

Frank's Note

Pork producers have long been stewards of the land. Actions such as improving production efficiencies, responsible manure management and precision energy use are already daily priorities on the farm.

Of course, there is always room to improve, and it is in the industry's collective best interest to continue to make gains in environmental sustainability. Measuring and documenting those gains also ensure continued freedom to operate and achieve shared goals across the supply chain for a long-term, sustainable future.

Environmental sustainability can be improved both in the barn and out of the barn, with small changes that can make a big impact. Such actions may involve monitoring feeder and waterer adjustments more closely, changing farrowing-house heat sources or adjusting stocking densities for more efficient energy use.

At *Farmweld*, we work to improve sustainability even before your equipment gets to the barn. Just as you embrace "We Care" principles for your pigs and people, we also care about our customers, employees and products.

Farmweld is here to help you identify ways to make continuous improvements within your pork production system. Simply give us a call at 800-EAT-PORK (328-7675) or visit [farmweld.com](https://www.farmweld.com).



Frank Brummer
President
Farmweld, Inc.

Prepare Your Farm for Environmental Sustainability You Can Prove

On-farm management that's good for your pigs and your business also benefits the environment, but you must be proactive.



The term "sustainability" has become something of a buzzword in recent years, with a broad range of definitions and interpretations. But even with a lack of clarity, it has taken root in the mindset of pork customers, increasingly influencing their purchasing decisions.

"A lot of different people and companies through the supply chain are looking into environmental sustainability," says Sara Crawford, president of Sustainable Environmental Consultants (SEC). "We know pork provides a nutritious, affordable, safe protein; now we need to show where pork stands and what it does for the climate."

As independent, third-party "sustainable accountants," with a broad range of agriculture and food clients, SEC is partnering with the pork industry to measure and enhance sustainability actions from breeding to the packing plant.

"We're here to help producers understand what's happening in the barn and in the field," Crawford says.

Among the areas SEC evaluates are soil health, crops/feed, water quality and use, energy use, carbon sequestration and greenhouse gas (GHG) emissions, which include carbon dioxide, methane and nitrous oxide.

Why Is It a Priority Now?

Put simply, pork's customers want some environmental accountability today. Many retailers (and foodservice providers) have made commitments to reduce GHG emissions. Investors are requiring companies to establish sustainability goals, and regulations are occurring in some states, with the prospect of more in the future.

Bottomline, there is some perception among the public that agriculture is contributing to GHG emissions that lead to climate change. Yet, the reality for pork production is that over the past 60 years, producers have reduced land use by 75 percent, water by 25 percent, energy by 7 percent and carbon emissions by 7.7 percent. Of course, there's always room for more reduction.

“In a world where meat consumption and environmental impact are hotly debated, we need to participate in these conversations with facts and data-driven approaches,” says Jamie Burr, chief sustainability officer for the National Pork Board (NPB). “We recognize the need for balanced, sustainable diets and are committed to demonstrating how pork can fit into this paradigm responsibly.”

The pork industry has set a goal to reduce GHG emissions 40 percent from the 2015 baseline by 2030.

Crawford emphasizes that pork producers shouldn’t feel overwhelmed or pressured by sustainability directives. “SEC can help with that,” she adds. “We know that pig farms are part of the solution.”

For example, continuous productivity and efficiency gains reduce a farm’s carbon footprint. The pig-manure-crop-feed cycle is the very definition of regenerative



Sara Crawford, *president of Sustainable Environmental Consultants*

agriculture, which pork producers have been a part of for years.

“Now we need to make sure you have the data and the frame of mind that what you’re already doing is moving pork in the right direction,” Crawford says.

On-farm Sustainability Help

One way to get started is for pork producers to request a Pork Cares Farm Impact Report, which measures and documents a farm’s continuous improvement efforts. This is a checkoff-

funded resource available to every pork producer of any production type or size.

The purpose is to show your farm’s positive environmental impact, where you can make additional gains and set future goals. “We’re on a mission to build public trust in U.S. pork,” Burr says. “To make pork a leading, sustainable protein choice and ensure continuous improvement in a financially sensible way.”

It takes just a few minutes to sign up. Go to porkcheckoff.org and search for Pork Cares Farm Impact Report, then provide your basic contact information. Within 5 business days you will receive an introductory email to schedule a 15-minute call with NPB’s program partner, SEC. The report process will address both the in-field and in-barn aspects of pork production.

The next step is to collect and submit on-farm data to your SEC technician. “It’s not a huge lift for a farm to get involved,”

Producer Works to Reduce Carbon Footprint, Improve Farmland

Al Wulfekuhle and his wife, Kathy, own and operate a farrow-to-finish hog operation and raise corn and soybeans in eastern Iowa. Wulfekuhle is enrolled in the industry’s Pork Cares Farm Impact Report program, and with feed accounting for 40 percent of pork’s carbon footprint, he elected to make changes to his crop-production practices to improve his farm’s carbon footprint.

His priority is to address erosion and enrich soil quality; he wanted to make the land better than when he started farming. “We are all on this earth for a short period, and I believe it is our responsibility to make things better for the next generation,” he says.

Wulfekuhle started using no-till with corn into bean stubble and beans into corn stalks. “We started out chopping corn stalks but didn’t like the heavy residue mat we were planting beans into, so we changed to calmer rolls and devastator stalk stompers,” he notes. “This has been a great improvement and has a much lower operating cost.”



Al Wulfekuhle, *an Iowa pork producer, and his grandson*

The next steps were to abandon the chisel plow and soil finisher on corn-to-corn ground, planting cover crops and using strip-till. Still some additional adjustments were needed. Wulfekuhle tried running a 12-row strip-till bar and using a 16-row planter, but even with a real-time kinematic guidance system, it did not work well. “The following year we purchased a 16-row bar to match the planter, but it was still a challenge to stay on top of the strip, so we swapped out our tractor monitors and installed AgLeader guidance,” he says.

It all required some trial and error, and he admits there’s a learning curve to combining hog manure, cover crops, no-till and strip-till. “Seed, herbicide, seed treatment, insecticide and fungicide choices all factor into a successful outcome,” Wulfekuhle notes.

Combine that with the challenge of finding proper residue sizing and distribution, manure/fertilizer placement, strip-till bar and planter setup, and it creates a lot of moving parts to make it all work.

“All of that is before Mother Nature throws you some curve balls,” he says. “The rewarding part is that all our fields are now in a positive soil-health trajectory, according to the NRCS soil-conditioning index. We are making our land better.”

His advice is to start slow and work with people who have had success because there are lots of details to consider. For example, accurate guidance is a significant factor when planting corn-on-corn with cover crops.

“The corn seedling doesn’t like being planted in the cover-crop roots or in contact with last year’s corn residue. Staying on the strip of black dirt is harder than it sounds,” Wulfekuhle points out. “We do spring strip-till with liquid nitrogen in the strip. When we stay on the strip, the corn starts off great; if we get off the strip it gets yellow and stunted quickly. It all worked great once we got the details figured out; I just wish we would have done that a bit faster.”

Crawford notes. “A lot of the information is already being collected; it’s just putting it to use in a different way.”

It takes an hour or two to collect and submit the data, she says, which can be done through an in-person or online meeting. The platform is confidential and secure, and once all the data is received SEC will present your farm-specific report within 30 to 60 days. The SEC team will walk you through the details, discuss the metrics and set goals.

“We include a continuous-improvement plan; we know pig farmers are always evolving,” she adds. “It’s really about helping identify those next pieces.” An annual follow-up is part of the process as well.

A return-on-investment calculator measures the financial cost/benefit of making further adjustments to the farm’s carbon footprint. “We know there are costs associated with most changes,” Crawford says. “We can run scenarios to show the return over time per acre or barn space to help producers make business decisions.”

The final report serves as a baseline to measure progress for your farm and the industry. Crawford advises using the

information to educate your farm staff and illustrate how their jobs relate to sustainability efforts. Then share your report details with financial institutions, packers, community members and others.

To date, more than 1,000 individuals and sites, 6.3 million pigs and more than 436,000 acres across 21 states are enrolled.

U.S. Pork Sustainability Grant

There’s more good news for pork producers in some states — Minnesota, Iowa and Missouri, with potential future expansion to others. USDA’s Partnership for Climate-Smart Commodities program is providing a 5-year, \$35 million grant program called Advancing U.S. Pork Sustainability, to be administered by NPB and six collaborating organizations. The funds are targeted to pork producers for technical support and to incentivize the adoption of climate-smart agriculture practices, such as:

- Cover crops and livestock integration in cover crops;
- Conservation tillage, such as no-till, reduced-till and strip-till;

- Manure management — usage on cropland, managing deep pits and methane digesters;
- Edge-of-field perennial grass buffers, tree buffers, etc.;
- In-barn LED lighting;
- Solar and wind technologies.

To tap into the grant program, a producer must be enrolled in the Pork Cares Farm Impact Report and will work with an SEC representative to develop an implementation plan for climate-smart agriculture practices on their farm. The producer will receive technical assistance associated with adopting the approved practices from SEC, Ducks Unlimited and Millborn Seeds. Farm Credit Council will provide financial training.

SEC will capture data on the climate-smart practices to measure and report general results, but specific data will be secure and remain with the producer.

Actions You Can Take Today

There are steps that producers can take in the field and in barns today. Crawford reports that live-animal production accounts for 65 percent of pork’s lifecycle

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GHG emissions. Of that, manure and feed each account for about 40 percent. The pig makes up 15 percent, and fuel/ electricity each contribute 3 percent to 4 percent.

“Feed” includes all the farming to create the feed — fuel, fertilizer, pesticides, herbicides. “The more tractor passes, the more carbon released into the air,” she notes. “So, we can make big improvements with less tilling.” Cover crops, wetlands, buffer strips and tree buffers also address carbon release.

Manure use on cropland improves the soil structure, nutrient use and water-holding capacity. It also sequesters carbon into the soil versus the air. In a deep-pit system,

storage creates methane so if it’s possible to pump twice a year, it would reduce emissions from about 40 percent down to 20 percent to 25 percent.

Inside the barn, “the things you do to be profitable will reduce GHG numbers,” Crawford says. Healthy pigs are efficient pigs, so walk the pens, and identify and treat sick pigs. Sows that have large litters, low mortality and a high number of pigs that reach market efficiently improve the farm’s carbon footprint.

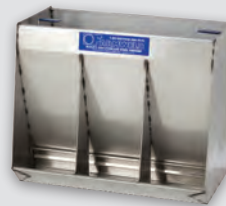
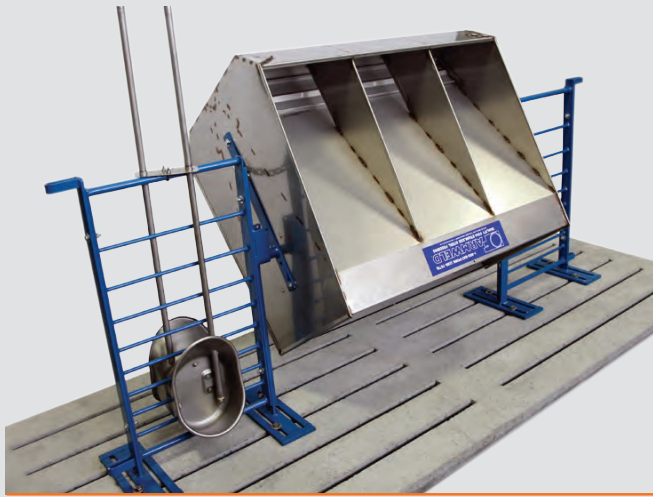
Monitor feeders and waterers to limit waste. It not only reduces costs but also benefits sustainability. “If you can be more efficient with feed, even by 1 percent to 2 percent, it will help,” she adds.

Change out light bulbs and/or fixtures to LEDs; maintain an efficient ventilation system and reduce drafts. Consider stocking densities by season; double or triple stocking in winter can reduce propane use.

Of course, there are larger infrastructure projects as previously noted, such as solar power, wind mills and methane digesters.

“Be sure you understand the baseline data for your barn before you start making changes,” Crawford says. “Every pig you save, every pig that goes to market, every pound of feed that doesn’t go into the pit helps reduce GHG emissions.” **F**

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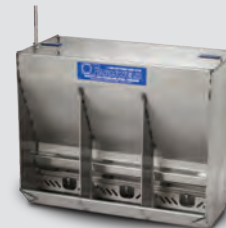
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