

April 29, 2021

Submitted via www.regulations.gov

Attention Docket ID No.: USDA-2021-0003

William Hohenstein
Director, Office of Energy and Environmental Policy
U.S. Department of Agriculture
1400 Independence Ave SW
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**RE: Comments of the National Pork Producers Council on Request for Comments:
Executive Order on Tackling the Climate Crisis at Home and Abroad**

Dear Mr. Hohenstein:

The National Pork Producers Council (NPPC) appreciates the opportunity to respond to the U.S. Department of Agriculture's (USDA) Request for Comment on President Biden's Executive Order on Tackling the Climate Crisis at Home and Abroad. NPPC is a national association representing 42 affiliated state associations and America's pork producers, who annually generate approximately \$23 billion in farm gate sales. The U.S. pork industry supports more than 500,000 domestic jobs, generates more than \$39 billion of gross national product, and exports an increasing volume of product, which in 2020 was valued at more than \$7.7 billion.

U.S. pork production is a vibrant sector of rural America, and our producers are deeply committed to supporting the economic and environmental sustainability of their communities and country.

U.S. pork producers have a long-standing commitment to environmental stewardship, helping to preserve our air, land and water for future generations. We take this responsibility seriously and our producers have made significant commitments to address environmental conservation and greenhouse gas emission reductions.

NPPC is proud of the reputation the U.S. pork industry has earned for initiating innovative environmental improvement programs over the past few decades, and we continue to seek ways to further reduce our environmental footprint.

America's pork producers welcome the opportunity to work with USDA, the Environmental Protection Agency (EPA) and other government and industry stakeholders to further reduce emissions through a variety of practices, including methane capture and manure management. Thanks to these innovations, only 0.45% of total U.S. greenhouse gas (GHG) emissions are attributable to U.S. pork production, according to the EPA.

While the pork industry's share of total U.S. greenhouse gas emissions is quite small, there is still a real contribution to be made to agriculture's collective efforts to reduce emissions.¹ In support of that objective, we offer the following responses to the questions posed by USDA's request for information.

We caution USDA and other government stakeholders to consider the broader, critical implications of policies and measures that could significantly reduce the tremendous efficiencies that have already been achieved by U.S. pork producers over the last several decades. Avoiding or ending such policies and measures could cause environmental backsliding, negating years of progress and harming our natural resources.

Efficiency and Reducing GHG Emissions

Efficiency across the pork production lifecycle have led to dramatic GHG emission reductions, making the U.S. pork sector a global model for environmental sustainability. Pork is the preferred source of protein for much of the world, and the efficiency gains achieved by U.S. pork producers are critical to meeting worldwide demand for animal proteins without compromising progress on GHG emissions and other environmental objectives.

For example, [a study of the changes in the pork sector's production footprint between 1959 and 2009²](#) found the total number of animals sent to market during this period increased by 29 percent, achieved with a 39 percent smaller breeding herd, while increasing the total quantity of pork produced by two and a half times. These and other astounding increases in productivity and efficiency (feed-use efficiency, reduced animal mortalities, water-use efficiencies, etc.) resulted in a 35 percent reduction in the GHG emissions across the pork production lifecycle.

Reports produced by the United Nations' Food and Agriculture Organization (FAO) have long highlighted the critical role that efficient, modern agriculture must play in meeting worldwide demand for food and the growth in demand for animal proteins. Its 2013 report, "Tackling Climate Change Through Livestock; A Global Assessment of Emissions and Mitigation Opportunities," found that animal agriculture is responsible for 14.5 percent of global GHG emissions. Yet the FAO found in its 2006 report, "Livestock's Long Shadow," that U.S.-style animal feeding operations (all species) accounted for only five percent of GHG emissions worldwide. This finding is comparable to the results of the U.S. EPA's inventories of U.S. GHG emission sources, which, as noted earlier, found animal agriculture accounted for about 4.5 percent of U.S. emissions. The FAO's 2013 "Tackling Climate Change" report stresses that efficient practices are the "key to reducing emissions."

¹ Working from the U.S. Environmental Protection Agency's [2021 Report](#) on its inventory of U.S. GHG emissions, approximately 10% of total U.S. emissions are attributable to agriculture, of which EPA's reported swine manure management and use emissions (CH₄ and N₂O) represented about 4.5 percent of that total, giving swine approximately .45 percent of all U.S. emissions. <https://www.epa.gov/sites/production/files/2021-04/documents/us-ghg-inventory-2021-main-text.pdf>

² <https://www.porkcdn.com/sites/research/ResearchDocuments/10-174-Boyd-Camco-final-5-22-12.pdf>

According to the FAO, efforts to reduce emissions are largely based on technologies and practices that improve production efficiency at animal and herd levels. These practices include:

- better quality feed and feed balancing;
- improved breeding and animal health, which reduces the number of animals lost throughout their lifecycle; and
- high-quality manure management practices to ensure nutrient recovery and recycling.

FAO also reports that most of these mitigation efforts provide both environmental and economic benefits, contributing to food security and economic development.

The U.S. pork sector lifecycle analyses conducted to date highlight several areas of research and development that could further improve the efficiency of swine production, including:

- Genetic improvements, which could reduce mortality, morbidity, feed-use efficiencies, the number of piglets per sow and optimal weights per finished pig. These improvements can lead to lower total swine herd size, reducing the land and energy needed in the lifecycle of producing market hogs while lowering emissions and reducing the industry's environmental footprint.
- Feed manufacturing and composition innovations involving techniques like pelletization, or the use of products like dried distillers' grains, which could increase feed-use efficiency, further reducing land and total energy needs to produce market hogs.

U.S. pork producers are in varying stages of adopting the currently available efficiency improving measures like those listed above. Research could expand the number and effectiveness of these measures, as well as promote their adoption.

These and other sources of efficiency gains will only result from further development and application of good science. America's pork producers raise pigs with a shared commitment to delivering affordable, quality meat to markets worldwide, while caring for people, the environment, animals and communities. Again, we must remain careful not to negate the significant progress made by our producers. Unfortunately, there are efforts underway to reject the clear and sound science of our highly efficient agriculture system.

Take, for example, California's Proposition 12, which imposes highly prescriptive requirements on pork producers who want to sell into the California market. These prescriptive standards eliminate the use of important tools for animal care that will reduce the efficiency of hog farms by dramatically increasing mortality rates and decreasing both conception and feed efficiency rates. Furthermore, Prop 12 will require most pork producers across the country to either construct new farms altogether or reduce the efficiency of their existing barns anywhere from 30% to as much as 75%³, leading to increased GHG emissions and a greatly expanded environmental footprint.

³ In addition to the profound negative impact Proposition 12 will have on the industry's environmental performance, Proposition 12 is also clearly in violation of the constitution's dormant commerce clause and

Other regulatory policies similarly not grounded in science have the potential to reduce efficiencies or prevent operations from achieving their full efficiency potential. Limiting hog farming operations by restricting expansion can make it impossible to reach the scale needed to finance new technologies, such as anaerobic digestion to produce, capture and recycle biogas. Similarly, certain operational scale in some parts of the country is needed to take advantage of advanced technologies that allow manure to reach its full potential as a substitute for commercial fertilizers and their associated carbon footprints.

U.S. pork producer commitment to environmental stewardship is clear. Science must continue to play a major role in further improvements. As it considers federal environmental policies, it is critical that USDA recognize the role of science and innovative technologies in achieving efficiencies that will allow U.S. agriculture to further reduce its footprint. We encourage USDA to fully support and advance these efficiencies and the science behind achieving them. In doing so, we can meet U.S. and worldwide demand for nutritious pork and other meat proteins without compromising environmental objectives.

USDA's Climate-Smart Agriculture Programming

USDA's in-house research capabilities and its programming to support research and extension efforts in universities can play a critical role in advancing an even more efficient U.S. pork production system. NPPC would welcome the opportunity to meet with USDA's research leadership to discuss programming in support of this objective and the benefits it would provide, including further reductions in GHG emissions.

The ability of U.S. pork producers to participate in carbon credit markets is limited due to the lack of authoritative estimates of the emissions reduced or carbon sequestered due to manure-management practices. Of course, this is not the case with anaerobic digestion of swine manure and the capture and use of the methane they produce, which can be measured. USDA could advance GHG emissions reduction and U.S. pork producer participation in carbon markets if there were better measures to manage the relatively small amounts of methane lost from deep pit systems, the reduction in emissions of nitrous oxide from soils fertilized with manure and reduced emissions for the substitution of manure for commercial nitrogen fertilizer.

Fortunately, the UN Food and Agriculture Organization recently created a Technical Advisory Group to work on some of these issues. The groups should have a draft report available later this summer. NPPC has also engaged academic institutions to identify productive and useful areas of further research. That literature review will also be completed in July. We ask that USDA continues its deliberations on these topics and meet with us later this summer once that work is available.

California, rather than being a leader in efficiency and combating the challenges of climate change, is attempting to force its ill-considered strategies across U.S. agriculture and set the entire nation back.

Use of the Commodity Credit Corporation to Support Carbon Markets

NPPC encourages USDA to use the Commodity Credit Corporation (CCC), under existing authority or new authority that could be created, to support and facilitate the operation of the private carbon credit markets. The CCC should not become a carbon market that is active in the purchase and sale of carbon credits produced by agriculture. Instead, the CCC should operate much the same way as the Federal Reserve Bank or the Federal Deposit Insurance Corporation supports financial markets and the private banking system. USDA's partnership with the private crop insurance industry is a good example of how CCC liquidity could be used to help finance the development of carbon markets. We encourage USDA to draw on the federal government's deep expertise to identify effective options for making the private carbon-credit markets a success for producers.

Carbon Sequestration and Feed Availability

For more than a decade, NPPC has consistently voiced concerns about the excessive conversion of feed grain-producing land in the United States to land dedicated to trees or other vegetation dedicated to sequestering carbon. It is entirely conceivable that climate policies and artificial incentives could be created that would lead to a serious undersupply of acreage for feed grain production. Feed grain users in animal agriculture, including pork producers, would suffer economically, but the damage goes far beyond producers. Total U.S. pork production would decline, leading to the loss of jobs, income and local communities' tax base. There would be environmentally damaging effects as well, as demand for pork would remain high, leading to expansion of feed grain production in other parts of the world to support their growing pork sectors. Land would be brought into feed grain production with the associated negative environmental consequences, and unless the grain and pork production systems are as efficient as those in the U.S., the environmental and carbon footprint of worldwide pork production would grow.

NPPC urges USDA to be fully cognizant of this possibility as it promotes climate-smart agriculture and carbon sequestration. We support policies that reduce GHG emissions while promoting a productive feed-grain sector that ensures a supply of feed grains needed to sustain a productive and profitable pork sector.

Biofuels and Climate-Smart Agriculture

USDA policies have long recognized that anaerobic digestion of swine manure is a sound practice for the capture, destruction or use of methane. USDA's financial assistance programs can be used to help support the adoption of this technology, although in many instances the limits on the size and income levels of many swine operations preclude them from participating. For many swine producers, financial assistance programs will be beneficial. More commonly, though, carbon credit markets will be the source of compensation to support the adoption and use of methane digestion. Again, please note previous comments the CCC could play in making carbon credit markets accessible for producers.

As noted, swine deep pit manure management systems produce much lower levels of methane than anaerobic treatment systems. Still, some methane may be emitted from some of these deep pit systems; eliminating those emissions will have GHG reduction benefits. To support the development of carbon credits for sale, we encourage further research to quantify these emissions and to identify practical techniques to reduce them.

For some producers employing deep pit systems, it may make sense to convert to anaerobic digestion, although the scale of operation needed to make that practical and successful can be a challenge in locations that limit operation size. These limitations prevent economies of scale and the efficiencies they provide.

We note that agricultural biogas can be used for more than just fuel. It can serve as a substitute for petroleum-based feedstocks, like natural gas, to create biobased products such as plastics and in other similar applications, including chemical production and manufacturing. USDA research into agricultural biogas applications enabled by manure's decomposition could lead to greater incentives for producer adoption of systems to further reduce GHG emissions.

Environmental Justice and Climate-Smart Agriculture

NPPC fully supports efforts by USDA to ensure its climate policies and the financial opportunities they create are fairly and justly available to all landowners, producers and communities. We encourage USDA to draw upon its deep expertise in reaching farmers nationwide who employ a wide range of agricultural practices. There is no practical reason that USDA's proven ability to service U.S. agriculture cannot lead to successful efforts to reach underserved communities.

Thank you again for the opportunity to provide these comments on President Biden's Executive Order on Tackling the Climate Crisis at Home and Abroad. U.S. pork producers look forward to continuing their constructive engagement with USDA and other federal agencies to further reduce agriculture's environmental footprint in the United States and around the world. If you have any questions about these comments, please contact Michael Formica, NPPC's general counsel and assistant vice president of domestic policy. (formicam@nppc.org).