Agricultural Newsletter

UW-Madison College of Ag & Life Science
University of Wisconsin-Extension

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Table of Contents

UWEX Area Agricultural Agents
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Farming for Profit Series Offered

Dairying in the North

Otto Wiegand
Area Agricutlural Agent
Burnett, Washburn & Sawyer Counties

The Farming for Profit series will be held again for the 5th consecutive year, this time focusing on dairying. Previous topics have been hay, beef, vegetables and fruits. The objective this year is to appeal to small and large dairy operators and perhaps even to beef farmers. Participants may attend all or individual sessions. Also watch for newspaper press releases.

Classes will be held from 1:00-3:30 on Mondays. Presentations will be by webinar. Sites this year are Spooner, Ladysmith, Ashland, Superior and Marinette. There will be a principal presentation for one hour by a University/Extension expert. A second speaker may be present at some of the venues.

The tentative agenda and topics are:

Feb 2 – Calves, care, raising, housing, ventilation, health, and /or nutrition

Feb 9 – Genomics, genetics, sexed-semen, trait selection

Feb 16 – Dairy modernization, re-fitting old facilities, retro-fit parlors

Feb 23 – Heifers, ICPA economic data, production issues, custom vs. home-raised

Mar 2 – Farm transition, succession, getting out of farming

The cost for the entire series is $40, or $10 per session. For more information, contact your respective Ag Agent, or Otto Wiegand or Kevin Schoessow at Spooner UWEX, 715-635-3506.

Beginning Farmer Course Still Has Openings

There are still openings to attend the Wisconsin School for Beginning Dairy and Livestock Farmers course offered locally at the Ag Research Station in Spooner. The remaining sessions are $150 or $20 each. You can also take the course online at your convenience. Class sessions are held on Thursdays from 11:00 AM -1:15 PM. Delivery will be done through Blackboard Collaborate with Power Point and audio. To register or obtain information, contact Otto Wiegand at UWEX Spooner, 715-635-3506.

Agricultural NEWSLETTER

produced by
University of Wisconsin-Extension and
UW-Madison College of Ag & Life Sciences

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NW Wisconsin Graziers Network Survey Results Have Been Compiled

Otto Wiegand
Area Agricultural Agent
Burnett, Washburn & Sawyer Counties

Lynn Johnson
Grazing Consultant
Northwest Graziers Network

Since 2006, with assistance from UW-Extension and funding from federal and state sources, NW Graziers has written 162 grazing plans covering over 10,000 acres. Of those plans, 68% were considered to be fully implemented, 34% represented new farmers, 23% took soil samples, 15% took forage samples, 19% were women operators, 50% used EQIP funding, 65% were beef farmers, 14% were dairy farmers and 10% were sheep farmers. NW Graziers generally serves six counties – Barron, Burnett, Polk, Rusk, Sawyer, and Washburn, although a few plans have also been written in Douglas, St. Croix and Taylor. The counties with the most plans were Washburn (42), Polk (35), Barron (29), Burnett (24) and Sawyer (23). Rusk and Sawyer also received plans from North Central Graziers out of Medford. NW Graziers annual conferences have attracted 750 participants since 2004, and pasture walks, up to ten held per year, have attracted over 2,500 participants.

A four-page anonymous survey was mailed in June, 2014 to over 500 farmers on the Northwest Graziers mailing list to find out what farmers owned and raised, what their participation was in the Network, what they thought about NW Graziers services, what educational and technical support they needed, and what they would be willing to pay for services if privatized. There were 103 surveys returned with sufficient information representing 19% of the total mailing, which is a relatively high return rate for surveys of this kind. Most of the cost for survey came from the UW-Extension Livestock Team. Some information in the survey, which contained over 200 variables, is still being analyzed.

Respondents to the survey claimed to be 39% full-time farmers, 45% part-timers, 43% with some university or technical college education, 14% women operators, 30% fully-implemented graziers, 65% having a farm background, 17% having no farm background, 22% retired from a previous career, and over 40% belonging to a farm organization. Only 2% were certified organic, but 24% used organic practices. Although there can be some overlap in enterprises among respondents, 17% were dairy farmers, 53% had beef, 11% had sheep, 6% had goats, 24% had horses, 25% had poultry, and 16% had pigs. The average number of animals for each enterprise reported was 60 dairy cattle, 43 beef cattle, 22 stockers, 20 feeders, 69 poultry, 24 dairy sheep, 45 meat sheep, 15 dairy goats, 8 meat goats, 5 horses and 15 pigs. Eighty-four farmers owned an average of 243 acres, 55 rented an average of 126 acres, 74 grazed an average of 75 acres, and 37 cash-cropped an average of 192 acres.

Farmers preferred to receive their information by newsletters, email, meetings, newspapers, other publications, and social media, in that order. Sixty-seven percent of respondents had attended at least one pasture walk, 56% at least one grazing conference, 49% received at least one visit by a grazing planner or consultant, and 33% hosted a pasture walk or other event. Seventeen percent of

respondents mentored other farmers. Thirty-seven percent of respondents had a grazing plan, 26% did soil sampling, 20% did forage sampling, and 21% used EQIP cost-sharing. The average EQIP contract/cost share was about $10,600.

Level of satisfaction with NW Graziers was high with many of the services ranked over four points on a five-point scale. The highest ranked categories were client respect, pasture walks, learning obtained, conferences and meetings, consulting/ follow up, response time, phone calls, and farm visits in that order. The top results or behavioral changes noted by farmers were a desire to continue participation, received the information needed, gained better management, improved the environment and benefited from networking, in that order.

Farmers preferred delivery of education in the following order: pasture walks, local meetings, outside speakers, farmer panels and workshops. Of the 50 choices listed for future grazing education, the top ten topics in order were beef, grazing management, soils, environment, cost of production, cover crops, forage quality, improving production, nutrient management and weeds. The average maximum distance that farmers would travel to a meeting was 48 miles, and to an all-day conference was 80 miles.

NW Graziers estimated that a typical all-day conference without outside funding would cost $40-50 per person, half-day meetings with food about $10, a grazing plan with follow-up about $500, consulting in general about $20 per hour plus mileage, or an annual membership that includes a grazing plan, meetings, pasture walks, discussion groups or other consulting, depending on level of services, at about $100-200 per year. The number of respondents who would be willing to pay for services varied from about 20-50%, depending on the service. Of those indicating a value, they would be willing to pay an average of $14 for a pasture walk, $43 for an all-day conference, $16 for a half-day or evening meeting, $278 for a grazing plan, $25 per hour for consulting and mileage, $101 for an annual inclusive membership, $14 for a mailed quarterly newsletter, and $12 for an emailed quarterly newsletter.

The survey responses indicate that NW Graziers is doing most things well, needs to adjust its approach in some areas, and must continue to rely on farm operator input, feedback and requests for assistance. Beef, dairy, forages, fencing, watering, and management-intensive grazing practices have been common topics over time. NW Graziers has added more programming for owners of horses, sheep and goats, pastured poultry and pastured hogs. In recent years, cover crops, weeds, soil microbiology, water retention, silvo-pastures, multi-species grazing and nutrient management have gained importance. Benefits to individual farm operators, their environmental resources, livestock enterprises and quality of life all seem to be connected by the information and networking services provided by NW Graziers. Leadership from the NW Graziers steering committee and staff will be essential along with continued support from agency partners such as UW-Extension, NRCS, County Land and Water departments, and other agricultural organizations to take NW Graziers into the future.

Marketing the 2015 Lamb Crop

Rusty Burgett
Asst. Superintendent
Sheep Researcher
Spooner Ag Research Station

As we are all preparing for the upcoming lambing season or finishing up fall lambing season, early winter is a great time to start planning how to market this year's lambs. With the current low prices of grains and steady price of fed lambs, producers should consider finishing their own lambs in 2015 rather than selling feeder lambs. Another option for marketing lambs from smaller options is to strategically market animals around certain ethnic holidays. The following article was presented by our friends at the Ohio Sheep Improvement Association for the 2014 calendar year. The original article can be found at http://ohiosheep.org/news.html. An updated calendar for dates of these holidays for 2015 can be found at http://www.sheepgoatmarketing.info/calendar.php.

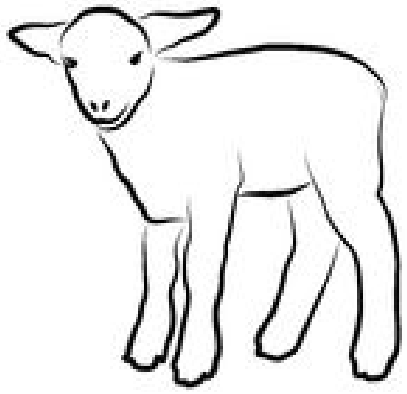
According to a 2010 study funded by the American Sheep Industry Association, ethnic markets comprise a significant and growing portion of the US sheep market. For this reason, producers need to consider the dates of various ethnic holidays (or religious observances) when developing their marketing plans. Traditionally, the demand for lamb increases at Easter. This year, both (Eastern) Orthodox and Roman (Western) Easter will occur on the same day, April 20. Often, the Easters occur on different Sundays, as different calendars are used to calculate the dates of the holidays. When targeting the Easter markets, be

sure to sell the right kind of lambs (usually milk-fed and "fat") and place lambs in the market place at least 5-10 days before the holiday. As an option, you might consider spreading your risks and sending some lambs directly after the holiday. Prices sometimes are high afterwards as supply is decreased due to the holiday.

Muslim holidays have become increasing important to the US lamb market. There are two major Muslim holidays. Eid ul Fitr or the "Festival of Fast Breaking" follows the holy month of Ramadan, in which Muslims fast from sunrise to sunset and have celebratory meals in the evening. In 2014, this three day holiday will occur on July 29-31. The most important Muslim holiday is Eid ul Adha or the "Festival of the Sacrifice." In 2014, it will occur October 4-7. This holiday commemorates Abraham's willingness to sacrifice his son in obedience to God. Instead, he sacrificed a lamb (ram). Muslim holidays cannot be predicted with exact certainty, since they are based on a lunar calendar and the siting of the moon. For this same reason, Muslim holidays move forward approximately 11 days each year. The type of lamb demanded by Muslim consumers varies, but is usually an older, unblemished lamb or yearling, usually an intact male. As with any market segment, it's important to learn what potential customers want and will pay a premium for.

To help US sheep producers evaluate and develop potential markets to ethnic consumers, three University Extension systems have partnered with their respective sheep associations to help address this opportunity. Maine, Maryland and Ohio received funding from ASI's Let's Grow campaign in 2013 for this effort. A series of webinars on marketing lamb to ethnic consumers was presented in November and December of 2013. These webinars, each 1-hour in length, were recorded and are available for viewing.

In addition, the tri-state ethnic marketing project has created several tools to help producers make better marketing decisions. Susan Schoenian Sheep & Goat Specialist for University of Maryland Extension has developed several spreadsheet templates to help producers evaluate marketing options. Richard Brzozowski, Small Ruminant Specialist for the University of Maine has developed a template for producers to use in learning more about specific ethnic consumers as well as a set of questions for possible use in customer surveys. For these tools on marketing lamb and mutton to ethnic consumers, go to http://umaine.edu/livestock/sheep/ethnic-marketing-of-lamb-and-mutton/. For links to the webinar series on marketing lamb and mutton to ethnic consumers, go to http://www.sheepandgoat.com/recordings.html#ethnic.



GENOMICS – To Test or Not to Test?

Dr. Kent Weigel
Ashley Mikshowsky
UW-Madison Dairy Science Department

Genomics has taken the dairy genetics industry by storm over the past five-plus years. Regardless of whether you sell elite breeding stock or use young, genome-tested bulls, you've probably been affected in one way or another.

No doubt, the greatest impact of genomics has been the heavy use of young sires. By 2012, more than 50 percent of inseminations in the Holstein and Jersey breeds were to young genome-tested bulls with no progeny of their own. That percentage has more than doubled since 2007. At the same time, the average generation interval for sires and dams of young A.I. bulls dropped to 3 years of age (and it's still dropping), while the average generation interval for sires of replacement heifers fell below 5 years of age for the first time since A.I. and frozen semen became available.

What about the so-called "females to produce females" selection pathway? In other words, are we making more rapid genetic progress by selecting better dams of our future replacement heifers now that genomic testing is possible? Up until this point, genetic progress in females has always been the weakest link in our breeding programs, because farmers had to keep nearly every heifer calf that was born as a future herd replacement. That "raise every heifer" paradigm has shifted, because many farms have upgraded

facilities, improved calf health, reduced involuntary culling, and improved pregnancy rates (using timed A.I.). Those management changes, coupled with widespread use of sexed semen, have for the first time allowed dairy farmers to produce extra heifers and consider the possibility of culling a significant number of heifer calves. As this has taken place, low-density chips that cost less than $50 per animal have become available. We can now identify superior or inferior calves accurately and confidently at a young age and use this information to reduce feed costs and improve the genetic level of our replacement heifers.

Or can we? The Allenstein Dairy Herd at UW-Madison has 764 cows total, including our campus, Arlington and Marshfield sites. The herd has a rolling herd average of 28,362 pounds of milk, 1,076 pounds of fat, and 894 pounds of protein on 2X milking. Since 2011, every heifer calf has been tested with a Zoetis low-density chip (CLARIFIDE) upon arrival at the Marshfield Agricultural Research Station, which is where our replacement heifers are reared. Because more than 400 of the 1,000-plus tested heifers have grown up and entered the milking herd, we now have enough information to assess the accuracy of these early genomic predictions. A total of 411 Holstein cows were beyond 60 days in milk in their first lactation, and these animals were used to compare the genomic predicted transmitting ability (PTA) for milk yield with the actual mature equivalent (ME) 305-day milk production. As a reference, we also compared each cow's actual first lactation ME 305-day production with the August 2014 PTA milk of her sire.

Was it a good investment? The genomic PTA for milk yield at 12 months of age explained 18.8 percent of the variation in first lactation ME 305-day production, whereas sire PTA explained only 4.4 percent. Therefore, the genomic information provided a substantial improvement, but it's hard to really say whether this gain in accuracy was worth the $40 to $50 cost of carrying out a genomic test.

Let's look at it a different way, by dividing cows into quartiles based on genomic PTA for milk yield at 12 months of age and sire PTA milk. The difference in actual production between the top and bottom quartiles based on genomic PTA as a heifer was 4,801 pounds. As a comparison, the difference was less than half - 2,366 pounds - when cows were divided into quartiles based on sire PTA milk. Again, this means that genomic information on individual animals allows more accurate selection decisions than one can achieve using pedigree information alone. It is important to note that, in all of our examples, the sire identification errors had already been corrected using genomic testing, and before correcting these errors the sire PTA would have been a slightly poorer predictor (we have a 5% sire misidentification rate in our herd, as compared with roughly 15% nationally).

What would have been the cost of the "selection errors" we would have made by culling the bottom 25% of heifer calves based on sire PTA milk rather than by genomic PTA for milk yield? Per lactation it would yield an additional 237 pounds or 652 pounds per lifetime. (To arrive at that number, the difference would be 29,832 - 29,595 = 237 pounds of milk per lactation. The 29,832-pound figure represents average milk yield for the top 75% based on genomic PTA versus the top 75% based on sire PTA which is 29,595 pounds of milk. This difference of 237 pounds was multiplied by 2.75 lactations per cow for a total of 652 pounds of lifetime milk production. After accounting for the extra cost of the feed used to produce those 652 pounds of milk (43% of the extra milk value), and using a three-year average mailbox price of $20.39 per hundred costs about $45 per animal, we would generate $23,484 in extra revenue ($76 per cow times 309 cows kept as herd replacements). Meanwhile, the cost of genomic testing would be $18,495 ($45 per heifer times 411 heifers tested). Remember that the genetic improvement is permanent. That means we will realize additional financial gains when we milk the daughters and granddaughters of the heifers selected using genomics.

Gains in health are also important. We have talked a lot about milk yield, but what about some of the other traits? First, let's take a look at days open and see how it is related to the cow's genomic PTA for daughter pregnancy rate (DPR) and her sire's PTA for DPR. The difference is striking. The top versus bottom quartiles based on genomic PTA at 12 months of age differed by 21 days open. The difference was only 3.4 days open when cows were divided into quartiles based on sire PTA. If we consider a cost of $2 or $3 per day open, it is clear that improvements in fertility can also help offset the cost of genomic testing.

Genomics works! Genomic predictions are not perfect, but they are much more informative than pedigree information alone. This is

not only true for the predicted genomic PTA of young bulls and elite heifers, but also for predicted future performance of replacement heifers on commercial farms. Based on data from our Allenstein Dairy Herd at UW-Madison the benefits of genomic testing can outweigh the corresponding costs. The reason we emphasize the word "can" is that we must take management actions based on the genomic test results. In this study, we kept heifers that ranked in the bottom 25% based on genomic PTA for research purposes, but in the future (and in your herd) these animals should be culled in order to save feed and recoup the cost of genomic testing. Assuming a post-weaning rearing cost of $2.30 per day, we could have saved approximately $147,798 in rearing costs by culling the 102 heifer calves in the lowest quartile for genomic PTA milk at 3 months of age.

It is also important to capture other benefits of genomic testing whenever possible. These include:

1) use of the top-ranking females as embryo donors and the below-average females as embryo recipients,

2) use of sexed semen to create extra heifer calves from the above-average females, and

3) use of genomic mating programs to avoid inherited defects and minimize inbreeding. Lastly, don't underestimate the value of combining technologies, because it is clear that the benefits of genomic testing can be enhanced when used alongside embryo transfer, in vitro fertilization, sexed semen, genomic mating programs and other reproductive and management technologies.

Plot Results at the UW-Spooner Ag Research Station

Phil Holman
Superintendent
Spooner Ag Research Station

2014 Trial Averages were as follows:

Corn Grain		
	Irrigated Sandy Loam soil	182 bu/A
	Dryland Sandy Loam soil	159 bu/A
	Dryland Silt Loam soil	137 bu/A
Corn Silage		
	Irrigated Sandy Loam soil	7.8 ton DM/A
	Dryland Silt Loam soil	6.4 ton DM/A
Soybean		
	Irrigated Sandy Loam soil	44.5 bu/A
	Dryland Sandy Loam soil	32.2 bu/A
Oats		89.6 bu/A
Barley		72.8 bu/A

Complete Variety Trial Results can be found at:

Corn Grain and Silage: http://corn.agronomy.wisc.edu/
Soybean: http://soybean.uwex.edu/
Alfalfa: http://www.uwex.edu/ces/crops/uwforage/alfalfa.htm
Oats & Barley: http://soybean.uwex.edu/

Effects of Fungicide on Oat Yield and Quality

The University of Wisconsin established two separate oat trials over three years (2011-13). Both trials looked at management factors (varieties, seeding rates, seed treatments, and foliar fungicides) to improve oat yield and quality.

Foliar fungicide had the largest improvement in yield in the trials and was statistically significant. The first trial had two varieties (Badger and Esker) and tested seed treatments and fungicides. Use of fungicide improved oat yields by 21.8 bushels per acre, but the seed treatment results were mixed. Seeding rate in this trial did not impact oat yields either. The second trial contained five oat varieties (Badger, BetaGene, Esker, Excel and Ogle). In this trial, the fungicide treated plots yielded 22.3 bushels per acre more than the untreated plots.

The use of a foliar fungicide applied at Feekes 9 increased yield and reduced lodging severity in both experiments. A complete paper on the trials can be found at: http://ipcm.wisc.edu/blog/2014/03/new-pub-oat-yield-and-quality-in-wisconsin/.

This Quarter's Events

Contacts: UW-Extension Ag Agents Otto Wiegand or Kevin Schoessow, Spooner Station, 715-635-3506/800-528-1914, Jane Anklam Douglas Co, 715-395-1363, Rich Toebe, Rusk Co 715-532-2151, or Jason Fischbach or Matt Cogger, Ashland & Bayfield Counties, 715-373-6104 for more information.

Jan 14, Weds, 10-Noon or 1-3 – ARC/PLC Farm Programs, Siren – Government Center, choice of AM or PM session, contact Farm Service Agency, Spooner, 715-635-8228 x2 (see FSA insert), repeated in Spooner, Jan 22.

Jan 15-17, Thurs-Sat – GrassWorks Grazing Conference, Wis. Dells – Chula Vista Resort,contact Heather Flashinski, 715-289-4896.

Jan 20-21, Tues-Weds, 10-3:30 – Rice Lake Farm Show – Cedar Mall, Rice Lake.

Jan 22, Thurs, 10-Noon or 1-3 – ARC/PLC Farm Programs, Spooner – Ag Research Station, choice of AM or PM session, contact Farm Service Agency, Spooner, 715-635-8228 x2 (see FSA insert).

Jan 22, 29, Feb 5, 19, 26, Mar 5, 12, 19, Thursdays, 11 AM to 1 PM – Beginning Farmer Course Parts II & III, Spooner - contact Otto Wiegand, 715-635-3506 (See article).

Jan 29, Feb, 19, Mar 5, Mar 19, Thursdays, 10 AM-Noon – Northern Safari, Spooner, **Superior, Ashland, and Ladysmith** - webinar format, contact Kevin Schoessow or Otto Wiegand, 715-635-3506. Topics will cover commercial crop issues.

Jan 31, Sat – Indianhead Shepherds Clinic, Rice Lake – WITC, contact Tim Jergenson, 715-537-6250, or register on-line at Indianhead Sheep Breeders Assoc.

Jan 31, Sat – Northern Wis Beef Producers Annual Meeting, Rice Lake – Turtleback Conference Center, contact Kate Whiting, 715-642-0804.

Feb 2, 9, 16, 23, Mar 2, Mondays, 1:00-3:30 PM – Farming For Profit Dairy Series, Spooner, Ladysmith, Superior & Ashland – webinar format, contact Otto Wiegand or Kevin Schoessow, 715-635-3506 (See article).

Feb 6-7, Fri – Sat – Lake Superior Farming Conference – Ashland – WITC, contact Jason Fischbach or Matt Cogger, 715-373-6104.

Feb 12, Thurs – Regional CAFO Meeting, Rice Lake – WITC, contact Tim Jergenson, 715-537-6250 (See article).

Feb 14, Sat, 9:30-3:30 - Heart of the Farm Women's Conference, Cable – Lakewood Resort contact Otto Wiegand or Kevin Schoessow, 715-635-3506, or Jason Fischbach, 715-373-6104 x5.

Feb 24-25, Tues-Weds – Midwest Manure Summit, Green Bay – Radisson Hotel, contact Liz Binversie, 920-391-4612.

Feb 26-28, Thurs-Sat – MOSES Organic Conference, LaCrosse – early registration discount by Jan 18, contact MOSES at 715-778-5775, or www.mosesorganic.org.

Mar 7, Sat, 9:30-3:30 – NW Graziers Annual Conference, Rice Lake – WITC, agenda yet to be determined, contact Tim Jergenson, 715-537-6250 x1, or Otto Wiegand or Kevin Schoessow, 715-635-3506.

Mar 11, Weds, 9:00-3:00 – Pesticide Applicator Training, Spooner – contact Kevin Schoessow, 715-635-3506 – other sites are Balsam Lake - Jan 15, Barron - Feb 4, Ladysmith - Mar 10.

Mar 14, Sat – Arlington Sheep Day - contact Dave Thomas, UW-Madison, 608-263-4306.

Apr 29, Weds – St Croix Summit, Stillwater, MN – Stillwater Inn, contact St Croix River Assoc, 715-483-3300.

CAFO Workshop to be held in February

John Haack
Natural Resources Educator
St. Croix Basin

Tim Jergenson
Agricultural Agent
Barron County

This year's Confined Animal Feed Operation (CAFO) workshop will be held at WITC in Rice Lake on Thursday, Feb. 12, from 9:00 AM – 3:30 PM. Registration begins at 8:30 AM.

Session topics include the new implements of husbandry (IoH) rule changes, SnapPlus 14.0 updates, calf hutch housekeeping, pasturing, emergency response plans and more. To view the complete agenda go to http://spooner.ars.wisc.edu. CAFO operators, crop consultants and those considering a CAFO permit are encouraged to attend. C.E.U credits are available for Certified Crop Advisors.

Advance registration is $30, or $45 at the door. Check or credit cards are accepted for pre-registration; check or cash only at the door. To pre-register, call Kim at Barron County UW-Extension 715-537-6250. This training is sponsored by UW-Extension in cooperation with the Wisconsin DNR.

Inside This Issue

Agricultural Newsletter

January
February
March

2015

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UWEX Area Agricultural Agent