



Sustainability is not a fad

VISIT the *Hoard's Dairyman* website and search for the terms "carbon" or "sustainability." You'll find upward of a dozen publicly available articles from 2022, not including those that were published in the print edition only. The heightened focus within the W.D. Hoard and Sons Company family of publications, and many others, is being driven in part by an approaching consumer-driven tidal wave for enhanced sustainability.

You may not recognize the sustainability tidal wave bound for the dairy industry yet but set aside your dairy producer hat and put on your consumer hat to visualize it. Go to a store, any store, and look at product packaging. Sustainability-focused marketing and product labels are found everywhere.

Five years ago, I thought this might be a fad. I was flat-out wrong. This consumer demand won't be subsiding any time soon.

New vocabulary

There is a new glossary of terms to learn as we wade into this oncoming tidal wave of sustainability. It begins and ends with carbon accounting. Think of this like financial accounting but tracking carbon emissions in an effort to reduce or eliminate an entity's carbon footprint. New terms include net-zero and Scope 1, 2, and 3 emissions.

For dairy processors and retailers, Scope 1 and 2 emissions are those

that the business can control. Scope 3 emissions are those within the supply chain but outside of the business' control. Emissions associated with milk trucks and processing plants would be Scope 1 and 2 emissions. Dairy farms represent Scope 3 emissions for milk processing plants, cooperatives, and retailers.

Bringing this closer to home with an example, a cheese company representative told me at a scientific meeting last year that its pizza restaurant clients' patrons are increasingly asking about where its cheese and food is sourced from and its sustainability metric. Conceivably, a cheese plant can reduce the carbon footprint associated with its production; however, another carbon footprint and sustainability potential exists with the plant's clients, who are dairy farmers. To be certain, we are going to be asked to do more to offset carbon emissions downstream from our farms.

We need to make note, take ownership, and showcase our sustainability efforts. At the same time, we have much to be proud of and can make a substantial impact. Further, our industry has many advantages over others that we can showcase. For example, dairy cattle can convert otherwise landfill-bound waste into nutritious foods, and we can do so with economics in mind.

Coming back to the *Hoard's Dairyman* sustainability articles, one that caught my attention in November 2022 was *Hoard's Dairyman Intel's* "Sustainability must be profitable, too." Speaking to this title and article, retaining more nitrogen and carbon on the farm and in the bulk

tank can be very profitable.

Enteric methane emissions from the dairy cows' digestive tract contribute a fair bit to the farm's carbon footprint. Thankfully, lessening methane emissions can be tied to improved feed conversion efficiency with some research-backed solutions. In these cases, if the dairy adopts the right nutrition technology or approach, lower methane emissions are also associated with more milk per pound consumed. This is a win-win and the solution your farm should be seeking.

Science is building

The scientific community has been actively involved in this space. There is a rapidly expanding research community studying dairy and carbon or nitrogen footprints. Seeing the tidal wave on the horizon, I've been making a concerted effort to network with and learn from thought leaders in this area such as Karen Beuchemin, Frank Mitloehner, Juan Tricarico, Claudia Arndt, and many others. Beuchemin has recently published an invited review detailing the research-backed solutions to improve sustainability on dairy farms. There are new technologies and nutrition solutions on the horizon as well, which your farm may be approached with.

Questions to ask

As your farm looks to adopt new technologies to contribute toward sustainability goals, here are a few questions to ask and research to seek beyond the traditional return on investment questions:

- What methane emission reduc-

tion can be expected with this new technology?

- Will the reduction be calculated or measured on your farm?
- What cow-side or laboratory research is available to support the ingredient or technology claims in this area?
- Will the nutritional ingredient or technology perform reliably across different diets and different farm conditions?
- Is there commercial dairy or professionally orchestrated laboratory research available testing the performance in these different conditions?
- What feed efficiency gains can be expected if the ingredient or technology is adopted?
- Will the vendor work with your farm to track performance and emission reductions?
- Who owns the carbon credits associated with the technology adoption on my farm?
- What is the monetary value of these carbon credits?

This is a new, yet daunting, scientific area to wade into. At the same time, I'm excited for what's on the horizon for our dairy industry. We are leaders in production agriculture and should be proud of what we're accomplishing.

Consumers across the globe will continue to demand sustainably sourced, nutritious dairy foods. We can meet and exceed these coming consumer demands by pursuing new technologies and research on farms and teaming up throughout our supply chain to achieve sustainability objectives. Face this tidal wave head on and divert the wave's energy to your farm's benefit. 🐄

Goeser is the director of nutritional research and innovation with Rock River Lab Inc., Watertown, Wis., and adjunct assistant professor, dairy science department, University of Wisconsin-Madison.