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(Original Signature of Member)

117TH CONGRESS
2D SESSION

H. R. _____

To amend the Agricultural Research, Extension, and Education Reform Act of 1998 to direct the Secretary of Agriculture to establish a national biochar research network, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

Mrs. MILLER-MEEKS introduced the following bill; which was referred to the Committee on _____

A BILL

To amend the Agricultural Research, Extension, and Education Reform Act of 1998 to direct the Secretary of Agriculture to establish a national biochar research network, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the ''Biochar Research Network Act of 2022''

SEC. 2. NATIONAL BIOCHAR RESEARCH NETWORK.

Title IV of the Agricultural Research, Extension, and Education Reform Act of 1998 is amended by inserting before section 404 (7 U.S.C. 7624) the following new section:

"SEC. 403. NATIONAL BIOCHAR RESEARCH NETWORK.

''(a) ESTABLISHMENT.—The Secretary shall establish a national biochar research network of not more than 20 research sites to test the full range of biochar types across soil types, soil conditions, application methods, and climatic and agronomic regions to—

''(1) assess the soil carbon sequestration potential of biochar;

''(2) understand how to use biochar productively to contribute to climate mitigation, crop production, resilience to extreme weather events, ecosystem health, and natural resource conservation; and

''(3) deliver science-based, region-specific, cost-effective, and practical information to farmers, ranchers, foresters, land reclamation managers, urban land managers and other land and natural resource managers and businesses on sustainable biochar production and application.

''(b) SCOPE.—The national biochar research network established under subsection (a) shall encompass agri-

culture, horticulture, rangeland, forestry, and other biochar uses and a broad range of feedstocks, production processes, and application treatments. The research conducted shall include—

''(1) cross-site and mechanistic experiments to—

''(A) fill critical knowledge gaps and gain a more complete understanding of the impact of various types of biochar in varying site conditions on soil properties, plant growth, greenhouse gas emissions, and carbon sequestration in different soils, climates, and other natural and agronomic conditions;

''(B) provide mechanistic and techno-economic insights on thermochemical conversion processes in biochar production and the co-production of biochar and bioenergy, including interactions of feedstock properties with reactor conditions and processes on the relative proportions and properties of biochar, bio-fuels, and value-added co-products, as well as process efficiency;

''(C) generate data to develop, calibrate, and validate robust mechanistic models to predict the full life cycle of greenhouse gas, crop

response, and related agronomic and environmental implications of particular applications of biochar;

''(D) generate data to help guide the design of new, more-efficient biochar and bioenergy production reactors and biorefineries; and

''(E) generate data to develop, calibrate, and validate testing methodologies for biochar to identify potential contaminants or other factors that may cause unintended consequences;

''(2) site-specific farm and forestry systems assessments and pilot-scale biochar production and application systems to—

''(A) refine the most promising soil-based uses, sources, and methods of producing and applying biochar in particular regions to enhance productivity, increase profitability, scalability, and portability, reduce greenhouse gas emissions, improve ecosystem health, and strengthen resilience to extreme weather events, and explore soil, crop, climate, management, and biochar interactions;

''(B) develop new knowledge to support decisions on sustainable production and use of biochar;

''(C) collect relevant data needed for full life cycle greenhouse gas and economic analyses and complete such analysis;

''(D) predict plant-response, soil health, soil carbon sequestration, ecosystem health, water quality, greenhouse gas, and economic outcomes for specific implementations of biochar technology;

''(E) provide data to evaluate local biomass feedstocks, support selection of sustainable biochar production methods, and address biochar production issues; and

''(F) share research results to inform farmers, horticulturalists, ranchers, foresters, urban biochar users, extension agents and specialists, and technical assistance providers on the most advantageous ways to use biochar to increase profitability, raise productivity, lower costs, improve soil and plant health, and enhance resilience to extreme weather events while contributing to carbon sequestration and greenhouse gas reductions.

''(c) ELIGIBILITY.—An entity is eligible to be selected to conduct research funded under this Section if such entity is—

''(1) a State agricultural experiment station or a State forestry experiment station;

''(2) a research facility of the Agricultural Research Service, the Forest Service, or any other agency of the Department of Agriculture that the Secretary determines is appropriate; or

''(3) a research facility of the Department of Energy, the Department of Commerce, or the Department of Interior.

''(d) ADMINISTRATION.—

''(1) IN GENERAL.—The research network established under subsection (a) shall be administered by the Administrator of the Agricultural Research Service, in partnership with Chief of the Forest Service, the Director of the National Institute of Food and Agriculture, the Secretary of Energy, the Secretary of Commerce, the Secretary of the Interior, and, as determined by the Secretary of Agriculture, other agencies of the Department of Agriculture.

''(2) CONSERVATION.—The Secretary, acting through the Natural Resources Conservation Service—

''(A) may develop a practice standard informed by the research; and

''(B) shall coordinate the activities of the research network established under subsection (a) with—

''(i) the development and refinement of a biochar conservation practice standard; and

''(ii) improvements and expansion of conservation program technical and financial support for biochar production and application.

''(e) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to carry out this section $50,000,000 for each fiscal years 2023 through 2028.''.