Cornell University
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NWNY Dairy, Livestock & Field Crops Team

NORTHWEST NEW YORK DAIRY, LIVESTOCK & FIELD CROPS TEAM

Ag Focus

Vigilance Needed to Avoid Accidents While Farming

By: Joan Sinclair Petzen

Accidents have taken a significant toll on the farming industry in Western New York lately. People we know have lost both lives and limbs. First, I want to offer compassion to the families who have experienced tragedy in recent months. Second, I want to call everyone involved in farming to action to be more vigilant about observing safety precautions as you go about your day-to-day work on the farm.

Farm managers, take time to reflect on how your business prepares your workforce to be safe while performing their daily tasks. Develop a safety training program for your family and employees. Working with equipment, traveling on roadways, interactions with livestock, applying crop protection materials, confined spaces and grain handling can put people in harm's way.

It is easy to become complacent about safety precautions. This is especially true when we are rushed, fatigued or preoccupied with seasonal or financial challenges. Things going on in someone's personal life can be distracting and prevent them from focusing on being safe while at work.

Hazards when working with equipment include roll over, entanglement, and run -away. Always use caution when operating on a slope. Never attempt to unclog or clear an obstruction from an operating machine. Turn the machine off first, then work on clearing the

problem. I know, it can be done faster if I just…. The most surefire way to be certain the machine will not slip into operating mode is to turn off the ignition.

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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.

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There are a multitude of training materials and in today's information age you can find a fact sheet or video about almost any farm safety topic. Find ones appropriate to the risks in your business and put them to work.

When traveling the roadways, always remember you are sharing the road with hundreds of people who don't often understand the hazards of approaching or passing farm equipment. There are very specific rules and regulations regarding both trucking of farm products and operation of farm equipment on roadways. The New York State Farm Bureau's Legal Library offers "Farmer's Guide to Truck & Farm Implement Laws & Regulations," 4th Edition for purchase. Ordering information is located on their website: http://www.nyfb.org/legal/NYFB_s_Legal_Library_54_pg.htm. This is an excellent resource for understanding the traffic laws as they apply to agriculture in New York State.

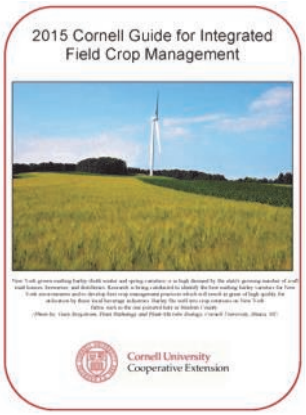
Livestock, even the most gentle, can be unpredictable. Handlers need to be mindful of the hazards associated with moving, restraining and working around animals. Cattle, in particular, are big and strong and can cause injury if spooked, in pain or protecting their calf or the herd. When working in a pen with a bull present, always know where he is and have an escape plan just in case he becomes a threat.

Applying crop protection materials and working in confined spaces both require personal protective equipment. People working in these situations should be trained in the hazards of exposure and oxygen deficient environments. Personal protective equipment must be available, and workers must be trained to use it effectively. Before entering a confined space always test the air to be certain adequate oxygen is available.

Grain handling exposes workers to dusty or moldy conditions, has the potential to entrap a worker if he or she enters a bin and can give off carbon dioxide if stored when moist. Use harnesses if one must enter a bin and be certain adequate ventilation is provided to prevent carbon dioxide poisoning.

Make it your New Year's resolution to implement practices and training programs to make your farm a safer place to work this year. Provide appropriate training. Follow the rules of the road whether traveling on highways or rural roadways. Invest in equipment needed for safely performing hazardous tasks. Be on guard when working with livestock. Get adequate rest and be certain your workers do also to maintain focus and avoid injury. Plan to farm safely in 2015.

2015 Cornell Guidelines for Integrated Field Crops available!



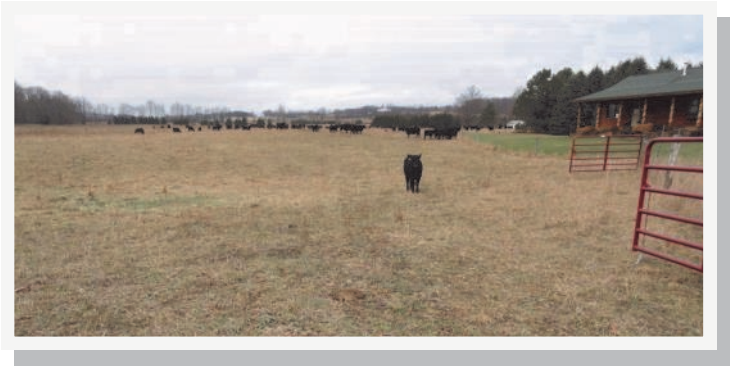
New for 2015 are three different product options for the Cornell Guidelines. Users can obtain a print copy, online-only access, or a package that combines print and online access. The print edition of the 2015 Field Crops Guide is $26 plus shipping. Online-only access is $26. A combination of print and online access costs $36.50 plus shipping costs for the printed book.

Cornell Guidelines can be obtained through your local Cornell Cooperative Extension office or from the Cornell Store at Cornell University. To order from the Cornell Store, call: 800-624-4080 or order online at: http://store.cornell.edu/c-874-pmep-manuals-and-guidelines.aspx

Stockpiling Your Pastures

By: Nancy Glazier

There has been some discussion amongst technical service providers who operate their own farms regarding stockpiling pastures. There are basic resources around, but an attempt is being made to take it to the next level.



The theory behind stockpiling is to save some pasture for late fall/early winter grazing. Livestock are moved off the pastures that are set aside for stockpiling early to mid-August. It is recommended to apply 50-75 lb actual Nitrogen fertilizer to give the grasses a boost. With timely late August - early September rains, pastures will grow and reduce the need for feeding hay, and if livestock are normally fed in a barn, the manure is out on pastures.

Some of the recent exchanges before contemplating stockpiling are below. What is the fertility of your pastures? Ideally, soil samples are taken periodically, so you know this answer. Do they need some Phosphorus and Potassium? Apply that along with the Nitrogen.

Poultry litter would give your pastures a jump start for stockpiling. A general analysis of litter is 3-3-2. You'll need about a ton/acre to achieve an adequate amount of N (60 lb/ac). The organic matter will be beneficial for the long term, too.

Work has been done on species selection for stockpiling. Typically tall fescue is the best due to its standability, yield, and quality. There is less tall fescue grown in NWNY compared to orchardgrass, reed canarygrass, bromegrasses, or timothy. They will stockpile but not as well as tall fescue. Alfalfa will stockpile and handle stockpiling and grazing better than late-season mechanical harvest. Clovers will not withstand stockpiled grazing well.

It may be worthwhile to clip pastures and/or graze 'tight' prior to stockpiling, particularly if they have gone to seed. If not, there may be more stemmy growth and less leaves.

For best utilization it is important to strip-graze the stockpiling. Use high density of livestock on small strips to graze effectively, set up in calculated amounts. These can be subdivided with temporary fencing, and this may take some trial and error to set up the amount of pasture available. One estimate from a beef producer is pasture utilization may be up to 90% with daily moves.

Some questions to ponder:

Do you have extra acreage available for stockpiling? What are the economics of stockpiling? Obviously, there are savings if you feed less hay, due to harvesting costs. What is the value of the land – taxes or rent? Could additional livestock be grazed during the season, such as dairy heifers, stockers, or ewes with lambs that may leave the farm prior to the end of the season? Does heavy grazing affect spring growth? Should some residual be left? What about the early season snowfall? How does that affect quality?

I would be interested to hear from anyone who is experimenting stockpiling and what your experiences are, both good and bad. Give me a call or drop me an email: contact information inside the front cover. I would really like to work with someone to do some on-farm research with this!

BQA-Update – Reproductive Hormone Injections Cause Tissue Damage

By: Michael Baker, Cornell University,
Beef Cattle Extension Specialist

Injection sites are known to cause damage which affects meat quality. It is often thought that hormone injections cause less damage than antibiotics, vaccines or anti-inflammatory drugs. It is also incorrectly believed that meat from market cows are used entirely as ground product. In the 2007 National Beef Quality Audit, 100% of packing plants reported removing sub-primals from market cows and bulls. In dairy cows, the 2007 National Animal Health Monitoring Service reported that nearly 70% of reproductive drugs were given in the upper hip and round. While facilities on dairies make it inconvenient to give reproductive hormones in front of the shoulder, given that 15% of annual receipts come from the sale of cull dairy cows, producers are beginning to re-evaluate their practices. This study was designed to test the hypothesis that reproductive hormones are not as damaging to muscle tissue as flunixin meglumine and would not be different from saline injection.

The researchers used the blood concentration of creatine kinase (CK) as metric to estimate muscle damage. In future studies it will be necessary to measure the impact on muscle tenderness postmortem. Dairy cows in different lactations were given the common reproductive hormones, prostaglandin (PG) and GnRH; a substance known to cause severe muscle damage - flunixin meglumine; saline and a needle injection only.

Results showed that PG and flunixin injection both caused a significantly increased estimate of muscle tissue damage compared with needle only. PG and flunixin caused a marginally significant increased muscle tissue damage compared with GnRH. No statistically significant difference was found between the estimated weight of muscle tissue damaged by flunixin compared with PG, or by saline compared with GnRH or needle only.

The authors concluded that the assumption that reproductive hormones are less damaging than vaccines and antimicrobial drugs is probably incorrect. The effect of reproductive hormones on tissue site damage should be examined more closely, including postmortem evaluation of injection site lesions and effects on tenderness.

V. R. Fajt, et al. The effect of intramuscular injection of dinoprost or gonadotropin releasing hormone in dairy cows on beef quality. J. Anim. Sci. 2011. 89:1939–1943

The new Farm Bill has improved and strengthened crop insurance and NAP making them the primary crop protection programs for almost all crops grown.

Three new supplemental programs have been added that can provide additional protection.

Together these disaster protection programs can have a very positive impact on a farmer's bottom line.

THINK CROP INSURANCE.

Then evaluate the new supplemental area risk programs:

Supplemental Coverage Option (**SCO**) for Corn or Corn Silage

- can add to (or replace) part of your individual crop insurance coverage
- can raise the level of coverage to 86% of your APH yield
- loss triggers when the county average yield is less than 86% of normal

For those with Base Acres (to be used with or without crop insurance):

- Agricultural Risk Coverage (ARC-I or ARC-C) can be used instead of SCO
- Price Loss Coverage (PLC) can be used with or without SCO

Explore the protection options available for each of your crops by contacting a crop insurance agent and your county FSA office. To benefit from these protection plans, you must enroll by the deadlines. The deadline for most spring-planted crops is **March 15th**.

To find an agent, go to: www.rma.usda.gov/tools/agent.html or ask your FSA office
For more information, visit: www.agriculture.ny.gov/AP/CropInsurance.html
or call 800-554-4501

The New NY WORKS for Agriculture
New York State Dept. of Agriculture & Markets

USDA "This institution is an equal opportunity provider."
Risk Management Agency

Truss Safety

By: Timothy X. Terry
Dairy Farm Strategic Planning Specialist,
Harvest NY

Last month's snowstorm is definitely one for the record books. Unfortunately, many of you will remember it more for its devastating effects than for the actual snow amounts. There have been a number of roof failures reported in the area – agricultural, industrial, and residential. As morbid as it may seem, this is to be expected since roof structures in this area are not typically designed for 6'-7' deep snow loads.

Wooden trusses, properly installed, are amazingly strong. "Properly installed" means as a complete system with all the necessary anchors, mechanical fasteners, and cross bracing. Individually, trusses are surprisingly fragile and flexible with very little strength especially to lateral (i.e. – wind) loading. Notwithstanding the recent overloading, the majority of truss failures can be attributed to improper or inadequate bracing.

Mechanics 101

A truss is designed to support loads in a perfectly vertical plane. During construction a good contractor will go through and make sure each truss is plumb (vertical) before securing it in place. Rarely does a truss fail in a perfectly vertical manner. In fact, prior to failure a truss, or individual members of the truss, may begin to deflect or bow sideways since this is the thinner dimension of the lumber and offers the lesser resistance. At some point the member will break, crack, and/or tear loose from the plate connector. Shortly, if not immediately, thereafter the entire truss will fail in a catastrophic manner. Through proper and adequate cross bracing this initial deflection can be minimized or eliminated and the truss will support its maximum designed load.

What to do

Even if you didn't suffer a catastrophic loss, you should go through your buildings and visually inspect all the trusses and the supporting structures – posts, girders, purlins, knee braces, etc.

Be on the lookout for:

- bowed or cracked members
- missing, misaligned, or pulled metal plate connectors
- popped nails, screws, or stripped bolts
- loose or broken diagonal bracing
- anything else that may look suspicious

CAUTION! If sagging in the roof line is apparent and/or you hear creaking and groaning DO NOT ENTER the facility. These may be warning signs of a catastrophic failure. If you must enter to remove cattle or equipment do so only in a cabbed tractor or skid loader.

If repairs are needed it may be best to have them reviewed by a licensed Professional Engineer and installed by a reputable contractor. If you don't find any problem areas but would like to know if your roof structure has been adequately braced, the Structural Building Components Association (SCBA) has developed a reference guide: *BCSI-B3 Summary Sheet – Permanent Restraint / Bracing of Chords and Web Members*. This is available for viewing as a PDF at the following web address: http://support.sbcindustry.com/images/publication_images/b3.pdf?PHPSESSID=v0nbkr7dnce7avch1l2ia2l365

Unfortunately, because of copyright restrictions this can only be viewed online or via a smart phone. It cannot be copied or printed to take to the field.

So grab your I-pad or I-phone, maybe a ladder or two, and head out to the barn, shop, machine shed, etc. and give each of them a thorough inspection before we get any deeper into winter. Bring along a note pad and digital or phone camera for documenting needed repairs, as well as a can of brightly colored spray paint to mark problem areas. This will make them easier to find when it comes time to actually make the repairs.

Updated Technology Provides an Advantage -- *What We Learned by Studying LED Lighting and Long Day Photoperiod*

By: Libby Eiholzer, John Hanchar & Jackson Wright

The authors thank NYSERDA for funding the project titled, Long Day Energy Efficient Lighting for Increased Milk Production on Dairy Operations, and acknowledge the time, effort, and subject matter expertise provided by Michael Capel of Perry Veterinary Clinic, the Meyer family of Dairy Knoll Farms and Sandra Meier, NYSERDA.

Summary

- Researchers conducting an on farm study designed to measure milk production, energy usage, and light brightness under Long Day Photoperiod (LDPP) conditions and alternative lighting technologies concluded that the Light Emitting Diode (LED), LDPP or the T8 (a tubular fluorescent fixture), LDPP treatment did not affect milk production when compared to the T8, non LDPP control. However, differences in energy use among lighting technologies were measured.
- Using data from three nearly identical barns, assuming no expected milk response, partial budget and Net Present Value (NPV) results per barn suggest that LDPP using LED or T8 technology cannot be expected to increase profit or to yield NPVs greater than or equal to zero when compared to the T8, non LDPP control. Results are sensitive to bulb lifetime in hours, energy cost per kilowatt hour (kWh), expected milk response and others. For example, if expected milk response is 3 pounds per cow per day, then the LDPP treatments can be expected to increase profit and yield NPVs greater than or equal to zero for all combinations of fixture life and energy cost per kWh evaluated.
- Partial budget and NPV results suggest that LED and T8 fixtures can be expected to increase profit and yield NPVs greater than or equal to zero when compared to 400Watt (W) High Pressure Sodium (HPS) High Bay fixtures. Results are sensitive to fixture lifetime in hours and energy cost ($ per kWh).

On Farm Study of LDPP & Alternative Lighting Systems

Between August 2012 and January 2014, the NWNY Team completed a study evaluating the energy savings and effective light provided by LED and T8 fluorescent lighting systems in dairy barns. Also assessed were the impacts of the two lighting systems on manipulating photoperiod and milk production.

Previous research has shown that exposing lactating dairy cows to 16 to 18 hours of light (long day photoperiod or LDPP) can increase milk production by approximately 5.1 pounds per cow per day (Dahl, G. E. 2010. Effect of Photoperiod on Feed Intake and Animal Performance. Extension. http://www.extension.org/pages/25470/effect-of-photoperiod-on-feed-intake-and-animal-performance.) It was hypothesized that using LED fixtures to implement LDPP would be preferable over T8 fixtures, as T8s do not perform well in cold weather, which is precisely when the extra light is needed most.

The study utilized three nearly identical barns, measuring approximately 220 feet long by 114 feet wide, on a commercial dairy farm. Existing high pressure sodium (HPS) fixtures were replaced with either new LED or T8 fluorescent fixtures. Two barns were placed on an 18 hour lighting interval, one with LED fixtures and one with T8 fixtures. The third barn (the control) was placed on a conventional lighting interval with T8 fixtures. Milk production, energy usage

And light brightness at cow eye level were measured in all barns for the duration of the study.

Milk Production

Despite previous research results, LDPP did not produce an increase in milk yield in this study. In theory, LDPP sounds like an easy way to make more milk. In practice, we learned that implementing LDPP on commercial dairy farms can be challenging! LDPP requires 6 to 8 hours of *uninterrupted darkness* following the 16 to 18 hours of light, which can be a difficult condition to meet when milking 3X. Although the lights were placed on timers to achieve the necessary 6 to 8 hours of darkness, sometimes part of a group was exposed to light during their "dark" period, because they were still in the holding area or milking parlor. In addition, part of the study took place during the extreme cold of the winter of 2013/2014. This caused two of the waterers to freeze in the LED barn, therefore providing inadequate access to water for part of the season.

Energy Use: New Technologies Provide Advantages

Reduced energy use associated with LED and T8 fixtures relative to the existing, before study 400W HPS fixtures were measured (Table 1).

Table 1. Percent Change in Energy Use, Barns A, B, and C by Technology vs. Existing, Before Study, 400W HPS -- Hours of Use, and Number of Fixtures Fixed for Each Comparison.

	LED, LDPP Barn A	T8, LDPP Barn B	T8, non LDPP Barn C
Basis for Comparison - Existing Before Study, 400W	Minus 47 Percent	Minus 56 Percent	Minus 52 Percent

Note: Hours of use and number of fixtures for Barns A, B and C were 18 hours per day and 32, 18 hours per day and 36, and 13 hours per day and 12, respectively.

Economics

Partial budgeting and Net Present Value (NPV) analysis were used to evaluate economic aspects associated with LDPP and alternative technologies. Analysts used the partial budget approach to estimate the change in profit associated with a change in the farm business, for example, in Barn A, a change to LED LDPP from T8 non LDPP, proposed vs. current, respectively. NPV analysis considers the time value of a stream of net cash flows, net cash incomes over the life of the investment. If the net present value of an investment is greater than or equal to zero, then the investment is attractive to the decision maker.

All analyses are at the barn level, and reflect roughly 2012 price levels. Capital investments required to fit Barn A with LED LDPP, Barn B with T8 LDPP, and Barn C, the control barn, with T8 non LDPP totaled $43,758, $12,383, and $4,128, respectively. Analysts obtained net milk price, and expenses for dairy grain and concentrate and other purchased inputs per hundredweight of milk from the Dairy Farm Business Summary Program (Cornell University).

For the LED LDPP vs. T8 non LDPP control comparison, given an expected milk response of 0 pounds per cow per day and a LED lifetime of 80,000 hours, partial budget analysis yielded an expected change in profit for an average future year of negative $8,400. Expected changes in profit for all 15 combinations of LED lifetime and electric cost evaluated via sensitivity analysis were negative (Table 2).

	LED Lifetime in Hours		
$ per kWh	50,000	80,000	100,000
		-- Dollars --	
0.08	-9,796	-7,627	-6,916
0.09	-10,183	-8,013	-7,303
0.1	-10,569	-8,400	-7,690
0.11	-10,956	-8,787	-8,077
0.12	-11,343	-9,173	-8,463

Table 2. Expected Change in Annual Profit, LED LDPP vs. T8 non LDPP Control by LED Lifetime in Hours by Dollars per kWh.

Results are sensitive to expected milk response. For example, if the response equals 3 pounds per cow per day, then expected change in profit for Barn A is $10,325, and NPVs for all three LED lifetimes are greater than zero.

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For the T8 LDPP vs. T8 non LDPP control comparison, given a milk response of 0 pounds per cow per day and a T8 lifetime of 24,000 hours, partial budget analysis yielded an expected change in profit for an average future year of negative $6,846. Expected changes in profit for all 15 combinations of electric cost and T8 lifetime were negative, ranging from a low of negative $8,095 annually for the $0.12 per kWh, 20,000 lifetime hours combination to a high of negative $5,597 for the $0.08 per kWh, 30,000 hours combination. Analysis yielded an NPV of negative $22,138 for the 24,000 hour life. Results are sensitive to expected milk response. For example, if the response equals 3 pounds per cow per day, then the expected change in profit for Barn B is $11,879, and the NPV for the 24,000 hour T8 lifetime is positive.

A second set of analyses evaluated LED and T8 technologies compared to the before study, 400W HPS High Bay system. Analyses reflected equal numbers of fixtures and annual hours of operation for the study and before study comparisons. For example, for the Barn A study vs. before study comparison of LED vs. HPS, fixture numbers and hours of operation per day were constant at 32, and 18, respectively.

Given a milk response of 0 pounds per cow per day, partial budget, NPV and sensitivity analyses comparing LED and T8 systems to the before study 400W HPS system for Barns A, B, and C yielded expected increases in profit over a range of hours of lifetime and $ per kWh, and NPVs greater than zero.

Note that the analyses developed do not reflect marginal internal or external economic and environmental benefits and/or costs associated with the different technologies; for example, those potentially attributed to mercury contained in fluorescent fixtures.

What does this mean to you? First of all, if you are considering replacing outdated lighting fixtures with newer, more energy efficient fixtures, this could have a positive economic impact on your farm due to a decrease in energy usage. Farmers who have made these updates have also cited other benefits, such as the increased ease in working with cows in barns that are better lighted. As for LDPP, we've learned that it takes precision to make it work correctly, and that it is only economical if it does indeed yield an increase in milk production. Minimum requirements for light levels at cow eye level must be met in order for LDPP to work, so if you are considering utilizing LDPP, it would be prudent to have a lighting engineer evaluate your barn before installing new fixtures.

FAQs about Farm Drones Part 1

By: Bill Verbeten

There's a lot of excitement and uncertainty about farm "drones." These unmanned aerial systems (UAS) have a lot of potential to improve crop management and we are getting a lot of questions about their use in western NY.

Drone, UAV, UAS? What does it all mean?

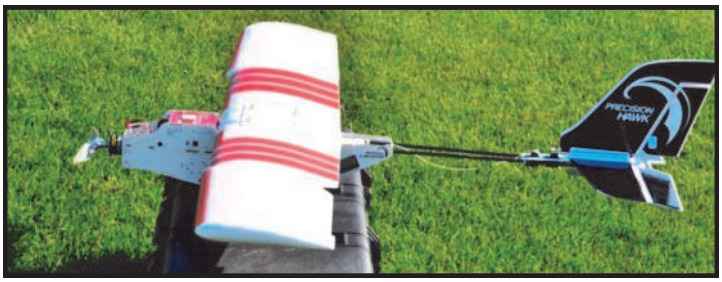
Many people think of the large military craft when they hear the word "drone" and know that it's an aircraft without an on-board pilot. However, many smaller unmanned aerial vehicles (UAVs) have become common. An unmanned aerial system (UAS) includes the UAV, the ground control station (what is used to fly the UAV), the pilot, a visual observer and any other needed equipment.

Can I legally fly a UAS over my farm?

It depends how you use it. As long as you fly your UAS under 400 ft, are more than 5 miles away from the nearest airport, fly only during daylight hours, obey visual flight rules, and do not use the UAS imagery to make a management decision on your crops or livestock then as a hobbyist you would be in compliance. However if you use the UAS imagery to, for example, write a prescription for variable rate nitrogen on corn, even if it's fed to animals, you would be in violation of the law. A change in management = commercial UAS use. We have obtained FAA approval to conduct research on a small number of farms in western NY to evaluate management changes based on UAS imagery beginning in 2015.

How can I get a usable picture of my field from UAS imagery?

Software that stitches images together is needed to make a usable mosaic from UAS imagery. Many farmers in other parts of the US and Canada have spent a lot of time trying to figure this out with varying degrees of success. Paying for a service that does this automatically can save a lot of time if you don't have the expertise. In our work we have a company who will provide this service to us and get us and our collaborators useable geo-referenced imagery that can be taken back to the field within 24 hours of scanning with our UAS.



CCE's UAS platform
Source: NUAIR Alliance

What would I have to do to legally fly a UAS for eventual commercial use?

The proposed commercial UAS rules will likely be released for public comment in early 2015. While a number of things are up in the air, two things are going to be part of the process to legally operate UAS: a second class aviation physical and passing the private pilot written exam for airplanes (fixed-wing UAS) or rotorcraft (quadcopter UAS). Pilot training will be similar to getting a CDL, pesticide applicator's license, or CCA certification. The more we can self-educate and self-regulate the better off we will be as an industry. There are a lot of rules in the sky and a lot of knowledge about flying that is needed to operate UAS safely. Traditional ground schools and home study courses are available. The second class aviation physical is similar to an annual check-up plus an eye exam.

Will you be doing demonstrations?

We are tentatively planning to have two field days during the late summer of 2015 where we will demonstrate our UAS, provide research updates, and have some of our collaborating farmers speak about their initial experiences with UAS imagery of their crops.

How can I be involved with UAS crop research?

We are advising many farmers how to explore UAS use under the hobby rules and the COA (certificate of authorization) process and would be happy to discuss your ideas, questions, and concerns further. We can also receive industry sponsorship for evaluations as part of our FAA approved research efforts across western NY.

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2004 PETERBILT 357; 430 HP CAT C12 Diesel; 8LL Trans.; Engine Brake; 19' East Alum. Dump Body w/Coal Chute & Electric Tarp; Air Ride Susp.; 4.33 Ratio; 256" WB; 22.5 Tires; Alum./Steel Wheels; Tri-Axle; 20,000# F/A; 46,000# R/A; 599,000 Miles; Stk. #4721 - **$43,900**

2002 PETERBILT 379 DAYCAB; 450 HP Cummins; Jake Brake; 10-Spd. Manual Trans.; 12,000# F/A; 46,000# Rears; 796,500 Miles; As Clean As Photo - **$36,900**

2002 KENWORTH T800; 335 HP CAT C10 Diesel; 10-Spd., Engine Brake; 22' Deck And Manitoc MDL 1047 3-Stage 10-Ton Crane; Hendrickson Susp.; 5.29 Ratio; 262" WB; 22.5 Tires; All Steel Wheels; Tri-Axle; 20,000# F/A; 44,000# R/A; 92,000 Miles; Very Clean Low Mile Truck; D/F, 90+% Rubber; Will Separate Crane/Bed From Chassis; 25' Of Frame Behind Cab; 186" CT; Stk. #4619 - **$53,900**

2004 KENWORTH T300; 475 HP CAT C15 Diesel; 18-Spd.; Engine Brake, Chalmers Susp.; 4.33 Ratio; 230" WB; 24.5 Tires; Alum./Steel Wheels; Tandem Axle; 14,600# F/A; 46,000# R/A; 253,000 Miles; Low Mileage Clean KW T800 w/Full Locking Rears & PTO; Heavy Single Frame; 20" Behind Cab; 156" CT; Stk. #4372 - **$59,900**

2002 INTERNATIONAL 4900; 300 HP International 530 Diesel; 7-Spd.; 22'x96" Steel Bed w/Tie Down Straps; Air Ride Susp.; 238" WB; 22.5 Tires; All Steel Wheels; Tandem Axle; 14,000# F/A; 40,000# R/A; 115,560 Miles; Very Clean, Good Running Flatbed Truck w/Double Frame; Will Separate Flatbed From Chassis; 22'6" Frame Behind Cab; 168" CT; Stk. #4742 - **$25,900**

2000 MACK RD688S; E7 Mack 350 HP Diesel; 8LL Trans.; Camelback Susp.; 262" WB; 24.5 Tires; All Steel Wheels; Tandem Axle; 20,000# F/A; 44,000# R/A; 108,544 Miles; Very Clean, Double Frame Truck; 19'6" Of Frame Behind Cab; 190" CT; Auto-Lube System; Stk. #4647cc - **$35,900**

(2) 2006 WESTERN STAR 4900SA; 515 HP Detroit 14L Diesel; Engine Brake; Reynolds 21'L x 7' H x 102" W Steel Heated Body; Hendrickson Susp.; 220" WB; 12.00x24 Tires; Spoke Wheels; Tandem Axle; 18,740# F/A; 65,000# R/A; Off Road Tires @ 85%; Low Miles; Stk. #4699 - **$34,900**
Stk. #4698 Has 190,180 Miles • **ALSO: 2009 Western Star Dump & 2012 Mack Dump** With Same Specs

2006 PETERBILT 378; CAT C15 475 HP, 18-Spd., Eng. Brake, Air Ride Susp.; 172" WB; 22.5 Tires; Alum. Whls.; T/A; 12K FA; 46K RA; 380,024 Miles; Very Clean; Low Mile Daycab w/46K Full Locking Rears (Truck Currently Has 40K Pete Rears Pricing Includes Swapping Out For 46 Air Trac Full Lock); Stk. #4553-46R - **$59,000**

2002 KENWORTH T800; 410 HP CAT C12 Diesel; 10-Spd.; Engine Brake; Air Ride Susp.; 5.29 Ratio; 206" WB; 36" Flat Top Sleeper; Tandem Axle; 44,000# Full Locking Rears; 175,138 Miles; LOW MILES!!!; ECM 176,000 Miles; Good Running T800 w/Sleeper; Wetline System; ; Stk. #4748 - **$34,900**

2003 INTERNATIONAL 4300; DT466 International Diesel; Automatic; 47"; Spring Susp.; 187" WB; 22.5 Tires; All Steel Wheels; Single Axle; 13,000# F/A; 22,000# R/A; 94,813 Miles; Very Clean, Low Mile Truck w/Altec DM47 Crane/Auger/Pole Grabber With 4 Stabilizers; Also Has Aux. Hydraulics To Run Portable Tools; Rear Hitch w/Air & Electric Hookups; Stk. #4681 - **$32,900**

1999 INTERNATIONAL 2574; 330 HP Cummins ISM Diesel; 8LL Trans.; Rubber Block Susp.; 207" WB; 22.5 Tires; Spoke Wheels; Tandem Axle; 20,000# F/A; 40,000# R/A; 62,532 Miles; Clean, Low Mile Cab & Chassis w/Double Frame & PTO; 19' Frame Behind Cab; 126" CT; Stk. #4737 - **$24,900**

2000 MACK RD688S; 400 HP Mack E7 Diesel; 18-Spd.; Engine Brake; Camelback Susp.; 208" WB; 22.5 Tires; Spoke Wheels; Tandem Axle; 20,000# F/A; 46,000# R/A; 194,012 Miles; Good Running Plow/Sander Truck w/Tenco Plow Equipment & 14' Tenco Center Drop Sander Body; Has Tarp, Coal Chute, Compu-Sander Controls; All Service Records Available; Stk. #4788 - **$29,500**

1998 PETERBILT 379; Cummins N14 460 HP; Diesel; 13-Spd.; Eng. Brake; Air Ride susp.; 208" WB; 22.5 Tires; Alum./Steel Whls.; T/A; 12,000# FA; 44,000# RA; 938,450 Miles; Clean Good Running Daycab w/Wet-Line System; Stk. #4583 - **$25,900**

2004 MACK MR500; 300 HP Mack Diesel Engine; 248,000 Miles; Auto. Trans.; Haulmaxx Susp.; 315/80R22.5 Tires; All Steel Wheels; 214" WB; Tandem Axle; 20,000# F/A; 46,000# R/A; Stk #4655 - **$39,900**

2004 PETERBILT 357; 445 HP CAT C12 Diesel; 8LL Trans.; Engine Brake; Haulmaxx Susp.; 220" WB; 22.5 Tires; Alum. Wheels; Tandem Axle; 22,000# F/A; 46,000# R/A; 81,708 Mile; Very Clean Mid West Mixer Truck; Full Locking Rears; Low Miles; We Will Separate The Mixer From The Chassis; 144" CT; 17' Of Frame Behind The Cab; Stk. #4604 - **$49,900**

2006 WESTERN STAR 4900EX; 515 HP Detroit 14L Diesel; 18-Spd.; Engine Brake; Air Ride Susp.; 222" WB; 24.5 Tires; Alum. Wheels; Tandem Axle; 12,000# F/A; 46,000# R/A; 526,344 Miles; Very Clean Heavy Spec Truck With FULL LOCKING 46,000# Rears And Wetline; Stk. #4702 - **$49,500**

2004 Freightliner Business Class M2 106; Mercedes MBE-900 280 HP; 31,007 Miles; 8LL; Eng. Brake; Air Ride Susp.; 3.90 Ratio; 22.5 Tires; Alum./Steel Whls.; 228" WB; T/A; 16,000# FA; 40,000# RA; 17' Length Stk. #4641 - **$49,900**

(2) 1998 MACK RB688; Mack E7 350 HP; 509,349 Miles; 8LL; Eng. Brake; Camelback Susp.; 20' HD Dump; 260" WB; 20,000# FA; 46,000# RA; Steel Comp.; Clean DF, Qty Of RB, RD, DM Models In Stock! Stk. #4616/4617 - **$25,900**

2000 VOLVO VHD64; 335 HP Cummins ISM Diesel; Allison Auto.; Engine Brake; T Ride Susp.; 3.58 Ratio; 228" WB; 22.5 Tires; All Steel Wheels; Tandem Axle; 16,000# F/A; 40,000# R/A; 286,904 Miles; VERY CLEAN Cab & Chassis; Low Miles; Double Frame; 20' Frame Behind Cab; 152" CT; Full Locking Rears; Stk. #4561 - **$45,900**

2006 VOLVO VHD42B200; 395 HP Volvo VED12D Diesel; 200,337 Miles; 8LL Trans.; Engine Brake; TufTrac Susp.; 16' Steel Body; 4.89 Ratio; 24.5 Tires; 232" WB; Tandem Axle; 20,000# F/A; 46,000# R/A; Good Running, Clean Dump Truck w/Electric Tarp; Stk. #4006 - **$57,500**

1998 KENWORTH T800; 550 HP CAT 3406E Diesel; 8LL Trans.; Engine Brake; Neway Susp.; 4.56 Ratio; 228" WB; 12x22.5 Tires; Alum./Steel Wheels; Tandem Axle; 14,600# F/A; 46,000# R/A; 538,264 Miles; Heavy Duty Daycab w/46,000# Full Locking Rears; Wetline System; Dual Exhaust & Air Cleaners; Stk. #4575 - **$30,750**

2003 Sterling LT9500; CAT C12 335 HP; 455,969 Miles; 8LL; Eng. Brake; Haulmax Susp.; 21' Length; 24.5 Tires; All Steel Whls.; 272" WB; 5-Axle; 18,000# FA; 40,000# RA; Alum. Composition Stk. #4639 - **$55,900**

2000 PETERBILT 378; 430 HP CAT C12 Diesel; 8LL Trans.; Engine Brake; 22'; Hendrickson Susp.; 272" WB; 24.5 Tires; All Steel Wheels; Tri-Axle; 18,000# F/A; 46,000# R/A; 532,311 Miles; Nice Double Frame Truck With 75,000# American Rolloff & 20,000# Air Lift Tag Axle; 19'6" Of Frame Behind Cab; 183" CT; Stk. #4631 - **$42,500**

$$$$$ WE BUY MACK, FREIGHTLINER, PETE, KENWORTH, Etc. TRUCKS and CAT, KOMATSU, CASE, HYUNDAI, IR, Etc. CONSTRUCTION EQUIPMENT for $$$$$

Debris Disposal

By: Timothy X. Terry
Dairy Farm Strategic Planning Specialist, Harvest NY

The storm of the century is now over, much of the snow has melted, and the clean-up and repair have begun. The $64 question then is what to do with all the damaged wooden structural members and the steel roofing. If only a little trimming of the wooden pieces is required and it is otherwise sound – no cracks or tears – then it may be salvaged and reused or repurposed elsewhere on the farm. Sections of steel roofing, truss plates, metal fasteners, etc. should be scrapped and taken to a recycling center. A quick google or yellow pages search will list scrap recyclers in your area.

Wood that cannot be salvaged should be taken to a landfill that accepts construction debris. Depending on when the barn was originally constructed and where the pieces were located – posts, girders, trusses – these materials may have been treated with some form of wood preservative such as creosote, pentachlorophenol (Penta), or Chromated Copper Arsenate (CCA) (the green stuff). Some of the CCA-treated wood may be so weathered or sun-bleached that the green tint is no longer visible. These materials should NEVER:

- be composted, chipped, or mulched
- be burned as toxic chemicals may be released as part of the smoke and ashes (fireplaces and fire pits included)
- be repurposed in areas where children play (picnic tables, playgrounds) or where food may be produced or stored (vegetable gardens, farm stands, etc.)
- be buried on the farm (ALWAYS take to a permitted landfill), especially creosoted materials

If the wood must be cut in order to remove it from the structure and make repairs, then a dust mask, goggles, and gloves should be worn. Sawdust should be swept up and disposed of with the lumber. You don't want the cattle licking up this material and having residues appear in the milk or meat.

After working with the wood, wash all exposed areas of your body, especially the hands, thoroughly with soap and water. Wash your work clothes separately from other household clothing before wearing them again.

For more information, check out the NYS Department of Environmental Conservation's (NYS DEC) website: http://www.dec.ny.gov/chemical/8480.html. There are additional links there to the US Environmental Protection Agency's (EPA) website. Stay safe, stay healthy.

Upcoming Webinars:

Troubleshooting Design-Based Cow Comfort Issues

January 14, 1:00 p.m.
Presented by:
Dan McFarland
eXtension
http://www.extension.org/pages/29156/upcoming-dairy-cattle-webnars

Technology Tuesday Series:

LEED for Dairy & Livestock Facilities

January 20, 8:30 - 10:30 a.m.
Presented by:
Mathew Haan
Penn State Extension
http://extension.psu.edu/animals/dairy/courses/technology-Tuesday-series


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Dr. Ronald Hanson
Neal E. Harlan Professor of
Agribusiness in the Department
of Agricultural Economics at the
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2015 SOYBEAN & SMALL GRAIN CONGRESSES

Come and get all the latest on soybean and small grains production from Cornell researchers, extension, and local industry. Visit with all of your favorite local industry representatives at the Ag. Exhibitor Tradeshow and get answers to all your questions on the latest technology and innovations!

◊ ***Soybean & Small Grain Disease Management***
Gary Bergstrom, Cornell University Plant Pathologist

◊ ***Storage Management of Small Grains to Preserve Maximum Quality***
Kenneth Hellevang, North Dakota State University, Extension Engineer

◊ ***NY Soybean Yield Contest Winners – How did they do it!***
Mike Stanyard, Cornell Cooperative Extension, NWNY Team

◊ ***Neonics Implicated in Bee Decline and Ground Water: A Storm Cloud on the Horizon***
Elson Shields, Cornell University Entomologist

◊ ***Herbicide Choices for Weed Control and Resistance Management in Soy and Wheat***
Russ Hahn, Cornell University Weed Scientist

◊ ***Economics of High Management Wheat…..Where do we stand?***
John Hanchar, Cornell Cooperative Extension, NWNY Team

◊ ***Can Soybeans Benefit from Additional Nitrogen Applications?***
Mike Stanyard, Cornell Cooperative Extension, NWNY Team

Guest Speaker: Dr. Kenneth Hellevang

As an Extension (outreach) Engineer of Agricultural & Biosystems Engineering at North Dakota State University, Ken has provided education and technical assistance in grain drying and storage, structures with a focus on energy efficiency, indoor environmental engineering primarily related to moisture and mold, and flood preparation and recovery to farmers, agribusiness, and professionals across the United States and internationally since 1980.

DEC Recertification points & Certified Crop Adviser Credits available

February 4, Clarion Hotel, Batavia
February 5, Holiday Inn, Waterloo

Please make reservations by ***JANUARY 29*** *by contacting:*
Cathy Wallace: 585-343-3040 x138 or cfw6@cornell.edu

Cost:

$45 for those not enrolled in the NWNY Team through your local county extension office.
(If you do not receive AgFocus, the monthly team newsletter, you are not enrolled).

$35 for those enrolled in the NWNY Team.

Cornell University
Cooperative Extension

Milk Quality Training

PRO-DAIRY

Program Dates:

This three day program will meet on Thursday:

January 8th, 2015
February 5th, 2015
March 5th, 2015

10:30am to 3:30pm

Registration fee is $100.00

**Program offered via live presentations and video conferencing at all sites.*

Participating Sites:

CCE - Genesee County
420 East Main Street
Batavia, 14020

and

CCE - Ontario County
480 North Main Street
Canandaigua, 14424

To register for either site contact:
Cathy Wallace:
585-343-3040 x138 or
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Quality Milk Production Services

North West New York Dairy, Livestock & Field Crops

Improve Your Milk Check Through Quality Milk.

January 8th-What is Mastitis Costing your Farm?

- Analysis of Potential Lost Income.
- Mammary Physiology & the Basics of Mastitis Culturing.
- Bovine Mammary Gland Anatomy & Physiology –Importance of a Consistent Milking Protocol.
- Knowing Your Mastitis Organisms .
- How to Take a Proper Milk or Bedding Sample for Culture

Presenters:
Dr. Kimberley Morrill, PhD, CCE Regional Dairy Specialist.
Dr. Theresa Taraska, DVM, CCE Lewis County Dairy Specialist
Dr. Rick Watters, PhD, Quality Milk Production Services

February 5th- Importance of Cow Comfort, Environment & Equipment Maintenance

- Overview on milk samples and bedding samples submitted from week one.
- Scoring Systems to Implement On-farm to Monitor Cleanliness and Teat Health- who should you score, how to score, why they are a good idea.
- Cow Comfort and its Impact on Quality Milk.
- Cow Comforts Impacts on the Immune System.
- Impact of Equipment Maintenance.

Presenters:
Curt Gooch, Agricultural Engineer, Cornell ProDairy Program
Dr. Jerry Bertoldo, DVM-NWNY Dairy Specialist.
Dr. Paul Virkler, DVM, Quality Milk Production Services
Dr. Rick Watters, PhD, Quality Milk Production Services

March 5th Importance of Record Keeping for Mastitis Control.

- Economic Impact of Management Changes to Improve Milk Quality.
- Residues & Treatment Records.
- Dairy Comp – The Value of Recordkeeping .
- Review of NYSCHAP Quality Milk Module

Presenters:
Dr. Michael Capel, DVM, Perry Vet Clinic
Dr. Dwight Bruno, DVM, New State Dept. of Ag and Markets.

One bulk tank sample and bedding sample per farm is included in the registration fee.

Stalk Nitrate Test Results for NY Corn Fields from 2007 - 2014

By: Quirine Ketterings[1], Karl Czymmek[1,2], Sanjay Gami[1], and Mike Reuter[3]
Cornell University Nutrient Management Spear Program[1], PRODAIRY[2], and Dairy One[3]

Since the introduction of the corn stalk nitrate test (CSNT) as an end-of-season evaluation tool for nitrogen (N) management in 2nd or higher year corn fields, the number of fields that have been tested for CSNT has been on the increase. The greatest benefit of this test is that it allows evaluation and fine-tuning of N management for each specific field. It does, however, require multiple years of testing to gain experience with on-farm interpretation. Corn stalk nitrate test results >2000 ppm indicate there was significantly more N available during the growing season than the crop needed.

The summary of CSNT results for the past eight years is shown in Table 1. In the 2013 and 2014 growing season, the CSNT testing results from the Nutrient Management Spear Program and Dairy One were summarized to obtain a distribution of CSNT categories in New York State. Quality control samples shared between the two laboratories in both years showed excellent consistency in reported data between the two laboratories. Data prior to 2013 reflect submissions to Cornell University only. For 2014, this summary shows that about 36% of all tested fields were over the 2000 ppm range, while 27% were over 3000 ppm and 14% exceeded 5000 ppm. In contrast, 29% of the 2014 samples tested low in CSNT. For 2nd or higher year corn fields, low test results (less than 250 ppm) are likely to reflect a true N deficiency. Weed pressure, disease pressure, lack of moisture, lack of oxygen and other stress factors can impact the N status of the crop, so in some circumstances, additional N might not have been able to overcome the real reason for the low CSNTs (e.g. no amount of N fertilizer can make up for a drought).

As mentioned, the CSNT is most effective when used for multiple years on the same fields to determine how each responds to the way N is being managed. Crop history, manure history, other N inputs, soil type, and growing conditions all impact CSNT results, and crop management records that include these pieces of information can be used to evaluate CSNT results and determine where changes can be made.

Table 1. Distribution of CSNT values for New York State corn fields sampled in 2007-2014.

Corn stalk nitrate test category	2007	2008	2009	2010	2011	2012	2013	2014
	%	%	%	%	%	%	%	%
Low (<250 ppm)	12	19	30	24	21	20	35	29
Marginal (250-750 ppm)	13	12	14	17	19	17	16	16
Optimal (>750-2000 ppm)	26	22	21	19	24	22	20	19
Excess (>2000 ppm)	49	48	35	40	36	41	29	36
Excess (>3000 ppm)	34	36	22	28	24	29	20	27
Excess (>5000 ppm)	21	20	11	14	12	14	9	14
Total number	105	252	367	509	765	923	1473	1175
Maximum value (ppm)	14933	13069	11723	13966	16687	15671	13147	14659

Cooperative Extension Association of Livingston
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January 2015

8 ***Milk Quality Training,*** 10:30 - 300 p.m., for details see page 17.

14 ***Corn Congress,*** 8:30 a.m. - 3:00 p.m., Clarion Hotel, 8250 Park Road, Batavia. For details see page 9.

15 ***Corn Congress,*** 8:30 a.m. - 3:00 p.m., Holiday Inn, 2468 NYS Route 414, Waterloo. For more details see page 9.

February 2015

2 ***Pesticide Training & Recertification Series***, CCE-Ontario County, 480 North Main Street, Canandaigua. For additional dates and cost, contact: Nancy Anderson: 585-394-3977 x427 or nia8@cornell.edu or Russ Welser at: 585-394-3977 x436 or rw43@cornell.edu. Registration form is available on the website: www.cceontario.org

4 ***WNY Soybean/Small Grains Congress,*** 8:30 a.m. - 3:00 p.m., Clarion Hotel, 8250 Park Road, Batavia

5 ***Finger Lakes Soybean/Small Grains Congress,*** 8:30 a.m. - 3:00 p.m., Holiday Inn, 2468 NYS Route 414, Waterloo

5 ***Milk Quality Training,*** 10:30 - 3:00 p.m., for more details see page 17.

March 2015

5 ***Milk Quality Training,*** 10:30 - 3:00 p.m., for more details see page 17.

Building Strong and Vibrant New York Communities