Chapter 5. Policy Recommendations

Well-designed climate policies can support rural economic development and advance agricultural goals. The Coalition on Agricultural Greenhouse Gases has developed five policy recommendations for incorporating agricultural GHG emissions reduction activities into U.S. climate change policies and programs.

In summary, C-AGG believes that U.S. climate policy should:

- **Use a variety of policies and programs** to encourage GHG abatement in the U.S. agricultural sector.
- **Use the best available science and technology** to develop and reward GHG abatement activities in the U.S. agricultural sector.
- **Enable the federal government to create institutional arrangements that promote and facilitate improved GHG data collection and analysis**, and ensure accessibility of accurate, current data for all stakeholders.
- **Promote and encourage additional/ancillary benefits and positive impacts wherever possible**, and prevent or minimize any adverse impacts.
- **Enable the voluntary market to play a role in the transition to a fully regulated U.S. greenhouse gas market**, particularly through the development of early offset credits and methodologies.

This chapter provides some details of these recommendations.

First, use a variety of policies and programs to encourage GHG abatement in the U.S. agricultural sector. Agriculture depends on many diverse biological processes and includes a great number of equally diverse actors in managed landscapes. Encouraging changes in practices that achieve quantifiable net GHG reductions in the agricultural sector will require a coordinated framework of programs and policies.

Recognizing this complexity, C-AGG recommends the following approaches to maximize voluntary GHG reductions and increased carbon sequestration from agriculture.

1. GHG offsets and allowance set-aside payments should be made to agriculture within climate policy.

   Offset credit should be issued for real, additional, measurable, verifiable, and permanent or maintained reductions in GHG emissions and increased sequestration.

   Allowance allocation "set asides" can be used to:

   - reward farmers for actions that may not be suitable for inclusion in an offset program,
   - recognize early actors/early actions,
   - fund vital research and development for new GHG emission reduction or increased sequestration activities or technologies, and
   - improve GHG measurement and monitoring tools and techniques.

2. Greenhouse gas mitigation activities that produce measurable, verifiable reductions in GHGs should be incorporated into existing and new Farm Bill programs. Methodologies for agricultural offset credits should be completed by the appropriate federal agency, taking into consideration existing methodologies, within 24 months of enactment of federal climate policy in order to provide market certainty to investors and the agricultural sector.

3. Early action credits, if they are considered, should be awarded in a way that protects the

integrity of the overall mandated reduction (or "cap") on the regulated sectors. Awarding set-aside allowances for early action credits is one way to accomplish this.

Second, use the best available science and technology to develop and reward GHG abatement activities in the U.S. agricultural sector.

1. GHG abatement programs for the agricultural sector should strive toward measured GHG reduction outcomes, when possible, and away from practice-based crediting.

    a. Wherever possible, crediting should be based on scientifically and statistically sound measurement methods rather than being awarded solely on the implementation of a specific practice.

    b. The GHG offset program administrator should evaluate where performance-based crediting systems are possible, and where practice-based crediting methods might be appropriate proxies for performance.

    c. Practice-based crediting methodologies are appropriate if the level of uncertainty in performance as a result of a particular practice can be adequately characterized and accounted for.

2. Accurate, reliable, and affordable measurement and quantification tools and technologies for GHG emissions reductions and increased sequestration within the agricultural sector are needed. A major investment in research and technology development associated with measuring agricultural GHG emissions and carbon sequestration is needed in order to realize agriculture's full GHG mitigation potential. In order to overcome these barriers, research is needed to:

    a. Reduce the costs and improve the accuracy of GHG measurement technology;

    b. Further develop and calibrate modeling tools for a wide range of applications, such as for additional crops, geographies, and management practices;

    c. Enhance access, coordination, and reliability of data sets used for GHG measurement, monitoring, and modeling, particularly across federal agencies; and

    d. Develop comprehensive GHG accounting frameworks for farm-scale agricultural activities. These should quantify and account for all relevant GHG sources and sinks; consider additionality; account for any leakage of emissions outside a project's boundaries that may occur as a result of the implementation of a project, when possible; address permanence and risk of reversal; and distinguish between intentional and unintentional reversals.

3. GHG policies, programs, and rules must incorporate mechanisms that allow for adaptation and adjustment over time to accommodate emerging science, knowledge, technologies, and best practices.

    a. GHG policies should require regularly scheduled reviews of crediting methodologies, processes, and mechanisms.

    b. Programs should allow for needed program adjustments to incorporate the latest science, best practices, and best methodologies.

4. Balancing the economic costs of policies and programs and the GHG and economic benefits is an important issue for the agricultural sector and should be carefully considered in the design of federal GHG programs.

5. A better understanding of the relative costs, and the cost benefits, of emission reduction

opportunities in the agricultural sector is needed.

Third, enable the federal government to create institutional arrangements that promote and facilitate improved GHG data collection and analysis, and ensure accessibility of accurate, current data for all stakeholders.

1. The appropriate federal agency should develop a standardized framework for data collection and analysis for the agricultural sector, which should include participation by other federal agencies with relevant land use jurisdictions and data.

2. The appropriate federal agencies should develop a comprehensive method to catalog and rank various agricultural systems, practices, and activities by region in order to provide estimates of the potential for each to provide net GHG emissions reduction or increased sequestration, and they should evaluate their costs.

3. The system should allow comparative assessments, including cost-benefit analyses across systems and activities to help focus public and private investments on methodologies and protocols for potential market-based offset credits.

    a. The system should help discern which activities qualify for carbon offset credits and which are best addressed through other policies (e.g., through allowance set-asides or farm bill program adjustments).

    b. The system should provide a national pooling of available publicly funded data on soil carbon time series data that document changes in soil stratography, levels of total carbon, soil organic carbon, and soil inorganic carbon, and well-organized geographic databases should be created for stakeholders to use in developing performance-measurement-based carbon projects.

    c. Comprehensive information access, transparency, and accountability provisions should be established for all rulemaking, monitoring, and verification processes associated with the offset program.

Fourth, promote and encourage additional/ancillary benefits and positive impacts wherever possible, and prevent or minimize any adverse impacts. Climate change mitigation policy should take into consideration other ecosystem services, adaptation, and sustainability considerations in order to promote multiple environmental benefits and to prevent or reduce negative environmental impacts.

1. Existing and developing environmental markets beyond GHG markets should be evaluated, and market opportunities for all agricultural stakeholders and participants should be developed where appropriate. An office established to promote ecosystem services within USDA, called the Office of Environmental Services, has begun work on evaluating existing ecosystem services and markets.

2. Accounting frameworks should be developed to accurately assess and evaluate the interactions between various environmental impacts/ outcomes that occur as result of practices implemented due to environmental markets.

3. If multiple environmental commodities are "stacked" (e.g., generating GHG offset credits as well as water quality credits from practices implemented by an agricultural producer), credits should only be awarded for incremental environmental outcomes in order to ensure additionality and prevent double-counting. Further research and policy development is needed to determine best practices and the optimal means of crediting multiple environmental commodities from a single project, activity, or geographic area.

4. Early warning systems and monitoring procedures should be developed to identify any potential unintended negative environmental or other impacts that might occur as a result of the implementation of GHG mitigation activities as soon as possible, including within the land use, agricultural, and forestry sectors. This will enable those impacts to be addressed as quickly as possible.

5. Regulations governing the eligibility of different project types should include appropriate safeguards to protect against negative impacts on public health and/or the environment, including the destruction or temporary conversion of native habitats.

6. Agricultural GHG mitigation efforts should result in net emissions reductions or increased sequestration.

    a. Methodologies to assess aggregate GHG impacts at regional, national, and ultimately, global scales should be developed.

    b. Methodologies should be developed to ensure GHG accounting occurs at the national and international levels wherever possible, and not just at the project level. This will ensure that all relevant GHG emissions are properly accounted for.

Fifth, enable the voluntary market to play a role in the transition to a fully regulated U.S. greenhouse gas market, particularly through the development of early offset credits and methodologies. The voluntary carbon market is an important source of innovation and a test market for new or untried GHG methodologies that could potentially be graduated to mandatory markets as long as they meet the quality criteria standards established by the mandatory offset program.

1. Voluntary markets allow investors and agricultural producers to gain experience and to perfect methodologies and protocols for transactions; they are an important component of long-term GHG mitigation strategies.

2. Existing agricultural methodologies should be prioritized for review and potential approval by the offset program administrator as soon as possible after passage of climate legislation.

3. The offset program administrator should give priority to the development of high-quality agricultural offset methodologies within the first 24 months of the program.

4. A rationale and process for assessing credit for early action projects should be established to provide certainty to participants and investors. Credit should be targeted at activities that reward early actors and early actions to protect and prevent the reversal of existing carbon stocks created or enhanced by these actors/actions, and to avoid perversely penalizing actors/actions taken in advance of mandatory carbon markets.