CASMGS Background Information

Original Authorization:

Public Law 106-224 – The Crop Insurance Reform Act of 2001 established the Consortium for Agricultural Soils Mitigation of Greenhouse Gases (CASMGS) as an official entity. The Consortium for Agricultural Soils Mitigation of Greenhouse Gases (CASMGS) was established to provide information on a comprehensive program of agricultural practices that support greenhouse gas mitigation. The overall goal of CASMGS **is *to provide tools and information to implement mitigation options for agriculture and provide market opportunities for farmers*.**

Why is CASMGS necessary?

The buildup of atmospheric carbon dioxide (CO_2) and other greenhouse gases (GHG) has created concern about the implications on our climate and the environment. Agriculture can help mitigate GHG in a cost-effective and environmentally sound way. Sequestering carbon in agricultural soils and reducing emissions of nitrous oxide (N_2O) and methane (CH_4) can be achieved by a variety of improved management practices. Such practices also generate corollary benefits such as increased soil fertility, reduced erosion and improved soil and water quality. Many of these practices also provide adaptation to climate change by increasing efficient water use, a serious issue in Kansas and the western Great Plains. Properly managed, agriculture can also be a source of renewable energy, thus providing energy security and additional opportunities for the rural economy. Research and outreach is needed to enable implementation of agricultural mitigation options.

CASMGS Priorities: 2007-2012

- Evaluate and make recommendations for 'Best Management Practices' to sequester carbon and reduce net greenhouse gas emissions from soils, in partnership with federal, state and private entities. Evaluate the link between bioenergy production and greenhouse gas emissions in agriculture.
- Provide measurement and monitoring tools for quantifying and verifying soil carbon sequestration rates and greenhouse gas emissions. Establish demonstration projects where needed.
- Predict rates of carbon sequestration and greenhouse gas emissions, provide field- and farm-level decision support tools, and evaluate alternative national economic and policy strategies using integrated models to assess the impacts of mitigation programs on crop production potential, food security, and environmental quality.
- Provide information to stakeholder groups: policy makers, the agricultural sector, energy and transportation industries, the scientific community, and the general public. This will be done through annual and special reports, scientific and trade journals, popular publications and a website (www.soilcarboncenter.ksu.edu). The Center will participate in the transfer and adoption of technology for quantifying and verifying carbon sequestration rates.

CASMGS Funding History:

FY02- Requested - $15 million
Received - $15 million
No additional funds received

FY07 - $1M private grant to Kansas State University as bridge funding for CASMGS

Bill Language:

Public Law 106-224 – The Crop Insurance Reform Act of 2001 named the Consortium for Agricultural Soils Mitigation of Greenhouse Gases (CASMGS) as an official entity.

Congressional Record - 2001

Sec. 221. Carbon Cycle Research

(a) **IN GENERAL**.-- Of the amount made available under section 261 (a)(2), the Secretary shall use $15,000,000 to provide a grant to the Consortium for Agricultural Soils Mitigation of Greenhouse Gases, acting through Kansas State University, to develop, analyze, and implement, through the land grant universities described in subsection (b), carbon cycle research at the national, regional, and local levels.

(b) **LAND GRANT UNIVERSITIES**.--The land grant universities referred to in subsection (a) are the following:

1) Colorado State University
2) Iowa State University
3) Kansas State University
4) Michigan State University
5) Montana State University
6) Purdue University
7) Ohio State University
8) Texas A&M University
9) University of Nebraska

(c) **USE**.--Land grant universities described in subsection (b) shall use funds made available under this section--

1) to conduct research to improve the scientific basis of using land management practices to increase soil carbon sequestration, including research on the use of new technologies to increase carbon cycle effectiveness, such as biotechnology and nanotechnology;
2) to enter into partnerships to identify, develop, and evaluate agricultural best practices, including partnerships between--
    A. Federal, State, or private entities; and
    B. the Department of Agriculture
3) to develop necessary computer models to predict and assess the carbon cycle
4) to estimate and develop mechanisms to measure carbon levels made available as a result of--
    A. voluntary Federal conservation programs;
    B. private and Federal forests; and
    C. other land uses;

5) to develop outreach programs, in coordination with Extension Services, to share information on carbon cycle and agricultural best practices that is useful to agricultural producers; and
6) to collaborate with the Great Plains Regional Earth Science Application Center to develop a space-based carbon cycle remote sensing technology program to--
    A. provide on a near-continual basis, a real-time and comprehensive view of vegetation conditions;
    B. assess and model agricultural carbon sequestration; and
    C. develop commercial products.

(d) **ADMINISTRATIVE COSTS**.--Not more than 3 percent of the funds made available under sub-section (a) may be used by the Secretary to pay administrative costs incurred in carrying out this section.

10. Report Language:

(d) **IN GENERAL**.—The Secretary is authorized to use $xx per year for five years for continuation of the funding of the Consortium for Agricultural Mitigation of Greenhouse Gases (CASMGS), as established by the Agricultural Risk Protection Act of 2000 (Public Law 106-224), to develop, analyze, and implement carbon cycle and greenhouse gas mitigation research at the national, regional, and local levels. The will provide the tools and information needed to successfully implement soil carbon sequestration and greenhouse gas mitigation programs that lower the accumulation of greenhouse gases in the atmosphere, while providing income and incentives to farmers and improving the soil. Other benefits can include an increased and stable agricultural production and a reduction of soil erosion and pollution by agricultural chemicals.

(e) **USE**.—The Consortium shall use funds made available under this section--
1) to conduct research to improve the scientific basis of using land management practices to increase soil carbon sequestration and reduce methane and nitrous oxide flux, including research on the use of new technologies to increase carbon cycle effectiveness;
2) to identify, develop, and evaluate agricultural best practices with response to carbon sequestration, greenhouse gas mitigation, and associated co-benefits and costs in partnership with--
    A. Federal, State, or private entities; and
    B. the Department of Agriculture
3) to predict and assess the carbon cycle and greenhouse gas emissions and mitigation using computer models, databases, and other appropriate tools to evaluate the impacts of alternative policies and strategies for carbon sequestration and greenhouse gas mitigation;
4) to develop mechanisms to estimate and verify carbon sequestration and greenhouse gas reductions made available as a result of--
    A. voluntary Federal conservation programs,

B. private markets; and
C. other land uses;

5) to develop outreach programs, in coordination with Extension Services, to share information on carbon cycle and agricultural best practices that is useful to the agricultural industry, policy makers, energy and transportation industries, and other countries.