UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

PESTICIDE ACTION & AGROECOLOGY NETWORK NORTH AMERICA, CENTER FOR FOOD SAFETY, and CENTER FOR BIOLOGICAL DIVERSITY, *Petitioners*, v. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, and LEE ZELDIN, in his official capacity as Administrator, *Respondents*.	**Case No.** **PETITION FOR REVIEW**

PETITION FOR REVIEW

Pursuant to Section 16(b) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), 7 U.S.C. § 136n(b), and Rule 15(a) of the Federal Rules of Appellate Procedure, Petitioners Pesticide Action & Agroecology Network North America, Center for Food Safety, and

Center for Biological Diversity ("Petitioners") petition this Court to review the order of the United States Environmental Protection Agency (EPA) approving the registration of trifludimoxazin as a new active ingredient and registrations of one technical and five end-use products containing trifludimoxazin. *See* Exhibits A–G (the final registration decision and six product labels).

EPA's challenged order is memorialized in a document signed on June 30, 2026, titled "Memorandum Supporting Final Decision to Approve Registration for the New Active Ingredient of Trifludimoxazin." *See* EPA Dkt. No. EPA-HQ-OPP-2022-0649-0042, Memorandum Supporting Final Decision to Approve Registration for the New Active Ingredient of Trifludimoxazin (Jun. 30, 2026), Exhibit A. EPA also approved the labels for one technical and five end-use products containing trifludimoxazin. *See* Exhibits B–G. EPA posted the challenged order on regulations.gov, EPA docket EPA-HQ-OPP-2022-0642, on June 30, 2026.

Because EPA held public notice and comment, judicial review under FIFRA is properly sought through a direct petition for review to this Court, rather than in district court. *See* 7 U.S.C. § 136n(b); *United*

Farmworkers of America v. EPA, 592 F.3d 1080, 1082 (9th Cir. 2010); *National Family Farm Coalition v. EPA*, 960 F.3d 1120, 1131 (9th Cir. 2020).

Petitioners respectfully petition this Court to set aside EPA's registration of trifludimoxazin. Petitioners further request that this Court grant any other relief as may be necessary and appropriate.

Respectfully submitted this 28th day of August 2026.

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Exhibit A

Memorandum Supporting Final Decision to Approve Registration for the New Active Ingredient of Trifludimoxazin

Ed Messina

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I. SUMMARY

This memorandum presents the rationale to support the final decision of the U.S. Environmental Protection Agency (EPA or the Agency) to register under section 3(c)(5) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), the new active ingredient (ai), trifludimoxazin, for use on legume vegetable group 6; foliage of legume vegetable group 7; bearing and non-bearing tree crops: citrus fruit group 10-10, pome fruit group 11-10, tree nuts group 14-12; cereal grain group 15&16 (except rice); peanut; soybean; and post-harvest and fallow land use.

Trifludimoxazin (1,5-dimethyl-6-thioxo-3-[2,2,7-trifluoro-3-oxo-4-(prop-2-yn-1-yl)-3,4-dihydro-2-1,4-benzoazin-6-yl]-1,3,5-triazinane-2,4-dione; CAS Number: 1258836-72-4), is a new oxazine contact herbicide to control broadleaf and grass weed species. Both the Herbicide Resistance Action Committee (HRAC) and the Weed Science Society of America (WSSA) classify trifludimoxazin as a Group 14 (PPO inhibition) herbicide. The herbicidal action of trifludimoxazin is as a light-dependent peroxidizing herbicide (LDPH) that acts through inhibition of the protoporphyrinogen-IX-oxidase (PPO) enzyme, which is an important component of biosynthesis of chlorophyll in plants. PPO inhibition ultimately causes the cell membranes to leak, rapidly dry, and disintegrate. Trifludimoxazin is primarily a contact herbicide and is rapidly absorbed by roots and foliage. Susceptible emerging weed seedlings treated with trifludimoxazin absorb the chemical through roots and foliage and will usually die as they reach the soil surface or shortly after emergence. Trifludimoxazin will be an additional broad-spectrum weed control option in the labeled crops to control weeds, including weeds that are resistant to some PPO herbicides and other modes of action.

The Agency received an application from BASF Corporation (referred to hereafter as BASF) to register trifludimoxazin products. BASF's application includes a single technical product, Tirexor Herbicide Technical (EPA Reg. No. 7969-491; 99.2% Trifludimoxazin) as well as five end-use products, Tirexor Herbicide (EPA Reg. No. 7969-492; 41.53% Trifludimoxazin), Vulcarus Herbicide (EPA Reg. No. 7969-496; 41.53% trifludimoxazin), Rexovor Herbicide (EPA Reg. No. 7969-494; 41.53% Trifludimoxazin), Voraxor Herbicide (EPA Reg. No. 7969-495; 10.76% Trifludimoxazin, 21.51% Saflufenacil) and Antorix Herbicide (EPA Reg. No. 7969-493; 10.76% Trifludimoxazin, 21.51% Saflufenacil).

Tirexor (EPA Reg. No. 7969-492), Vulcarus (EPA Reg. No. 7969-496) and Rexovor (EPA Reg. No. 7969-494) are soluble concentrate liquid herbicides containing 4.17 pounds trifludimoxazin per gallon, that may be applied by ground (as a broadcast, banded or spot treatment) or by air. Voraxor (EPA Reg. No. 7969-495) and Antorix (EPA Reg. No. 7969-493) are also soluble concentrate liquid herbicides containing 1.04 pounds trifludimoxazin and 2.08 pounds saflufenacil per gallon and may be applied by ground (as a broadcast, banded or spot treatment) or by air.

II. REQUESTED ACTION

On April 28, 2022, the EPA received an application from BASF to register one technical product and five end-use products containing trifludimoxazin for use on cereal grains crop group 15 (except rice), forage/fodder/straw of cereal grains crop group 16 (except rice), legume vegetable group 6, foliage of legume vegetable group 7, soybean, citrus fruit crop group 10-10, peanut, pome fruit crop group 11-10, and tree nut crop group 14-12, postharvest and fallow land use.

Table 1. Overview of Registered Products	
EPA File Symbols	**Product Information**
7969-491	Trifludimoxazin Technical (99.2%) – Tirexor Herbicide Technical
7969-496	7969-496 Trifludimoxazin 41.53% Liquid Herbicide – Vulcarus™
7969-492	7969-492 Trifludimoxazin 41.53% Liquid Herbicide- Tirexor™
7969-494	7969-494 Trifludimoxazin 41.53% Liquid Herbicide - Rexovor™
7969-495	7969-495 Trifludimoxazin 10.76% + Saflufenacil 21.51% - Voraxor™
7969-493	7969-493 Trifludimoxazin 10.76% + Saflufenacil 21.51% - Antorix™

Trifludimoxazin was previously registered as new herbicide by the Agency on May 17, 2021. Subsequently, BASF voluntarily withdrew the initial registrations after EPA was sued for allegedly failing to comply with the ESA when approving the previous registration. The tolerances that were established for the initial registration remain and BASF Corporation has not submitted a tolerance petition with this new application. Therefore, the Agency has not published a notice of filing in the Federal Register under the Federal Food, Drug, and Cosmetic Act (FFDCA) requesting the establishment of tolerance regulations for residues of trifludimoxazin on various commodities. EPA is moving forward with the previously assessed crop groups for trifludimoxazin per request of the registrant. EPA is not proposing to update the tolerances to reflect the newer crop groups.

In this application, BASF Corporation included proposed mitigations intended to reduce exposure to non-target organisms (including listed species). These proposed mitigations include removal of all previously approved non-agricultural use sites, prohibition of use in AK, HI, and US territories, prohibition of aerial application in peanuts and tree crops, and reduced maximum application rates in most field, row and tree crops.

Under FIFRA section 3(c)(4), EPA is required to notify the public when a request for registering a new active ingredient is made and allow a 30-day public comment period. The EPA published a notice of receipt in the Federal Register for an application requesting the registration of trifludimoxazin on March 27, 2023. One comment was received. This comment is discussed in Section V Public Comments.

III. USE PROFILE

Table 2 outlines the uses for trifludimoxazin. The trifludimoxazin end-use products Tirexor (7969-492 trifludimoxazin 41.53%), Vulcarus (7969-496 trifludimoxazin 41.53%), Rexovor (7969-494 trifludimoxazin 41.53%), Voraxor (7969-495 trifludimoxazin 10.76% + saflufenacil 21.51%) and

Antorix (7969-493 trifludimoxazin 10.76% + saflufenacil 21.51%) are formulated as a soluble concentrate. Trifludimoxazin may be applied by ground equipment (banded, broadcast, or spot treatment) or aircraft for pre- or post-emergent control of broadleaf and grass weeds. Trifludimoxazin may be applied with sprayable fluid nitrogen fertilizer solutions. Additionally, trifludimoxazin may be impregnated on and applied with dry bulk fertilizers. The label stipulates that applicators and other handlers must wear a long-sleeved shirt and long pants, chemical resistant gloves, shoes plus socks, and protective eye wear (such as face shield, goggles, or safety glasses). Depending on the use site, maximum single application rates range from 0.011 to 0.034 lb ai/A. The minimum re-treatment interval is 14 days, and the pre-harvest intervals for applicable use sites/patterns range from 0 to 7 days, in rotational crops a plant back interval (PBI) of 30 days is sufficient. The restricted-entry interval (REI) is 12 hours. The product label prohibits trifludimoxazin use on any non-agricultural use sites, including residential applications. The product label prohibits use in Alaska, Hawaii, United States (US) Territories, and New York (Nassau and Suffolk counties only). Spot treatments and applications with bulk fertilizers must not exceed the maximum labeled rate for the crop. Applications of trifludimoxazin to areas where domestic animals graze is prohibited.

Table 2. Final Use Patterns of Trifludimoxazin

Crop Group/ Use Group	Application Method [1]	Max Single Use Rate (lbs ai/A)	Max # Uses/ Year	Max Annual Use Rate (lbs ai/A/yr)	Minimum Retreatment Interval (d)	Preharvest Interval (d)	Aerial application restriction	Comments
Citrus[2] Group 10-10	Ground	0.022	4	0.089	21	May be applied any time up to or on the day of harvest.	Do not apply aerially	--
Corn	Aerial, Ground	0.011	1	0.011	NA	NA		Do not apply after crop emergence
Legume Vegetable[3] Group 6 and 7	Aerial, Ground	0.011	1	0.011	NA	NA		
Peanut	Ground	0.034	1	0.034	NA	NA	Do not apply aerially	
Pome Fruit[4] Group 11-10	Ground	0.022	4	0.089	21	May be applied any time up to or on the day of harvest.	Do not apply aerially	-
Postharvest and Fallow[5]	Aerial, Ground	0.022	1	0.022	NA	NA		--
Cereal Grain[6]	Aerial, Ground	0.011	1	0.011	NA	NA		Do not apply after crop emergence
Sorghum	Aerial, Ground	0.011	1	0.011	NA	NA		
Soybean	Aerial, Ground	0.011	2	0.022	14	NA		
Tree Nut[7],[8]	Ground	0.022	4	0.089	21	7	Do not apply aerially	-

NA - Not applicable;

[1] Ground applications included banded, broadcast, or spot treatments.

[2] Citrus Crop Group 10-10 includes Australian desert lime, Australian finger lime, Australian round lime, Brown river finger lime, calamondin, citron, citrus hybrids, grapefruit, Japanese summer grapefruit, kumquat, lemon, lime, mediterranean mandarin, mount white lime, new guinea wild lime, orange (sour), orange (sweet), pummelo, Russell river lime, satsuma mandarin, sweet lime, tachibana orange, Tahiti lime, tangelo, tangerine (mandarin), tangor, trifoliate orange, uniq fruit.

[3] Legume vegetable Crop Groups 6 and 7 include edible beans, edible peas, and field peas.

[4] Pome fruits Crop Group 11-10 includes apple, azarole, crabapple, loquat, mayhaw, medlar, pear, Asian pear, quince, Chinese quince, Japanese quince, tejocote.

[5] May be applied after previous crop harvest, during a fallow period, preceding crop planting or after crop planting as pre-emergence treatment in field and row agricultural crops. that includes all labeled crops including canola, cotton, rice, sugar beet and sunflower.

[6] Cereal grains (Crop Groups 15 and 16 except rice) that includes sorghum, corn and small grains. Corn on the label refers to field corn (grain, seed, or silage), popcorn (grain, seed), and sweet corn (processing, fresh market, seed). Small grains as a labeled use refers to barley, millet (pearl and proso), oats, rye, triticale, and wheat (including durum, spring and winter).

[7] Tree nuts Crop Group 14-12 includes African nut-tree, almond, beech nut, Brazil nut, Brazilian pine, bunya, bur oak, butternut, cajou nut, candlenut, cashew, chestnut, chinquapin, coconut, coquito nut, dika nut, ginkgo, guiana chestnut hazelnut (filbert), heartnut, hickory nut, Japanese horse-chestnut, macadamia nut, mongongo nut, monkey-pot, monkey puzzle nut, okari nut, pachira nut, peach palm nut, pecan, pequi, pili nut, pine nut, pistachio, sapucaia nut, tropical almond, walnut (black/English), yellowhorn.

[8] Tree nut, Pome fruit & Citrus crop groups applications were updated in January 2025 from 4 to 3 annual applications for co-formulations of trifludimoxazin.

IV. EVALUATION

In evaluating a pesticide registration application, EPA assesses a wide variety of use information (i.e., where and how the pesticide is used) and environmental fate (i.e., persistence and mobility of the chemical in the environment) and toxicity (i.e., effects on humans and other non-target organisms) studies to determine the likelihood of adverse effects (i.e., risk) from exposures associated with the use of the product. Risk assessments are developed to evaluate the environmental fate of the compound as well as how it might affect a wide range of non-target organisms including humans and terrestrial and aquatic wildlife (plants and animals). In addition, a benefits assessment may be conducted. Based on these assessments, the EPA evaluates benefits versus risks and approves language for each pesticide label to ensure the directions for use and safety measures are appropriate to mitigate any potential risk to meet the FIFRA standard of no unreasonable risks to humans or the environment. In this way, the pesticide label communicates essential limitations and mitigations that are necessary for public and environmental safety. It is a FIFRA violation to use a registered pesticide in a manner inconsistent with its labeling. Consistent with Endangered Species Act (ESA) Section 7(a)(2), EPA also assessed the potential effects of the use of trifludimoxazin on federally listed threatened or endangered (hereafter referred to as "listed") species and their designated critical habitats (CHs).

Please note that the sections below A-C are for assessment of risks to human health, assessment of environmental and ecological risks, ESA assessment, and benefits assessment.

A. Assessment of Risks to Human Health

The EPA requires a wide range of studies to assess a pesticide use scenario. For the proposed uses of trifludimoxazin, the database is complete.

The toxicology database is considered complete and is adequate. Acceptable guideline studies for developmental, reproductive toxicity, and neurotoxicity are available. The HASPOC recommended that the inhalation toxicity study be waived at this time (J. Camp, TXR# 0057977, 11/27/2019) and the study was waived based on this recommendation.

This section summarizes EPA's Human Health Risk Assessment for New Active Ingredient trifludimoxazin. The complete assessment can be found in docket ID number EPA-HQ-OPP-2022-0649 at www.regulations.gov.

1. Toxicology Profile

The available database of guideline studies for trifludimoxazin indicates that the primary target organs in mammals are the thyroid and liver. However, the hematological effects associated with the PPO inhibitor class of chemicals were observed but not considered adverse at the selected lowest-observable adverse-effects levels (LOAELs). Effects on the thyroid occurred in rats and consisted primarily of follicular cell hypertrophy/hyperplasia and altered colloid of the thyroid after subchronic and chronic exposure durations. Increased relative thyroid weights were also observed in male rats; however, thyroid hormones were not adversely affected after subchronic

exposure for males and females. Liver effects were also observed at the same dose as thyroid effects in male rats after subchronic and chronic exposure. Liver effects were also observed in mice after subchronic and chronic exposure. Effects on the reproductive system were observed as evidence of increased abnormal sperm in male rats in the extended one generation reproductive toxicity study (EOGRTS), and as effects to the epididymis in rats after subchronic and chronic exposure.

Trifludimoxazin did not demonstrate neurotoxic potential in either acute or subchronic neurotoxicity studies in rats. However, in the 90-day subchronic study, observations were suggestive of neurotoxicity, evidenced by functional observational battery (FOB) deficits as well as histopathological findings in the spinal cord and medulla oblongata. These effects were not observed in the chronic toxicity study, but the dosing was lower compared to the subchronic study and neurotoxicity may have occurred at higher doses than what were assessed.

There were no adverse maternal or developmental effects observed in the rat developmental toxicity study at the limit dose. However, in the rabbit developmental study, decreased fetal body weight was observed at a lower dose than maternal toxicity; thus, increased quantitative susceptibility was observed. The EOGRTS study demonstrated no increase in susceptibility as no effects were observed in the offspring while increased incidence and severity of follicular cell hypertrophy/hyperplasia and altered colloid in the thyroid was observed in the parental animals. Immunotoxicity was not observed throughout the toxicity database. Additionally, there were no effects in the dermal toxicity study.

In accordance with EPA's Final Guidelines for Carcinogen Risk Assessment (March 2005), the Cancer Assessment Review Committee (CARC) classified trifludimoxazin as "suggestive evidence of carcinogenic potential" (Wilson, M, TXR#0058028, 04/24/2020). The CARC determined that quantification of risk using a non-linear approach (i.e., chronic reference dose [cRfD]) will adequately account for all chronic toxicity, including carcinogenicity, that could potentially result from exposure to trifludimoxazin.

Trifludimoxazin was categorized as having low acute toxicity via the oral (toxicity category III), eye (toxicity category III), dermal (toxicity category IV), and inhalation (toxicity category IV) routes of exposure. It is non-irritating to skin, and not a dermal sensitizer. The signal word assigned for all routes of exposure is "Caution."

A summary of the points of departure (POD) selected for human health risk assessments can be found in **Tables 3** and **4**. No effects attributable to a single dose were observed in the database; therefore, an endpoint for acute dietary was not selected. The rat combined chronic/carcinogenicity study was selected to evaluate chronic dietary exposure. The EOGRTS was selected to evaluate short-term oral exposure in adults and short- and intermediate-term inhalation exposure scenarios. The co-critical 90-day and 1 year dog studies were selected to evaluate incidental oral exposure. Dermal exposure scenarios were not assessed because there was no dermal hazard identified. This section, *Assessment of Risks to Human Health,* is a summary of the agency's human health assessment of trifludimoxazin; the full Human Health Risk Assessment can be found in docket ID number EPA-HQ-OPP-2022-0649 at www.regulations.gov.

While there were adverse androgen and thyroid effects observed for trifludimoxazin, EPA has concluded that no additional estrogen, androgen, or thyroid data are needed at this time (see Section VI. B. below).

Table 3. Summary of Toxicological Doses and Endpoints for Trifludimoxazin for Use in Dietary and Non-Occupational Human Health Risk Assessments

Exposure/ Scenario	POD	Uncertainty/ FQPA Safety Factors	RfD, PAD, LOC for Risk Assessment	Study and Toxicological Effects
Acute Dietary (General Population, including Infants and Children)	Not selected; no effects attributable to a single dose were observed in the database.			
Chronic Dietary (All Populations)	NOAEL = 10.7 mg/kg/day	UF_A = 10X UF_H = 10X FQPA SF = 1X	Chronic RfD = 0.11 mg/kg/day cPAD = 0.11 mg/kg/day	**Combined Chronic/Carcinogenicity study (Rat)** LOAEL = 33 mg/kg/day based on increased incidence of spermatogenic granuloma, altered colloid and follicular cell hyperplasia in the thyroid, and increased pigment, multinucleated hepatocytes and bile duct hyperplasia in the liver.
Incidental Oral (Children 1-2 yrs old) Short-term	NOAEL = 15 mg/kg/day	UF_A = 10X UF_H = 10X FQPA SF = 1X	LOC for MOE = 100	**Co-critical 90-day and 1 year** LOAEL = 50 mg/kg/day based on abnormal gait, paralysis, degeneration of the fasciculus gracilis and white material in the cervical cord, thoracic cord, medulla oblongata, and lumbar cord.
Adult Oral Short- and Intermediate- Term	Parental NOAEL = 6.4 mg/kg/day	UF_A = 3X UF_H = 10X FQPA SF = 1X	LOC for MOE = 30	**EOGRTS** Parental LOAEL = 22 mg/kg/day based on increased incidence and severity of follicular cell hypertrophy/hyperplasia and altered colloid in the thyroid.
Dermal Short-and Intermediate-Term (1-30 days)	Not selected. No toxicity was observed in a route-specific dermal study, including effects to the thyroid. The increased susceptibility observed in the database was not of concern because, using a 9% DAF, the dermal equivalent LOAEL of developmental effects of concern would be 2X the limit dose and not considered relevant to human health risk assessment.			
Inhalation Short- and Intermediate-Term (1-30 days)	Parental NOAEL = 6.4 mg/kg/day Oral toxicity assumed equal to inhalation toxicity	UF_A = 3X UF_H = 10X FQPA SF = 1X	LOC for MOE = 30	**EOGRTS** Parental LOAEL = 22 mg/kg/day based on increased incidence and severity of follicular cell hypertrophy/hyperplasia and altered colloid in the thyroid.

Table 3. Summary of Toxicological Doses and Endpoints for Trifludimoxazin for Use in Dietary and Non-Occupational Human Health Risk Assessments				
Exposure/ Scenario	**POD**	**Uncertainty/ FQPA Safety Factors**	**RfD, PAD, LOC for Risk Assessment**	**Study and Toxicological Effects**
Cancer (oral, dermal, inhalation)	Classification: "Suggestive evidence of carcinogenic potential". The RfD approach is considered protective.			

Point of departure (POD) = A data point or an estimated point that is derived from observed dose-response data and used to mark the beginning of extrapolation to determine risk associated with lower environmentally relevant human exposures. NOAEL = no-observed adverse-effect level. LOAEL = lowest-observed adverse-effect level. UF = uncertainty factor. UFA = extrapolation from animal to human (interspecies). UFH = potential variation in sensitivity among members of the human population (intraspecies). FQPA SF = FQPA Safety Factor. PAD = population-adjusted dose (a = acute, c = chronic). RfD = reference dose. MOE = margin of exposure. LOC = level of concern. EOGRTS = extended one generation toxicity study.

Table 4. Summary of Toxicological Doses and Endpoints for Trifludimoxazin for Use in Occupational Human Health Risk Assessments				
Exposure/ Scenario	**POD**	**Uncertainty Factors**	**LOC for Risk Assessment**	**Study and Toxicological Effects**
Dermal Short- and Intermediate-Term (1-30 days)	No hazard identified.			
Inhalation Short- and Intermediate-Term (1-30 days)	Parental NOAEL = 6.4 mg/kg/day Oral toxicity assumed equal to inhalation toxicity	UF_A = 3X UF_H = 10X	LOC for MOE = 30	**EOGRTS** Parental LOAEL = 22 mg/kg/day based on increased incidence and severity of follicular cell hypertrophy/hyperplasia and altered colloid in the thyroid.
Cancer (oral, dermal, inhalation)	Classification: "Suggestive evidence of carcinogenic potential". The RfD approach is considered protective.			

Point of departure (POD) = A data point or an estimated point that is derived from observed dose-response data and used to mark the beginning of extrapolation to determine risk associated with lower environmentally relevant human exposures. NOAEL = no-observed adverse-effect level. LOAEL = lowest-observed adverse-effect level. UF = uncertainty factor. UFA = extrapolation from animal to human (interspecies). UFH = potential variation in sensitivity among members of the human population (intraspecies). MOE = margin of exposure. LOC = level of concern. EOGRTS = extended one generation toxicity study.

2. Dietary (Food + Water) Risks

An acute dietary exposure analysis was not conducted for trifludimoxazin because no appropriate endpoint attributable to a single exposure was identified for the general U.S. population or any population subgroups. Therefore, based upon a qualitative analysis, the Agency concludes there are no acute dietary risks of concern for trifludimoxazin at this time.

Chronic dietary (food and drinking water) exposure and risk assessments were conducted using the Food Commodity Intake Database (DEEM-FCID) Version 4.02. This software uses 2005-2010 food consumption data from the U.S. Department of Agriculture's National Health and Nutrition Examination Survey, What We Eat in America, (NHANES/WWEIA). Residue input values are

based on tolerance-level residues for all proposed commodities. Because all residues were below the limit of quantitation (<LOQ), processing factors were not incorporated. EDWCs provided by EFED were incorporated directly into the assessments as point estimates. In conducting this assessment, HED assumed that 100% of all crops with trifludimoxazin uses were treated. The chronic risk estimates of food and drinking water found for trifludimoxazin are below the Agency's LOC at < 1% of the chronic population-adjusted dose (cPAD) for the U.S. population and all population subgroups. Therefore, the Agency concludes there are no chronic risks of concern for trifludimoxazin at this time.

The Agency has determined that quantification of risk using a non-linear approach (i.e., reference dose (RfD)) will adequately account for all chronic toxicity, including carcinogenicity, that could result from exposure to trifludimoxazin. Therefore, a separate cancer dietary risk assessment is not required, and the non-cancer chronic dietary assessment is protective of any dietary cancer risks (noted in the previous paragraph).

3. Occupational Handler Risks

Based on the anticipated use patterns and current labeling, and types of equipment and techniques that can potentially be used, short- and intermediate-term occupational and post-application handler exposure is expected from the uses of trifludimoxazin. Since no endpoints were identified for the dermal route of exposure, only inhalation exposure and risk estimates were calculated for occupational handlers. None of the short or intermediate-term occupational handler scenarios risk estimates (driven by inhalation since no dermal toxicity endpoints were identified) resulted in margin of exposures (MOEs) that are of concern (MOEs are all greater than 400 (LOC = 30)) with baseline attire (long-sleeve shirt, long pants, and shoes plus socks). No risks estimates of concern were identified for aerial applicators.

In accordance with the Agency's current practices, a quantitative non-cancer occupational post-application inhalation exposure assessment was not performed for trifludimoxazin. Any residues which become inhalable during post-application activities are expected to be lower in concentration than the residues assessed in the handler scenarios. Therefore, it is expected that handler inhalation exposure estimates, which were not of concern, would be protective of most occupational post-application inhalation exposure scenarios.

4. Residential Risks

Trifludimoxazin is not expected to result in any residential exposures, either for residential handlers, or residential post-application scenarios, since there are no proposed residential uses. Therefore, there are no residential MOEs for consideration in the aggregate risk assessment for trifludimoxazin.

5. Aggregate Risk

In accordance with the FQPA, HED must consider and aggregate pesticide exposures and risks from three major sources: food, drinking water, and residential exposures. In an aggregate assessment, exposures from relevant sources are added together and compared to quantitative

estimates of hazard (e.g., a NOAEL or PAD), or the risks themselves can be aggregated. When aggregating exposures and risks from various sources, HED considers both the route and duration of exposure.

The aggregate risk estimates are equivalent to the dietary exposure assessment conclusions (food and drinking water only) because there are no residential exposures anticipated from the uses. The risk estimates are below the LOC for all dietary routes of exposure. An acute dietary exposure analysis was not conducted for trifludimoxazin because no appropriate endpoint attributable to a single exposure was identified for the general U.S. population or any population subgroups. As an acute dietary exposure analysis was not conducted for trifludimoxazin, there are no acute exposures that contribute to aggregate exposure or risk. Chronic aggregate risk is equal to chronic dietary exposure (food + drinking water) and is not of concern.

6. Non-Occupational Spray Drift Exposure and Risk Estimates

HED conducts human health spray drift assessments to determine potential risk from indirect exposure to pesticides that may drift during or immediately after an application. Pesticide applications made in the form of a spray and applied aerially or via airblast or groundboom may result in pesticide drift and deposition in non-target areas adjacent to the application site.

On July 15th, 2024, the Agency updated its practice on spray drift[1] to include chemical-specific spray drift assessments for proposed uses through Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) registration actions (e.g., Section 3 new active ingredient and/or new use registrations, label amendments, Section 18 emergency exemptions, etc).

Trifludimoxazin is proposed for registration as a new active ingredient. Therefore, EPA conducted a chemical-specific assessment of spray drift exposure. Because a dermal POD has not been established for trifludimoxazin, only incidental oral non-occupational spray drift exposure and risk estimates have been assessed.

There were no risks at the edge of the field and therefore no spray drift buffers are required to protect bystanders.

7. Cumulative Risk

Unlike other pesticides for which EPA has followed a cumulative risk approach based on a common mechanism of toxicity, EPA has not made a common mechanism of toxicity finding as to trifludimoxazin and any other substances and trifludimoxazin does not appear to produce a toxic metabolite produced by other substances. For the purposes of this action, therefore, EPA has not assumed that trifludimoxazin has a common mechanism of toxicity with other substances.

B. Assessment of Environmental Fate and Ecological Risks

[1] *Implementing Chemical Specific Human Health Spray Drift Analysis for Pesticide Registration Action.* Available online: https://www.regulations.gov/document/EPA-HQ-OPP-2013-0676-0124.

The ecological risk assessment examines the potential for adverse effects to non-target organisms associated with proposed uses of trifludimoxazin and accounts for any mitigations on the proposed label as submitted by the registrant in their application. EPA also conducted an assessment that evaluates potential effects on listed species and includes EPA's predictions of potential likelihood of future jeopardy (J) for federally threatened or endangered (listed) species or adverse modification (AM) of designated critical habitats (CH). These assessments also considered potential effects to the co-formulated active ingredient saflufenacil in the proposed products. In addition to consideration of any mitigations included in the registrant's initial application, EPA's assessment also takes into account additional mitigations proposed by EPA and agreed to by the registrant subsequent to the original application with the goal of avoiding potential likelihood of future jeopardy or adverse modification (J/AM). Evaluated taxa include mammals, birds (which serve as surrogates for reptiles and terrestrial-phase amphibians), terrestrial invertebrates (*Apis* and non-*Apis*), fish (where freshwater fish serve as surrogates for aquatic-phase amphibians), aquatic invertebrates, and aquatic, terrestrial and wetland plants. Ecological risk characterization integrates the results of the exposure and ecotoxicity data to evaluate the likelihood of adverse ecological effects using a risk quotient (RQ) method. For this method, RQs are calculated by dividing point estimates of exposure (i.e., estimated environmental concentration [EEC]) by point estimates of toxicity (RQ = EEC/toxicity endpoint), for both acute and chronic effects. The RQs are then compared to EPA's acute and chronic risk Levels of Concern (LOC) for each taxon. The LOCs are well-established levels used by EPA to indicate potential risk to non-target organisms.

The LOC indicates whether a pesticide, when used as directed, has the potential to cause adverse effects to non-target organisms. RQs below a LOC indicate there are no risks of concern for that taxon. If the RQ exceeds the LOC, then the EPA further characterizes and describes the associated risk of concern.

These findings also play a role in EPA's assessment of potential effects to listed species, as required by the Endangered Species Act (ESA). If the RQs representative of listed species exposure are below the listed species LOC for a particular taxon, EPA does not expect direct effects to listed species in that taxon. However, further refinement or analysis may be necessary to complete an effects determination for listed species within that taxon because there may be effects to a listed species from potential direct effects to another taxon on which the listed species depends for prey, pollination, habitat, and/or dispersal (referred to as "PPHD"). In making its effects determinations, EPA evaluates both potential direct and PPHD effects to listed species and designated critical habitats.

EPA has determined that all relevant data requirements specified in 40 CFR Part 158 based on the uses of trifludimoxazin have been satisfied (completed, waived, or not triggered). There are no data gaps for environmental fate or ecological effects studies of trifludimoxazin.

This section summarizes EPA's Environmental and Ecological Risk Assessment. The complete assessment can be found in docket ID number EPA-HQ-OPP-2022-0649 at www.regulations.gov.

1. Environmental Fate

The Residues of Concern (ROC) for assessing aquatic and terrestrial exposure are the parent compound plus major degradates M850H001, M850H002, M850H003, M850H004, M850H033, M850H0035 and M850H042, which are the seven degradates that form in environmentally relevant media.

Where alkaline conditions exist, the major environmental exposure route of degradation for trifludimoxazin is hydrolysis (half-life = 0.33 day at pH 9), while hydrolysis is slow under neutral conditions, and is stable at pHs 4 and 5. Also, trifludimoxazin degrades via soil photolysis (time to 50% degradation (DT_{50}) = 32 days). Where neutral or acidic conditions exist, the major environmental exposure route of degradation is aerobic soil metabolism. Under aerobic soil conditions, trifludimoxazin is non-persistent to slightly persistent (DT_{50} = 12-40 days). Trifludimoxazin ROC degrades in days to years under anaerobic aquatic conditions (DT_{50} = 8.8-817 days) and degrades under aerobic aquatic conditions similarly (DT_{50} = 19-224). Trifludimoxazin is classified as moderately water soluble and as moderately mobile in soil. Trifludimoxazin is not expected to volatilize under dry and wet field conditions. Terrestrial field dissipation of trifludimoxazin indicated dissipation half-lives from 2.9 to 12.5 days across six sites.

2. Environmental Effects

EPA took a comprehensive approach in evaluating potential risk concerns for all taxa (including freshwater and estuarine/marine fish and invertebrates, aquatic vascular and non-vascular plants, birds, mammals, terrestrial invertebrates (including honey bees), and terrestrial and wetland plants using available data. These studies include registrant-submitted acute and chronic toxicity data on trifludimoxazin. Since trifludimoxazin is a new pesticide that was only registered for use in the United States for a short time before the initial registration was canceled, there are no incident data to report for any taxon.

In the following sections, the toxicity of trifludimoxazin (and its co-formulated active ingredient saflufenacil, where relevant) to various taxonomic groups is summarized. Simultaneous exposure to both trifludimoxazin and saflufenacil as contained in co-formulated products (*i.e.,* Antorix and Voraxor) was considered in this assessment. After a comparison of the available toxicity data for both active ingredients, trifludimoxazin was determined to be the driver of toxicity for all taxa, except for terrestrial invertebrates, which were more sensitive to saflufenacil. Therefore, the risk conclusions for trifludimoxazin are inclusive of saflufenacil exposure across all taxa, except terrestrial invertebrates, where exposure to saflufenacil was quantitatively assessed due to the more sensitive endpoint. It is important to note that EPA determined there was no relevant evidence of greater-than-additive effects for trifludimoxazin and saflufenacil.[2]

As discussed above, EPA integrates toxicity data with exposure estimates (*i.e.*, estimated environmental concentrations (EEC)) to generate RQ values. **Table 5** summarizes RQs and LOC exceedances for listed and non-listed species associated with the uses of trifludimoxazin.

[2] USEPA. 2023. *Trifludimoxazin: Addendum to Patent Search Reviews*. March 16, 2023. Environmental Fate and Effects Division. Office of Pesticide Programs. U.S. Environmental Protection Agency (DP 467118).

Terrestrial Plants

Vegetative vigor endpoints represent the most sensitive growth stage for terrestrial plants. Trifludimoxazin was similarly toxic to both dicots (tomato IC_{25} of 0.00075 lbs a.i./A) and monocots (ryegrass IC_{25} of 0.0011 lbs a.i./A) in the available seedling emergence studies. A similar trend was observed in vegetative vigor studies, where dicot plants (IC_{25} of 0.0000438 lbs a.i./A; soybean) were slightly more sensitive to trifludimoxazin exposure than monocot plants (IC_{25} = 0.000193 lbs a.i./A; corn). While dicots are more sensitive than monocots, there are toxicity concerns for both. There were LOC exceedances for listed and non-listed terrestrial and wetland aquatic plants for all uses of trifludimoxazin. Therefore, direct risks of concern are expected for this taxon.

Aquatic Vascular and Non-vascular Plants

In general, vascular plants were more sensitive to trifludimoxazin than non-vascular plants. Five toxicity studies were conducted on the vascular aquatic plant, *Lemna gibba* with the technical grade active ingredient (TGAI, 98.5% a.i.), 3 major degradates M850H001, M850H002, M850H004, and a trifludimoxazin typical end-use product (TEP, BAS 850 00H (40.9% a.i.)). The major degradates were 24 to 150-fold less toxic to aquatic plants compared to the parent compound (EC_{50} = 0.115 µg a.i./L; LOAEC = 0.0305 µg a.i./L based on a 33% reduction in biomass). Vascular toxicity endpoints for the TEP (BAS 850 00H; NOAEC = 0.0139 µg a.i./L; EC_{50} = 0.116 µg a.i./L) were similar to that of the TGAI (NOAEC = 0.0143 µg a.i./L; EC_{50} = 0.115 µg a.i./L).

For nonvascular aquatic plants, the most sensitive EC_{50} was 0.200 µg a.i./L, for the TGAI based on a 35% reduction in freshwater diatom (*Navicula pelliculosa*) yield at the LOAEC of 0.134 µg a.i./L. The degradates were 5 to 20-fold less toxic to non-vascular aquatic plants compared to the parent compound. Nonvascular toxicity endpoints for the TEP (freshwater algae (*Pseudokirchneriella subcapitata*); NOAEC = 0.068 µg a.i./L; EC_{50} = 0.20 µg a.i./L) were similar to that of the TGAI (NOAEC = 0.108 µg a.i./L; EC_{50} = 0.356 µg a.i./L). There were LOC exceedances for listed and non-listed, vascular and non-vascular aquatic plants for all uses of trifludimoxazin. Therefore, direct risks of concern are expected for this taxon.

Aquatic Invertebrates

Trifludimoxazin is classified as moderately toxic to freshwater invertebrates (*Daphnia magna*) (1,950 µg a.i./L). There was no evidence that *Daphnia* were more sensitive to the metabolites M850H001 and M850H002 compared to TGAI. In a chronic exposure study conducted with daphnia, a 20% reduction in parental survival, 17% reduction in total living offspring, and 9% decrease in successful birth rate were observed at the LOAEC (20.4 µg a.i./L; NOAEC = 10.1 µg a.i./L). For estuarine/marine invertebrates, trifludimoxazin is classified as highly toxic to mysids (*Americamysis bahia*) on an acute exposure basis (371 µg a.i./L). There were no significant effects observed for mysids in the available chronic exposure study (NOAEC = 52.5 µg a.i./L) and, therefore, the corresponding LOAEC is non-definitive (*i.e.,* LOAEC > 52.5 µg a.i./L). There were no LOC exceedances for aquatic invertebrates. Therefore, there are not expected to be direct risks of concern from exposure to trifludimoxazin or the co-formulated active ingredient saflufenacil.

Aquatic Vertebrates

Trifludimoxazin is classified as practically non-toxic to freshwater and estuarine/marine fish on an acute exposure basis. On a chronic exposure basis, trifludimoxazin exhibits toxicity to both freshwater and estuarine/marine vertebrates with reported effects on survival and growth. In an early life-stage chronic for fathead minnow (*Pimphales promelas*), there was 11% reduction in number of live larvae at the LOAEC (18 µg a.i./L). In the sheepshead minnow chronic study, the most sensitive endpoints were wet weight and length with 16.3 % and 6.3% decreases, respectively, at the LOAEC (4.7 µg a.i./L).

Due to the potential for LDPH chemicals to cause enhanced toxicity to fish under UV light (*i.e.,* natural sunlight in clear, shallow pools), a chronic endpoint (NOAEC) for fish was estimated using a surrogate molar threshold following EPA guidance[3] (*i.e*., molecular weight of trifludimoxazin*0.002 µg-mol/L). Based on the molecular weight of trifludimoxazin of 412.3 g/mol, the NOAEC under UV light is 0.82 µg a.i./L. This molar equivalency fish chronic toxicity NOAEC is roughly 15 and 4x, respectively, less than the lowest empirical chronic toxicity NOAEC for freshwater fish (12 µg a.i./L) and for estuarine/marine fish (2.7 µg a.i./L). There were no LOC exceedances for aquatic vertebrates; therefore, there are not expected to be direct risks of concern from exposure to trifludimoxazin or the co-formulated active ingredient saflufenacil.

Birds, Reptiles, and Terrestrial-Phase Amphibians

Acute oral toxicity tests of TGAI with bobwhite quail (*Colinus virginianus*), mallard duck (*Anas platyrhynchos*), and canary (*Serinus canaria*) reported no effects from trifludimoxazin at concentrations > 2000 mg a.i./kg-bw. Based on these data, trifludimoxazin is classified as practically non-toxic to birds on an acute oral exposure basis. There were no mortalities or other sublethal effects reported in sub-acute dietary studies conducted with mallard ducks and bobwhite quail (LC_{50} = 2,841 and 2,222 mg a.i./kg-diet, respectively). In a chronic exposure study conducted with bobwhite quail, the LOAEC (285 mg a.i./kg-diet) was determined based on significant reproductive endpoint effects (viable embryos/eggs set, live embryos/eggs set, number of hatchlings/eggs set, 14-day hatchlings/eggs set, and no. of hatchlings/live embryos) (NOAEC 145 mg a.i./kg-diet). There were no LOC exceedances for birds (surrogates for reptiles and terrestrial-phase amphibians). Therefore, there are not expected to be direct risks of concern from exposure to trifludimoxazin or the co-formulated active ingredient saflufenacil.

[3] EPA LDPH guidance can be found here: https://www.epa.gov/sites/default/files/2016-06/documents/guidancelightdependentperoxidizingherbicides.pdf

Mammals

An acute oral toxicity study with rats (*Rattus norvegicus*) reported no chemical-related effects at the highest tested concentration (lethal dose to 50% of tested organisms, *i.e.* LD_{50} >2000 mg a.i./kg-bw). Therefore, trifludimoxazin is considered practically non-toxic to mammals on an acute oral exposure basis. Chronic exposure to trifludimoxazin resulted in a NOAEC of 750 mg/kg-diet (NOAEL = 64.4 and 68.1 mg a.i./kg-bw/day for males and females, respectively), based on no effects on survival, reproduction, or growth compared to the negative control. There were no LOC exceedances for any use pattern. Therefore, there are not expected to be direct risks of concern from exposure to trifludimoxazin or the co-formulated active ingredient saflufenacil.

Honey Bees (and Non-Apis Terrestrial Invertebrates)

Trifludimoxazin is classified as practically non-toxic to honey bees (*Apis mellifera)*, which serve as surrogates for both *Apis* and non-*Apis* bees, on both an acute contact and oral exposure basis. In addition, trifludimoxazin is classified as practically non-toxic to larval honey bees on an acute oral exposure basis. The chronic oral LOAEL (5.5 µg a.i./larva/day) for larval bees is based on a 17% reduction in adult bee emergence and is two times above the NOAEL (2.9 µg a.i./larva/day) used to calculate the RQs. There were no mortalities reported at any concentration (NOAEL = 9.6 µg a.i./bee/day) for adult honey bees on a chronic oral exposure basis. In the absence of more sensitive endpoints for non-*Apis* terrestrial invertebrates, the dietary endpoints for honey bees were used as surrogates to assess trifludimoxazin exposure to non-target, non-*Apis* terrestrial invertebrates.

Saflufenacil is a co-formulated active ingredient with trifludimoxazin in two TEPs proposed for registration (Antorix™ and Voraxor™). Based on the available toxicity data for saflufenacil, it has higher toxicity to honey bees compared to trifludimoxazin, and therefore is expected to be the driver for potential risks to terrestrial invertebrates. Exposure risks, from saflufenacil alone, are expected to be low for adult honey bees on an acute and chronic exposure basis and to larval honey bees on an acute exposure basis. The saflufenacil TGAI chronic oral LOAEL (0.49 µg a.i./larva/day) for larval bees is based on day-8 mortality and is three times above the NOAEL (0.15 µg a.i./larva/day). The chronic oral LOAEL (24.4 µg a.i./bee/day) for adult bees based on reductions in food consumption and is 1.8 times greater than the NOAEL (13.9 µg a.i./bee/day). In the absence of more sensitive endpoints for non-*Apis* terrestrial invertebrates, the dietary endpoints for honey bees were used as surrogates to assess saflufenacil exposure to non-target, non-*Apis* terrestrial invertebrates.

There are not expected to be risks of concern for honey bees or non-*Apis* terrestrial invertebrates from the uses of trifludimoxazin alone. However, there are on-field, direct risk concerns for honey bees and non-*Apis* terrestrial invertebrates based on exposure to the co-formulated active ingredient saflufenacil.

Table 5. Summary of Ecological Risk Conclusions for the Final Registration of the Herbicide Trifludimoxazin

Taxa	Exposure Duration or Pathway	Risk Quotient (RQ) Range[1]	Potential Risk to Non-listed Species?[3]	Additional Information/ Lines of Evidence	Do Potential Risks to Non-Listed Species Extend Beyond the Treated Field?	Potential Direct Effects to Listed Species?[4,5]
Vascular and Non-Vascular Aquatic Plants	Wetland	Non-Listed 1.0 - 125 Listed 2.9 – 1007	Yes	Potential risk could occur for both vascular and non-vascular plants (wetland and non-wetland) based on assessment of wetland plant exposure zone (WPEZ) and aquatic plant exposure zone (APEZ) modeled estimated exposure concentrations (EECs).	Yes	Yes
	Non-Wetland	Non-Listed <0.1 – 10.2 Listed <0.1 – 82.1	Yes		Yes	Yes
Terrestrial Plants	Upland or Dry-Land	Non-Listed 0.7 – 148 Listed 0.1 – 1970	Yes	Multiple lines of evidence suggest potential risk for terrestrial and wetland plants from runoff and drift-based exposure.	Yes	Yes
	Wetlands, Riparian Areas	Non-Listed 0.1 - 187 Listed 0.1 - 2482	Yes		Yes	Yes
Aquatic Vertebrates (Surrogates for Aquatic phase Amphibians)	Acute	NC	No	RQs could not be calculated due to non-definitive endpoints. However, risk is expected to be low on an acute basis because EECs are at least 490x lower than the non-definitive endpoints.	No	No
	Chronic	Freshwater: <0.1 Estuarine/Marine: <0.1 – 0.4 LDPH-derived:	No	Based on the LDPH-derived endpoint, there were LOC exceedances for the uses of trifludimoxazin on tree crops, peanuts, and postharvest and fallow. However, risk to this taxon is considered to be low as there were no reported signs of hematological effects (from PPO-inhibition) in	No	No

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Taxa	Exposure Duration or Pathway	Risk Quotient (RQ) Range[1]	Potential Risk to Non-listed Species?[3]	Additional Information/ Lines of Evidence	Do Potential Risks to Non-Listed Species Extend Beyond the Treated Field?	Potential Direct Effects to Listed Species?[4,5]
		<0.1 – 1.4		the available aquatic vertebrate toxicity studies, no aquatic uses (including applications to rice and/or cranberry), and no LOC exceedances based on empirical toxicity data (non-adjusted). Therefore, risk is expected to be low from the uses of trifludimoxazin.		
Aquatic Water Column Invertebrates	Acute	Freshwater: NC Estuarine/Marine (Mysid): <0.01 Estuarine/Marine (Oyster): NC	No	RQs could not be calculated for freshwater invertebrates and oysters due to nondefinitive endpoints. However, both nondefinitive endpoints are nearly three orders of magnitude greater than the maximum EEC for trifludimoxazin exposure (1.26 µg a.i./L.; postharvest and fallow).	No	No
	Chronic	Freshwater: <0.1 - 0.1 Estuarine/Marine: <0.01 – 0.02	No	(No additional lines of evidence)	No	No
Aquatic Benthic Sediment Invertebrates	Acute	Freshwater: <0.01 Estuarine/Marine: <0.01	No	(No additional lines of evidence)	No	No
	Chronic	Freshwater Pore Water: <0.1 Sediment: <0.1	No	(No additional lines of evidence)	No	No

Table 5. Summary of Ecological Risk Conclusions for the Final Registration of the Herbicide Trifludimoxazin

Taxa	Exposure Duration or Pathway	Risk Quotient (RQ) Range[1]	Potential Risk to Non-listed Species?[3]	Additional Information/ Lines of Evidence	Do Potential Risks to Non-Listed Species Extend Beyond the Treated Field?	Potential Direct Effects to Listed Species?[4,5]
		Estuarine/Marine Pore Water: <0.1 Sediment: <0.1				
Birds (Surrogates for Terrestrial-Phase Amphibians and Reptiles)	Acute	Dose-based NC Dietary-based <0.01	No	The maximum dose-based EEC (12.6 mg a.i./kg-bw) is 159x less than the nondefinitive dose-based endpoint for birds.	No	No
	Chronic	Dietary-based <0.1	No	(No additional lines of evidence)		
Mammals	Acute	Dose-based <0.1 Dietary-based NC	No	There is not acute dietary toxicity endpoint. However, risk is expected to be low based on risk quantitation for the available acute and chronic dose-based and chronic dietary-based toxicity endpoints.	No	No
	Chronic	Dose-based <0.1 Dietary-based <0.1	No	(No additional lines of evidence)		
Bees and Other Terrestrial Invertebrates	Acute Adult	NC	No	Both acute oral and contact endpoints for adults were non-definitive), with all available LD_{50} values >107 µg a.i./bee and at least three orders of magnitude the maximum dietary dose (0.0918 µg a.i./bee). Therefore, risk is expected to be low.	No	No
	Chronic Adult	0.1	No	(No additional lines of evidence)	No	No

Table 5. Summary of Ecological Risk Conclusions for the Final Registration of the Herbicide Trifludimoxazin						
Taxa	**Exposure Duration or Pathway**	**Risk Quotient (RQ) Range[1]**	**Potential Risk to Non-listed Species?[3]**	**Additional Information/ Lines of Evidence**	**Do Potential Risks to Non-Listed Species Extend Beyond the Treated Field?**	**Potential Direct Effects to Listed Species?[4,5]**
	Acute Larval	NC	No	The acute larval oral exposure endpoint was non-definitive. However, the non-definitive endpoint (LD_{50}> 105 µg a.i./larva) is an order of magnitude greater than the dietary EEC (0.46 µg a.i./larva). Therefore, risk is expected to be low.	No	No
	Chronic Larval	<0.1 – 3.1	Yes	There were larval honey bee and other terrestrial invertebrate chronic exceedances based on evaluation of the most sensitive endpoint for the co-formulated active ingredient saflufenacil. However, risk did not extend beyond the treated field.	No	Yes

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C. Final Effects Determination under the Endangered Species Act

Consistent with ESA Section 7(a)(2), EPA assessed the potential effects of trifludimoxazin, and the co-formulated active ingredient saflufenacil, on listed species and designated critical habitats (CHs). The federal action area is the overall geographic extent or footprint of the federal action plus any additional areas where effects are reasonably expected to occur and is based on the registered uses of trifludimoxazin and the co-formulant saflufenacil. EPA conducted an overlap analysis to determine which listed species and designated CHs occur within this action area. EPA also considered life history (including factors such as diet and body weight), toxicity, and exposure information to determine whether trifludimoxazin will have No Effect (NE) or May Affect (MA) an individual of each listed species or its designated critical habitat.

Based on EPA's screening-level assessment, there are potential direct effects on listed bees and other terrestrial invertebrates (RQ range: 0.1-3.1), vascular and non-vascular aquatic plants (RQ range: <0.1-82), upland terrestrial plants (RQ range: 0.1-1970), and wetland plants (RQ range: 0.1-2482).

EPA's analysis identified 1,796 listed and proposed species and 921 designated CHs within the action area. EPA made NE determinations for 709 listed species and 499 designated CHs based on (1) low overlap; (2) the species or habitat is in an area where exposure is reasonably not expected to occur; (3) no direct toxicity to the taxon with no dependency on plants for PPHD; and/or (4) no plant-based physical and biological factors (PBFs). EPA made MA determinations for the remaining 1,087 listed species and 422 designated CHs.

For those listed species and designated CHs with MA determinations, EPA further distinguished whether trifludimoxazin is not likely to adversely affect (NLAA) or likely to adversely affect (LAA) an individual of the listed species or any designated CH. EPA made NLAA determinations for 203 listed species and 96 CHs. A majority of the NLAA determinations were based upon unlikely exposure due to habitat or when specific physical and biological factors for the designated CHs are not expected to be impacted by trifludimoxazin exposure. EPA made LAA determinations for 884 listed and proposed species and 326 CHs. These species were either listed or proposed terrestrial, wetland or aquatic plants or terrestrial invertebrates that may be directly affected by the proposed uses, or listed animals that depend upon plants for PPHD. For all designated CHs with proposed LAA determinations, the primary factor leading to the determination was potential effects on plant-based PBFs where plants serve as PPHD for the listed species. Table 6 summarizes the effects determinations by taxon for listed species and for designated CHs.

EPA further evaluated the LAA species and CHs and made predictions about the potential likelihood of future jeopardy to any listed species or potential likelihood of adverse modification of any designated CH from the use of trifludimoxazin (and the co-formulated active ingredient saflufenacil) after implementation of mitigations agreed upon by the registrant (as described in Sections VI.D. below). EPA originally predicted a potential likelihood of future J/AM for fourteen (14) listed terrestrial plant species and two (2) designated critical habitats, prior to the consideration of proposed mitigations that are expected to avoid the potential likelihood of future J/AM. These mitigations for the uses of trifludimoxazin are also expected to reduce incidental

take and adverse effects to plants which are likely to result from this action without these mitigations.

Table 6. Number of Listed and Proposed Species and Designated Critical Habitat Effects Determinations and EPA's Predictions of Potential Likelihood of Future Jeopardy or Adverse Modification by Taxon Following Commitment to EPA-Proposed Mitigations.[1]

Taxon	Number of Species/CH[2]	NE	NLAA	LAA, No J/AM	LAA, J/AM
Amphibians[2]	42	5	11	26	0
Aquatic Invertebrates	194	13	15	166	0
Birds	111	61	13	37	0
Fish	180	17	11	152	0
Mammals	104	18	34	52	0
Plants	950	501	81	368	0
Reptiles[3]	55	10	16	29	0
Terrestrial Invertebrates[4]	161	84	22	54	0
Total Listed and Proposed Species	1796	709	203	884	0
Designated and Proposed Critical Habitat	921	499	96	326	0

[1] CH = critical habitat; NE = no effect; NLAA = not likely to adversely affect; LAA = likely to adversely affect; J = potential likelihood of future jeopardy; AM = potential likelihood of future adverse modification

[2] Reflects the species and critical habitats listed or proposed as of February 16th, 2022 due to availability of overlap and life history data from the Services.

[3] "Amphibians" and "Reptiles" includes species that have both a terrestrial and aquatic phase.

[4] Terrestrial Invertebrates" includes damselflies which have both a terrestrial and aquatic phase

C. Benefits Assessment

Trifludimoxazin is a LDPH and PPO inhibitor, classified by the Weed Science Society of America (WSSA) as Group 14 herbicide, which is proposed for preemergence and/or postemergence (burndown) control of a variety of problematic annual broadleaf weed species and some annual grass weed species. Based on usage information, for agricultural use sites, the five most commonly used herbicides in terms of acres treated for control of trifludimoxazin target weeds are glyphosate, atrazine, mesotrione, S-metolachlor, and fomesafen.

Field trials indicate that trifludimoxazin could provide comparable control of major weed pests such as waterhemp and Palmer amaranth, including some PPO-resistant biotypes, to herbicides such as flumioxazin, saflufenacil, and sulfentrazone that are currently registered and used by growers. Trifludimoxazin would be an additional broad-spectrum weed control option in the registered crops and may control some PPO-resistant weeds depending on the mechanism of resistance.

For more detailed information on benefits for trifludimoxazin refer to the following document in the docket EPA-HQ-OPP-2022-0649 "Revised Benefits Review for a New Active Ingredient Registration of Trifludimoxazin for Preemergence and/or Postemergence Control of Annual Broadleaf and Grass Weeds in Various Agricultural Use Sites".

D. Synergy

Some chemical companies have made claims in patents that certain combined mixtures of pesticides elicit synergistic effects, meaning that when the chemicals are mixed the combined effect is greater than the sum of the individual effects of each chemical. But upon inspection of these patents for trifludimoxazin, the underlying raw data of three patents are cumulative of data disclosed in the patent specification and are not replicated; therefore, they are relevant but not suitable for quantitative use in the ecological risk assessment. More details on the synergy patent search review are in the document entitled Trifludimoxazin: Review of U.S. Patent Search Submission in docket ID number EPA-HQ-OPP-2022-0649.

V. PUBLIC COMMENTS

On March 27, 2023, the EPA published a Notice of Receipt (NOR) in the Federal Register (EPA-HQ-OPP-2022-0649) notifying that EPA was in receipt of an application to register pesticide products containing an active ingredient not included in any currently registered pesticide products (trifludimoxazin) and announced a public comment period of 30 days. EPA received one comment on the NOR from the Center for Food Safety (CFS). CSF's comment summarized the history of the previous registration action, as well as detailed the risks, benefits, and mitigations previously proposed. CSF emphasized the need of EPA to meet FIFRA and ESA obligations. The comment can be found in docket ID number EPA-HQ-OPP-2022-0649 at www.regulations.gov.

Trifludimoxazin was previously registered with the Agency, and the registrant, BASF corporation, subsequently voluntarily withdrew the initial registration. This is a second application to register

this chemical with the Agency, and BASF Corporation has not submitted any tolerance petition with this new application as tolerances were already established in relation to the previous trifludimoxazin registration application. Therefore, the Agency has not published a notice of filing (NOF) in the Federal Register under the Federal Food, Drug, and Cosmetic Act (FFDCA) requesting the establishment of tolerance regulations for residues of trifludimoxazin on various commodities.

The comments are addressed in the Response to Public Comments (RTC) document published to the docket alongside this Final Decision Memo. The Memorandum Supporting Proposed Decision to approve registration for the new active ingredient of trifludimoxazin was available for 45-day public comment on June 11, 2025, closing on July 26, 2025. The Agency received 22 comments to the docket. The agency responded to the comments received on the NOR, and proposed decision document in the RTC and can be found in docket ID number EPA-HQ-OPP-2022-0649 at www.regulations.gov. None of the comments received changed the Agency's final regulatory decision to approve the registration.

VI. FINAL REGULATORY DECISION

In accordance with FIFRA, EPA registers a pesticide unconditionally when it determines that it will not cause unreasonable adverse effects on humans or the environment, while taking into account the economic, social, and environmental costs and benefits of the use of the pesticide. Under FIFRA, EPA is charged with balancing risks posed by the use of a pesticide against its benefits. EPA must determine if the benefits in light of its use outweigh the risks for EPA to register the pesticide.

FIFRA 3(c)(5) requires EPA to approve registration if the Agency determines that:

(a) its composition is such as to warrant the proposed claims for it;
(b) its labeling and other material required to be submitted comply with the requirements of this subchapter;
(c) it will perform its intended function without unreasonable adverse effects on the environment; and
(d) when used in accordance with widespread and commonly recognized practice it will not generally cause unreasonable adverse effects on the environment.

A. Rationale and Risk Mitigation

EPA is proposing to issue unconditional registrations under FIFRA section 3(c)(5) for the following products for use on conventional varieties of legume vegetable group 6 & 7; citrus fruit group 10-10; pome fruit group 11-10; tree nuts group 14-12; cereal grain group 15 & 16 (except rice); peanut; and soybean.

- Tirexor Herbicide Technical (EPA File Symbol 7969-491) as a TGAI.
- Tirexor Herbicide (EPA File Symbol 7969-492) as an end-use product.
- Vulcarus Herbicide (EPA File Symbol 7969-496) as an end-use product.
- Rexovor Herbicide (EPA File Symbol 7969-494) as an end-use product.

- Voraxor Herbicide (EPA File Symbol 7969-495) as an end-use product.
- Antorix Herbicide (EPA File Symbol 7969-493) as an end-use product.

To determine whether the products will cause unreasonable adverse effects under FIFRA, EPA is charged with considering the economic, social, and environmental costs and benefits of the use of the pesticide. To determine the risks and benefits, the Agency reviewed a large body of information based on how these products will be used according to the final labeling. EPA determines whether a product will generally cause unreasonable adverse effects by considering whether the benefits of the product outweigh any potential risks of concern or adverse impacts from its use.

EPA has determined that the database is complete for assessment of risks to human health and the environment for the trifludimoxazin agricultural crop uses. Based on these data, EPA has not identified any dietary or aggregate risks of concern for human health. Additionally, EPA has not identified any direct risks of concern for listed or non-listed freshwater or estuarine/marine invertebrates, fish, aquatic-phase amphibians, mammals, or birds (surrogates for terrestrial-phase amphibians and reptiles) on an acute or chronic exposure basis. In addition, there were no acute direct risks to bees. However, EPA identified potential direct risks of concern for terrestrial, wetland, and aquatic plants, as well as chronic risk to bees and non-*Apis* terrestrial invertebrates that may forage on fields that have been treated with trifludimoxazin products containing the co-formulant saflufenacil. The Agency believes the proposed mitigations to reduce runoff and spray drift described in the ESA section below will avoid the potential likelihood of future jeopardy for listed species and/or adverse modification of designated critical habitat. These mitigations will also reduce the likelihood of adverse effects to individual listed and non-listed species including bees.

Trifludimoxazin is a non-selective protoporphyrinogen oxidase (PPO) inhibitor in the n-phenyl-imide chemical family. It is for pre- and post-emergence control of annual and perennial grass and broadleaf weeds. Trifludimoxazin products could be used in existing weed control programs, or as an additional rotation or tank-mix PPO partner, including as a part of Herbicide Resistance Management (HRM) and Integrated Pest Management (IPM) programs.

The Agency finds the benefit of having a broad spectrum, non-selective foliarly applied herbicide for control of broadleaf weeds and grasses, as a rotational tool, partnered with the mitigation measures for any environmental risks. EPA reviewed the compositions of the products and determined that the claims made are warranted as the data and product label support the approval of the registrations. The final labeling, which has been revised to include additional mitigation measures to address ecological risks, contains all the necessary requirements and restrictions, and complies with the requirements of FIFRA.

Therefore, considering the assessed risk to human health and the environment, consistent with the requirements of FIFRA section 3(c)(5), EPA has determined that trifludimoxazin meets the regulatory standard under FIFRA and concludes that registering the products and the use of trifludimoxazin as a non-selective foliar herbicide for weed control in conventional varieties of legume vegetable group 6 &7; citrus fruit group 10-10; pome fruit group 11-10; tree nuts group 14-12; cereal grain group 15 & 16 (except rice); peanut; and soybean, would not cause unreasonable adverse effects on human health or the environment when the herbicides are used in accordance with the labels, and widespread and commonly recognized practice.

B. Endocrine Disruptor Screening Program

The Federal Food Drug and Cosmetic Act (FFDCA) §408(p) requires EPA to develop a screening program to determine whether certain substances (including pesticide active and other ingredients) may have an effect in humans similar to an effect produced by a "naturally occurring estrogen, or other such endocrine effects as the Administrator may designate." (21 U.S.C. 346a(p)). In carrying out the Endocrine Disruptor Screening Program (EDSP), FFDCA section 408(p)(3) requires that EPA "provide for the testing of all pesticide chemicals," which includes "any substance that is a pesticide within the meaning of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), including all active and pesticide inert ingredients of such pesticide." (21 U.S.C. 231(q)(1) and 346a(p)(3)). However, FFDCA section 408(p)(4) authorizes EPA to, by order, exempt a substance from the EDSP if the EPA "determines that the substance is anticipated not to produce any effect in humans similar to an effect produced by a naturally occurring estrogen." (21 U.S.C. 346a(p)(4)).

The EDSP initiatives developed by EPA in 1998 includes human and wildlife testing for estrogen, androgen, and thyroid pathway activity and employs a two-tiered approach. Tier 1 consists of a battery of 11 screening assays to identify the potential of a chemical substance to interact with the estrogen, androgen, or thyroid pathways. Tier 2 testing is designed to identify any adverse endocrine-related effects caused by the substance and establish a dose-response relationship for any adverse estrogen, androgen, or thyroid effect. If EPA finds, based on that data, that the pesticide has an adverse endocrine-related effect on humans, FFDCA § 408(p)(6) also requires EPA, "… as appropriate, [to] take action under such statutory authority as is available to the Administrator … as is necessary to ensure the protection of public health." (21 U.S.C. 346a(p)(6)).

Between October 2009 and February 2010, EPA issued Tier 1 test orders/data call-ins (DCIs) for its first list of chemicals ("List 1 chemicals") for EDSP screening and subsequently required submission of EDSP Tier 1 data for a refined list of these chemicals. EPA received data for 52 List 1 chemicals (50 pesticide active ingredients and 2 inert ingredients). EPA scientists performed weight-of-evidence (WoE) analyses of the submitted EDSP Tier 1 data and other scientifically relevant information (OSRI) for potential interaction with the estrogen, androgen, and/or thyroid signaling pathways for humans and wildlife.

In addition, for FIFRA registration, registration review, and tolerance-related purposes, EPA collects and reviews numerous studies to assess potential adverse outcomes, including potential outcomes to endocrine systems, from exposure to pesticide active ingredients. Although EPA has been collecting and reviewing such data, EPA has not been explicit about how its review of required and submitted data for these purposes also informs EPA's obligations and commitments under FFDCA section 408(p). Consequently, on October 27, 2023, EPA issued a Federal Register Notice (FRN) providing clarity on the applicability of these data to FFDCA section 408(p) requirements and near-term strategies for EPA to further its compliance with FFDCA section 408(p). This FRN, entitled Endocrine Disruptor Screening Program (EDSP): Near-Term Strategies for Implementation' Notice of Availability and Request for Comment (88 FR 73841) is referred to here as EPA's EDSP Strategies Notice. EPA also published three documents supporting the strategies described in the Notice:

- Use of Existing Mammalian Data to Address Data Needs and Decisions for Endocrine Disruptor Screening Program (EDSP) for Humans under FFDCA Section 408(p);
- List of Conventional Registration Review Chemicals for Which an FFDCA Section 408(p)(6) Determination is Needed; and,
- Status of Endocrine Disruptor Screening Program (EDSP) List 1 Screening Conclusions (referred to here as List 1 Screening Conclusions).

The EDSP Strategies Notice and the support documents are available on www.regulations.gov in docket number EPA-HQ-OPP-2023-0474. As explained in these documents, EPA is prioritizing its screening for potential impacts to the estrogen, androgen, and thyroid systems in humans, focusing first on conventional active ingredients. Although EPA voluntarily expanded the scope of the EDSP to screening for potential impacts to the estrogen, androgen, and thyroid systems in wildlife, EPA announced that it is not addressing this discretionary component of the EDSP at this time, considering its current focus on developing a comprehensive, long-term approach to meeting its Endangered Species Act obligations (See EPA's April 2022 ESA Workplan and November 2022 ESA Workplan Update). However, EPA notes that for 35 of the List 1 chemicals (33 active ingredients and 2 inert ingredients), Tier 1 WoE memoranda indicate that available data were sufficient for FFDCA section 408(p) assessment and review for potential adverse effects to the estrogen, androgen, or thyroid pathways for wildlife. For the remaining 17 List 1 chemicals, Tier 1 WoE memoranda made recommendations for additional testing. EPA expects to further address these issues taking into account future scientific work.

As discussed in EPA's EDSP Strategies Notice and supporting documents, EPA will be using all available data to determine whether additional data are needed to meet EPA's obligations and discretionary commitments under FFDCA section 408(p). For some conventional pesticide active ingredients, the toxicological databases may already provide sufficient evaluation of the chemical's potential to interact with estrogen, androgen, and/or thyroid pathways and EPA will generally not need to obtain any additional data to reevaluate those pathways, if in registration review, or to provide an initial evaluation for new active ingredient applications. For instance, EPA has endocrine-related data for numerous conventional pesticide active ingredients through either a two-generation reproduction toxicity study performed in accordance with the current guideline (referred to here as the updated two-generation reproduction toxicity study; OCSPP 870.3800 - Reproduction and Fertility Effects) or an extended one-generation reproductive toxicity (EOGRT) study (OECD Test Guideline 443 - Extended One-Generation Reproductive Toxicity Study). In these cases, EPA expects to make FFDCA 408(p)(6) decisions for humans without seeking further estrogen or androgen data. However, as also explained in the EPA's EDSP Strategies Notice, where these data do not exist, EPA will reevaluate the available data for the conventional active ingredient during registration review to determine what additional data, if any, might be needed to confirm EPA's assessment of the potential for impacts to estrogen, androgen, and/or thyroid pathways in humans. For more details on EPA's approach for assessing these endpoints, see EPA's EDSP Strategies Notice and related support documents.

Also described in the EPA's EDSP Strategies Notice is a framework that represents an initial approach by EPA to organize and prioritize the large number of conventional pesticides in registration review. For conventional pesticides with a two-generation reproduction toxicity study performed under a previous guideline (i.e., an updated two-generation reproduction toxicity study

or an EOGRT is not available), EPA has used data from the Estrogen Receptor Pathway and/or Androgen Receptor Pathway Models to identify a group of chemicals with the highest priority for potential data collection (described in EPA's EDSP Strategies Notice as Group 1 active ingredients). For these cases, although EPA has not reevaluated the existing endocrine-related data, EPA has sought additional data and information in response to the issuance of EPA's EDSP Strategies Notice to better understand the positive findings in the ToxCast™ data for the Pathway Models and committed to issuing DCIs to require additional EDSP Tier 1 data to confirm the sufficiency of data to support EPA's assessment of potential adverse effects to the estrogen, androgen, and/or thyroid pathways in humans and to inform FFDCA 408(p) data decisions. For the remaining conventional pesticides (described in EPA's EDSP Strategies Notice as Group 2 and 3 conventional active ingredients), EPA committed to reevaluating the available data to determine what additional studies, if any, might be needed to confirm EPA's assessment of the potential for impacts to endocrine pathways in humans. Since the release of the EDSP Strategies Notice, EPA has updated these groups for conventional pesticides. As further information is received, these groups may be updated in the future as needed.

As noted in EPA's EDSP Strategies Notice and summarized above, where EPA has received endocrine-related data through an updated two-generation reproduction toxicity study or EOGRT study, EPA will generally not need to obtain any additional data, including EDSP Tier 1 data, to confirm its assessment of the potential for adverse effects to the estrogen and androgen pathways in humans. In the case of trifludimoxazin, an EOGRT study has been submitted and no additional data are needed, at this time, to support EPA's assessment of the potential for adverse estrogen and androgen effects in humans.

An EOGRT study that evaluates lifestage sensitivity to thyroid effects is available and the results have been incorporated into the human health risk assessment for trifludimoxazin. Therefore, EPA has concluded, at this time, that the points of departure for human health risk assessment to evaluate the proposed uses of trifludimoxazin are protective of potential adverse estrogen, androgen, and thyroid effects in humans.

The current PODs for human health risk assessment for trifludimoxazin are based on potential adverse androgen and thyroid effects. Since the human health risk assessment did not identify any risks of concern, EPA has completed its FFDCA section 408(p)(6)-related commitments and obligations "to ensure the protection of public health" at this time.

C. Endangered Species Assessment (ESA)

ESA section 7(a)(2) provides that "*[e]ach Federal agency shall, in consultation with [FWS] ensure that any action authorized, funded, or carried out by such agency. . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species. . . .*"
EPA completed effects determinations for federally listed threatened and endangered species (listed species) for the registered uses of trifludimoxazin in the areas where it may be applied. EPA evaluated whether the registration of this active ingredient poses any reasonable expectation of discernible effects to listed species and designated critical habitats within the action area in the listed

species effects determination. The ESA effects determination makes use of the best available scientific and commercially available information and considered both direct and PPHD effects. The term "direct effects" refers to decreases in the survival, growth, or reproduction of individuals of a listed species due to exposure to trifludimoxazin. The term "PPHD effects" refers to impacts on individuals of a listed species that may be the result of the effects of trifludimoxazin to organisms on which the listed species depends upon for prey, pollination, habitat, and/or dispersal.

In the *Final* effects determinations (*Trifludimoxazin: Ecological Risk Assessment and Biological Evaluation for the Proposed Section 3 New Chemical Registration*), EPA concluded that the use of the registered trifludimoxazin products may affect, and are LAA, multiple listed species and designated critical habitats. When considering an action (*e.g.*, the registration of a pesticide product), the ESA directs federal agencies to avoid jeopardizing listed species or adversely modifying their designated critical habitats. An LAA determination is not equivalent to a jeopardy determination; however, EPA can predict the potential likelihood for future J/AM to help inform the formal consultation with the Services and resulting Biological Opinions developed by the Services (*See 50 C.F.R. 402.40(b)(1)*). The purpose of the EPA evaluation of the potential likelihood of future J/AM is to inform mitigations to avoid and minimize exposures to listed species earlier in the consultation process. Therefore, for those species and critical habitats with preliminary LAA determinations, EPA further assessed the potential likelihood that the registered trifludimoxazin products would lead to future J/AM determinations. The Services though will make the final determination as to any jeopardy to listed species and any adverse modification to designated critical habitats.

In the effects determination, EPA originally predicted a potential likelihood of future J/AM for fourteen (14) listed terrestrial plant species and two (2) designated critical habitats, prior to the consideration of proposed mitigations that are expected to avoid the potential likelihood of future J/AM. For one species Spring Creek Bladderpod (*Lesquerella perforata*), the prediction of jeopardy was based on the assumption that this species is found on the treated agricultural field and the overlap at 0 m (i.e., on-field). EPA predicted a potential likelihood of future jeopardy for the remaining thirteen plant species outlined in the EPA's 2024 Vulnerable Species Action Plan and are found in close proximity (>1% overlap at 30 m or less for any associated UDL) to trifludimoxazin use sites. The main risk concern for trifludimoxazin is direct effects (via spray drift and runoff) to listed and non-listed terrestrial and wetland aquatic plants and PPHD effects to listed animals that rely on terrestrial plants and/or vascular and non-vascular aquatic plants. To address the predicted potential likelihood of future jeopardy of listed species and adverse modification of designated critical habitat, EPA used the Herbicide Strategy (HS) framework to inform the level of mitigations necessary to reduce spray drift/runoff.

Overall, EPA identified six points of spray drift/runoff mitigation as sufficient to make population- and community-level effects to listed species not likely from the registered uses of trifludimoxazin. Users must select mitigations that total six points from the website (https://www.epa.gov/pesticides/mitigation-menu). The mitigations identified for the product label, which include national alignment with the HS and committed to by the registrant, include 15- and 110- ft ground and aerial spray drift buffers, respectively, between the application area and closest downwind edge of non-target aquatic and terrestrial habitat, and 6 mitigation points for all uses, and establishment of a Pesticide Use Limitation Areas (PULA) for one species (Spring Creek

Bladderpod). In addition, these mitigations include a reduction in number of applications to tree crops (4 to 3 maximum annual applications) for co-formulated products containing saflufenacil to mitigate risk to terrestrial invertebrates. These mitigations eliminated the predicted potential likelihood of future jeopardy for all but one listed species (Spring Creek Bladderpod). For this species, geographically-specific mitigations as mandated by species-specific PULA, that will be implemented through Bulletins Live! Two (BLT), are expected to reduce exposures so that there is no predicted potential likelihood of future J/AM for any listed/proposed species or designated/proposed critical habitat. Through this mitigation spray applications are prohibited in specific areas between September 15th and May 15.th

EPA predicts that the mitigation measures on these labels reduce the potential likelihood of adverse effects on listed species and their designated critical habitats to the extent that the registration of products containing trifludimoxazin (and the co-formulated active ingredient saflufenacil) would not result in predictions of a potential likelihood of future jeopardy for any listed species or potential likelihood of future adverse modification for any designated CHs. However, the Services have the sole authority to make a final determination of whether these registration actions will likely cause jeopardy of any listed species or adverse modification of any designated CHs. The Services provide their determinations in their biological opinions and may determine that additional mitigations are necessary.

When EPA determines that initiating formal consultation is appropriate on a FIFRA action, the Agency may still be able to proceed with the action before completing consultation if it determines that doing so will not result in "any irreversible or irretrievable commitment of resources . . . [that] has the effect of foreclosing the formulation or implementation of any reasonable and prudent alternative measures which would not violate [ESA section 7(a)(2)]." See 16 U.S.C. § 1536(d). As stated above, EPA initiated formal consultation with the Services. EPA will work with the Services to complete the consultation process as expeditiously as possible. Acknowledging that the final determination on jeopardy and adverse modification is made by the Services and that either (or both) of the Services may not fully adopt EPA's prediction that this action will avoid jeopardy and adverse modification, the registration includes a term to allow EPA to address any further mitigation determined to be necessary following consultation. The Agency has also concluded that granting the registrations for diflufenican prior to the completion of formal consultation with the Services will not result in any irreversible or irretrievable commitment of resources that would have the effect of foreclosing the formulation or implementation of any reasonable and prudent alternative measures, in accordance with ESA section 7(d)[4].

D. Label Requirements

The following statements are included on the final end-use product labels.

The following label mitigations have been added to the final product labels (EPA File Symbol 7969-492, 7969-496, 7969-494, 7969-495 and 7969-493) to mitigate environmental risks:

[4] Endangered Species Act Section 7(d) Consistency Determination with Respect to the Application for the Registration of Products Containing the New Active Ingredient Trifludimoxazin.

1. For all use sites:

    a. DO NOT apply the product through any type of irrigation system (e.g. chemigation)
    b. DO NOT contaminate water used for irrigation or domestic purposes
    c. DO NOT sell, distribute, or use in Alaska, Hawaii, US Territories (including American Samoa, Guam, Puerto Rico, Mariana Islands, US Virgin Islands), and in Nassau and Suffolk counties in New York State.

2. The following statements are the use directions in the crop-specific information section of the product label:

For citrus crop group 10-10, tree nuts crop group 14-12, and pome fruits crop group 11-10:

a. DO NOT apply aerially in bearing or non-bearing fruit and nut trees
b. DO NOT apply more than 0.022 lbs a.i. per acre in a single application to citrus, tree nuts, and pome fruits.
c. DO NOT apply more than 0.089 lbs a.i. per acre per year in citrus, tree nuts, and pome fruits.

For legume vegetables crop groups 6 & 7, small cereal grain crop groups 15 &16 (except rice), and corn:

a. DO NOT apply more than 0.011 lbs a.i. per acre in a single application to legume vegetables, small cereal grains (except rice), and corn.
b. DO NOT apply more than 0.011 lbs a.i. per acre per year to legume vegetables, small cereal grain (except rice) and corn.

For soybean:

a. DO NOT apply more than 0.011 lbs a.i. per acre in a single application to soybean.
b. DO NOT apply more than 0.022 lbs a.i. per acre per year to soybean.

For peanut:

a. DO NOT apply aerially in peanut, apply only by ground application equipment
b. DO NOT apply more than 0.034 lbs a.i. per acre in a single application.
c. DO NOT apply more than 0.034 lbs a.i. per acre per year.

Post-harvest and fallow application:

a. DO NOT apply more than 0.022 lbs a.i. per acre in a single application for post-harvest and fallow application.
b. DO NOT apply more than 0.022 lbs a.i. per acre per year for post-harvest and fallow application.

3. The following statements are the use directions in the crop-specific information section of the product label for co-formulated products (Voraxor, 7969-495 and Antorix, 7969-493):

    a. DO NOT apply more than 8.25 fl ozs per acre (0.134 lbs a.i. per acre saflufenacil + 0.067 lbs a.i. per acre trifludimoxazin) as a maximum cumulative amount from sequential applications per year.
    b. DO NOT apply more than 3 applications per year.

4. The following Pollinator Advisory statement is included in the "Environmental Hazards" section of the co-formulated products (Voraxor, 7969-495L and Antorix, 7969-493):

    a. **Pollinator Advisory statement:** This product is potentially toxic to bee larvae. Avoid application of this product to crops in bloom or if bees are actively collecting pollen or nectar from the treatment area.

5. To address direct effects to listed plants that establish off-site and prey, pollination, habitat, and dispersal (PPHD) effects to listed animal species that rely on plants, the following applies to all use sites:

- The following language is included in the "**Mandatory Spray Drift Management**" section:

  For aerial and ground applications, maintain a wind-directional (downwind) buffer distance (for aerial - 110 feet and for ground - 15 feet) from the edge of the treated area. The buffer footage distance may include the following managed areas, provided that people are not present within the application exclusion zone during the application, and they will not be contacted by the pesticide, either directly or through drift (see 40 CFR 170.405(a) and 40 CFR 170.505(a)):

    a. Buffer Restrictions for Ground and Aerial Applications:
        - Ground – 15 ft buffer between application area and closest downwind edge of non-target aquatic AND terrestrial habitat
        - Aerial – 110 ft buffer between the application area and closest downwind edge of non-target aquatic AND terrestrial habitat

MANDATORY SPRAY DRIFT MANAGEMENT

Ground Boom Applications:

- During application, the Sustained Wind Speed, as defined by the National Weather Service (standard averaging period of 2 minutes), must register between 3 and 15 miles per hour.
- Wind speed and direction must be measured on location using a windsock or anemometer (including systems to measure wind speed or velocity using application equipment).

- Wind speed must be measured at the release height or higher, in an area free from obstructions such as trees, buildings, and farm equipment.
- Do not release spray at a height greater than 2 feet above the ground or crop canopy.
- Applicators must select nozzle and pressure that deliver coarse to very coarse droplets in accordance with American Society of Agricultural & Biological Engineers Standard 572 (ASAE S572).
- DO NOT apply during temperature inversions.

MANDATORY SPRAY DRIFT MANAGEMENT
Aerial Applications:

- DO NOT release spray at a height greater than 10 ft above the ground or vegetative canopy, unless a greater application height is necessary for pilot safety.
- Applicators must select nozzle and pressure that deliver very coarse or coarser droplets in accordance with the most current version of the American Society of Agricultural & Biological Engineers Standard 641 (ASABE S641).
- During application, the Sustained Wind Speed, as defined by the National Weather Service (standard averaging period of 2 minutes) must register between 3 and 15 miles per hour.
- Wind speed and direction must be measured on location using a windsock, an anemometer (including systems to measure wind speed or velocity on an aircraft), or an aircraft smoke system.
- Wind speed must be measured at the release height or higher, in an area free from obstructions such as trees, buildings, and farm equipment.
- If the wind speed is 10 miles per hour or less, applicators must use a minimum of ½ swath displacement upwind at the downwind edge of the field. When the wind speed is between 11-15 miles per hour, applicators must use a minimum of ¾ swath displacement upwind at the downwind edge of the field.
- When the wind speed is between 11-15 miles per hour, the boom length must be 65% or less of the wingspan for fixed wing aircraft and 75% or less of the rotor diameter for helicopters. Otherwise, the boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters.
- DO NOT apply during temperature inversions.

Mandatory Ecological Spray Drift Buffer Requirements:
Ecological spray drift buffers are required for this product for aerial, ground boom to field crops unless the application is occurring as a specialized application (e.g., soil injection, tree injection, spot treatment, small treatment area less than 1/10th of an acre). Access EPA's Mitigation Menu Website at www.epa.gov/pesticides/mitigation-menu for the full list of parameters to evaluate whether your field is subject to the required spray drift buffer.

Applicators must access and search Bulletins Live! Two (BLT) at https://www.epa.gov/pesticides/bulletins within six months prior to or on the day of the application to determine whether the application site falls within a Pesticide Use Limitation Area (PULA). If you are located inside a PULA, follow the instructions in the BLT bulletin. If the application site falls outside of a PULA, follow the instructions in the "Outside a PULA" section below. Additional restrictions may be present in bulletins—always follow the most restrictive bulletin instructions.

Outside PULAs:
If you are located outside of a PULA, a minimum down-wind spray drift buffer must be maintained between the application area and any unmanaged areas for applications to field crops. Unmanaged areas are defined in comparison to managed areas--anything that is not a managed area is an unmanaged area. Refer to the "Managed Areas Definition" section of this label for information on managed areas.

Mandatory Spray Drift Buffers

For aerial and ground applications, maintain a wind- directional (downwind) buffer distance from the edge of the treated area as follows:

Application Method	Minimum Required Buffer Distance
Aerial	110 feet
Ground	15 feet

Reduction Options for All Ecological Wind-Directional Drift Buffers:
The applicator may choose among the ecological drift buffer reduction options on EPA's Mitigation Menu Website (https://www.epa.gov/pesticides/mitigation-menu) to reduce the wind-directional buffer distance before applying this product. All buffer reduction options selected must align with the minimum droplet size and release height requirements on this label.

Examples of buffer reduction options include: using larger droplets, lowering the boom height, reducing the maximum single application rate, reducing the number of passes across the field, maintaining a windbreak or hedgerow, or using directed sprayers.

The buffer reduction options must be employed in accordance with the instructions and descriptions on EPA's Mitigation Menu Website. When using more than one option during the application, the percent reduction in the buffer distances may be added together. The maximum buffer reduction that can be achieved by a combination of buffer reduction options is 100% (i.e., no drift buffer).

Additional restrictions may be present in bulletins—always follow the most restrictive bulletin instructions. If you are located in an area where PULAs overlap, follow the most restrictive requirements across all bulletins. When tank mixing, the most restrictive of the products' label or bulletin requirements must be followed (e.g., drift buffers that are not wind-directional, Application Exclusion Zone drift requirements, drift buffers to residences, schools, and parks where people could be present, use prohibitions, timing restrictions, and application method prohibitions).

SPRAY DRIFT ADVISORIES:

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. Be aware of nearby non-target sites and environmental conditions.

IMPORTANCE OF DROPLET SIZE
An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size – Ground boom

- Volume – Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure – Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle – Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

Controlling Droplet Size – Aircraft:

- Adjust Nozzles – Follow nozzle manufacturers' recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

BOOM HEIGHT – Ground Boom
For ground equipment, the boom should remain level with the crop and have minimal bounce. Automated boom height controllers are recommended with large booms to better maintain optimum nozzle to canopy height. Excessive boom height will increase the potential for spray drift.

HOODED (OR SHIELDED) SPRAYERS
Shielding the boom or individual nozzles can reduce spray drift. Consider using hooded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

TEMPERATURE AND HUMIDITY
When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of

smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

WIND

Drift potential generally increases with wind speed.
Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

MEASURING WIND SPEED AND WIND DIRECTION

Best Management Practices for measuring wind speed and wind direction:

- Applicators should check and acquire the predicted wind speed and direction for the application site within 12 hours prior to conducting applications to determine the time periods wind speed is likely to fall outside the applicable thresholds.
- Applicators should reassess wind speed and direction at the application site at least every hour while applications are in progress.
- Measuring wind speed and direction can be done by:
  - Relying on equipment on the application equipment that measures wind speed (e.g., aerial equipment).
  - Using a tower anemometer with telemetry or handheld anemometer. Users should read user manual on how to calibrate, operate and interpret the output from an anemometer. Ground applicators should stop at least every hour to take a reading with a tower anemometer with telemetry or handheld anemometer. Some anemometers may have software that would allow users to view wind measurements in real time while making an application, and, those cases, applicators would not have to stop to take measurements.
  - Using a windsock. Wind can be estimated with a windsock using the strips on a windsock. The applicator should consult the user manual for the windsock on wind speed estimation and direction of wind. Applicators should look at the sock at least every hour to estimate wind speed and direction.
  - Using an aircraft smoke system. Laying down several puffs of smoke along different lines using an aircraft smoke system can provide an accurate view of what the wind speed and direction for the application.
  - Checking behind the spray rig at least every hour to see if the spray has changed direction from when the application started.

- To minimize runoff from use sites the following language is required in the "**application instructions**" section. Please note that the EPA's mitigation menu website noted below should be utilized.
  - DO NOT apply during rain.
  - DO NOT apply this product when soil is saturated or at field capacity, or when a storm event likely to produce runoff from the treated area is expected to occur within 24 hours following application.

- Within 24 hours after application, DO NOT irrigate the treatment area to the point of runoff.

MANAGEMENT OF RUNOFF/EROSION: A variety of factors including soil type, slope, and weather conditions (e.g., rainfall) can influence volume and intensity of water running off the treated field. The applicator should evaluate factors and make appropriate adjustments when applying this product. Land management, agronomic practices, field conditions, and application measures that reduce, to the maximum extent practicable, runoff from treated fields, should be implemented by land managers/users of this product.

MANDATORY RUNOFF MITIGATION:

Applicators must access and search Bulletins Live! Two (BLT) at https://www.epa.gov/pesticides/bulletins within six months prior to or on the day of the application to determine whether the application site falls within a Pesticide Use Limitation Area (PULA). If you are located inside a PULA, follow the instructions in the BLT bulletin. If the application site falls outside of a PULA, follow the instructions in the section below.

- **6** mitigation points are required for all field crops listed on this label. Follow the steps below to achieve points.

Step 1. To achieve the mitigation points specified above, visit EPA's mitigation menu website (www.epa.gov/pesticides/mitigation-menu) for a full list of mitigation and mitigation relief options.

Step 2. Determine if you are eligible for mitigation relief. Runoff/erosion mitigation is NOT required if certain field/application parameters are present at the time of application (*e.g.*, subsurface or tile drains with controlled outlet, perimeter berm systems, irrigation tailwater return systems, spot treatment, etc).

Step 3. If the application site does not meet the field/application parameters specified on EPA's mitigation menu website, choose among the mitigation and/or mitigation relief options on EPA's mitigation menu website to meet or exceed the required points noted here before applying this product.

Step 4. To achieve mitigation points for the application, the mitigation and mitigation relief measures must be:

- Employed in accordance with the instructions and descriptions on EPA's Mitigation Menu Website.
- In place during the application unless a different timing (such as before or after application) is specifically provided in the measure's description on EPA's Mitigation Menu Website. EPA may periodically update the Mitigation Menu Website, for example, by adding new mitigation measures or updating a mitigation measure description.

Step 5. Additional restrictions may be present in bulletins—always follow the most restrictive bulletin instructions. If you are located in an area where PULAs overlap, follow the most

restrictive requirements across all bulletins. When tank mixing, the most restrictive requirements must be followed between the products' labels and bulletins.

6. To address on-field effects to non-target species, specifically the listed plant species Spring Creek Bladderpod, included in the "Bulletins Live! Two" web-based system (BLT), the end-use product directs all users to access the BLT prior to application, according to the label statement below:

   ENDANGERED AND THREATENED SPECIES PROTECTION REQUIREMENTS: Before using this product, you must obtain any applicable Endangered Species Protection Bulletins ('Bulletins') within six months prior to or on the day of application. To obtain Bulletins, go to Bulletins Live! Two (BLT) at https://www.epa.gov/pesticides/bulletins. When using this product, you must follow all directions and restrictions contained in any applicable Bulletin(s) for the area where you are applying the product, including any restrictions on application timing if applicable. It is a violation of Federal law to use this product in a manner inconsistent with its labeling, including this labeling instruction to follow all directions and restrictions contained in any applicable Bulletin(s). For general questions or technical help, call 1-844-447-3813, or email *ESPP@epa.gov*."

7. REPORTING ECOLOGICAL INCIDENTS: For guidance on reporting ecological incidents, see EPA's Pesticide Incident Reporting website: https://www.epa.gov/pesticideincidents.

VII. SUPPORTING DOCUMENTS

All supporting documents can be found in docket ID number EPA-HQ-OPP-2022-0649 at regulations.gov.

Exhibit B

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7505P)
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

NOTICE OF PESTICIDE:
_X_ Registration
___ Reregistration
(under FIFRA, as amended)

EPA Reg. Number:	Date of Issuance:
7969-493	6/30/26

Term of Issuance: Unconditional

Name of Pesticide Product: ANTORIX Herbicide

BASF Corporation
26 Davis Drive, PO Box 13528
Research Triangle Park, NC 27709

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA section 3(c)(5) provided that you:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product when the Agency requires all registrants of similar products to submit such data.

Signature of Approving Official:

Nathan Mellor, Chief
Fungicide and Herbicide Branch, Registration Division (7505P)

Date: 6/30/26

EPA Form 8570-6

2. Registration Term for Implementing Additional Mitigations from the Services
   If, following formal consultation with FWS and NMFS, additional modifications are identified in any applicable Biological Opinion, EPA will notify Bayer in writing within 45 calendar days of the issuance of the Biological Opinion of any necessary required changes. Within 30 calendar days of receiving EPA's notice, Bayer must submit an amendment application incorporating the necessary changes, including amended labels. Alternatively, Bayer may respond by submitting a request for voluntary cancellation of this product. If Bayer fails to comply with this term, Bayer has agreed in prior written acceptance of the terms that EPA may cancel the registration under an expedited process under FIFRA 6(e).

3. Make the following label changes before you release the product for shipment:

   - Revise the EPA Registration Number to read, "EPA Reg. No. 7969-493."

4. Submit one copy of the revised final printed label for the record before you release the product for shipment.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSF:

- Basic CSF dated: 3/27/2024

If you have any questions, please contact Sayed Islam via email at islam.sayed@epa.gov

Enclosure

BASF
We create chemistry

Trifludimoxazin	Group	14	Herbicide
Saflufenacil	Group	14	Herbicide

Antorix™

Herbicide

ACCEPTED
06/30/2026
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 7969-493

For use as a postemergence-directed broadleaf and grass herbicide in the following bearing and nonbearing crops: citrus fruit trees, nut trees, and pome fruit trees

Active Ingredients:

trifludimoxazin: 1,5-dimethyl-6-thioxo-3-[2,2,7-trifluoro-3-oxo-4-(prop-2-yn-1-yl)-3,4-dihydro-2H-1,4-benzoxazin-6-yl]-1,3,5-triazinane-2,4-dione. 10.76%

saflufenacil: N'-[2-chloro-4-fluoro-5-(3-methyl-2,6-dioxo-4-(trifluoromethyl)-3,6-dihydro-1(2H)-pyrimidinyl)benzoyl]-N-isopropyl-N-methylsulfamide. 21.51%

Other Ingredients:. 67.73%

Total: 100.00%

Contains 1.043 pounds active ingredient trifludimoxazin and 2.086 pounds active ingredient saflufenacil per gallon formulated as a water-based suspension concentrate

EPA Reg. No. 7969-XXX **EPA Est. No.**

KEEP OUT OF REACH OF CHILDREN

CAUTION/PRECAUCION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

See full label for complete **Precautionary Statements**, **Directions For Use**, **Conditions of Sale and Warranty**, and state-specific crop and/or use site restrictions.

In case of an emergency endangering life or property involving this product, call day or night 1-800-832-HELP (4357).

Net Contents:

BASF Agricultural Solutions US LLC
2 TW Alexander Drive
Research Triangle Park, NC 27713

FIRST AID	
If swallowed	• Call a poison control center or doctor immediately for treatment advice. • **DO NOT** induce vomiting unless told to do so by a poison control center or doctor. • Have person sip a glass of water if able to swallow. • **DO NOT** give anything by mouth to an unconscious person.
If in eyes	• Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. • Remove contact lenses, if present, after first 5 minutes; then continue rinsing eyes. • Call a poison control center for treatment advice.
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 to 20 minutes. • Call a poison control center or doctor for treatment advice.
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably by mouth to mouth, if possible. • Call a poison control center or doctor for further treatment advice.
HOTLINE NUMBER	
Have the product container or label with you when calling the poison control center 1-800-222-1222 or doctor or going for treatment. You may also contact BASF Agricultural Solutions US LLC (hereafter "BASF") for emergency medical treatment information at 1-800-832-HELP (4357).	

Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION. Harmful if swallowed. Remove and wash contaminated clothing before reuse. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves

Follow the manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. **DO NOT** reuse them.

Engineering Controls

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.607(d-e)], the handler PPE requirements may be reduced or modified as specified in the WPS.

IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for **applicators and other handlers** and have such PPE immediately available for use in an emergency, including a spill or equipment breakdown.

USER SAFETY RECOMMENDATIONS

Users should:

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Environmental Hazards

For terrestrial uses, **DO NOT** apply directly to water, areas where surface water is present, or intertidal areas below the mean high water mark. **DO NOT** contaminate water when disposing of equipment washwater or rinsate.

Groundwater Advisory. Trifludimoxazin and saflufenacil have properties and characteristics associated with chemicals detected in groundwater. This product may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

Surface Water Advisory. Trifludimoxazin and saflufenacil may impact surface water due to runoff of rainwater. This is especially true for poorly draining soils and soils with shallow groundwater. This product is classified as having high potential for reaching surface water via runoff for several weeks after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features including ponds, streams, and springs will reduce the potential loading of this chemical from runoff water and sediment. Runoff of this product will be reduced by avoiding application when rainfall is forecast to occur within 48 hours.

Non-target Organism Advisory: This product is toxic to plants and may adversely impact the forage and habitat of

non-target organisms, including pollinators, in areas adjacent to the treated area. Protect the forage and habitat of non-target organisms by minimizing spray drift.

Pollinator Advisory: This product is potentially toxic to bee larvae. Avoid application of this product to crops in bloom or if bees are actively collecting pollen or nectar from the treatment area.

Reporting Ecological Incidents: For guidance on reporting ecological incidents, see EPA's Pesticide Incident Reporting website: https://www.epa.gov/pesticide-incidents.

Directions For Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. This labeling must be in the possession of the user at time of herbicide application.

DO NOT apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

Observe all precautions and restrictions in this label and the labels of products used in combination with **Antorix™ herbicide**. The use of **Antorix** not consistent with this label can result in injury to crops, animals, or persons. Keep containers closed to avoid spills and contamination.

Unless otherwise directed in supplemental labeling, all applicable directions, restrictions, precautions, and **Conditions of Sale and Warranty** are to be followed.

BASF does not advise or authorize the use of this product in manufacturing, processing, or preparing custom blends with other products for application in crops.

Endangered and Threatened Species Protection Requirements

Before using this product, you must obtain any applicable Endangered Species Protection Bulletins ('Bulletins') within six months prior to or on the day of application. To obtain Bulletins, go to Bulletins Live! Two (BLT) at https://www.epa.gov/pesticides/bulletins. When using this product, you must follow all directions and restrictions contained in any applicable Bulletin(s) for the area where you are applying the product, including any restrictions on application timing if applicable. It is a violation of Federal law to use this product in a manner inconsistent with its labeling, including this labeling instruction to follow all directions and restrictions contained in any applicable Bulletin(s).

For general questions or technical help, call 1-844-447-3813, or email ESPP@epa.gov.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

DO NOT enter or allow worker entry into treated areas during the restricted-entry interval (REI) of **12 hours**.

EXCEPTION: If the product is soil injected or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, including plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves
- Shoes plus socks

STORAGE AND DISPOSAL

DO NOT contaminate water, food, or feed by storage or disposal. Open dumping is prohibited.

Pesticide Storage

DO NOT use or store near heat or open flame. Store in original container in a well-ventilated area separately from fertilizer, feed, or foodstuffs. Avoid cross-contamination with other pesticides.

Pesticide Disposal

Wastes resulting from this product must be disposed of on-site or at an approved waste disposal facility. Improper disposal of excess pesticide, spray mix, or rinsate is a violation of federal law. If these wastes cannot be disposed of according to label instructions, contact the state agency responsible for pesticide regulation or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Handling

Nonrefillable Plastic Container. DO NOT reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

Triple rinse containers small enough to shake (capacity ≤ 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Triple rinse containers too large to shake (capacity > 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank, or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Refillable Container. Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

(continued)

STORAGE AND DISPOSAL *(continued)*

Container Handling *(continued)*

Triple rinse as follows: To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank . Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

When this container is empty, replace the cap and seal all openings that have been opened during use; return the container to the point of purchase or to a designated location. This container must only be refilled with a pesticide product. Prior to refilling, inspect carefully for damage including cracks, punctures, abrasions, worn out threads and closure devices. Check for leaks after refilling and before transport. **DO NOT** transport if this container is damaged or leaking. If the container is damaged, or leaking, or obsolete and not returned to the point of purchase or to a designated location, triple rinse emptied container and offer for recycling, if available, or dispose of container in compliance with state and local regulations.

In Case of Emergency

In case of large-scale spill of this product, call:

- CHEMTREC 1-800-424-9300
- BASF 1-800-832-HELP (4357)

In case of medical emergency regarding this product, call:

- Your local doctor for immediate treatment
- Your local poison control center (hospital)
- BASF 1-800-832-HELP (4357)

Steps to take if material is released or spilled:

- Dike and contain the spill with inert material (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal.
- Remove contaminated clothing and wash affected skin areas with soap and water.
- Wash clothing before reuse.
- Keep the spill out of all sewers and open bodies of water.

Product Information

Antorix™ herbicide provides contact burndown control of broadleaf and select grass weeds (refer to **Table 1** for list). **Antorix** may be used sequentially or tank mixed with another herbicide for a complete weed control program. Refer to **Crop-specific Information** section for recommendations on herbicide tank mixtures or sequential programs.

Make burndown applications of **Antorix** when broadleaf and grass weeds are small and actively growing. Burndown activity may be reduced on weeds previously mowed or cut. An adjuvant is required with **Antorix** for optimum burndown activity (refer to **Additives** section for details). Burndown activity may be slowed or reduced under cloudy and/or foggy or cooler weather conditions, or when weeds are growing in drought or other stress conditions. When targeting dense weed populations and/or larger broadleaf and grass weeds, use higher spray volumes. Angling nozzles forward (to 45 degrees) may improve penetration of denser weed canopies.

Table 1. Broadleaf and Grass Weeds Controlled with a Burndown Application of Antorix™ herbicide

Common Name	Scientific Name	C = Control S = Suppression	Maximum Height or Diameter (inches)
Broadleaf Weeds			
Amaranth, palmer[3]	*Amaranthus palmeri*	C	6
Bedstraw, catchweed	*Galium aparine*	C	3
Beggarticks, hairy	*Bidens pilosa*	C	6
Beggarweed, Florida	*Desmodium tortuosum*	C	6
Bindweed, field	*Convolvulus arvensis*	S[1]	6
Buckwheat, wild	*Polygonum convolvulus*	C	6
California burclover	*Medicago polymorpha*	C	5
Canola, volunteer (rapeseed)	*Brassica* spp.	C	6
Carpetweed	*Mollugo verticillata*	C	6
Chickweed, common	*Stellaria media*	C	6
Chickweed, field	*Cerastium arvense*	C	6
Chickweed, mouseear	*Cerastium vulgatum*	C	6
Cocklebur, common	*Xanthium strumarium*	C	6
Cotton, volunteer[2]	*Gossypium hirsutum*	C	6
Cowcockle	*Vaccaria pyramidata*	C	4
Cudweed, purple	*Gnaphalium purpureum*	C	6
Dandelion, common	*Taraxacum officinale*	S	6
Eveningprimrose, cutleaf	*Oenothera laciniata*	C	4
Falseflax, smallseed	*Camelina microcarpa*	C	4
Fiddleneck	*Amsinckia menziesii*	C	4
Filaree, broadleaf	*Erodium botrys*	C	6
Filaree, redstem	*Erodium cicutarium*	S	3
Filaree, whitestem	*Erodium moschatum*	C	6
Fleabane, hairy	*Conyza bonariensis*	C	4 rosette
Flixweed	*Descurainia sophia*	C	6
Geranium/Cranesbill, Carolina	*Geranium carolinianum*	C	6
Goatweed	*Scoparia dulcis*	C	6
Groundcherry, cutleaf	*Physalis angulata*	C	6
Groundsel, cressleaf	*Senecio glabellus*	C	6
Groundsel, common	*Senecio vulgaris*	C	4
Hairy indigo	*Indigofera hirsuta*	C	4
Hawksbeard, narrowleaf[2]	*Crepis tectorum*	C	4
Hemlock, poison[2]	*Conium maculatum*	C	6
Henbit	*Lamium amplexicaule*	C	6
Jointvetch, Indian	*Aeschynomene indica*	C	4
Knotweed, common	*Polygonum arenastrum*	C	4
Knotweed, prostrate	*Polygonum aviculare*	C	3
Kochia	*Kochia scoparia*	C	1-inch to 3-inch Suppression of button/puffball stage at < 1-inch tall
Ladysthumb	*Polygonum persicaria*	C	6
Lambsquarters, common	*Chenopodium album*	C	6
Lambsquarters, narrowleaf	*Chenopodium pratericola*	C	6
Lettuce, prickly	*Lactuca serriola*	C	6 rosette
Mallow, common	*Malva neglecta*	C	6
Mallow, little (Cheeseweed)	*Malva parviflora*	C	3

(continued)

Table 1. Broadleaf and Grass Weeds Controlled with a Burndown Application of Antorix™ herbicide *(continued)*

Common Name	Scientific Name	C = Control S = Suppression	Maximum Height or Diameter (inches)
Broadleaf Weeds *(continued)*			
Mallow, Venice	*Hibiscus trionum*	C	6
Marestail (Horseweed)	*Conyza canadensis*	C	4
Marshelder	*Iva xanthifolia*	C	4
Morningglory, entireleaf	*Ipomoea hederacea* var. *integriuscula*	C	6
Morningglory, ivyleaf	*Ipomoea hederacea*	C	6
Morningglory, palmleaf	*Ipomoea wrightii*	C	6
Morningglory, pitted	*Ipomoea lacunosa*	C	6
Morningglory, tall	*Ipomoea purpurea*	C	6
Mustard, black	*Brassica nigra*	C	6 rosette
Mustard, tumble	*Sisymbrium altissimum*	C	6 rosette
Mustard, wild	*Sinapis arvensis*	C	6 rosette
Needles, Spanish[2]	*Bidens pilosa*	C	6
Nettle, burning	*Urtica urens*	C	4
Nightshade, black	*Solanum, nigrum*	C	6
Nightshade, cutleaf	*Solanum, triflorum*	C	6
Nightshade, Eastern black	*Solanum, ptycanthum*	C	6
Nightshade, hairy	*Solanum, saccharoides*	C	6
Panicle willowherb	*Epilobium brachycarpum*	C	6
Parthenium (ragweed)	*Parthenium hysterophorus*	C	6
Pennycress, field	*Thlaspi arvense*	C	6
Pigweed, green	*Amaranthus viridus*	C	6
Pigweed, prostrate	*Amaranthus blitoides*	C	6
Pigweed, redroot	*Amaranthus retroflexus*	C	6
Pigweed, smooth	*Amaranthus hybridus*	C	6
Puncturevine	*Tribulus terrestris*	C	6
Purslane, common	*Portulaca oleracea*	C	3
Pusley, Florida	*Richardia scabra*	C	3
Radish, wild	*Raphanus raphanistrum*	C	4
Ragweed, common[3]	*Ambrosia artemisiifolia*	C	6
Ragweed, giant	*Ambrosia trifida*	C	6
Redmaids	*Calandrinia ciliata*	C	6
Rocket, London	*Sisymbrium irio*	C	6
Sesbania, hemp	*Sesbania exaltata*	C	4
Shepherd's-purse	*Capsella bursa-pastoris*	C	6
Sida, arrowleaf	*Sida rhombifolia*	C	6
Sida, prickly	*Sida spinosa*	C	6
Smartweed, Pennsylvania	*Polygonum pensylvanicum*	C	6
Sowthistle, annual	*Sonchus oleraceus*	C	6 rosette
Sowthistle, spiny	*Sonchus asper*	C	6 rosette
Spurge, leafy	*Euphorbia esula*	C	4
Spurge, spotted	*Euphorbia maculata*	C	6
Sunflower, common	*Helianthus annuus*	C	6
Swinecress, lesser	*Coronopus didymus*	C	4
Tansymustard, pinnate	*Descurainia pinnata*	C	6
Texasweed	*Caperonia palustris*	C	4
Thistle, Canada	*Cirsium arvense*	C	6
Thistle, Russian	*Salsola kali*	C	3

(continued)

Table 1. Broadleaf and Grass Weeds Controlled with a Burndown Application of Antorix™ herbicide *(continued)*

Common Name	Scientific Name	C = Control S = Suppression	Maximum Height or Diameter (inches)
Broadleaf Weeds *(continued)*			
Tropical spiderwort	*Commelina benghalensis*	C	4
Velvetleaf	*Abutilon theophrasti*	C	6
Vetch, common	*Vicia sativa*	C	4
Waterhemp[3]	*Amaranthus tuberculatus*	C	6
Willowweed	*Epilobium adenocaulon*	C	3
Woolly Croton	*Croton capitatus*	C	4
Grass Weeds			
Barnyardgrass	*Echinochloa crus-galli*	C	3
Bluegrass, annual	*Poa annua*	C	2
Crabgrass, large	*Digitaria sanguinalis*	S	4
Foxtail, giant	*Setaria faberi*	C	2
Goosegrass	*Eleusine indica*	S	3
Ryegrass, Italian	*Lolium multiflorum*	S	2
Signalgrass, broadleaf	*Brachiaria platyphylla*	S	2

Optional footnotes:

[1] Control of seedling stage and suppression of perennial growth stage.

[2] Not controlled in California

[3] Populations of noted weeds exist that are known to be resistant to burndown applications of **Group 14** herbicides and may not be controlled by herbicides like **Antorix**. See the **Herbicide Resistance Management** section for practices to manage and minimize the impact of resistant weeds (e.g. tank mixes or alternation with other herbicide modes of action, crop rotation, and mechanical control).

[Optional text in brackets]

Mode of Action

Saflufenacil and trifludimoxazin, the active ingredients in **Antorix™ herbicide**, are potent inhibitors of protoporphyrinogen-oxidase belonging to herbicide mode of action **Group 14**. **Antorix** is rapidly absorbed by roots and foliage. Following inhibition of protoporphyrinogen-oxidase, plant death is the result of membrane damage. Under active growing conditions, susceptible emerged weeds usually develop chlorotic and necrotic injury symptoms within hours and die within a few days. Susceptible emerging weed seedlings usually die as they reach the soil surface or shortly after emergence.

Herbicide Resistance Management

Any weed population may contain or develop plants naturally resistant to **Antorix** and other **Group 14** herbicides. Weed species with resistance to **Group 14** may dominate the weed population if **Group 14** herbicides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by **Antorix** or other **Group 14** herbicides. Proper stewardship practices should be employed to ensure the long-term effectiveness of **Antorix** including mixture or sequential use of other effective herbicides to mitigate resistance development with **Antorix**.

To delay herbicide resistance, consider:

- Resistance management should be part of a diversified weed control strategy that integrates chemical, cultural, and mechanical (tillage) control tactics. Cultural control tactics include crop rotation, proper fertilizer placement, and optimum seeding rate/row spacing. Start with clean fields using tillage or an effective burndown herbicide program. These practices encourage crop growth and improve competitiveness against weeds.
- Clean equipment before moving to a different field to avoid spread of resistant weeds.
- Scout fields prior to application to identify the weed species present and their growth stage to determine if the intended application will be effective.
- Always follow labeled application rate and weed growth stage specifications.
- Use sequential programs with preemergence herbicides that provide soil residual control of weeds to reduce early season weed competition and allow for timely in-crop postemergence herbicide applications.
- **DO NOT** rely on a single herbicide site of action for weed control during the growing season.
- Avoid application of herbicides with the same site of action more than twice a season.
- Use tank mixes or premixes with other herbicides possessing different sites of action that are also effective on the target weeds.
- Scout fields after herbicide application to identify areas where weed control was ineffective.
- Control weed escapes with herbicides possessing a different site of action or use a mechanical control measure. Weed escapes should not be allowed to reproduce by seed or to proliferate vegetatively.
- If a weed population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action.
- Contact your **Antorix** supplier and/or your local BASF representative to report weed escapes.
- Consult your local BASF representative, local or state cooperative extension service, professional consultants or crop advisors, or other qualified authority to determine appropriate actions if you suspect resistant weeds.
- Suspected herbicide-resistant weeds may be identified by these indicators:
  1. Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
  2. A spreading patch of noncontrolled plants of a particular weed species; and
  3. Surviving plants mixed with controlled individuals of the same species.

Crop Tolerance

Crops listed on this label are tolerant to **Antorix** when applied according to label directions as a postemergence-directed treatment and under normal environmental conditions. Crop injury may occur under stressful growing conditions (e.g. low soil fertility, seedling disease, extreme hot or cold weather, excessive moisture, high soil pH, high soil salt concentration, or drought).

Severe crop injury will result if **Antorix** is applied postemergence (over the top) to any tree crop.

Application Instructions

Antorix must be applied as a postemergence-directed spray application either as a uniform broadcast, banded, or spot application to emerged broadleaf and grass weeds.

Table 3. Use Rate Equivalency

Amount of Antorix (fl ozs/A)	**Amount of Saflufenacil** (lb ai/A)	**Amount of Trifludimoxazin** (lb ai/A)
1.4	0.023	0.011
2.0	0.033	0.016
2.73	0.044	0.022

Application Methods and Equipment

Antorix can **ONLY** be applied using ground spray equipment. Thorough spray coverage is required for optimum broadleaf and grass weed control and can be improved with proper adjuvant, nozzle, and spray volume selection.

Use and configure application equipment for adequate spray volume, accurate and uniform distribution of spray droplets over the treated area, and to avoid spray drift to nontarget areas. Adjust equipment to maintain continuous agitation during spraying with good mechanical or bypass agitation. Avoid overlaps that will increase rates above use

rates specified in this label. **DO NOT** apply broadcast or banded using high pressure hand wands.

Antorix™ herbicide may **ONLY** be applied using water as the spray carrier.

Ground Spray Carrier Volume. Use 10 to 15 or more gallons of water per treated acre. Increased efficacy has been observed at water volumes of 20 to 40 gallons per acre. Thorough spray coverage is required for control of emerged broadleaf and grass weeds. High populations and/or variations in size can prevent thorough spray coverage. Controlling fall-germinated weeds in the spring (e.g. horseweed/marestail) also requires thorough spray coverage. Use higher spray volumes (e.g. 15 to 20 gallons of water per acre) in these situations to increase spray coverage and optimize burndown activity.

Ground Spray Nozzle Selection. Applicators must select nozzles and pressure that deliver coarse to very coarse droplets as indicated in nozzle manufacturer's catalogues and in accordance with American Society of Agricultural & Biological Engineers Standard 572 (ASABE §572). Nozzles that deliver coarse or very coarse spray droplets may be used to reduce spray drift provided spray volume per acre (GPA) is increased to maintain coverage of target (i.e., weeds).

Spray Drift Retardants. Addition of some spray drift retardants (drift reducing agents, e.g. DRA) can significantly increase the droplet size but reduce spray coverage and efficacy. If a spray drift retardant is used, ensure that it is compatible for use with **Antorix** and spray equipment being used and the desired level of weed control is maintained.

Cleaning Spray Equipment

Before applying **Antorix** all application equipment must be thoroughly cleaned. All spray equipment, hoses, and nozzles must be cleaned according to the manufacturer's directions for the last product used before the equipment is used to apply **Antorix**.

Spray equipment used to apply **Antorix** should not be used to apply other materials to any crop unless the proper cleanout procedures are followed. Clean application equipment thoroughly by using a strong detergent or commercial sprayer cleaner according to the manufacturer's directions, followed by triple rinsing the equipment after applying this product.

Mitigating Off-Target Movement

MANDATORY SPRAY DRIFT MANAGEMENT

All Ground Boom Applications

- **DO NOT** apply when wind speeds exceed 15 miles per hour at the application site.
- Wind speed and direction must be measured on location using a windsock or an anemometer (including systems to measure wind speed or velocity on ground application equipment).
- Wind speed must be measured at the release height or higher, in an area free from obstructions such as trees, buildings, and farm equipment.
- During application, the Sustained Wind Speed, as defined by the National Weather Service (standard averaging period of 2 minutes) must register between 3 and 15 miles per hour.
- **DO NOT** apply during temperature inversions.
- Spray at the appropriate boom height based on nozzle selection and nozzle spacing, but **DO NOT** exceed a nozzle height of 24 inches above the spray target (i.e., top of weed canopy). Set boom to lowest effective height over the target pest based on equipment manufacturer's directions.
- Applicators should select a ground speed that will deliver the desired spray volume while maintaining the desired spray pressure, but **DO NOT** exceed a ground speed of 15 miles per hour.

Mandatory Spray Drift Mitigations

Ecological spray drift buffers are required for this product for ground boom applications to field crops. Access EPA's **Mitigation Menu** website (www.epa.gov/pesticides/mitigation-menu) for the full list of parameters to evaluate whether your field is subject to the required spray drift buffer.

Applicators must access and search **Bulletins Live! Two** (BLT) at https://www.epa.gov/pesticides/bulletins within six months prior to or on the day of the application to determine whether the application site falls within a Pesticide Use Limitation Area (PULA). If you are located inside a PULA, follow the instructions in the BLT bulletin. If the application site falls outside of a PULA, follow the instructions in the "Outside a PULA" section below. Additional restrictions may be present in bulletins—always follow the most restrictive bulletin instructions.

Outside a PULA. A minimum down-wind spray drift buffer must be maintained between the application area and any unmanaged areas for applications to field crops. Unmanaged areas are defined in comparison to managed areas – anything that is not a managed area is an unmanaged area. Refer to the list of **Managed Areas** in this label.

Mandatory Spray Drift Buffers

For ground applications, maintain a wind-directional (downwind) buffer distance from the edge of the treated area as follows:

Application Method	Minimum Required Buffer Distance
Ground	15 feet

Reduction Options for All Ecological Wind-Directional Drift Buffers

The applicator may choose among the ecological drift buffer reduction options on EPA's **Mitigation Menu** website (http://www.epa.gov/pesticides/mitigation-menu) to reduce the wind-directional buffer distance before applying this product. All buffer reduction options selected must align with the minimum droplet size and release height requirements on this label.

Examples of buffer reduction options include: using larger droplets, lowering the boom height, reducing the maximum single application rate, reducing the number of passes across the field, maintaining a windbreak or hedgerow, or using directed sprayers.

The buffer reduction options must be employed in accordance with the instructions and descriptions on EPA's **Mitigation Menu** website. When using more than one option during the application, the percent reduction in the buffer distances may be added together. The maximum buffer reduction that can be achieved by a combination of buffer reduction options is 100% (i.e., no drift buffer).

Additional restrictions may be present in bulletins—always follow the most restrictive bulletin instructions. If you are located in an area where PULAs overlap, follow the most restrictive requirements across all bulletins. When tank mixing, the most restrictive of the products' label or bulletin requirements must be followed (e.g., drift buffers that are not wind-directional, Application Exclusion Zone drift requirements, drift buffers to residences, schools, and parks where people could be present, use prohibitions, timing restrictions, and application method prohibitions).

Managed Areas

Managed areas that can be included as part of wind-directional spray drift buffer footage include the following:

- Agricultural fields, pastures, forage fields, and private rangelands, including untreated portions of the treated field/site;
- Roads, paved or gravel surfaces, mowed grassy/fallowed areas adjacent to field, and areas of bare ground from recent plowing or grading that are contiguous with the treated area;
- Buildings and their perimeters, or other on-farm man-made structures with walls and/or roof;
- Areas present and/or maintained as a runoff/erosion measure as listed on EPA's **Mitigation Menu** website. Examples include vegetative filter strips (VFS), field borders, grassed waterways, vegetated ditches, riparian areas, managed/constructed wetlands, or other areas of intentional habitat improvement;
- Areas present and/or maintained as a drift buffer reduction measure as listed on EPA's **Mitigation Menu** website. Examples include vegetative windbreaks, hedgerows, shelterbelts, riparian areas, private forests, woodlots, and shrublands;
- Conservation Reserve Program (CRP) and Agricultural Conservation Easement Program (ACEP) lands;
- On-site contained irrigation water resources that are not connected to adjacent water bodies, including on-site irrigation canals and ditches, water conveyances, managed irrigation/runoff retention basins, ponds, and tailwater collection ponds.

Managed areas can be included as part of the buffer footage if they are downwind and immediately adjacent/contiguous to the treated field and people are not present in those areas.

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. Be aware of nearby non-target sites and environmental conditions.

Importance of Droplet Size

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size - Ground Boom

Volume. Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.

Pressure. Use the lowest spray pressure specified for the nozzle to produce the target spray volume and droplet size.

Spray Nozzle. Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

Release Height - Ground Boom

For ground equipment, the boom should remain level with the crop and have minimal bounce. Automated boom height controllers are recommended with large booms to better maintain optimum nozzle to canopy height. Excessive boom height will increase the potential for spray drift.

Hooded (or Shielded) Sprayers

Shielding the boom or individual nozzles can reduce spray drift. Consider using hooded (or shielded) sprayers. Verify that the hoods (or shields) are not interfering with the uniform deposition of the spray on the target area.

Temperature and Humidity
When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

Temperature Inversion
Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Wind
Drift potential generally increases with wind speed. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

Measuring Wind Speed and Wind Direction
- Applicators should check and acquire the predicted wind speed and direction for the application site within 12 hours prior to conducting applications to determine the time periods wind speed is likely to fall outside the applicable thresholds.
- Applicators should reassess wind speed and direction at the application site at least every hour while applications are in progress.
- Measuring wind speed and direction can be done by:
  - Relying on equipment on the application equipment that measures wind speed.
  - Using a tower anemometer with telemetry or handheld anemometer. Users should read user manual on how to calibrate, operate and interpret the output from an anemometer. Ground applicators should stop at least every hour to take a reading with a tower anemometer with telemetry or handheld anemometer. Some anemometers may have software that would allow users to view wind measurements in real time while making an application, and, those cases, applicators would not have to stop to take measurements.
  - Using a windsock. Wind can be estimated with a windsock using the strips on a windsock. The applicator should consult the user manual for the windsock on wind speed estimation and direction of wind. Applicators should look at the sock at least every hour to estimate wind speed and direction.
  - Checking behind the spray rig at least every hour to see if the spray has changed direction from when the application started.

Mandatory Runoff Mitigation

Applicators must access and search **Bulletins Live! Two** (BLT) at https://www.epa.gov/pesticides/bulletins within six months prior to or on the day of the application to determine whether the application site falls within a Pesticide Use Limitation Area (PULA). If you are located inside a PULA, follow the instructions in the the BLT bulletin. If the application site falls outside of a PULA, follow the instructions in the section below.

The minimum of 6 mitigation points must be achieved for the following agricultural crop use sites: bearing and non-bearing fruit and nut trees.

Step 1. To achieve the mitigation points specified above, visit EPA's **Mitigation Menu** website (http://www.epa.gov/pesticides/mitigation-menu) for a full list of mitigation and mitigation relief options.

Step 2. Determine if you are eligible for mitigation relief. Runoff/erosion mitigation is NOT required if certain field/application parameters are present at the time of application (e.g., subsurface or tile drains with controlled outlet, perimeter berm systems, irrigation tailwater return systems, spot treatment, etc).

Step 3. If the application site does not meet the field/application parameters specified on EPA's **Mitigation Menu** website, choose among the mitigation and/or mitigation relief options on EPA's **Mitigation Menu** website to meet or exceed the required points noted here before applying this product.

Step 4. To achieve mitigation points for the application, the mitigation and mitigation relief measures must be:
- Employed in accordance with the instructions and descriptions on EPA's **Mitigation Menu** website.
- In place during the application unless a different timing (such as before or after application) is specifically provided in the measure's description on EPA's **Mitigation Menu** website. EPA may periodically update the **Mitigation Menu** website, for example, by adding new mitigation measures or updating a mitigation measure description.

Step 5. Additional restrictions may be present in bulletins—always follow the most restrictive bulletin instructions. If you are located in an area where PULAs overlap, follow the most restrictive requirements across all bulletins. When tank mixing, the most restrictive requirements must be followed between the products' labels and bulletins.

Additives

For optimum burndown with **Antorix™ herbicide**, an adjuvant system must be used that includes the following:

Adjuvant	Rate
methylated seed oil[1] (MSO)	1 gal/100 gals[2] (1% v/v)
PLUS	**PLUS**
ammonium sulfate (AMS)	8.5 to 17 lbs/100 gals (1% to 2% w/v)
or	**or**
urea ammonium nitrate (UAN)	1.25 to 2.5 gals/100 gals (1.25% to 2.5% v/v)

[1] MSO-based adjuvant **MUST** contain at least 60% methylated seed oil. Poor performance may occur with adjuvants containing less than 60% methylated seed oil.
[2] **DO NOT** use less than 1 pint/A of MSO with low-volume (less than 12.5 gallons per acre) ground application.

Use of AMS fertilizer is highly advised when mixing **Antorix™ herbicide** with glyphosate-based herbicides and glufosinate-based herbicides.

DO NOT use nonionic surfactant (NIS) as a substitute for MSO, or poor performance on broadleaf and/or grass weeds will occur.

When an adjuvant is to be used with this product, BASF recommends the use of a Chemical Producers and Distributors Association (CPDA) certified adjuvant.

Tank Mixing Information

It is the pesticide user's responsibility to ensure that all products in the mixtures are registered for the intended use. Read and follow the applicable restrictions and precautions and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Antorix may be tank mixed or applied sequentially with other herbicide products registered for use in any labeled crop found in this label for a broader spectrum of control of emerged weeds and/or residual weed control. Refer to the tank mix product labels to confirm that the respective tank mix products are registered for use on the labeled crop. Read and follow tank mix product labels for application instructions, use restrictions and precautions, and rotational cropping guidance.

When tank mixing, the most restrictive of the products' label or bulletin (BLT) requirements must be followed (e.g., use prohibition, timing restriction, application method restriction, sandy soil application restriction, etc.).

Compatibility Test for Mix Components

Before mixing components, always perform a compatibility jar test.

1. For 20 gallons per acre spray volume, use 3.3 cups (800 mL) of water. For other spray volumes, adjust rates accordingly. Only use water from the intended source at the source temperature.
2. Add components in the sequence indicated in **Mixing Order** using 2 teaspoons for each pound or 1 teaspoon for each pint of label rate per acre.
3. Always cap the jar and invert 10 cycles between component additions.
4. When the components have all been added to the jar, let the solution stand for 15 minutes.
5. Evaluate the solution for uniformity and stability. The spray solution should not have free oil on the surface, or fine particles that precipitate to the bottom, or thick (clabbered) texture. If the spray solution is not compatible, repeat the compatibility test with the addition of a suitable compatibility agent. If the solution is then compatible, use the compatibility agent as directed on its label. If the solution is still incompatible, **DO NOT** mix the ingredients in the same tank.

Mixing Order

Maintain agitation throughout mixing and application until spraying is completed.

1. **Water** - Fill tank 1/2 to 3/4 full with clean water and start agitation.
2. **Inductor** - If an inductor is used, rinse it thoroughly after each component has been added.
3. **Products in PVA bags** - Place any product contained in water-soluble PVA bags into the mixing tank. Wait until all water-soluble PVA bags have fully dissolved and the product is evenly mixed in the spray tank before continuing.
4. **Water-soluble additives** (including dry and liquid fertilizers AMS or UAN)
5. **Water-dispersible products** (dry flowables, wettable powders, suspension concentrates, or suspo-emulsions, add **Antorix** now)
6. **Water-soluble products**
7. **Emulsifiable concentrates** (including MSO adjuvants)
8. **Remaining quantity of water**

If the spray mixture is allowed to settle for any period of time, thorough agitation is essential to resuspend the mixture before spraying is resumed. Continue agitation while spraying.

Use Restrictions

- **Maximum annual use rate** - Refer to **Crop-specific Information** section for maximum application use rates for each crop use.
- If additional saflufenacil and/or trifludimoxazin is applied from other product sources, refer to the **Crop-specific Restrictions** section for each crop use for the maximum cumulative amount per year.
- **DO NOT** apply **Antorix** by aerial spray.
- **DO NOT** contaminate water used for irrigation or domestic purposes.
- **DO NOT** apply **Antorix** through any type of irrigation system (e.g. chemigation).
- **DO NOT** apply during rain.
- **DO NOT** apply this product when soil is saturated or at field capacity, or when a storm event likely to produce runoff from the treated area is expected to occur within 24 hours following application.
- Within 24 hours after application, **DO NOT** irrigate the treatment area to the point of runoff.
- **Antorix is not for sale, distribution, or use in Alaska, Hawaii, US Territories (including American Samoa, Guam, Puerto Rico, Mariana Islands, US Virgin Islands), and in Nassau and Suffolk counties in New York State.**

Use Precautions

- **Rainfastness** - **Antorix™ herbicide** is rainfast 1 hour after application. Burndown activity may be reduced if rain or irrigation occurs within 1 hour of application.
- **Emergency Replanting Intervals** - If any labeled crop treated with **Antorix** is lost to adverse weather or for other reasons, the area treated may be replanted to citrus fruit trees 1 month after treatment and to nut trees and pome fruit trees 3 months after treatment. Corn and small grains may be planted immediately after crop removal. Wait 9 months before planting any other crop. Be sure to determine the rotational crop interval for tank mix products and follow the most restrictive interval of all products applied.

Crop-specific Information

This section provides use directions for **Antorix** in specific crops. Read product information, mixing, application, weeds controlled, and adjuvant instructions in preceding sections of the label. Read and follow tank mix product labels for restrictions, precautions, instructions, and rotational crop restrictions.

Thorough spray coverage is required for control of emerged broadleaf and grass weeds. High populations and/or variations in size can prevent adequate spray coverage. Controlling fall-germinated weeds in the spring (e.g. horseweed/marestail) also requires thorough spray coverage. Use higher spray volumes (e.g. 15 to 20 gallons of water per acre) in these situations to increase spray coverage and optimize burndown activity.

Bearing and Nonbearing Fruit and Nut Trees

Antorix may be applied in the following individual bearing or nonbearing fruit tree and tree nut crops:

Citrus Fruits
Crop Group 10-10: Australian desert lime, Australian finger lime, Australian round lime, Brown River finger lime, Calamondin, Citron, Citrus hybrids, Grapefruit, Japanese summer grapefruit, Kumquat, Lemon, Lime, Mediterranean mandarin, Mount White lime, New Guinea wild lime, Orange (sour), Orange (sweet), Pummelo, Russell River lime, Satsuma mandarin, Sweet lime, Tachibana orange, Tahiti lime, Tangelo, Tangerine (mandarin), Tangor, Trifoliate orange, Uniq fruit
Pome Fruits
Crop Group 11-10: Apple, Azarole, Crabapple, Loquat, Mayhaw, Medlar, Pear, Asian pear, Quince, Chinese quince, Japanese quince, Tejocote

Tree Nuts
Crop Group 14-12: African nut-tree, Almond, Beech nut, Brazil nut, Brazilian pine, Bunya, Bur oak, Butternut, Cajou nut, Candlenut, Cashew, Chestnut, Chinquapin, Coconut, Coquito nut, Dika nut, Ginkgo, Guiana chestnut, Hazelnut (filbert)*, Heartnut, Hickory nut, Japanese horse-chestnut, Macadamia nut, Mongongo nut, Monkey-pot, Monkey puzzle nut, Okari nut, Pachira nut, Peach palm nut, Pecan, Pequi, Pili nut, Pine nut, Pistachio, Sapucaia nut, Tropical almond, Walnut (black), Walnut (English), Yellowhorn

* Not for use in California.

Application Rate, Method, and Timing

Apply **Antorix** at [1.4, 2.0, or] 2.73 fl ozs/A in citrus fruit, pome fruit, and tree nuts plus the required adjuvants (refer to **Additives** section for details) as a postemergence-directed spray either as a uniform broadcast, banded, or spot application directed at the base of the tree trunks while targeting emerged broadleaf weeds and grasses (refer to **Table 1** for weeds controlled). **Antorix** can **ONLY** be applied using ground spray equipment. Spray contact of tree foliage, flowers, buds, or fruit either directly via improper nozzle orientation or indirectly via physical drift will result in crop injury. The use of shielded sprayers is highly advised when applying in citrus trees and other trees with low-hanging branches and fruit.

Applications can be made to newly planted or replacement citrus trees after irrigation or rainfall has settled the soil; nut trees and pome fruit trees must be established for at least 9 months before application. Trunk shields must be used until adequate bark has formed to protect trees from potential herbicide injury (typically by 2 to 3 years after establishment).

Antorix may be applied either in a single application or sequentially up to 3 times per year with applications occurring either in-season or separated between dormant period and in-season as described in paragraphs that follow. Sequential applications must be separated by at least 30 days regardless of the time of year.

Dormant Period Application in Tree Nuts and Pome Fruit Trees. Antorix may be applied during the dormant period of postharvest through winter dormancy. Make one or two (no more than two) applications of **Antorix** during the period of postharvest through winter dormancy. In-season **Antorix** applications may begin in the spring when trees are in the bud-swell stage. A maximum of three (3) **Antorix** applications are permitted per year (i.e., across tree growth periods including postharvest through winter dormancy, and bud-swell to crop harvest).

Spot Treatment

Consult the following chart for the amount of **Antorix™ herbicide** for making various gallons of spray mix to be used for spot treatments applied to actively growing broadleaf and grass weeds and sizes in **Table 1**. Coverage is important. Spray thoroughly to wet the weed foliage but not to point of runoff. To maximize performance, refer to the **Additives** section for the adjuvant and rate to be added to the spray mix. Each spray mix is equivalent to applying **Antorix** at a use rate of 2.73 fl ozs/A in a spray volume of 100 gallons per acre. Application of a spot spray mix must not be made to an equivalent area less than what is shown in the chart or exceed the equivalent broadcast rate of 2.73 fl ozs/A. Spot treatments may be applied with backpack sprayers or via an ATV-mounted (all-terrain vehicle-mounted) or tractor/truck mounted sprayers equipped for hand wand applications. Spot applications can be made sequentially and/or be combined with broadcast/banded applications, but the maximum cumulative amount applied must not exceed the total use rate for the crop per year (see **Crop-specific Restrictions**). **DO NOT** apply spot treatments using high-pressure hand wands.

Gallons Spray Mix	Spray Mix Treatment Area (sq ft)	Amount of Antorix	
		(mL)	(fl ozs)
1.0	436	0.8	0.03
2.5	1,089	2	0.07
5.0	2,178	4	0.14
10.0	4,356	8	0.27
25.0	10,890	20	0.68
50.0	21,780	40	1.35

Crop-specific Restrictions

- **DO NOT** apply more than 2.73 fl ozs/A of **Antorix** (0.044 lb ai/A saflufenacil + 0.022 lb ai/A trifludimoxazin) in a single application in bearing and nonbearing fruit/nut trees.
- **DO NOT** apply more than 8.25 fl ozs/A of **Antorix** (0.134 lb ai/A saflufenacil + 0.067 lb ai/A trifludimoxazin) as a maximum cumulative amount from sequential applications per year in bearing and nonbearing fruit/nut trees.
- Sequential applications must be separated by at least 30 days.
- Maximum number of applications per year: 3
- If additional saflufenacil is applied from other product sources, **DO NOT** apply more than the following maximum cumulative amount of saflufenacil per year in bearing and nonbearing fruit/nut trees: 0.134 lb ai/A.
- If additional trifludimoxazin is applied from other product sources, **DO NOT** apply more than the following maximum cumulative amount of trifludimoxazin per year in bearing and nonbearing fruit/nut trees: 0.089 lb ai/A.
- For spot applications, apply as needed for the desired weed control but **DO NOT** exceed the equivalent of 0.066 lb ai/A (0.063 fl oz per 1000 square feet) per application or 0.201 lb ai/A (0.189 fl oz per 1000 square feet) from applications per year.
- **Antorix** may be applied any time up to or on the day of citrus or pome fruit harvest.
- **Preharvest interval (PHI)** for tree nuts: 7 days.
- **DO NOT** use in tree nurseries.

Tank Mixes

Broad-spectrum postemergence control of additional annual and perennial weeds will usually require a tank mix with a herbicide including glyphosate. **Antorix** may be tank mixed or applied sequentially with one or more of, but not limited to, the following herbicide products for additional burndown or residual weed control:

- glufosinate-ammonium
- glyphosate
- indaziflam
- oxyfluorfen
- pendimethalin
- rimsulfuron

Conditions of Sale and Warranty

The **Directions For Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully. However, it is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of BASF Agricultural Solutions US LLC ("BASF") or the Seller. To the extent consistent with applicable law, all such risks shall be assumed by the Buyer.

BASF warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Directions For Use**, subject to the inherent risks, referred to above.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S EXCLUSIVE REMEDY AND BASF'S EXCLUSIVE LIABILITY, WHETHER IN CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY, OR OTHERWISE, SHALL BE LIMITED TO REPAYMENT OF THE PURCHASE PRICE OF THE PRODUCT.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF AND THE SELLER DISCLAIM ANY LIABILITY FOR CONSEQUENTIAL, EXEMPLARY, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

BASF and the Seller offer this product, and the Buyer and User accept it, subject to the foregoing **Conditions of Sale and Warranty** which may be varied only by agreement in writing signed by a duly authorized representative of BASF. 1108

Antorix *and* ***Tirexor*** *are trademarks of BASF.*

Kixor *is a registered trademark of BASF.*

Note to PM/reviewer: Alternate text in brackets [. . .]

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007969-00XXX.20220407h.**NVA 2021-04-657-0035**

BASF Agricultural Solutions US LLC
2 TW Alexander Drive
Research Triangle Park, NC 27713

BASF
We create chemistry

[Optional Marketing Claims:
Powered by Kixor®
Powered by Kixor® herbicide
Powered by Tirexor™
Powered by Tirexor™ herbicide
Powered by Kixor® and Tirexor™
Powered by Kixor® and Tirexor™ herbicides
Powered by Kixor® Active Herbicide
Powered by Tirexor™ Active Herbicide
Powered by Kixor® and Tirexor™ Active Herbicides]

Exhibit C

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7505P)
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

NOTICE OF PESTICIDE:
_X_ Registration
___ Reregistration
(under FIFRA, as amended)

EPA Reg. Number:	Date of Issuance:
7969-494	6/30/26

Term of Issuance: Unconditional

Name of Pesticide Product: REXOVOR Herbicide

BASF Corporation
26 Davis Drive, PO Box 13528
Research Triangle Park, NC 27709

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA section 3(c)(5) provided that you:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product when the Agency requires all registrants of similar products to submit such data.

Signature of Approving Official:

Nathan Mellor, Chief
Fungicide and Herbicide Branch, Registration Division (7505P)

Date: 6/30/26

EPA Form 8570-6

2. Registration Term for Implementing Additional Mitigations from the Services
   If, following formal consultation with FWS and NMFS, additional modifications are identified in any applicable Biological Opinion, EPA will notify Bayer in writing within 45 calendar days of the issuance of the Biological Opinion of any necessary required changes. Within 30 calendar days of receiving EPA's notice, Bayer must submit an amendment application incorporating the necessary changes, including amended labels. Alternatively, Bayer may respond by submitting a request for voluntary cancellation of this product. If Bayer fails to comply with this term, Bayer has agreed in prior written acceptance of the terms that EPA may cancel the registration under an expedited process under FIFRA 6(e).

3. Make the following label changes before you release the product for shipment:

   - Revise the EPA Registration Number to read, "EPA Reg. No. 7969-494."

4. Submit one copy of the revised final printed label for the record before you release the product for shipment.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSF:

- Basic CSF dated: 4/01/2024

If you have any questions, please contact Sayed Islam via email at islam.sayed@epa.gov

Enclosure

BASF
We create chemistry

Trifludimoxazin	Group	14	Herbicide

ACCEPTED
06/30/2026
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 7969-494

Rexovor™

Herbicide

For use in corn, legume vegetables, peanut, small grains, sorghum, soybean, and in postharvest and fallow

Active Ingredient:
trifludimoxazin: 1,5-dimethyl-6-thioxo-3-[2,2,7-trifluoro-3-oxo-4-(prop-2-yn-1-yl)-3,4-dihydro-2H-1,4-benzoxazin-6-yl]-1,3,5-triazinane-2,4-dione 41.53%
Other Ingredients:. 58.47%
Total: 100.00%

Contains 4.17 pounds active ingredient trifludimoxazin per gallon product formulated as a water-based suspension concentrate.

EPA Reg. No. 7969-XXX **EPA Est. No.**

KEEP OUT OF REACH OF CHILDREN

CAUTION/PRECAUCION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

See inside for complete **First Aid**, **Precautionary Statements**, **Directions For Use**, **Conditions of Sale and Warranty**, and state-specific crop and/or use site restrictions.

In case of an emergency endangering life or property involving this product, call day or night 1-800-832-HELP (4357).

Net Contents:

BASF Agricultural Solutions US LLC
2 TW Alexander Drive
Research Triangle Park, NC 27713

FIRST AID	
If swallowed	• Call a poison control center or doctor immediately for treatment advice. • **DO NOT** induce vomiting unless told to do so by a poison control center or doctor. • **DO NOT** give anything by mouth to an unconscious person. • Have a person sip a glass of water if able to swallow.
If in eyes	• Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. • Remove contact lenses, if present, after first 5 minutes; then continue rinsing eyes. • Call a poison control center for treatment advice.
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 to 20 minutes. • Call a poison control center or doctor for treatment advice.
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably by mouth to mouth, if possible. • Call a poison control center or doctor for further treatment advice.
HOTLINE NUMBER	
Have the product container or label with you when calling the poison control center at 1-800-222-1222 or doctor or going for treatment. You may also contact BASF Agricultural Solutions US LLC (hereafter "BASF") for emergency medical treatment information at 1-800-832-HELP (4357).	

Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION. Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes or clothing. Remove and wash contaminated clothing before reuse. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Wear protective eyewear.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves
- Protective eyewear (including face shield, goggles, or safety glasses)

User Safety Requirements

Follow the manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. **DO NOT** reuse them.

Engineering Controls Statement

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for **"applicators and other handlers"** and have such PPE immediately available for use in an emergency, including a spill or equipment breakdown.

USER SAFETY RECOMMENDATIONS
Users should: • Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. • Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Environmental Hazards

For terrestrial uses, **DO NOT** apply directly to water, or to areas where surface water is present or to intertidal areas below the mean highwater mark. **DO NOT** contaminate water when disposing of equipment washwater or rinsate.

Groundwater Advisory. Trifludimoxazin has properties and characteristics associated with chemicals detected in groundwater. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

Surface Water Advisory. Trifludimoxazin may impact surface water quality due to runoff of rainwater. This is especially true for poorly draining soils and soils with shallow groundwater. This product is classified as having high potential for reaching surface water via runoff for several weeks after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features including ponds, streams, and springs will reduce the potential loading of this chemical

from runoff water and sediment. Runoff of this product will be reduced by avoiding application when rainfall is forecast to occur within 48 hours.

Nontarget Organism Advisory: This product is toxic to plants and may adversely impact the forage and habitat of nontarget organisms, including pollinators, in areas adjacent to the treated area. Protect the forage and habitat of nontarget organisms by minimizing spray drift.

Reporting Ecological Incidents: For guidance on reporting ecological incidents, see EPA's Pesticide Incident Reporting website: https://www.epa.gov/pesticide-incidents.

Directions For Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. This labeling must be in the possession of the user at time of herbicide application.

DO NOT apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

Observe all precautions and restrictions in this label and the labels of products used in combination with **Rexovor™ herbicide**. The use of **Rexovor** not consistent with this label can result in injury to crops, animals, or persons. Keep containers closed to avoid spills and contamination.

Unless otherwise directed in supplemental labeling, all applicable directions, restrictions, precautions, and **Conditions of Sale and Warranty** are to be followed.

BASF does not recommend or authorize the use of this product in manufacturing, processing, or preparing custom blends with other products for application in crops.

Endangered and Threatened Species Protection Requirements

Before using this product, you must obtain any applicable Endangered Species Protection Bulletins ('Bulletins') within six months prior to or on the day of application. To obtain Bulletins, go to Bulletins Live! Two (BLT) at https://www.epa.gov/pesticides/bulletins. When using this product, you must follow all directions and restrictions contained in any applicable Bulletin(s) for the area where you are applying the product, including any restrictions on application timing if applicable. It is a violation of Federal law to use this product in a manner inconsistent with its labeling, including this labeling instruction to follow all directions and restrictions contained in any applicable Bulletin(s).

For general questions or technical help, call 1-844-447-3813, or email ESPP@epa.gov.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on the label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

DO NOT enter or allow worker entry into treated areas during the restricted-entry interval (REI) of **12 hours**.

EXCEPTION: If the product is soil injected or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, including plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves
- Shoes plus socks

STORAGE AND DISPOSAL

DO NOT contaminate water, food, or feed by storage or disposal. Open dumping is prohibited.

Pesticide Storage

DO NOT use or store near heat or open flame. Store in original container in a well-ventilated area separately from fertilizer, feed, or foodstuffs. Avoid cross-contamination with other pesticides. Prevent from freezing, however if product freezes allow to thaw at room temperature for 24 hours and agitate well prior to use.

Pesticide Disposal

Wastes resulting from this product may be disposed of on-site or at an approved waste disposal facility. Improper disposal of excess pesticide, spray mix, or rinsate is a violation of federal law. If these wastes cannot be disposed of according to label instructions, contact the state agency responsible for pesticide regulation or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Handling

Nonrefillable Plastic Container. DO NOT reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

Triple rinse containers small enough to shake (capacity ≤ 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Triple rinse containers too large to shake (capacity > 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Repeat this procedure two more times.

(continued)

STORAGE AND DISPOSAL *(continued)*

Container Handling *(continued)*

Pressure rinse as follows: Empty the remaining contents into application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Refillable Container. Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

Triple rinse as follows: To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank . Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

When this container is empty, replace the cap and seal all openings that have been opened during use; return the container to the point of purchase or to a designated location. This container must only be refilled with a pesticide product. Prior to refilling, inspect carefully for damage including cracks, punctures, abrasions, worn out threads and closure devices. Check for leaks after refilling and before transport. **DO NOT** transport if this container is damaged or leaking. If the container is damaged, or leaking, or obsolete and not returned to the point of purchase or to a designated location, triple rinse emptied container and offer for recycling, if available, or dispose of container in compliance with state and local regulations.

In Case of Emergency

In case of large-scale spill of this product, call:

- CHEMTREC 1-800-424-9300
- BASF 1-800-832-HELP (4357)

In case of medical emergency regarding this product, call:

- Your local doctor for immediate treatment
- Your local poison control center (hospital)
- BASF 1-800-832-HELP (4357)

Steps to take if case material is released or spilled:

- Dike and contain the spill with inert material (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal.
- Remove contaminated clothing and wash affected skin areas with soap and water.
- Wash clothing before reuse.
- Keep the spill out of all sewers and open bodies of water.

Product Information

Rexovor™ herbicide provides both rate-dependent residual preemergence control of germinating broadleaf and grass weeds and postemergence control (i.e., foliar contact burndown) of emerged broadleaf and grass weeds. Refer to **Table 1** and **Table 2** for list of weeds controlled by residual preemergence and postemergence applications, respectively.

Rexovor can be used in corn, legume vegetables, peanut, small grains, sorghum, soybean, and in postharvest and fallow. See **Crop-specific Information** section for specific use directions.

Make burndown applications of **Rexovor** when broadleaf and grass weeds are small and actively growing. Burndown activity may be reduced on weeds previously mowed or cut. An adjuvant is required with **Rexovor** for optimum burndown activity (refer to **Additives** section for details). Burndown activity may be slowed or reduced under cloudy and/or foggy or cooler weather conditions, or when weeds are growing in drought or other stress conditions. When targeting dense weed populations and/or larger broadleaf and grass weeds, use higher spray volumes. Angling nozzles forward (to 45 degrees) may improve penetration of denser weed canopies.

Table 1. Broadleaf and Grass Weeds Controlled with a Residual Preemergence Application of Rexovor™ herbicide

Common Name	Scientific Name	Rexovor Use Rate (fl oz/A)	
		0.68	1.0
Broadleaf Weeds			
Amaranth, Palmer	*Amaranthus palmeri*	C	C
Beggarweed, Florida	*Desmodium tortuosum*	C	C
Canola, volunteer (rapeseed)	*Brassica* spp.	S	C
Carpetweed	*Mollugo verticillata*	C	C
Henbit	*Lamium amplexicaule*	C	C
Lambsquarters, common	*Chenopodium album*	C	C
Morningglory	*Ipomoea* spp.	S	C
Pigweed, prostrate	*Amaranthus blitoides*	C	C
Pigweed, redroot	*Amaranthus retroflexus*	C	C
Ragweed, common	*Ambrosia artemisiifolia*	S	S
Sunflower, common	*Helianthus annuus*	S	S
Velvetleaf	*Abutilon theophrasti*	C	C
Waterhemp	*Amaranthus tuberculatus*	C	C
Grass Weeds			
Crabgrass, large	*Digitaria sanguinalis*	S	C
Crowfootgrass	*Dactyloctenium aegyptium*	S	C
Foxtail, giant	*Seteria faberi*	S	C
Goosegrass	*Eleusine indica*	C	C
Panicum, Texas	*Panicum texanum*	S	C
Ryegrass, Italian	*Lolium multiflorum*	S	S
Signalgrass, broadleaf	*Brachiaria platyphylla*	S	C

C = Control, S = Suppression

Table 2. Broadleaf and Grass Weeds Controlled with a Postemergence Application of Rexovor™ herbicide

Common Name	Scientific Name	Rexovor Use Rate (fl oz/A)		
		0.35	0.50	0.68
Broadleaf Weeds		Maximum Weed Height or Diameter (4 inches)		
Amaranth, Palmer[1]	*Amaranthus palmeri*	C	C	C
Bedstraw, catchweed	*Galium aparine*	S	S	S
Buckwheat, wild	*Polygonum convulvulus*	S	S	S
Canola, volunteer (rapeseed)	*Brassica* spp.	S	S	C
Chickweed, common	*Stellaria media*	C	C	C
Chickweed, field	*Ceraqstium arvense*	C	C	C
Eveningprimrose, cutleaf	*Oenothera laciniata*	—	—	S
Henbit	*Lamium amplexicaule*	C	C	C
Kochia	*Kochia scoparia*	—	—	S
Pennycress, field	*Thlaspi arvense*	S	S	C
Purslane	*Portulaca* spp.	C	C	C
Sheperdspurse	*Capsella burse-pastoris*	C	C	C
Swinecress, lesser	*Coronopus didymus*	S	S	S
Velvetleaf	*Abutilon theophrasti*	C	C	C
Waterhemp[1]	*Amaranthus tuberculatus*	S	S	C

(continued)

Table 2. Broadleaf and Grass Weeds Controlled with a Postemergence Application of Rexovor™ herbicide *(continued)*

Common Name	Scientific Name	Rexovor Use Rate (fl oz/A)		
		0.35	0.50	0.68
Grass Weeds		**Maximum Weed Size** (2-3 leaves)		
Bluegrass, annual	*Poa annua*	S	S	C
Foxtail, giant	*Setaria faberi*	S	S	S
Ryegrass, Italian	*Lolium multiflorum*	S	S	S

C = Control, S = Suppression

[1] Populations of noted weeds exist that are known to be resistant to burndown applications of **Group 14** herbicides and may not be controlled by herbicides like **Rexovor**. See the **Herbicide Resistance Management** section for practices to manage and minimize the impact of resistant weeds (e.g.tank mixes or alternation with other herbicide modes of action, crop rotation, and mechanical control).

Mode of Action

Trifludimoxazin, the active ingredient in **Rexovor**, is a potent inhibitor of protoporphyrinogen-oxidase (PPO) belonging to herbicide mode of action **Group 14** (WSSA). **Rexovor** is rapidly absorbed by roots and foliage. Following inhibition of protoporphyrinogen-oxidase, plant death is the result of membrane damage. Under active growing conditions, susceptible emerged weeds usually develop chlorotic and necrotic injury symptoms within hours and die within a few days. Susceptible emerging weed seedlings will usually die as they reach the soil surface or shortly after emergence.

Herbicide Resistance Management

Any weed population may contain or develop plants naturally resistant to **Rexovor** and other **Group 14** herbicides. Weed species with resistance to **Group 14** may dominate the weed population if **Group 14** herbicides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by **Rexovor** or other **Group 14** herbicides.

To delay herbicide resistance, consider:

- Resistance management should be part of a diversified weed control strategy that integrates chemical, cultural, and mechanical (tillage) control tactics. Cultural control tactics include crop rotation, proper fertilizer placement, and optimum seeding rate/row spacing. Start with clean fields using tillage or an effective burndown herbicide program. These practices encourage crop growth and improve competitiveness against weeds.
- Clean equipment before moving to a different field to avoid spread of resistant weeds.
- Scout fields prior to application to identify the weed species present and their growth stage to determine if the intended application will be effective.
- Always follow labeled application rate and weed growth stage specifications.
- Use sequential programs with preemergence herbicides that provide soil residual control of weeds to reduce early season weed competition and allow for timely in-crop postemergence herbicide applications.
- **DO NOT** rely on a single herbicide site of action for weed control during the growing season.
- Avoid application of herbicides with the same site of action more than twice a season.
- Use tank mixes or premixes with other herbicides possessing different sites of action that are also effective on the target weeds.
- Scout fields after herbicide application to identify areas where weed control was ineffective.
- Control weed escapes with herbicides possessing a different site of action or use a mechanical control measure. Weed escapes should not be allowed to reproduce by seed or to proliferate vegetatively.
- If a weed population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action.
- Contact your **Rexovor** supplier and/or your local BASF representative to report weed escapes.
- Consult your local BASF representative, local or state cooperative extension service, professional consultants or crop advisors, or other qualified authority to determine appropriate actions if you suspect resistant weeds.
- Suspected herbicide-resistant weeds may be identified by these indicators:
  - failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
  - a spreading patch on non-controlled plants of a particular weed species; and
  - surviving plants mixed with controlled individuals of the same species.

Crop Tolerance

Crops listed on this label are tolerant to **Rexovor** when applied according to label directions and under normal environmental conditions. Crop injury may occur under stressful growing conditions (e.g. low soil fertility, seedling disease, extreme hot or cold weather, excessive moisture, high soil pH, high soil salt concentration, or drought).

Severe crop injury will result if **Rexovor** is applied postemergence (over the top) to any crop.

Application Instructions

Application Timing and Rate

Rexovor™ herbicide may be applied after previous crop harvest, during a fallow period, preceding crop planting as preplant surface or preplant incorporated treatments, or after crop planting as preemergence treatment in field and row agricultural crops. Refer to the **Crop-specific Information** section for specific application instructions (timings, rates, restrictions and precautions) by crop.

Table 3. Use Rate Equivalency

Rexovor Rate (fl oz/A)	Trifludimoxazin Rate (lb ai/A)
0.35	0.011
0.5	0.016
0.68	0.022
1.0	0.034

Post-harvest Application

Apply **Rexovor** as a broadcast spray after previous crop harvest and before the ground freezes for burndown control of existing weeds. Tillage operations may be conducted before or after applying **Rexovor**. If tillage is used following an application, tillage must be no more than 2-inches deep to uniformly incorporate the herbicide into the upper soil surface.

Fallow Application

Apply **Rexovor** as a broadcast spray during a fallow period for burndown control of existing weeds and/or residual control of germinating weeds during the fallow period.

Preplant Surface Application

Apply **Rexovor** as broadcast spray within 45 days of planting for (early) preplant burndown control of existing weeds and/or residual control of germinating weeds up to and through crop planting.

Preplant Incorporated Applications

Apply **Rexovor** as a broadcast spray to the soil surface up to 14 days before planting and incorporate into the upper soil surface (1 to 2 inches) using a harrow, rolling cultivator, field cultivator, or other implement capable of providing uniform shallow incorporation. Avoid deeper incorporation or reduced weed control may result.

Preemergence Surface Application

Apply **Rexovor** as a broadcast spray to the soil surface after planting and before crop emergence. **Rexovor** must be applied before crop emergence or injury will occur.

Split Applications

Preplant surface applications may be applied as the initial part of a split application program where the sequential applications (preplant incorporated, preemergence) are made near, at, or after crop planting time. However, the cumulative use rate total from the split application program must not exceed the maximum labeled rate for the crop.

Application Methods and Equipment

Rexovor may be applied by ground spray or aerial spray. Thorough spray coverage is required for optimum broadleaf and grass weed control and can be improved with proper adjuvant, nozzle and spray volume selection.

Use and configure application equipment for spray volume, accurate and uniform distribution of spray droplets over the treated area, and to avoid spray drift to nontarget areas. Adjust equipment to maintain continuous agitation during spraying with mechanical or bypass agitation. Avoid overlaps that will increase rates above use rates specified in this label.

Rexovor may be applied using water or sprayable fluid nitrogen fertilizer solutions as the spray carrier. Additionally, **Rexovor** may be impregnated on and applied with dry bulk fertilizer.

Aerial Spray Carrier Volume. Use 15 or more gallons of water per acre for helicopter applications. Use 5 or more gallons of water per acre for fixed-wing aircraft applications.

Ground Spray Carrier Volume. Use 15 or more gallons of water per treated acre or 20 or more gallons of sprayable fluid nitrogen fertilizer per treated acre. Thorough spray coverage is required for control of emerged broadleaf and grass weeds. High populations and/or variations in size can prevent thorough spray coverage. Controlling fall-germinated weeds in the spring (e.g. horseweed/marestail) also requires thorough spray coverage. Use higher spray volumes (e.g. 15 to 20 gallons of water per acre) in these situations to increase spray coverage and optimize burndown activity.

Aerial Spray Nozzle Selection. Applicators must select nozzles and pressure that deliver very coarse or coarser droplets as indicated in nozzle manufacturer's catalogues and in accordance with American Society of Agricultural & Biological Engineers Standard 641 (ASABE §641).

Ground Spray Nozzle Selection. Applicators must select nozzles and pressure that deliver coarse to very coarse droplets as indicated in nozzle manufacturer's catalogues and in accordance with American Society of Agricultural & Biological Engineers Standard 572 (ASABE §572). Nozzles that deliver coarse or very coarse spray droplets may be used to reduce spray drift provided spray volume per acre (GPA) is increased to maintain coverage of target (i.e., weeds).

Spray Drift Retardants. Addition of some spray drift retardants (drift reducing agents, e.g. DRA) can significantly increase the droplet size but reduce spray coverage and efficacy. If a spray drift retardant is used, ensure that it is compatible for use with **Rexovor** and spray equipment being used and the desired level of weed control is maintained.

Cleaning Spray Equipment

Before applying **Rexovor™ herbicide** all application equipment must be thoroughly cleaned. All spray equipment, hoses, and nozzles must be cleaned according to the manufacturer's directions for the last product used before the equipment is used to apply **Rexovor**.

Spray equipment used to apply **Rexovor** should not be used to apply other materials to any crop unless the proper cleanout procedures are followed. Clean application equipment thoroughly by using a strong detergent or commercial sprayer cleaner according to the manufacturer's directions, followed by triple rinsing the equipment after applying this product.

Ground Application (dry bulk fertilizer)

Rexovor may be impregnated or coated onto dry bulk granular fertilizer carriers for residual soil surface application. Impregnation or coating may be conducted by in-plant bulk or on-board systems. Perform the mixing operation in well-ventilated areas.

Addition of a drying agent may be necessary if the fertilizer and herbicide blend is too wet for uniform application because of high humidity, high urea concentration, or low fertilizer use rate. Slowly add the drying agent to the blend until a flowable mixture is obtained. Drying agents are not intended for use with on-board impregnation systems.

Under some conditions, fertilizer impregnated with **Rexovor** may clog air tubes or deflector plates on pneumatic application systems. Mineral oil may be added to **Rexovor** before blending with fertilizer to reduce plugging. **DO NOT** use drying agents when mineral oil is used. To avoid separation of **Rexovor** and mineral oil mixes in cold temperatures, keep mixture heated or agitate before blending with fertilizer. Mineral oil may be used with in-plant blending stations or on-board injection systems.

Generally, fertilizer application rates of at least 200 lbs to 700 lbs per acre of herbicide and fertilizer blend provide adequate distribution or coverage of **Rexovor** across the soil surface. Application must be made uniformly to the soil to prevent possible crop injury and offer satisfactory weed control. Impregnated fertilizer spread at half rate and overlapped for a full rate offers a more uniform distribution. A shallow (less than 2 inches) incorporation is desirable for improved weed control. Deeper incorporation dilutes the herbicide layer near the soil surface and may result in unsatisfactory weed control.

To calculate the herbicide rate when using dry bulk fertilizer application:
fl ozs herbicide per acre/pounds fertilizer per acre X 2000 = fl ozs herbicide per ton of fertilizer

Mitigating Off-Target Movement

MANDATORY SPRAY DRIFT MANAGEMENT

All Applications – Aerial and Ground Boom

- **DO NOT** apply when wind speeds exceed 15 miles per hour at the application site.
- Wind speed and direction must be measured on location using a windsock, an anemometer (including systems to measure wind speed or velocity on an aircraft or ground application equipment), or an aircraft smoke system.
- Wind speed must be measured at the release height or higher, in an area free from obstructions such as trees, buildings, and farm equipment.
- During application, the Sustained Wind Speed, as defined by the National Weather Service (standard averaging period of 2 minutes) must register between 3 and 15 miles per hour.
- **DO NOT** apply during temperature inversions.

Aerial Applications – Fixed-wing Aircraft and Helicopter

- When applying via aerial application equipment, the spray boom must be mounted on the aircraft to minimize drift caused by wing tip or rotor blade vortices.
- **DO NOT** release spray at a height greater than 10 feet above the vegetative canopy, unless a greater application height is required for pilot safety.
- The boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters. But when the wind speed is between 11 to 15 miles per hour, the boom length must be 65% or less of the wingspan for fixed wing aircraft and 75% or less of the rotor diameter for helicopters.
- Applicators must use AT LEAST 1/2 swath displacement upwind at the downwind edge of the field. But when the wind speed is between 11 to 15 miles per hour, applicators must use a minimum of 3/4 swath displacement upwind at the downwind edge of the field.

Ground Boom Applications

- Spray at the appropriate boom height based on nozzle selection and nozzle spacing, but **DO NOT** exceed a nozzle height of 24 inches above the spray target (i.e., top of weed canopy). Set boom to lowest effective height over the target pest based on equipment manufacturer's directions.
- Applicators should select a ground speed that will deliver the desired spray volume while maintaining the desired spray pressure, but **DO NOT** exceed a ground speed of 15 miles per hour.

Mandatory Spray Drift Mitigations

Ecological spray drift buffers are required for this product for aerial and ground boom applications to field crops. Access EPA's **Mitigation Menu** website (www.epa.gov/pesticides/mitigation-menu) for the full list of parameters to evaluate whether your field is subject to the required spray drift buffer.

Applicators must access and search **Bulletins Live! Two** (BLT) at https://www.epa.gov/pesticides/bulletins within six months prior to or on the day of the application to determine whether the application site falls within a Pesticide Use Limitation Area (PULA). If you are located inside a PULA, follow the instructions in the BLT bulletin. If the application site falls outside of a PULA, follow the instructions in the "Outside a PULA" section below. Additional restrictions may be present in bulletins—always follow the most restrictive bulletin instructions.

Outside a PULA. A minimum down-wind spray drift buffer must be maintained between the application area and any unmanaged areas for applications to field crops. Unmanaged areas are defined in comparison to managed areas – anything that is not a managed area is an unmanaged area. Refer to the list of **Managed Areas** in this label.

Mandatory Spray Drift Buffers

For aerial and ground applications, maintain a wind-directional (downwind) buffer distance from the edge of the treated area as follows:

Application Method	Minimum Required Buffer Distance
Aerial	110 feet
Ground	15 feet

Reduction Options for All Ecological Wind-Directional Drift Buffers

The applicator may choose among the ecological drift buffer reduction options on EPA's **Mitigation Menu** website (http://www.epa.gov/pesticides/mitigation-menu) to reduce the wind-directional buffer distance before applying this product. All buffer reduction options selected must align with the minimum droplet size and release height requirements on this label.

Examples of buffer reduction options include: using larger droplets, lowering the boom height, reducing the maximum single application rate, reducing the number of passes across the field, maintaining a windbreak or hedgerow, or using directed sprayers.

The buffer reduction options must be employed in accordance with the instructions and descriptions on EPA's **Mitigation Menu** website. When using more than one option during the application, the percent reduction in the buffer distances may be added together. The maximum buffer reduction that can be achieved by a combination of buffer reduction options is 100% (i.e., no drift buffer).

Additional restrictions may be present in bulletins—always follow the most restrictive bulletin instructions. If you are located in an area where PULAs overlap, follow the most restrictive requirements across all bulletins. When tank mixing, the most restrictive of the products' label or bulletin requirements must be followed (e.g., drift buffers that are not wind-directional, Application Exclusion Zone drift requirements, drift buffers to residences, schools, and parks where people could be present, use prohibitions, timing restrictions, and application method prohibitions).

Managed Areas

Managed areas that can be included as part of wind-directional spray drift buffer footage include the following:

- Agricultural fields, pastures, forage fields, and private rangelands, including untreated portions of the treated field/site;
- Roads, paved or gravel surfaces, mowed grassy/fallowed areas adjacent to field, and areas of bare ground from recent plowing or grading that are contiguous with the treated area;
- Buildings and their perimeters, or other on-farm man-made structures with walls and/or roof;
- Areas present and/or maintained as a runoff/erosion measure as listed on EPA's **Mitigation Menu** website. Examples include vegetative filter strips (VFS), field borders, grassed waterways, vegetated ditches, riparian areas, managed/constructed wetlands, or other areas of intentional habitat improvement;
- Areas present and/or maintained as a drift buffer reduction measure as listed on EPA's **Mitigation Menu** website. Examples include vegetative windbreaks, hedgerows, shelterbelts, riparian areas, private forests, woodlots, and shrublands;
- Conservation Reserve Program (CRP) and Agricultural Conservation Easement Program (ACEP) lands;
- On-site contained irrigation water resources that are not connected to adjacent water bodies, including on-site irrigation canals and ditches, water conveyances, managed irrigation/runoff retention basins, ponds, and tailwater collection ponds.

Managed areas can be included as part of the buffer footage if they are downwind and immediately adjacent/contiguous to the treated field and people are not present in those areas.

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. Be aware of nearby non-target sites and environmental conditions.

Importance of Droplet Size

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size - Ground Boom
Volume. Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.

Pressure. Use the lowest spray pressure specified for the nozzle to produce the target spray volume and droplet size.

Spray Nozzle. Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

Controlling Droplet Size – Aircraft
Adjust Nozzles. Follow nozzle manufacturers' directions for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

Release Height - Ground Boom
For ground equipment, the boom should remain level with the crop and have minimal bounce. Automated boom height controllers are recommended with large booms to better maintain optimum nozzle to canopy height. Excessive boom height will increase the potential for spray drift.

Release Height – Aircraft
Higher release heights increase the potential for spray drift.

Hooded (or Shielded) Sprayers
Shielding the boom or individual nozzles can reduce spray drift. Consider using hooded (or shielded) sprayers. Verify that the hoods (or shields) are not interfering with the uniform deposition of the spray on the target area.

Temperature and Humidity
When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

Temperature Inversion
Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Wind
Drift potential generally increases with wind speed. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

Measuring Wind Speed and Wind Direction

- Applicators should check and acquire the predicted wind speed and direction for the application site within 12 hours prior to conducting applications to determine the time periods wind speed is likely to fall outside the applicable thresholds.
- Applicators should reassess wind speed and direction at the application site at least every hour while applications are in progress.
- Measuring wind speed and direction can be done by:
  - Relying on equipment on the application equipment that measures wind speed (e.g., aerial or ground equipment).
  - Using a tower anemometer with telemetry or handheld anemometer. Users should read user manual on how to calibrate, operate and interpret the output from an anemometer. Ground applicators should stop at least every hour to take a reading with a tower anemometer with telemetry or handheld anemometer. Some anemometers may have software that would allow users to view wind measurements in real time while making an application, and, those cases, applicators would not have to stop to take measurements.
  - Using a windsock. Wind can be estimated with a windsock using the strips on a windsock. The applicator should consult the user manual for the windsock on wind speed estimation and direction of wind. Applicators should look at the sock at least every hour to estimate wind speed and direction.
  - Using an aircraft smoke system. Laying down several puffs of smoke along different lines using an aircraft smoke system can provide an accurate view of what the wind speed and direction for the application.
  - Checking behind the spray rig at least every hour to see if the spray has changed direction from when the application started.

Mandatory Runoff Mitigation

Applicators must access and search **Bulletins Live! Two** (BLT) at https://www.epa.gov/pesticides/bulletins within six months prior to or on the day of the application to determine whether the application site falls within a Pesticide Use Limitation Area (PULA). If you are located inside a PULA, follow the instructions in the the BLT bulletin. If the application site falls outside of a PULA, follow the instructions in the section below.

The minimum of 6 mitigation points must be achieved for the following agricultural crop use sites: corn, postharvest/fallow, legumes vegetables, peanut, small grains, sorghum, and soybean.

Step 1. To achieve the mitigation points specified above, visit EPA's **Mitigation Menu** website (http://www.epa.gov/pesticides/mitigation-menu) for a full list of mitigation and mitigation relief options.

Step 2. Determine if you are eligible for mitigation relief. Runoff/erosion mitigation is NOT required if certain field/application parameters are present at the time of application (e.g., subsurface or tile drains with controlled outlet, perimeter berm systems, irrigation tailwater return systems, spot treatment, etc).

Step 3. If the application site does not meet the field/application parameters specified on EPA's **Mitigation Menu** website, choose among the mitigation and/or mitigation relief options on EPA's **Mitigation Menu** website to

meet or exceed the required points noted here before applying this product.

Step 4. To achieve mitigation points for the application, the mitigation and mitigation relief measures must be:
- Employed in accordance with the instructions and descriptions on EPA's **Mitigation Menu** website.
- In place during the application unless a different timing (such as before or after application) is specifically provided in the measure's description on EPA's **Mitigation Menu** website. EPA may periodically update the **Mitigation Menu** website, for example, by adding new mitigation measures or updating a mitigation measure description.

Step 5. Additional restrictions may be present in bulletins—always follow the most restrictive bulletin instructions. If you are located in an area where PULAs overlap, follow the most restrictive requirements across all bulletins. When tank mixing, the most restrictive requirements must be followed between the products' labels and bulletins.

Additives

For optimum burndown activity with **Rexovor™ herbicide**, an adjuvant system must be used that includes the following:

Adjuvant	Rate
Methylated seed oil (MSO)[1]	1 gal/100 gals (1% v/v)[2]
PLUS	**PLUS**
Ammonium sulfate (AMS) **or** Urea ammonium nitrate (UAN)	8.5 to 17 lbs/100 gals (1% to 2% w/v) **or** 1.25 to 2.5 gals/100 gals (1.25% to 2.5% v/v)

[1] MSO-based adjuvant **MUST** contain at least 60% methylated seed oil. Poor performance may occur with adjuvants containing less than 60% methylated seed oil.
[2] **DO NOT** use less than 1 pint/A of MSO with low-volume (< 12.5 gallons per acre) aerial or ground applications.

Use of AMS fertilizer is highly advised when mixing **Rexovor** with glyphosate-based herbicides.

DO NOT use nonionic surfactant (NIS) as a substitute for MSO, or poor performance on broadleaf and/or grass weeds will occur.

When an adjuvant is to be used with this product, BASF recommends the use of a Chemical Producers and Distributors Association (CPDA) certified adjuvant.

Tank Mixing Information

It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Rexovor may be tank mixed or applied sequentially with other herbicide products registered for use in any labeled crop found in this label for a broader spectrum of control of emerged weeds and/or residual weed control. Refer to the tank mix product labels to confirm that the respective tank mix products are registered for use on the labeled crop. Read and follow tank mix product labels for application instructions, use restrictions and precautions, and rotational cropping guidance.

When tank mixing, the most restrictive of the products' label or bulletin (BLT) requirements must be followed (e.g., use prohibition, timing restriction, application method restriction, sandy soil application restriction, etc.).

Compatibility Test for Mix Components

Before mixing components, always perform a compatibility jar test.

1. For 20 gallons per acre spray volume, use 3.3 cups (800 mL) of water. For other spray volumes, adjust rates accordingly. Only use water from the intended source at the source temperature.
2. Add components in the sequence indicated in **Mixing Order** using 2 teaspoons for each pound or 1 teaspoon for each pint of label rate per acre.
3. Always cap the jar and invert 10 cycles between component additions.
4. When the components have all been added to the jar, let the solution stand for 15 minutes.
5. Evaluate the solution for uniformity and stability. The spray solution shall not have free oil on the surface, or fine particles that precipitate to the bottom, or thick (clabbered) texture. If the spray solution is not compatible, repeat the compatibility test with the addition of a suitable compatibility agent. If the solution is then compatible, use the compatibility agent as directed on its label. If the solution is still incompatible, **DO NOT** mix the ingredients in the same tank.

Mixing Order

Maintain agitation throughout mixing and application until spraying is completed. Except when mixing products in PVA bags, maintain constant agitation during mixing and application.

1. **Water** - Fill tank to 1/2 to 3/4 full with clean water and start agitation.
2. **Inductor** - If an inductor is used, rinse it thoroughly after each component has been added.
3. **Products in PVA bags** - Place any product contained in water-soluble PVA bags into the mixing tank. Wait until all water-soluble PVA bags have fully dissolved and the product is evenly mixed in the spray tank before continuing.
4. **Water-soluble additives** (including dry and liquid fertilizers AMS or UAN)
5. **Water-dispersible products** (dry flowables, wettable powders, suspension concentrates, or suspo-emulsions), add **Rexovor** now
6. **Water-soluble products**

7. **Emulsifiable concentrates** (including MSO adjuvants)
8. **Remaining quantity of water**

If the spray mixture is allowed to settle for any period of time, thorough agitation is essential to resuspend the mixture before spraying is resumed. Continue agitation while spraying.

Use Restrictions

- **Maximum annual use rate:** Refer to **Crop-specific Information** section for maximum application use rates per year.
- **Maximum cropping seasonal application rate:** Refer to **Crop-specific Information** section for maximum application use rates per cropping season for a crop use pattern. A cropping season is defined as the period following harvest of the preceding crop through the harvest of the planned or current crop.
- **DO NOT** apply **Rexovor™ herbicide** after crop emergence as severe crop injury will occur.
- **DO NOT** apply **Rexovor** through any type of irrigation system (e.g. chemigation).
- **DO NOT** contaminate water used for irrigation or domestic purposes.
- **DO NOT** apply during rain.
- **DO NOT** apply this product when soil is saturated or at field capacity, or when a storm event likely to produce runoff from the treated area is expected to occur within 24 hours following application.
- Within 24 hours after application, **DO NOT** irrigate the treatment area to the point of runoff.
- **Rexovor is not for sale, distribution, or use in Alaska, Hawaii, US Territories (including American Samoa, Guam, Puerto Rico, Mariana Islands, US Virgin Islands), and in Nassau and Suffolk counties in New York State.**

Use Precautions

- **Rainfastness** - **Rexovor** is rainfast 1 hour after application. Burndown activity may be reduced if rain or irrigation occurs within 1 hour of application.

Crop Rotation and Emergency Replanting Intervals

Refer to **Table 4** for the proper interval between **Rexovor™ herbicide** application and planting of rotational crops or replanting after crop failure (because of environmental factors including drought, frost, or hail, etc.). Determine the rotational crop interval for tank mix products and use the most restrictive interval of all products applied.

Table 4. Rotational Crop and Emergency Replanting Intervals by Rexovor Application Rate

Crop	Rexovor Rate (fl ozs/A)		
	0.35	**0.68**	**1.0**
	Rotational Crop Interval (months after application)[1]		
Corn	0	0	0
Corn, pop	0	0	0
Corn, sweet	0	0	0
Sorghum	0	0	0
Small grains[2]	0	0	0
Chickpea	0	0	0
Edible pea	0	0	0
Edamame	0	0	0
Edible bean	0	0	0
Field pea	0	0	0
Lentil	0	0	0
Peanut	0	0	0
Soybean	0	0	0
Citrus fruit trees	1	1	1
Nut trees	3	3	4
Pome fruit trees	3	3	4
Other fruit trees	4	5	6
Cotton	4	5	6
Rice	4	5	6
Sugar beet	4	5	6
Sugarcane	4	5	6
Sunflower	4	5	6
Cover crops (winter, spring)[3]	1	2	2
Other crops	4	5	6

[1] **DO NOT** include time when the soil is frozen, or months when less than 1 inch of precipitation or irrigation occurred.
[2] Small grains are defined in **Crop-specific Information** section of this label. For other small grains, use the rotational crop interval for Other Crops.
[3] Cover crops (winter, spring) may be planted after application of **Rexovor**, either inter-seeded into the current crop before harvest or after harvest of the current crop. Depending on the sensitivity of the sown cover crop to **Rexovor**, stand establishment may be reduced. If cover crops were sown less than 4 months after **Rexovor** application, **DO NOT** harvest cover crops as a food or feed crop and **DO NOT** allow livestock to graze cover crops.

Crop-specific Information

This section provides use directions for **Rexovor™ herbicide** in specific crops. Read product information, mixing, application, weeds controlled, and adjuvant instructions in preceding sections of the label.

Broad-spectrum control of additional broadleaf and/or grass weeds requires a tank mix with another herbicide, such as glyphosate or other herbicide products. **Rexovor** may be tank mixed or applied sequentially with other herbicide products. Read and follow tank mix product labels for restrictions, precautions, instructions, and rotational crop restrictions. The most restrictive labeling applies to tank mixes.

For all crop-specific uses in this section, refer to **Table 4** for emergency re-planting and crop rotation intervals.

Corn

Apply **Rexovor** prior to corn emergence. Corn in this label refers to field corn (grain, seed, or silage), popcorn (grain, seed), and sweet corn (processing, fresh market, seed). Before applying **Rexovor** to seed corn, sweet corn, or popcorn, verify the selectivity of **Rexovor** on your inbred line or hybrid with your local seed company (supplier) to help avoid potential injury to sensitive inbreds or hybrids.

Application Rate, Method, and Timing

Apply **Rexovor** at 0.35 fl oz/A as preplant surface or preemergence for burndown control of broadleaf and grass weeds (refer to **Table 2** for lists of weeds controlled). An adjuvant system (refer to the **Additives** section for details) is required for optimum broadleaf and grass burndown activity.

Rexovor may only be applied in a single application.

Crop-specific Restrictions:

- **DO NOT** apply more than 0.35 fl oz/A (0.011 lb ai/A) of **Rexovor** in a single application in corn.
- Maximum number of applications per year: 1
- **DO NOT** apply more than 0.35 fl oz/A (0.011 lb ai/A) of **Rexovor** per year in corn.
- **DO NOT** apply after corn emergence or severe crop injury will occur.
- There is no required (preharvest) interval between a preplant or preemergence application of **Rexovor** and the harvest of corn.
- Corn forage and stover may be fed to or grazed by livestock.

Crop-specific Precautions

- **Rexovor** use may result in delayed corn emergence and stunting under certain environmental conditions including cool temperatures, excessive rainfall/irrigation, and/or persistent wet soil conditions occurring after application.
- Ensure the corn seed row is closed. Soil conditions that cause poor seed furrow closure and coverage may result in delayed corn emergence or stunting.
- **Rexovor** applied to sweet corn planted at depth of 1/2-inch or less may result in crop injury.

Postharvest and Fallow

Rexovor may be applied to control broadleaf and grass weeds (refer to **Table 1** and **Table 2** for lists of weeds controlled) following crop harvest and/or at any time of the year during a fallow period in all labeled crops (corn, legume vegetables, peanut, small grains, sorghum, and soybean), and canola, cotton, rice, sugar beet, and sunflower. **DO NOT** apply **Rexovor** after harvest of any other crop or in fallow period preceding any other crop.

Application Rate, Method, and Timing

Apply **Rexovor** as a broadcast spray at up to 0.68 fl oz/A plus the required adjuvants (refer to **Additives** section for details). For best burndown product performance, apply when broadleaf weeds and grasses are small and actively growing. **Rexovor** may only be applied in a single application.

Use-specific Restrictions:

- **DO NOT** apply more than 0.68 fl oz/A (0.022 lb ai/A) of **Rexovor** in a single application.
- Maximum number of applications per year: 1
- **DO NOT** apply more than 0.68 fl oz/A (0.022 lb ai/A) of **Rexovor** per year in postharvest and fallow.
- Specific rotational crop intervals must be observed between an application of **Rexovor** and planting of the following crop (see **Table 4** for crop rotation intervals).

Legume Vegetables

Apply **Rexovor** prior to legume vegetable emergence. Before applying **Rexovor** to legume vegetables, verify the selectivity of **Rexovor** on your variety with your seed company (supplier) to help avoid potential injury to sensitive varieties.

Rexovor is for use on the following legume vegetable types included in **Crop Group 6** and **7**:

Chickpea (garbanzo bean)
Edible Beans

- Edible-podded *Phaseolus* beans (runner bean, snap bean, wax bean)
- Succulent *Phaseolus* beans (lima bean [green], broad bean)
- Dry *Phaseolus* beans (field bean, kidney bean, lima bean [dry], navy bean, pinto bean, tepary bean)
- Dry beans (broad, guar, lablab)
- Edible-podded *Vigna* beans (asparagus bean, Chinese longbean, moth bean, yardlong bean)
- Succulent *Vigna* beans (blackeyed pea, cowpea, Southern pea)

- Dry *Vigna* beans (adzuki bean, blackeyed pea, cowpea, Crowder pea, moth bean, mung bean, rice bean, Southern pea)
- Dry *Lupinus* beans (grain lupin, sweet lupin, white lupin, white sweet lupin)
- Dry and succulent *Vicia* beans (broad bean, faba bean, fava bean, field bean)

Edible Peas

- Edible-podded peas (dwarf pea, edible-pod pea, pigeon pea, snow pea, sugar snap pea)
- Succulent peas (English pea, garden pea, green pea, pigeon pea, marrowfat pea)
- Dry peas (pigeon pea)

Field Peas

- Dry field peas (including Austrian winter peas)

Lentils
Vegetable Soybean (edamame)

Application Rate, Method, and Timing

Apply **Rexovor™ herbicide** at 0.35 fl oz/A as preplant surface or preemergence for burndown control of broadleaf and grass weeds (refer to **Table 2** for lists of weeds controlled). An adjuvant system (refer to the **Additives** section for details) is required for optimum broadleaf and grass burndown activity.

Rexovor may only be applied in a single application.

Crop-specific Restrictions:

- **DO NOT** apply more than 0.35 fl oz/A (0.011 lb ai/A) of **Rexovor** in a single application in legume vegetables.
- Maximum number of applications per year: 1
- **DO NOT** apply more than 0.35 fl oz/A (0.011 lb ai/A) of **Rexovor** per year in legume vegetables.
- **DO NOT** apply when legumes have reached the cracking stage or after emergence or severe crop injury will occur.
- There is no required (preharvest) interval between a preplant or preemergence application of **Rexovor** and the harvest of legumes.

Crop-specific Precautions

- Plant legumes at least 1/2-inch deep to reduce risk of crop injury from **Rexovor** application.
- Ensure the seed row is closed. Soil conditions that cause poor seed furrow closure and coverage may result in delayed crop emergence or stunting.

Peanut

Apply **Rexovor** prior to peanut emergence. Before applying **Rexovor** to peanut, verify the selectivity of **Rexovor** on your variety with your seed company (supplier) to help avoid potential injury to sensitive varieties.

Application Rate, Method, and Timing

Apply **Rexovor** at 0.68 to 1.0 fl oz/A as preplant surface, preplant incorporated, or preemergence for burndown and/or residual control of broadleaf and grass weeds (refer to **Table 1** and **Table 2** for lists of weeds controlled). An adjuvant system (refer to the **Additives** section for details) is required for optimum broadleaf and grass burndown activity.

Rexovor may only be applied in a single application.

Crop-specific Restrictions:

- **DO NOT** apply aerially in peanut, apply only by ground equipment.
- **DO NOT** apply more than 1.0 fl oz/A (0.034 lb ai/A) of **Rexovor** in a single application in peanut.
- Maximum number of applications per year: 1
- **DO NOT** apply more than 1.0 fl oz/A (0.034 lb ai/A) of **Rexovor** per year in peanut.
- **DO NOT** apply after peanut emergence or crop injury will occur.
- There is no required (preharvest) interval between a preplant or preemergence application of **Rexovor** and the harvest of peanut.

Crop-specific Precautions

- Ensure the seed row is sufficiently covered with soil to avoid washing and concentration of the herbicide in the seed zone.

Small Grains

Apply **Rexovor** prior to small grain emergence. Small grains in this label refers to barley, millet (pearl and proso), oats, rye, triticale, and wheat (including durum, spring and winter). Before applying **Rexovor** to small grains, verify the selectivity of **Rexovor** on your variety with your seed company (supplier) to help avoid potential injury to sensitive varieties.

Application Rate, Method, and Timing

Apply **Rexovor** at 0.35 fl oz/A as preplant surface or preemergence for burndown control of broadleaf and grass weeds (refer to **Table 2** for lists of weeds controlled). An adjuvant system (refer to the **Additives** section for details) is required for optimum broadleaf and grass burndown activity.

Rexovor may only be applied in a single application.

Crop-specific Restrictions:

- **DO NOT** apply more than 0.35 fl oz/A (0.011 lb ai/A) of **Rexovor** in a single application in small grains.
- Maximum number of applications per year: 1
- **DO NOT** apply more than 0.35 fl oz/A (0.011 lb ai/A) of **Rexovor** per year in small grains.

- **DO NOT** apply after small grain emergence or crop injury will occur.
- There is no required (preharvest) interval between a preplant or preemergence application of **Rexovor™ herbicide** and the harvest of small grains.

Crop-specific Precautions

- Ensure the seed row is sufficiently covered with soil to avoid washing and concentration of the herbicide in the seed zone.

Sorghum

Apply **Rexovor** prior to sorghum emergence. Before applying **Rexovor** to sorghum, verify the selectivity of **Rexovor** on your inbred line or hybrid with your local seed company (supplier) to help avoid potential injury to sensitive inbreds or hybrids.

Rexovor is for use on the following sorghum types:

- **Grain sorghum** (milo, durra, kaffir-corn, Indian millet, great millet, grand millet, kaoliang, Chinese sorghum, shattercane, guineacorn, sorgo comun)
- **Sweet sorghum** (sorgo, sorgo duice, Zuckerhirse, sorgo doux)

Application Rate, Method, and Timing

Apply **Rexovor** at 0.35 fl oz/A as preplant surface or preemergence for burndown control of broadleaf and grass weeds (refer to **Table 2** for lists of weeds controlled). An adjuvant system (refer to the **Additives** section for details) is required for optimum broadleaf and grass burndown activity.

Rexovor may only be applied in a single application.

Crop-specific Restrictions:

- **DO NOT** apply more than 0.35 fl oz/A (0.011 lb ai/A) of **Rexovor** in a single application in sorghum.
- Maximum number of applications per year: 1
- **DO NOT** apply more than 0.35 fl oz/A (0.011 lb ai/A) of **Rexovor** per year in sorghum.
- **DO NOT** apply after sorghum emergence or severe crop injury will occur.
- There is no required (preharvest) interval between a preplant or preemergence application of **Rexovor** and the harvest of sorghum.

Crop-specific Precautions

- **Rexovor** use may result in delayed sorghum emergence and stunting under certain environmental conditions including cool temperatures, excessive rainfall/irrigation, and/or persistent wet soil conditions occurring after application.
- Ensure the sorghum seed row is closed. Soil conditions that cause poor seed furrow closure and coverage may result in delayed sorghum emergence or stunting.

Soybean

Apply **Rexovor** prior to soybean emergence. An adjuvant system (refer to **Additives** section for details) is required for optimum burndown activity. Before applying **Rexovor** to soybean, verify the selectivity of **Rexovor** on your variety with your seed company (supplier) to help avoid potential injury to sensitive varieties.

Application Rate, Method, and Timing

Apply **Rexovor** at 0.35 fl oz/A as preplant surface or preemergence for burndown control of broadleaf and grass weeds (refer to **Table 2** for lists of weeds controlled). An adjuvant system (refer to the **Additives** section for details) is required for optimum broadleaf and grass burndown activity.

Sequential applications of **Rexovor** may be made as needed prior to soybean emergence as part of a split application program.

Crop-specific Restrictions:

- **DO NOT** apply more than 0.35 fl oz/A (0.011 lb ai/A) of **Rexovor** in a single application in soybean.
- **DO NOT** apply more than 0.68 fl oz/A (0.022 lb ai/A) of **Rexovor** as a maximum cumulative amount from sequential applications per year in soybean.
- Sequential applications must be separated by at least 14 days.
- Maximum number of applications per year: 2
- **DO NOT** apply when soybean has reached the cracking stage or after emergence or severe crop injury will occur.
- There is no required (preharvest) interval between a preplant or preemergence application of **Rexovor** and the harvest of soybean.

Crop-specific Precautions

- Use of **Rexovor** may result in delayed soybean emergence and stunting under certain environmental conditions including cool temperatures, excessive rainfall/irrigation, and/or persistent wet soil conditions occurring after application.
- Ensure the seed row is sufficiently covered with soil to avoid washing and concentration of the herbicide in the seed zone.

Conditions of Sale and Warranty

The **Directions For Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully. However, it is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of BASF Agricultural Solutions US LLC ("BASF") or the Seller. To the extent consistent with applicable law, all such risks shall be assumed by the Buyer.

BASF warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Directions For Use**, subject to the inherent risks, referred to above.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S EXCLUSIVE REMEDY AND BASF'S EXCLUSIVE LIABILITY, WHETHER IN CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY, OR OTHERWISE, SHALL BE LIMITED TO REPAYMENT OF THE PURCHASE PRICE OF THE PRODUCT.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF AND THE SELLER DISCLAIM ANY LIABILITY FOR CONSEQUENTIAL, EXEMPLARY, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

BASF and the Seller offer this product, and the Buyer and User accept it, subject to the foregoing **Conditions of Sale and Warranty** which may be varied only by agreement in writing signed by a duly authorized representative of BASF. 1108

Rexovor *and* ***Tirexor*** *are trademarks of BASF.*

Note to PM/reviewer: Alternate text in brackets [...]

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007969-00XXX.20220401g.**NVA 2022-04-0655-0098**

BASF Agricultural Solutions US LLC
2 TW Alexander Drive
Research Triangle Park, NC 27713

BASF
We create chemistry

[Optional Marketing Claims:
Powered by Tirexor™
Powered by Tirexor™ herbicide
Powered by Tirexor™ Active herbicide]

Exhibit D

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7505P)
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

NOTICE OF PESTICIDE:
_X_ Registration
___ Reregistration
(under FIFRA, as amended)

EPA Reg. Number:	Date of Issuance:
7969-492	6/30/26

Term of Issuance: Unconditional

Name of Pesticide Product: TIREXOR Herbicide

BASF Corporation
26 Davis Drive, PO Box 13528
Research Triangle Park, NC 27709

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA section 3(c)(5) provided that you:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product when the Agency requires all registrants of similar products to submit such data.

Signature of Approving Official:

Nathan Mellor, Chief
Fungicide and Herbicide Branch, Registration Division (7505P)

Date: 6/30/26

EPA Form 8570-6

2. Registration Term for Implementing Additional Mitigations from the Services
   If, following formal consultation with FWS and NMFS, additional modifications are identified in any applicable Biological Opinion, EPA will notify Bayer in writing within 45 calendar days of the issuance of the Biological Opinion of any necessary required changes. Within 30 calendar days of receiving EPA's notice, Bayer must submit an amendment application incorporating the necessary changes, including amended labels. Alternatively, Bayer may respond by submitting a request for voluntary cancellation of this product. If Bayer fails to comply with this term, Bayer has agreed in prior written acceptance of the terms that EPA may cancel the registration under an expedited process under FIFRA 6(e).

3. Make the following label changes before you release the product for shipment:

   - Revise the EPA Registration Number to read, "EPA Reg. No. 7969-492."

4. Submit one copy of the revised final printed label for the record before you release the product for shipment.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSF:

- Basic CSF dated: 4/01/2024

If you have any questions, please contact Sayed Islam via email at islam.sayed@epa.gov

Enclosure

BASF
We create chemistry

Trifludimoxazin	Group	14	Herbicide

ACCEPTED
06/30/2026
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 7969-492

Tirexor™

Herbicide

Active Ingredient:
trifludimoxazin: 1,5-dimethyl-6-thioxo-3-[2,2,7-trifluoro-3-oxo-4-(prop-2-yn-1-yl)-3,4-dihydro-2H-1,4-benzoxazin-6-yl]-1,3,5-triazinane-2,4-dione 41.53%
Other Ingredients:. 58.47%
Total: 100.00%

Contains 4.17 pounds active ingredient trifludimoxazin per gallon product formulated as a water-based suspension concentrate.

EPA Reg. No. 7969-XXX **EPA Est. No.**

KEEP OUT OF REACH OF CHILDREN

CAUTION/PRECAUCION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

See inside for complete **First Aid**, **Precautionary Statements**, **Directions For Use**, **Conditions of Sale and Warranty**, and state-specific crop and/or use site restrictions.

In case of an emergency endangering life or property involving this product, call day or night 1-800-832-HELP (4357).

Net Contents:

BASF Agricultural Solutions US LLC
2 TW Alexander Drive
Research Triangle Park, NC 27713

FIRST AID	
If swallowed	• Call a poison control center or doctor immediately for treatment advice. • **DO NOT** induce vomiting unless told to do so by a poison control center or doctor. • **DO NOT** give anything by mouth to an unconscious person. • Have a person sip a glass of water if able to swallow.
If in eyes	• Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. • Remove contact lenses, if present, after first 5 minutes; then continue rinsing eyes. • Call a poison control center for treatment advice.
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 to 20 minutes. • Call a poison control center or doctor for treatment advice.
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably by mouth to mouth, if possible. • Call a poison control center or doctor for further treatment advice.
HOTLINE NUMBER	
Have the product container or label with you when calling the poison control center at 1-800-222-1222 or doctor or going for treatment. You may also contact BASF Agricultural Solutions US LLC (hereafter "BASF") for emergency medical treatment information at 1-800-832-HELP (4357).	

Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION. Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes or clothing. Remove and wash contaminated clothing before reuse. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Wear protective eyewear.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves
- Protective eyewear (including face shield, goggles, or safety glasses)

User Safety Requirements

Follow the manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. **DO NOT** reuse them.

Engineering Controls Statement

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "applicators and other handlers" and have such PPE immediately available for use in an emergency, including a spill or equipment breakdown.

USER SAFETY RECOMMENDATIONS
Users should: • Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. • Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Environmental Hazards

For terrestrial uses, **DO NOT** apply directly to water, or to areas where surface water is present or to intertidal areas below the mean highwater mark. **DO NOT** contaminate water when disposing of equipment washwater or rinsate.

Groundwater Advisory. Trifludimoxazin has properties and characteristics associated with chemicals detected in groundwater. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

Surface Water Advisory. Trifludimoxazin may impact surface water quality due to runoff of rainwater. This is especially true for poorly draining soils and soils with shallow groundwater. This product is classified as having high potential for reaching surface water via runoff for several weeks after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features including ponds, streams, and

springs will reduce the potential loading of this chemical from runoff water and sediment. Runoff of this product will be reduced by avoiding application when rainfall is forecast to occur within 48 hours.

Nontarget Organism Advisory: This product is toxic to plants and may adversely impact the forage and habitat of nontarget organisms, including pollinators, in areas adjacent to the treated area. Protect the forage and habitat of nontarget organisms by minimizing spray drift.

Reporting Ecological Incidents: For guidance on reporting ecological incidents, see EPA's Pesticide Incident Reporting website:
https://www.epa.gov/pesticide-incidents.

Directions For Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. This labeling must be in the possession of the user at time of herbicide application.

DO NOT apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

Endangered and Threatened Species Protection Requirements

Before using this product, you must obtain any applicable Endangered Species Protection Bulletins ('Bulletins') within six months prior to or on the day of application. To obtain Bulletins, go to Bulletins Live! Two (BLT) at https://www.epa.gov/pesticides/bulletins. When using this product, you must follow all directions and restrictions contained in any applicable Bulletin(s) for the area where you are applying the product, including any restrictions on application timing if applicable. It is a violation of Federal law to use this product in a manner inconsistent with its labeling, including this labeling instruction to follow all directions and restrictions contained in any applicable Bulletin(s).

For general questions or technical help, call 1-844-447-3813, or email ESPP@epa.gov.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on the label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

DO NOT enter or allow worker entry into treated areas during the restricted-entry interval (REI) of **12 hours**.

EXCEPTION: If the product is soil injected or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, including plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves
- Shoes plus socks

STORAGE AND DISPOSAL

DO NOT contaminate water, food, or feed by storage or disposal. Open dumping is prohibited.

Pesticide Storage

DO NOT use or store near heat or open flame. Store in original container in a well-ventilated area separately from fertilizer, feed, or foodstuffs. Avoid cross-contamination with other pesticides. Prevent from freezing, however if product freezes allow to thaw at room temperature for 24 hours and agitate well prior to use.

Pesticide Disposal

Wastes resulting from this product may be disposed of on-site or at an approved waste disposal facility. Improper disposal of excess pesticide, spray mix, or rinsate is a violation of federal law. If these wastes cannot be disposed of according to label instructions, contact the state agency responsible for pesticide regulation or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Handling

Nonrefillable Plastic Container. DO NOT reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

Triple rinse containers small enough to shake (capacity ≤ 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

In Case of Emergency

In case of large-scale spill of this product, call:

- CHEMTREC 1-800-424-9300
- BASF 1-800-832-HELP (4357)

In case of medical emergency regarding this product, call:

- Your local doctor for immediate treatment
- Your local poison control center (hospital)
- BASF 1-800-832-HELP (4357)

Steps to take if case material is released or spilled:

- Dike and contain the spill with inert material (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal.
- Remove contaminated clothing and wash affected skin areas with soap and water.
- Wash clothing before reuse.
- Keep the spill out of all sewers and open bodies of water.

Product Information

*[Alternate text for EPA review purposes only: Refer to **Table 1** for use rate equivalency between herbicide active ingredient (AI, Trifludimoxazin) and formulated typical end use product (TEP, **Tirexor™ herbicide**).]*

Table 1. Use Rate Equivalency (AI vs. TEP)

Trifludimoxazin Rate (g ai/ha)	**Trifludimoxazin Rate** (lb ai/A)	**Tirexor™ herbicide Rate** (fl ozs/A)
9	0.008	0.25
12.75	0.011	0.35
18	0.016	0.50
25	0.022	0.68
30	0.027	0.82
38	0.034	1.0

Tirexor provides both rate-dependent residual preemergence control of germinating broadleaf and grass weeds and postemergence control (i.e., foliar contact burndown) of emerged broadleaf and grass weeds. Refer to **Table 2** and **Table 3** for list of weeds controlled by residual preemergence and postemergence applications, respectively.

Tirexor can be used in select field and row crops, bearing and nonbearing fruit and nut trees, fallow and postharvest croplands. See **Crop-specific Information** section for specific use directions.

Table 2. Broadleaf and Grass Weeds Controlled with a Residual Preemergence Application of Tirexor™ herbicide

Common Name	Scientific Name	Tirexor Use Rate (fl oz/A)	
		0.68	1.0
Broadleaf Weeds			
Amaranth, Palmer	*Amaranthus palmeri*	C	C
Beggarweed, Florida	*Desmodium tortuosum*	C	C
Canola, volunteer (rapeseed)	*Brassica* spp.	S	C
Carpetweed	*Mollugo verticillata*	C	C
Henbit	*Lamium amplexicaule*	C	C
Lambsquarters, common	*Chenopodium album*	C	C
Morningglory	*Ipomoea* spp.	S	C
Pigweed, prostrate	*Amaranthus blitoides*	C	C
Pigweed, redroot	*Amaranthus retroflexus*	C	C
Ragweed, common	*Ambrosia artemisiifolia*	S	S
Sunflower, common	*Helianthus annuus*	S	S
Velvetleaf	*Abutilon theophrasti*	C	C
Waterhemp	*Amaranthus tuberculatus*	C	C
Grass Weeds			
Crabgrass. large	*Digitaria sanguinalis*	S	C
Crowfootgrass	*Dactyloctenium aegyptium*	S	C
Foxtail, giant	*Seteria faberi*	S	C
Goosegrass	*Eleusine indica*	C	C
Panicum, Texas	*Panicum texanum*	S	C
Ryegrass, Italian	*Lolium multiflorum*	S	S
Signalgrass, broadleaf	*Brachiaria platyphylla*	S	C

C = Control, S = Suppression

Table 3. Broadleaf and Grass Weeds Controlled with a Postemergence Application of Tirexor™ herbicide

Common Name	Scientific Name	Tirexor Use Rate (fl oz/A)		
		0.35	0.50	0.68
Broadleaf Weeds		Maximum Weed Height or Diameter (4 inches)		
Amaranth, Palmer	*Amaranthus palmeri*	C	C	C
Bedstraw, catchweed	*Galium aparine*	S	S	S
Buckwheat, wild	*Polygonum convulvulus*	S	S	S
Canola, volunteer (rapeseed)	*Brassica* spp.	S	S	C
Chickweed, common	*Stellaria media*	C	C	C
Chickweed, field	*Ceraqstium arvense*	C	C	C
Eveningprimrose, cutleaf	*Oenothera laciniata*	—	—	S
Henbit	*Lamium amplexicaule*	C	C	C
Kochia	*Kochia scoparia*	—	—	S
Pennycress, field	*Thlaspi arvense*	S	S	C
Purslane	*Portulaca* spp.	C	C	C
Sheperdspurse	*Capsella burse-pastoris*	C	C	C
Swinecress, lesser	*Coronopus didymus*	S	S	S
Velvetleaf	*Abutilon theophrasti*	C	C	C
Waterhemp	*Amaranthus tuberculatus*	S	S	C

(continued)

Table 3. Broadleaf and Grass Weeds Controlled with a Postemergence Application of Tirexor™ herbicide
(continued)

Common Name	Scientific Name	Tirexor Use Rate (fl oz/A)		
		0.35	0.50	0.68
Grass Weeds		**Maximum Weed Size** (2-3 leaves)		
Bluegrass, annual	*Poa annua*	S	S	C
Foxtail, giant	*Setaria faberi*	S	S	S
Ryegrass, Italian	*Lolium multiflorum*	S	S	S

C = Control, S = Suppression

Mode of Action

Trifludimoxazin, the active ingredient in **Tirexor**, is a potent inhibitor of protoporphyrinogen-oxidase (PPO) belonging to herbicide mode of action **Group 14** (WSSA). **Tirexor** is rapidly absorbed by roots and foliage. Following inhibition of protoporphyrinogen-oxidase, plant death is the result of membrane damage. Under active growing conditions, susceptible emerged weeds usually develop chlorotic and necrotic injury symptoms within hours and die within a few days. Susceptible emerging weed seedlings will usually die as they reach the soil surface or shortly after emergence.

Herbicide Resistance Management

Any weed population may contain or develop plants naturally resistant to **Tirexor** and other **Group 14** herbicides. Weed species with resistance to **Group 14** may dominate the weed population if **Group 14** herbicides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by **Tirexor** or other **Group 14** herbicides.

To delay herbicide resistance, consider:

- Resistance management should be part of a diversified weed control strategy that integrates chemical, cultural, and mechanical (tillage) control tactics. Cultural control tactics include crop rotation, proper fertilizer placement, and optimum seeding rate/row spacing. Start with clean fields using tillage or an effective burndown herbicide program. These practices encourage crop growth and improve competitiveness against weeds.
- Clean equipment before moving to a different field to avoid spread of resistant weeds.
- Scout fields prior to application to identify the weed species present and their growth stage to determine if the intended application will be effective.
- Always follow labeled application rate and weed growth stage specifications.
- Use sequential programs with preemergence herbicides that provide soil residual control of weeds to reduce early season weed competition and allow for timely in-crop postemergence herbicide applications.
- **DO NOT** rely on a single herbicide site of action for weed control during the growing season.
- Avoid application of herbicides with the same site of action more than twice a season.
- Use tank mixes or premixes with other herbicides possessing different sites of action that are also effective on the target weeds.
- Scout fields after herbicide application to identify areas where weed control was ineffective.
- Control weed escapes with herbicides possessing a different site of action or use a mechanical control measure. Weed escapes should not be allowed to reproduce by seed or to proliferate vegetatively.
- If a weed population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action.
- Contact your **Tirexor** supplier and/or your local BASF representative to report weed escapes.
- Consult your local BASF representative, local or state cooperative extension service, professional consultants or crop advisors, or other qualified authority to determine appropriate actions if you suspect resistant weeds.
- Suspected herbicide-resistant weeds may be identified by these indicators:
  - failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
  - a spreading patch on non-controlled plants of a particular weed species; and
  - surviving plants mixed with controlled individuals of the same species.

Application Instructions

Application Timing and Rate

Tirexor may be applied after previous crop harvest, during a fallow period, preceding crop planting as preplant surface or preplant incorporated treatments, or after crop planting as preemergence treatment in field and row agricultural crops. **Tirexor** may be applied postemergence-directed in tree crops. Refer to the **Crop-specific Information** section for specific application instructions (timings, rates, restrictions and precautions) by crop.

Post-harvest Application

Apply **Tirexor** as a broadcast spray after previous crop harvest and before the ground freezes for burndown control of existing weeds. Tillage operations may be conducted before or after applying **Tirexor**. If tillage is used following an application, tillage must be no more than

2-inches deep to uniformly incorporate the herbicide into the upper soil surface.

Fallow Application

Apply **Tirexor™ herbicide** as a broadcast spray during a fallow period for burndown control of existing weeds and/or residual control of germinating weeds during the fallow period.

Preplant Surface Application

Apply **Tirexor** as broadcast spray within 45 days of planting for (early) preplant burndown control of existing weeds and/or residual control of germinating weeds up to and through crop planting.

Preplant Incorporated Applications

Apply **Tirexor** as a broadcast spray to the soil surface up to 14 days before planting and incorporate into the upper soil surface (1 to 2 inches) using a harrow, rolling cultivator, field cultivator, or other implement capable of providing uniform shallow incorporation. Avoid deeper incorporation or reduced weed control may result.

Preemergence Surface Application

Apply **Tirexor** as a broadcast spray to the soil surface after planting and before crop emergence. **Tirexor** must be applied before crop emergence or injury will occur.

Split Applications

Preplant surface applications may be applied as the initial part of a split application program where the sequential applications (preplant incorporated, preemergence) are made near, at, or after crop planting time. However, the cumulative use rate total from the split application program must not exceed the maximum labeled rate for the crop.

Application Methods and Equipment

Tirexor may be applied by ground spray (banded, broadcast, or spot) or aerial spray. Thorough spray coverage is required for optimum broadleaf and grass weed control and can be improved with proper adjuvant, nozzle and spray volume selection.

Use and configure application equipment for spray volume, accurate and uniform distribution of spray droplets over the treated area, and to avoid spray drift to nontarget areas. Adjust equipment to maintain continuous agitation during spraying with mechanical or bypass agitation. Avoid overlaps that will increase rates above use rates specified in this label.

Tirexor may be applied using water or sprayable fluid nitrogen fertilizer solutions as the spray carrier. Additionally, **Tirexor** may be impregnated on and applied with dry bulk fertilizer.

Aerial Spray Carrier Volume. Use 15 or more gallons of water per acre for helicopter applications. Use 5 or more gallons of water per acre for fixed-wing aircraft applications.

Ground Spray Carrier Volume. Use 15 or more gallons of water per treated acre or 20 or more gallons of sprayable fluid nitrogen fertilizer per treated acre. Thorough spray coverage is required for control of emerged broadleaf and grass weeds. High populations and/or variations in size can prevent thorough spray coverage. Controlling fall-germinated weeds in the spring (e.g. horseweed/marestail) also requires thorough spray coverage. Use higher spray volumes (e.g. 15 to 20 gallons of water per acre) in these situations to increase spray coverage and optimize burndown activity.

Aerial Spray Nozzle Selection. Applicators must select nozzles and pressure that deliver very coarse or coarser droplets as indicated in nozzle manufacturer's catalogues and in accordance with American Society of Agricultural & Biological Engineers Standard 641 (ASABE §641).

Ground Spray Nozzle Selection. Applicators must select nozzles and pressure that deliver coarse to very coarse droplets as indicated in nozzle manufacturer's catalogues and in accordance with American Society of Agricultural & Biological Engineers Standard 572 (ASABE §572). Nozzles that deliver coarse or very coarse spray droplets may be used to reduce spray drift provided spray volume per acre (GPA) is increased to maintain coverage of target (i.e., weeds).

Spray Drift Retardants. Addition of some spray drift retardants (drift reducing agents, e.g. DRA) can significantly increase the droplet size but reduce spray coverage and efficacy. If a spray drift retardant is used, ensure that it is compatible for use with **Tirexor** and spray equipment being used and the desired level of weed control is maintained.

Cleaning Spray Equipment

Clean application equipment thoroughly by using a strong detergent or commercial sprayer cleaner according to the manufacturer's directions, followed by triple rinsing the equipment before and after applying this product.

Ground Application (dry bulk fertilizer)

Tirexor may be impregnated or coated onto dry bulk granular fertilizer carriers for residual soil surface application. Impregnation or coating may be conducted by in-plant bulk or on-board systems. Perform the mixing operation in well-ventilated areas.

Addition of a drying agent may be necessary if the fertilizer and herbicide blend is too wet for uniform application because of high humidity, high urea concentration, or low fertilizer use rate. Slowly add the drying agent to the blend until a flowable mixture is obtained. Drying agents are not intended for use with on-board impregnation systems.

Under some conditions, fertilizer impregnated with **Tirexor** may clog air tubes or deflector plates on pneumatic application systems. Mineral oil may be added to **Tirexor** before blending with fertilizer to reduce plugging. **DO NOT** use drying agents when mineral oil is used. To avoid separation of **Tirexor** and mineral oil mixes in cold temperatures, keep mixture heated or agitate before blending with fertilizer. Mineral oil may be used with in-plant blending stations or on-board injection systems.

Generally, fertilizer application rates of at least 200 lbs to 700 lbs per acre of herbicide and fertilizer blend provide adequate distribution or coverage of **Tirexor™ herbicide** across the soil surface. Application must be made uniformly to the soil to prevent possible crop injury and offer satisfactory weed control. Impregnated fertilizer spread at half rate and overlapped for a full rate offers a more uniform distribution. A shallow (less than 2 inches) incorporation is desirable for improved weed control. Deeper incorporation dilutes the herbicide layer near the soil surface and may result in unsatisfactory weed control.

To calculate the herbicide rate when using dry bulk fertilizer application:

fl ozs herbicide per acre/pounds fertilizer per acre X 2000 = fl ozs herbicide per ton of fertilizer

Mitigating Off-Target Movement

MANDATORY SPRAY DRIFT MANAGEMENT

All Applications - Aerial and Ground Boom

- **DO NOT** apply when wind speeds exceed 15 miles per hour at the application site.
- Wind speed and direction must be measured on location using a windsock, an anemometer (including systems to measure wind speed or velocity on an aircraft or ground application equipment), or an aircraft smoke system.
- Wind speed must be measured at the release height or higher, in an area free from obstructions such as trees, buildings, and farm equipment.
- During application, the Sustained Wind Speed, as defined by the National Weather Service (standard averaging period of 2 minutes) must register between 3 and 15 miles per hour.
- **DO NOT** apply during temperature inversions.

Aerial Applications - Fixed-wing Aircraft and Helicopter

- When applying via aerial application equipment, the spray boom must be mounted on the aircraft to minimize drift caused by wing tip or rotor blade vortices.
- **DO NOT** release spray at a height greater than 10 feet above the vegetative canopy, unless a greater application height is required for pilot safety.
- The boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters. But when the wind speed is between 11 to 15 miles per hour, the boom length must be 65% or less of the wingspan for fixed wing aircraft and 75% or less of the rotor diameter for helicopters.
- Applicators must use AT LEAST 1/2 swath displacement upwind at the downwind edge of the field. But when the wind speed is between 11 to 15 miles per hour, applicators must use a minimum of 3/4 swath displacement upwind at the downwind edge of the field.

(continued)

MANDATORY SPRAY DRIFT MANAGEMENT *(continued)*

Ground Boom Applications

- Spray at the appropriate boom height based on nozzle selection and nozzle spacing, but **DO NOT** exceed a nozzle height of 24 inches above the spray target (i.e., top of weed canopy). Set boom to lowest effective height over the target pest based on equipment manufacturer's directions.
- Applicators should select a ground speed that will deliver the desired spray volume while maintaining the desired spray pressure, but **DO NOT** exceed a ground speed of 15 miles per hour.

Mandatory Spray Drift Mitigations

Ecological spray drift buffers are required for this product for aerial and ground boom applications to field crops. Access EPA's **Mitigation Menu** website (www.epa.gov/pesticides/mitigation-menu) for the full list of parameters to evaluate whether your field is subject to the required spray drift buffer.

Applicators must access and search **Bulletins Live! Two** (BLT) at https://www.epa.gov/pesticides/bulletins within six months prior to or on the day of the application to determine whether the application site falls within a Pesticide Use Limitation Area (PULA). If you are located inside a PULA, follow the instructions in the BLT bulletin. If the application site falls outside of a PULA, follow the instructions in the "Outside a PULA" section below. Additional restrictions may be present in bulletins—always follow the most restrictive bulletin instructions.

Outside a PULA. A minimum down-wind spray drift buffer must be maintained between the application area and any unmanaged areas for applications to field crops. Unmanaged areas are defined in comparison to managed areas – anything that is not a managed area is an unmanaged area. Refer to the list of **Managed Areas** in this label.

Mandatory Spray Drift Buffers

For aerial and ground applications, maintain a wind-directional (downwind) buffer distance from the edge of the treated area as follows:

Application Method	Minimum Required Buffer Distance
Aerial	110 feet
Ground	15 feet

Reduction Options for All Ecological Wind-Directional Drift Buffers

The applicator may choose among the ecological drift buffer reduction options on EPA's **Mitigation Menu** website (http://www.epa.gov/pesticides/mitigation-menu) to reduce the wind-directional buffer distance before applying this product. All buffer reduction options selected must align

with the minimum droplet size and release height requirements on this label.

Examples of buffer reduction options include: using larger droplets, lowering the boom height, reducing the maximum single application rate, reducing the number of passes across the field, maintaining a windbreak or hedgerow, or using directed sprayers.

The buffer reduction options must be employed in accordance with the instructions and descriptions on EPA's **Mitigation Menu** website. When using more than one option during the application, the percent reduction in the buffer distances may be added together. The maximum buffer reduction that can be achieved by a combination of buffer reduction options is 100% (i.e., no drift buffer).

Additional restrictions may be present in bulletins—always follow the most restrictive bulletin instructions. If you are located in an area where PULAs overlap, follow the most restrictive requirements across all bulletins. When tank mixing, the most restrictive of the products' label or bulletin requirements must be followed (e.g., drift buffers that are not wind-directional, Application Exclusion Zone drift requirements, drift buffers to residences, schools, and parks where people could be present, use prohibitions, timing restrictions, and application method prohibitions).

Managed Areas

Managed areas that can be included as part of wind-directional spray drift buffer footage include the following:

- Agricultural fields, pastures, forage fields, and private rangelands, including untreated portions of the treated field/site;
- Roads, paved or gravel surfaces, mowed grassy/fallowed areas adjacent to field, and areas of bare ground from recent plowing or grading that are contiguous with the treated area;
- Buildings and their perimeters, or other on-farm man-made structures with walls and/or roof;
- Areas present and/or maintained as a runoff/erosion measure as listed on EPA's **Mitigation Menu** website. Examples include vegetative filter strips (VFS), field borders, grassed waterways, vegetated ditches, riparian areas, managed/constructed wetlands, or other areas of intentional habitat improvement;
- Areas present and/or maintained as a drift buffer reduction measure as listed on EPA's **Mitigation Menu** website. Examples include vegetative windbreaks, hedgerows, shelterbelts, riparian areas, private forests, woodlots, and shrublands;
- Conservation Reserve Program (CRP) and Agricultural Conservation Easement Program (ACEP) lands;
- On-site contained irrigation water resources that are not connected to adjacent water bodies, including on-site irrigation canals and ditches, water conveyances, managed irrigation/runoff retention basins, ponds, and tailwater collection ponds.

Managed areas can be included as part of the buffer footage if they are downwind and immediately adjacent/contiguous to the treated field and people are not present in those areas.

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. Be aware of nearby non-target sites and environmental conditions.

Importance of Droplet Size

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size - Ground Boom

Volume. Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.

Pressure. Use the lowest spray pressure specified for the nozzle to produce the target spray volume and droplet size.

Spray Nozzle. Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

Controlling Droplet Size - Aircraft

Adjust Nozzles. Follow nozzle manufacturers' directions for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

Release Height - Ground Boom

For ground equipment, the boom should remain level with the crop and have minimal bounce. Automated boom height controllers are recommended with large booms to better maintain optimum nozzle to canopy height. Excessive boom height will increase the potential for spray drift.

Release Height - Aircraft

Higher release heights increase the potential for spray drift.

Hooded (or Shielded) Sprayers

Shielding the boom or individual nozzles can reduce spray drift. Consider using hooded (or shielded) sprayers. Verify that the hoods (or shields) are not interfering with the uniform deposition of the spray on the target area.

Temperature and Humidity

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

Temperature Inversion

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

Wind
Drift potential generally increases with wind speed. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

Measuring Wind Speed and Wind Direction
- Applicators should check and acquire the predicted wind speed and direction for the application site within 12 hours prior to conducting applications to determine the time periods wind speed is likely to fall outside the applicable thresholds.
- Applicators should reassess wind speed and direction at the application site at least every hour while applications are in progress.
- Measuring wind speed and direction can be done by:
  - Relying on equipment on the application equipment that measures wind speed (e.g., aerial or ground equipment).
  - Using a tower anemometer with telemetry or handheld anemometer. Users should read user manual on how to calibrate, operate and interpret the output from an anemometer. Ground applicators should stop at least every hour to take a reading with a tower anemometer with telemetry or handheld anemometer. Some anemometers may have software that would allow users to view wind measurements in real time while making an application, and, those cases, applicators would not have to stop to take measurements.
  - Using a windsock. Wind can be estimated with a windsock using the strips on a windsock. The applicator should consult the user manual for the windsock on wind speed estimation and direction of wind. Applicators should look at the sock at least every hour to estimate wind speed and direction.
  - Using an aircraft smoke system. Laying down several puffs of smoke along different lines using an aircraft smoke system can provide an accurate view of what the wind speed and direction for the application.
  - Checking behind the spray rig at least every hour to see if the spray has changed direction from when the application started.

Mandatory Runoff Mitigation

Applicators must access and search **Bulletins Live! Two** (BLT) at https://www.epa.gov/pesticides/bulletins within six months prior to or on the day of the application to determine whether the application site falls within a Pesticide Use Limitation Area (PULA). If you are located inside a PULA, follow the instructions in the the BLT bulletin. If the application site falls outside of a PULA, follow the instructions in the section below.

The minimum of 6 mitigation points must be achieved for the following agricultural crop use sites: bearing and nonbearing fruit and nut trees, corn, postharvest/fallow, legumes vegetables, peanut, small grains, sorghum, and soybean.

Step 1. To achieve the mitigation points specified above, visit EPA's **Mitigation Menu** website (http://www.epa.gov/pesticides/mitigation-menu) for a full list of mitigation and mitigation relief options.

Step 2. Determine if you are eligible for mitigation relief. Runoff/erosion mitigation is NOT required if certain field/application parameters are present at the time of application (e.g., subsurface or tile drains with controlled outlet, perimeter berm systems, irrigation tailwater return systems, spot treatment, etc).

Step 3. If the application site does not meet the field/application parameters specified on EPA's **Mitigation Menu** website, choose among the mitigation and/or mitigation relief options on EPA's **Mitigation Menu** website to meet or exceed the required points noted here before applying this product.

Step 4. To achieve mitigation points for the application, the mitigation and mitigation relief measures must be:
- Employed in accordance with the instructions and descriptions on EPA's **Mitigation Menu** website.
- In place during the application unless a different timing (such as before or after application) is specifically provided in the measure's description on EPA's **Mitigation Menu** website. EPA may periodically update the **Mitigation Menu** website, for example, by adding new mitigation measures or updating a mitigation measure description.

Step 5. Additional restrictions may be present in bulletins—always follow the most restrictive bulletin instructions. If you are located in an area where PULAs overlap, follow the most restrictive requirements across all bulletins. When tank mixing, the most restrictive requirements must be followed between the products' labels and bulletins.

Additives

For optimum burndown activity with **Tirexor™ herbicide**, an adjuvant system must be used that includes the following:

Adjuvant	Rate
Methylated seed oil (MSO)[1]	1 gal/100 gals (1% v/v)[2]
PLUS	**PLUS**
Ammonium sulfate (AMS) **or** Urea ammonium nitrate (UAN)	8.5 to 17 lbs/100 gals (1% to 2% w/v) **or** 1.25 to 2.5 gals/100 gals (1.25% to 2.5% v/v)

[1] MSO-based adjuvant **MUST** contain at least 60% methylated seed oil. Poor performance may occur with adjuvants containing less than 60% methylated seed oil.
[2] **DO NOT** use less than 1 pint/A of MSO with low-volume (< 12.5 gallons per acre) aerial or ground applications.

Tank Mixing Information

Tirexor may be tank mixed with one or more registered herbicide products according to the specific tank mixing instructions in this label and respective product labels. Refer to **Crop-specific Information** section for tank mixing details.

It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

When tank mixing, the most restrictive of the products' label or bulletin (BLT) requirements must be followed (e.g., use prohibition, timing restriction, application method restriction, sandy soil application restriction, etc.).

Compatibility Test for Mix Components

Before mixing components, always perform a compatibility jar test.

1. For 20 gallons per acre spray volume, use 3.3 cups (800 mL) of water. For other spray volumes, adjust rates accordingly. Only use water from the intended source at the source temperature.
2. Add components in the sequence indicated in **Mixing Order** using 2 teaspoons for each pound or 1 teaspoon for each pint of label rate per acre.
3. Always cap the jar and invert 10 cycles between component additions.
4. When the components have all been added to the jar, let the solution stand for 15 minutes.
5. Evaluate the solution for uniformity and stability. The spray solution shall not have free oil on the surface, or fine particles that precipitate to the bottom, or thick (clabbered) texture. If the spray solution is not compatible, repeat the compatibility test with the addition of a suitable compatibility agent. If the solution is then compatible, use the compatibility agent as directed on its label. If the solution is still incompatible, **DO NOT** mix the ingredients in the same tank.

Mixing Order

Maintain agitation throughout mixing and application until spraying is completed. Except when mixing products in PVA bags, maintain constant agitation during mixing and application.

1. **Water** - Fill tank to 1/2 to 3/4 full with clean water and start agitation.
2. **Inductor** - If an inductor is used, rinse it thoroughly after each component has been added.
3. **Products in PVA bags** - Place any product contained in water-soluble PVA bags into the mixing tank. Wait until all water-soluble PVA bags have fully dissolved and the product is evenly mixed in the spray tank before continuing.
4. **Water-soluble additives** (including dry and liquid fertilizers AMS or UAN)
5. **Water-dispersible products** (dry flowables, wettable powders, suspension concentrates, or suspo-emulsions)
6. **Water-soluble products**
7. **Emulsifiable concentrates** (including MSO adjuvants)
8. **Remaining quantity of water**

If the spray mixture is allowed to settle for any period of time, thorough agitation is essential to resuspend the mixture before spraying is resumed. Continue agitation while spraying.

Use Restrictions

- **Maximum annual use rate:** Refer to **Crop-specific Information** section for maximum application use rates per year.
- **Maximum cropping seasonal application rate:** Refer to **Crop-specific Information** section for maximum application use rates per cropping season for a crop use pattern. A cropping season is defined as the period following harvest of the preceding crop through the harvest of the planned or current crop.
- **DO NOT** apply aerially in bearing or non-bearing fruit and nut trees and peanuts.
- **DO NOT** apply **Tirexor™ herbicide** after crop emergence or over-the-top of desirable crops/plants as severe crop/plant injury will occur.
- **DO NOT** apply **Tirexor** through any type of irrigation system (e.g. chemigation).
- **DO NOT** contaminate water used for irrigation or domestic purposes.
- **DO NOT** feed or allow domestic animals to graze areas or crops not included in the use directions of this label within 365 days of **Tirexor** application.
- **DO NOT** apply during rain.
- **DO NOT** apply this product when soil is saturated or at field capacity, or when a storm event likely to produce runoff from the treated area is expected to occur within 24 hours following application.
- Within 24 hours after application, **DO NOT** irrigate the treatment area to the point of runoff.
- **Tirexor is not for sale, distribution, or use in Alaska, Hawaii, US Territories (including American Samoa, Guam, Puerto Rico, Mariana Islands, US Virgin Islands), and in Nassau and Suffolk counties in New York State.**

Use Precautions

- **Rainfastness** - **Tirexor** is rainfast 1 hour after application. Burndown activity may be reduced if rain or irrigation occurs within 1 hour of application.

Crop Rotation and Emergency Replanting Intervals

Refer to **Table 4** for the proper interval between **Tirexor™ herbicide** application and planting of rotational crops or replanting after crop failure (because of environmental factors including drought, frost, or hail, etc.). Determine the rotational crop interval for tank mix products and use the most restrictive interval of all products applied.

Table 4. Rotational Crop and Emergency Replanting Intervals by Tirexor Application Rate

Crop	Tirexor Rate (fl ozs/A)		
	0.35	**0.68**	**1.0**
	Rotational Crop Interval (months after application)[1]		
Corn	0	0	0
Corn, pop	0	0	0
Corn, sweet	0	0	0
Sorghum	0	0	0
Small grains[2]	0	0	0
Chickpea	0	0	0
Edible pea	0	0	0
Edamame	0	0	0
Edible bean	0	0	0
Field pea	0	0	0
Lentil	0	0	0
Peanut	0	0	0
Soybean	0	0	0
Citrus fruit trees	1	1	1
Nut trees	3	3	4
Pome fruit trees	3	3	4
Other fruit trees	4	5	6
Cotton	4	5	6
Rice	4	5	6
Sugar beet	4	5	6
Sugarcane	4	5	6
Sunflower	4	5	6
Cover crops (winter, spring)[3]	1	2	2
Other crops	4	5	6

[1] **DO NOT** include time when the soil is frozen, or months when less than 1 inch of precipitation or irrigation occurred.
[2] Small grains are defined in **Crop-specific Information** section of this label. For other small grains, use the rotational crop interval for Other Crops.
[3] Cover crops (winter, spring) may be planted after application of **Tirexor**, either inter-seeded into the current crop before harvest or after harvest of the current crop. Depending on the sensitivity of the sown cover crop to **Tirexor**, stand establishment may be reduced. If cover crops were sown less than 4 months after **Tirexor** application, **DO NOT** harvest cover crops as a food or feed crop and **DO NOT** allow livestock to graze cover crops.

Crop-specific Information

This section provides use directions for **Tirexor™ herbicide** in specific crops. Read product information, mixing, application, weeds controlled, and adjuvant instructions in preceding sections of the label.

Broad-spectrum control of additional broadleaf and/or grass weeds requires a tank mix with another herbicide, including glyphosate or other herbicide products. **Tirexor** may be tank mixed or applied sequentially with other herbicide products. Read and follow tank mix product labels for restrictions, precautions, instructions, and rotational crop restrictions. The most restrictive labeling applies to tank mixes.

For all crop-specific uses in this section, refer to **Table 4** for emergency re-planting and crop rotation intervals.

Bearing and Nonbearing Fruit and Nut Trees

Tirexor may be applied in the following individual bearing or nonbearing crops within the fruit tree and tree nut crop groupings:

Citrus Fruits
Crop Group 10-10 including Australian desert lime, Australian finger lime, Australian round lime, Brown River finger lime, Calamondin, Citron, Citrus hybrids, Grapefruit, Japanese summer grapefruit, Kumquat, Lemon, Lime, Mediterranean mandarin, Mount White lime, New Guinea wild lime, Orange (sour), Orange (sweet), Pummelo, Russell River lime, Satsuma mandarin, Sweet lime, Tachibana orange, Tahiti lime, Tangelo, Tangerine (mandarin), Tangor, Trifoliate orange, Uniq fruit

Pome Fruits
Crop Group 11-10 including Apple, Azarole, Crabapple, Loquat, Mayhaw, Medlar, Pear, Asian pear, Quince, Chinese quince, Japanese quince, Tejocote

Tree Nuts
Crop Group 14-12 including African nut-tree, Almond, Beech nut, Brazil nut, Brazilian pine, Bunya, Bur oak, Butternut, Cajou nut, Candlenut, Cashew, Chestnut, Chinquapin, Coconut, Coquito nut, Dika nut, Ginkgo, Guiana chestnut Hazelnut (filbert), Heartnut, Hickory nut, Japanese horse-chestnut, Macadamia nut, Mongongo nut, Monkey-pot, Monkey puzzle nut, Okari nut, Pachira nut, Peach palm nut, Pecan, Pequi, Pili nut, Pine nut, Pistachio, Sapucaia nut, Tropical almond, Walnut (black), Walnut (English), Yellowhorn

Application Rate, Method, and Timing

Apply **Tirexor** up to 0.68 fl oz/A in citrus fruit, pome fruit, and tree nuts plus the required adjuvants (refer to **Additives** section for details) as a postemergence-directed spray either as a uniform broadcast, banded, or spot application directed at the base of the tree trunks while targeting emerged broadleaf weeds and grasses (refer to **Table 2** and **Table 3** for weeds controlled). Spray contact of tree foliage, flowers, buds, or fruit either directly via improper nozzle orientation or indirectly via physical drift will result in crop injury. The use of shielded sprayers is highly advised when applying in citrus trees with low hanging branches and fruit.

Tirexor may be applied either in a single application or sequentially.

Applications can be made to newly planted or replacement citrus trees after irrigation or rainfall has settled the soil, while nut trees and pome fruit trees must be established for at least 12 months prior to application. Trunk shields must be used until adequate bark has formed to protect trees from potential herbicide injury (typically by 2 to 3 years after establishment).

Spot Treatment

Consult the chart following for the amount of **Tirexor** for making various gallons of spray mix to be used for spot treatments applied to actively growing broadleaf and grass weeds and sizes referenced in **Table 3**. Coverage is important. Spray thoroughly to wet the weed foliage but not to point of runoff. To maximize performance, refer to the **Additives** section for the adjuvant and rate to be added to the spray mix. Each spray mix is equivalent to applying **Tirexor** at a use rate of 0.68 fl oz/A in a spray volume of 100 gallons per acre. Applications of a spot spray mix must not be made to an equivalent area less than what is shown in the chart or exceed the equivalent broadcast rate of 0.68 fl oz/A. Spot treatments may be applied with backpack sprayers or via an ATV-mounted (all-terrain vehicle-mounted) or tractor/truck mounted sprayers equipped for hand wand applications. Spot applications can be made sequentially and/or be combined with broadcast/banded applications, but the maximum cumulative amount applied must not exceed the total use rate for the crop per year (see **Crop-specific Restrictions**).

Gallons Spray Mix	Spray Mix Treatment Area (sq ft)	Amount of Tirexor* (fl oz)	Amount of Tirexor* (mL)
1.0	436	0.0068	0.2
2.5	1,089	0.017	0.5
5.0	2,178	0.034	1.0
10.0	4,356	0.07	2.0
25.0	10,890	0.17	5.0

* equivalent to 0.022 lb active trifludimoxazin/Acre

Crop-specific Restrictions:

- **DO NOT** apply aerially in bearing and non-bearing fruit and nut trees, apply only by ground equipment.
- **DO NOT** apply more than 0.68 fl oz/A (0.022 lb ai/A) of **Tirexor** in a single application in bearing and nonbearing fruit and nut trees.

- **DO NOT** apply more than 2.74 fl ozs/A (0.089 lb ai/A) of **Tirexor™ herbicide** as a maximum cumulative amount from sequential applications per year in bearing and nonbearing fruit and nut trees.
- Sequential applications must be separated by at least 30 days.
- Maximum number of applications per year: 4
- **Tirexor** may be applied any time up to or on the day of citrus or pome fruit harvest.
- **Preharvest interval (PHI)** for tree nuts: 7 days.

Corn

Apply **Tirexor** prior to corn emergence. Corn in this label refers to field corn (grain, seed, or silage), popcorn (grain, seed), and sweet corn (processing, fresh market, seed). Before applying **Tirexor** to seed corn, sweet corn, or popcorn, verify the selectivity of **Tirexor** on your inbred line or hybrid with your local seed company (supplier) to help avoid potential injury to sensitive inbreds or hybrids.

Application Rate, Method, and Timing

Apply **Tirexor** at 0.35 fl oz/A as preplant surface, preplant incorporated, or preemergence for burndown control of broadleaf and grass weeds (refer to **Table 3** for lists of weeds controlled). An adjuvant system (refer to the **Additives** section for details) is required for optimum broadleaf and grass burndown activity.

Tirexor may only be applied in a single application.

Crop-specific Restrictions:

- **DO NOT** apply more than 0.35 fl oz/A (0.011 lb ai/A) of **Tirexor** in a single application in corn.
- Maximum number of applications per year: 1
- **DO NOT** apply more than 0.35 fl oz/A (0.011 lb ai/A) of **Tirexor** per year in corn.
- **DO NOT** apply after corn emergence or severe crop injury will occur.
- There is no required (preharvest) interval between a preplant or preemergence application of **Tirexor** and the harvest of corn.
- Corn forage and stover may be fed to or grazed by livestock.

Crop-specific Precautions

- **Tirexor** use may result in delayed corn emergence and stunting under certain environmental conditions including cool temperatures, excessive rainfall/irrigation, and/or persistent wet soil conditions occurring after application.
- Ensure the corn seed row is closed. Soil conditions that cause poor seed furrow closure and coverage may result in delayed corn emergence or stunting.
- **Tirexor** applied to sweet corn planted at depth of 1/2-inch or less may result in crop injury.

Postharvest and Fallow

Tirexor may be applied to control broadleaf and grass weeds (refer to **Table 2** and **Table 3** for lists of weeds controlled) following crop harvest and/or at any time of the year during a fallow period in all labeled crops (bearing and nonbearing fruit and nut trees, corn, legume vegetables, peanut, small grains, sorghum, and soybean), and canola, cotton, rice, sugar beet, and sunflower. **DO NOT** apply **Tirexor** after harvest of any other crop or in fallow period preceding any other crop.

Application Rate, Method, and Timing

Apply **Tirexor** as a broadcast spray at up to 0.68 fl oz/A plus the required adjuvants (refer to **Additives** section for details). For best burndown product performance, apply when broadleaf weeds and grasses are small and actively growing. **Tirexor** may only be applied in a single application.

Use-specific Restrictions:

- **DO NOT** apply more than 0.68 fl oz/A (0.022 lb ai/A) of **Tirexor** in a single application.
- Maximum number of applications per year: 1
- **DO NOT** apply more than 0.68 fl oz/A (0.022 lb ai/A) of **Tirexor** per year in postharvest and fallow.
- Specific rotational crop intervals must be observed between an application of **Tirexor** and planting of the following crop (see **Table 4** for crop rotation intervals).

Legume Vegetables

Apply **Tirexor** prior to legume vegetable emergence. Before applying **Tirexor** to legume vegetables, verify the selectivity of **Tirexor** on your variety with your seed company (supplier) to help avoid potential injury to sensitive varieties.

Tirexor is for use on the following legume vegetable types included in **Crop Group 6** and **7**:

Chickpea (garbanzo bean)
Edible Beans

- Edible-podded *Phaseolus* beans (runner bean, snap bean, wax bean)
- Succulent *Phaseolus* beans (lima bean [green], broad bean)
- Dry *Phaseolus* beans (field bean, kidney bean, lima bean [dry], navy bean, pinto bean, tepary bean)
- Dry beans (broad, guar, lablab)
- Edible-podded *Vigna* beans (asparagus bean, Chinese longbean, moth bean, yardlong bean)
- Succulent *Vigna* beans (blackeyed pea, cowpea, Southern pea)
- Dry *Vigna* beans (adzuki bean, blackeyed pea, cowpea, Crowder pea, moth bean, mung bean, rice bean, Southern pea)
- Dry *Lupinus* beans (grain lupin, sweet lupin, white lupin, white sweet lupin)

- Dry and succulent *Vicia* beans (broad bean, faba bean, fava bean, field bean)

Edible Peas

- Edible-podded peas (dwarf pea, edible-pod pea, pigeon pea, snow pea, sugar snap pea)
- Succulent peas (English pea, garden pea, green pea, pigeon pea, marrowfat pea)
- Dry peas (pigeon pea)

Field Peas

- Dry field peas (including Austrian winter peas)

Lentils
Vegetable Soybean (edamame)

Application Rate, Method, and Timing

Apply **Tirexor™ herbicide** up to 0.35 fl oz/A as preplant surface, preplant incorporated, or preemergence for burndown control of broadleaf and grass weeds (refer to **Table 3** for lists of weeds controlled). An adjuvant system (refer to the **Additives** section for details) is required for optimum broadleaf and grass burndown activity.

Tirexor may only be applied in a single application.

Crop-specific Restrictions:

- **DO NOT** apply more than 0.35 fl oz/A (0.011 lb ai/A) of **Tirexor** in a single application in legume vegetables.
- Maximum number of applications per year: 1
- **DO NOT** apply more than 0.35 fl oz/A (0.011 lb ai/A) of **Tirexor** per year in legume vegetables.
- **DO NOT** apply when legumes have reached the cracking stage or after emergence or severe crop injury will occur.
- There is no required (preharvest) interval between a preplant or preemergence application of **Tirexor** and the harvest of legumes.

Crop-specific Precautions

- Plant legumes at least 1/2-inch deep to reduce risk of crop injury from **Tirexor** application.
- Ensure the seed row is closed. Soil conditions that cause poor seed furrow closure and coverage may result in delayed crop emergence or stunting.

Peanut

Apply **Tirexor** prior to peanut emergence. Before applying **Tirexor** to peanut, verify the selectivity of **Tirexor** on your variety with your seed company (supplier) to help avoid potential injury to sensitive varieties.

Application Rate, Method, and Timing

Apply **Tirexor** at 0.68 to 1.0 fl oz/A as preplant surface, preplant incorporated, or preemergence for burndown and/or residual control of broadleaf and grass weeds (refer to **Table 2** and **Table 3** for lists of weeds controlled). An adjuvant system (refer to the **Additives** section for details) is required for optimum broadleaf and grass burndown activity.

Tirexor may only be applied in a single application.

Crop-specific Restrictions:

- **DO NOT** apply aerially in peanut, apply only by ground equipment.
- **DO NOT** apply more than 1.0 fl oz/A (0.034 lb ai/A) of **Tirexor** in a single application in peanut.
- Maximum number of applications per year: 1
- **DO NOT** apply more than 1.0 fl oz/A (0.034 lb ai/A) of **Tirexor** per year in peanut.
- **DO NOT** apply after peanut emergence or crop injury will occur.
- There is no required (preharvest) interval between a preplant or preemergence application of **Tirexor** and the harvest of peanut.

Crop-specific Precautions

- Ensure the seed row is sufficiently covered with soil to avoid washing and concentration of the herbicide in the seed zone.

Small Grains

Apply **Tirexor** prior to small grain emergence. Small grains in this label refers to barley, millet (pearl and proso), oats, rye, triticale, and wheat (including durum, spring and winter). Before applying **Tirexor** to small grains, verify the selectivity of **Tirexor** on your variety with your seed company (supplier) to help avoid potential injury to sensitive varieties.

Application Rate, Method, and Timing

Apply **Tirexor** up to 0.35 fl oz/A as preplant surface, preplant incorporated, or preemergence for burndown control of broadleaf and grass weeds (refer to **Table 3** for lists of weeds controlled). An adjuvant system (refer to the **Additives** section for details) is required for optimum broadleaf and grass burndown activity.

Tirexor may only be applied in a single application.

Crop-specific Restrictions:

- **DO NOT** apply more than 0.35 fl oz/A (0.011 lb ai/A) of **Tirexor** in a single application in small grains.
- Maximum number of applications per year: 1
- **DO NOT** apply more than 0.35 fl oz/A (0.011 lb ai/A) of **Tirexor** per year in small grains.
- **DO NOT** apply after small grain emergence or crop injury will occur.
- There is no required (preharvest) interval between a preplant or preemergence application of **Tirexor** and the harvest of small grains.

Crop-specific Precautions

- Ensure the seed row is sufficiently covered with soil to avoid washing and concentration of the herbicide in the seed zone.

Sorghum

Apply **Tirexor™ herbicide** prior to sorghum emergence. Before applying **Tirexor** to sorghum, verify the selectivity of **Tirexor** on your inbred line or hybrid with your local seed company (supplier) to help avoid potential injury to sensitive inbreds or hybrids.

Tirexor is for use on the following sorghum types:

- **Grain sorghum** (milo, durra, kaffir-corn, Indian millet, great millet, grand millet, kaoliang, Chinese sorghum, shattercane, guineacorn, sorgo comun)
- **Sweet sorghum** (sorgo, sorgo duice, Zuckerhirse, sorgo doux)

Application Rate, Method, and Timing

Apply **Tirexor** up to 0.35 fl oz/A as preplant surface, preplant incorporated, or preemergence for burndown control of broadleaf and grass weeds (refer to **Table 3** for lists of weeds controlled). An adjuvant system (refer to the **Additives** section for details) is required for optimum broadleaf and grass burndown activity.

Tirexor may only be applied in a single application.

Crop-specific Restrictions:

- **DO NOT** apply more than 0.35 fl oz/A (0.011 lb ai/A) of **Tirexor** in a single application in sorghum.
- Maximum number of applications per year: 1
- **DO NOT** apply more than 0.35 fl oz/A (0.011 lb ai/A) of **Tirexor** per year in sorghum.
- **DO NOT** apply after sorghum emergence or severe crop injury will occur.
- There is no required (preharvest) interval between a preplant or preemergence application of **Tirexor** and the harvest of sorghum.

Crop-specific Precautions

- **Tirexor** use may result in delayed sorghum emergence and stunting under certain environmental conditions including cool temperatures, excessive rainfall/irrigation, and/or persistent wet soil conditions occurring after application.
- Ensure the sorghum seed row is closed. Soil conditions that cause poor seed furrow closure and coverage may result in delayed sorghum emergence or stunting.

Soybean

Apply **Tirexor** prior to soybean emergence. An adjuvant system (refer to **Additives** section for details) is required for optimum burndown activity. Before applying **Tirexor** to soybean, verify the selectivity of **Tirexor** on your variety with your seed company (supplier) to help avoid potential injury to sensitive varieties.

Application Rate, Method, and Timing

Apply **Tirexor** up to 0.35 fl oz/A as preplant surface, preplant incorporated, or preemergence for burndown control of broadleaf and grass weeds (refer to **Table 3** for lists of weeds controlled). An adjuvant system (refer to the **Additives** section for details) is required for optimum broadleaf and grass burndown activity.

Sequential applications of **Tirexor** may be made as needed prior to soybean emergence as part of a split application program.

Crop-specific Restrictions:

- **DO NOT** apply more than 0.35 fl oz/A (0.011 lb ai/A) of **Tirexor** in a single application in soybean.
- **DO NOT** apply more than 0.68 fl oz/A (0.022 lb ai/A) of **Tirexor** as a maximum cumulative amount from sequential applications per year in soybean.
- Sequential applications must be separated by at least 14 days.
- Maximum number of applications per year: 2
- If additional trifludimoxazin is applied from other product sources, **DO NOT** apply more than 0.034 lb ai/A in soybean.
- **DO NOT** apply when soybean has reached the cracking stage or after emergence or severe crop injury will occur.
- There is no required (preharvest) interval between a preplant or preemergence application of **Tirexor** and the harvest of soybean.

Crop-specific Precautions

- Use of **Tirexor** may result in delayed soybean emergence and stunting under certain environmental conditions including cool temperatures, excessive rainfall/irrigation, and/or persistent wet soil conditions occurring after application.
- Ensure the seed row is sufficiently covered with soil to avoid washing and concentration of the herbicide in the seed zone.

Conditions of Sale and Warranty

The **Directions For Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully. However, it is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of BASF Agricultural Solutions US LLC ("BASF") or the Seller. To the extent consistent with applicable law, all such risks shall be assumed by the Buyer.

BASF warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Directions For Use**, subject to the inherent risks, referred to above.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S EXCLUSIVE REMEDY AND BASF'S EXCLUSIVE LIABILITY, WHETHER IN CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY, OR OTHERWISE, SHALL BE LIMITED TO REPAYMENT OF THE PURCHASE PRICE OF THE PRODUCT.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF AND THE SELLER DISCLAIM ANY LIABILITY FOR CONSEQUENTIAL, EXEMPLARY, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

BASF and the Seller offer this product, and the Buyer and User accept it, subject to the foregoing **Conditions of Sale and Warranty** which may be varied only by agreement in writing signed by a duly authorized representative of BASF. 1108

Tirexor *is a trademark of BASF.*

Note to PM/reviewer: Alternate text in brackets [...]

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007969-00XXX.20220328i.**NVA 2022-04-0609-0080**

BASF Agricultural Solutions US LLC
2 TW Alexander Drive
Research Triangle Park, NC 27713

BASF
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[Optional Marketing Claims:
Powered by Tirexor™
Powered by Tirexor™ herbicide
Powered by Tirexor™ Active herbicide]

Exhibit E

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7505P)
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

NOTICE OF PESTICIDE:
_X_ Registration
___ Reregistration
(under FIFRA, as amended)

EPA Reg. Number:	Date of Issuance:
7969-491	6/30/26

Term of Issuance: Unconditional

Name of Pesticide Product: TIREXOR Herbicide Technical

BASF Corporation
26 Davis Drive, PO Box 13528
Research Triangle Park, NC 27709

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA section 3(c)(5) provided that you:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product when the Agency requires all registrants of similar products to submit such data.

Signature of Approving Official:

Nathan Mellor, Chief
Fungicide and Herbicide Branch, Registration Division (7505P)

Date: 6/30/26

EPA Form 8570-6

2. Registration Term for Implementing Additional Mitigations from the Services
   If, following formal consultation with FWS and NMFS, additional modifications are identified in any applicable Biological Opinion, EPA will notify Bayer in writing within 45 calendar days of the issuance of the Biological Opinion of any necessary required changes. Within 30 calendar days of receiving EPA's notice, Bayer must submit an amendment application incorporating the necessary changes, including amended labels. Alternatively, Bayer may respond by submitting a request for voluntary cancellation of this product. If Bayer fails to comply with this term, Bayer has agreed in prior written acceptance of the terms that EPA may cancel the registration under an expedited process under FIFRA 6(e).

3. Make the following label changes before you release the product for shipment:

   - Revise the EPA Registration Number to read, "EPA Reg. No. 7969-491."

4. Submit one copy of the revised final printed label for the record before you release the product for shipment.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSF:

- Basic CSF dated: 4/04/2022

If you have any questions, please contact Sayed Islam via email at islam.sayed@epa.gov

Enclosure

BASF

We create chemistry

Tirexor™ Herbicide Technical

Alternate Tradenames for this product are as follows: BAS 850 H Technical, Trifludimoxazin Technical

For Formulating Purposes Only

Active Ingredients:

Trifludimoxazin: 1,5-dimethyl-6-thioxo-3-[2,2,7-trifluoro-3-oxo-4-(prop-2-yn-1-yl)-3,4-dihydro-2H-1,4-benzoxazin-6-yl]-1,3,5-triazinane-2,4-dione 99.2%

Other Ingredients: 0.8%

Total: 100.0%

EPA Reg. No.: 7969-XXX **EPA Est. No.:**

KEEP OUT OF REACH OF CHILDREN

CAUTION / PRECAUCION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you do not understand the label, find someone to explain it to you in detail.)

FIRST AID	
If swallowed	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • **DO NOT** induce vomiting unless told to do so by a poison control center or doctor. • **DO NOT** give anything by mouth to an unconscious person.
If in eyes	• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. • Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 to 20 minutes. • Call a poison control center or doctor for treatment advice.
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
HOT LINE NUMBER	
Have the product container or label with you when calling the poison control center at 1-800-222-1222 or doctor or going for treatment. You may also contact BASF Agricultural Solutions US LLC (hereafter "BASF") for emergency medical treatment information: 1-800-832-HELP (4357).	

Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION. Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes or clothing. Remove and wash contaminated clothing before reuse. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, usin tobacco or using the toilet. Wear protective eyewear (googles or face shield).

[*Optional text:* Produced for: _____]

BASF Agricultural Solutions US LLC

2 TW Alexander Drive, Research Triangle Park, NC 27713

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ACCEPTED

06/30/2026

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 7969-491

TIREXOR is a trademark of BASF

Environmental Hazards

DO NOT discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. **DO NOT** discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your local State Water Board or Regional Office of EPA.

Directions for Use

It is a violation of federal law to use this product in a manner inconsistent with its labeling. This technical material may only be used to produce formulations that are registered or exempted from registration by the US EPA. If it is desired to produce formulations that do not have prior approval, the producer of such formulations is responsible for providing all necessary data and for obtaining registration. Only for formulation into a herbicide for the following uses: (1) cereal grains crop group 15 (except rice), forage/fodder/straw of cereal grains crop group 16 (except rice), legume vegetables (edible, succulent and dried) crop group 6, foliage of legume vegetables crop group 7, soybean, citrus fruit crop group 10-10, peanut, pome fruit crop group 11-10, and tree nut crop group 14-12; (2) uses for which US EPA has accepted the required data and/or citations of data that the formulator has submitted in support of registration; and (3) uses for experimental purposes that are in compliance with US EPA regulations. This product may be used to formulate products for specific uses not listed on this label if the formulator, user group, or grower has complied with US EPA data submission requirements regarding support of such uses. The user is solely responsible for determination of suitability of the use of this product for any specific purpose, any manufacturing practice employed, and adoption of such safety precautions as may be necessary.

Storage and Disposal

DO NOT contaminate water, food, or feed by storage or disposal.

Pesticide Storage: Store in original container in a well-ventilated area separately from fertilizer, feed, and foodstuffs. Avoid cross-contamination with other pesticides. Spillage or leakage should be contained, carefully swept up, and collected for disposal. Wash area of spill with detergent.

Pesticide disposal: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

Container handling: (woven fabric supersack with plastic liner) Nonrefillable Container: DO NOT reuse or refill this container. Completely empty bag into manufacturing equipment; then dispose of empty bag in a sanitary landfill or by incineration, or by other procedures approved by state and local authorities.

In Case of Emergency

In case of large-scale spillage in the U.S. regarding this product, call:

- CHEMTREC 1-800-424-9300
- BASF 1-800-832-HELP (4357)

In case of medical emergency regarding this product, call: 1) Your local doctor for immediate treatment. 2) Your local poison control center (hospital). 3) BASF 800-832-HELP. **Steps to be taken in case material is released or spilled:** Dike and contain with inert material (sand, earth, etc.) and transfer the material to separate labeled containers for disposal. Remove contaminated clothing and wash affected skin areas with water. Wash clothing before reuse. Keep spill out of all sewers and open bodies of water.

Conditions of Sale and Warranty

BASF warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Directions for Use**. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S EXCLUSIVE REMEDY AND BASF'S EXCLUSIVE LIABILITY, WHETHER IN CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY, OR OTHERWISE, SHALL BE LIMITED TO REPAYMENT OF THE PURCHASE PRICE OF THE PRODUCT. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF AND THE SELLER DISCLAIM ANY LIABILITY FOR CONSEQUENTIAL, EXEMPLARY, SPECIAL, OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.** BASF and the Seller offer this product, and the Buyer and User accept it, subject to the foregoing **Conditions of Sale and Warranty** which may be varied only by agreement in writing signed by a duly authorized representative of BASF.

Net Contents:

[*Optional text:* Product of ____]

007969-00XXX.20220317c.**NVA 2022-13-0592-0032**

Case: 26-5590, 08/28/2026, DktEntry: 1.1, (110 of 152)

Exhibit F

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7505P)
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

NOTICE OF PESTICIDE:
_X_ Registration
___ Reregistration
(under FIFRA, as amended)

EPA Reg. Number:	Date of Issuance:
7969-495	6/30/26

Term of Issuance: Unconditional

Name of Pesticide Product: VORAXOR Herbicide

BASF Corporation
26 Davis Drive, PO Box 13528
Research Triangle Park, NC 27709

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA section 3(c)(5) provided that you:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product when the Agency requires all registrants of similar products to submit such data.

Signature of Approving Official:

Nathan Mellor, Chief
Fungicide and Herbicide Branch, Registration Division (7505P)

Date: 6/30/26

EPA Form 8570-6

2. Registration Term for Implementing Additional Mitigations from the Services
   If, following formal consultation with FWS and NMFS, additional modifications are identified in any applicable Biological Opinion, EPA will notify Bayer in writing within 45 calendar days of the issuance of the Biological Opinion of any necessary required changes. Within 30 calendar days of receiving EPA's notice, Bayer must submit an amendment application incorporating the necessary changes, including amended labels. Alternatively, Bayer may respond by submitting a request for voluntary cancellation of this product. If Bayer fails to comply with this term, Bayer has agreed in prior written acceptance of the terms that EPA may cancel the registration under an expedited process under FIFRA 6(e).

3. Make the following label changes before you release the product for shipment:

   - Revise the EPA Registration Number to read, "EPA Reg. No. 7969-495."

4. Submit one copy of the revised final printed label for the record before you release the product for shipment.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSF:

- Basic CSF dated: 3/27/2024

If you have any questions, please contact Sayed Islam via email at islam.sayed@epa.gov

Enclosure

BASF
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Trifludimoxazin	Group	14	Herbicide
Saflufenacil	Group	14	Herbicide

ACCEPTED
06/30/2026
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 7969-495

Note to PM/reviewer: Alternate/Optional text placed in brackets [...]

Voraxor™

Herbicide

For use in corn, legume vegetables, small grains, sorghum, soybean, and in postharvest and fallow

Active Ingredients:

trifludimoxazin: 1,5-dimethyl-6-thioxo-3-[2,2,7-trifluoro-3-oxo-4-(prop-2-yn-1-yl)-3,4-dihydro-2H-1,4-benzoxazin-6-yl]-1,3,5-triazinane-2,4-dione. 10.76%

saflufenacil: N'-[2-chloro-4-fluoro-5-(3-methyl-2,6-dioxo-4-(trifluoromethyl)-3,6-dihydro-1(2H)-pyrimidinyl)benzoyl]-N-isopropyl-N-methylsulfamide. 21.51%

Other Ingredients:. 67.73%

Total: 100.00%

Contains 1.043 pounds active ingredient trifludimoxazin and 2.086 pounds active ingredient saflufenacil per gallon product formulated as a water-based suspension concentrate

EPA Reg. No. 7969-XXX **EPA Est. No.**

KEEP OUT OF REACH OF CHILDREN

CAUTION/PRECAUCION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

See full label for complete **Precautionary Statements**, **Directions For Use**, **Conditions of Sale and Warranty**, and state-specific crop and/or use site restrictions.

In case of an emergency endangering life or property involving this product, call day or night 1-800-832-HELP (4357).

Net Contents:

BASF Agricultural Solutions US LLC
2 TW Alexander Drive
Research Triangle Park, NC 27713

FIRST AID	
If swallowed	• Call a poison control center or doctor immediately for treatment advice. • **DO NOT** induce vomiting unless told to do so by a poison control center or doctor. • Have person sip a glass of water if able to swallow. • **DO NOT** give anything to an unconscious person.
If in eyes	• Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. • Remove contact lenses, if present, after first 5 minutes; then continue rinsing eyes. • Call a poison control center for treatment advice.
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 to 20 minutes. • Call a poison control center or doctor for treatment advice.
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably by mouth to mouth, if possible. • Call a poison control center or doctor for further treatment advice.
HOTLINE NUMBER	
Have the product container or label with you when calling the poison control center at 1-800-222-1222 or doctor or going for treatment. You may also contact BASF Agricultural Solutions US LLC (hereafter "BASF") for emergency medical treatment information at 1-800-832-HELP (4357).	

Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION. Harmful if swallowed. Remove and wash contaminated clothing before reuse. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves

User Safety Requirements

Follow the manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. **DO NOT** reuse them.

Engineering Controls

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for **applicators and other handlers** and have such PPE immediately available for use in an emergency, including a spill or equipment breakdown.

USER SAFETY RECOMMENDATIONS
Users should: • Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. • Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Environmental Hazards

For terrestrial uses, **DO NOT** apply directly to water, areas where surface water is present, or intertidal areas below the mean high water mark. **DO NOT** contaminate water when disposing of equipment washwater or rinsate.

Groundwater Advisory. Trifludimoxazin and saflufenacil have properties and characteristics associated with chemicals detected in groundwater. These chemicals may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

Surface Water Advisory. Trifludimoxazin and saflufenacil may impact surface water due to runoff of rainwater. This is especially true for poorly draining soils and soils with shallow groundwater. This product is classified as having high potential for reaching surface water via runoff for several weeks after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features including ponds, streams, and springs will reduce the potential loading of this chemical from runoff water and sediment. Runoff of this product will be reduced by avoiding application when rainfall is forecast to occur within 48 hours.

Nontarget Organism Advisory: This product is toxic to plants and may adversely impact the forage and habitat of nontarget organisms, including pollinators, in areas adjacent to the treated area. Protect the forage and habitat of nontarget organisms by minimizing spray drift.

Pollinator Advisory: This product is potentially toxic to bee larvae. Avoid application of this product to crops in bloom or if bees are actively collecting pollen or nectar from the treatment area.

Reporting Ecological Incidents: For guidance on reporting ecological incidents, see EPA's Pesticide Incident Reporting website: https://www.epa.gov/pesticide-incidents.

Directions For Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. This labeling must be in the possession of the user at time of herbicide application.

DO NOT apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

Observe all precautions and restrictions in this label and the labels of products used in combination with **Voraxor™ herbicide**. The use of **Voraxor** not consistent with this label can result in injury to crops, animals, or persons. Keep containers closed to avoid spills and contamination.

Unless otherwise directed in supplemental labeling, all applicable directions, restrictions, precautions, and **Conditions of Sale and Warranty** are to be followed.

BASF does not advise or authorize the use of this product in manufacturing, processing, or preparing custom blends with other products for application in crops.

Endangered and Threatened Species Protection Requirements

Before using this product, you must obtain any applicable Endangered Species Protection Bulletins ('Bulletins') within six months prior to or on the day of application. To obtain Bulletins, go to Bulletins Live! Two (BLT) at https://www.epa.gov/pesticides/bulletins. When using this product, you must follow all directions and restrictions contained in any applicable Bulletin(s) for the area where you are applying the product, including any restrictions on application timing if applicable. It is a violation of Federal law to use this product in a manner inconsistent with its labeling, including this labeling instruction to follow all directions and restrictions contained in any applicable Bulletin(s).

For general questions or technical help, call 1-844-447-3813, or email ESPP@epa.gov.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

DO NOT enter or allow worker entry into treated areas during the restricted-entry interval (REI) of **12 hours**.

EXCEPTION: If the product is soil injected or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, including plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves
- Shoes plus socks

STORAGE AND DISPOSAL

DO NOT contaminate water, food, or feed by storage or disposal. Open dumping is prohibited.

Pesticide Storage

DO NOT use or store near heat or open flame. Store in original container in a well-ventilated area separately from fertilizer, feed, or foodstuffs. Avoid cross-contamination with other pesticides.

Pesticide Disposal

Wastes resulting from this product must be disposed of on-site or at an approved waste disposal facility. Improper disposal of excess pesticide, spray mix, or rinsate is a violation of federal law. If these wastes cannot be disposed of according to label instructions, contact the state agency responsible for pesticide regulation or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Handling

Nonrefillable Plastic Container. DO NOT reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

(continued)

STORAGE AND DISPOSAL *(continued)*

Triple rinse containers small enough to shake (capacity ≤ 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Triple rinse containers too large to shake (capacity > 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank, or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Container Handling *(continued)*

Refillable Container. Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

Triple rinse as follows: To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

(continued)

STORAGE AND DISPOSAL *(continued)*

When this container is empty, replace the cap and seal all openings that have been opened during use; return the container to the point of purchase or to a designated location. This container must only be refilled with a pesticide product. Prior to refilling, inspect carefully for damage including cracks, punctures, abrasions, worn out threads and closure devices. Check for leaks after refilling and before transport. **DO NOT** transport if this container is damaged or leaking. If the container is damaged, or leaking, or obsolete and not returned to the point of purchase or to a designated location, triple rinse emptied container and offer for recycling, if available, or dispose of container in compliance with state and local regulations.

In Case of Emergency

In case of large-scale spill of this product, call:

- CHEMTREC 1-800-424-9300
- BASF 1-800-832-HELP (4357)

In case of medical emergency regarding this product, call:

- Your local doctor for immediate treatment
- Your local poison control center (hospital)
- BASF 1-800-832-HELP (4357)

Steps to take if material is released or spilled:

- Dike and contain the spill with inert material (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal.
- Remove contaminated clothing and wash affected skin areas with soap and water.
- Wash clothing before reuse.
- Keep the spill out of all sewers and open bodies of water.

Product Information

Voraxor™ herbicide provides contact burndown control of broadleaf and grass weeds (refer to **Table 1** for list). It can be used in select field and row crops: chickpea (garbanzo beans), corn (field, seed, silage, sweet, and popcorn), field pea, lentil, small grains, sorghum (grain), soybean, fallow, and postharvest croplands. Refer to **Crop-specific Information** section for specific use directions.

Make burndown applications of **Voraxor** when broadleaf and grass weeds are small and actively growing. An adjuvant is required with **Voraxor** for optimum burndown activity (refer to **Additives** section for details). Burndown activity may be slowed or reduced under cloudy and/or foggy or cooler weather conditions, or when weeds are growing in drought or other stress conditions. When targeting dense weed populations and/or larger broadleaf and grass weeds, use a higher application rate within an application rate range and/or higher spray volumes. Angling nozzles forward (to 45 degrees) may improve penetration of denser weed canopies.

Table 1. Broadleaf and Grass Weeds Controlled with a Burndown Application of Voraxor™ herbicide

Common Name	Scientific Name	Voraxor Use Rate (fl ozs/A)		
		0.7	1.0	1.4
		Maximum Weed Height or Diameter		
Broadleaf Weeds		(4 inches)	(4 to 6 inches)	(4 to 6 inches)
Amaranth, Palmer[3]	*Amaranthus palmeri*	C (3")	C	C
Bedstraw, catchweed	*Galium aparine*		C	C
Beggarticks, hairy	*Bidens pilosa*			C
Beggarweed, Florida	*Desmodium tortuosum*			C
Bindweed, field	*Convolvulus arvensis*			S[1]
Buckwheat, wild	*Polygonum convolvulus*		C	C
Canola, volunteer (rapeseed)	*Brassica* spp.			C
Carpetweed	*Mollugo verticillata*		C	C
Chickweed, common	*Stellaria media*	C	C	C
Chickweed, field	*Cerastium arvense*			C
Chickweed, mouseear	*Cerastium vulgatum*	C	C	C
Cocklebur, common	*Xanthium strumarium*			C
Cotton, volunteer[2]	*Gossypium hirsutum*			C
Cowcockle	*Vaccaria pyramidata*			C
Cudweed, purple	*Gnaphalium purpureum*	C	C	C
Dandelion, common	*Taraxacum officinale*		S[1]	S
Eveningprimrose, cutleaf	*Oenothera laciniata*		C	C
Falseflax, smallseed	*Camelina microcarpa*			C
Fiddleneck	*Amsinckia menziesii*			C
Field pansy	*Viola bicolor Pursh*		C	C
Filaree, redstem	*Erodium cicutarium*			S
Fleabane, hairy	*Conyza bonariensis*	C	C	C
Flixweed	*Descurainia sophia*			C
Geranium/Cranesbill, Carolina	*Geranium carolinianum*		C	C
Groundcherry, cutleaf	*Physalis angulata*			C
Groundsel, cressleaf	*Senecio glabellus*	C	C	C
Groundsel, common	*Senecio vulgaris*			C
Hawksbeard, narrowleaf[2]	*Crepis tectorum*			C
Hemlock, poison[2]	*Conium maculatum*			C
Henbit	*Lamium amplexicaule*	C	C	C
Horseweed (marestail)	*Conyza canadensis*	C (3")	C	C
Jointvetch, Indian	*Aeschynomene indica*		C	C
Knotweed, prostrate	*Polygonum aviculare*			C
Kochia	*Kochia scoparia*	C 1-inch to 3-inch Suppression of button/ puffball stage at < 1-inch tall	C 1-inch to 3-inch Suppression of button/ puffball stage at < 1-inch tall	C
Ladysthumb	*Polygonum persicaria*			C
Lambsquarters, common	*Chenopodium album*	C	C	C
Lambsquarters, narrowleaf	*Chenopodium pratericola*			C
Lesser swinecress	*Lepidium didymum*	C	C	C

(continued)

Table 1. Broadleaf and Grass Weeds Controlled with a Burndown Application of Voraxor™ herbicide *(continued)*

Common Name	Scientific Name	Voraxor Use Rate (fl ozs/A)		
		0.7	**1.0**	**1.4**
		Maximum Weed Height or Diameter		
Broadleaf Weeds *(continued)*		(4 inches)	(4 to 6 inches)	(4 to 6 inches)
Lettuce, prickly	*Lactuca serriola*			C
Mallow, common	*Malva neglecta*			C
Mallow, little (Cheeseweed)	*Malva parviflora*			C
Mallow, Venice	*Hibiscus trionum*			C
Marestail (Horseweed)	*Conyza canadensis*	C (3")	C	C
Marshelder	*Iva xanthifolia*			C
Morningglory, entireleaf	*Ipomoea hederacea* var. *integriuscula*			C
Morningglory, ivyleaf	*Ipomoea hederacea*	C	C	C
Morningglory, palmleaf	*Ipomoea wrightii*			C
Morningglory, pitted	*Ipomoea lacunosa*	C	C	C
Morningglory, tall	*Ipomoea purpurea*			C
Mustard, black	*Brassica nigra*			C
Mustard, tumble	*Sisymbrium altissimum*			C
Mustard, wild	*Sinapis arvensis*		C	C
Needles, Spanish[2]	*Bidens pilosa*			C
Nettle, burning	*Urtica urens*			C
Nightshade, black	*Solanum, nigrum*			C
Nightshade, cutleaf	*Solanum, triflorum*			C
Nightshade, Eastern black	*Solanum, ptycanthum*			C
Nightshade, hairy	*Solanum, saccharoides*			C
Parthenium	*Parthenium hysterophorus*			C
Pennycress, field	*Thlaspi arvense*	C	C	C
Pigweed, prostrate	*Amaranthus blitoides*			C
Pigweed, redroot	*Amaranthus retroflexus*	C	C	C
Pigweed, smooth	*Amaranthus hybridus*			C
Plantain, buckhorn	*Plantago lanceolata L.*			C
Puncturevine	*Tribulus terrestris*			C
Purple Deadnettle	*Lamium purpureum*	C	C	C
Purslane, common	*Portulaca oleracea*	C	C	C
Pusley, Florida	*Richardia scabra*			C
Radish, wild	*Raphanus raphanistrum*		C	C
Ragweed, common[3]	*Ambrosia artemisiifolia*		C	C
Ragweed, giant	*Ambrosia trifida*		C	C
Rocket, London	*Sisymbrium irio*			C
Sesbania, hemp	*Sesbania exaltata*	C	C	C
Shepherd's-purse	*Capsella bursa-pastoris*	C	C	C
Sida, prickly	*Sida spinosa*		C	C
Smartweed, Pennsylvania	*Polygonum pensylvanicum*			C
Sowthistle, annual	*Sonchus oleraceus*			C
Sowthistle, spiny	*Sonchus asper*			C
Speedwell, Bird's-eye	*Veronica persica*	C	C	C
Speedwell, Field	*Veronica agrestis L.*	C	C	C
Speedwell, Persian	*Veronica persica Poir.*	C	C	C
Speedwell, purslane	*Veronica peregrina L.*	C	C	C

(continued)

Table 1. Broadleaf and Grass Weeds Controlled with a Burndown Application of Voraxor™ herbicide *(continued)*

Common Name	Scientific Name	Voraxor Use Rate (fl ozs/A)		
		0.7	**1.0**	**1.4**
Broadleaf Weeds *(continued)*		**Maximum Weed Height or Diameter**		
		(4 inches)	(4 to 6 inches)	(4 to 6 inches)
Spurge, leafy	*Euphorbia esula*	C	C	C
Sunflower, common	*Helianthus annuus*		C	C
Swinecress, lesser	*Coronopus didymus*	C	C	C
Tansymustard, pinnate	*Descurainia pinnata*			C
Texasweed	*Caperonia palustris*			C
Thistle, Canada	*Cirsium arvense*			C
Thistle, Russian	*Salsola kali*	S	C	C
Velvetleaf	*Abutilon theophrasti*	C	C	C
Vetch, common	*Vicia sativa*			C
Waterhemp[3]	*Amaranthus tuberculatus*	C (3")	C	C
Willowweed	*Epilobium adenocaulon*			C
Woolly Croton	*Croton capitatus*			C
• Additional broadleaf weeds controlled (or suppressed) at rate of 2.75 fl ozs/A: curly dock *(Rumex crispus)*, panicle willowweed *(Epilobium paniculatum)*, white clover *(Trifolium repens)*				
Grass Weeds and Sedges		**Maximum Weed Size** (2 to 3 leaves)		
Barnyardgrass	*Echinochloa crus-galli*			C
Bluegrass, annual	*Poa annua*	S	S	C
Crabgrass, large	*Digitaria sanguinalis*			S
Foxtail, giant	*Setaria faberi*			C
Goosegrass	*Eleusine indica*			S
Nutsedge, annual	*Cyperus esculentus*		S	S
Nutsedge, yellow	*Cyperus compressus*		S	S
Ryegrass, Italian	*Lolium multiflorum*			S
Signalgrass, broadleaf	*Brachiaria platyphylla*			S

C = Control, S = Suppression

Optional footnotes:
[1] Control of seedling stage and suppression of perennial growth stage.
[2] Not controlled in California
[3] Populations of noted weeds exist that are known to be resistant to burndown applications of **Group 14** herbicides and may not be controlled by herbicides like **Voraxor**. See the **Herbicide Resistance Management** section for practices to manage and minimize the impact of resistant weeds (e.g. tank mixes or alternation with other herbicide modes of action, crop rotation, and mechanical control).
[Optional text in brackets]

Mode of Action

Saflufenacil and trifludimoxazin, the active ingredients in **Voraxor™ herbicide**, are potent inhibitors of protoporphyrinogen-oxidase belonging to herbicide mode of action **Group 14**. **Voraxor** is rapidly absorbed by roots and foliage. Following inhibition of protoporphyrinogen-oxidase, plant death is the result of membrane damage. Under active growing conditions, susceptible emerged weeds usually develop chlorotic and necrotic injury symptoms within hours and die within a few days.

Herbicide Resistance Management

Any weed population may contain or develop plants naturally resistant to **Voraxor** and other **Group 14** herbicides. Weed species with resistance to **Group 14** may dominate the weed population if **Group 14** herbicides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by **Voraxor** or other **Group 14** herbicides. Proper stewardship practices should be employed to ensure the long-term effectiveness of **Voraxor** including mixture or sequential use of other effective herbicides to mitigate resistance development with **Voraxor**.

To delay herbicide resistance, consider:

- Resistance management should be part of a diversified weed control strategy that integrates chemical, cultural, and mechanical (tillage) control tactics. Cultural control tactics include crop rotation, proper fertilizer placement, and optimum seeding rate/row spacing. Start with clean fields using tillage or an effective burndown herbicide program. These practices encourage crop growth and improve competitiveness against weeds.
- Clean equipment before moving to a different field to avoid spread of resistant weeds.
- Scout fields prior to application to identify the weed species present and their growth stage to determine if the intended application will be effective.
- Always follow labeled application rate and weed growth stage specifications.
- Use sequential programs with preemergence herbicides that provide soil residual control of weeds to reduce early season weed competition and allow for timely in-crop postemergence herbicide applications.
- **DO NOT** rely on a single herbicide site of action for weed control during the growing season.
- Avoid application of herbicides with the same site of action more than twice a season.
- Use tank mixes or premixes with other herbicides possessing different sites of action that are also effective on the target weeds.
- Scout fields after herbicide application to identify areas where weed control was ineffective.
- Control weed escapes with herbicides possessing a different site of action or use a mechanical control measure. Weed escapes should not be allowed to reproduce by seed or to proliferate vegetatively.
- If a weed population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action.
- Contact your **Voraxor** supplier and/or your local BASF representative to report weed escapes.
- Consult your local BASF representative, local or state cooperative extension service, professional consultants or crop advisors, or other qualified authority to determine appropriate actions if you suspect resistant weeds.
- Suspected herbicide-resistant weeds may be identified by these indicators:
  1. Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
  2. A spreading patch of noncontrolled plants of a particular weed species; and
  3. Surviving plants mixed with controlled individuals of the same species.

Crop Tolerance

Crops listed on this label are tolerant to **Voraxor** when applied according to label directions and under normal environmental conditions. Crop injury may occur under stressful growing conditions (e.g. low soil fertility, seedling disease, extreme hot or cold weather, excessive moisture, high soil pH, high soil salt concentration, or drought).

Severe crop injury will result if **Voraxor** is applied postemergence (over the top) to any crop.

Application Instructions

Voraxor may only be applied before crop emergence.

Application Rates

Application rates of **Voraxor** vary depending on soil texture and organic matter. Refer to **Table 2** for soil texture groups used in this label.

Table 2. Soil Texture Groups

Coarse	Medium	Fine
Sand Loamy sand Sandy loam	Silt Silt loam Loam Sandy clay loam	Sandy clay Silty clay Silty clay loam Clay loam Clay
Low Organic Matter – soils (regardless of texture) with ≤ 2% organic matter		

Refer to the **Crop-specific Information** section for specific application rate, timing, and restrictions and precautions by crop and use pattern.

Table 3. Use Rate Equivalency

Amount of Voraxor™ herbicide (fl ozs/A)	Amount of Saflufenacil (lb ai/A)	Amount of Trifludimoxazin (lb ai/A)
0.7	0.011	0.006
1.0	0.016	0.008
1.4	0.023	0.011
2.75	0.045	0.022

Application Methods and Equipment

Voraxor may be applied by ground spray or aerial spray. Thorough spray coverage is required for optimum broadleaf and grass weed control and can be improved with proper adjuvant, nozzle, and spray volume selection.

Use and configure application equipment for adequate spray volume, accurate and uniform distribution of spray droplets over the treated area, and to avoid spray drift to nontarget areas. Adjust equipment to maintain continuous agitation during spraying with good mechanical or bypass agitation. Avoid overlaps that will increase rates above use rates specified in this label.

Voraxor may be applied using water or sprayable fluid nitrogen fertilizer solutions as the spray carrier.

Aerial Spray Carrier Volume. Use 15 or more gallons of water per acre for helicopter applications. Use 3 or more gallons of water per acre for fixed-wing aircraft applications.

Ground Spray Carrier Volume. Use 15 or more gallons of water per treated acre or 20 or more gallons of sprayable fluid nitrogen fertilizer per treated acre. Thorough spray coverage is required for control of emerged broadleaf and grass weeds. High populations and/or variations in size can prevent thorough spray coverage. Controlling fall-germinated weeds in the spring (e.g. horseweed/marestail) also requires thorough spray coverage. Use higher spray volumes (e.g. 15 to 20 gallons of water per acre) in these situations to increase spray coverage and optimize burndown activity.

Aerial Spray Nozzle Selection. Applicators must select nozzles and pressure that deliver very coarse or coarser droplets as indicated in nozzle manufacturer's catalogues and in accordance with American Society of Agricultural & Biological Engineers Standard 641 (ASABE §641).

Ground Spray Nozzle Selection. Applicators must select nozzles and pressure that deliver coarse to very coarse droplets as indicated in nozzle manufacturer's catalogues and in accordance with American Society of Agricultural & Biological Engineers Standard 572 (ASABE §572). Nozzles that deliver coarse or very coarse spray droplets may be used to reduce spray drift provided spray volume per acre (GPA) is increased to maintain coverage of target (i.e., weeds).

Spray Drift Retardants. Addition of some spray drift retardants (drift reducing agents, e.g. DRA) can significantly increase the droplet size but reduce spray coverage and efficacy. If a spray drift retardant is used, ensure that it is compatible for use with **Voraxor** and spray equipment being used and the desired level of weed control is maintained.

Cleaning Spray Equipment

Before applying **Voraxor** all application equipment must be thoroughly cleaned. All spray equipment, hoses, and nozzles must be cleaned according to the manufacturer's directions for the last product used before the equipment is used to apply **Voraxor**.

Spray equipment used to apply **Voraxor** should not be used to apply other materials to any crop unless the proper cleanout procedures are followed. Clean application equipment thoroughly by using a strong detergent or commercial sprayer cleaner according to the manufacturer's directions, followed by triple rinsing the equipment after applying this product.

Mitigating Off-Target Movement

MANDATORY SPRAY DRIFT MANAGEMENT

All Applications – Aerial and Ground Boom

- **DO NOT** apply when wind speeds exceed 15 miles per hour at the application site.
- Wind speed and direction must be measured on location using a windsock, an anemometer (including systems to measure wind speed or velocity on an aircraft or ground application equipment), or an aircraft smoke system.
- Wind speed must be measured at the release height or higher, in an area free from obstructions such as trees, buildings, and farm equipment.
- During application, the Sustained Wind Speed, as defined by the National Weather Service (standard averaging period of 2 minutes) must register between 3 and 15 miles per hour.
- **DO NOT** apply during temperature inversions.

(continued)

MANDATORY SPRAY DRIFT MANAGEMENT
(continued)

Aerial Applications – Fixed-wing Aircraft and Helicopter

- When applying via aerial application equipment, the spray boom must be mounted on the aircraft to minimize drift caused by wing tip or rotor blade vortices.
- **DO NOT** release spray at a height greater than 10 feet above the vegetative canopy, unless a greater application height is required for pilot safety.
- The boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters. But when the wind speed is between 11 to 15 miles per hour, the boom length must be 65% or less of the wingspan for fixed wing aircraft and 75% or less of the rotor diameter for helicopters.
- Applicators must use a minimum of 1/2 swath displacement upwind at the downwind edge of the field. But when the wind speed is between 11 to 15 miles per hour, applicators must use a minimum of 3/4 swath displacement upwind at the downwind edge of the field.

Ground Boom Applications

- Spray at the appropriate boom height based on nozzle selection and nozzle spacing, but **DO NOT** exceed a nozzle height of 24 inches above the spray target (i.e., top of weed canopy). Set boom to lowest effective height over the target pest based on equipment manufacturer's directions.
- Applicators should select a ground speed that will deliver the desired spray volume while maintaining the desired spray pressure, but **DO NOT** exceed a ground speed of 15 miles per hour.

Mandatory Spray Drift Mitigations

Ecological spray drift buffers are required for this product for aerial and ground boom applications to field crops. Access EPA's **Mitigation Menu** website (www.epa.gov/pesticides/mitigation-menu) for the full list of parameters to evaluate whether your field is subject to the required spray drift buffer.

Applicators must access and search **Bulletins Live! Two** (BLT) at https://www.epa.gov/pesticides/bulletins within six months prior to or on the day of the application to determine whether the application site falls within a Pesticide Use Limitation Area (PULA). If you are located inside a PULA, follow the instructions in the BLT bulletin. If the application site falls outside of a PULA, follow the instructions in the "Outside a PULA" section below. Additional restrictions may be present in bulletins—always follow the most restrictive bulletin instructions.

Outside a PULA. A minimum down-wind spray drift buffer must be maintained between the application area and any unmanaged areas for applications to field crops. Unmanaged areas are defined in comparison to managed areas – anything that is not a managed area is an unmanaged area. Refer to the list of **Managed Areas** in this label.

Mandatory Spray Drift Buffers

For aerial and ground applications, maintain a wind-directional (downwind) buffer distance from the edge of the treated area as follows:

Application Method	Minimum Required Buffer Distance
Aerial	110 feet
Ground	15 feet

Reduction Options for All Ecological Wind-Directional Drift Buffers

The applicator may choose among the ecological drift buffer reduction options on EPA's **Mitigation Menu** website (http://www.epa.gov/pesticides/mitigation-menu) to reduce the wind-directional buffer distance before applying this product. All buffer reduction options selected must align with the minimum droplet size and release height requirements on this label.

Examples of buffer reduction options include: using larger droplets, lowering the boom height, reducing the maximum single application rate, reducing the number of passes across the field, maintaining a windbreak or hedgerow, or using directed sprayers.

The buffer reduction options must be employed in accordance with the instructions and descriptions on EPA's **Mitigation Menu** website. When using more than one option during the application, the percent reduction in the buffer distances may be added together. The maximum buffer reduction that can be achieved by a combination of buffer reduction options is 100% (i.e., no drift buffer).

Additional restrictions may be present in bulletins—always follow the most restrictive bulletin instructions. If you are located in an area where PULAs overlap, follow the most restrictive requirements across all bulletins. When tank mixing, the most restrictive of the products' label or bulletin requirements must be followed (e.g., drift buffers that are not wind-directional, Application Exclusion Zone drift requirements, drift buffers to residences, schools, and parks where people could be present, use prohibitions, timing restrictions, and application method prohibitions).

Managed Areas

Managed areas that can be included as part of wind-directional spray drift buffer footage include the following:

- Agricultural fields, pastures, forage fields, and private rangelands, including untreated portions of the treated field/site;
- Roads, paved or gravel surfaces, mowed grassy/fallowed areas adjacent to field, and areas of bare ground from recent plowing or grading that are contiguous with the treated area;
- Buildings and their perimeters, or other on-farm man-made structures with walls and/or roof;
- Areas present and/or maintained as a runoff/erosion measure as listed on EPA's **Mitigation Menu** website.

Examples include vegetative filter strips (VFS), field borders, grassed waterways, vegetated ditches, riparian areas, managed/constructed wetlands, or other areas of intentional habitat improvement;
- Areas present and/or maintained as a drift buffer reduction measure as listed on EPA's **Mitigation Menu** website. Examples include vegetative windbreaks, hedgerows, shelterbelts, riparian areas, private forests, woodlots, and shrublands;
- Conservation Reserve Program (CRP) and Agricultural Conservation Easement Program (ACEP) lands;
- On-site contained irrigation water resources that are not connected to adjacent water bodies, including on-site irrigation canals and ditches, water conveyances, managed irrigation/runoff retention basins, ponds, and tailwater collection ponds.

Managed areas can be included as part of the buffer footage if they are downwind and immediately adjacent/contiguous to the treated field and people are not present in those areas.

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. Be aware of nearby non-target sites and environmental conditions.

Importance of Droplet Size

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size - Ground Boom

Volume. Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.

Pressure. Use the lowest spray pressure specified for the nozzle to produce the target spray volume and droplet size.

Spray Nozzle. Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

Controlling Droplet Size – Aircraft

Adjust Nozzles. Follow nozzle manufacturers' directions for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

Release Height - Ground Boom

For ground equipment, the boom should remain level with the crop and have minimal bounce. Automated boom height controllers are recommended with large booms to better maintain optimum nozzle to canopy height. Excessive boom height will increase the potential for spray drift.

Release Height – Aircraft

Higher release heights increase the potential for spray drift.

Hooded (or Shielded) Sprayers

Shielding the boom or individual nozzles can reduce spray drift. Consider using hooded (or shielded) sprayers. Verify that the hoods (or shields) are not interfering with the uniform deposition of the spray on the target area.

Temperature and Humidity

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

Temperature Inversion

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

Wind

Drift potential generally increases with wind speed. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

Measuring Wind Speed and Wind Direction

- Applicators should check and acquire the predicted wind speed and direction for the application site within 12 hours prior to conducting applications to determine the time periods wind speed is likely to fall outside the applicable thresholds.
- Applicators should reassess wind speed and direction at the application site at least every hour while applications are in progress.
- Measuring wind speed and direction can be done by:
  - Relying on equipment on the application equipment that measures wind speed (e.g., aerial or ground equipment).
  - Using a tower anemometer with telemetry or handheld anemometer. Users should read user manual on how to calibrate, operate and interpret the output from an anemometer. Ground applicators should stop at least every hour to take a reading with a tower anemometer with telemetry or handheld anemometer. Some anemometers may have software that would allow users to view wind measurements in real time while making an application, and, those cases, applicators would not have to stop to take measurements.
  - Using a windsock. Wind can be estimated with a windsock using the strips on a windsock. The applicator should consult the user manual for the windsock on wind speed estimation and direction of wind. Applicators should look at the sock at least every hour to estimate wind speed and direction.
  - Using an aircraft smoke system. Laying down several puffs of smoke along different lines using an aircraft smoke system can provide an accurate view of what the wind speed and direction for the application.

- Checking behind the spray rig at least every hour to see if the spray has changed direction from when the application started.

Mandatory Runoff Mitigation

Applicators must access and search **Bulletins Live! Two** (BLT) at https://www.epa.gov/pesticides/bulletins within six months prior to or on the day of the application to determine whether the application site falls within a Pesticide Use Limitation Area (PULA). If you are located inside a PULA, follow the instructions in the the BLT bulletin. If the application site falls outside of a PULA, follow the instructions in the section below.

The minimum of 6 mitigation points must be achieved for the following agricultural crop use sites: corn, postharvest/fallow, legume vegetables, small grains, sorghum, and soybean.

Step 1. To achieve the mitigation points specified above, visit EPA's **Mitigation Menu** website (http://www.epa.gov/pesticides/mitigation-menu) for a full list of mitigation and mitigation relief options.

Step 2. Determine if you are eligible for mitigation relief. Runoff/erosion mitigation is NOT required if certain field/application parameters are present at the time of application (e.g., subsurface or tile drains with controlled outlet, perimeter berm systems, irrigation tailwater return systems, spot treatment, etc).

Step 3. If the application site does not meet the field/application parameters specified on EPA's **Mitigation Menu** website, choose among the mitigation and/or mitigation relief options on EPA's **Mitigation Menu** website to meet or exceed the required points noted here before applying this product.

Step 4. To achieve mitigation points for the application, the mitigation and mitigation relief measures must be:
- Employed in accordance with the instructions and descriptions on EPA's **Mitigation Menu** website.
- In place during the application unless a different timing (such as before or after application) is specifically provided in the measure's description on EPA's **Mitigation Menu** website. EPA may periodically update the **Mitigation Menu** website, for example, by adding new mitigation measures or updating a mitigation measure description.

Step 5. Additional restrictions may be present in bulletins—always follow the most restrictive bulletin instructions. If you are located in an area where PULAs overlap, follow the most restrictive requirements across all bulletins. When tank mixing, the most restrictive requirements must be followed between the products' labels and bulletins.

Additives

For optimum burndown with **Voraxor™ herbicide**, an adjuvant system must be used that includes the following:

Adjuvant	Rate
methylated seed oil[1] (MSO)	1 gal/100 gals[2] (1% v/v)
PLUS	**PLUS**
ammonium sulfate (AMS)	8.5 to 17 lbs/100 gals (1% to 2% w/v)
or	**or**
urea ammonium nitrate (UAN)	1.25 to 2.5 gals/100 gals (1.25% to 2.5% v/v)

[1] MSO-based adjuvant **MUST** contain at least 60% methylated seed oil. Poor performance may occur with adjuvants containing less than 60% methylated seed oil.
[2] **DO NOT** use less than 1 pint/A of MSO with low-volume (less than 12.5 gallons per acre) aerial or ground application.

Use of AMS fertilizer is highly advised when mixing **Voraxor** with glyphosate-based herbicides.

DO NOT use nonionic surfactant (NIS) as a substitute for MSO, or poor performance on broadleaf and/or grass weeds will occur.

When an adjuvant is to be used with this product, BASF recommends the use of a Council of Producers & Distributors of Agrotechnology (CPDA) certified adjuvant.

DO NOT add acidifying agents to the spray tank when applying **Voraxor**.

Tank Mixing Information

It is the pesticide user's responsibility to ensure that all products in the mixtures are registered for the intended use. Read and follow the applicable restrictions and precautions and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Voraxor may be tank mixed or applied sequentially with other herbicide products registered for use in any labeled crop found in this label for a broader spectrum of control of emerged weeds and/or residual weed control. Refer to the tank mix product labels to confirm that the respective tank mix products are registered for use on the labeled crop. Read and follow tank mix product labels for application instructions, use restrictions and precautions, and rotational cropping guidance.

Tank mixes with contact herbicides (e.g. carfentrazone, paraquat) may reduce the burndown activity of **Voraxor**.

When tank mixing, the most restrictive of the products' label or bulletin (BLT) requirements must be followed (e.g., use prohibition, timing restriction, application method restriction, sandy soil application restriction, etc.).

Compatibility Test for Mix Components

Before mixing components, always perform a compatibility jar test.

1. For 20 gallons per acre spray volume, use 3.3 cups (800 mL) of water. For other spray volumes, adjust rates accordingly. Only use water from the intended source at the source temperature.
2. Add components in the sequence indicated in **Mixing Order** using 2 teaspoons for each pound or 1 teaspoon for each pint of label rate per acre.
3. Always cap the jar and invert 10 cycles between component additions.
4. When the components have all been added to the jar, let the solution stand for 15 minutes.
5. Evaluate the solution for uniformity and stability. The spray solution should not have free oil on the surface, or fine particles that precipitate to the bottom, or thick (clabbered) texture. If the spray solution is not compatible, repeat the compatibility test with the addition of a suitable compatibility agent. If the solution is then compatible, use the compatibility agent as directed on its label. If the solution is still incompatible, **DO NOT** mix the ingredients in the same tank.

Mixing Order

Maintain agitation throughout mixing and application until spraying is completed.

1. **Water** - Fill tank 1/2 to 3/4 full with clean water and start agitation.
2. **Inductor** - If an inductor is used, rinse it thoroughly after each component has been added.
3. **Products in PVA bags** - Place any product contained in water-soluble PVA bags into the mixing tank. Wait until all water-soluble PVA bags have fully dissolved and the product is evenly mixed in the spray tank before continuing.
4. **Water-soluble additives** (including dry and liquid fertilizers AMS or UAN)
5. **Water-dispersible products** (dry flowables, wettable powders, suspension concentrates, or suspo-emulsions, add **Voraxor™ herbicide** now)
6. **Water-soluble products**
7. **Emulsifiable concentrates** (including MSO adjuvants)
8. **Remaining quantity of water**

If the spray mixture is allowed to settle for any period of time, thorough agitation is essential to resuspend the mixture before spraying is resumed. Continue agitation while spraying.

Use Restrictions

- **Maximum annual use rate** - Refer to **Crop-specific Information** section for maximum application use rates for each crop use. A cropping season is defined as the period following harvest of the preceding crop through the harvest of the planned or current crop.
- If additional saflufenacil is applied from other product sources, refer to the **Crop-specific Restrictions** section for each crop use for the maximum cumulative amount per year.
- **DO NOT** apply **Voraxor** after crop emergence or severe crop injury will occur.
- **DO NOT** apply **Voraxor** through any type of irrigation system (e.g. chemigation).
- **DO NOT** contaminate water used for irrigation or domestic purposes.
- **DO NOT** feed or allow domestic animals to graze areas or crops not included in the use directions of this label within 365 days of **Voraxor** application.
- **DO NOT** apply during rain.
- **DO NOT** apply this product when soil is saturated or at field capacity, or when a storm event likely to produce runoff from the treated area is expected to occur within 24 hours following application.
- Within 24 hours after application, **DO NOT** irrigate the treatment area to the point of runoff.
- **Voraxor is not for sale, distribution, or use in Alaska, Hawaii, US Territories (including American Samoa, Guam, Puerto Rico, Mariana Islands, US Virgin Islands), and in Nassau and Suffolk counties in New York State.**

Use Precautions

- **Rainfastness** - **Voraxor** is rainfast 1 hour after application. Burndown activity may be reduced if rain or irrigation occurs within 1 hour of application.
- **Emergency Replanting Intervals** - In the event of crop failure (because of environmental factors, including drought, frost, hail, etc.), the following labeled crops may be planted immediately after an application of **Voraxor** according to the rates specified in the **Crop-specific Information** section: Field corn, popcorn, seed corn, processing sweet corn, chickpea, field pea, barley, wheat, grain sorghum and soybean.

Crop Rotation Intervals

Refer to **Table 4** for the proper interval between **Voraxor** application and planting of rotational crops. Determine the rotational crop interval for tank mix products and use the most restrictive interval of all products applied.

Table 4. Rotational Crop Intervals by Voraxor™ herbicide Application Rate

Crop	Voraxor Rate (fl ozs/A)	
	≤ 1.4	2.75
	Rotational Crop Interval (months after application)[1]	
Corn (field, pop, seed, processing sweet)	0	1
Chickpea	[0] 0.5	2
Pea, dry field	[0, 0.5] 1	2
Barley and wheat	0	1
Sorghum (grain)	0	1
Soybean[2]	0 to 1	1 to 1.5
Alfalfa	4	6
Corn, fresh sweet (and sweet seed)	0.5	2
Cotton	4	4
Edible peas	1.5	3
Edible beans	1	2
Lentil	[0.5, 1] 1.5	3
Grass (forage, seed) Establishment	4	4
Peanut	4	5
Rice	4	4
Small grains (other than barley and wheat)	1	1
Sorghum (all other than grain)	1	1
Sugar beet	5	5
Sugarcane	4	4
Sunflower	5	5
Cover crops (winter, spring)[3]	1	2
Other field crops	5	6
Citrus fruit trees	1	1
Nut trees	3	3
Pome fruit trees	3	3
Other fruit trees	4	6
Avocado trees	9	9
Grape	9	9

[1] **DO NOT** include time when the soil is frozen, or months when less than 1 inch of precipitation or irrigation occurred.
[2] The planting interval for these crops and rates are further defined in the respective **Crop-specific Information** section of this label. Use longer interval within listed ranges for indicated crops grown on coarse-texture soils with organic matter less than 2%.
[3] Cover crops (winter, spring) may be planted after application of **Voraxor**, either inter-seeded into the current crop before harvest or after harvest of the current crop. Depending on the sensitivity of the sown cover crop to **Voraxor**, stand establishment may be reduced. If cover crops were sown less than 4 months after **Voraxor** application, **DO NOT** harvest cover crops as a food or feed crop and **DO NOT** allow livestock to graze cover crops.

Crop-specific Information

This section provides use directions for **Voraxor™ herbicide** in specific crops. Read product information, mixing, application, weeds controlled, and adjuvant instructions in preceding sections of the label. Read and follow tank mix product labels for restrictions, precautions, instructions, and rotational crop restrictions.

Depending on specific crop application directions, **Voraxor** may be applied for burndown control of emerged broadleaf and grass weeds (refer to **Table 1** for list of weeds controlled) before crop planting (preplant and/or preseed) or after planting but before crop emergence (preemergence).

For all crop-specific uses in this section, refer to **Table 4** for crop rotation intervals.

Thorough spray coverage is required for control of emerged broadleaf and grass weeds. High populations and/or variations in size can prevent adequate spray coverage. Controlling fall-germinated weeds in the spring (e.g. horseweed/marestail) also requires thorough spray coverage. Use higher spray volumes (e.g. 15 to 20 gallons of water per acre) in these situations to increase spray coverage and optimize burndown activity.

Field Corn (grain, silage), Popcorn, Seed Corn, and Sweet Corn

Voraxor may be applied prior to corn emergence for burndown control of broadleaf and grass weeds (refer to **Table 1** for list of weeds controlled). Corn in this label refers to field corn (grown for grain or silage), popcorn, seed corn, and sweet corn (processing varieties only, not including sweet corn grown for seed or fresh market varieties). Before applying **Voraxor** to seed corn, processing sweet corn, or popcorn, verify the selectivity of **Voraxor** on your inbred line or hybrid with your local seed company (supplier) to help avoid potential injury to sensitive inbreds or hybrids.

Application Rate, Method, and Timing

Apply **Voraxor** as a broadcast spray for burndown control of emerged broadleaf and grass weeds as preplant surface or preemergence application. An adjuvant system (refer to the **Additives** section for details) is required for optimum burndown activity.

Voraxor may only be applied in a single application.

Fall Application

Apply **Voraxor** at 1.4 fl ozs/A for burndown after the prior crop is harvested. Application must be made before first killing frost. Fall application can be made to all soil types.

Early Preplant Surface Application (greater than 14 days before planting)

Apply **Voraxor** at 1.0 to 1.4 fl ozs/A. Early preplant surface applications are not advised: on coarse soils, in areas where average annual rainfall (or rainfall plus irrigation) typically exceeds 40 inches, or for popcorn or processing sweet corn. Cultivation or a labeled postemergence herbicide application may still be required under certain conditions for complete weed control.

Preplant Surface Application

Apply **Voraxor** within 14 days of planting at the rates provided in **Table 5**.

Preemergence Surface Application

Apply **Voraxor** at the rates provided in **Table 5** after planting and before crop emergence. **Voraxor** must be applied before crop emergence or injury will occur.

Table 5. Preplant Surface and Premergence Surface Application Rates of Voraxor in Corn

Soil Texture[1]	Rate by Soil Texture (fl ozs/A)
Low Organic soils	1.0
Coarse	
Medium	1.0 to 1.4
Fine	

[1] Refer to **Table 2** for definition of soil texture groups.

Crop-specific Restrictions

- **DO NOT** apply **Voraxor** after corn emergence or severe crop injury will occur.
- **DO NOT** apply more than 1.4 fl ozs/A of **Voraxor** (0.023 lb ai/A saflufenacil + 0.011 lb ai/A trifludimoxazin) in a single application in corn.
- Maximum number of applications per year: 1
- **DO NOT** apply more than 1.4 fl ozs/A of **Voraxor** (0.023 lb ai/A saflufenacil + 0.011 lb ai/A trifludimoxazin) per year in corn.
- **DO NOT** apply **Voraxor** where an at-planting application of an organophosphate (OP) or carbamate insecticide(s) is planned and/or has occurred because severe injury may result.

  EXCEPTION: Voraxor may be applied when **Aztec® 2.1% granular insecticide**, **Aztec® 4.67 G granular insecticide**, or **SmartChoice™ 5G granular insecticide** is applied at planting as a band, T-band, or in-furrow. **Voraxor** may be applied with all other classes of at-planting insecticides including neonicotinoid and pyrethroid.
- If additional saflufenacil is applied from other product sources, **DO NOT** apply more than the following maximum cumulative amount of saflufenacil per year in corn: 0.134 lb ai/A.
- There is no required (preharvest) interval between a preplant surface or preemergence application of **Voraxor** and the harvest of field corn grain, popcorn, seed corn and sweet corn ears.
- Corn forage and silage must not be harvested, fed, or grazed sooner than 80 days after application. Sweet corn cannery waste may be fed to livestock after harvest.

Crop-specific Precautions

- **Voraxor™ herbicide** use may result in delayed corn emergence and stunting under certain environmental conditions including cool temperatures, excessive rainfall/irrigation, and/or persistent wet soil conditions occurring after application.
- Ensure the corn seed row is closed. Soil conditions that cause poor seed furrow closure and coverage may result in delayed corn emergence or stunting.
- **Voraxor** applied to processing sweet corn planted at depth of 1/2 inch or less may result in crop injury.

Fallow and Postharvest

Voraxor may be applied for burndown control of broadleaf and grass weeds (refer to **Table 1** for list of weeds controlled) following crop harvest and/or at any time of the year during a fallow period in all labeled crops (corn, legume vegetables, small grains, sorghum, soybean), and canola, cotton, rice, sugar beet, and sunflower. **DO NOT** apply **Voraxor** after harvest of any other crop or in fallow period preceding any other crop.

Application Rate, Method, and Timing

Apply **Voraxor** at 1.4 to 2.75 fl ozs/A as a broadcast burndown spray targeting emerged weeds. An adjuvant system (refer to the **Additives** section for details) is required for optimum burndown activity. For best product performance, apply when broadleaf and grass weeds are small and actively growing. Thorough coverage of existing weeds is essential and higher spray volumes may be needed for best performance.

Voraxor may only be applied in a single application.

Use-specific Restrictions

- **DO NOT** apply more than 2.75 fl ozs/A of **Voraxor** (0.045 lb ai/A saflufenacil + 0.022 lb ai/A trifludimoxazin) in a single application.
- Maximum number of applications per year: 1
- **DO NOT** apply more than 2.75 fl ozs/A of **Voraxor** (0.045 lb ai/A saflufenacil + 0.022 lb ai/A trifludimoxazin) per year in postharvest and fallow.
- Specific rotational crop intervals must be observed between an application of **Voraxor** and planting of the following crop (see **Table 4** for crop rotation intervals).

Legume Vegetables [chickpea, field pea (dry), and lentil]

Voraxor may be applied prior to legume vegetable emergence of crops specified in this section [planting of legume vegetable crops specified in this section] for burndown control of broadleaf and grass weeds (refer to **Table 1** for list of weeds controlled). Before applying **Voraxor** to any of the specified legume crops, verify the selectivity of **Voraxor** on your variety with your seed company (supplier) to help avoid potential injury to sensitive varieties.

Application Method, Rate, and Timing

Apply **Voraxor** as a broadcast spray for burndown control of emerged broadleaf and grass weeds [as preplant surface or preemergence application]. See the specific application rates and timings as they vary by legume crop. With burndown application, an adjuvant system (refer to **Additives** section for details) is required for optimum burndown activity.

Chickpea (garbanzo bean)

Voraxor is for use in all types of chickpeas.

Voraxor may only be applied in a single application.

Apply **Voraxor** early preplant through preemergence at 0.7 to 1.0 [1.4] fl oz[s]/A before crop emergence.

[Apply **Voraxor** early preplant surface (30 or more days before planting) at 0.7 to 1.0 fl oz/A or preplant surface (14 to 29 days before planting) at 0.7 fl oz/A.]

Field Peas

Voraxor is for use **ONLY** on dry field peas including Austrian winter peas.

Voraxor may only be applied in a single application.

Apply **Voraxor** early preplant through preemergence at 0.7 to 1.0 [1.4] fl oz[s]/A before crop emergence.

[Apply **Voraxor** early preplant surface (30 or more days before planting) at 0.7 to 1.0 fl oz/A or preplant surface (14 to 29 days before planting) at 0.7 fl oz/A.]

Lentils

Voraxor is for use in all types of lentils. [**Voraxor** may be applied to green-type and red-type lentils. **DO NOT** apply **Voraxor** to Spanish brown lentils.]

Voraxor may only be applied in a single application.

Apply **Voraxor** early preplant through preemergence at 0.7 [to 1.0] fl oz/A before crop emergence. [Higher use rates must be avoided or crop injury may result.]

[Apply **Voraxor** early preplant surface (30 or more days before planting) at 0.7 to 1.0 fl oz/A or preplant surface (14 to 29 days before planting) at 0.7 fl oz/A.]

Use Advisory for Lentils: Rainfall shortly after product application can result in slight injury to the crop. Lentils will be more susceptible to injury on course texture and low organic matter soils. Injury will usually appear as leaf tissue necrosis on the outer edges of the leaves. Lentils will grow out of injury symptoms, and yield will not be impacted at labeled rates. The addition of other soil applied herbicides may increase the sensitivity of lentils to **Voraxor** and injury may result.

Crop-specific Restrictions for all Legume Vegetables

- **DO NOT** apply more than 1.0 fl oz/A of **Voraxor™ herbicide** (0.016 lb ai/A saflufenacil + 0.008 lb ai/A trifludimoxazin) [1.4 fl ozs/A of **Voraxor** (0.023 lb ai/A saflufenacil + 0.011 lb ai/A trifludimoxazin)] in a single application.
- Maximum number of applications per year: 1
- **DO NOT** apply more than 1.0 fl oz/A of **Voraxor** (0.016 lb ai/A saflufenacil + 0.008 lb ai/A trifludimoxazin) [1.4 fl ozs/A of **Voraxor** (0.023 lb ai/A saflufenacil + 0.011 lb ai/A trifludimoxazin)] per year in legume vegetables.
- **DO NOT** apply **Voraxor** if cold and/or wet conditions are present or predicted to occur within 1 week of application.
- **DO NOT** apply when legumes have reached the cracking stage or after emergence or severe crop injury will occur.
- **DO NOT** apply **Voraxor** with other products containing **Group 14** herbicides (including sulfentrazone or flumioxazin) as a tank mix partner or sequential application within 30 days of planting because crop injury may result.
- If additional saflufenacil is applied from other product sources, **DO NOT** apply more than the following maximum cumulative amount of saflufenacil per year in legume vegetables: 0.089 lb ai/A.
- There is no required (preharvest) interval between an application of **Voraxor** and the harvest of mature legume pods or seeds.
- Legume forage must not be fed or grazed sooner than 65 days after application.

Crop-specific Precautions

- Plant legumes at least 1/2 inch deep to reduce risk of crop injury from **Voraxor** application.
- Ensure the seed row is closed. Soil conditions that cause poor seed furrow closure and coverage may result in delayed crop emergence or stunting.
- Use of **Voraxor** may result in delayed crop emergence and stunting under certain environmental conditions including cool temperatures, excessive rainfall/irrigation, and/or persistent wet soil conditions occurring after application.

Small Grains (barley and wheat)

Voraxor may be applied prior to small grain emergence for burndown control of broadleaf and grass weeds (refer to **Table 1** for list of weeds controlled). Small grains in this label refers to wheat (including durum, spring, and winter) and barley. Before applying **Voraxor** to small grains, verify the selectivity of **Voraxor** on your variety with your seed company (supplier) to help avoid potential injury to sensitive varieties.

Application Rate, Method, and Timing

Voraxor may only be applied in a single application.

Apply **Voraxor** as a broadcast spray for burndown control of emerged broadleaf and grass weeds as preplant surface or preemergence application. An adjuvant system (refer to the **Additives** section for details) is required for optimum burndown activity.

Apply **Voraxor** early preplant through preemergence at the rates provided in **Table 6**.

Table 6. Application Rates of Voraxor in Small Grains

Soil Texture[1]	Rate by Crop and Soil Texture (fl ozs/A)	
	Winter Wheat	**Spring Wheat, Durum Wheat, Barley**
Low Organic soils	1.0	1.0 to 1.4
Coarse		
Medium	1.0 to 1.4	
Fine		

[1] Refer to **Table 2** for definition of soil texture groups.

Crop-specific Restrictions

- **DO NOT** apply after small grain emergence or crop injury will occur.
- **DO NOT** apply more than 1.4 fl ozs/A of **Voraxor** (0.023 lb ai/A saflufenacil + 0.011 lb ai/A trifludimoxazin) in a single application in small grains.
- Maximum number of applications per year: 1
- **DO NOT** apply more than 1.4 fl ozs/A of **Voraxor** (0.023 lb ai/A saflufenacil + 0.011 lb ai/A trifludimoxazin) per year in small grains.
- If additional saflufenacil is applied from other product sources, **DO NOT** apply more than the following maximum cumulative amount of saflufenacil per year in small grains: 0.134 lb ai/A.
- Small grain forage and hay must not be fed or grazed sooner than 30 days after application.

Crop-specific Precautions

- Ensure the seed row is sufficiently covered with soil to avoid washing and concentration of the herbicide in the seed zone.

Sorghum (grain)

Voraxor™ herbicide may be applied prior to grain sorghum emergence for burndown control of broadleaf and grass weeds (refer to **Table 1** for list of weeds controlled). Before applying **Voraxor** to grain sorghum, verify with your local seed company (supplier) the selectivity of **Voraxor** on your hybrid or variety to help avoid potential injury to sensitive hybrids or varieties.

Application Rate, Method, and Timing

Apply **Voraxor** as a broadcast spray for burndown control of emerged broadleaf and grass weeds in the fall or in spring as preplant surface or preemergence application. An adjuvant system (refer to the **Additives** section for details) is required for optimum burndown activity.

Voraxor may only be applied in a single application.

Fall Application

Apply **Voraxor** at 1.4 fl ozs/A for burndown after the prior crop is harvested. Application must be made before first killing frost. Fall application can be made to all soil types.

Early Preplant Surface Application (greater than 14 days before planting)

Apply **Voraxor** at 1.0 to 1.4 fl ozs/A. Early preplant surface application is not advised on coarse soils, in areas where average annual rainfall (or rainfall plus irrigation) typically exceeds 40 inches. Cultivation or a labeled postemergence herbicide application may still be required under certain conditions for complete weed control.

Preplant Surface Application

Apply **Voraxor** within 14 days of planting at the rates provided in **Table 7**.

Preemergence Surface Application

Apply **Voraxor** at the rates provided in **Table 7** after planting and before crop emergence. **Voraxor** must be applied before crop emergence or injury will occur.

Table 7. Preplant Surface and Premergence Surface Application Rates of Voraxor in Grain Sorghum

Soil Texture[1]	Rate by Soil Texture (fl ozs/A)
Low Organic soils	1.0
Coarse	
Medium	1.0 to 1.4
Fine	

[1] Refer to **Table 2** for definition of soil texture groups.

Crop-specific Restrictions

- **DO NOT** apply **Voraxor** after grain sorghum emergence or crop injury will occur.
- **DO NOT** apply more than 1.4 fl ozs/A of **Voraxor** (0.023 lb ai/A saflufenacil + 0.011 lb ai/A trifludimoxazin) in a single application in grain sorghum.
- **DO NOT** apply more than 1.4 fl ozs/A of **Voraxor** (0.023 lb ai/A saflufenacil + 0.011 lb ai/A trifludimoxazin) per year in sorghum.
- Maximum number of applications per year: 1
- If additional saflufenacil is applied from other product sources, **DO NOT** apply more than the following maximum cumulative amount of saflufenacil per year in grain sorghum: 0.111 lb ai/A.
- **DO NOT** apply **Voraxor** where an at-planting application of an organophosphate (OP) or carbamate insecticide(s) is planned and/or has occurred because severe injury may result.

  EXCEPTION: Voraxor may be applied when **Aztec® 2.1% granular insecticide**, **Aztec® 4.67 G granular insecticide**, or **SmartChoice™ 5G granular insecticide** is applied at planting as a band, T-band, or in-furrow. **Voraxor** may be applied with all other classes of at-planting insecticides including neonicotinoid and pyrethroids.
- Grain sorghum forage must not be harvested, fed, or grazed sooner than 70 days after application.

Crop-specific Precautions

- **Voraxor** use may result in delayed grain sorghum emergence and stunting under certain environmental conditions including cool temperatures, excessive rainfall/irrigation, and/or persistent wet soil conditions occurring after application.
- Ensure the grain sorghum seed row is closed. Soil conditions that cause poor seed furrow closure and coverage may result in delayed sorghum emergence or stunting.

Soybean

Voraxor™ herbicide may be applied prior to soybean emergence in conventional-till, reduced-till, or no-till systems for burndown control of broadleaf and grass weeds (refer to **Table 1** for list of weeds controlled). Before applying **Voraxor** to soybean, verify the selectivity of **Voraxor** on your variety with your seed company (supplier) to help avoid potential injury to sensitive varieties.

Application Rate, Method, and Timing

Apply **Voraxor** as a broadcast spray for burndown control of emerged broadleaf and grass weeds in the fall or in spring as preplant surface or preemergence application. An adjuvant system (refer to the **Additives** section for details) is required for optimum burndown activity.

Sequential applications of **Voraxor** may be made before soybean emergence as part of a split program between fall and spring applications. Fall followed by spring early preplant surface or preemergence applications may be applied as part of a split program with the application timings described in this label. However, the cumulative total rates of the sequential applications must not exceed the maximum rate per year.

Fall Application

Apply **Voraxor** at 1.4 fl ozs/A for burndown after the prior crop is harvested. Application must be made before first killing frost. Fall application can be made to all soil types.

Spring Application

Apply **Voraxor** early preplant through preemergence at 1.0 to 1.4 fl ozs/A before crop emergence.

Soybean Planting Interval

Depending on **Voraxor** use rate, soil texture, and organic matter, an interval between **Voraxor** application and planting may be required (see **Table 8**) or crop injury may occur.

Table 8. Minimum Soybean Planting Intervals

Minimum Preplant Interval (days) **Required between Voraxor Application and Soybean Planting**		
Voraxor Use Rate (fl ozs/A)	**Soil Texture[1]**	
	Coarse Soils with ≤ 2.0% Organic Matter	**All Other Soils**
1.0	14	0
1.4	30	0

[1] Refer to **Table 2** for definition of soil texture groups.

Crop-specific Restrictions

- Prior to soybean emergence, **DO NOT** tank mix or sequentially apply another **Group 14** herbicide with **Voraxor**.
- **DO NOT** apply when soybean has reached the cracking stage or after emergence or severe crop injury will occur.
- **DO NOT** apply more than 1.4 fl ozs/A of **Voraxor** (0.023 lb ai/A saflufenacil + 0.011 lb ai/A trifludimoxazin) in a single application in soybean.
- **DO NOT** apply more than a maximum cumulative amount of 2.75 fl ozs/A of **Voraxor** (0.045 lb ai/A saflufenacil + 0.022 lb ai/A trifludimoxazin) from sequential application per year in soybean.
- Sequential applications must be separated by at least 14 days.
- Maximum number of applications per year: 2
- If additional saflufenacil is applied from other product sources, **DO NOT** apply more than the following maximum cumulative amount of saflufenacil per year in soybean: 0.089 lb ai/A.
- **DO NOT** apply **Voraxor** within 30 days of planting where an at-planting application of an organophosphate or carbamate insecticide(s) is planned and/or has occurred because severe injury may result.
- Always use the most restrictive preplant interval of all inclusive herbicides when applying **Voraxor** as part of a tank mix.
- Soybean forage must not be fed or grazed sooner than 65 days after application.
- There is no required (preharvest) interval between a preplant or preemergence application of **Voraxor** and the harvest of soybean grain.

Crop-specific Precautions

- Use of **Voraxor** may result in delayed crop emergence and stunting under certain environmental conditions including cool temperatures, excessive rainfall/irrigation, and/or persistent wet soil conditions occurring after application.
- Contact your local retailer or BASF representative before applying **Voraxor** to natto soybeans to verify tolerance and help avoid potential injury.
- Ensure the seed row is sufficiently covered with soil to avoid washing and concentration of the herbicide in the seed zone.
- **Group 14** herbicides labeled for postemergence application in soybean may be used 14 days or more after soybean emergence. Refer to other products' labels for use directions.

Conditions of Sale and Warranty

The **Directions For Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully. However, it is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of BASF Agricultural Solutions US LLC ("BASF") or the Seller. To the extent consistent with applicable law, all such risks shall be assumed by the Buyer.

BASF warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Directions For Use**, subject to the inherent risks, referred to above.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S EXCLUSIVE REMEDY AND BASF'S EXCLUSIVE LIABILITY, WHETHER IN CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY, OR OTHERWISE, SHALL BE LIMITED TO REPAYMENT OF THE PURCHASE PRICE OF THE PRODUCT.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF AND THE SELLER DISCLAIM ANY LIABILITY FOR CONSEQUENTIAL, EXEMPLARY, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

BASF and the Seller offer this product, and the Buyer and User accept it, subject to the foregoing **Conditions of Sale and Warranty** which may be varied only by agreement in writing signed by a duly authorized representative of BASF. 1108

Kixor *is a registered trademark of BASF.*

Tirexor *and* ***Voraxor*** *are trademarks of BASF.*

Aztec *is a registered trademark of AMVAC Chemical Corporation.* (tebupirimphos + cyfluthrin, EPA Reg. Nos. 5481-9030 and 5481-9028)

SmartChoice *is a trademark of AMVAC Chemical Corporation.* (chlorethoxyfos + bifenthrin, EPA Reg. No. 5481-561)

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BASF Agricultural Solutions US LLC
2 TW Alexander Drive
Research Triangle Park, NC 27713

BASF
We create chemistry

[Optional Marketing Claims:
Powered by Kixor®
Powered by Kixor® herbicide
Powered by Kixor® Active herbicide
Powered by Tirexor™
Powered by Tirexor™ herbicide
Powered by Tirexor™ Active herbicide
Powered by Kixor® and Tirexor™
Powered by Kixor® and Tirexor™ herbicides
Powered by Kixor® and Tirexor™ Active herbicides]

Exhibit G

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7505P)
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

NOTICE OF PESTICIDE:
_X_ Registration
___ Reregistration
(under FIFRA, as amended)

EPA Reg. Number:	Date of Issuance:
7969-496	6/30/26

Term of Issuance: Unconditional

Name of Pesticide Product: VULCARUS Herbicide

BASF Corporation
26 Davis Drive, PO Box 13528
Research Triangle Park, NC 27709

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA section 3(c)(5) provided that you:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product when the Agency requires all registrants of similar products to submit such data.

Signature of Approving Official:

Nathan Mellor, Chief
Fungicide and Herbicide Branch, Registration Division (7505P)

Date: 6/30/26

EPA Form 8570-6

2. Registration Term for Implementing Additional Mitigations from the Services
   If, following formal consultation with FWS and NMFS, additional modifications are identified in any applicable Biological Opinion, EPA will notify Bayer in writing within 45 calendar days of the issuance of the Biological Opinion of any necessary required changes. Within 30 calendar days of receiving EPA's notice, Bayer must submit an amendment application incorporating the necessary changes, including amended labels. Alternatively, Bayer may respond by submitting a request for voluntary cancellation of this product. If Bayer fails to comply with this term, Bayer has agreed in prior written acceptance of the terms that EPA may cancel the registration under an expedited process under FIFRA 6(e).

3. Make the following label changes before you release the product for shipment:

   - Revise the EPA Registration Number to read, "EPA Reg. No. 7969-496."

4. Submit one copy of the revised final printed label for the record before you release the product for shipment.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSF:

- Basic CSF dated: 4/01/2024

If you have any questions, please contact Sayed Islam via email at islam.sayed@epa.gov

Enclosure

BASF
We create chemistry

Trifludimoxazin	Group	14	Herbicide

ACCEPTED
06/30/2026
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 7969-496

Vulcarus™

Herbicide

For use as a postemergence-directed broadleaf and grass herbicide in the following bearing and nonbearing tree crops: citrus fruit trees, nut trees, and pome fruit trees

Active Ingredient:
trifludimoxazin: 1,5-dimethyl-6-thioxo-3-[2,2,7-trifluoro-3-oxo-4-(prop-2-yn-1-yl)-3,4-dihydro-2H-1,4-benzoxazin-6-yl]-1,3,5-triazinane-2,4-dione 41.53%
Other Ingredients:. 58.47%
Total: 100.00%

Contains 4.17 pounds active ingredient trifludimoxazin per gallon product formulated as a water-based suspension concentrate.

EPA Reg. No. 7969-XXX **EPA Est. No.**

KEEP OUT OF REACH OF CHILDREN

CAUTION/PRECAUCION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

See inside for complete **First Aid**, **Precautionary Statements**, **Directions For Use**, **Conditions of Sale and Warranty**, and state-specific crop and/or use site restrictions.

In case of an emergency endangering life or property involving this product, call day or night 1-800-832-HELP (4357).

Net Contents:

BASF Agricultural Solutions US LLC
2 TW Alexander Drive
Research Triangle Park, NC 27713

FIRST AID	
If swallowed	• Call a poison control center or doctor immediately for treatment advice. • **DO NOT** induce vomiting unless told to do so by a poison control center or doctor. • **DO NOT** give anything by mouth to an unconscious person. • Have a person sip a glass of water if able to swallow.
If in eyes	• Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. • Remove contact lenses, if present, after first 5 minutes; then continue rinsing eyes. • Call a poison control center for treatment advice.
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 to 20 minutes. • Call a poison control center or doctor for treatment advice.
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably by mouth to mouth, if possible. • Call a poison control center or doctor for further treatment advice.
HOTLINE NUMBER	
Have the product container or label with you when calling the poison control center at 1-800-222-1222 or doctor or going for treatment. You may also contact BASF Agricultural Solutions US LLC (hereafter "BASF") for emergency medical treatment information at 1-800-832-HELP (4357).	

Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION. Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes or clothing. Remove and wash contaminated clothing before reuse. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Wear protective eyewear.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves
- Protective eyewear (including face shield, goggles, or safety glasses)

User Safety Requirements

Follow the manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. **DO NOT** reuse them.

Engineering Controls Statement

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for **"applicators and other handlers"** and have such PPE immediately available for use in an emergency, including a spill or equipment breakdown.

USER SAFETY RECOMMENDATIONS
Users should: • Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. • Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Environmental Hazards

For terrestrial uses, **DO NOT** apply directly to water, or to areas where surface water is present or to intertidal areas below the mean highwater mark. **DO NOT** contaminate water when disposing of equipment washwater or rinsate.

Groundwater Advisory. Trifludimoxazin has properties and characteristics associated with chemicals detected in groundwater. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

Surface Water Advisory. Trifludimoxazin may impact surface water quality due to runoff of rainwater. This is especially true for poorly draining soils and soils with shallow groundwater. This product is classified as having high potential for reaching surface water via runoff for several weeks after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features including ponds, streams, and springs will reduce the potential loading of this chemical

from runoff water and sediment. Runoff of this product will be reduced by avoiding application when rainfall is forecast to occur within 48 hours.

Nontarget Organism Advisory: This product is toxic to plants and may adversely impact the forage and habitat of nontarget organisms, including pollinators, in areas adjacent to the treated area. Protect the forage and habitat of nontarget organisms by minimizing spray drift.

Reporting Ecological Incidents: For guidance on reporting ecological incidents, see EPA's Pesticide Incident Reporting website: https://www.epa.gov/pesticide-incidents.

Directions For Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. This labeling must be in the possession of the user at time of herbicide application.

DO NOT apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

Endangered and Threatened Species Protection Requirements

Before using this product, you must obtain any applicable Endangered Species Protection Bulletins ('Bulletins') within six months prior to or on the day of application. To obtain Bulletins, go to Bulletins Live! Two (BLT) at https://www.epa.gov/pesticides/bulletins. When using this product, you must follow all directions and restrictions contained in any applicable Bulletin(s) for the area where you are applying the product, including any restrictions on application timing if applicable. It is a violation of Federal law to use this product in a manner inconsistent with its labeling, including this labeling instruction to follow all directions and restrictions contained in any applicable Bulletin(s).

For general questions or technical help, call 1-844-447-3813, or email ESPP@epa.gov.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on the label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

DO NOT enter or allow worker entry into treated areas during the restricted-entry interval (REI) of **12 hours**.

EXCEPTION: If the product is soil injected or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, including plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves
- Shoes plus socks

STORAGE AND DISPOSAL

DO NOT contaminate water, food, or feed by storage or disposal. Open dumping is prohibited.

Pesticide Storage

DO NOT use or store near heat or open flame. Store in original container in a well-ventilated area separately from fertilizer, feed, or foodstuffs. Avoid cross-contamination with other pesticides. Prevent from freezing, however if product freezes allow to thaw at room temperature for 24 hours and agitate well prior to use.

Pesticide Disposal

Wastes resulting from this product may be disposed of on-site or at an approved waste disposal facility. Improper disposal of excess pesticide, spray mix, or rinsate is a violation of federal law. If these wastes cannot be disposed of according to label instructions, contact the state agency responsible for pesticide regulation or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Handling

Nonrefillable Plastic Container. DO NOT reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

Triple rinse containers small enough to shake (capacity ≤ 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Triple rinse containers too large to shake (capacity > 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Repeat this procedure two more times.

(continued)

STORAGE AND DISPOSAL *(continued)*

Container Handling *(continued)*

Pressure rinse as follows: Empty the remaining contents into application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Refillable Container. Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

Triple rinse as follows: To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

When this container is empty, replace the cap and seal all openings that have been opened during use; return the container to the point of purchase or to a designated location. This container must only be refilled with a pesticide product. Prior to refilling, inspect carefully for damage including cracks, punctures, abrasions, worn out threads and closure devices. Check for leaks after refilling and before transport. **DO NOT** transport if this container is damaged or leaking. If the container is damaged, or leaking, or obsolete and not returned to the point of purchase or to a designated location, triple rinse emptied container and offer for recycling, if available, or dispose of container in compliance with state and local regulations.

In Case of Emergency

In case of large-scale spill of this product, call:

- CHEMTREC 1-800-424-9300
- BASF 1-800-832-HELP (4357)

In case of medical emergency regarding this product, call:

- Your local doctor for immediate treatment
- Your local poison control center (hospital)
- BASF 1-800-832-HELP (4357)

Steps to take if case material is released or spilled:

- Dike and contain the spill with inert material (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal.
- Remove contaminated clothing and wash affected skin areas with soap and water.
- Wash clothing before reuse.
- Keep the spill out of all sewers and open bodies of water.

Product Information

Vulcarus™ herbicide provides both residual preemergence control of germinating broadleaf and grass weeds and postemergence control (i.e., foliar contact burndown) of emerged broadleaf and grass weeds. Refer to **Table 1** and **Table 2** for list of weeds controlled by residual preemergence and postemergence applications, respectively.

Vulcarus can be used in bearing and nonbearing fruit and nut trees. See **Crop-specific Information** section for specific use directions.

Make burndown applications of **Vulcarus** when broadleaf and grass weeds are small and actively growing. Burndown activity may be reduced on weeds previously mowed or cut. An adjuvant is required with **Vulcarus** for optimum burndown activity (refer to **Additives** section for details). Burndown activity may be slowed or reduced under cloudy and/or foggy or cooler weather conditions, or when weeds are growing in drought or other stress conditions. When targeting dense weed populations and/or larger broadleaf and grass weeds, use higher spray volumes. Angling nozzles forward (to 45 degrees) may improve penetration of denser weed canopies.

Table 1. Broadleaf and Grass Weeds Controlled with a Residual Preemergence Application of Vulcarus™ herbicide

Common Name	Scientific Name	Vulcarus Use Rate (fl oz/A)
		0.68
Broadleaf Weeds		
Amaranth, Palmer	*Amaranthus palmeri*	C
Beggarweed, Florida	*Desmodium tortuosum*	C
Canola, volunteer (rapeseed)	*Brassica* spp.	S
Carpetweed	*Mollugo verticillata*	C
Henbit	*Lamium amplexicaule*	C
Lambsquarters, common	*Chenopodium album*	C
Morningglory	*Ipomoea* spp.	S
Pigweed, prostrate	*Amaranthus blitoides*	C
Pigweed, redroot	*Amaranthus retroflexus*	C
Ragweed, common	*Ambrosia artemisiifolia*	S
Sunflower, common	*Helianthus annuus*	S
Velvetleaf	*Abutilon theophrasti*	C
Waterhemp	*Amaranthus tuberculatus*	C
Grass Weeds		
Crabgrass. large	*Digitaria sanguinalis*	S
Crowfootgrass	*Dactyloctenium aegyptium*	S
Foxtail, giant	*Seteria faberi*	S
Goosegrass	*Eleusine indica*	C
Panicum, Texas	*Panicum texanum*	S
Ryegrass, Italian	*Lolium multiflorum*	S
Signalgrass, broadleaf	*Brachiaria platyphylla*	S

C = Control, S = Suppression

Table 2. Broadleaf and Grass Weeds Controlled with a Postemergence Application of Vulcarus™ herbicide

Common Name	Scientific Name	Vulcarus Use Rate (fl oz/A)		
		0.35	0.50	0.68
Broadleaf Weeds		Maximum Weed Height or Diameter (4 inches)		
Amaranth, Palmer	*Amaranthus palmeri*	C	C	C
Bedstraw, catchweed	*Galium aparine*	S	S	S
Buckwheat, wild	*Polygonum convulvulus*	S	S	S
Canola, volunteer (rapeseed)	*Brassica* spp.	S	S	C
Chickweed, common	*Stellaria media*	C	C	C
Chickweed, field	*Ceraqstium arvense*	C	C	C
Eveningprimrose, cutleaf	*Oenothera laciniata*	—	—	S
Henbit	*Lamium amplexicaule*	C	C	C
Kochia	*Kochia scoparia*	—	—	S
Pennycress, field	*Thlaspi arvense*	S	S	C
Purslane	*Portulaca* spp.	C	C	C
Sheperdspurse	*Capsella burse-pastoris*	C	C	C
Swinecress, lesser	*Coronopus didymus*	S	S	S
Velvetleaf	*Abutilon theophrasti*	C	C	C
Waterhemp	*Amaranthus tuberculatus*	S	S	C

(continued)

Table 2. Broadleaf and Grass Weeds Controlled with a Postemergence Application of Vulcarus™ herbicide *(continued)*

Common Name	Scientific Name	Vulcarus Use Rate (fl oz/A)		
		0.35	0.50	0.68
Grass Weeds		Maximum Weed Size (2-3 leaves)		
Bluegrass, annual	*Poa annua*	S	S	C
Foxtail, giant	*Setaria faberi*	S	S	S
Ryegrass, Italian	*Lolium multiflorum*	S	S	S

C = Control, S = Suppression

Mode of Action

Trifludimoxazin, the active ingredient in **Vulcarus**, is a potent inhibitor of protoporphyrinogen-oxidase (PPO) belonging to herbicide mode of action **Group 14** (WSSA). **Vulcarus** is rapidly absorbed by roots and foliage. Following inhibition of protoporphyrinogen-oxidase, plant death is the result of membrane damage. Under active growing conditions, susceptible emerged weeds usually develop chlorotic and necrotic injury symptoms within hours and die within a few days. Susceptible emerging weed seedlings will usually die as they reach the soil surface or shortly after emergence.

Herbicide Resistance Management

Any weed population may contain or develop plants naturally resistant to **Vulcarus** and other **Group 14** herbicides. Weed species with resistance to **Group 14** may dominate the weed population if **Group 14** herbicides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by **Vulcarus** or other **Group 14** herbicides.

To delay herbicide resistance, consider:

- Resistance management should be part of a diversified weed control strategy that integrates chemical, cultural, and mechanical (tillage) control tactics. Cultural control tactics include crop rotation, proper fertilizer placement, and optimum seeding rate/row spacing. Start with clean fields using tillage or an effective burndown herbicide program. These practices encourage crop growth and improve competitiveness against weeds.
- Clean equipment before moving to a different field to avoid spread of resistant weeds.
- Scout fields prior to application to identify the weed species present and their growth stage to determine if the intended application will be effective.
- Always follow labeled application rate and weed growth stage specifications.
- Use sequential programs with preemergence herbicides that provide soil residual control of weeds to reduce early season weed competition and allow for timely in-crop postemergence herbicide applications.
- **DO NOT** rely on a single herbicide site of action for weed control during the growing season.
- Avoid application of herbicides with the same site of action more than twice a season.
- Use tank mixes or premixes with other herbicides possessing different sites of action that are also effective on the target weeds.
- Scout fields after herbicide application to identify areas where weed control was ineffective.
- Control weed escapes with herbicides possessing a different site of action or use a mechanical control measure. Weed escapes should not be allowed to reproduce by seed or to proliferate vegetatively.
- If a weed population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action.
- Contact your **Vulcarus** supplier and/or your local BASF representative to report weed escapes.
- Consult your local BASF representative, local or state cooperative extension service, professional consultants or crop advisors, or other qualified authority to determine appropriate actions if you suspect resistant weeds.
- Suspected herbicide-resistant weeds may be identified by these indicators:
  - failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
  - a spreading patch on non-controlled plants of a particular weed species; and
  - surviving plants mixed with controlled individuals of the same species.

Application Instructions

Vulcarus must be applied as a postemergence-directed spray application either as a uniform broadcast, banded, or spot application to emerged broadleaf and grass weeds.

Table 3. Use Rate Equivalency

Vulcarus Rate (fl oz/A)	Trifludimoxazin Rate (lb ai/A)
0.35	0.011
0.5	0.016
0.68	0.022

Application Methods and Equipment

Vulcarus™ herbicide can **ONLY** be applied using ground equipment. Thorough spray coverage is required for optimum broadleaf and grass weed control and can be improved with proper adjuvant, nozzle and spray volume selection.

Use and configure application equipment for spray volume, accurate and uniform distribution of spray droplets over the treated area, and to avoid spray drift to nontarget areas. Adjust equipment to maintain continuous agitation during spraying with mechanical or bypass agitation. Avoid overlaps that will increase rates above use rates specified in this label.

Vulcarus may **ONLY** be applied using water as the spray carrier.

Ground Spray Carrier Volume. Use 15 or more gallons of water per treated acre. Thorough spray coverage is required for control of emerged broadleaf and grass weeds. High populations and/or variations in size can prevent thorough spray coverage. Controlling fall-germinated weeds in the spring also requires thorough spray coverage. Use higher spray volumes (e.g. 15 to 20 gallons of water per acre) in these situations to increase spray coverage and optimize burndown activity.

Ground Spray Nozzle Selection. Applicators must select nozzles and pressure that deliver coarse to very coarse droplets as indicated in nozzle manufacturer's catalogues and in accordance with American Society of Agricultural & Biological Engineers Standard 572 (ASABE §572). Nozzles that deliver coarse or very coarse spray droplets may be used to reduce spray drift provided spray volume per acre (GPA) is increased to maintain coverage of target (i.e., weeds).

Spray Drift Retardants. Addition of some spray drift retardants (drift reducing agents, e.g. DRA) can significantly increase the droplet size but reduce spray coverage and efficacy. If a spray drift retardant is used, ensure that it is compatible for use with **Vulcarus** and spray equipment being used and the desired level of weed control is maintained.

Cleaning Spray Equipment

Before applying **Vulcarus** all application equipment must be thoroughly cleaned. All spray equipment, hoses, and nozzles must be cleaned according to the manufacturer's directions for the last product used before the equipment is used to apply **Vulcarus**.

Spray equipment used to apply **Vulcarus** should not be used to apply other materials to any crop unless the proper cleanout procedures are followed. Clean application equipment thoroughly by using a strong detergent or commercial sprayer cleaner according to the manufacturer's directions, followed by triple rinsing the equipment after applying this product.

Mitigating Off-Target Movement

MANDATORY SPRAY DRIFT MANAGEMENT

All Ground Boom Applications

- **DO NOT** apply when wind speeds exceed 15 miles per hour at the application site.
- Wind speed and direction must be measured on location using a windsock or an anemometer (including systems to measure wind speed or velocity on ground application equipment).
- Wind speed must be measured at the release height or higher, in an area free from obstructions such as trees, buildings, and farm equipment.
- During application, the Sustained Wind Speed, as defined by the National Weather Service (standard averaging period of 2 minutes) must register between 3 and 15 miles per hour.
- **DO NOT** apply during temperature inversions.
- Spray at the appropriate boom height based on nozzle selection and nozzle spacing, but **DO NOT** exceed a nozzle height of 24 inches above the spray target (i.e., top of weed canopy). Set boom to lowest effective height over the target pest based on equipment manufacturer's directions.
- Applicators should select a ground speed that will deliver the desired spray volume while maintaining the desired spray pressure, but **DO NOT** exceed a ground speed of 15 miles per hour.

Mandatory Spray Drift Mitigations

Ecological spray drift buffers are required for this product for ground boom applications to field crops. Access EPA's **Mitigation Menu** website (www.epa.gov/pesticides/mitigation-menu) for the full list of parameters to evaluate whether your field is subject to the required spray drift buffer.

Applicators must access and search **Bulletins Live! Two** (BLT) at https://www.epa.gov/pesticides/bulletins within six months prior to or on the day of the application to determine whether the application site falls within a Pesticide Use Limitation Area (PULA). If you are located inside a PULA, follow the instructions in the BLT bulletin. If the application site falls outside of a PULA, follow the instructions in the "Outside a PULA" section below. Additional restrictions may be present in bulletins—always follow the most restrictive bulletin instructions.

Outside a PULA. A minimum down-wind spray drift buffer must be maintained between the application area and any unmanaged areas for applications to field crops. Unmanaged areas are defined in comparison to managed areas – anything that is not a managed area is an unmanaged area. Refer to the list of **Managed Areas** in this label.

Mandatory Spray Drift Buffers

For ground applications, maintain a wind-directional (downwind) buffer distance from the edge of the treated area as follows:

Application Method	Minimum Required Buffer Distance
Ground	15 feet

Reduction Options for All Ecological Wind-Directional Drift Buffers

The applicator may choose among the ecological drift buffer reduction options on EPA's **Mitigation Menu** website (http://www.epa.gov/pesticides/mitigation-menu) to reduce the wind-directional buffer distance before applying this product. All buffer reduction options selected must align with the minimum droplet size and release height requirements on this label.

Examples of buffer reduction options include: using larger droplets, lowering the boom height, reducing the maximum single application rate, reducing the number of passes across the field, maintaining a windbreak or hedgerow, or using directed sprayers.

The buffer reduction options must be employed in accordance with the instructions and descriptions on EPA's **Mitigation Menu** website. When using more than one option during the application, the percent reduction in the buffer distances may be added together. The maximum buffer reduction that can be achieved by a combination of buffer reduction options is 100% (i.e., no drift buffer).

Additional restrictions may be present in bulletins—always follow the most restrictive bulletin instructions. If you are located in an area where PULAs overlap, follow the most restrictive requirements across all bulletins. When tank mixing, the most restrictive of the products' label or bulletin requirements must be followed (e.g., drift buffers that are not wind-directional, Application Exclusion Zone drift requirements, drift buffers to residences, schools, and parks where people could be present, use prohibitions, timing restrictions, and application method prohibitions).

Managed Areas

Managed areas that can be included as part of wind-directional spray drift buffer footage include the following:

- Agricultural fields, pastures, forage fields, and private rangelands, including untreated portions of the treated field/site;
- Roads, paved or gravel surfaces, mowed grassy/fallowed areas adjacent to field, and areas of bare ground from recent plowing or grading that are contiguous with the treated area;
- Buildings and their perimeters, or other on-farm man-made structures with walls and/or roof;
- Areas present and/or maintained as a runoff/erosion measure as listed on EPA's **Mitigation Menu** website. Examples include vegetative filter strips (VFS), field borders, grassed waterways, vegetated ditches, riparian areas, managed/constructed wetlands, or other areas of intentional habitat improvement;
- Areas present and/or maintained as a drift buffer reduction measure as listed on EPA's **Mitigation Menu** website. Examples include vegetative windbreaks, hedgerows, shelterbelts, riparian areas, private forests, woodlots, and shrublands;
- Conservation Reserve Program (CRP) and Agricultural Conservation Easement Program (ACEP) lands;
- On-site contained irrigation water resources that are not connected to adjacent water bodies, including on-site irrigation canals and ditches, water conveyances, managed irrigation/runoff retention basins, ponds, and tailwater collection ponds.

Managed areas can be included as part of the buffer footage if they are downwind and immediately adjacent/contiguous to the treated field and people are not present in those areas.

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. Be aware of nearby non-target sites and environmental conditions.

Importance of Droplet Size

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size - Ground Boom

Volume. Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.

Pressure. Use the lowest spray pressure specified for the nozzle to produce the target spray volume and droplet size.

Spray Nozzle. Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

Release Height - Ground Boom

For ground equipment, the boom should remain level with the crop and have minimal bounce. Automated boom height controllers are recommended with large booms to better maintain optimum nozzle to canopy height. Excessive boom height will increase the potential for spray drift.

Hooded (or Shielded) Sprayers

Shielding the boom or individual nozzles can reduce spray drift. Consider using hooded (or shielded) sprayers. Verify that the hoods (or shields) are not interfering with the uniform deposition of the spray on the target area.

Temperature and Humidity

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

Temperature Inversion
Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Wind
Drift potential generally increases with wind speed. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

Measuring Wind Speed and Wind Direction
- Applicators should check and acquire the predicted wind speed and direction for the application site within 12 hours prior to conducting applications to determine the time periods wind speed is likely to fall outside the applicable thresholds.
- Applicators should reassess wind speed and direction at the application site at least every hour while applications are in progress.
- Measuring wind speed and direction can be done by:
  - Relying on equipment on the application equipment that measures wind speed.
  - Using a tower anemometer with telemetry or handheld anemometer. Users should read user manual on how to calibrate, operate and interpret the output from an anemometer. Ground applicators should stop every hour to take a reading with a tower anemometer with telemetry or handheld anemometer. Some anemometers may have software that would allow users to view wind measurements in real time while making an application, and, those cases, applicators would not have to stop to take measurements.
  - Using a windsock. Wind can be estimated with a windsock using the strips on a windsock. The applicator should consult the user manual for the windsock on wind speed estimation and direction of wind. Applicators should look at the sock at least every hour to estimate wind speed and direction.
  - Checking behind the spray rig at least every hour to see if the spray has changed direction from when the application started.

Mandatory Runoff Mitigation

Applicators must access and search **Bulletins Live! Two** (BLT) at https://www.epa.gov/pesticides/bulletins within six months prior to or on the day of the application to determine whether the application site falls within a Pesticide Use Limitation Area (PULA). If you are located inside a PULA, follow the instructions in the the BLT bulletin. If the application site falls outside of a PULA, follow the instructions in the section below.

The minimum of 6 mitigation points must be achieved for the following agricultural crop use sites: bearing and non-bearing fruit and nut trees.

Step 1. To achieve the mitigation points specified above, visit EPA's **Mitigation Menu** website (http://www.epa.gov/pesticides/mitigation-menu) for a full list of mitigation and mitigation relief options.

Step 2. Determine if you are eligible for mitigation relief. Runoff/erosion mitigation is NOT required if certain field/application parameters are present at the time of application (e.g., subsurface or tile drains with controlled outlet, perimeter berm systems, irrigation tailwater return systems, spot treatment, etc).

Step 3. If the application site does not meet the field/application parameters specified on EPA's **Mitigation Menu** website, choose among the mitigation and/or mitigation relief options on EPA's **Mitigation Menu** website to meet or exceed the required points noted here before applying this product.

Step 4. To achieve mitigation points for the application, the mitigation and mitigation relief measures must be:
- Employed in accordance with the instructions and descriptions on EPA's **Mitigation Menu** website.
- In place during the application unless a different timing (such as before or after application) is specifically provided in the measure's description on EPA's **Mitigation Menu** website. EPA may periodically update the **Mitigation Menu** website, for example, by adding new mitigation measures or updating a mitigation measure description.

Step 5. Additional restrictions may be present in bulletins—always follow the most restrictive bulletin instructions. If you are located in an area where PULAs overlap, follow the most restrictive requirements across all bulletins. When tank mixing, the most restrictive requirements must be followed between the products' labels and bulletins.

Additives

For optimum burndown activity with **Vulcarus™ herbicide**, an adjuvant system must be used that includes the following:

Adjuvant	Rate
Methylated seed oil (MSO)[1]	1 gal/100 gals (1% v/v)[2]
PLUS	**PLUS**
Ammonium sulfate (AMS) **or** Urea ammonium nitrate (UAN)	8.5 to 17 lbs/100 gals (1% to 2% w/v) **or** 1.25 to 2.5 gals/100 gals (1.25% to 2.5% v/v)

[1] MSO-based adjuvant **MUST** contain at least 60% methylated seed oil. Poor performance may occur with adjuvants containing less than 60% methylated seed oil.
[2] **DO NOT** use less than 1 pint/A of MSO with low-volume (< 12.5 gallons per acre) ground applications.

Use of AMS fertilizer is highly advised when mixing **Vulcarus** with glyphosate-based herbicides and glufosinate-based herbicides.

DO NOT use nonionic surfactant (NIS) as a substitute for MSO, or poor performance on broadleaf and/or grass weeds will occur.

When an adjuvant is to be used with this product, BASF recommends the use of a Chemical Producers and Distributors Association (CPDA) certified adjuvant.

Tank Mixing Information

Vulcarus™ herbicide may be tank mixed with one or more registered herbicide products according to the specific tank mixing instructions in this label and respective product labels. Refer to **Crop-specific Information** section for tank mixing details.

It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

When tank mixing, the most restrictive of the products' label or bulletin (BLT) requirements must be followed (e.g., use prohibition, timing restriction, application method restriction, sandy soil application restriction, etc.).

Compatibility Test for Mix Components

Before mixing components, always perform a compatibility jar test.

1. For 20 gallons per acre spray volume, use 3.3 cups (800 mL) of water. For other spray volumes, adjust rates accordingly. Only use water from the intended source at the source temperature.
2. Add components in the sequence indicated in **Mixing Order** using 2 teaspoons for each pound or 1 teaspoon for each pint of label rate per acre.
3. Always cap the jar and invert 10 cycles between component additions.
4. When the components have all been added to the jar, let the solution stand for 15 minutes.
5. Evaluate the solution for uniformity and stability. The spray solution shall not have free oil on the surface, or fine particles that precipitate to the bottom, or thick (clabbered) texture. If the spray solution is not compatible, repeat the compatibility test with the addition of a suitable compatibility agent. If the solution is then compatible, use the compatibility agent as directed on its label. If the solution is still incompatible, **DO NOT** mix the ingredients in the same tank.

Mixing Order

Maintain agitation throughout mixing and application until spraying is completed. Except when mixing products in PVA bags, maintain constant agitation during mixing and application.

1. **Water** - Fill tank to 1/2 to 3/4 full with clean water and start agitation.
2. **Inductor** - If an inductor is used, rinse it thoroughly after each component has been added.
3. **Products in PVA bags** - Place any product contained in water-soluble PVA bags into the mixing tank. Wait until all water-soluble PVA bags have fully dissolved and the product is evenly mixed in the spray tank before continuing.
4. **Water-soluble additives** (including dry and liquid fertilizers AMS or UAN)
5. **Water-dispersible products** (dry flowables, wettable powders, suspension concentrates, or suspo-emulsions), add **Vulcarus** now
6. **Water-soluble products**
7. **Emulsifiable concentrates** (including MSO adjuvants)
8. **Remaining quantity of water**

If the spray mixture is allowed to settle for any period of time, thorough agitation is essential to resuspend the mixture before spraying is resumed. Continue agitation while spraying.

Use Restrictions

- **Maximum annual use rate:** Refer to **Crop-specific Information** section for maximum application use rates per year.
- If additional trifludimoxazin is applied from other product sources, refer to the **Crop-specific Restrictions** section for each crop use for the maximum cumulative amount per year.
- **DO NOT** apply **Vulcarus** by aerial spray.
- **DO NOT** apply **Vulcarus** through any type of irrigation system (e.g. chemigation).
- **DO NOT** contaminate water used for irrigation or domestic purposes.
- **DO NOT** feed or allow domestic animals to graze areas or crops not included in the use directions of this label within 365 days of **Vulcarus** application.
- **DO NOT** apply during rain.
- **DO NOT** apply this product when soil is saturated or at field capacity, or when a storm event likely to produce runoff from the treated area is expected to occur within 24 hours following application.
- Within 24 hours after application, **DO NOT** irrigate the treatment area to the point of runoff.
- **Vulcarus is not for sale, distribution, or use in Alaska, Hawaii, US Territories (including American Samoa, Guam, Puerto Rico, Mariana Islands, US Virgin Islands), and in Nassau and Suffolk counties in New York State.**

Use Precautions

- **Rainfastness** - **Vulcarus™ herbicide** is rainfast 1 hour after application. Burndown activity may be reduced if rain or irrigation occurs within 1 hour of application.
- **Emergency Replanting Intervals** - If any labeled crop treated with **Vulcarus** is lost to adverse weather or for other reasons, the area treated may be replanted to citrus fruit trees 1 month after treatment and to nut trees and pome fruit trees 3 months after treatment. Corn and small grains may be planted immediately after crop removal. Wait 9 months before planting any other crop. Be sure to determine the rotational crop interval for tank mix products and follow the most restrictive interval of all products applied.

Crop-specific Information

This section provides use directions for **Vulcarus** in specific crops. Read product information, mixing, application, weeds controlled, and adjuvant instructions in preceding sections of the label.

Broad-spectrum control of additional broadleaf and/or grass weeds requires a tank mix with another herbicide, including glyphosate or glufosinate or other herbicide products. **Vulcarus** may be tank mixed or applied sequentially with other herbicide products. Read and follow tank mix product labels for restrictions, precautions, instructions, and rotational crop restrictions. The most restrictive labeling applies to tank mixes.

Thorough spray coverage is required for control of emerged broadleaf and grass weeds. High populations and/or variations in size can prevent adequate spray coverage. Controlling fall-germinated weeds in the spring also requires thorough spray coverage. Use higher spray volumes (e.g. 15 to 20 gallons of water per acre) in these situations to increase spray coverage and optimize burndown activity.

Bearing and Nonbearing Fruit and Nut Trees

Vulcarus may be applied in the following individual bearing or nonbearing crops within the fruit tree and tree nut crop groupings:

Citrus Fruits
Crop Group 10-10 including Australian desert lime, Australian finger lime, Australian round lime, Brown River finger lime, Calamondin, Citron, Citrus hybrids, Grapefruit, Japanese summer grapefruit, Kumquat, Lemon, Lime, Mediterranean mandarin, Mount White lime, New Guinea wild lime, Orange (sour), Orange (sweet), Pummelo, Russell River lime, Satsuma mandarin, Sweet lime, Tachibana orange, Tahiti lime, Tangelo, Tangerine (mandarin), Tangor, Trifoliate orange, Uniq fruit

Pome Fruits
Crop Group 11-10 including Apple, Azarole, Crabapple, Loquat, Mayhaw, Medlar, Pear, Asian pear, Quince, Chinese quince, Japanese quince, Tejocote

Tree Nuts
Crop Group 14-12 including African nut-tree, Almond, Beech nut, Brazil nut, Brazilian pine, Bunya, Bur oak, Butternut, Cajou nut, Candlenut, Cashew, Chestnut, Chinquapin, Coconut, Coquito nut, Dika nut, Ginkgo, Guiana chestnut, Hazelnut (filbert), Heartnut, Hickory nut, Japanese horse-chestnut, Macadamia nut, Mongongo nut, Monkey-pot, Monkey puzzle nut, Okari nut, Pachira nut, Peach palm nut, Pecan, Pequi, Pili nut, Pine nut, Pistachio, Sapucaia nut, Tropical almond, Walnut (black), Walnut (English), Yellowhorn

Application Rate, Method, and Timing

Apply **Vulcarus** up to [at] 0.68 fl oz/A in citrus fruit, pome fruit, and tree nuts plus the required adjuvants (refer to **Additives** section for details) as a postemergence-directed spray either as a uniform broadcast, banded, or spot application directed at the base of the tree trunks while targeting emerged broadleaf weeds and grasses (refer to **Table 1** and **Table 2** for weeds controlled). Spray contact of tree foliage, flowers, buds, or fruit either directly via improper nozzle orientation or indirectly via physical drift will result in crop injury. The use of shielded sprayers is highly advised when applying in citrus trees with low hanging branches and fruit.

Vulcarus may be applied either in a single application or sequentially up to 4 times per year. Sequential applications must be separated by at least 30 days.

Crop-specific use in California. Split applications between dormant and in-season, with 2 application in each.

Crop-specific use in Florida. Apply up to 3 times in-season and apply once during dormant season.

Applications can be made to newly planted or replacement citrus trees after irrigation or rainfall has settled the soil, while nut trees and pome fruit trees must be established for at least 9 months prior to application. Trunk shields must be used until adequate bark has formed to protect trees from potential herbicide injury (typically by 2 to 3 years after establishment).

Spot Treatment

Consult the chart following for the amount of **Vulcarus™ herbicide** for making various gallons of spray mix to be used for spot treatments applied to actively growing broadleaf and grass weeds and sizes referenced in **Table 2**. Coverage is important. Spray thoroughly to wet the weed foliage but not to point of runoff. To maximize performance, refer to the **Additives** section for the adjuvant and rate to be added to the spray mix. Each spray mix is equivalent to applying **Vulcarus** at a use rate of 0.68 fl oz/A in a spray volume of 100 gallons per acre. Applications of a spot spray mix must not be made to an equivalent area less than what is shown in the chart or exceed the equivalent broadcast rate of 0.68 fl oz/A. Spot treatments may be applied with backpack sprayers or via an ATV-mounted (all-terrain vehicle-mounted) or tractor/truck mounted sprayers equipped for hand wand applications. Spot applications can be made sequentially and/or be combined with broadcast/banded applications, but the maximum cumulative amount applied must not exceed the total use rate for the crop per year (see **Crop-specific Restrictions**).

Gallons Spray Mix	**Spray Mix Treatment Area** (sq ft)	**Amount of Vulcarus*** (fl oz)	**Amount of Vulcarus*** (mL)
1.0	436	0.0068	0.2
2.5	1,089	0.017	0.5
5.0	2,178	0.034	1.0
10.0	4,356	0.068	2.0
25.0	10,890	0.17	5.0

* equivalent to 0.022 lb active trifludimoxazin/Acre

Crop-specific Restrictions:

- **DO NOT** apply more than 0.68 fl oz/A (0.022 lb ai/A) of **Vulcarus** in a single application in bearing and nonbearing fruit and nut trees.
- **DO NOT** apply more than 2.74 fl ozs/A (0.089 lb ai/A) of **Vulcarus** as a maximum cumulative amount from sequential applications per year in bearing and nonbearing fruit and nut trees.
- Sequential applications must be separated by at least 30 days.
- Maximum number of applications per year: 4
- If additional trifludimoxazin is applied from other product sources, **DO NOT** apply more than the following maximum cumulative amount of trifludimoxazin per year in bearing and nonbearing fruit and nut trees: 0.089 lb ai/A.
- **Vulcarus** may be applied any time up to or on the day of citrus or pome fruit harvest.
- **Preharvest interval (PHI)** for tree nuts: 7 days.

Conditions of Sale and Warranty

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Note to PM/reviewer: Alternate text in brackets [...]

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