

117TH CONGRESS
2D SESSION

S. 4189

To amend the Food Security Act of 1985 to authorize the Secretary of Agriculture to improve agricultural productivity, profitability, resilience, and ecological outcomes through modernized data infrastructure and analysis, and for other purposes.

IN THE SENATE OF THE UNITED STATES

MAY 11 (legislative day, MAY 10), 2022

Ms. KLOBUCHAR (for herself and Mr. THUNE) introduced the following bill; which was read twice and referred to the Committee on Agriculture, Nutrition, and Forestry

A BILL

To amend the Food Security Act of 1985 to authorize the Secretary of Agriculture to improve agricultural productivity, profitability, resilience, and ecological outcomes through modernized data infrastructure and analysis, 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 “Agriculture Innovation
5 Act of 2022”.

1 **SEC. 2. DATA ON CONSERVATION AND OTHER PRODUCTION**
2 **PRACTICES.**

3 Subtitle E of title XII of the Food Security Act of
4 1985 (16 U.S.C. 3841 et seq.) is amended by adding at
5 the end the following:

6 **“SEC. 1248. DATA ON CONSERVATION AND OTHER PRODUC-**
7 **TION PRACTICES.**

8 “(a) PURPOSE.—The purpose of this section is to im-
9 prove conservation outcomes, increase agricultural produc-
10 tivity and resilience, and accelerate the development of
11 carbon and other ecosystem service markets by collecting,
12 analyzing, and providing data—

13 “(1) to better understand how covered con-
14 servation practices and suites of covered conserva-
15 tion practices and other production practices impact
16 farm, ranch, and other working land productivity
17 and profitability (such as crop yields, soil health,
18 and other risk-reducing factors);

19 “(2) to support the measurement and quan-
20 tification of ecosystem services provided by working
21 land, such as carbon sequestration, water filtration,
22 and habitat, that result from covered conservation
23 practices and other production practices; and

24 “(3) to improve the implementation of Depart-
25 ment programs to optimize productivity, profit-
26 ability, and ecological benefits.

1 “(b) DEFINITIONS.—In this section:

2 “(1) COVERED CONSERVATION PRACTICE.—The
3 term ‘covered conservation practice’ means a specific
4 conservation practice or enhancement that is de-
5 signed to protect soil health, farm and ranch produc-
6 tivity, or both (including the protection of wildlife
7 habitat) while maintaining or enhancing crop yields
8 in an economically sustainable manner (including
9 such a conservation practice or enhancement that is
10 supported by the Department or used independently
11 by a producer), as determined by the Secretary.

12 “(2) DEPARTMENT.—The term ‘Department’
13 means the Department of Agriculture.

14 “(3) OTHER PRODUCTION PRACTICE.—The
15 term ‘other production practice’ means a practice
16 used to produce a crop or livestock, including pest
17 control, nutrient management, manure management,
18 water and irrigation management, seed, feed and nu-
19 trition, and crop residue management.

20 “(c) DATA COLLECTION, REVIEW, ANALYSIS, AND
21 TECHNICAL ASSISTANCE.—The Secretary, acting through
22 the 1 or more applicable Under Secretaries that head mis-
23 sion areas relating to farm and ranch productivity and
24 conservation, in coordination with the Chief Data Officer
25 of the Department, the Chief Economist, and the Under

1 Secretary for Research, Education, and Economics, shall
2 carry out the following activities:

3 “(1) Identify in the data inventory maintained
4 by the Secretary under section 3511 of title 44,
5 United States Code, data relating to the impacts of
6 covered conservation practices and other production
7 practices on enhancing crop yields, soil health, and
8 ecosystem services, reducing risk, and improving
9 farm, ranch, and other working land profitability
10 generated or collected by the Department, including
11 the Farm Service Agency, the Risk Management
12 Agency, the Natural Resources Conservation Service,
13 the National Agricultural Statistics Service, the Eco-
14 nomic Research Service, the Forest Service, and any
15 other relevant agency, as determined by the Sec-
16 retary.

17 “(2) Collect or acquire, using other authorities
18 of the Secretary, and using technology and a mod-
19 ernized survey system, to the greatest extent prac-
20 ticable, or another appropriate method, any addi-
21 tional producer data, baseline data, or other data re-
22 lating to the impacts of covered conservation prac-
23 tices and other production practices on enhancing
24 crop yields, soil health, and ecosystem services, re-
25 ducing risk, and improving farm, ranch, and other

1 working land profitability necessary to achieve the
2 purpose described in subsection (a), ensuring that
3 data is collected from all types and sizes of oper-
4 ations.

5 “(3) Ensure that producer data identified or
6 collected under paragraph (1) or (2) are collected in
7 a compatible format that is machine-readable (as de-
8 fined in section 3502 of title 44, United States
9 Code) at the field- and farm-level and in a manner
10 that places the lowest practicable burden on pro-
11 ducers and improves the interoperability of the data
12 collected by the Department for the purposes of this
13 section and optimizes the interoperability, to the ex-
14 tent practicable, with data relating to conservation
15 practices generated by other organizations and other
16 activities of the Department.

17 “(4) Establish procedures and incentives for
18 producers to voluntarily elect to be contacted to par-
19 ticipate in or submit additional research and to pro-
20 vide supplemental data that may be useful in statis-
21 tical activities (as defined in section 311 of title 5,
22 United States Code) and activities to build evidence
23 (as defined in that section) of the impacts of covered
24 conservation practices on—

1 “(A) enhancing crop yields, soil health,
2 and ecosystem services;

3 “(B) reducing risk; and

4 “(C) improving farm, ranch, and other
5 working land profitability.

6 “(5) Integrate, collate, and link, to the greatest
7 extent practicable, data identified or collected under
8 this subsection with other government or nongovern-
9 mental data sources that include crop yields, soil
10 health, covered conservation practices, and other
11 production practices.

12 “(6) Establish a conservation and farm produc-
13 tivity secure data center designed to carry out the
14 purposes of this section that ensures the security,
15 privacy, and integrity of data.

16 “(7) Make available data through the secure
17 data center established under paragraph (6) to aca-
18 demic institutions and researchers that meet the
19 user permission requirements described in subsection
20 (d)(2)(A) for the provision of technical assistance.

21 “(8) Analyze, consistent with the scientific in-
22 tegrity policy of the Department, the data identified
23 or collected under this subsection to consider the im-
24 pacts of covered conservation practices and other
25 production practices on enhancing crop yields, soil

1 health, and ecosystem services and improving farm,
2 ranch, and other working land profitability.

3 “(9) Use the results of the analyses under para-
4 graph (8) to improve the implementation of Depart-
5 ment programs to increase productivity, profitability,
6 and ecological benefits of farm, ranch, and other
7 working land, including relating to issues identified
8 in the evidence-building plan of the Department re-
9 quired under section 312 of title 5, United States
10 Code.

11 “(10) Promptly make available on the public-
12 facing component of the secure data center estab-
13 lished under paragraph (6) the research, analysis,
14 evaluation products, and other information gen-
15 erated in carrying out this section (including open
16 Government data assets (as defined in section 3502
17 of title 44, United States Code), to the extent per-
18 missible by law)—

19 “(A) that demonstrates the impacts of cov-
20 ered conservation practices and other produc-
21 tion practices on enhancing crop yields, soil
22 health, and ecosystem services, reducing risk,
23 and improving farm, ranch, and other working
24 land profitability; and

1 “(B) in a manner that is easily accessed by
2 producers, researchers, and other stakeholders.

3 “(d) SECURE AGRICULTURAL DATA CENTER ESTAB-
4 LISHMENT.—

5 “(1) IN GENERAL.—The Secretary may enter
6 into 1 or more agreements with 1 or more academic
7 institutions, organizations, government agencies, or
8 other experts determined necessary by the Secretary
9 to provide technical assistance, expertise, and tech-
10 nology infrastructure, as needed, to develop the se-
11 cure data center under subsection (c)(6).

12 “(2) REQUIREMENT TO MODERNIZE DATA SE-
13 CURITY, STORAGE, AND ACCESS.—

14 “(A) IN GENERAL.—In establishing the se-
15 cure data center described in paragraph (1), the
16 Secretary shall use industry-standard data se-
17 curity protocols and user permissions to protect
18 the security and confidentiality of proprietary
19 producer data while automating and standard-
20 izing data collection, storage, and sharing, to
21 the greatest extent practicable, for the purpose
22 of carrying out this section and encouraging ag-
23 riculture innovation.

24 “(B) ADDITIONAL REQUIREMENTS.—In
25 carrying out subparagraph (A), the Secretary

1 shall establish procedures for the operation and
2 use of the secure data center that includes—

3 “(i) prohibiting the sale of any indi-
4 vidual or identifiable producer data;

5 “(ii) requiring any published research
6 to release only aggregated data, consistent
7 with best practices for disclosure avoidance
8 and reducing the risk of re-identification;
9 and

10 “(iii) periodically consulting with ex-
11 perts and stakeholders to consider nec-
12 essary modifications to security protocols
13 or confidentiality protections for identifi-
14 able data accessed or maintained by the se-
15 cure data center and improvements to ac-
16 cess for approved users.

17 “(e) PRODUCER TOOLS.—

18 “(1) IN GENERAL.—Not later than 3 years
19 after the date of enactment of this section, the Sec-
20 retary shall provide technical assistance, including
21 through internet-based tools, based on the analysis
22 conducted in carrying out this section and other
23 sources of relevant data, to assist producers in im-
24 proving sustainable production practices that in-
25 crease yields and enhance environmental outcomes.

1 “(2) INTERNET-BASED TOOLS.—Internet-based
2 tools described in paragraph (1) shall provide to pro-
3 ducers, to the greatest extent practicable—

4 “(A) confidential data specific to each
5 farm or ranch of the producer; and

6 “(B) general data relating to the impacts
7 of covered conservation practices on enhancing
8 crop yields, soil health, and otherwise reducing
9 risk and improving farm and ranch profit-
10 ability.

11 “(f) EFFECT ON PRIVACY PROTECTION LAWS.—
12 Nothing in this section affects the applicability to this sec-
13 tion of—

14 “(1) section 1770;

15 “(2) section 1619 of the Food, Conservation,
16 and Energy Act of 2008 (7 U.S.C. 8791);

17 “(3) section 502(c) of the Federal Crop Insur-
18 ance Act (7 U.S.C. 1502(c));

19 “(4) section 552a of title 5, United States
20 Code; or

21 “(5) any other applicable privacy law that pro-
22 tects personally identifiable information of pro-
23 ducers.

24 “(g) REPORTING.—Not later than 1 year after the
25 date of enactment of this section, and each year there-

1 after, the Secretary shall submit to the Committee on Ag-
2 riculture, Nutrition, and Forestry of the Senate and the
3 Committee on Agriculture of the House of Representatives
4 a report that includes—

5 “(1) a summary of the analysis conducted
6 under this section;

7 “(2) the number and regions of producers that
8 voluntarily submitted information under subsection
9 (c)(4);

10 “(3) a description of any additional or new ac-
11 tivities planned to be conducted under this section in
12 the next fiscal year, including—

13 “(A) research relating to any additional
14 conservation practices;

15 “(B) any new types of data to be collected;

16 “(C) any improved or streamlined data col-
17 lection efforts associated with this section; and

18 “(D) any new research projects; and

19 “(4) in the case of the first 2 reports submitted
20 under this subsection, a description of the current
21 status of the implementation of activities under sub-
22 section (c).

23 “(h) FUNDING AND ADMINISTRATION.—The Sec-
24 retary shall use the existing funds and authorities of the
25 Department to carry out this section.

1 “(i) EFFECT.—Nothing in this section authorizes the
2 Secretary to compel a producer—
3 “(1) to provide data to the Department; or
4 “(2) to receive technical assistance.”.

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