



## Glossary of Agricultural Production, Programs, and Policy — Fourth Edition

by Chuck Culver

### November, 2005 Updates

*(All entries have been incorporated into the master Glossary)*

**Asian soybean rust (ASBR):** A serious, rapidly-spreading disease causing crop losses of between 10 percent and 100 percent in infected fields. It is an air-borne fungus that can travel 300 miles in a day. In late 2004, soybean rust was first detected in Louisiana where it subsequently spread to many states across the southeast and southwest. If left unchecked, the epidemic can spread to the major Midwestern soybean production states. The epidemic most likely originated in Brazil and spread to the U.S. as a result of Hurricane Ivan. A complicating factor for *pest* detection and control are the large number of legume hosts that can harbor soybean rust such as kudzu, yellow sweet clover, green beans, kidney beans, lima beans, butter beans, cowpeas, and blackeyed peas. At present, there are no soybean-resistant varieties in the U.S. Also *Soybean rust*.

**Basic research:** (1) *Fundamental research* on principles of organisms that adds new knowledge without assurances of direct application. (2) Research that tests scientific hypotheses and provides basic knowledge which allows advances in *applied research* and from which major conceptual breakthroughs can occur.

**Biobased (pest) management:** The control of *pests* using one or more of five major tactics: (a) *biological control* – suppression of *pests* by using natural enemies (predators, parasites, competitors, and diseases), (b) *microbial pesticides*, (c) behavior-modifying chemicals, (d) genetic manipulation of *pests*, and (e) host plant resistance. See *Biological control agent(s) (organism)* and *Biopesticide(s)*.

**Biobased product(s):** Under the *Farm Security and Rural Investment Act of 2002* (Title IX, Sec. 9001), a commercial or industrial product (other than food or *feed*) that is composed, in whole or significant part, of *biological products* or renewable domestic agricultural materials (including *plant*, animal, and marine materials) or *forestry* materials. Examples include polymers, lubricants, solvents, composites, and energy.

**Biological control(s) (biocontrol) (of pests):** (1) Control, but not always a total eradication, of an insect *pest* achieved by using natural enemies, either indigenous or imported, or diseases to which the *pest* is susceptible. (2) The use of other organisms to eliminate or severely reduce *pathogen* populations.

**Biological control agent(s) (organism):** A natural enemy, antagonist, or competitor, and other self-replicating *biotic* entity, used to control *pests* or *noxious weeds*. See *Biopesticide(s)*.

**Consolidated Appropriations Act, 2005 (P.L. 108-447):** Signed into law December 8, 2004. The bill consolidates *appropriations* bills for Agriculture; Commerce; Energy and Water; Foreign Operations; Interior; Labor, Health and Human Services; Legislative Branch; Transportation, Treasury; and Veterans Affairs, Housing and Urban Development. The Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act, 2005, is Division A of the omnibus Act. It provides \$83.25 billion in both discretionary and mandatory spending, including a 2.5 percent increase in support for basic and applied research and development. The Act includes funding for the construction of a *national animal identification system* and increases funding for *BSE* detection and prevention activities. Significant funding increases were also provided for the *Child Nutrition Programs*, *WIC*, and the *Food Stamp Program*, while reductions in funding were authorized for *Conservation Operations, PL-480*, and the *Rural Community Advancement Program*.

**EPSCoR:** See *Experimental Program for Stimulating Competitive Research (EPSCoR)*.

**Experimental Program for Stimulating Competitive Research (EPSCoR):** A state-federal partnership established at the National Science Foundation to stimulate *sustainable* improvements in R&D competitiveness through the development and utilization of science and technology resources that reside at the state's major research universities. EPSCoR emphasizes local direction and administration by broad-based statewide governing committees, *program* accountability at all levels, and non-federal *cost-sharing* investments. EPSCoR currently operates in twenty-one states and the Commonwealth of Puerto Rico. The states are: Alabama, Alaska, Arkansas, Hawaii, Idaho, Kansas, Kentucky, Louisiana, Maine, Mississippi, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, South Carolina, South Dakota, Vermont, West Virginia, and Wyoming. EPSCoR attempts to develop nationally competitive R&D infrastructures within participating states by promoting partnerships among state government, universities, and the private sector in strategic research areas with high growth potential. The *program* is currently administered within seven federal agencies: NSF, National Institutes of Health, Department of Defense, NASA, Department of Energy, *EPA*, and *USDA*.

**Formula funds:** Common name given to *Hatch Act funds* administered by *CSREES* and provided to the various *state agricultural experiment stations* on a formula basis, taking into account the size of the agricultural activity in the state and the number of *producers*. The formula was adopted in 1955 as an amendment to the *Hatch Act*. The formula provides for each state to receive what it received in 1955 as a base amount. Sums appropriated in excess of the 1955 level are distributed as follows: 20 percent is allotted equally to each state; 52 percent is allocated on the basis of a state's share of U.S. *rural* and *farm* population; a maximum of 25 percent is allocated to the states for research projects that involve more than one state; and 3 percent is reserved for administration. On average, *Hatch Act* formula funds constitute 10 percent of total funding for each *state agricultural experiment station*. Formula funds also refers to *Cooperative Extension Service Smith-Lever 3(b&c) funds* administered by *CSREES*.

**Hatch Act of 1887 (7 U.S.C. §§ 361a et seq.; 24 Stat. 440):** Signed into law March 2, 1887. The permanent statute *authorizing* the providing of federal funds to *state agricultural experiment stations*. Congress last amended the Act in 1955, adding a *formula* that the *USDA* uses to allocate the annual *appropriations* among the states. The *formula* provides for each state to receive what it received in 1955 as a base amount. Sums appropriated in excess of the 1955 level are distributed as follows: 20 percent is allotted equally to each state; 52 percent is allocated on the basis of a state's share of U.S. *rural* and *farm* population; a maximum of 25 percent is allocated to the states for research projects that involve more than one state; and 3 percent is reserved for administration. On average, *Hatch Act* formula funds constitute 10 percent of the total funding for each *state agricultural experiment station*.

**Indirect(s); indirect costs:** For research and other sponsored projects, those costs not readily identified with a single, specific project or organizational activity, but rather common costs incurred for the joint benefit of more than one project and activity. Indirect costs are usually grouped into common pools and charged to benefitting projects or activities through an established rate. Also known as *overhead*, examples include rent, security, utilities, and administrative expenses such as accounting and human resources departmental costs. Under the *NARETPA of 1977* (Sec. 1462; 7 U.S.C. § 3310), indirect costs shall not exceed 19 percent of the total federal funds provided under *competitive grant* awards, with exceptions. An alternative method of calculation of this limitation is to multiply total direct costs by 23.456 percent. However, recent *agricultural appropriations* acts have increased the limit to 20 percent (*Consolidated Appropriations Act, 2005*, Division A, Title VI, General Provisions, Sec. 710). See *Direct costs*.

**Mission-linked research:** Research on specifically identified agricultural problems which, through a continuum of efforts, provides information and technology that may be transferred to users and may relate to a product, practice, or process.

**Multidisciplinary research:** Research in which investigators from two or more disciplines, including biological, physical, chemical, and social sciences, are collaborating closely.

**Principal investigator:** A single individual who is responsible for the scientific and technical direction of a research project.

**Smith-Lever Act (of 1914) (7 U.S.C. §§ 341 et seq.):** Signed into law May 8, 1914. The Act created the *Cooperative Extension Service* system. Each state's *CES* is associated with a *land grant university* and its *agricultural experiment station*. The Act provides federal funds (*Smith-Lever 3(b&c) funds*) for *cooperative extension* activities and requires states to provide a 100 percent match from non-federal resources. The Act also *authorizes special cooperative extension* projects under section 3(d). Current projects funded under this *authority* include the *Expanded Food and Nutrition Education Program (EFNEP)*, *Farm Safety, Integrated Pest Management*, and *Children, Youth and Families at Risk*. See *Cooperative Extension System* and *Smith-Lever 3(d) (funds)*.

**State Water Pollution Control Revolving Fund (SRF):** A program authorized by the *Water Quality Act of 1987*, replacing the *Construction Grants program*, to provide low-cost financing for water quality protection projects for wastewater treatment, *nonpoint source pollution* control, and *watershed* and estuary management in each state and Puerto Rico. The *SFR program* is capitalized through federal *grants* and state matching funds equal to 20 percent of the federal *grant*. Funds are loaned to communities and *loan* repayments are recycled back into the *program* to fund additional *authorized* projects. Also *Clean Water State Revolving Fund (CWSRF)*.

**Nanotechnology:** The science of studying and producing materials and devices of nanometer size – about the size of a small molecule or individual atom.