

108TH CONGRESS
2D SESSION

S. 3009

To establish a Division of Food and Agricultural Science within the National Science Foundation and to authorize funding for the support of fundamental agricultural research of the highest quality, and for other purposes.

IN THE SENATE OF THE UNITED STATES

NOVEMBER 19, 2004

Mr. BOND (for himself, Ms. MIKULSKI, Mr. BENNETT, and Mr. HARKIN) introduced the following bill; which was read twice and referred to the Committee on Agriculture, Nutrition, and Forestry

A BILL

To establish a Division of Food and Agricultural Science within the National Science Foundation and to authorize funding for the support of fundamental agricultural research of the highest quality, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “National Food and
5 Agricultural Science Act of 2004”.

6 **SEC. 2. DEFINITIONS.**

7 In this Act:

1 (1) COUNCIL.—The term “Council” means the
2 Standing Council of Advisors established under sec-
3 tion 4(c).

4 (2) DIRECTOR.—Except as otherwise provided
5 in this Act, the term “Director” means the Director
6 of Food and Agricultural Science.

7 (3) DIVISION.—The term “Division” means the
8 Division of Food and Agricultural Science estab-
9 lished under section 4(a).

10 (4) FOUNDATION.—The term “Foundation”
11 means the National Science Foundation.

12 (5) FUNDAMENTAL AGRICULTURAL RESEARCH;
13 FUNDAMENTAL SCIENCE.—The terms “fundamental
14 agricultural research” and “fundamental science”
15 mean fundamental research or science that—

16 (A) advances the frontiers of knowledge so
17 as to lead to practical results or to further sci-
18 entific discovery; and

19 (B) has an effect on agriculture, food,
20 human health, or another purpose of this Act,
21 as described in section 3(b).

22 (6) SECRETARY.—The term “Secretary” means
23 the Secretary of Agriculture.

24 (7) UNITED STATES.—The term “United
25 States” when used in a geographical sense means

1 the States, the District of Columbia, the Common-
2 wealth of Puerto Rico, and all territories and posses-
3 sions of the United States.

4 **SEC. 3. FINDINGS AND PURPOSES.**

5 (a) FINDINGS.—The Agricultural Research, Econom-
6 ics, and Education Task Force established under section
7 7404 of the Farm Security and Rural Investment Act of
8 2002 (7 U.S.C. 3101 note) conducted an exhaustive review
9 of agricultural research in the United States and evalu-
10 ated the merits of establishing 1 or more national insti-
11 tutes focused on disciplines important to the progress of
12 food and agricultural science. Consistent with the findings
13 and recommendations of the Agricultural Research, Eco-
14 nomics, and Education Task Force, Congress finds the
15 following:

16 (1) Agriculture in the United States faces crit-
17 ical challenges, including an impending crisis in the
18 food, agricultural, and natural resource systems of
19 the United States. Exotic diseases and pests threat-
20 en crops and livestock, obesity has reached epidemic
21 proportions, agriculturally-related environmental
22 degradation is a serious problem for the United
23 States and other parts of the world, certain animal
24 diseases threaten human health, and United States

1 producers of some major crops are no longer the
2 world's lowest cost producers.

3 (2) In order to meet these critical challenges, it
4 is essential that the Nation ensure that the agricul-
5 tural innovation that has been so successful in the
6 past continues in the future. Agricultural innovation
7 has resulted in hybrid and higher yielding varieties
8 of basic crops and enhanced the world's food supply
9 by increasing yields on existing acres. Since 1960,
10 the world's population has tripled with no net in-
11 crease in the amount of land under cultivation. Cur-
12 rently, only 1.5 percent of the population of the
13 United States provides the food and fiber to supply
14 the Nation's needs. Agriculture and agriculture
15 sciences play a major role in maintaining the health
16 and welfare of all people of the United States and
17 in husbanding our land and water, and that role
18 must be expanded.

19 (3) Fundamental scientific research that leads
20 to understandings of how cells and organisms work
21 is critical to continued innovation in agriculture in
22 the United States. Such future innovations are de-
23 pendent on fundamental scientific research, and will
24 be enhanced by ideas and technologies from other
25 fields of science and research.

1 (4) Opportunities to advance fundamental
2 knowledge of benefit to agriculture in the United
3 States have never been greater. Many of these new
4 opportunities are the result of amazing progress in
5 the life sciences over recent decades, attributable in
6 large part to the provision made by the Federal Gov-
7 ernment through the National Institutes of Health
8 and the National Science Foundation. New tech-
9 nologies and new concepts have speeded advances in
10 the fields of genetics, cell and molecular biology, and
11 proteomics. Much of this scientific knowledge is
12 ready to be mined for agriculture and food sciences,
13 through a sustained, disciplined research effort at an
14 institute dedicated to this research.

15 (5) Publicly sponsored research is essential to
16 continued agricultural innovation to mitigate or har-
17 monize the long-term effects of agriculture on the
18 environment, to enhance the long-term sustainability
19 of agriculture, and to improve the public health and
20 welfare.

21 (6) Competitive, peer-reviewed fundamental ag-
22 ricultural research is best suited to promoting the
23 fundamental research from which breakthrough in-
24 novations that agriculture and society require will
25 come.

1 (7) It is in the national interest to dedicate ad-
2 ditional funds on a long-term, ongoing basis to an
3 institute dedicated to funding competitive peer-re-
4 viewed grant programs that support and promote
5 the highest caliber of fundamental agricultural re-
6 search.

7 (8) The Nation's capacity to be competitive
8 internationally in agriculture is threatened by inad-
9 equate investment in research.

10 (9) To be successful over the long term, grant-
11 receiving institutions must be adequately reimbursed
12 for their costs if they are to pursue the necessary
13 agricultural research.

14 (10) To meet these challenges, address these
15 needs, and provide for vitally needed agricultural in-
16 novation, it is in the national interest to provide suf-
17 ficient Federal funds over the long term to fund a
18 significant program of fundamental agricultural re-
19 search through an independent institute.

20 (b) PURPOSES.—The purposes of the Division estab-
21 lished under section 4(a) shall be to ensure that the tech-
22 nological superiority of agriculture in the United States
23 effectively serve the people of the United States in the
24 coming decades, and to support and promote fundamental

1 agricultural research of the highest caliber in order to
2 achieve goals, including the following goals:

3 (1) Increase the international competitiveness
4 of United States agriculture.

5 (2) Develop foods that improve health and com-
6 bat obesity.

7 (3) Create new and more useful food, fiber,
8 health, medicinal, energy, environmental, and indus-
9 trial products from plants and animals.

10 (4) Improve food safety and food security by
11 protecting plants and animals in the United States
12 from insects, diseases, and the threat of bioter-
13 rorism.

14 (5) Enhance agricultural sustainability and im-
15 prove the environment.

16 (6) Strengthen the economies of the Nation's
17 rural communities.

18 (7) Decrease United States dependence on for-
19 eign sources of petroleum by developing bio-based
20 fuels and materials from plants.

21 (8) Strengthen national security by improving
22 the agricultural productivity of subsistence farmers
23 in developing countries to combat hunger and the
24 political instability that it produces.

1 (9) Assist in modernizing and revitalizing the
 2 Nation's agricultural research facilities at institu-
 3 tions of higher education, independent non-profit re-
 4 search institutions, and consortia of such institu-
 5 tions, through capital investment.

6 (10) Achieve such other goals and meet such
 7 other needs as determined appropriate by the Foun-
 8 dation, the Director, or the Secretary.

9 **SEC. 4. ESTABLISHMENT OF DIVISION.**

10 (a) ESTABLISHMENT.—There is established within
 11 the National Science Foundation a Division of Food and
 12 Agricultural Science. The Division shall consist of the
 13 Council and be administered by a Director of Food and
 14 Agricultural Science.

15 (b) REPORTING AND CONSULTATION.—The Director
 16 shall coordinate the research agenda of the Division with
 17 the Secretary.

18 (c) STANDING COUNCIL OF ADVISORS.—

19 (1) ESTABLISHMENT.—

20 (A) IN GENERAL.—There is established in
 21 the Division a Standing Council of Advisors
 22 composed of 12 highly qualified scientists who
 23 are not employed by the Federal Government
 24 and 12 stakeholders.

25 (B) SCIENTISTS.—

1 (i) APPOINTMENT.—The 12 scientist
2 members of the Council shall be appointed
3 to 4-year staggered terms by the Director
4 of the National Science Foundation, with
5 the consent of the Director of Food and
6 Agricultural Science.

7 (ii) QUALIFICATIONS.—The persons
8 nominated for appointment as scientist
9 members of the Council shall be—

10 (I) eminent in the fields of agri-
11 cultural research, science, or related
12 appropriate fields; and

13 (II) selected for appointment
14 solely on the basis of established
15 records of distinguished service and to
16 provide representation of the views of
17 agricultural research and scientific
18 leaders in all areas of the Nation.

19 (C) STAKEHOLDERS.—

20 (i) APPOINTMENT.—The 12 stake-
21 holder members of the Council shall be ap-
22 pointed to 4-year staggered terms by the
23 Secretary, with the consent of the Direc-
24 tor.

1 (ii) QUALIFICATIONS.—The persons
2 nominated for appointment as stakeholder
3 members of the Council shall—

4 (I) include distinguished mem-
5 bers of the public of the United
6 States, including representatives of
7 farm organizations and industry, and
8 persons knowledgeable about the envi-
9 ronment, subsistence agriculture, en-
10 ergy, and human health and disease;
11 and

12 (II) be selected for appointment
13 so as to provide representation of the
14 views of stakeholder leaders in all
15 areas of the Nation.

16 (2) DUTIES.—The Council shall assist the Di-
17 rector in establishing the Division’s research prior-
18 ities, and in reviewing, judging, and maintaining the
19 relevance of the programs funded by the Division.
20 The Council shall review all proposals approved by
21 the scientific committees of the Division to ensure
22 that the purposes of this Act and the needs of the
23 Nation are being met.

24 (3) MEETINGS.—

1 (A) IN GENERAL.—The Council shall hold
2 periodic meetings in order to—

3 (i) provide an interface between sci-
4 entists and stakeholders; and

5 (ii) ensure that the Division is linking
6 national goals with realistic scientific op-
7 portunities.

8 (B) TIMING.—The meetings shall be held
9 at the call of the Director, or at the call of the
10 Secretary, but not less frequently than annu-
11 ally.

12 **SEC. 5. FUNCTIONS OF DIVISION.**

13 (a) COMPETITIVE RESEARCH.—

14 (1) IN GENERAL.—The Director shall carry out
15 the purposes of this Act by awarding competitive
16 peer-reviewed grants to support and promote the
17 very highest quality of fundamental agricultural re-
18 search.

19 (2) GRANT RECIPIENTS.—The Director shall
20 make grants to fund research proposals submitted
21 by—

22 (A) individual scientists;

23 (B) single and multi-institutional research
24 centers; and

1 (C) entities from the private and public
2 sectors, including researchers in the Depart-
3 ment of Agriculture, the Foundation, or other
4 Federal agencies.

5 (b) COMPLEMENTARY RESEARCH.—The research
6 funded by the Division shall—

7 (1) supplement and enhance, not supplant, the
8 existing research programs of, or funded by, the De-
9 partment of Agriculture, the Foundation, and the
10 National Institutes of Health; and

11 (2) seek to make existing research programs
12 more relevant to United States agriculture, con-
13 sistent with the purposes of this Act.

14 (c) GRANT-AWARDING ONLY.—The Division's sole
15 duty shall be to award grants. The Division may not con-
16 duct fundamental agricultural research or fundamental
17 science, or operate any laboratories or pilot plants.

18 (d) PROCEDURES.—The Director shall establish pro-
19 cedures for the peer review, awarding, and administration
20 of grants under this Act, consistent with sound manage-
21 ment and the findings and purposes described in section
22 3.

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