



Photo source: Nancy Glazier

Ag Focus



Precision Agriculture

By: John Hanchar

Summary

- Precision agriculture has the potential to improve economic and environmental results on farms
- Follow steps from management thought to help with decision making
- Save the date, Thursday, February 25, 2016, and plan to attend “NE Precision Agriculture: Decision Making for a Profitable Future,” a precision farming educational program in conjunction with the NY Farm Show, Syracuse, NY

Precision Agriculture

Precision agriculture, or precision farming is defined by the PrecisionAg Institute as “managing crop production inputs (seed, fertilizer, lime, pesticides etc.) on a site specific basis to increase profits, reduce waste and maintain environmental quality” (PrecisionAg Institute, <www.precisionag.com>, accessed 6 November 2015). Precision farming recognizes that agronomic related processes vary with space and time within fields, and involves the application of computerized data acquisition and/or control systems and information systems to land management (Van Es, Cox and others, Cornell University). Greater accuracy with respect to rate, timing and/or location of input usage can lead to more efficient use of inputs, including improved economic and environmental results.



Photo source: <https://jameseaddicott.files.wordpress.com/2013/11/massey-furgeson-fuse.jpg>

Yield mapping and/or auto steer, guidance systems are common entry points to precision agriculture.

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Mission Statement

The NWNy Dairy, Livestock & Field Crops team will provide lifelong
education to the people of the agricultural community to assist them in
achieving their goals. Through education programs & opportunities, the
NWNy Team seeks to build producers' capacities to:

- ◆ Enhance the profitability of their business
- ◆ Practice environmental stewardship
- ◆ Enhance employee & family well-being in a safe work environment
- ◆ Provide safe, healthful agricultural products
- ◆ Provide leadership for enhancing relationships between agricultural
sector, neighbors & the general public.



Photo source: Nancy Glazier

Continued from page 1

Other examples of precision farming applications include: variable rate lime and fertilizer applications based upon soil sampling on small grids; variable rate seeding; and a variety of sensing and imagery tools for monitoring soil variation and crop progression.

See Kevin Kreher's article in this issue to learn about the current status of precision farming in Western New York based upon a survey of producers and others.

Decision Making

As with any potential change in the farm business, farm business owners enhance decision making efforts by following some prescribed steps from management thought.

1. Establish criteria, the standards upon which you are going to judge a single proposed change in the farm business, or multiple alternative solutions to a problem. Criteria should be very closely related to business and family objectives and goals. For example, a criterion related to profit objectives of the farm business would be "the expected change in profit is greater than zero." Another example, might be, "the change in practice must be feasible given the availability of labor."
2. Evaluate, analyze the proposed change(s), alternative(s) based upon the criteria established. For example, use partial budgeting to estimate the expected change in profit associated with the adoption of auto steer technology.
3. Rate a single proposed change, or several proposed solutions to a problem given the criteria established.
4. Make a decision. If judging, for example, the adoption of a single change in technology such as auto steer versus current practice, then decide yes or no. If making decisions where you have identified several alternatives as potential solutions to a problem, then select the best or set of best alternatives based upon the ratings.

Save the Date

The NWNY Dairy, Livestock and Field Crops Program's Field Crop Advisory Committee

identified work on various aspects of precision agriculture as a need of high priority. One response has been that Team members are working as part of a statewide committee formed in the spring of this year to help guide activities on precision farming. The committee has organized and will offer "NE Precision Agriculture: Decision Making for a Profitable Future," a precision farming educational program in conjunction with the NY Farm Show, Syracuse, NY, to be held Thursday, February 25, 2016. Save the date, and plan to attend to learn about precision agriculture so that you can make decisions regarding precision farming's place in helping your business achieve improved economic and environmental results.

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Opening the Barn Door

By: Libby Eiholzer

In October Nancy Glazier and I attended Farm Bureau's conference in Syracuse entitled "Opening the Barn Door: Communicating With the Public About Your Animals & Your Business." In addition to the eminent Dr. Temple Grandin, speakers included Jessica Ziehm of the New York Animal Agriculture Coalition and Kay Johnson of the Animal Agriculture Alliance. In attendance were a wide array of farmers and agribusiness professionals representing all facets of New York agriculture.

So why should we open the barn door? In Ziehm's talk entitled "Tell Your Story. Rinse & Repeat" she made a great case for why we should tell our story. Her first point was that it's not the public's fault that they don't know about agriculture; most are 2 to 3 generations removed from farming which creates both an emotional and a geographic separation. Since others want to tell our story for us (think activists!), we need to tell it ourselves. Speaking from her own experiences as the wife of a dairy farmer and as the Executive Director of the NY Animal Ag Coalition, Ziehm encouraged us to own our actions and be transparent about why farms operate the way they do. She challenged us to think about our own farming practices and said that if there are any that we can't justify, we really need to change them.

Dr. Temple Grandin opened her talk with the comment that while things have really improved in the agricultural industry, consumers don't know it! She noted that "social media elevates the voices of radicals," and the rapid pace of social media creates responses that are emotional, not rational or thoughtful.

What can we do to counteract this conundrum? Grandin urged us not to "stay in our silos and communicate only with people who share our values." Studies show that consumers trust farmers more than they do food manufacturers, and a mom scientist more than a government scientist. Finding a way to connect with the public, through your role as



Photo Source: Libby Eiholzer

a parent, for example, will help them trust you more. Once you win that trust, you can show them the good things that you are doing on your farm.

How Can You Open Your Barn Door?

With the holiday season upon us, now is a great time to reach out to your neighbors to tell them about your farming operation. Here are some of the suggestions that Ziehm gave:

- ◆ Make a point to visit one neighbor a week
- ◆ Invite neighbors over for an open house or a meal
- ◆ Participate in a parade & throw cheese instead of candy
- ◆ Make up some postcards w/ pictures of your farm and use them as thank you notes (or Christmas cards)
- ◆ Sponsor an event in your community and volunteer as a farm

If you think crop insurance is too expensive, consider the cost of the alternative.



Nobody enjoys writing checks for insurance premiums, but when crop losses mean losses in annual income, it's a small price to pay.

In 2014, New York farmers insured more than 1 million acres for \$555 million. The 1,494 policy holders who filed for losses received more than \$40 million in payments. There are multiple causes associated with losses. In 2012, fruit producers were hit hard with two early freeze/thaw events. Apple producers received \$46.7 million in payments and grape producers received \$5.4 million. Total losses for all insured crops were \$67 million.

Following are enrollment or crop insurance change **deadlines for 2016**:

November 20, 2015 for *grapes, apples, peaches, cherries*; **February 2, 2016** for *Onions*;
March 15, 2016 for *field crops, other vegetables and improved Whole Farm Revenue Protection*;
4th Friday of every month for *Livestock Gross Margin-Dairy*.

To find an agent, call your local Farm Service Agency to get a list of agents or find crop insurance agents on the United States Department of Agriculture Risk Management Agency website at:
www.rma.usda.gov/tools/agent.html.



Welcome to MeatSuite!

By: Nancy Glazier

The meat marketing website, MeatSuite.com, has expanded to the NWNy region and beyond. MeatSuite.com is a free online directory of regional livestock farms selling meat in bulk quantities. MeatSuite is a project of Cornell Cooperative Extension Tompkins and Steuben Counties to promote direct, local, meat sales and is currently funded by the New York Farm Viability Institute. Efforts are underway right now to recruit farmers to the site. After doing some searches I see there are already some farms in our region on the site. Good for you!

MeatSuite started in 2012 in 9 counties and is adding 16 more counties, including Genesee, Niagara, Ontario, and Yates, in our region. Wyoming and Orleans are also joining without funding support. If your county isn't listed, you can still participate. MeatSuite is designed to increase freezer trade sales of local meat by connecting farms with consumers. Farms can create profiles featuring contact information, prices, photographs, and descriptions of products, practices, and more. Consumers visit the site to search for farms that match their buying preferences.

The directory is FREE for farms and consumers. Creating a profile is an easy way to reach new potential customers and expand your farm's online presence. MeatSuite offers you an opportunity to explain to consumers why your farm is unique. The directory is open to all meat products raised on your farm. Take some time and look at other profiles; this will give you ideas for developing your profile. There are many terms and claims (breeds, pricing, types of feeds, etc.) to describe your farm and practices. Under the tab, Learn More, there are pages to help you, and also to help consumers. It works best to develop your profile first then enter it into the site.

Each profile will be reviewed prior to posting. Remember, sales are all on a bulk basis, such as quarters or halves. Prices include processing and must be posted. If you use more than one processor, use the higher cost in calculating your price per pound. For rabbit and poultry, list price as \$/lb for the whole animal or \$/animal. You must list a price for each product! "TBD" or "contact for price" is not acceptable. Products without prices will not be listed on your farm profile. Stay away from false claims; your reputation is at stake.

While we cannot guarantee that MeatSuite will generate sales for you, we encourage you to take a few minutes to join. It's easy, fast, and free, and the more farms that join, the more consumers will see

MeatSuite as a great shopping resource. It is another tool in the marketing toolbox. There is also a MeatSuite Facebook page, too.

Matt LeRoux, CCE Tompkins County has done comparative pricing of bulk and retail cuts with grocery stores in the Ithaca area. Bulk prices save consumers \$150-200 for the equivalent of a mixed quarter of beef. By selling meat in bulk, a farmer can utilize a USDA or New York licensed processor.

I'll post the instruction sheet to create a profile on our website, <http://nwnyteam.cce.cornell.edu/>. Contact me if you'd like me to send it to you, my cell phone number is inside the front cover. I can help you set up a profile if you don't have internet access. You can also email me at nig3@cornell.edu or contact@meatsuite.com with any questions.

After we get some farms listed, the next step will be to promote the site to consumers. We will offer some workshops to promote the site plus postcards to distribute.



Graphic source by Matt LeRoux

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2008 KALMAR OTTAWA 4x2 DOT, Diesel, All Steel Wheels, Single Axle, 166" WB, 22.5 Tires, Good Running Spotter Truck w/Hyd. Lift 5th Wheel, Allison Auto. Trans., 4x2, 76,023 Miles, Stk. #Kalmar - \$29,900



2005 FREIGHTLINER FL112, 210 HP CAT C7 Diesel, Auto. Trans., Spring Susp., 22.5 Tires, All Steel Wheels, 150" WB, Single Axle, 10,000# F/A, 17,500# R/A, 170,066 Miles, Stk. #4807 - \$24,900



2006 PETERBILT 357, 625 HP CAT C15 Diesel, 18-Spd., Engine Brake, Air Trac Susp., 24.5 Tires, Alum/Steel Wheels, 231" WB, Tandem Axle, 14,350# F/A, 46,000# R/A, Very Clean, Double Frame Winch Truck w/Tulsa 45,000 lbs. Winch & Tail Roller, Air Slide 8th Wheel, Good Rubber, Will Separate Winch & Deck From Chassis, 17' Frame Behind Cab, 152" CT, 535,919 Miles, Stk. #4803 - \$41,000



2009 WESTERN STAR 4900, 515 HP Detroit Diesel, 8LL Trans., Engine Brake, Hendrickson Susp., 21" Body, 12.00 x 24 Tires, Spoke Wheels, 244" WB, Tri-Axle, 18,740# F/A, 65,000# R/A, Triple Frame, Stk. #4882 - \$59,900



2005 MACK GRANITE CV713, 400 HP Mack AI 400 Diesel, Auto., Engine Brake, Haulmax Susp., 22.5 Tires, Spoke Wheels, 230" WB, Tandem Axle, 20,000# F/A, 46,000# R/A, 76,000 Miles, Stk. #4887 - \$59,900



2002 MACK RD680SX, 400 HP Mack E7 Diesel, 8LL Trans., Engine Brake, Camelback Susp., 12.00 x 24.5 Tires, Spoke Wheels, 268" WB, Tandem Axle, 20,000# F/A, 54,000# R/A, 350,665 Miles, Stk. #4953CC - \$39,900



2003 INTERNATIONAL 4300, 237 HP DT466 Int'l Diesel, Auto. Trans., Spring Susp., 187" WB, Single Axle, 13,000# F/A, 22,000# R/A, 94,813 Miles, Stk. #4681 - \$24,900



2005 WESTERN STAR 4900SA, 550 HP CAT C15 Diesel, 18-Spd., Engine Brake, Airliner Susp., 4.30 Ratio, 24.5 Tires, Polished Alum. Wheels, 267" WB, Tri-Axle, 20,000# F/A, 69,000# R/A, 666,916 Miles, Stk. #4924CC - \$45,900



2007 KENWORTH T800, 430 HP CAT C13 Diesel, Allison Auto., Engine Brake, Air Ride Susp., 4.10 Ratio, 22.5 Tires, All Steel Wheels, 254" WB, Tandem Axle, 14,600# F/A, 44,000# Full Locking R/A, Cab & Chassis w/24" Sleeper, 16'6" Total Frame, 14'6" CT, Single Frame, 30% w/25% Rear Tires, PTO, 186,400 Miles, Stk. #4917 - \$45,000



2004 KENWORTH T800, 335 HP CAT C10 Diesel, 10-Spd., Engine Brake, Hendrickson Susp., 22" Length X 102" Width, 5.29 Ratio, 22.5 Tires, All Steel Wheels, 240" WB, Tandem Axle, 20,000# F/A, 44,000# Full Locking Rears, Low Mile, Double Frame Flatbed Truck w/PTO, Will Separate Flatbed from Chassis, 20' Frame Behind Cab, 160" CT, 75% Rubber, 110,826 Miles, Stk. #4952 - \$44,500



2005 KENWORTH T800, 410 HP CAT C13 Diesel, 10-Spd., Engine Brake, Neway Susp., 5.29 Ratio, 200" WB, 36" Flat Top Sleeper, 22.5 Tires, All Steel Wheels, Tandem Axle, 12,000# F/A, 44,000# R/A, 93,255 Miles, Very Clean Truck w/2-Line Wetline, 5' Good Rubber, 17,540 lb. Chassis Weight, Stk. #4838 - \$35,250



2005 MACK VISION CX613, 380 HP Mack Diesel, 13-Spd., Engine Brake, Air Ride Susp., 22.5 Tires, Alum/Steel Wheels, 106" WB, Tandem Axle, 14,000# F/A, 46,000# R/A, Very Clean, Heavy Spec Daycab Tractor w/Low Miles, Air Slide 5th Wheel, 75% Rubber, 327,882 Miles, Stk. #4933 - \$29,900



1999 PETERBILT 357, 330 HP CAT 3306 Diesel, 8LL Trans., Hendrickson Susp., 23" Length, 31.5/80R22.5 Tires, All Steel Wheels, 258" WB, Tandem Axle, 18,000# F/A, 45,000# R/A, Good Running Truck w/Gasbreath 60,000# Rolloff w/Tarp System, Tires & Brakes In Good Condition, 555,740 Miles, Stk. #4771 - \$36,900



2006 FREIGHTLINER FLD120SD, 475 HP CAT C15 Diesel, (CAT Records of Engine Overhaul @ 977,161 Miles On 03/08/14 With Balance of 3-Yr Warranty Left), 18-Spd., Engine Brake, Airliner Susp., 22.5 Tires, Alum/Steel Wheels, 320" WB, Tandem Axle, Clean Low Mile Winch Truck w/Double Frame, 100,000# Tulsa Winch, 25-Ton Brakes & Tulsa Winches, 24" Oil Poles, 33" Job, 24" x 96" Deck w/Tail Roller, Will Separate Deck & Winches From Chassis, 23'9" Frame Behind Cab, 228" CT, 644 Miles, Stk. #4963 - \$39,900



QTY. (3) 2005 PETERBILT 357, 305 HP CAT C11 Diesel, Automatic, Haulmax Susp., 216" WB, 22.5 Tires, Alum. Wheels, Tandem Axle, 22,000# F/A, 46,000# R/A, 433,862 Miles, Good Running, Low Mile Truck w/McNeilus 10.5 Cu. Yd. Mixer, Will Separate Mixer From Chassis, 17' Frame Behind Cab, 140" CT, Stk. #4893-4894 - \$56,500



1999 MACK R868S, 400 HP Mack E7 Diesel, 8LL Trans., Engine Brake, Rubber Block Susp., 19" Length, 22.5 Tires, Spoke Wheels, 248" WB, Tri-Axle, 20,000# F/A, 46,000# R/A, 501,176 Miles, Stk. #4760 - \$24,900



2004 KENWORTH T800, 430 HP CAT C12 Diesel, 10-Spd., Engine Brake, 8-Bag Air Ride Susp., 4.56 Ratio, 22.5 Tires, Alum/Steel Wheels, 205" WB, Tandem Axle, 12,350# F/A, 46,000# R/A, 1 Million Miles, Stk. #4902/4903 - \$27,900



1998 MACK CL713, 350 HP Mack E7 Diesel, 8LL Trans., Engine Brake, Camelback Susp., 315/80R22.5 Tires, All Steel Wheels, 221" WB, Tandem Axle, 18,000# F/A, 46,000# R/A, 398,243 Miles, Stk. #4937 - \$22,900



2005 PETERBILT 378, 475 HP CAT C15 Diesel, 18-Spd. Trans., Engine Brake, 20'6" Alum. Box, Air Trac Susp., 264" WB, 22.5 Tires, Alum. Wheels, Tri-Axle, 20,000# F/A, 46,000# R/A, 638,321 Miles, Very Clean, Double Frame Dump Truck w/Dual Intakes & Exhaust 20,000# Air Lift Axle, Full Locking Rears, Stk. #4817 - \$39,900



1999 PETERBILT 357, 330 HP CAT 3306C Diesel, 8LL Trans., Rubber Block Susp., 445/65R22.5 Tires, Alum. Wheels, 268" WB, Tandem Axle, 22,000# F/A, 46,000# R/A, Very Clean 6x6 w/Super Single Tires @ 90%, Heavy Single Frame, 23'6" Frame Behind Cab, 196" CT, Originally Explosives Mixing Truck, Hoppers Can Be Removed, 245,350 Miles, Stk. #4861 - \$39,900



2006 KENWORTH T800, 470 HP CAT C13 ACERT Diesel, 18-Spd. Engine Brake, Air Ride Susp., 4.10 Ratio, 239" WB, 24.5 Tires (95%), Alum/Steel Wheels, Tandem Axle, 20,000# F/A, 46,000# Full Locking R/A, 103,302 Miles, Very Clean, Low Mile Cab & Chassis w/PTO & Pump, 21' Frame Behind Cab, 164" CT, Stk. #4858 - \$60,000



2009 PETERBILT 367, 475 HP CAT C15, 8LL Trans., Air Trac Susp., 3.70 Ratio, All Alum. Wheels, 224" WB, Tandem Axle, 14,000# F/A, 46,000# R/A, 365,800 Miles, Stk. #3874 - \$69,900



2008 Kenworth T800, 350 HP CAT C13 Diesel, 10-Spd., Engine Brake, Neway Susp., 22.5 Tires, Alum. Wheels, 3,990 Gal. Stainless Pneumatic Tank, 214" WB, Tri-Axle, 60,101 Miles, Stk. #4921/4922 - \$65,900

Thinking Out of the Box on Gut Health

By: Jerry Bertoldo

We have all heard or used expressions like “having a gut feeling,” “trust your gut instincts” or “gut wrenching.” At the recent Cornell Nutrition Conference some of these old clichés got some credit from modern science for being more than just sayings.

Mark Lyte, PhD, a microbiologist at the Iowa State Veterinary College, talked about some fascinating work linking the microbiome (the community of organisms) in the intestinal tract with overall health and behavior. This work applies to humans and animals alike. He has been on a 25 year quest to determine how the complex world of bacteria and other living bugs in the gut influence the brain and vice versa. The question of whether pathogens that exist in the gut remain passive or lead to disease may be explained by this line of investigation as well.

This field of study is known as microbial endocrinology. There is a nerve and chemical connection between the brain and gut. It has been long known that neurochemicals are produced by animal cells, but only relatively recently discovered that microbes also manufacture and secrete the same ones such as adrenaline and growth-inhibiting hormone. Even more remarkable is the finding that these microbes respond to host created neurochemicals just like the body’s own cells.

The highly developed nervous system of the intestinal tract is both a transmitter and receiver of chemically induced “messages” going to and from the brain! This relationship is quite the paradigm shift from conventional thinking. We now can understand that not only do changes in gut nutrient content and pH cause a shift in microbial numbers and ratios amongst different types, but there can be an impact on the attitude of the animal and even a change in the risk or resistance to disease. If this pathway goes both ways, gut upsets can change the brain’s perceived state of well-being and awareness of stress can alter gut function and health. That “feeling in the pit of your stomach” is not only a direct result of your gut cells responding to

neurochemical signals from your brain, but the contribution of billions of bacteria amplifying the message by means of the same stimulus.

With the pressure being put on animal production systems to reduce antibiotic use, particularly through the feed, we may now see a strong movement towards alternative products that stimulate “good” chemicals from the gut microbes. Could this be what happens with probiotics and fermentation based feed additives? One theory as to why antibiotics are effective in increasing feed efficiency has nothing to do with changing the makeup of the gut microbe landscape. It focuses on increasing nutrient uptake by the gut lining. Could it be that this is driven by the gut microbes themselves secreting neurochemicals that upregulated digestive function?

The old adage “you are what you eat” might have to be updated to “you are, think and act like you eat.” We live in interesting times for sure!

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Technology Tuesday Series:

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December 8, 8:30 - 10:00 a.m.

Presented by:

Dan McFarland, Penn State Extension

<http://extension.psu.edu/animals/dairy/courses/technology-tuesday-series>

Understanding Efficacy & Safety of Respiratory Vaccines

December 9, 2:00 - 3:00 p.m.

Presented by:

Dan Grooms, DVM, PhD, ACVM,
Michigan State University

Scott Nordstrom, DVM, Merck Animal Health

<http://www.dairyherd.com/webinar-examine-vaccine-safety-and-efficacy>

Today's Tech Tools to Fine-Tune Herd Care

December 14, 1:00 - 2:00 p.m.

Presented by:

Jeff Bewley

University of Kentucky

<https://attendee.gotowebinar.com/register/65326017>

Using Social Media to Deliver Extension

December 15, 1:00 p.m.

Presented by:

Dr. Alison Van Eenennaam

<http://www.extension.org/pages/29156/upcoming-dairy-cattle-webinars#.VkDYoberSM9>



Raising Your Bull Calves Can Add To Your Dairy Farm Profitability

If you are thinking about adding a new profitable enterprise to your dairy or beef operation, dairy beef production could be a natural fit.

If you would like to learn more about raising dairy beef, Cornell Cooperative Extension and JBS meat packers will be hosting this meeting at the Cooperative Extension Education Center in Albion to discuss the production and marketing of dairy beef.

Speakers for the workshop will be:

- ◆ Dr. Mike Baker, Cornell University Beef Cattle Specialist - beef cattle cycle, & rations for dairy beef.
- ◆ Tom Gallagher, CCE Livestock Specialist, Capital Area Ag & Horticulture Program - vaccination programs for dairy steers and dairy beef quality assurance.
- ◆ Larry Rose, VP for Cattle Procurement at JBS, Greely, Colorado - overview of JBS, including their leased feedlot in Nicholville, NY marketing dairy beef, and risk management in regard to raising beef.

Please register for this program by **December 2**

Timely registration will guarantee a lunch.

There will be no charge to attend this educational event.

Contact: Cathy Wallace at:

585-343-3040 x138 or cfw6@cornell.edu

Or register on-line at:

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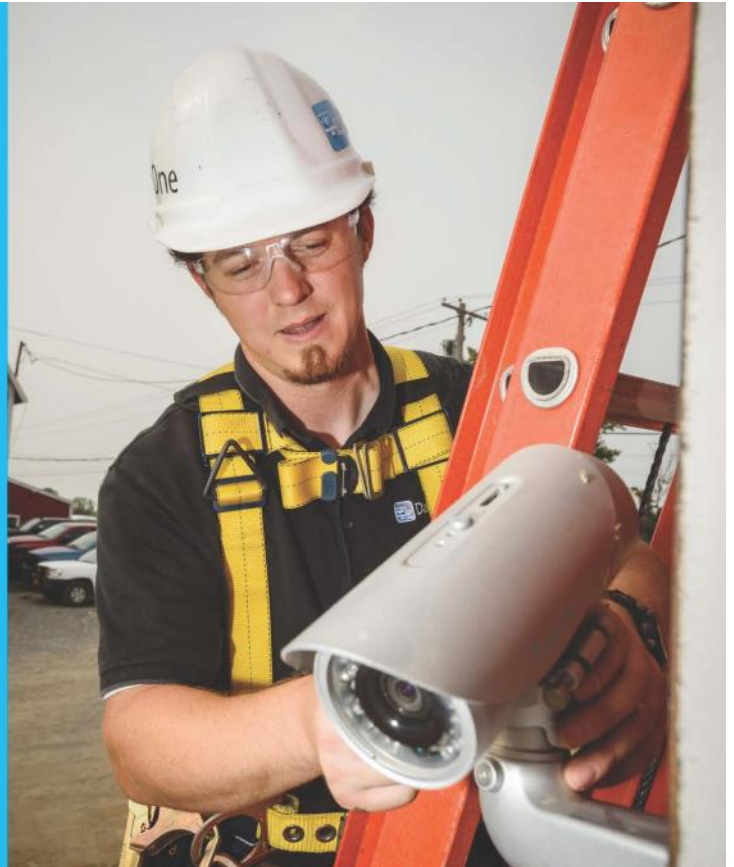


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Dairy cattle housing to maximize comfort, production & welfare

January 13, 10:00 a.m. - 3:00 p.m.

Session 2:

Assuring positive perception of dairy cattle welfare

January 20, 10:00 a.m. - 3:00 p.m.



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CCE-Orleans, 12690 State Route 31, Albion

CCE-Wyoming, 401 North Main Street, Warsaw

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Dairy Handling & Cow Comfort

Katy Proudfoot, PhD, Ohio State University

Welfare Considerations for the Cold

Kimberley Morrill, PhD, NNY Regional Dairy Specialist

Calf Comfort & Welfare Considerations for Youngstock

Kimberley Morrill, PhD, NNY Regional Dairy Specialist

Animal Welfare in the Milking Parlor

*Julie Smith, DVM, PhD, University of Vermont Extension
Dairy Specialist*

Session 2:

How To Deliver Messages to the Public About Farming Practices

Beth Meyer, ADADC

Social Media & Traditional Media Training

Beth Meyer, ADADC

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Sara Gillette, Upstate Niagara Cooperative

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What do ‘Millennials’ See as the Future of Farming?

By: Joan Sinclair Petzen

Four young professional farmers shared their views on getting started and the future of farming during a panel discussion at the Northeast Organic Dairy Producers Conference held in Pavilion on October 1 and 2.

Eric Beiler presently works for Chuck Deichmann in Belmont. This is Eric's third dairy position in his quest for eventually owning and operating his own dairy. The robotic, organic dairy of 120 cows provides a good opportunity to expand Eric's knowledge base and grow financially.

Virginia Chamberlain manages the SUNY Alfred College of Technology's farming operations. Virginia hails from south of Syracuse and graduated from the University of New Hampshire. She has since worked for both grazing and robotic dairies before accepting the position at Alfred State which involves managing both a conventional and an organic herd in a tie stall/parlor and robotic freestall respectively.

Stephen Gould farms with his parents John and Susan Gould at HarGo Farm near Pavilion. Stephen returned to the family farm after studying at both Alfred State College and Cornell University. Mutual respect between parents and adult children in family dairy farming is both challenging and rewarding. The Goulds work hard to develop mutually acceptable goals and work toward them together.

Peter Martens, son of Mary Howell and Klaus Martens of Penn Yan started branching out to develop his independent farming operations during high school. Renting cropland and hiring his father's equipment to plant and harvest crops is how Peter got his start. He too has enjoyed the opportunity advanced education affords. Today he works to grow and expand his farming operations by gradually taking on more land and acquiring equipment.

As the discussion progressed some common themes emerged among the young panelists. Each had been involved in a youth agriculture program like 4-H.

This foundation helped to build their passion for agriculture. They took that passion and applied it to further their education and their daily life in farming today. All achieved a Bachelor of Science in their chosen agricultural specialty.

Compensation was another topic of discussion. Adequate compensation to be able to raise a family and gain equity was important. These folks were willing to work hard and are dedicated to farming as a career and a way of life but feel that time away to reflect, grow and spend time with family is also important to getting started in organic farming. They described how organic farming has helped to afford them opportunities. This was particularly true for the individuals not farming in conjunction with family.

Investing in ongoing professional growth opportunities and continued learning is important to these farmers. They are excited about technology and how it will change farming practices going forward. They talked about how reinvestment in the businesses they are affiliated with is critical to long term success.

Lastly, each emphasized the importance of communication among the parties involved in the farming operation. Effective communication is critical to identifying and achieving common goals. They talked about how shared goals are necessary for multiple parties to successfully operate a farm business together.

It was indeed an honor to facilitate this panel of bright, young Western New York organic farmers. As I work with farms across the region to develop and implement succession plans, the ideas introduced to the discussion by Eric, Virginia, Stephen and Peter frequently emerge.

In 2016, the NWNYS Dairy, Livestock and Field Crops Team will offer the "Managing for Today and Tomorrow" Workshop Series to help farms owners and managers think through and develop succession plans for their farm businesses. To learn more about this course reach out to Joan Sinclair Petzen, jsp10@cornell.edu or 585-786-2251, Ext. 122.

Where Are We with Precision Ag Technology in NWNY?

By: Kevin Kreher, Senior at Cornell University

This summer I had the opportunity to intern with the NWNY Team and Cornell Cooperative Extension of Genesee County. My internship focused on a comprehensive survey of “Precision Agriculture Adoption and Trends” in the ten-county region covered by the NWNY Dairy, Livestock, and Field Crops Team. The survey aimed to determine how growers are using the technologies, gauge how it is working for them, and discover how Cornell Cooperative Extension might help farmers working with these technologies. More than 60 people were interviewed for this report, and the grower portion of this survey represents almost 140 thousand acres of cropland in the region.

The report, available in full on the NWNY Team website, <http://nwnyteam.cce.cornell.edu/submission.php?id=506&crumb=precisionxxag15>, starts with a brief overview of the history of technology adoption. The survey results provide an evaluation of current adoption and trends in the region regarding technology use. The results also explore problems and solutions that have emerged with the technology, including a discussion of economic payback for existing and upcoming technology. The report ends with a look at technologies role in the future of agriculture in the region.

A key finding among the group surveyed was that the average age of a farm’s employees shows no distinct correlation with the amount of technology adopted



Photo source : Kevin Kreher

on a farm. The most important factor was a farmer’s willingness to educate themselves on new ideas, regardless of age.

Recent advances in agricultural technologies have increased compatibility and ease of data transfer, allowing the technology to be used as a tool to assist farming instead of being seen as an entirely new undertaking that few had time for. Although there are still problems that were repeatedly brought up by numerous parties, the rate of adoption overall has significantly increased and looks to continue to do so.

The survey finds that a majority of farms have embraced technology generally known as autosteer, where a Global Positioning System (GPS) guides the tractor straight down a row. Many farms are using the GPS enabled equipment to side-dress and spray. This can be complemented by precision data gathered previously including yield, soil maps, and precipitation and crop models to adjust rate in subsections of fields, although this is much less common currently in WNY.

Survey participants also agreed on the potential economic returns and benefits found when using autosteer or GPS steering enabled equipment. Accurate positioning of an implement during passes prevented overlap on all equipment, which, depending on the size of the equipment, field, and the job being performed, could provide significant savings.

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The full report delves deeper into the economics, problems, and solutions found during the course of the survey.

A common concern among those using technology is how to best use the already under-utilized data. This is an especially important issue given the amount of data to be collected in the future by more and more technology. Utilizing this data and maximizing the benefit will be an exercise in creativity for farmers, and will require outside of the box thinking, as technology is providing whole new solutions to what previously has been seen as set in stone limiting factors.

The future of agricultural technology is difficult to predict as both the hardware and software is rapidly evolving. What some farmers might not be using for a couple of years, other early adopters will be using next season. The survey shows that technology is already having a big impact on New York State agriculture, and new technologies will continue to benefit the everyday operation of farms across the state.

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Biosecure Engineering

By Timothy X. Terry

Regional Dairy Strategic Planning Specialist

I was finishing up a farmstead survey the other day and was just outside the milkhouse cleaning / sanitizing my boots, as well as the legs of the tripod and feet of the survey rod when the landowner came up and, with a quizzical look, asked me why I was scrubbing down my equipment.

“In a word: biosecurity. Whatever pathogens may be on this farm will stay on this farm. Just like whatever pathogens were on the previous farm are still on that farm and are not now on this farm.”

We’re all familiar with biosecurity between farms. We’ve all seen various service personnel – vets, AI techs, nutritionists – sanitizing their boots at the end of a service call. And who isn’t well acquainted with the disposable plastic booties handed out like candy at farm tours?

However, have you ever thought about biosecurity *within* your farm operation? In other words, what is being done, or can be done, to prevent the spread of pathogens from sick / infected animals to healthy, susceptible herdmates? Dr. Jerry, Libby and others have consistently preached the husbandry techniques associated with internal biosecurity – sanitizing vet equipment, single use needles, milker’s gloves, etc., but what about the farmstead layout?

Help or Hinder

“Intelligent growth” is kind of a buzz word in community development circles and it refers to guiding the growth and development of a community in a safe and sensible manner. In other words, designing so a landfill doesn’t end up next to a school or playground.

Similarly, you want to develop the farmstead so that it is safe, efficient, and allows for future growth. Unfortunately, “Layout has often evolved by convenience, not by planning,” says John Tyson PE, Penn State Extension. How many times has a new building been placed because “it fits there,” which is

usually right next to the previous one, with little or no thought for its function, management, or possible expansion.

Biosecure Layout

So how should it be done? Here are some things to consider:

- **Isolate Sensitive Areas** - The swine industry has probably done the best of any animal agriculture in this respect. The farrowing barn is separate from the feeder barn, which is separate from the finishing barn, and there is some sort of biosecurity protocol to be followed when entering any of these facilities. Likewise, sensitive areas such as newborn / maternity pens and wet calves should be isolated from much of the farm’s activities and not incidental to it (note: that is, isolated, not out-of-sight). Efficient traffic patterns may have a significant influence on the placement of these facilities. They should be kept away from traffic routes that consistently arise from high pathogen areas – sick pen, manure storage, etc.
- **Manage Air and Manure** – Since the majority of pathogens spread via air or body fluids it seems logical to try to control the flow of air and manure as much as possible. The flow of these fluids should ALWAYS be from most susceptible to the least susceptible (Fig. 1), or better yet, no flow at all. If at all possible, avoid chasing manure from one area into another.

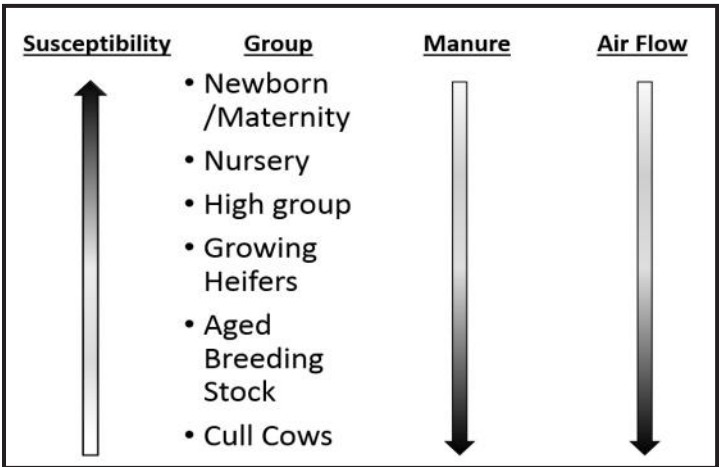


Figure 1 - Pathogen Flow

- Gone are the days of keeping calves in front of the cows in the main barn because it was always warm. (If you're still doing this you may be playing with fire.) A simple runny nose may be an inconvenience for a cow, but it could be deadly for the calf in front of her.
- **Spread Out** – I'm the first one to argue against turning viable cropland into a building site, but there comes a point where it just is not wise or feasible to add just one more building to an already cramped farmstead. Moreover, what legal crop can you grow that will give you the same return on investment as a comfortable, healthy dairy cow? Spreading out affords some physical isolation, better ventilation, and an opportunity for expansion. In a day and age where there are mixer wagons/trucks, payloaders, skid loaders, manure pumps, etc., there is no need to place buildings almost on top of one another.
- **Minimize Exposure to Outside Traffic** – Spreading out may also allow you to control where traffic coming from other farms – feed truck, milk truck, vet, renderer -- has access to your farm. Isolating these access routes from

common farm operational routes minimizes the potential for cross farm contamination.

- **Isolation** - In the same way, provide an isolation or quarantine area for new animals or animals returning from a grower or fair/show.
- Lastly, animal laneways should be hard surfaced and curbed. This will allow you to keep them clean, and the curbs will contain the manure helping to keep you out of hot water with the DEC. Ideally, these should also be roofed thereby keeping excess precipitation out of the manure handling system.

So the next time you're contemplating expansion or renovation think beyond the immediate need and consider how this might better fit into long term plans. For example, you might need more room for lactating cows, but if you were to build a dry cow / maternity barn, move these animals away from the general population, and put lactating cows in the area vacated by the dry cows you've not only solved your housing problem but you've improved biosecurity and increased your ability to more closely manage these differing groups.



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- 15-16 ***Calf & Heifer Congress - "Manage What Matters"***, For more conference information on cost, lodging, meals and registration details go to <http://www.cvent.com/d/jrq4k0>

JANUARY 2016

- 13 ***Corn Congress***, 10:00 a.m. - 3:00 p.m., Clarion Hotel, 8250 Park Road, Batavia. For more details see page 11
- 13 ***Cow Comfort, Welfare & the Public***, 10:00 a.m. - 3:00 p.m., See page 13 for more details
- 14 ***Corn Congress***, 10:00 a.m. - 3:00 p.m., Holiday Inn, 2468 NYS Route 414, Waterloo. For more details see page 11
- 16 ***NY Pork Producers Annual Meeting***, Holiday Inn, 2468 NYS Route 414, Waterloo. For more information contact: Krista Jaskier: 716-697-3031 or www.newyorkpork.org
- 16-17 ***2016 Farmer Brewer Symposium***, Hartwick College, Oneonta, NY. For more details go to: www.hartwick.edu/farmerbrewer
- 20 ***Cow Comfort, Welfare & the Public***, 10:00 a.m. - 3:00 p.m., See page 13 for more details
- 20 ***Cornell Agribusiness Economic Outlook Conference***, 9:00 a.m. - 3:30 p.m., B25 Warren Hall, Cornell University. For more information contact: Gretchen Gilbert at 607-254-1281 or gcg4@cornell.edu or visit the website: <http://dyson.cornell.edu/outlook/econokic-outlook-conference>
- 22-23 ***NY Beef Producers Winter Management Meeting***, DoubleTree, East Syracuse, NY. For more information contact: Brenda Bippert at: 716-902-4305 or www.nybpa.org
- 28 ***NY Corn & Soybean Expo***, Holiday Inn, Liverpool

FEBRUARY 2016

- 3 ***WNY Soybean/Small Grains Congress***, 10:00 a.m. - 3:00 p.m., Clarion Hotel, 8250 Park Road, Batavia
- 4 ***Finger Lakes Soybean/Small Grains Congress***, 10:00 a.m. - 3:00 p.m., Holiday Inn, 2468 NYS Route 414, Waterloo
- 25 ***NE Precision Agriculture: Decision Making for a Profitable Future***, NYS Fairgrounds, Syracuse, NY

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