

CHALLENGES AND OPPORTUNITIES FACING THE DAIRY INDUSTRY: VIEW FROM A CROP PRODUCTION, NUTRIENT MANAGEMENT AND ENVIRONMENTAL PERSPECTIVE

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One of the greatest opportunities lies in the area of forage yield monitors and precision farming technologies. Forage yield monitors provide producers with a fairly simple means to test field treatments, whether it is fertilizer or manure applications/rates, comparing varieties or seed populations, fungicide treatments, and so on. The new tools will take us well beyond truck scales in our ability to conduct widespread testing of what we do in the field in a meaningful way and evaluate our decisions and the advice that has been given. Precision farming technology will be needed to deliver the treatments, record locations, and to find the areas again at harvest and following years if the treatment results warrant future changes. Advisors will need to embrace this way of doing business if their services are to remain relevant. Software will be devised that helps set up and prescribe treatments that are scientifically valid and analyzes the results. In this way, producers will control the questions that get tested on their farm and will generate much more detailed information of their land base than ever before available. I believe the potential here is enormous.

One of the greatest challenges for dairy continues to be in the area of nutrient management. One issue relates to the control of manure and nutrient runoff, especially when soil is frozen or snow covered, but more generally when crops are dormant or the soil is bare. The second has to do with the need to improve nitrogen use efficiency across the whole dairy; better management of animal diets, manure storage and handling, and field application timing and method will be necessary. Both issues are intertwined. Fall and winter surface spreading of manure is expected to deliver about 25% of the N applied to the next crop. While spring incorporation in NY is expected to deliver about 65% of the N applied to the next crop (for example, corn), a much more efficient result. At the present time, a CNMP accepts these nutrient outcomes without prejudice. However, there is increasing pressure to address this issue. The implementation of a total maximum daily load (TMDL) in the Chesapeake Bay Watershed threatens to require winter manure storage for all livestock manure generated on farms in the watershed; the Bay watershed includes parts of 18 counties in NYS. The EPA CAFO Rule expects manure to be applied at agronomic rates and N use efficiency will eventually become part of this discussion. On a broader level, ecologists are increasingly concerned about the substantial quantities of nitrogen that escape annually from agriculture, including losses from livestock production systems. This “fugitive N” then “fertilizes” the non-farm environment creating water quality issues as well as other concerns relating to air quality and human health. For these reasons, we will be called upon to continue to do a better job with N: doing more with less. Anticipation of these changes raises an opportunity in the meantime to be more efficient, cut costs, and increase profitability.

Lastly, one of our greatest challenges is also one of our greatest advantages for long-term viability of our dairy industry. From a Clean Water Act perspective, “no-discharge” can be a challenge in a humid region with perhaps 25-30 inches of excess precipitation annually. But this excess water will help us in the long run to continue to be a good place to produce forage and raise cows.