



# U.P. Ag Connections Newsletter

February 2019

Agricultural News from MSU Extension and AgBioResearch

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## In this issue:

Page 2  
2018 UP Pea and Small Grain  
Variety Trial

Page 3  
Plan and record for produce  
safety success

Page 4  
Protect corn from sandhill  
cranes

Page 5  
Upcoming conferences,  
trainings and meetings  
Market Report

Page 6-7  
Advertisers

Page 8  
Calendar of events

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## Annual U.P. Agriculture for Tomorrow conference coming up soon...

The Agriculture for Tomorrow conference is scheduled for Tuesday, March 12, at Bay College in Escanaba. This will be the 13<sup>th</sup> year for the program. It's a great opportunity for Upper Peninsula farmers and other agriculture people to get together for a full day of learning and making connections. This year, we are re-introducing break-out sessions targeting smaller, diversified farms selling locally in our communities, along with many sessions of interest to farms of all types and sizes across the U.P. region. We also heard from participants that industry presentations are valuable to farmers, and we have concentrated on adding more of those.

But... **why should you come?** Let me give you a few reasons...

- This is a very **affordable** program, thanks to the generosity of many commercial and organizational sponsors from our region. The \$25 pre-registration fee (\$35 at the door) includes a full day of presentations and a good, hot buffet lunch.
- This is a good, local **educational opportunity**. You have to travel downstate or to Wisconsin for a comparable or larger farm-related conference.
- This conference provides a chance to **connect with other U.P. farmers** in a great setting. The exhibitor hall and the various commercial presenters provide opportunities to **hear from ag industry professionals on topics of local interest**.
- After the conference, your trip to Escanaba can also **include stops for shopping and supplies**, or a nice dinner out.
- It's good to **take a break from the farm** every now and then...and this conference is a productive way to spend a day off!

Just to whet your interest, here are some of the topics planned for the conference:

- The new MSU Ag Tech Program coming to Bay College (featuring Randy Showerman, director of MSU Ag Tech programs).
- Farm business management for novices, and level 2. Also business plan development.
- Increasing productivity and reducing joint pain on the farm (featuring Ned Stoller from MI AgrAbility).
- Hay equipment trends and topics (featuring New Holland representatives).
- New forage varieties to consider (featuring Jeremy Sweeten from CISCO Seeds)
- Agroforestry and non-timber forest products for the U.P.
- Marketing your farm products (featuring Alexandria Palzewicz – Taste The Local Difference Local Food Coordinator for the Upper Peninsula)
- Food safety on small farms
- Soil health analysis, interpretation and management
- Cattle handling equipment (featuring a representative from Arrow Livestock Equipment)
- Livestock marketing (featuring Superior Livestock Auction)
- Vaccination and deworming programs (featuring a Merck Animal Health representative)
- Grass finished beef Michigan research update

We are looking forward to the conference and hope to see you there. Please take a minute to look through the enclosed conference registration brochure. Why not register now? You can register on-line, or mail it in.

## 2018 Upper Peninsula Pea and Small Grain Variety Trial

Our goal was to evaluate species mixtures and varietal performance of pea, oat and triticale on yield and nutrient content

Monica Jean, MSUE Educator

Michigan State University Extension received funding through Project GREEN to evaluate small grain varieties with and without peas at the Upper Peninsula Research and Extension Center in Chatham, MI. Our objective was to inform farmers on mixtures and variety selection to optimize their yield and feed value. Twenty-two entries donated by seed dealers in the Northern Michigan were planted at Chatham, MI on May 8, 2018 (Table 1). Plot size was four by sixteen feet and borders were planted to minimize edge effects. Urea was applied on May 8<sup>th</sup> at 108 lbs/acre. Previous crop was a cover crop mixture of crimson clover and oil seed radish. Growing conditions across the region exhibited higher temperatures and below normal rainfall when compared to a 5-year average.

Varieties were harvested when the small grain species reached boot stage, which resulted in several different dates (Table 2). Three quadrat clippings were taken from each treatment. NIR nutrient analysis was done at Dairyland Laboratory.

| Variety                         | Species           | Source     | Seeding Rate, lbs/ac | Grain/pea, % of mix |
|---------------------------------|-------------------|------------|----------------------|---------------------|
| Jerry                           | Oat               | Public     | 96                   |                     |
| Milkmaker                       | Triticale/Pea     | Cisco      | 100                  | 50/50               |
| Partner                         | Oat/Pea           | Cisco      | 100                  | 50/50               |
| Trical 2700                     | Spring Triticale  | Wolf River | 100                  |                     |
| Everleaf 126                    | Oat               | Wolf River | 96                   |                     |
| Tritlage Pro                    | Triticale/Pea     | Byron      | 100                  |                     |
| Stockade/Haywire/Elevator       | Pea/Oat/Triticale | Cisco      | 100                  |                     |
| Survivor peas/ T100 facultative | Peas/Triticale    | Cisco      | 100                  | 50/50               |
| Laker                           | Oat               | Wolf River | 96                   |                     |
| Laker/Fergie                    | Oat/Pea           | Wolf River | 100                  | 60/40               |
| Laker/Arvika                    | Oat/Pea           | Wolf River | 100                  | 60/40               |
| Tritcal 2700/Fergie             | Oat/Pea           | Wolf River | 100                  | 50/50               |
| Tritcal 2700/Arvika             | Oat/Pea           | Wolf River | 100                  | 50/50               |
| Everleaf 126/Fergie             | Oat/Pea           | Wolf River | 100                  | 60/40               |
| Everleaf 126/Arvika             | Oat/Pea           | Wolf River | 100                  | 60/40               |
| Goliath/4010                    | Oat/Pea           | CPS        | 100                  | 60/40               |
| Ogle/4010                       | Oat/Pea           | CPS        | 100                  | 60/40               |
| Ogle                            | Oat               | CPS        | 96                   |                     |
| Goliath                         | Oat               | CPS        | 96                   |                     |
| Forage plus                     | Oat               | Wolf River | 96                   |                     |
| Forage Plus/4010                | Oat/Pea           | Wolf River | 100                  |                     |

No pest damage, lodging or high weed population was observed. Selecting the species and variety is dependent on the end goal of the crop. If tonnage is the goal, Everleaf 126 or Everleaf 126/Fergie pea and oat mixture yielded the highest (Table 1). If protein content is the goal, Laker oat had the highest protein content but Milkmaker (spring triticale and pea mix) was significantly greater on a land-area basis (Figure 1). If energy content is the goal, several varieties had significantly greater TDN concentrations. No single entry was superior in both yield and nutrient content.

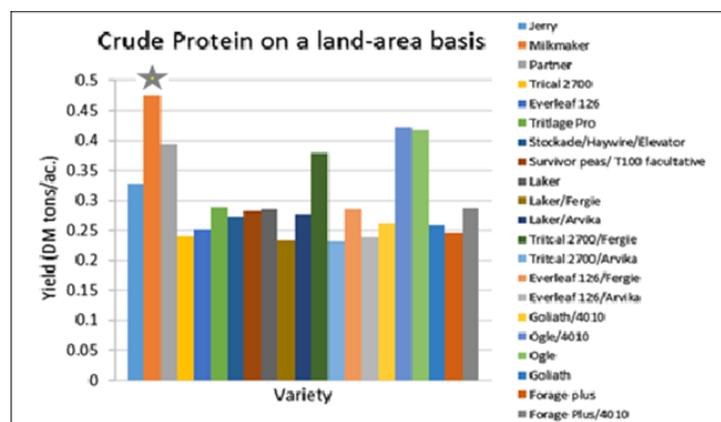


Figure 1. Crude protein on a land-area basis compared across varieties. (\* denotes highest yielding variety)

**Table 2. Summary of harvest time, yield and nutrient content by variety.**

| Variety                          | Harvest date<br>(boot stage) | Yield<br>(DM tons/acre) | Crude<br>Protein | ADF <sup>1</sup> | NDF <sup>1</sup> | TDN <sup>1</sup> | RFV <sup>1</sup> |
|----------------------------------|------------------------------|-------------------------|------------------|------------------|------------------|------------------|------------------|
| Jerry                            | 6/22                         | 2.38                    | 19.9             | 29.3             | 60.3             | 64.4             | 91.3             |
| Milkmaker                        | 6/29                         | 1.46                    | 16.9             | 33.2             | 48.2             | 66.8*            | 126.1            |
| Partner                          | 7/2                          | 2.55                    | 17.2             | 30.1             | 49.9             | 65.7             | 117.0            |
| Trical 2700                      | 7/2                          | 1.76                    | 13.6             | 31.3             | 48.7             | 65.7             | 119.5            |
| Everleaf 126                     | 7/11                         | 2.94*                   | 9.8              | 34.7             | 52.6             | 65.2             | 108.8            |
| Tritlage Pro                     | 7/2                          | 1.93                    | 11.5             | 34.9             | 53.7             | 65.6             | 108.4            |
| Stockade/Haywire/Elevator        | 7/2                          | 2.12                    | 10.1             | 34.2             | 49.0             | 66.4*            | 121.9            |
| Survivor peas/ T100/ facultative | 6/28                         | 1.17                    | 15.4             | 29.9             | 47.6             | 66.6*            | 129.4            |
| Laker                            | 7/2                          | 2.56                    | 23.6*            | 27.8             | 51.2             | 66.9*            | 119.4            |
| Laker/Fergie                     | 7/2                          | 2.37                    | 9.1              | 33.0             | 52.6             | 66.4*            | 114.2            |
| Laker/Arvika                     | 7/2                          | 2.33                    | 12.4             | 33.6             | 58.7             | 65.2             | 97.2             |
| Tritcal 2700/Fergie              | 7/2                          | 1.71                    | 16.3             | 33.6             | 56.7             | 65.4             | 101.5            |
| Tritcal 2700/Arvika              | 7/3                          | 2.26                    | 13.7             | 33.1             | 45.9             | 67.2*            | 136.5            |
| Everleaf 126/Fergie              | 7/13                         | 2.95*                   | 12.4             | 33.6             | 49.9             | 66.0             | 119.2            |
| Everleaf 126/Arvika              | 7/13                         | 2.67                    | 12.6             | 33.1             | 44.3             | 67.2*            | 139.2            |
| Goliath/4010                     | 6/29                         | 1.97                    | 15.2             | 29.4             | 50.6             | 66.6*            | 119.8            |
| Ogle/4010                        | 6/28                         | 2.12                    | 16.6             | 33.0             | 57.0             | 65.6             | 101.6            |
| Ogle                             | 6/28                         | 2.34                    | 20.8             | 33.1             | 47.4             | 67.1*            | 131.1            |
| Goliath                          | 6/29                         | 2.26                    | 9.8              | 33.1             | 44.6             | 67.2*            | 139.7            |
| Forage plus                      | 7/2                          | 2.51                    | 13.0             | 31.2             | 46.6             | 66.1             | 127.9            |
| Forage Plus/4010                 | 7/2                          | 2.34                    | 12.7             | 34.4             | 53.1             | 65.9             | 110.3            |

<sup>1</sup> Acid Detergent Fiber (ADF), Neutral Detergent Fiber (NDF), Total Digestible Nutrients (TDN), Relative Food Value (RFV)

\* indicates significant difference within columns based on 5% level of significance

## Plan & Record for Produce Safety Success

*Write a customized Food Safety Plan and keep detailed records to optimize produce safety on the farm.*

It's no secret that all produce farmers care deeply about produce safety. We take pride in our work and our products, and experience joy at sharing those products with our local communities. We also know that if some of our produce were to make someone sick from a preventable foodborne illness, it would feel devastating and could hurt business. Every farmer should take the extra step to prevent a foodborne illness outbreak from their produce by writing a customized food safety plan.

Do you know where to start? How to customize a plan template to fit *your farm's* needs? Do you know which records are required for all of your certifications – FSMA, GAPs, Organic, MAEAP, and so on? Luckily, there are plenty of resources for produce farmers to help them create a food safety plan that works for their unique farm. Produce Safety Technicians are always available for record keeping advice and food safety plan writing assistance, and there are many plan templates to choose from on the web to get you started.

If you prefer to learn hands-on, as many farmers do, there is a workshop coming up on February 13<sup>th</sup> to write your plan in a classroom setting, in a room full of produce safety experts. This Food Safety Plan Writing Workshop is scheduled on February 13<sup>th</sup> at the Peter White Public Library Lion's Room in Marquette, from 10am - 4:30pm. Pre-registration is required to attend, but the event is free and lunch will be provided. This event is cohosted by the National Farmer's Union and the Produce Safety Technician program. Register online at <https://michiganfarmersunion.org/event/> or by phone at 616-813-2384.

Landen Tetil  
 Produce Safety Technician, Marquette County Conservation District  
 (906)226-8871 x 105  
 Landen.mqtcondist@gmail.com

## Protect field corn or sweet corn from sandhill cranes with Avipel (anthraquinone), an effective and non-lethal repellent seed treatment.

By James DeDecker and Christian Tollini, MSUE

As populations of sandhill cranes (*Grus canadensis*) continue to rise throughout the Great Lakes region, conflicts between agriculture and cranes are on the rise as well. Sandhill cranes are distinguished by their predominantly gray color with white cheeks and a red crown. Their legs are long and slender, and they have a long neck and beak as well. Sandhill cranes are omnivorous and predominantly feed on invertebrates, small vertebrates, seeds, cultivated grains and berries. They migrate through Michigan in spring and fall, with some breeding pairs taking up residence for summer.



Agricultural damage from sandhill cranes most often takes the form of birds feeding on sprouting corn or wheat seed. When feeding in a corn field, they use their beak to pull out entire seedlings and then consume the seed that is still attached to the young plant. Cranes will feed on corn seeds throughout the seedling stage until the endosperm that was present in the seed is completely metabolized by the plant. This usually takes until the corn reaches the V4 stage (four leaf collars present).

Damage can be quite extensive, as cranes usually pluck sections of row throughout the field, creating extensive gaps in stands. These gaps in stand cause significant yield loss because yield from missing plants will not be compensated for by neighboring plants in adjacent rows.

Economic losses are greater in corn grown for seed, not just because seed corn is a higher value crop, but because some growers have lost seed corn contracts due to crane damage being a persistent problem. Large congregations of juvenile birds are responsible for a greater proportion of damage due to their numbers and because they are more likely to move around. Fields at the highest risk are usually wetter fields, or those adjacent to wetlands, and fields isolated from human activity.

There are a few methods available for reducing sandhill crane damage in field crops. Deploying scare tactics may work to some extent and lethal removal does help to reinforce scare tactics. However, due to the federal protection of sandhill cranes, depredation permits from the [U.S. Fish and Wildlife Service](#) must be obtained before employing lethal controls. Both tactics are time consuming, as they require monitoring the field and waiting for cranes to show up.

Scare tactics and lethal control may also move cranes to neighboring fields, and thus spread rather than reduce damage. Furthermore, sandhill cranes are known to return to a field and continue feeding after a threat is removed.

Another method of controlling crane damage that is gaining popularity is using Avipel (anthraquinone), a non-lethal repellent seed treatment. Sandhill cranes that ingest Avipel-treated seeds experience immediate, but harmless, digestive repellency and will learn to avoid eating those treated seeds. Research has proven this to be an effective method for reducing crane damage. Cranes may still be present in treated fields, but they will instead feed on insects like grubs and caterpillars.

Prior to 2019, Avipel has been used in Michigan under a Section 24(c) exemption. However, in 2019 Avipel received approval from the [EPA](#) for a new federal label, expanding registration to all 50 states for use in field corn and sweet corn. Avipel comes in dry and liquid formulations, is compatible with existing seed treatments and can be purchased from most agricultural input suppliers.



For more information on sandhill crane damage or to request depredation permits, contact [USDA Wildlife Services](#). For more information on Avipel seed treatment, contact [Arkion Life Sciences](#) or your local agriculture input supplier.

Close-up of sandhill crane damage. Photo by Chris DiFonzo, MSU Entomology.

## Great Lakes Forage & Grazing Conference

The annual Great Lakes Forage & Grazing Conference and trade show is scheduled for March 5th at the AgroLiquid headquarters located in St. Johns, MI. The theme of the conference is “Mixing Forages for Sustainability”. The day will feature a full slate of practical information in addition to many vendors who support forages in Michigan. For registration and more information go to: <https://events.anr.msu.edu/2019GLFGC/> Dr. Ray Smith, University of Kentucky Professor & Forage Specialist, will be our keynote speaker for the event.

## FSMA Produce Safety Rule Grower Training Program

April 9th— Stephenson, MI  
Menominee County Extension  
S904 US-41, Stephenson, MI 49887

April 11th—St. Ignace, MI  
St. Ignace Public Library  
110 W. Spruce Street, St. Ignace, MI 49781

These produce safety training’s are free to growers. They are designed to help growers determine if the FSMA Produce Safety Rule applies to them, and if so, the training helps growers understand the rule and comply with the section of the rule that requires growers complete a grower training education program.

For more information or to enroll online: <https://events.anr.msu.edu/2019SpringPSA/>

**Dry Bean Growers Meeting** – Annual update of on-going MSU research and industry trends for the 2019 growing season! 2 MDARD pesticide applicator recert credits requested.

**Delta Co MSU Extension Office, 2840 College Ave. Escanaba, MI 49829**  
Tuesday, Feb 26th, 2019 1:00 – 4:00pm

### Speakers/topics include:

- *Dr. Jim Kelly, MSU Dry bean breeder update*
- *Greg Varner, MI Bean Commission PRAB research update*
- *Market Update*
- *Fred Springborn, MSUE Agriculture 2019 and beyond*
- *Jim Isleib, MSUE and Monica Jean, MSUE Local Updates*

Registration is required by Feb 22nd by phone at 786-3032 or email at [atkinmon@anr.msu.edu](mailto:atkinmon@anr.msu.edu)

## U.P. Christmas Tree Update

**Delta Co MSU Extension Office, 2840 College Ave. Escanaba, MI 49829**  
Tuesday, March 19th, 2019 1:00 – 3:00pm

The past few years growers have faced several challenges in growing Christmas trees from wet springs to high pH to new pests. Dr. Bert Cregg, MSU, will focus on several management areas such as; matching species to the site, fertility and nutrition considerations. Jill O'Donnell, MSU Extension, will review current insect and disease problems and management options for pests.

2 MDARD pesticide applicator recert credits requested for Private and Commercial Core, 2 (Forestry), 3B (Ornamental).

Registration is required by March 15th by phone at 786-3032 or email at [atkinmon@anr.msu.edu](mailto:atkinmon@anr.msu.edu)

## Market Report

|                 |                          |
|-----------------|--------------------------|
| Choice Steers   | \$110—\$120 per 100 lbs. |
| Holstein Steers | \$85—\$95 per 100 lbs.   |
| Hogs            | \$48—\$53 per 100 lbs.   |
| Lambs           | \$125—\$150 per 100 lbs. |
| Cull cows       | \$40—\$55 per 100 lbs.   |
| Calves          | \$30—\$60 per 100 lbs.   |
| Goats           | \$200—\$270 per 100 lbs. |

### Breeding and Feeder Animals

|                             |                    |
|-----------------------------|--------------------|
| Grade Holstein cows         | \$950—\$1350/head  |
| Grade Holstein bred heifers | \$1000—\$1400/head |

### Feed Prices across the U.P.

|                                      | Avg. \$/cwt | Avg. \$/ton | Price Range |
|--------------------------------------|-------------|-------------|-------------|
| Corn                                 | \$10.09     | \$201.70    | \$155-256   |
| Soymeal                              | \$19.59     | \$391.75    | \$370-450   |
| Oats                                 | \$12.00     | \$240.00    | \$200-300   |
| Barley                               | \$9.90      | \$198.00    | \$160-240   |
| Average price/100 wt. for 1 ton lots |             |             |             |

## Classifieds

**REGISTERED RED ANGUS BULLS** Gentle, growth and fertility tested. Sire is a son of Card Shark. Dennis Van Elsacker, Cripple Creek Ranch, (906) 238-4236

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### ***Calendar of Events***

- UP Crop Nutrient Management Meeting**—February 4—MSU UPREC, Chatham, 6:30-8:00 pm
- Pesticide Applicator Training –Core manual review**—February 6—State Office Bldg., Escanaba, 9 am—1 pm
- UP Crop Nutrient Management Meeting**—February 11 —Mass City Comm Center, Mass City, 6:30-8:00 pm
- Food Safety Plan Writing Workshop**—February 13 —Peter White Library, Marquette, 10 am-4:30 pm
- MSUE Field Crop Webinar Series**—February 18-April 1—online
- Dry Bean Growers Meeting**—February 26—Delta Co MSU Extension Office, Escanaba, 1-4 pm
- Great Lakes Forage & Grazing Conference**—March 5—AgroLiquid, St. Johns, 9 am-4 pm
- Ag For Tomorrow Conference**—March 12—Bay College, Escanaba, 9:45 am-3:30 pm
- Christmas Tree Grower Educational Workshop**—March 19—Delta Co. MSUE Office, 1-3 pm
- FSMA Produce Safety Rule Grower Training Program** —April 9—Menominee Co Extension, Stephenson, 9am-4pm
- FSMA Produce Safety Rule Grower Training Program** —April 11—St. Ignace Public Library, St. Ignace, 9am-4pm

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