

fice of Research and Development of the Environmental Protection Agency in order to avoid duplication of research activities.

(g) Authorization of appropriations

(1) In general

There are authorized to be appropriated such sums as necessary to carry out this section.

(2) Withholdings from biotechnology outlays

The Secretary of Agriculture shall withhold from outlays of the Department of Agriculture for research on biotechnology, as defined and determined by the Secretary, at least 2 percent of such amount for the purpose of making grants under this section for research on biotechnology risk assessment.

(3) Application of funds

Funds made available under this subsection shall be applied, to the maximum extent practicable, to risk assessment research on all categories identified in subsection (c).

(Pub. L. 101-624, title XVI, § 1668, Nov. 28, 1990, 104 Stat. 3767; Pub. L. 102-237, title IV, § 407(9), Dec. 13, 1991, 105 Stat. 1865; Pub. L. 107-171, title VII, § 7210, May 13, 2002, 116 Stat. 446; Pub. L. 110-234, title VII, § 7511(c)(21), May 22, 2008, 122 Stat. 1269; Pub. L. 110-246, § 4(a), title VII, § 7511(c)(21), June 18, 2008, 122 Stat. 1664, 2031.)

Editorial Notes

CODIFICATION

Pub. L. 110-234 and Pub. L. 110-246 made identical amendments to this section. The amendments by Pub. L. 110-234 were repealed by section 4(a) of Pub. L. 110-246.

AMENDMENTS

2008—Subsec. (b). Pub. L. 110-246, § 7511(c)(21), substituted “National Institute of Food and Agriculture” for “Cooperative State Research, Education, and Extension Service”.

2002—Pub. L. 107-171 reenacted section catchline and amended text generally, substituting substantially similar provisions in subsecs. (a), (b), and (d) to (g), and substituting in subsec. (c), provisions relating to research priorities for provisions relating to types of research.

1991—Subsec. (g)(2). Pub. L. 102-237 substituted “Withholdings” for “Withholdings” in heading.

Statutory Notes and Related Subsidiaries

EFFECTIVE DATE OF 2008 AMENDMENT

Amendment of this section and repeal of Pub. L. 110-234 by Pub. L. 110-246 effective May 22, 2008, the date of enactment of Pub. L. 110-234, except as otherwise provided, see section 4 of Pub. L. 110-246, set out as an Effective Date note under section 8701 of this title.

Amendment by section 7511(c)(21) of Pub. L. 110-246 effective Oct. 1, 2009, see section 7511(c) of Pub. L. 110-246, set out as a note under section 1522 of this title.

§ 5921a. Repealed. Pub. L. 110-234, title VII, § 7411, May 22, 2008, 122 Stat. 1255, and Pub. L. 110-246, § 4(a), title VII, § 7411, June 18, 2008, 122 Stat. 1664, 2017

Section, Pub. L. 107-171, title X, § 10802, May 13, 2002, 116 Stat. 525, related to public information campaign regarding use of biotechnology in producing food for human consumption.

Editorial Notes

CODIFICATION

Pub. L. 110-234 and Pub. L. 110-246 repealed this section. Pub. L. 110-234 was repealed by section 4(a) of Pub. L. 110-246.

Statutory Notes and Related Subsidiaries

EFFECTIVE DATE OF REPEAL

Repeal of this section and repeal of Pub. L. 110-234 by Pub. L. 110-246 effective May 22, 2008, the date of enactment of Pub. L. 110-234, see section 4 of Pub. L. 110-246, set out as an Effective Date note under section 8701 of this title.

§ 5922. Repealed. Pub. L. 107-171, title X, § 10705(b), May 13, 2002, 116 Stat. 519

Section, Pub. L. 101-624, title XVI, § 1669, Nov. 28, 1990, 104 Stat. 3768, related to Graduate School of Department of Agriculture.

Statutory Notes and Related Subsidiaries

EFFECTIVE DATE OF REPEAL

Repeal of section effective Oct. 1, 2002, see section 10705(c) of Pub. L. 107-171, set out as an Effective Date of 2002 Amendment note under section 2279b of this title.

§ 5923. Repealed. Pub. L. 113-79, title VII, § 7207, Feb. 7, 2014, 128 Stat. 881

Section, Pub. L. 101-624, title XVI, § 1670, as added Pub. L. 107-171, title VI, § 6202, May 13, 2002, 116 Stat. 419; amended Pub. L. 110-234, title VII, § 7511(c)(22), May 22, 2008, 122 Stat. 1269; Pub. L. 110-246, § 4(a), title VII, § 7511(c)(22), June 18, 2008, 122 Stat. 1664, 2031, related to rural electronic commerce extension program.

Editorial Notes

PRIOR PROVISIONS

A prior section 5923, Pub. L. 101-624, title XVI, § 1670, Nov. 28, 1990, 104 Stat. 3769; Pub. L. 102-237, title IV, § 407(10), Dec. 13, 1991, 105 Stat. 1865; Pub. L. 104-127, title VIII, § 834, Apr. 4, 1996, 110 Stat. 1169, authorized establishment of livestock product safety and inspection program, prior to repeal by Pub. L. 105-185, title III, § 302(c), June 23, 1998, 112 Stat. 563.

§ 5924. Agricultural Genome to Phenome Initiative

(a) Goals

The goals of this section are—

(1) to expand knowledge concerning genomes and phenomes of crops and animals of importance to the agriculture sector of the United States;

(2) to understand how variable weather, environments, and production systems impact the growth and productivity of specific varieties of crops and species of animals in order to provide greater accuracy in predicting crop and animal performance under variable conditions;

(3) to support research that leverages plant and animal genomic information with phenotypic and environmental data through an interdisciplinary framework, leading to a novel understanding of plant and animal processes that affect growth, productivity, and the ability to predict performance, which will result in the deployment of superior varieties

and species to producers and improved crop and animal management recommendations for farmers and ranchers;

(4) to catalyze and coordinate research that links genomics and predictive phenomics at different sites across the United States to achieve advances in crops and animals that generate societal benefits;

(5) to combine fields such as genetics, genomics, plant physiology, agronomy, climatology, and crop modeling with computation and informatics, statistics, and engineering;

(6) to combine fields such as genetics, genomics, animal physiology, meat science, animal nutrition, and veterinary science with computation and informatics, statistics, and engineering;

(7) to focus on crops and animals that will yield scientifically important results that will enhance the usefulness of many other crops and animals;

(8) to build on genomic research, such as the Plant Genome Research Project and the National Animal Genome Research Program, to understand gene function in production environments that is expected to have considerable returns for crops and animals of importance to the agriculture of the United States;

(9) to develop improved data analytics to enhance understanding of the biological function of genes;

(10) to allow resources developed under this section, including data, software, germplasm, and other biological materials, to be openly accessible to all persons, subject to any confidentiality requirements imposed by law; and

(11) to encourage international partnerships with each partner country responsible for financing its own research.

(b) Duties of Secretary

The Secretary of Agriculture (referred to in this section as the “Secretary”) shall conduct a research initiative, to be known as the “Agricultural Genome to Phenome Initiative”, for the purpose of—

(1) studying agriculturally significant crops and animals in production environments to achieve sustainable and secure agricultural production;

(2) ensuring that current gaps in existing knowledge of agricultural crop and animal genetics and phenomics are filled;

(3) identifying and developing a functional understanding of relevant genes from animals and agronomically relevant genes from crops that are of importance to the agriculture sector of the United States;

(4) ensuring future genetic improvement of crops and animals of importance to the agriculture sector of the United States;

(5) studying the relevance of diverse germplasm as a source of unique genes that may be of importance in the future;

(6) enhancing genetics to reduce the economic impact of pathogens on crops and animals of importance to the agriculture sector of the United States;

(7) disseminating findings to relevant audiences; and

(8) otherwise carrying out this section.

(c) Grants and cooperative agreements

(1) Authority

The Secretary, acting through the National Institute of Food and Agriculture, may make grants or enter into cooperative agreements with individuals and organizations in accordance with section 3318 of this title.

(2) Competitive basis

A grant or cooperative agreement under this subsection shall be made or entered into on a competitive basis.

(3) Consortia

The Secretary shall encourage awards under this section to consortia of eligible entities.

(d) Administration

Paragraphs (4), (7), (8), and (11)(B) of subsection (b) of section 3157 of this title shall apply with respect to the making of a grant or cooperative agreement under this section.

(e) Consultation with National Academy of Sciences

The Secretary may use funds made available under this section to consult with the National Academy of Sciences regarding the administration of the Agricultural Genome to Phenome Initiative.

(f) Matching funds requirement

(1) In general

Subject to paragraph (3), with respect to a grant or cooperative agreement under this section that provides a particular benefit to a specific agricultural commodity, the recipient of funds under the grant or cooperative agreement shall provide non-Federal matching funds (including funds from an agricultural commodity promotion, research, and information program) equal to not less than the amount provided under the grant or cooperative agreement.

(2) In-kind support

Non-Federal matching funds described in paragraph (1) may include in-kind support.

(3) Waiver

The Secretary may waive the matching funds requirement under paragraph (1) with respect to a research project if the Secretary determines that—

(A) the results of the project are of a particular benefit to a specific agricultural commodity, but those results are likely to be applicable to agricultural commodities generally; or

(B)(i) the project—

(I) involves a minor commodity; and
(II) deals with scientifically important research; and

(ii) the recipient is unable to satisfy the matching funds requirement.

(g) Authorization of appropriations

There is authorized to be appropriated to carry out this section \$40,000,000 for each of fiscal years 2019 through 2023.

(Pub. L. 101-624, title XVI, §1671, Nov. 28, 1990, 104 Stat. 3769; Pub. L. 104-66, title I, §1011(s),

Dec. 21, 1995, 109 Stat. 710; Pub. L. 104-127, title VIII, § 835, Apr. 4, 1996, 110 Stat. 1169; Pub. L. 105-185, title II, § 241, June 23, 1998, 112 Stat. 547; Pub. L. 107-171, title VII, § 7208(a), May 13, 2002, 116 Stat. 442; Pub. L. 110-234, title VII, § 7406(d)(2), May 22, 2008, 122 Stat. 1252; Pub. L. 110-246, § 4(a), title VII, § 7406(d)(2), June 18, 2008, 122 Stat. 1664, 2013; Pub. L. 113-79, title VII, §§ 7128(b)(2)(B), 7208, Feb. 7, 2014, 128 Stat. 878, 881; Pub. L. 115-334, title VII, §§ 7208, 7614(b)(2)(B), Dec. 20, 2018, 132 Stat. 4805, 4834.)

Editorial Notes

CODIFICATION

Pub. L. 110-234 and Pub. L. 110-246 made identical amendments to this section. The amendments by Pub. L. 110-234 were repealed by section 4(a) of Pub. L. 110-246.

AMENDMENTS

2018—Pub. L. 115-334, § 7208(1), inserted “to Phenome” after “Genome” in section catchline.

Subsec. (a). Pub. L. 115-334, § 7208(2), added subsec. (a) and struck out former subsec. (a) which related to goals for the Agricultural Genome Initiative.

Subsec. (b). Pub. L. 115-334, § 7208(3), added subsec. (b) and struck out former subsec. (b) which related to duties of the Secretary of Agriculture under the Agricultural Genome Initiative.

Subsec. (c)(1). Pub. L. 115-334, § 7208(4), inserted “, acting through the National Institute of Food and Agriculture,” after “The Secretary”.

Subsec. (e). Pub. L. 115-334, § 7208(5), inserted “to Phenome” after “Genome”.

Subsec. (f). Pub. L. 115-334, § 7614(b)(2)(B), added subsec. (f) and redesignated former subsec. (f) as (g).

Pub. L. 115-334, § 7208(6), added subsec. (f).

Subsec. (g). Pub. L. 115-334, § 7614(b)(2)(B)(i), redesignated subsec. (f) as (g).

2014—Subsec. (c)(3). Pub. L. 113-79, § 7208, added par. (3).

Subsecs. (e), (f). Pub. L. 113-79, § 7128(b)(2)(B), redesignated subsec. (f) as (e) and struck out former subsec. (e) which related to matching of funds.

2008—Subsec. (d). Pub. L. 110-246, § 7406(d)(2), substituted “Paragraphs (4), (7), (8), and (11)(B)” for “Paragraphs (1), (6), (7), and (11)”.

2002—Subsec. (b)(3). Pub. L. 107-171, § 7208(a)(1), inserted “pathogens and” before “diseases causing economic hardship”.

Subsec. (b)(7), (8). Pub. L. 107-171, § 7208(a)(2)–(4), added par. (7) and redesignated former par. (7) as (8).

1998—Pub. L. 105-185 amended section catchline and text generally, substituting present provisions for provisions which in subsec. (a) required plant genome mapping program, in subsec. (b) authorized competitive grants for research projects, in subsec. (c) described research areas for projects, in subsec. (d) set forth deadline for submission of plan for awarding grants, in subsec. (e) directed coordination of section activities with certain related activities, in subsec. (f) required protection of proprietary interests when considered to be appropriate, and in subsec. (g) authorized appropriations for fiscal years 1996 and 1997 to carry out this section.

1996—Subsec. (g). Pub. L. 104-127 inserted “for fiscal years 1996 and 1997” after “appropriated”.

1995—Subsecs. (g), (h). Pub. L. 104-66 redesignated subsec. (h) as (g) and struck out former subsec. (g) which required Secretary to submit annual reports to Congress describing operations of grant program for plant genome mapping.

Statutory Notes and Related Subsidiaries

EFFECTIVE DATE OF 2018 AMENDMENT

Amendment by section 7614(b)(2)(B) of Pub. L. 115-334 applicable to grants, cooperative agreements, or other

awards made after Dec. 20, 2018, with matching funds requirement in effect on Dec. 20, 2018, to continue to apply to such grant, cooperative agreement, or other award, see section 7614(c) of Pub. L. 115-334, set out as a note under section 3151 of this title.

EFFECTIVE DATE OF 2008 AMENDMENT

Amendment of this section and repeal of Pub. L. 110-234 by Pub. L. 110-246 effective May 22, 2008, the date of enactment of Pub. L. 110-234, except as otherwise provided, see section 4 of Pub. L. 110-246, set out as an Effective Date note under section 8701 of this title.

Amendment by section 7406(d)(2) of Pub. L. 110-246 inapplicable to any solicitation for grant applications issued by the Cooperative State Research, Education, and Extension Service before June 18, 2008, see section 7406(c) of Pub. L. 110-246, set out as a note under section 3157 of this title.

§ 5925. High-priority research and extension initiatives

(a) Competitive specialized research and extension grants authorized

(1) In general

The Secretary of Agriculture (referred to in this section as the “Secretary”) may make competitive grants to support research and extension activities specified in subsections (d) through (g).

(2) Matching funds requirement

(A) In general

Subject to subparagraph (C), an entity receiving a grant under paragraph (1) shall provide non-Federal matching funds (including funds from an agricultural commodity promotion, research, and information program) equal to not less than the amount of the grant.

(B) In-kind support

Non-Federal matching funds described in subparagraph (A) may include in-kind support.

(C) Waiver

The Secretary may waive the matching funds requirement under subparagraph (A) with respect to a research project if the Secretary determines that—

(i) the results of the project are of a particular benefit to a specific agricultural commodity, but those results are likely to be applicable to agricultural commodities generally; or

(ii)(I) the project—

(aa) involves a minor commodity; and
(bb) deals with scientifically important research; and

(II) the recipient is unable to satisfy the matching funds requirement.

(3) Consultation

The Secretary shall make the grants in consultation with the National Agricultural Research, Extension, Education, and Economics Advisory Board.

(b) Administration

(1) In general

Except as otherwise provided in this section, paragraphs (4), (7), (8), and (11)(B) of sub-