



12647 Olive Boulevard, Suite 410, St. Louis, MO 63141 • PHONE: (314) 576-1770

April 29, 2021

Dr. Seth Meyer  
Chief Economist  
U.S. Department of Agriculture  
1400 Independence Avenue, SW  
Washington, DC 20250

*Submitted online via the Federal eRulemaking Portal.*

**RE: Notice of Request for Public Comment on the Executive Order on Tackling the Climate Crisis at Home and Abroad (Docket No. USDA-2021-0003)**

Dear Dr. Meyer:

The American Soybean Association (ASA) appreciates the opportunity to submit comments regarding the U.S. Department of Agriculture's (USDA's) climate strategy, as the Department prepares recommendations to expand climate-smart agriculture practices and systems. ASA represents approximately 500,000 American soybean farmers on domestic and international policy issues important to the soybean industry, and has 26 affiliated state associations representing 30 soybean-producing states.

The Executive Order on Tackling the Climate Crisis at Home and Abroad stated: "America's farmers, ranchers, and forest landowners have an important role to play in combatting the climate crisis and reducing greenhouse gas (GHG) emissions, by sequestering carbon in soils, grasses, trees, and other vegetation and sourcing sustainable bioproducts and fuels." We appreciate that acknowledgement and add that American soybean growers have long been committed to producing the world's food, feed, fuel, and thousands of other bioproducts in a sustainable and climate-smart way.

Between 1980 and 2015, U.S. soybean production increased by 120 percent, while yield increases and widespread adoption of conservation practices led to across-the-board natural resource improvements. Over that period, on a per bushel basis, land use by soy growers declined by 40 percent; soil conservation improved by 47 percent; irrigation water use improved by 33 percent; energy use decreased by 35 percent; and greenhouse gas emissions (GHG) decreased by 45 percent.<sup>1</sup>

This trend is set to continue. By 2025, the soy industry has committed to reduce land use impacts by an additional 10% (acres per bushel), reduce soil erosion an additional 25% (acres per bushel), increase energy use efficiency by 10% (BTUs per year), and reduce total greenhouse gas emissions by 10% (pounds CO<sub>2</sub>-equivalent gases emitted per year) compared to 2000. Progress toward these goals is reflected in the Soy Sustainability Assurance Protocol, which assures foreign buyers that U.S. soy—America's #1 export crop—is sustainably produced.

---

<sup>1</sup> Field to Market: The Alliance for Sustainable Agriculture, 2016. Environmental and Socioeconomic Indicators for Measuring Outcomes of On Farm Agricultural Production in the United States (Third Edition).

As we prepare for the future, we remain mindful that sustainability in the face of climate change is core to our growers' business and essential to their success.

To help our farmers achieve their conservation and sustainability goals, ASA has identified five sustainability policy principles, which have guided these comments:

- ASA supports voluntary and incentive-based approaches and opposes mandates or penalties that remove agricultural land from production.
- ASA acknowledges that soybean producers are already employing sustainability practices on their farms, and that policies must include both retroactive supports and prospective incentives.
- ASA believes that there is no "one size fits all" solution to on-farm sustainability.
- ASA believes that farmers must have a seat at the table in climate policy discussions; as USDA develops new climate policies and programs, ASA supports the establishment of technical advisory committees that include agricultural producers.
- And above all, ASA supports policies that will maintain and improve the economic sustainability of soybean farmers across its 30 soybean-producing states.

Below, ASA highlights a variety of opportunities and strategies which reflect these principles, and which will help put U.S. agriculture at the leading edge of conserving our nation's lands and waters.

## **1. CLIMATE-SMART AGRICULTURE AND FORESTRY QUESTIONS**

**A. How should USDA utilize programs, funding and financing capacities, and other authorities, to encourage the voluntary adoption of climate-smart agricultural and forestry practices on working farms, ranches, and forest lands?**

***1. How can USDA leverage existing policies and programs to encourage voluntary adoption of agricultural practices that sequester carbon, reduce greenhouse gas emissions, and ensure resiliency to climate change?***

The voluntary, incentive-based conservation programs managed by the Natural Resource Conservation Service (NRCS) and Farm Service Agency (FSA), including the Conservation Stewardship Program (CSP), Environmental Quality Incentives Program (EQIP), Regional Conservation Partnership Program (RCPP), Agricultural Conservation Easement Program (ACEP), and Conservation Reserve Program (CRP), as well as the financial cost share and technical assistance provided by the agencies, already generate countless climate-smart benefits. Many conservation practices enabled by these programs enhance soil health, improve our nation's waters, and make our producers' operations more resilient to extreme weather events. ASA recommends the following measures that will support the voluntary adoption of additional conservation practices by American farmers.

### *General measures*

The key to engaging and empowering farmers to act on climate change is to make the business of sustainability profitable and resilient. For many growers, climate-smart agricultural practices are only possible if a farming operation can recover the costs of implementation and maintain profitability while the practice is in place. However, there are many scenarios that can negatively impact a growers' finances and deter them from continuing or expanding practice adoption. For instance, the benefits from implementing conservation practices may be delayed and spread over many years, and so the initial costs

of conservation practice implementation may not be recovered for a significant period of time (i.e., years). In addition, severe and unpredictable weather events may derail a years-long conservation practice, requiring seemingly counterintuitive remediation (e.g., tillage). It is essential that growers are properly incentivized to adopt climate-smart practices and maintain them for multiple years, and that conservation plans allow for flexibility and adaptive management to ensure long term conservation success.

“Early adopters,” those growers who have already been practicing conservation for many years both in and out of USDA’s programs, need to be eligible across the full suite of NRCS’ conservation programs. NRCS may consider providing these farmers with incentives to maintain a conservation baseline but may also consider offering a broadened menu of climate smart practices and enhancements that encourage early adopters to go further with their conservation. Without recognizing these contributions, USDA risks alienating these producers by limiting their involvement in NRCS programs at best; worst case, early adopters facing competitive market pressures may reverse longstanding conservation practices to be admitted into USDA programs or private sector ecosystem services markets.

NRCS should work to ensure producers can incorporate new conservation technologies and innovations into their operations as soon as possible. Currently, it takes several years for USDA to approve new conservation practices. Expediting the timeline for new practice creation—for instance, by judiciously employing modeling and machine learning, instead of in-field trials—and providing a greater variety of enhancement options would benefit producers and the environment.

Agricultural drainage, if done correctly, can play an important role in combatting climate change and making farms more resilient to the sorts of weather events that are and will continue to be more frequent. Where appropriate and necessary, proper drainage decreases GHG emissions by reducing the amount of fertilizer required; drier soils release fewer GHGs; conservation practices paired with tile drainage can reduce nutrient runoff into water bodies; and drainage systems prevent disease and poor root growth caused by wet soils. Similarly, irrigation in certain regions is critical to producing a vibrant, mature, full growth crop, which maximizes the amount of carbon sequestered, and fertigation can enable application of multiple, smaller doses of fertilizer to a growing crop, reducing nitrate leaching into groundwater. NRCS should consider augmenting locally appropriate drainage and irrigation offers when designing conservation enhancements or new initiatives to tackle climate change.

Many important conservation practices are enabled by grower access to crop protection tools, including pesticides, herbicides, fungicides, and insecticides. USDA should continue to work with the Environmental Protection Agency (EPA) and other relevant agencies to maintain robust producer access to crop protection tools that facilitate conservation practice adoption. Loss of crop protection tools would negatively impact many farmers’ ability to implement conservation practices.

USDA must also minimize bureaucratic hurdles and simplify the process for growers to enroll in USDA programs and multi-year contracts. The Department should build on the early successes of NRCS’ new Conservation Assessment Reporting Tool (CART) and should digitize as much of the program enrollment process as possible, while also working to ensure the algorithms behind CART are carefully built to reflect the specific intent of each conservation program so producers are appropriately scored and ranked.

Lastly, while USDA will receive many thoughtful and innovative suggestions on how to leverage its existing policies and programs, ASA urges the Department to maintain focus on its core functions, including customer service, technical assistance, and grower education. USDA has experienced significant

turnover of its staff in recent years, and many customer-facing positions remain unfilled. There is also a need for stronger, regionally focused educational programming that can help local farmers understand the costs and benefits of specific practices and identify the types of practices that will work best in their region. USDA should ensure that NRCS, state conservation agencies, local conservation districts, and other partners can provide adequate climate-smart outreach, technical assistance, education, and conservation planning to growers. This should include an enhanced customer-service focus for USDA personnel at the local level who work with farmers to adopt new practices and to understand and implement program requirements.

#### *Working Lands Programs – CSP, EQIP, and RCPP*

Working agricultural lands have significant potential to sequester and store carbon. To ensure that USDA's working lands conservation programs are as effective as possible, NRCS should offer soil health enhancement bundles that support soil testing and measurement, reporting, and verification of conservation outcomes by third parties, while maintaining the confidentiality and non-public disclosure of individual producer data. Data collected and shared in aggregate with NRCS will allow the agency to make ongoing improvements to its conservation programs and will provide critical data to private ecosystem markets and supply chains on the environmental impact of conservation practices.

NRCS should further direct limited funding toward practices with multiple resource benefits, including soil health water quality and quantity, biodiversity, air quality, farm resilience, and carbon storage; practices with high carbon benefits but low financial or yield return to farmers; transition assistance and/or risk management protection for adoption of practices that can provide benefits to producers, such as cover cropping; and incentives for on-farm energy conservation and low-carbon renewable energy production such as the Renewable Energy for America Program (REAP).

#### *Protecting sensitive and marginal lands – CRP and other programs*

As private sector ecosystem service market options increase and mature, USDA should clarify in its rules and contracts that the sale of carbon, water quality, or environmental credits is a permitted use on CRP and ACEP (Agricultural Land Easement Program) acreage, to ensure producers can participate in private, voluntary ecosystem services credit markets when participation is consistent with the program contract.

ASA also urges USDA to consider the global environmental implications of placing too much emphasis on CRP and easements as a tool to tackle climate change. Because our farmers compete in a global marketplace, set asides here in the U.S. will result in unintended, increased offshoring of emissions that would otherwise be sequestered on U.S. working farms. For instance, harvested acres in the U.S. have increased by just 6% since 2006, but the increases abroad have been dramatic: 66% in Brazil, 36% in Russia, 24% in India, and 23% in China. Most of this new cropland is the result of deforestation in some of the world's most productive carbon sinks, including in the Amazon rainforest. Global demand for agricultural commodities continues to grow, so setting aside U.S. cropland and reducing U.S. production to achieve domestic climate goals will result in increased production and decreased GHG sequestration at potentially much greater levels abroad.

NRCS and FSA can strengthen the GHG sequestration potential on sensitive and marginal lands through programs like CRP, Wetland Reserve Program (WRP), Sodsaver, Swampbuster, and conservation compliance. Incentivizing growers for long-term carbon storage and biodiversity improvements, while maintaining flexibility in those programs to allow haying, grazing, and other locally environmentally

compatible uses, would benefit producers and the environment. It is essential with these and similar programs that USDA remains the agency of authority, rather than EPA or the Department of the Interior (DOI).

USDA can encourage public-private partnerships to help farmers voluntarily preserve agricultural lands for production, where appropriate, by expanding the ACEP-Agricultural Land Easement (ALE) program. To incentivize climate-friendly capital investments, USDA could create pathways to connect producers to federal, state, and local programs that provide cost-share assistance, tax benefits for installation of methane digesters or conservation easements, or tax appraisals of farmland that consider carbon storage potential.

## **2. What new strategies should USDA explore to encourage voluntary adoption of climate-smart agriculture and forestry practices?**

### *Precision Agriculture*

A recent ASA-sponsored study found that precision agriculture technology used by farmers—such as auto guidance, precision irrigation, variable rate application, telematics, and section control—resulted in many conservation benefits, including:

- More efficient land use, preventing conversion of 10.2 million acres of land to cropland;
- More precise application of fertilizer, reducing GHG emissions by greater than 15%;
- Reduced fuel use, equivalent to removing 193,000 cars from roads annually;
- More precise application of herbicides, resulting in a reduction of 30 million pounds of herbicide applied;
- More precise application of water, reducing water inputs by four percent or 750,000 Olympic swimming pools; and
- Over 10 million metric tons of CO<sub>2</sub> equivalent emissions avoided because of precision agriculture adoption.

However, depending on the specific technology, as few as 12% of farmers are currently using precision agriculture. Increased adoption of precision tools by farmers will compound increases in yields, avoided emissions, and input savings.

NRCS should explore opportunities to recognize precision agriculture as a conservation practice capable of improving environmental outcomes in production agriculture, as well as create and offer enhancements that provide cost-share to help producers buy precision agriculture equipment. USDA can also use its grant and loan programs to support growers who wish to upgrade their equipment to achieve climate-smart outcomes.

## **B. How can partners and stakeholders, including State, local and Tribal governments and the private sector, work with USDA in advancing climate-smart agricultural and forestry practices?**

### *Global engagement*

Some international governments have proposed measures that could obstruct a predictable, level playing field for U.S. farmers competing in today's global agricultural marketplace. ASA asks that USDA remain mindful that climate change is a global problem, that the U.S. only produces 15% of the world's GHG

emissions, and that agriculture is responsible for less than 10% of total U.S. emissions.<sup>2</sup> The U.S. agriculture industry is already leading the world in sustainability and efficiency.

Leveraging its trade authorities, USDA can work with international partners and stakeholders to ensure a level playing field for U.S. farmers engaged in climate-smart agriculture and ease of movement for technology-based goods that will help growers adapt to and mitigate climate impacts (including genetically engineered seeds, new crop protection solutions, and precision agriculture technology). USDA should support:

- Collaboration with international partners to set shared climate goals for agriculture, and end export subsidies and trade barriers to increase deployment of green technology (including agricultural inputs);
- U.S. government intervention when trade barriers or restrictions are imposed on U.S. agricultural products, including the implementation of carbon border taxes or border adjustments;
- Bilateral and multilateral trade deals which are science-based and advance innovations in crop protection and plant breeding;
- International recognition and acceptance of carbon and ecosystem service credits generated by U.S. farmers; and
- International policies that set environmental standards for agriculture that do not exceed U.S. federal standards.

### **C. How can USDA help support emerging markets for carbon and greenhouse gases where agriculture and forestry can supply carbon benefits?**

USDA's support and oversight of private, voluntary agricultural opportunities for carbon and greenhouse gases may be essential to ensuring stability and grower confidence in the marketplace. As the Department works with private-sector markets to build upon NRCS' programs to further scale conservation on U.S. farmland, ASA requests that USDA consider the following key measures when engaging with the private sector.

The government should work to leverage private sector resources without undermining private voluntary markets or duplicating efforts, such as by creating new protocols or market standards. USDA can provide best available, science-backed data to growers and other market stakeholders and cost-share for conservation planning for participation in ecosystem service markets.

It would also be appropriate for USDA to provide oversight of the private sector marketplace. A standardized USDA-backed certification for qualified technical assistance providers and credit protocol verifiers will improve farmers' willingness to sell credits, as will USDA oversight of the collection, storage, and usage of producers' farming data. Data collection should be streamlined, and a high priority should be placed on producer data privacy.

USDA should additionally work with markets to allow growers the flexibility to adjust sequestration or emission-reduction strategies to adapt to local conditions and various crops and farming practices. Growers should not be penalized for using the best and most efficient technology and farming practices.

---

<sup>2</sup> Environmental Protection Agency, "Global Greenhouse Gas Emissions Data," April 2021, [www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data#Reference%202](http://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data#Reference%202)

As noted above, it is essential that the sale of carbon, water quality, or environmental credits is a permitted use on CRP and ACEP acreage. Farmers must be able to gain enough financial benefit to incentivize their participation. Lastly, any new ecosystem banking initiatives at USDA should be funded by newly appropriated dollars, rather than siphon funds from existing conservation or farm program accounts.

#### **D. What data, tools, and research are needed for USDA to effectively carry out climate-smart agriculture and forestry strategies?**

Important conservation practices, such as reduced or no-till soil management, pollinator habitat establishment, tank mixing, or cover crop use, are enabled by modern, climate-smart agricultural tools, including biotechnology, pesticides, and precision agriculture technologies. These practices can improve carbon sequestration, reduce tractor fuel use, reduce soil erosion, increase soil moisture, increase nutrient retention, increase water infiltration, and reduce other crop inputs, among other benefits. USDA should prioritize strategies that improve access to or reduce barriers to these tools that improve climate outcomes.

##### *Biotechnology*

For U.S. farmers to remain at the forefront of sustainability, they need access to as many new crop varieties as possible. Biotechnology enables this access. Traditional biotechnology has already demonstrated immense value for agricultural production in the face of climate change, for instance by improving soil health by enabling conservation tillage and reducing the number of passes required per field. Herbicide-resistant seed technologies and their companion herbicides have reduced weeds and enabled no- and reduce-till technologies, improving soil health and reducing erosion, runoff, and GHG release. Newer innovations can increase plant and root growth to increase the level of carbon transferred from root systems to soil. And further adoption of new technologies, including gene sequencing, editing, and other innovations in plant breeding will enable farmers to grow drought- or heat-resistant varieties and those with greater carbon storage potential, improving productivity in an uncertain future.

USDA should continue to fund research and partner with public and private sector stakeholders making further advancements in crop genetics, and encourage development of plant and animal varieties that will help the environment and global consumers. This includes supporting the National Institute of Food and Agriculture (NIFA), Agricultural Research Service (ARS), and university extension services as they research genetic sequencing of species, varieties, and traits that may have conservation benefits for agricultural production (e.g., improved water management, carbon sequestration potential, etc.) or may support sustainable end uses (improved biofuel potential, reduction of food waste, etc.).

USDA should also continue its work internally and with other relevant agencies to prevent unnecessary regulatory burdens (including those for which risks are improperly assessed or costs outweigh benefits) from inhibiting research, development, or deployment of genetic innovations; continue to educate consumers and end users on the benefits of these applications; and work to ensure global market opportunities that do not impede innovation.

##### *Crop Protection*

Many important agricultural conservation practices, including those with demonstrable GHG reduction benefits, are enabled by grower and user access to crop protection products. For instance, reduced tillage

and cover crops at scale are both made possible because of the selective use of herbicides to manage weeds and prepare fields for planting.

Crop protection-enabled conservation is also essential in helping farmers adapt in the face of increased pressures that will result from a changing climate. Crop pests can be expected to migrate to new regions of the country as growing regions shift, and hotter, wetter conditions caused by extreme weather events will necessitate the use of fungicides and insecticides. Continued access by farmers to safe, effective crop protection will be essential to ensure that U.S. farm operations can remain sustainable.

To ensure this access, USDA should increase research at USDA-NIFA, USDA-ARS, and extension services on herbicide resistance, secondary pest challenges that may arise from certain conservation practices (e.g., cover crops/residue housing insect pests), and the ability of precision agriculture equipment to optimize crop protection use, reduce risks of off-target applications, and minimize resistance pressures. As with biotechnology, USDA should also work to educate consumers on the climate-smart benefits of chemical crop protection, and work to ensure global trade partners do not hinder innovation.

#### *Precision Agriculture, Broadband, and Data*

As with genetic innovation and modern crop protection tools, improvements in data collection, management, and precision agriculture will improve crop productivity and environmental sustainability and should be a feature of USDA's climate strategy. As mentioned above, USDA should help growers adopt precision agriculture technology by directing funding to cost share, grant, and/or loan programs to reduce the cost to growers for buying precision agriculture equipment.

In addition, many of these tools require access to high-speed, wireless internet to be fully used, but broadband access continues to be unavailable in many rural areas. A recent United Soybean Board study found that nearly 60% of U.S. farmers and ranchers believe they do not have adequate internet connectivity to run their businesses, and the study highlighted direct links between connectivity-driven technology that farmers want to use and the sustainability of their operations. Fully extending broadband access to rural communities should continue to be a priority for USDA and the federal government to facilitate access to precision agriculture technologies and their related climate-smart benefits.

In addition, as farmers increase adoption of these tools, they will generate increasingly vast amounts of data. This data can already enable real-time decision making about conservation decisions, and in the future will power machines like drones that survey fields for stressors like pests or drought, or robots that precision-apply nutrients, water, and crop protection inputs to each specific plant in a field.

This data has direct benefits to the farmer, but it can also help USDA. USDA should continue its efforts to streamline data collection for conservation practices, drawing directly from internet-connected third-party machinery and farm management systems with grower permission. This data—protected by the strongest farmer-level confidentiality assurances—could improve the timeliness and quality of information reported to and by USDA, both alleviating burdens on growers and providing improved information to instruct conservation program design and implementation.

Lastly, NRCS' new Conservation Application Ranking Tool (CART) so far seems to be successful in streamlining and ranking producer applications across programs. USDA should consider integrating CART with the individual grower dashboards on farmers.gov to further modernize the conservation program application process and return data analysis back to producers.



USDA may consider convening a working group of growers, farm machinery companies, and other stakeholders to discuss further opportunities for data modernization and improvement.

### *Research*

USDA needs to expand its collaborations with public and private sector researchers to better understand the environmental impacts of agricultural practices intended to store carbon and other GHGs across farming regions and soil types. Although researchers have found that practices like cover cropping, soil amendments, and managed grazing have soil health benefits, their success at sequestering GHGs in the long term is less clear.

To maintain the integrity of private sector carbon markets, the various carbon accounting systems and registries require that practices used to mitigate climate change through carbon capture create permanent and measurable sequestration, a standard that is difficult for many agricultural conservation practices to meet. In addition, there is no uniform standard for measuring carbon sequestration in soil, either geographically or over time. It is vital that USDA support research that helps farmers—and public and private ecosystem service market developers—better understand how to achieve climate-smart outcomes at scale.

ASA also calls for more research into cover crops, which could increase their use and result in improved climate-smart outcomes. The general benefits of cover crops are well documented, which include improving soil quality; supplying forage for livestock; establishing pollinator habitat; reducing soil compaction and erosion, among many others. However, added research into cover crop varieties for different latitudes, soil types, and climatic conditions may help improve the breadth of cover crop adoption.

To increase adoption and maximize benefits, USDA should also invest in research into cover crops as secondary cash crops. With the enormous diversity of cover crops available, these secondary markets could provide sources of revenue for growers and provide new sources of food and feed, fiber, or feedstocks for biofuels or other end uses, while compounding the soil health, water quality, and GHG sequestration benefits.

USDA's interagency cover crop working group should also expand its scope to develop a comprehensive cover crop strategy that helps growers identify cover crop options that meet their specific agronomic needs; identify legal or regulatory hurdles that may prohibit adoption; and consider challenges to cultivation or marketability for existing cover crop options that can be addressed through breeding, genetic innovation, or refined planting or termination techniques.

### **E. How can USDA encourage the voluntary adoption of climate-smart agricultural and forestry practices in an efficient way, where the benefits accrue to producers?**

Many of the actions already noted would encourage the efficient adoption of climate-smart agricultural practices where the benefits accrue to producers. However, one of the largest challenges USDA must address is effectively communicating these benefits to farmers. USDA should not overlook the importance of a well-trained, locally led network of technical assistance providers who will work with farmers to adopt new practices, understand and implement program requirements, and appreciate the larger environmental and societal benefits of climate-smart agriculture.

In addition, USDA's support of agricultural innovation (including crop protection and biotechnology) through smart regulation and research will make farming more adaptable, resilient, and profitable. As will improving access to digital tools, through broadband expansion, increased precision agriculture use, and data modernization. And fair global markets for farm inputs and goods and a thriving private sector ecosystem services marketplace will further create and diversify sources of income for U.S. growers. ASA believes our above recommendations will help engage farmers to act on climate change by making sustainability profitable and resilient.

## **2. BIOFUELS, WOOD AND OTHER BIOPRODUCTS, AND RENEWABLE ENERGY QUESTIONS**

### **A. How should USDA utilize programs, funding and financing capacities, and other authorities to encourage greater use of biofuels for transportation, sustainable bioproducts (including wood products), and renewable energy?**

#### *Sustainable Bioproducts*

U.S. soy is already used in approximately 1,000 commercially available biobased products, including soy-based asphalt, insulation, paints, firefighting foam, cosmetics, tires, and more. Improved promotion, research, and public-private partnerships between USDA and stakeholders could help encourage greater use of these products, creating social and environmental benefits.

The U.S. government is the single largest consumer in the world, buying more than \$550 billion in goods and services each year—a streamlined approach to federal procurement that prioritizes bioproduct usage would significantly boost the biobased sector, creating scale and incentivizing new products and efficiencies in the bioproduct supply chain. The federal government should streamline its procurement processes, incorporate specific biobased language into its contracts, and encourage the use of bioproducts by federal contractors.

At USDA, the BioPreferred Program, which promotes bioproducts through a voluntary labeling initiative and a mandatory purchasing requirement for federal agencies and their contractors, already promotes many soy-based products. ASA supports expanding USDA's BioPreferred product list and encourages USDA to actively promote the biobased product label to increase acceptance and use of soy-based products by consumers and industry.

Additionally, USDA's Rural Development programs could encourage public-private partnerships to use bioproducts, including for roads, bridges, and other traditional infrastructure projects. Opportunities also exist to encourage and help farmers to use bioproducts by leveraging conservation programs at NRCS, such as EQIP. For instance, new or revised conservation practices could incentivize use of bioproducts including motor oils, tires, and products like soy-protein based seed lubricants, all of which can help improve a farmers' overall environmental footprint.

Public sector research conducted by or funded by USDA can also support the biobased sector. More research on soybean composition should focus on enhancement of industrial applications (including bio-based energy) and life cycle analysis to support the bioproducts industry.

Lastly, the USDA Foreign Agricultural Service can champion and help U.S. biobased manufacturers in developing new export markets.

## *Biodiesel*

Biodiesel helps farmers and rural communities across the country, increases the diversity of our fuel supply, contributes to our energy independence, reduces emissions, and provides additional markets for soybean farmers.

Biodiesel and renewable hydrocarbon diesel are made from a variety of readily available feedstocks, including soybean oil. Biodiesel and renewable hydrocarbon diesel reduce GHG emissions by at least 50% compared to petroleum diesel. And, depending on the feedstock used, biodiesel and renewable hydrocarbon diesel can reduce emissions by more than 80%. Soybean oil, specifically, reduces GHGs by 66%. Biodiesel and renewable hydrocarbon diesel offer an immediate opportunity to lower emissions using already available technologies.

To capture the greater environmental benefits brought by biodiesel, ASA encourages USDA to continue to engage with the EPA to ensure faithful implementation of the Renewable Fuel Standard, including significantly increasing annual volume obligations for biodiesel and advanced biofuels. USDA could also encourage greater availability of biodiesel at commercial fueling stations through grants or loans, and could use Rural Development programs like the Higher Blends Infrastructure Incentive Program to offer greater incentives for the deployment of fueling and distribution infrastructure for ethanol and biodiesel generally. In addition to supporting access and availability of biodiesel, USDA may also provide incentives to agricultural producers and haulers to buy biodiesel or other biofuels to fuel their farm machinery and agriculture hauling equipment.

Additionally, ASA supports updated life cycle GHG calculations for biofuels. These calculations should consider fuel crops' ability to take up and sequester carbon; only consider indirect land use changes in a science-based and verifiable way; and account for on-farm biodiesel consumption in machinery, which would further decrease the life cycle GHG calculation for those products.

USDA should consider multiple approaches to capturing the full environmental benefits of biodiesel. For example, the Department should work with other relevant agencies, such as the Department of Energy and Department of Transportation, and the states to incentivize transportation sectors that would be difficult to electrify, such as air and ocean fleets, to utilize biodiesel fuels. Moreover, there are existing programs at the Department, including the Biodiesel Fuel Education Program the Bioenergy Program for Advanced Biofuels, and the previously mentioned Higher Blends Infrastructure Incentive Program which support and promote expanded production, accessibility, consumption, and investment in biodiesel and renewable hydrocarbon diesel. USDA should increase investment in these programs to raise awareness of the benefits of biodiesel and biofuel use.

### **B. How can incorporating climate-smart agriculture and forestry into biofuel and bioproducts feedstock production systems support rural economies and green jobs?**

The economic impact of soybean production in the U.S. is immense, with a total impact on America's economy of almost \$116 billion and supporting 280,000 paid jobs and \$11.6 billion in wages.<sup>3</sup> The economic benefits compound when you consider the broader plant-based products industry, which contributes \$459 billion to U.S. economic activity and provides over 4.65 million jobs.<sup>4</sup> Regardless of the

---

<sup>3</sup> LMC, "Report: The Economic Impact of U.S. Soybeans and End Products of the U.S. Economy," November 2019

<sup>4</sup> Plant Based Products Council, "Economic Impact of the Plant-Based Products Industry," April 2021, [pbpc.com/plant-based-economic-impact/](https://pbpc.com/plant-based-economic-impact/)

life cycle stage—producing, delivering, storing, crushing, refining, or shipping and distributing bioproducts—nearly every step takes place in rural America. By encouraging greater use of bioproducts, USDA naturally focuses the associated jobs and investments into small communities.

Further, biorefineries and industry facilities are often located near agricultural feedstocks. Encouraging climate-smart production of renewable feedstocks for biobased products, including by implementing the practices and program improvements discussed in the Climate-Smart Agriculture section above, will create jobs in farming, research and development, engineering, transportation, and more, and deliver those economic returns into rural economies.

**C. How can USDA support adoption and production of other renewable energy technologies in rural America, such as renewable natural gas from livestock, biomass power, solar, and wind?**

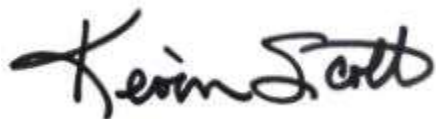
USDA is well positioned to help support adoption and production of renewable energy technology by rural farmers who are eager to improve the energy efficiency of their operation, both to realize cost savings and to achieve environmental goals. One easy step would be to offer incentives to producers to buy biodiesel or other biofuels for their farm machinery, which could be done through programs like EQIP.

However, for growers who wish to implement renewable energy technologies like wind and solar that require capital investment, startup costs can be prohibitive. ASA urges USDA to consider offering more grant and loan opportunities, for instance through REAP or Rural Development programs, to help farmers make their operations more energy efficient—and possibly even energy independent. Helping farmers to reduce reliance on the electric grid could incentivize them to invest in renewable energy and energy efficient technologies, improving the air quality and environment of rural populations.

+++++

ASA is eager to support USDA's efforts to expand conservation practice adoption and the use of biofuels and bioproducts in an effective and durable manner that transcends parties and administrations. On behalf of America's soybean farmers, we appreciate this opportunity to comment, and look forward to working with USDA, its partner agencies, and other relevant stakeholders to enact policies that will tackle the climate crisis.

Sincerely yours,

A handwritten signature in black ink that reads "Kevin Scott". The signature is written in a cursive, flowing style.

Kevin Scott  
President