

The M anager

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Northeast Dairy Management Conference

*A focus on leadership development
and personal growth*

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FOCUS: LEADERSHIP GROWTH

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Cover photo: Richard Popp memorial scholarship award winners Elizabeth Maslyn, Johnathan King, Colin Kadis, Matthew Peck, and Grace Harrigan, presented at the Northeast Dairy Management Conference, with Mike Van Amburgh, Cornell Animal Science Professor, and Ben Houlton, Ronald P. Lynch Dean of the College of Agriculture and Life Sciences.

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Northeast Dairy Management Conference

Julie Berry

After a virtual conference in 2020, the Northeast Dairy Management Conference, presented by PRO-DAIRY and the Northeast Dairy Producers Association (NEDPA), was back live and in person this spring. Offering topics ranging from technical skills to professional development, the well-regarded biennial event attracted over 350 progressive dairy producers, agriservice professionals, university faculty, extension staff, speakers, and sponsors from 23 states to network and learn.

Top-rated conference presentations highlighted in this issue include:

- Motivational speakers Mark Mayfield and Holly Green kicked off each day with tools and techniques to increase stress management and resiliency to change, which builds capacity to lead.
- Haydn Shaw, a popular generational speaker and writer, shared strategies on how to bring five generations together, including how to motivate employees and reduce generational turnover.
- Dr. Richard Stup, Cornell Agricultural Workforce Development, emphasized the importance of professionalizing human resource management on farms, from proper equipment and clean workspaces, to clear expectations and standardized human resource processes.
- A panel of leaders from a national policy organization, a dairy farm, academia, and allied industry discussed goals and continued progress toward dairy environmental sustainability and competitiveness in the global marketplace. Goals of the U.S. Dairy Net Zero Initiative for the U.S. dairy industry are to



Dairyman John Noble was honored with the Richard Popp Memorial Leadership Award presented by the Northeast Dairy Producers Association at the Northeast Dairy Management Conference.
Photo credit: Julie Berry

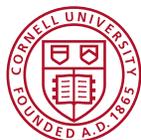
collectively by 2050 achieve greenhouse gas (GHG) neutrality, optimize water use while maximizing recycling, and improve water quality by optimizing utilization of manure and nutrients.

- A roundtable of past Dick Popp and PRO-DAIRY Agriservice award winners who share their insights on leadership and service. Richard Popp was co-owner of Southview Farm of Castile and Groveland, NY and achieved a local and national reputation as a creative, progressive, and successful dairy farmer. At this year's conference dairyman John Noble was honored by NEDPA with the Richard Popp Memorial Leadership Award.

General session presentation recordings from the 2022 conference are available for purchase at cals.cornell.edu/pro-dairy/events-programs/conferences-seminars/northeast-dairy-management-conference.

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Building capacity to respond to change

Julie Berry



A special feature of the Northeast Dairy Management Conference is a focus on leadership development and personal growth. Mark Mayfield kicked off the conference acknowledging and bringing humor to stress management with his presentation “Momma Told Me There’d Be Days Like This”. Mayfield, a past FFA national president, has taught agriculture, lobbied on behalf of agriculture, and is a professional speaker. The challenges of COVID, new and existing regulations, staffing shortages, milk price, and weather, have all tested the resilience of farmers across the country. “Mental health, depression, suicide, anxiety, and everything associated with agriculture right now exceeds the 1980s farm crises,” Mayfield said.

Change is more difficult in agriculture because we are traditional and sentimental. Age is a hindrance, as the older you get the more reluctant you are to change, but Mayfield said we must continue to morph. “We have to constantly change our technology, our communication strategy, our coalitions, and our mindset,” he said. “You can ignore change and hope it goes away, react to it and play catch up, or create change and win.” Activism is more important than ever for your industry, your association, and your community. Remember cycles, history, and agriculture’s perpetual optimism. Practice REACH: Relaxation – illness or injury is often caused or worsened by stress, Exercise – it must be regular and elevate the heart rate, Avocation – find a hobby that brings pleasure, Communication – identify two people who you can talk to and avoid internalizing problems, and Humor – laugh and find ways to have fun daily. This will enhance your creativity and state of mind, which is now more important than ever.

Practice the pause to gain perspective when an emergency arises. Ask “Will it make the six-o’clock news?” as a litmus test to whether this is a truly stressful



The biennial Northeast Dairy Management Conference offers a range of topics from technical skills to professional development.
Photo credit: Julie Berry

issue or just an inconvenience. “One of the biggest issues we have in life is that we don’t put stuff in the right pile,” Mayfield said. “We put it in a stress pile and it’s not a stress pile. It should be in the inconvenience pile.” Do a minute of deep breathing every hour. Perform a random act of kindness to bring new perspective to your own challenges. Talk to people. “In agriculture we are trained that we deal with stuff ourselves,” Mayfield said. “We keep it inside. Those days are over. Communicate. This is why we have friends and family. This is even why we talk to ourselves. We’ve got some real stuff to deal with.” Know your priorities and evaluate how this problem lines up. Recall a day or event that clearly identifies what’s most important to you to reset your baseline for happiness and success. Visit his website at markmayfield.com.

Holly Green, The Human Factor, offered insight and strategies in “Adapting and Thriving in an Ever-Changing World”. The human brain is not wired to work efficiently at our current hyper-pace, but understanding our limitations and applying strategies allows us to adapt more effectively. Each time we are met with unexpected change we go through a cycle of shock, denial, frustration or anger, depression and lack



of energy, before acceptance. “You could go through these phases in a second, it could be minutes, or it could take a month. Sometimes people get stuck,” Green said. “Once we begin to really process the unexpected change and say okay, it is what it is, I have to make the best of it, is when we begin to accept.”

Change is usually out of our control but how we respond is more in our control than we realize. “The magic trick to all of this is resiliency,” Green said. “Resilient people discern the difference between external change, and internal ‘How the heck do I deal with this?’ and can continue to get the right things done. They continue to have a great attitude, even when the world is falling apart around them.”

Resilient people are:

- **POSITIVE**, with inner confidence and self-assurance, and choose to focus on opportunities over obstacles. “A global trigger for the human brain is how can I help others?,” Green said. “If you can’t even get yourself back to a great positive view on things just ask yourself, how can I help others do that, and by doing that you’re helping yourself.”

- **FOCUSED** and maintain a clear vision of their goals, and feed their brain

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LEADERSHIP GROWTH

Building capacity to respond to change, cont'd from page 3

facts and credible information. Ask what's important to me in my life and speak and think about it as if it's already achieved. "This helps us keep focused," Green said. "This is your best time management tool. What is going to move me, my team, our organization, closer to winning?"

- **FLEXIBLE** when responding to change or uncertainty. "Get a little uncomfortable, practice doing that," Green said. "That's what creates

flexibility in your brain."

- **PROACTIVE** and adapt to change, even though our brain prefers the comfort of the familiar. "Take the time to actually plan," Green said. "Do not presume it will occur otherwise. Establish some mental reserves. Learn some new skills, something you've always wanted to try."

- **ORGANIZED** with routines and clear processes to sort information. Spend time eliminating clutter. "Have a clear workspace and simple little things like organizing files. Get organized. That brings us a sense of comfort whether we are good at it or not."

To set yourself up for success, start each day by identifying and writing down your intentions. Taking notes triggers

secondary learning modality, which increases the "stickiness" of what you're trying to remember. Make your goals visual. Get outside. "Practice kindness. Be kind to yourself, your self-talk," Green said. "Treat yourself like you would a respected, loved, and valued friend." Engage others. At our core we are all social. "Be positive, focused, proactive, organized, prompt yourself, do not presume you are any better than the rest of us," Green said. "Set yourself up and make sure you've got things that you're holding onto that do stay the same." Learn more about Holly Green at theHumanFactor.biz.

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Haydn Shaw shared concepts from his Tedx Talk "Why Half of What You Hear about Millennials Is Wrong" at the Northeast Dairy Management Conference. Photo screen shot from Ted Talk

Manage employees by life stage

Julie Berry

Haydn Shaw, People Driven Results, shared strategies on how to bring five generations together at the Northeast Dairy Management Conference, including how to motivate and reduce generational turnover, and how to create a workplace that employees attract their friends to.

Shaw says to think in terms of life stages, and mentor and manage employees according to their life stage and preferences. "If we think it's a generational characteristic we think we need to fix them," Shaw said. "If we

think it's a life stage, all we have to do is understand it and shut up and listen."

Successful human resource management requires responsiveness to the attitudes and preferences of today. "No longer say back in my day it was better," Shaw said. "When you face a new reality you don't like, you just have to set a timer for one minute and put it out, and then figure it out."

Improving communication across life stages improves efficiency and productivity, and contributes to a

positive work environment. Respect that younger generations have different communication styles and neither is better. Older generations typically prefer eye to eye contact and younger generations typically prefer to text. Use the communication style preferred by who you are talking to.

"They can't communicate your way," Shaw said. "Can we just quit hating on people. If you're going to supervise employees well you need to talk to them the way they like. Speak their language and get on with things. They don't mean

it personally, so don't take it personally.”

Life stage and generational differences are reflected in loyalty, respect, and work ethic.

LOYALTY

“You will not be able to keep everyone happy in order to be able to stay. People leave today,” Shaw said. Older generations have loyalty and will stay at a job, often for life, but younger generations expect to change jobs and like variety. They wonder if they're making a difference. Money matters, especially in jobs at the low end of the pay scale.

In general:

- **Traditionalists** view job hopping as the kiss of death for your career
- **Boomers** (born between 1946 and 1964) view leaving as necessary in some situations
- **Gen X** (born between 1965 and 1980) view leaving as necessary to get ahead
- **Millennials/Gen Y** (born between 1981 and 1996) believe there is nothing wrong with changing careers until you find the right one for you, but if you like your organization, why leave? Just do a different job.
- **Gen Z** (born between 1997 and 2012) will want to stay ten years – if there are raises and promotions

RESPECT

Of the five generations, millennials are the happiest life stage at work, but are always actively looking for the next opportunity. Even the ones who have a great environment will leave. Or, they wonder if they are making a difference, Shaw said. “What do you have to brag about? Dairy is a high quality, low-cost form of protein in a very hungry world,” he said. Titles matter and younger generations may want to move up before

they have developed the expertise that will allow them to be successful.

In general:

- **Traditionalists** will figure out the hierarchy and find their place
- **Boomers** will work their way up to a position that gets respect
- **Gen X** will give respect if you prove you deserve it
- **Millennials** will give respect to those who “get it” and take them more seriously
- **Gen Z** will respect those in the hierarchy who care about them more than they do about winning

WORK ETHIC

Agriculture has a challenge because many job applicants didn't grow up on farms and their spouses don't have the same expectation for time away from work.

In general:

- **Traditionalists** work 9 to 5 and stay late with overtime
- **Boomers** work 8 to 6 and then take it home
- **Gen X** try to get it all done at work, and will take it home if they have to
- **Millennials** live in a 24/7 world, so leave at 5, and log on at night
- **Gen Z** know they will have to put their career first for the next 10 years

NEW LIFE STAGE

The new life stage, ages 18 to 28, known as “Emerging Adulthood” have a need to understand. They value freedom, choice, and change in careers, places, and dating. Average age for a first mortgage is now 27 to 28.

EMPLOYEE RETENTION TIPS

“In most cases younger generations require a warm and inviting environment to thrive, and

knowing how to motivate this group without crushing their spirits can be challenging,” Shaw said. “Therefore they require more of an adaptive leadership style than the other generations.”

How to retain employees born after 1980:

- 1 They will leave you
- 2 Help some leave
- 3 Classic respect will kill you
- 4 Talk with them about leaving so you know if they will stay
- 5 Fight boredom

How to create conversations:

- 1 Point forward, don't demand
- 2 Give four times more positive than negative feedback
- 3 Assume you weren't clear when you are frustrated
- 4 Ask them to explain their thought process

How to talk career path:

- 1 Be direct with concerns, don't wait for employees or HR to bring issues forward
- 2 Clarify the ladder and the lattice parts and define next steps
- 3 Let them think out loud with you

To maintain a cross-generational workforce, acknowledge great work if you want it to continue, and don't let your old guard chase the 20 somethings away.

“People say to me, how do we attract the younger generation in this industry? You say, thank you for doing the hard things their friends won't,” Shaw said. They are your future and may be the most productive generation yet.

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LEADERSHIP GROWTH

Professionalizing human resource management in farms: Why and what this means

Richard Stup



A trend is emerging across the dairy industry, with some farmers becoming very professional in how they hire, develop, and lead employees. These farmers are highly aware that good employees are the most important asset for business success and that they may already be the scarcest resource available to farms. These professional human resource management (HRM) farms are consistently well-managed because they have excellent people in every position, and they are opening up a lead as they outperform other dairies who just can't find or retain good people.

WHY PROFESSIONALIZE?

The business case for professionalizing HRM is clear. Labor has been in short supply for years and this is likely to continue. The competition for good employees will remain fierce. Once employees are in place, employers need to take every action they can to ensure that employees are productive and engaged in their work, so they will stay. A professional workplace removes barriers to employee success, enhancing performance and business profitability. Finally, modern agriculture has its opponents. The industry can't afford to have unconscionable violations such as farm employees housed in substandard conditions or abusive relationships at work. If it does, then agriculture's opponents will use these shortcomings to attack farms and the industry as a whole in the media and through the legal system.

AN UNPROFESSIONAL WORKPLACE

I grew up on a small family dairy

farm. One big advantage of that lifestyle is that farm kids learned to do just about everything. Early in my working career I worked weekends for a single farmer so he could visit his girlfriend in another state. His operation was not a professional workplace. I had to use a rolling start for the TMR wagon tractor and bang on the electrical switchbox just so to make the silo unloader run. Worse, if the well pump breaker kicked off, I had to climb down in a pit to reset it. While climbing into that pit one weekend as I was working alone, I wondered: "How long will it take them to find me if I get electrocuted down in this pit with the water, pipes, and electricity?" You can't find people today willing to work in conditions like this, and they shouldn't have to.

A PROFESSIONAL WORKPLACE

In contrast with an unprofessional workplace, let's consider the characteristics of a professional workplace.

Management plans and maintains the physical places where people work. Equipment, tools, and supplies are located close to where employees perform their tasks so they can be conveniently used. The workplace is kept organized, meaning that extra clutter is removed diligently, supplies are replenished, and storage and workspaces are updated to enhance employee performance. Attention and work time are allocated to maintain organization. Picture in your mind a neat, stocked, and organized machinery repair shop where the proper tools are stored conveniently, contrasted with a cluttered and dirty shop where the right tools seem to never

find their way back to where they belong.

The workplace should be clean. After all, we're in the food production business. A clean workplace also makes it easier to spot problems, like broken equipment, leaks, and spills. Clutter and dirt tend to hide problems, often making them worse.

A professional workplace is kept in good repair. This doesn't mean that everything needs to be new, just well-maintained. Employees are quickly frustrated when broken equipment and tools force them to find less efficient workarounds. Frustration is amplified when employees ask to have something repaired and their request is ignored or takes way too long. Create and manage a repair system, make red tags available for employees to indicate something needs repair, create a log for reporting repair needs and tracking completion, and most importantly, assign responsibility and authority to someone to complete repairs on a timely basis.

Safety is a sign of a professional workplace. Safety equipment, shields and warnings signs should be in place, along with personal protective equipment. Safety training should start with new employee onboarding and continue with regular refreshers. Larger farm workforces should have a safety committee in place. The committee's purpose is to ensure that safety is a central part of the workplace culture, that procedures are in place to maintain safety, and to constantly look for ideas to improve overall safety. A great

trend in recent years is high visibility vests provided to farm employees and required at work at all times. When farm management purchases this safety gear for employees, it sends many messages beyond just, "Hey...I'm here!" Messages to employees like:

- You're important
- You're worth investing in
- We care about your health and well-being
- We want you to get home to your family safe
- We do things right around here

MEETING EMPLOYEES' NEEDS AS HUMANS

I'd like to share a little secret with farm managers. Your agribusiness partners, the veterinarian, nutritionists, and other service people who visit farms regularly, they all know which farms have bathrooms that are fit for use by humans and which do not. It says something about farm management when they provide an employee bathroom that is reasonable versus one that is an atrocious, filthy hellhole. The employees who work there don't have the luxury of waiting to go at the next stop, they are stuck and have to use the hellhole. This is not acceptable. Fix the bathroom, put a cleaning schedule in place, allocate paid work time for cleaning, and use your management skills to provide an acceptable, usable bathroom for your employees and everyone who visits your farm.

Employees are humans and have needs as such. Provide a breakroom

where they can relax on break, a locker or cubby to put their personal items, a refrigerator to stash their lunch, a microwave to heat it up, and a source of clean water. While you're at it, think about ergonomics on the farm. Where can the workplace be modified to make work easier on the limbs and backs of employees?

CLEAR POLICIES, RULES, AND EXPECTATIONS

Workplace culture flows down from owners and senior management, and they have the opportunity to establish workplace behaviors through clear expectations, rules, and policies. A professional workplace has a strict policy against behaviors such as sexual harassment and discrimination. It also uses an employee handbook to clarify expectations about items such as: pay schedules and increases, hours and overtime, cell phone usage, attendance and timeliness, leave from work, and other benefits. Many of these things are taught to new employees during their onboarding experience, which also serves as their first exposure to the farm's effective leadership practices.

EFFECTIVE LEADERSHIP

Professional HRM just can't exist without effective leadership. Professional managers know that supervising others is their most important responsibility. In fact, supervising others appears clearly in a manager's job description as their main responsibility. These professional managers are crystal clear about the



three parts of effective supervisory leadership:

- 1 Set clear expectations about behaviors and performance.
- 2 Provide training and other learning opportunities.
- 3 Provide effective feedback to employees about their performance.

Some dairy businesses are professionalizing their HRM as a competitive advantage and gateway to long-term success. Other farms must increase their professionalism rapidly to find and keep good employees. Support is available from industry organizations, extension, and even some outsourcing companies, to improve farm HRM. This type of change, unfortunately, can be difficult, because it involves changing personal beliefs and behaviors. Professional managers value employees as assets to invest in and develop, rather than viewing HR as a necessary evil of business growth. Changing this personal value is the first step to become a professional human resource manager.

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Lean Management: Practical applications and challenges on dairy farms

Barry Putnam and Mary Kate MacKenzie

Lean Management is a systematic approach to analyze and continuously improve the flow of information, materials, and work in a manufacturing environment. Lean systems maximize production efficiency by minimizing

waste and disruptions. Lean principles and practices emerged from the Japanese auto manufacturing industry in the 1950s, and managers have since applied them across many other industries, including agriculture. As farm managers strive

to utilize labor and other inputs more efficiently in response to rising costs, Lean Management offers a promising tool.

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LEADERSHIP GROWTH

Lean Management: Practical applications and challenges on dairy farms, cont'd from page 7

When trying to understand what Lean is, it can be helpful to think about what Lean is not. Disorganized procedures that waste time and materials, frustrate employees, or cause disruptions in production activities are definitely not Lean. How much time do managers on your farm spend responding to crises and putting out fires versus setting up systems that eliminate the root cause of those problems? How often does a 10-minute task take 20 minutes or more because the right tools and materials are not immediately available? How often does a failure to communicate critical information cause a quality defect or production delay? Lean Management invites farm operators to shift away from a reactive problem-solving mindset toward proactive process design grounded in continuous improvement.

In the spring of 2021, the PRO-DAIRY Farm Business Management team identified Lean Management as an opportunity to help dairy operators measure and improve performance. We developed a Lean Activity Project to teach farm managers about Lean

TABLE 1

What does Lean Management offer dairy operators?

- A systematic approach to analyze and improve production processes
- A tool to eliminate the root cause of common disruptions
- Methods to identify, measure, and reduce waste in business systems
- Methods to improve labor efficiency and effectiveness
- Principles to organize the physical workspace that improve workflow and reduce disruptions
- A continuous improvement mindset and organizational culture that engages employees at all levels



This dairy repositioned the augers to the opposite side of the feed bins so the feeder and delivery trucks can access the bins at the same time. Before making this change, the feeder had to wait for delivery trucks to finish unloading once a week. Now employees can deliver feed on-time 365 days a year, eliminating weekly disruptions to the feeding routine. The addition of a whey tank at the feed center further streamlined the loading and mixing routine.

principles and practices, and asked each participant to implement a Lean process improvement. Our team created educational materials that guided farm managers through selecting and observing a production activity, measuring waste, designing and implementing a change, and evaluating the impact. We shared project materials with 120 farms and provided additional support through three webinars and individual consultations.

Dairy operators have been seeking efficiency gains for many years, so Lean principles and practices are not entirely foreign. Most farms engaged in the Lean Activity Project had examples of past projects that demonstrated Lean concepts. However, most of these examples were motivated by a specific problem. Few farms reported using Lean Management proactively to identify waste and improve business processes.

About a quarter of farms engaged in the Lean Activity Project completed a Lean process improvement during the summer 2021 project timeline. Their projects addressed a wide range of production activities across different business areas. Several farms focused on the shop, developing Lean processes to inventory shop parts and perform

equipment maintenance. One farm cut 12 minutes off skid steer preventative maintenance by purchasing a rolling cart and assembling all the necessary tools and supplies on the cart before starting to work on the skid steer. Employees can use the same cart to assemble parts and supplies for other maintenance tasks, further reducing wasted steps in the shop.

Other Lean shop projects addressed flows of information. One farm developed a new procedure to assemble shopping lists that streamline purchasing. Another standardized their process to record and track vehicle maintenance. A third farm piloted the use of smartphone apps to create to-do lists, assign tasks, and improve communication among shop employees. These process improvements will help farmers stay on top of preventative maintenance and make shop employees more productive, while reducing delays caused by supply shortages and equipment breakdowns.

Farms also implemented process improvements related to livestock handling and management. One dairy set up a gate repair kit in each barn, and implemented a procedure to inventory and restock supplies in all the kits. This change saved time on gate repair, and

reduced the risk of cows getting into the wrong group due to broken gates. Another farm set up a new storage area for medications in the calf barn, eliminating unnecessary steps taken by employees who manage and treat calves.

Some of the largest efficiency gains documented by participating farmers came from changes to the layout of the feed or the fuel centers. One dairy previously experienced feeding delays on a weekly basis when delivery trucks blocked access to feed bins. After moving feed bin augers to the opposite side of the feed center, an employee can now load the wagon while delivery trucks unload, eliminating waiting and disruptions to the feeding schedule. Another dairy set up an old fuel tank next to the feed center, and transported diesel from their fuel center to their feed center using an existing fuel truck. As a result, equipment used at the feed center now gets fuel at the feed center, eliminating 6.5 trips per day, on average, down a bumpy driveway to the fueling center and back. The farm estimates this change will save 657 hired labor hours per year.

Dairy production systems are complex, offering endless opportunities to streamline and improve procedures. Our project examples demonstrate that farm managers can achieve measurable results by implementing low-cost changes in a relatively short timeframe. One change often leads to another, as farmers who successfully implemented one Lean improvement came away with

ideas for more. Several participating farmers also reported positive impacts on employee morale. Employees responded well to process changes when managers included them in the planning process, and incorporated their ideas, and when the changes made their jobs easier.

One of the biggest challenges that dairy operators reported was deciding where to start. With so many possible places in which to deploy Lean Management, it can be overwhelming to select just one. Dr. Abbot Maginnis, Director of the Lean Graduate Certificate Program at the University of Kentucky, recommended during a presentation at the 2022 Northeast Dairy Management Conference selecting one model area within the business to begin implementing Lean improvements. By restricting the scope of Lean Management to one area of the business, managers and employees can learn to develop and sustain Lean systems in a limited way, building skills and confidence before spreading the approach to other areas of the business. Starting small can also help farm managers gain buy-in from employees before tackling larger projects.

It is easier than most people think to get started with Lean Management. The keys to success include starting small and engaging frontline workers. With practice, operators can shift away from a reactive, problem-solving mindset toward a more proactive approach to identify and reduce waste. Dairy operators often think about managing assets, yet they also manage processes. Lean challenges



operators to adopt a process-centric lens. Change takes time and requires discipline, commitment, and practice. However, to quote Clarence W. Barron, grandfather of financial reporting, “Everything can be improved.”

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LEAN MANAGEMENT WEBSITE

Cornell CALS PRO-DAIRY has developed a website with Lean Management resources. As farm managers strive to utilize labor and other inputs more efficiently, Lean Management offers a framework to design production processes that minimize waste and disruptions without sacrificing safety or quality. Over time, managers who adopt Lean systems can shift the entire culture of their organization to enhance employee engagement and productivity. This website offers an overview of Lean Management for an agricultural audience and provides guidance to implement Lean principles and practices within your own farming operation. Find the link on the “Business” page under “Our Expertise” at cals.cornell.edu/pro-dairy or access the direct link at cals.cornell.edu/pro-dairy/our-expertise/business/lean-management.

Sustainability on the farm and the Net Zero Initiative

Julie Berry

The U.S. Dairy Net Zero Initiative (NZI) is a collaboration of dairy organizations to advance research, on-farm pilots, and new market developments to make sustainability practices more accessible and affordable to farms of all sizes. “This is an essential

element of an overall 30-year journey to U.S. dairy’s collective 2050 environmental goals,” said Jamie Jonker, National Milk Producers Federation, during a top-rated panel “Sustainability on the Farm and the Net Zero Initiative” at the Northeast Dairy Management Conference. Partners

in the effort include Innovation Center for U.S. Dairy, DMI, International Dairy Foods Association, Newtrient, National Milk Producers Federation, and U.S. Dairy Export Council. By 2050, the U.S.

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LEADERSHIP GROWTH

Sustainability on the farm and the Net Zero Initiative, cont'd from page 9

dairy industry collectively has goals to:

- Achieve greenhouse gas (GHG) neutrality
- Optimize water use while maximizing recycling
- Improve water quality by optimizing utilization of manure and nutrients

WHAT ARE THE KEY ELEMENTS TO GET TO NET ZERO, AND WILL EVERY FARM HAVE TO DO IT?

“The goal of the U.S. Dairy Net Zero initiative is for U.S. dairy, from farm to milk processing, to be net zero greenhouse gas (GHG) emissions by 2050. It applies to the industry as a whole and not to individual farms,” said Curt Gooch, Land O’Lakes – Truterra, who was also a panelist. The initiative ensures continued progress in environmental sustainability and competitiveness in a global marketplace. Individual farms

can contribute by reducing their cradle (inputs) to farm gate GHG emissions.

Four areas are analyzed to determine a farm’s GHG footprint: enteric, feed, manure, and energy.

ENTERIC

“While everyone is waiting for a feed additive silver bullet to substantially reduce enteric emissions, generally the single largest emission source on a farm, improved cattle management that also correlates with increasing margins, can be employed to reduce enteric emissions. The easiest way to think about this is to think about efficiency. The more efficient we manage our cattle, the lower the emissions will be,” Gooch said.

- Optimize the growth of replacement heifers and only raise enough to maintain herd size (assuming no planned internal herd growth). Also, calve heifers as early as possible and reduce the variation around age at first calving to decrease the non-productive period of life, which

reduces GHG emissions on a lifetime basis.

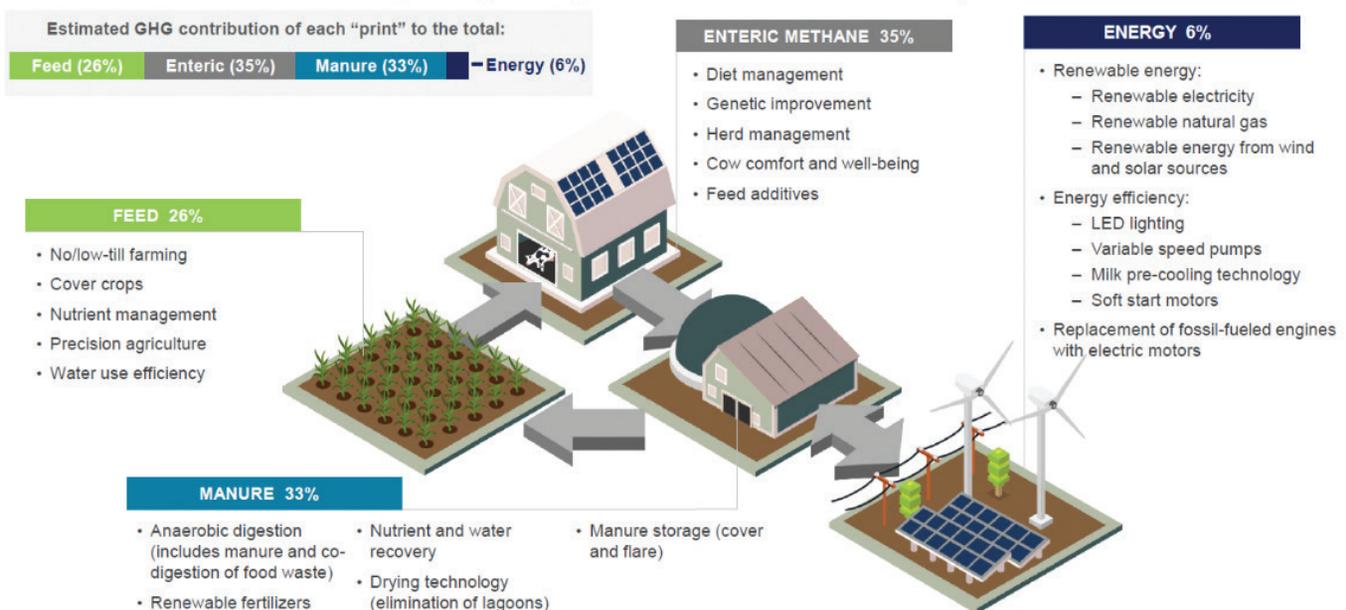
- Keep cows healthy and provide a quality barn environment to maximize cow comfort. Healthy and comfortable cows produce more milk per unit of feed intake - increasing feed efficiency decreases enteric methane intensity (methane emitted per unit of milk production). Fewer treated cows means less withheld milk and more milk shipped.

- From a reproduction perspective, strive to minimize the number of days open after the voluntary wait period is over, and strive to get cows bred on the first service. Getting cows bred efficiently means more productive days over a lifetime, thus reducing GHG emissions per lifetime.

FEED

Cows do best when fed high quality forages, and feeding high amounts of quality forages has a lower GHG intensity footprint than feeding lower quality

Mitigating Dairy’s Environmental Footprint



Visuals do not represent all possible practices, technologies or benefits. Each farm can voluntarily contribute to net zero efforts based on their individual operation.

* Adapted from Thoma 2013, Regional Analysis of greenhouse gas emissions from USA dairy farms. A cradle to farm-gate assessment of the American dairy industry, circa 2008

forages and/or less forage in diets. Feed recommendations from panelist Mike Van Amburgh, Cornell University, include:

- Feed the optimum level of protein and phosphorus to reduce the amount of excreted nitrogen (N) and phosphorus (P) and reduce potential nutrient loss from the farm.
- Select diet ingredients that reduce enteric methane intensity (mass of GHG emission per gallon fat- and protein-corrected milk) from cattle by using a nutrition model like the Cornell Net Carbohydrate and Protein System (CNCPS, AMTS, Dalex, NDS) and look for the greenhouse gas emissions predictions. (Each program has a different way of reporting.) These tools can establish an enteric emissions baseline, evaluate feed ingredient options, and track outcomes for the diets fed.
- Talk to a nutritionist about adding Monensin to cattle diets. Monensin improves feed efficiency and thus can reduce methane (CH₄) production by about five percent.

To reduce a farm's Feed Print, Gooch recommends:

- Minimize shrink. Although the costs and impacts of shrink are not well-documented, common sense tells us that when the quantity or quality of forages decreases from harvest to the cow's mouth, it takes more inputs to feed a given number of cows. Minimizing inputs reduces GHG emissions, both from a total emissions and intensity perspective.
- Reduce nitrous oxide (N₂O) emissions by capturing more manure nitrogen (N) in crops and reducing purchased fertilizer N. This also reduces carbon dioxide emissions due to the energy used to manufacture and transport commercial fertilizer N.
- Improve N management by calculating the appropriate rate of manure for the crop being grown, improve application timing to increase crop uptake, and ensure that maximum application rates do not exceed N needs. Overapplication of N increases N₂O losses per ton or bushel of feed produced and can also impact water quality.
- To capture and conserve soil carbon

and save fuel, adopt strip till or even no-till practices if possible.

- Combine manure injection and no-till practices by using low-disturbance shanks to inject manure to conserve carbon (and nitrogen), reduce soil loss, and reduce fuel-based carbon dioxide (CO₂) emissions.
- Plant cover crops after corn silage to make use of leftover nutrients and leave as much crop residue as possible to add carbon to soil.

MANURE

Manure is generally the second largest source of cradle to farm gate GHG emissions. Long-term manure storages improve nutrient management and protect water quality but produces methane. Pre-treating manure before long-term storage reduces storage emissions. Currently deployable options include:

- Separate manure solids from manure liquids. Removing manure solids from a long-term storage reduces feed

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NET ZERO AS STEWARDSHIP. A FARMER'S PERSPECTIVE.

Stewardship is an ethic that embodies the responsible planning and management of resources. The concepts of stewardship can be applied to the environment and nature, economics, health, property, information, theology, cultural resources etc. Wikipedia

"Obviously net zero has to start with being good stewards of ourselves, our families, our communities. In our industry, it also applies to our employees, our cattle, our land, and our environment. All this has to be accomplished by protecting the economic health of our businesses," said John Noble, Noblehurst Farms, who served on the "Sustainability on the Farm and the Net Zero Initiative" panel at the Northeast Dairy Management Conference.

Noble sees net zero as just another aspect of doing good business. "As our businesses evolve, knowledge is gained, and best practices change. We conform to changing consumer preferences and needs. We conform to changing societal norms and we adapt to changing public policy regulations. One could cite specific examples in animal husbandry, employee management, community interaction, land management, water management or any number of specific issues we deal with in the dairy industry. Air quality is the most recent example," Noble said.

"We know we are affecting the planet every time we start a tractor, drive a car, or turn on the air conditioner. It seems pretty minor in the big scheme of things. Until recently we did not think about cows burping or manure storage gases. There is much we need to learn."

Research is needed to continue to develop best practices. "Scientific investment and inquiry must help us determine what best practices can and will look like. On-farm innovation, testing, failure, and success will also contribute to increasing our knowledge," Noble said. "Each of our businesses are different. Different locations, land resources, economic situations, and a myriad of other drivers. Recognizing our responsibility to be good stewards and participating in the process is important."

"Net zero by 2050 sets the goalpost. There is no crystal ball to guide us," Noble said. "We will, however, discover techniques and tools to reduce, capture, and utilize these greenhouse gases. We will discover, perhaps, genetic differences for the cattle, feed additives, and feeding techniques. We will discover effective strategies to sequester carbon in our soils and forests. We have to recognize the road to net zero will not be straight. There will be failures. Public and private dollars will be spent erroneously (with the benefit of hindsight). However, this cannot deter us from our stewardship ambitions."

LEADERSHIP GROWTH

Sustainability on the farm and the Net Zero Initiative, cont'd from page 11

to the microbes that produce methane. Starved microbes equals less long-term storage methane emissions.

- Install a gas-tight impermeable cover to capture biogas. In moderate and cold climates, ensure the biogas is collected and flared. In hot climates, use the biogas to produce renewable electricity (RE) or renewable natural gas (RNG). Covering a manure storage also reduces fuel costs and associated GHG emissions in humid regions because less rainfall mixing with manure results in less material transported and applied to fields.

- Anaerobically digest manure and ensure the biogas is captured and used to produce RE or RNG.

- Consider co-digestion of community substrates, most notably pre- and post-consumer food byproducts and wastes. At this time, co-digestion is required for a farm to approach Net Zero GHG emissions or have a GHG footprint of less than zero.

ENERGY

Although the Energy Print is the smallest GHG footprint from producing milk, it is important to reduce these emissions because CO₂ lasts in the atmosphere 1,000 years while methane only lasts about 20.

- Use as many electric motors as possible. Electric motors are much more efficient than diesel fueled internal combustion engines. Consider switching to electric pumps when a new pump is required. Green energy can be purchased from the grid to meet the electrical demand of a farm.

- Don't idle diesel engines past what is needed for turbo cool-down. Although idling only uses a small amount fuel, if many farms cut back, this can have an impact.

- And, tied in with reducing the Feed Print, employ low-tillage options to reduce diesel use.

HOW CAN MODELS HELP US ASSESS WHERE WE ARE IN TERMS OF GREENHOUSE GASES AND TRACK PROGRESS?

Well-developed models are essential to estimate and track a farm's GHG footprint. Models are important because it is impractical to measure GHG emissions from cows, feed production, manure management, and energy use on individual farms. Several GHG emission models exist today. Many are more general in nature and not dairy-focused, especially when evaluating emissions from a whole-farm (cradle to farmgate) perspective. The industry will benefit from a whole-farm GHG accounting model that also can assist the farmer to make decisions about possible capital investments in environmental stewardship interventions, both from a possible return on investment and reduced GHG footprint perspectives. There is quite a bit to a model that has this capability, and its on-farm utility will hinge on farmers having the right, and good quality, data.

Curt Gooch, Land O'Lakes - Truterra; **Jamie Jonker**, National Milk Producers Federation; **John Noble**, Noblehurst Farms; and **Mike Van Amburgh**, Cornell University, were on the top-rated "Sustainability on the Farm and the Net Zero Initiative" panel, moderated by **Tom Overton**, Cornell CALS PRO-DAIRY, at the Northeast Dairy Management Conference. Conference recordings and proceedings are available at cals.cornell.edu/pro-dairy. Discover more at usdairy.com/sustainability.

Leadership insights

Caroline Potter and Julie Berry

The Northeast Dairy Management Conference is focused on growing the leaders of today and tomorrow. In this roundtable of New York dairy industry leaders we share thoughts of recipients of the Dick Popp Memorial Leadership Award, presented by the Northeast Dairy Producers Association (NEDPA) at the conference, and the PRO-DAIRY Agriservice Award, presented at the Great New York State Fair.

"I have had the privilege of engaging dairy farmer leaders in New York and beyond for nearly 25 years, including all of the leaders recognized in this article. Common threads among them include an entrepreneurial spirit, tremendous passion and dedication to their families and to their businesses, and a calling to serve the dairy industry more broadly for the overall good of the industry," said Cornell CALS PRO-DAIRY Director Thomas Overton. "We are proud to recognize these leaders."

Recipients have a humble, servant-leadership focus, with a clear desire to give back to the industry, an appreciation for learning from innovative, forward-thinking progressive people, whether they are farmers or involved in the dairy industry, and a recognition of receiving more through their service than what they give.

SERVICE



John Noble, Noblehurst Farms Inc.: has served on the N.Y. and national DHIA (Dairy Herd Improvement Association) boards, the N.Y. Agricultural Society board, as a Cornell University trustee, and on various other boards. He

received the Dick Popp Award in 2022.

"Receiving the Popp leadership award was humbling, and it was exciting to look out over the audience and see so many young faces who are enthusiastic about production agriculture. I and others like

me didn't have a grand design and aren't looking for accolades. We're driven by learning and curiosity. Humility and a willingness to learn are key," Noble said.



Maureen Torrey, Torrey Farms, LLC: has served the industry for over 50 years, beginning in high school where she was in charge of the veg-crop display at the state fair for 10 days, as an assistant leader in 4-H, and a N.Y.

Farm Bureau (NYFB) state and then national Youth Power winner. Her activity evolved and after college she was an Extension educator in Wayne County and then was the first woman hired by Chiquita to manage merchandising in their stores in western N.Y. She got bored with that job and returned to the home farm. She received the NEDPA Dick Popp Award in 2021.

"Leadership came naturally. I was and am driven by a passion for agriculture, the people, and the industry," Torrey said.



Dale Van Erden, Van Erden Family, LLC: has served nine years on the Dairylea board, on the Cayuga Marketing board, on the NEDPA board and as president, on the Fabius planning board, and on the local DHIA

board as president. He received the NEDPA Dick Popp Award in 2018.

"It's the adage that if you don't go to the polls and vote, don't complain. Well, if you're not serving in the dairy industry, don't complain about the direction," Van Erden said.



George Mueller, Willow Bend Farm, LLC: has served as the Ontario County Farm Bureau president, Ontario County Extension president, and on the N.Y. Farm Net board of directors. He

served 20 years on the Farm Credit board of directors during the merge of Lake

Ontario, Finger Lakes, Western New York, and the Southern Tier associations into Western New York Farm Credit Association. He also served as a director of Upstate Niagara for 20 plus years during the merge of Upstate Milk Co-op and Niagara Milk Co-op, and during the build of several cultured milk plants and expansion from three original milk plants to the present nine milk plants. One of his proudest accomplishments was being a founding partner, along with Dick Popp, neighbor Dale Van Erden, and other active New York dairy farmers, of the Northeast Dairy Producers Association. He received both the NEDPA Dick Popp Award (2002) and the PRO-DAIRY Agriservice Award (2018).

"The Dick Popp Award is the most precious of the awards I have received in my long career as a farmer. They said some nice things about me followed by Dick Popp's widow and daughter presenting me with a plaque and a hug that I will forever treasure. That plaque looks down on me in my office. Dick Popp has long been my hero and the hero of the whole Northeast dairy industry. His design of dairy facilities with California style parlors and breezeways was copied when we built our own milking parlor," Mueller said.

Mapleview Dairy LLC

Mapleview Dairy, owned and operated by the Fisher family, received the PRO-DAIRY Agriservice award in 2017.



LouAnne (Fisher) King: The Fisher family has a history of involvement in industry organizations both locally and statewide. LouAnne served in 4-H, school, Dairy Promotion, and Jr. Holstein roles that

evolved into both industry and community participation, including NEDPA, Farm Credit East, Holstein USA Legislative Affairs, local and N.Y. Dairy Promotion, and PRO-DAIRY and Cornell Animal Science advisory roles. Local involvement includes Assessment Review,



Workforce Development, church, and Hospice. King has chaired some of the committees she served on and enjoys collaborating with and learning from other business owners and professionals.

"I was taught that to have a voice you need to be present for the conversation," King said.



David Fisher: served starting in 4-H, and then Holstein club in high school and college. Cornell gave him connections, opportunities, and opened doors years later that he did not expect,

including service on the Cornell Animal Science ag group and the CALS dean's advisory council. He also served on the NEDPA board and as chair. Locally he served on the Soil and Water Conservation District board, the County Farmland Protection board, and in many Farm Bureau roles, including county, state, and national.

"It has always been expected in our family that we be involved and try to help," Fisher said.



Jon Greenwood, Greenwood Dairy: has served in a number of New York Farm Bureau roles, including young farmer representative and chair, on the board and national committees, and as vice president,

and also on the northern N.Y. Ag Program board, as a county legislator, and on the NEDPA board and as chair. He received the PRO-DAIRY Agriservice Award in 2016.

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LEADERSHIP GROWTH

Leadership insights, cont'd from page 13

“You can’t make a difference if you don’t show up,” Greenwood said.



George Allen, Allenwaite Farm: has served when important issues or developments surfaced and based on individual interests. Both the N.Y. Department of Environmental Conservation and the U.S.

Environmental Protection Agency were established during his college years, so Allen inadvertently had a front row seat hearing the lofty objectives set forth. It was clear to Allen environmentalism wasn’t just an enhancement of conservation practices being used in agriculture, but he had no idea how much of a shift it represented. During those years a favorite theory in academia was the certainty of a looming mini-ice age and as a student he wondered how a N.Y. dairy farmer was going to cope with that. Now the looming threats are considered something of the opposite, but the challenge to the industry remains the same; how best to respond?

A farm accident injury and personal experiences with Workers’ Comp led Allen to an interest in establishing ag safety groups for cost control and on-farm safety awareness and training.

Allen values information exchange and sharing in the industry and has been active in local Cooperative Extension and was a proponent of PRO-DAIRY’s development. He also supports attracting the next generation of agriculturalists through 4-H and FFA.

“Especially after the passage of the Swampbusters legislation in 1985, in which preservation of wetlands became a priority, and the on-going encroachment of suburbia onto farmland the question continues of where do agricultural lands and productivity fit into the national

interest? We have found all sorts of ways to preserve forests, battlefields, unique landscapes, recreation, and even swamps. Meanwhile cropland, especially reasonable level cropland, continues to be considered idle or vacant waiting for something ‘useful to happen to it’. Establishing a land trust for the purpose of protecting ag lands as a local response became another endeavor,” Allen said. He received the PRO-DAIRY Agriservice Award in 2012.

“Much of this might better be termed active participation; leadership sometimes a consequence,” Allen said.

WHY BECOME INVOLVED?

John Noble: Serving in leadership positions gave me an opportunity to interact with others who were “heading to where the puck was going”. When you interact with others who are innovative and pushing the envelope it is stimulating. You bring that back to your own business and use it to propel it forward. For example, in my early career I worked with spectacular leaders in dairy who were on the DHIA board. People like Dick Popp, Dave Porter, Dale Van Erden, Ron St. John, and others. It was out of that interaction about current nutrient management issues that the Northeast Dairy Producers Association was born.

Maureen Torrey: I could see that it was the future, if you don’t help shape the outcome, the outcome is generally less than you desire. I had many great role models around me. Laing Kennedy who became the hockey coach at Cornell was a great role model. Richard and Bob Call who helped develop the idea for ag districts to protect and promote land for farming and fellow farmers were great role models. There were strong agricultural leaders all around me. And I could see that hard work could get results and help shape the direction and future of agriculture.

I also feel it’s important to be involved in other organizations to bring more to the table from agriculture. I have participated in many other organizations as a leader (e.g., Federal Reserve Bank board), but also

in a support role. It allows you to support, mentor, and grow other leaders.

Dale Van Erden: In an industry that has been good to me I feel an obligation to give back. It’s important to be proactive and be involved so you participate in the direction of our industry. Legislation, regulation, the cooperative, processing, all need to be connected back to the production of dairy.

It’s important to get involved in all of the demographics in the leadership of our industry, from small farm to large farm, from younger to older, and so forth. You need a balance in the boardroom. The Northeast faces specific challenges, from climate change, to regulation, to taxes, and geography. We need producer involvement to steer direction for the long-term and to be able to compete with other regions of the U.S. If we don’t attempt to lead and represent ourselves, someone else will, and not necessarily in a beneficial fashion.

George Mueller: I have always wanted to be a farmer since I gave up the idea of being a railroad engineer or a steam boat captain in first grade. Once involved in farming, the need to improve the industry here in N.Y. state is just good business. As leadership roles come, it is part of your responsibility to do your share to help the farm community we work in. As a participant in farmer organizations I have certainly gained much more than I have contributed. We are blessed to have the excellent farm organizations we have in N.Y.

LouAnne King: When our family was young, my involvement was locally-based, but we know that state/national/international policies and markets are impacting our industry so I am glad for the opportunity to learn, question, and contribute to these conversations, which can have an impact. Recently, my husband told a friend that I said, “We are not the wait and see kind of people”. I think that sums it up pretty well.

David Fisher: If you want to make a difference you need to be in the conversation. My parents and

grandparents were always involved in more than just ag. Community and church, and our philosophy of trying to leave things better than you find them, in all aspects of life. I never went into anything looking for leadership, but just trying to make a positive impact and help the industry or organization. I have often said if I can help I will try my best.

Jon Greenwood: I have always been interested in policy issues and wasn't seeking leadership roles, but was asked and encouraged by others who came before me. The old cliché about it's those who show up that are heard, and that is true. There are a lot of people who would speak up on your behalf who don't necessarily hold the same views.

George Allen: I don't know if I ever thought about it as a choice. Rather, I think, following the example of my parents and grandparents.

VALUE OF SERVICE

John Noble: It broadens your experience and gives you the opportunity to see what others are doing as well and deepens your understanding of all the pieces tied into production agriculture. For example, LEAD NY helped me to better understand food systems on a broader level. These kinds of experiences help put the pieces of the puzzle together and contribute to the vision for your business and where it fits in the future. By far you receive more value than you give when you engage in your industry.

Maureen Torrey: The value has been tremendous. I've gained a lot of knowledge and I've watched people I've mentored blossom, shaping policy, and impacting agriculture for this generation and the next. I'm still hopeful for immigration reform. I value bringing commodity groups together and my experience from the vegetable to the dairy side. Seeing Agricultural Workforce Development come to fruition has been rewarding. The people and friendships I've made have been tremendous. There's value in the grassroots experiences. Interacting with

people in government positions brings a lot to the table for our agricultural industry. It's important for people to be engaged and represent their industry, even if for a short time.

Dale Van Erden: You learn a lot from other people and about the other pieces in the dairy industry. It connects production agriculture back to industry. Leadership roles contributed to my personal development and I was able to take that back to my business. It helps develop a vision for the future of your business.

George Mueller: By meeting with fellow farmers who have their farms under control enough to attend meetings is always an educational experience. Getting to know other progressive farmers, and being invited to visit, is a great method to promote the sharing of ideas in our dairy industry and our whole ag industry. We are blessed in our state to have a strong Extension system, and all the other farm organizations that have meetings and publications to help us share ideas to improve our farm and our industry. My participation and modest leadership in organizations has kept me abreast of latest happenings and events in our industry. As a city boy who wanted to be a farmer I could not have been more blessed than by an ag community that welcomed me in if I was willing to work hard. Also marrying Mary Lue Morgan, a farmer's daughter, sure helped my career. In a small way we have tried to keep farming open and welcoming to others who also have the same strong desire.

LouAnne King: I have learned so much from listening and interacting with other managers, public figures, and peers. I have gained a better understanding of what influences the industry and our communities.

David Fisher: Just getting away and having time to think about the farm while not there or traveling is good for me. Meeting and learning from others, hearing different ideas and perspectives, I have stolen so many ideas from others. The outside the box thinking of so many

speakers at meetings gives a very different perspective when returning to the farm. Just being around other wonderful successful business people makes it fun and challenging. Most rewarding is being able to see something that has been advocated for has an impact.

Jon Greenwood: I was able to meet with a lot of great, knowledgeable people, and ask questions that helped in my business. It is eye-opening, especially for someone who didn't grow up on a farm. Working on a board is different from running a business. You learn patience and how to bring people along with you. There's value in learning that process to impact issues and make a difference. For example, in N.Y. I believe we have good, workable CAFO policy around nutrient management that farmers are able to work with and which contributes to good water quality. This came from farmers and other key stakeholders working with our regulating agencies.

There are a lot of dedicated and talented people working in the industry. They are great people to be around and when you can leave re-energized and invigorated it's a great feeling and contributes in a positive way to your business.

George Allen: On the family level, the most meaningful aspect is participating in activities that can make this industry an attractive alternative out of many from which to choose for the next generation, not an albatross hung on them. These activities increasingly involve issues that cannot be solved single-handedly and that's where the value of investing time with others in seeking solutions accrues. We often are not in the position of being able to set the agenda, but we do not have to be subservient to it, which is exactly what happens when we don't effectively state our case.

Caroline Potter (cjh42@cornell.edu) and **Julie Berry** (jrb7@cornell.edu) are both on the PRO-DAIRY team.



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