Swine producers have had quite the challenge this past year since Porcine Epidemic Diarrhea virus (PEDv) was first detected in the United States. The virus has been found in 30 states, areas of Canada, areas of Mexico, and has almost 100% mortality in pigs under one month of age. Currently there are no vaccinations or treatments for the disease, so prevention of this disease entering the farm is key.

As of April 18, 2014, the USDA announced that PEDv along with a similar virus, the Swine Delta Coronavirus are now reportable diseases (although not international reportable diseases that have trade restrictions) so as to help slow the spread of the disease. More information on this announcement can be found at http://goo.gl/efeTym. Herds that are infected with PEDv will still be able to move animals, but will also be required to track equipment, vehicle, & pig movement off the farm premises. The goal of this measure is to help bolster biosecurity and allow the pork industry to work together to slow the spread of disease. Details of the reporting and tracking procedures have not yet been determined. Additional information on requirements related to the PEDv reporting announcement can be found at http://goo.gl/ns7AQd. State veterinarian Dr. Paul McGraw along with other state veterinarians from across the US will be assisting with review and development of the USDA program.

To date, PEDv has killed over 6 million pigs, although in Wisconsin there are only 14 premises that have been positively diagnosed with the disease. The impacts of PEDv are starting to be seen in pig inventories, although not to the extent originally anticipated. According to the March quarterly Hogs & Pigs Report, data from the USDA indicates that pig inventories are down 3% from March 2013, and down 5% from December 2013. According to the report, pigs saved per litter for the December through February period was down to 9.53 compared to 10.08 last year. The USDA quarterly report on hog inventories can be viewed at: http://goo.gl/5SC9St. Hog prices have been running a premium ($110 per carcass cwt on April 25) partly due to the estimated impacts of PEDv on inventory numbers. Daily Hog price reports can be viewed at: http://goo.gl/0JRcZt.

The good news is that PEDv preliminary research information and initial recommendations for control were available within a year of confirming the virus in the United States. The National Pork Board has an extensive amount of information on PEDv, including the latest research and completed projects (see http://goo.gl/SvgSJZ). To date, almost $2 million in Pork Checkoff research has been funded for projects tackling the study of this devastating disease. Cargill also recently donated
$150,000 to the National Pork Board for additional research. This demonstrates how seriously the swine industry and its partners are taking this disease.

What are some preventative measures you can take to prevent PEDv from getting on your farm?

- Assume you are at risk.
- Make sure you are following your biosecurity practices (or develop some). If biosecurity isn’t inconveniencing you, you probably aren’t doing it right!
- If you have visitors to your farm, disposable plastic boots are a must!
- Know your feed ingredients & their origin; try to avoid ingredients of porcine origin.
- Clean, disinfect, & dry transportation equipment & vehicles.
- PEDv can be inactivated either by heating the trailer to 160°F for 10 minutes (not very practical for most producers) or room temperature (68°F) for 7 days. Research on this topic can be found at: http://goo.gl/5k810a.

Use the right disinfectant at the right rate, proper contact time, and coverage: oxidizing agents (ex. Virkon S), sodium carbonates, phenolic compounds (ex. 1 Stroke Environ, Tek-Trol), lipid solvents, aldehydes (ex. Synergize), and strong iodophors in phosphoric acid are all disinfectants that have demonstrated PEDv inactivation properties.

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Is Your Barn Too Full?
By: Matt Lippert, Wood County

There is no doubt about it; the milk checks have been pretty good! The current cycle has run longer and higher than the experts predicted. We all know there are reasons why- in part dairy producers have not turned on the extra milk production the way many analysts have predicted. Why? Feed challenges in quality and quantity are cited; there was a long tough winter, and cows and producers struggled to even keep doing the same much less more. Maybe producers and their bankers have agreed to catch up on the bills rather than to get aggressive and spend money to make more milk.

Still who wouldn’t do some little things to capitalize on the markets right now? Maybe milk a few more cows? Crowd the free-stalls more? Switch more cows through the barn; keep more out on the bedded pack? We do know from the numbers that the industry has responded by seriously reducing the number of culls sent to the auction barn, so these cows have to be going somewhere, likely the barns are getting fuller.

We as an industry are not only in an enviable spot for milk prices, but also for cull cows and bull calves. Many cull dairy cows are priced over $1.00 per pound of live weight, $2,000 for a cull cow that has a deep udder or wouldn’t breed back—pretty impressive!

I point this out because the milk check is not the only way to generate cash on the dairy farm these days, culling surplus and less than perfect animals also provides a very good return.

Are you trying too hard to make a lot of milk? There are many instances where a dairy removes 10 head or more out of the barn one day and they don’t see the expected loss when the milk truck comes the next day. Crowding of cows, not only does it reduce milk production per cow, but it typically does it due to stress. We see lower fertility in crowded pens, higher instances of mastitis, and more hoof problems. These stresses typically affect our first lactation heifers the most. These are the
animals we need to be developing and to be the all-stars over the next several years. The dairy efficiency or feed conversion will be lower on crowded cows. Crowding is akin to running with a loose belt or an engine not tuned.

Since culling is a very good alternative, I advise that you use it aggressively even now with high milk prices. A mastitic cow removed from the herd can’t infect the others, can’t eat feed that is still in short supply, and can’t stress the two year old that needs room to develop. Replacement heifer prices have responded to the milk price, but the exchange of a cow sold for beef for a springer is still better than it historically has been.

If you are able to separate out recently fresh cows and prefresh cows, these groups should not have more than one cow per stall, preferably less. If you must work these fresh cows quickly into the main herd group, this reduces the stocking rate you should accept for the entire barn. We know that heat will soon be here as well. So if your barn has ventilation issues, or is a three-row barn, stocking rates are already high at 110% if we have recently fresh cows in the pen or no segregation between younger, smaller cows and older cows. If we have a two-row free stall pen with young cows segregated from older cows and no recently fresh cows in the pen for the first month after calving, we probably won’t see much difficulty at 120% stocking density.

Another way to look at this would be the linear inches of bunk space per cow. Three row freestall pens at 110% stocking rate will typically come in at under 14” per cow, while a two row at 120% is still at 20” per cow.

So you don’t have a freestall barn and these suggestions don’t apply in your system? Consider if the switch time in the barn for milking, limited access to water, over taxing bedding packs, dry lots, mangers and ventilation systems are still taking their toll. Usually they are. Facilities that are handling more animals than they were designed for create challenges for our cattle; right now there is really little reason to allow excessive crowding to happen.

Farm Management and Budgeting
By: Ken Williams, Waushara County

The one sure thing about farming is that it is always changing. A year or so ago we were looking at record high grain prices, now we are looking at drastically lower grain prices. The dairy markets have seen an extended period of mediocre prices and now we have seen record high dairy prices. Vegetable contracts have followed the grain markets lower and the cranberry industry has seen a substantial decrease in market prices. If you are producing crops that are now facing lower market prices, your goal is to lower input costs and do a better job of marketing. Dairy producers have seen record size milk checks and this puts them in a situation of paying down debt, or perhaps upgrading equipment whether that is field equipment of a possible dairy expansion.

One major change for 2014 is the drastic reduction in the amount that is allowed to be expensed under Section 179. In 2013 the amount allowed to be expensed under Section 179 was $500,000. That amount expired as of the end of 2013 and was reduced to a maximum of $25,000 for 2014. There is talk that many people expect congress to increase the amount allowed for Section 179, possibly change it back to the $500,000 amount by the end of 2014. However that is all conjecture and there is no guarantee of that happening. Producers should be aware of this in the event that Section 179 would be changed by the end of the year.

Budgets! Enterprise budgets! Know what your cost of production is. I have some survey data that I use in presentations that shows individual farmer’s cost of production for corn and soybeans.

(Continued on page 4)
When this data is plotted on a graph it looks like a blast of #6 birdshot out of a 12 gauge shotgun. Individual production cost doesn’t progressively change by size of farm or by yield per acre. The production cost for each farm is unique to that farm. I continually emphasize to producers to track their production costs and income by each individual farm enterprise. Every farmer has some type of recordkeeping system in order to be able to file their yearly tax return. Every type of accounting system can be adapted or modified to track input costs and income by each individual crop or animal production system.

In business management there is what is called the 80/20 rule. Simply stated 80 percent of the expenses in any production system are from only 20 percent of the inputs. Similarly on the income side, 80 percent of income will be from only 20 percent of those purchasing our products.

A grain producer growing corn and soybeans would need to code the major inputs such as seed and fertilizer to a corn or a soybean cost center. The producer would also need to code the inputs used for both into a “general” budget area. A vegetable producer might have potatoes, sweet corn, peas and green beans. A dairy producer might have dairy (milk) and steers. At the end of the year, reports will be generated showing the cost of production and income for each production area. There will also be a report for “general” expenses. This report will show all costs that may be used in multiple enterprises. The producer will then need to estimate how these smaller costs should be allocated across each enterprise. By making a small change in an existing accounting system a producer will be able to know his cost of production. It’s never too early to think about tax planning.

Minimize Traffic on Alfalfa
By: Craig Saxe, Juneau County

Wheel traffic is known to increase soil compaction, but research has shown that the largest effect of wheel traffic on alfalfa is to break off re-growing stems thereby reducing yield for the next cutting. It also goes without saying that farmers must drive over fields to harvest a crop. So before you head out to the alfalfa field, here’s a few helpful recommendations shared by our UW-Extension Forage Specialist, Dan Undersander:

- Consider planting traffic tolerant varieties. Dr. Undersander shares test results at: [www.uwex.edu/ces/forage](http://www.uwex.edu/ces/forage) (note: this option would be at the bottom of my list, the most important issue should be to minimize driving over the field).
- Match the smallest tractor possible for the equipment used. That means not using a larger tractor than necessary for raking, or removing the loader on a tractor when harvesting alfalfa.
- Minimize trips across the field by: mowing and conditioning in a single operation, drive loaded wagons/trucks off the field in as little distance as possible. If bales are dropped in the field, collect them as soon as possible and with the least possible driving. Do not drive on an alfalfa field when harvesting a crop in the adjacent field.
- Consider using larger harvesting equipment to reduce the percent of field covered with wheel tracks.
- Avoid use of tractors with dual wheels.
- Harvest as soon after cutting as possible: make silage from higher yielding fields and hay from lower yielding fields, use a wide cutting swath to allow hay/haylage to dry faster; make wrapped bales to allow harvest of wetter hay and apply manure immediately after harvest.
Where to find everything you need to know about everything agronomic
By: Don Genrich, Adams County

As I write this it’s raining out, no one is doing any fieldwork, so it’s time to check out web sites to get the latest agronomic information. Keeping current with agronomic information is easier than ever. It’s all online, on the World Wide Web. The only problem is finding the sites. I’ll take you on a brief tour of my favorite sites.

UW-Extension Soybean Specialist Shawn Conley has established his web site at http://www.coolbean.info/ and a blog site at http://thesoyreport.blogspot.com/ . Highlights include a unique children’s book called “Coolbean-The Soybean”, written by Shawn Conley and an interesting Extension piece on the profitability of soybean seed treatments at reduced seeding rates. Joe Lauer, UW-Extension Corn Agronomist has his website at http://corn.agronomy.wisc.edu/ and a blog site at http://wisccorn.blogspot.com/. An interesting read on his blog site is the results of a long-term research project (started in 1983) to determine the yield effect of tillage in corn-soybean rotations. The bottom line is that there is little to no yield response to tillage when corn and soybeans are rotated.

The Wisconsin Crop Weed Science group, Vince Davis and Mark Renz maintain these sites http://wcws.cals.wisc.edu/ and http://wcws.cals.wisc.edu/blog-out-of-control/. The discouraging news for crop farmers is that a second county with glyphosate resistant horseweed has been identified in Wisconsin. Rotate those herbicides!

Follow the research work of Damon Smith, Extension Field Crops Plant Pathologist at the Wisconsin Field Crops Pathology website http://fysi.uwex.edu/fieldcroppathology/. Identification and control measures for the diseases of corn, soybeans and wheat are found here.

The research work and publications of Eileen Cullen, UW-Extension Field Crop Entomologist are found at http://labs.russell.wisc.edu/cullenlab/?q=cullenlab/extension/index.html. Under Extension publications I can find the “Handy Bt Trait Table” so that I can try and keep track of what is happening with GMO traits in corn seed.

UW-Extension Soil Science is located at http://soils.wisc.edu/extension/ and tells about the work of Carrie Laboski, Matt Ruark, Francisco Arriaga and William Bland. This is a virtual library of soils Extension work covering all of the fertility elements for any crop.

An out-of-Wisconsin site that I like is http://www.agry.purdue.edu/ext/corn/cafe/ , a website hosted by Bob Nielsen, Corn Extension Agronomist at Purdue University. This site gives you a great overview of what is happening with agronomy across the Midwest. You can easily track weather, insect and disease issues in states south of Wisconsin so you know what might be coming your way.


The Midwest Cover Crops Council has established a website at http://www.mccc.msu.edu/ that provides general information on cover crops but also has a cover crops selection tool that provides locally useful, county-specific information (for example Adams County, Wisconsin) on cover crop selection, planting practices, suitability, etc. One commercial site that I find useful is http://www.no-tillfarmer.com/ , a site devoted to the benefits of no-till or strip-till planting systems. Most of the information is based on university research, but as a commercial site it also takes advertisements for equipment, soil additives, fertilizers, cover crops, etc.

So, take your time, have fun and learn, learn, learn.
Crops that produce more while using less water seem like a dream for a world with a burgeoning population and already strained food and water resources. This dream is coming closer to reality for University of Illinois at Urbana-Champaign researchers who have developed a new computer model that can help plant scientists breed better soybean crops.

Under current climate conditions, the model predicts a design for a soybean crop with 8.5 percent more productivity, but using 13 percent less water, and reflecting 34 percent more radiation back into space, by breeding for slightly different leaf distribution, angles and reflectivity. This work appears in the journal *Global Change Biology*.

Plants have evolved to outcompete other plants -- for example, shading out other plants or using water and nutrients liberally to the detriment of neighboring plants. However, in an agricultural setting, the plants don't need such competitive measures. The researchers aimed for three specific areas of improvement: First, productivity; Second, water usage; Third, combating climate change by reflecting more sunlight off the leaves. To address all three, they used the unique tactic of computationally modeling the whole soybean plant. The researchers used a technique called 'numerical optimization' to try out a very large number of combinations of structural traits to see which combination produced the best results with respect to each of the three goals. The model looks at biological functions, such as photosynthesis and water use, as well as the physical environment. The researchers looked at how the plant's biology changed with varying structural traits such as leaf area distributions, how the leaves are arranged vertically on the stalk, and the angles of the leaves.

For example, by changing the structure so that leaves are more evenly distributed, more light can penetrate through the canopy. This lets photosynthesis happen on multiple levels, instead of being limited to the top, thus increasing the plant's bean-producing power. A less dense canopy uses less water without affecting productivity. And changing the angle of the leaves can let the plant reflect back more solar radiation to offset climate change.

Most of the genetic approaches have looked at very specific traits. They haven't looked at restructing the whole canopy. According to researchers, they have developed very unique modeling capability where it can model the entire plant canopy in a lot of detail. This can also model what these plant canopies can do in a future climate, so that it will still be valid 40 or 50 years down the line.

Once the computer predicts an optimal plant structure, then the crop can be selected or bred from the diverse forms of soybeans that are already available - without the regulation and costs associated with genetic engineering. According to researchers, this kind of numerical approach - using realistic models of plant canopies - can provide a method for trying many more trait combinations than are possible through field breeding. The researchers hope their modeling approach will not only improve soybean yields, but also benefit agriculture worldwide as the population continues to rise.

The Food and Agriculture Organization of the United Nations predicts that by 2050 we will need 70 percent more primary foodstuffs to feed the world than we are producing today - and yet will have to do that with probably no more water while at the same time dealing with climate change.

According to researchers, by altering leaf arrangement we could have a yield increase, without using more water and also providing an offset to global warming. Next, the researchers plan to use their model to analyze other crops for their structural traits. The National Science Foundation and the Gates foundation supported this work.

The source of this article is: Darren T. Drewry, Praveen Kumar, Stephen P. Long. Simultaneous improvement in productivity, water use, and albedo through crop structural modification. *Global Change Biology*, 2014; DOI: 10.1111/gcb.12567. Material is edited for content and length.
Held in a different Wisconsin county each year since 1954, Farm Technology Days is a non-profit, educational event intended to showcase the cutting-edge of agriculture products and practices. Hosted by family farms, the event appeals to large scale agriculture and hobby farmers alike. This three day event traditionally draws 40,000 to 80,000 attendees.

Portage County host farms are Blue Top Farms, a 1,200 acre grain and vegetable operation and Feltz Family Farms, a 550 cow dairy located east of Plover’s Crossroad Commons, south of Highway HH. Additional land, being used for field demonstrations, is being made possible through neighboring potato and vegetable growers; Myron Soik and Sons, Inc. and Greg Kizewski and Sons, Inc.

Field demonstrations will feature a wide array of attractions including potato, sweet corn, and snap bean harvesting, multiple forms of forage cutting and harvesting, and tillage demonstrations. An offsite bus tour to see and learn about the carrot and cabbage production in Central Wisconsin will be available also.

The food tents will feature locally produced baked potatoes and sweet corn on the cob. Additional food being planned is a pork tenderloin sandwich with cranberry chutney and local handmade ice cream.

(Continued on page 8)
Youth and Family Living education and entertainment schedules are finalized and will feature many don’t miss programs such as a live performance of “Dairymen the Moo-sical”, Mad Dog and Merrill, and a surprise appearance by a former Green Bay Packer to mention a few.

Our Heritage Tractor and Equipment Committee is busy planning demonstrations including a saw mill, shingle mill, and wire-tie baler to go along with over 3 acres of equipment displays.

To further showcase the potato industry in Central Wisconsin, the commemorative toy collectible for 2014 is a one-of-a-kind, limited edition 2000 Lenco Self Propelled Airhead Potato Harvester. Only 1,000 of the toys (1:42 scale, die-cast metal) will be produced. These potato harvesters will be sold exclusively through the 2014 Portage County Farm Technology Days organization. It is sure to be a collector’s keepsake. Check out the Portage County Farm Tech Online Store at http://www.portagecountyfarmtech.com/online_store.php to order online or for a printable order form. This is a must have especially if you have any connections to the potato industry at all. Also available is a commemorative 16-month barn calendar featuring beautiful pictures of over 50 rural Wisconsin barns.

It takes 1,000 to 1,500 volunteers to host an event like this. Volunteer opportunities include tractor drivers, equipment operators, setup and takedown, parking assistants, admissions, information booth assistants, help in the youth and family living exhibits and the list goes on. If you have the time, we can use your talents.

Visit our website http://www.portagecountyfarmtech.com for opportunities to be a part of this exciting event. Please partner with us to showcase the unique agriculture of Central Wisconsin. For additional information call 715-344-2556. Be sure to mark your calendars for August 12 – 14 and come to the show. There is sure to be something for everyone!

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**Calendar of Events**

**June**

4 - 5  **“How to Start Grazing” Workshop** (see Pages 10 and 11 for full details)
Langlade County Resource Center, 837 Clermont St., Antigo, WI  54409
9 AM - 3:30 PM each day, Lunch provided.

11  **Pasture walk/tour, Keith and Sue Wohlfert Farm**
N2594 County Rd A, Oxford, WI  53952, 1 PM.

**August**

12-14  **Portage County Farm Technology Days**, east of Plover’s Crossroad Commons, south of Highway HH. Tuesday & Wednesday: 9-5; Thursday: 9-4.
May
24 **Adams County Dairy Breakfast**, Adams-Friendship High School, 1109 East North Street, Adams 53910. 7-11 AM.

30 **Mayor's Dairy Breakfast**, Central Wisconsin State Fairgrounds, 513 E. 17th Street, Marshfield 54449. 5:00-10:00 AM. $5; Children under 6 free.

June
15 **Marquette County Dairy Breakfast**, Ken & Cheri Borzick Farm, N6524 County Road Y, Montello 53949. 7 AM - Noon.

15 **Marshfield FFA Alumni June Dairy Breakfast**, Daryl & Brenda Sternweis Farm, 10950 County Road B, Marshfield 54449. 7 AM-Noon. $6 for ages 12 and up, $3 ages 11 and under; preschool and under free.

20 **Wisconsin Rapids Berry-Dairy Breakfast**, Lincoln High School, 1801 16th Street South, Wisconsin Rapids 54494, 6-10:30 AM.

21 **Portage County 35th Annual June Dairy Brunch and Open Farm**
Ken & Jackie Feltz Family Farms, 5796 Porter Drive, Stevens Point 54482
8 AM - Noon. Donation: $6 (adults), $2 (Children 6-10 years), Children 5 and under free.

21 **Auburndale FFA Alumni Dairy Breakfast**, Auburndale Village Park Shelter House, 10654 Park St, Auburndale 54412. 7-11 AM, Adults, $6; Children, $3.

28 **Pittsville FFA Alumni Dairy Breakfast**, Homestead Acres, Jack & Kathy Hahn, 7398 Homestead Lane, Pittsville 54466. 7-11 AM, Adults, $6; 11 and under, $3; preschool is free.

29 **Waushara County June Dairy Breakfast**

29 **Green Lake County Focus on the Farm**, Trillium Hill Farm, N8273 Cty Rd F Berlin 54923
8 AM-1 PM, Adults, $7; Age 5 and under, free.

Visit the Central Wisconsin Agricultural Specialization Team on the Web
http://fyi.uwex.edu/cwas/
Workshop

"How to Get Started in Grazing"

June 4-5, 2014

and agency personnel
farmers, educators, agribusiness

Experts in grazing, producers, soil and water specialists, Extension specialists, and specialists in soil and water conservation management will have the opportunity to network with new ideas presented in a series of workshops.

For additional workshop and registration information call:

(715) 677-2625

Registration is required. Contact

The Wisconsin Department of Agriculture, Trade and Consumer Protection for more information.

To register:

(Credit card or check accepted)

Midwest Grazing Conference
"How to Get Started in Grazing" Workshop Registration Form 2014 – Due June 2, 2014

First Name ___________________________________ Last Name ___________________________________

Address __________________________________________________________ City __________ State ________ Zip ______

Phone Number __________________________ E-mail __________________________

Cost: $50/person or $85/couple. Please make checks payable to: UW—Extension.

Do you require specific accommodation for the lunch, facility accessibility, and/or transportation to the Andy Bures farm site (10 miles NW of the Langlade County Resource Center)?

__________________________ Yes ______________ No

If yes, please describe the accommodation that is needed.

Please send Registration form and payment to:
UW-Extension Langlade County
837 Clermont St, Antigo, WI 54409