2013 Fall Field Demonstration Days: New Technologies in the Watershed

In late October, Yahara Pride Farms hosted its first annual Fall Field Demonstration Days in the Northern part of the Yahara Watershed. The demonstration days were held at two locations, Waunakee and Springfield, and brought in 230 producers, implement dealers, government workers and other pertinent stakeholders. The purpose of the demonstration days was to promote and expand the usage of new innovative technologies that aid in phosphorus reduction to area agricultural producers.

At Yahara Pride Farms, we strive to reduce phosphorus runoff by improving cropping, tillage and in-field practices on agricultural lands. The farmer-led organization, along with local implement dealers, were excited to exhibit these new, innovative technologies that will help in this effort. Cutting-edge technologies on display included strip tillage, a land preparation method that enhances seed germination; vertical tillage, a land preparation method for growing crops that sizes and mixes residue with top soil to improve soil warmup in spring and maintain moisture throughout the summer; as well as vertical manure injection, a manure management method that places manure below the surface so it does not interact with runoff water during storms. At both events, attendees had the opportunity to see the technologies demonstrated in the field, while having the chance to speak with implement representatives.

In addition to the equipment described above, the Springfield location exhibited a cover crop test plot designed and managed by UW Extension and Partners in Production. At the test plot there are eight different seed types and mixes displayed that were planted on four different planting dates. The purpose of the cover crop plot is to gather data that will help provide farmers with information on the best cover crop selection and planting times for this watershed. Also, the research is helping determine if certain combinations of cover crops can replace tillage and if the cover crops affect the overall yield/profitability of the following crop.

The demonstration days were a great opportunity to share these new technologies in the Yahara Watershed. This fall alone, Yahara Pride Farms members have implemented nearly 2,500 acres of cover crops, 200 acres of strip tillage, 80 acres of vertical tillage, and 600 acres of vertical manure injection. All of these conservation practices improve soil stability, which reduces phosphorus runoff by an estimated one pound for every acre implemented. With one pound of phosphorus producing 500 pounds of algae, these conservation practices on 3,920 acres of land have the potential to prevent nearly 2 million pounds of algae.

Thank you to our sponsors who made the Fall Field Demonstration Days possible: Carl F. Statz & Sons, Kalscheur Implement Co. Inc., McFarlanes’, Wisconsin Soybean Marketing Board, and Yahara WINs, as well as our cover crop plot sponsors, Partners in Production Crop IMS, and UW Extension and our event sponsor Badgerland Financial.

www.yaharapridefarms.org
Interview with Jack & Anton Kaltenberg

**Mission:** Partners in Production (PIP) as an independent, family-operated seed company, our mission is to provide our customers with superior product performance through genetic selection, product innovation, and strong customer relationships. Our products and practices are developed based on what is best suited for Wisconsin and Northern Illinois.

**Number of years in business:** Partners in Production has been in business for 6 years and have over 100 years of combined seedsmanship experience.

**What products/services does PIP offer?** PIP provides a comprehensive product line including corn, soybeans, soft red winter wheat, and alfalfa as well as a variety of cover crop seeds such as the Tillage Radish®. Our product line includes a strong silage portfolio and we include seed treatment as a standard on most of our products along with providing custom seed treating services. The partnerships we develop with our customers are based around helping them increase their return on investment and understanding their complete management practices.

**Why did PIP decide to partner with YPF?** Located in Arlington, and having a long history of farming land in the Yahara Watershed, we believe in supporting sustainability in agriculture because it is so important for the environment that we are stewards of the soil. We also hope to better understand our various and ever-changing cropping systems in order to promote better agricultural practice to all of our customers. We are honored to support and be a part of such a progressive and innovative group of agriculturalists.

**How do your products & services help with conservation management?** PIP is one of few seed companies that supplies seed for all cropping needs and seasons. We have a comprehensive product line which has continued to evolve with industry technology and innovation. When it comes to conservation, cover crops are big. PIP has always been strong in wheat, which can be used as a cover crop. Then, four years ago we started selling other cover crop seed which now includes a number of different products and blends based on achieving specific goals.

**What do you think are the biggest benefits of using cover crops?** The benefit of using cover crops is optimizing soil productivity and positively impacting environmental systems. Whether the land owner is trying to hold nutrients, control soil erosion, deal with compaction, add organic matter, or gain additional forage, the cover crop planting system may change but the benefits are still to the soil quality and productivity, which is important to our long term success as farmers.

**What discounted products and/or services does PIP offer to YPF members?** We value our community and the YPF members, so we are always available for agronomic questions and advice. We currently have a corn coupon available for all YPF members, along with other discounts and programs that we offer. Have any questions or curious what PIP can do for you? Call AJ Kaltenberg (608-335-8115) or Jack Kaltenberg (608-335-2112) at anytime.
2013 Demonstration Days: New Technologies
Did you ever stop and think about the difference between planning and accomplishing? We all have plans, like losing a few pounds, saving more money or becoming more sustainable. There is no question that planning is important. But while developing a plan can be a challenge, accomplishing your plans are where the real challenges occur. The spring of 2013 is a great example of the difference between planning and accomplishing. Many farmers had good plans for utilizing manure, rotating fields and harvesting high yields. They all knew what it takes to make these things happen and they were prepared to implement their plans and accomplish their goals. But mother nature dealt them a very different hand and all they could do was play the cards they were dealt.

This is a great example of why evaluating what is happening on farms by looking over plans (nutrient management or conservation), cannot be the only step in identifying performance. To understand and reduce ag’s environmental footprint, there needs to be good documentation of what’s currently happening on the land and how the current farming system is impacting water quality. Yahara Pride Farms has been working with farmers to verify, document and better understand the effectiveness of their farming system, their implementation of conservation practices and their soil fertility programs.

The first step in this process is evaluating the land (farmed and non-farmed) to determine the effectiveness of the farming system. Sometimes what works on paper doesn’t work in the field, and other times what works in the field cannot be put into a computer program. By walking over the cropland and non-farmed land, it’s easy to identify where sediment is moving. Critical sites are ranked using a multi-tiered evaluation process to prioritize the land areas where the risk of nutrients and/or sediment loss are at either acceptable, improvable or unacceptable.

These areas are rated on a three point scale:
- **Green** - excellent or very good level of management (no changes required),
- **Yellow** - areas that need some improvement over a period of 1 - 5 years,
- **Red** - area that need improvement within the next 12 -18 months.

The goal is to identify areas that may contribute nutrients and sediment (or offer significant potential to capture nutrients and/or sediment) to area streams and lakes.

After the walkover, a map and summary of all the land is developed. This information identifies the risk of nutrient and/or sediment loss and ranks the risk based on the three criteria. It also identifies and documents practices that farmers are using that protect water quality. This information is shared with...
the farmer to ensure that evaluation has identified all the critical areas on the farm. Areas that need improvement are discussed and strategies are developed to secure additional assistance where necessary. All information collected is confidential and is left with the farmer. Data will only be used in abstract/anonymous form to show our performance in the watershed.

The next step is to evaluate the crop production program and determine if the farm has a good understanding of the rates, methods and timing required to insure profitable crop production with acceptable levels of loss. This requires an evaluation of the nutrient management plan and a discussion of how the plan is implemented. The final phase is an evaluation of the facilities to ensure that losses from this area of the farm have been addressed.

A central objective of Yahara Pride Farms is to get all farms in the watershed involved in the certification program. This combination of planning and farm evaluation will guide current producers to better manage phosphorus runoff. Together we can preserve farm heritage and improve soil and water quality for generations to come.

Anyone interested in participating in this program should contact Joe Connors at 608-444-4702.

Yahara Pride Farms
Certification Benefits

For a detailed description of all certification components, please review our Certification Checklist on our website.

By becoming a Yahara Pride Farms certified member, producers currently have access to branding benefits as well as the following discounts:

- Discounted Servicing, Processing or Appraisal Fees
- Discounted Tax or Farm Accounting Services
- Discounted registration fees to attend industry meetings & conferences

Additionally, the following benefits will soon be available to certified members:
• Expedited permitting
• Value-added commodity prices
• Discounted agricultural supplies
• Sustainable agricultural producer label

A Word From One of Our Sponsors

“Middleton Community Bank is proud to be a part of the Yahara Pride Farms. Our bank has a “sincere interest” in caring for the natural resources of this community. With offices in Belleville, Brooklyn, Cross Plains, Sauk City, and Middleton we serve a growing Agribusiness market of production farms and related agri-businesses. We all rely on a healthy environment for our businesses, our families, and our long term future. Yahara Pride Farms has worked diligently to provide ongoing educational information and resources to this community regarding the preservation and improvement of our natural resources. Resources that we all respect and enjoy.” -David Fahey, President/CEO of Middleton Community Bank

Middleton Community Bank kindly donates the use of their facilities for our monthly board meetings.
Farms with livestock have the unique advantage of producing a valuable by-product, manure, which has many of the nutrients required for crop production. However, in order for these nutrients to be available to support crop growth, manure has to be applied with consideration for timing, method, and rate. While all these factors are important, properly timing manure application while the soil is frozen and/or snow-covered is critical to protecting surface water quality and reducing nutrient loss from fields.

Data gathered by UW Discovery Farms shows that when manure is applied one week or less before a runoff event, the losses of nitrogen and phosphorus are significantly increased even with relatively low application rates. When manure applications are made several weeks or months before runoff occurs, nutrient losses can be reduced by as much as 50 to 75 percent. Understanding the conditions that increase the risk of nutrient loss can help farmers better manage manure throughout the year.

Management recommendations for this time period. Farmers with manure storage capacity of three months or more should use the early winter period to make sure that the storage is empty enough to prevent a ‘must spread’ situation until early April. Farms with limited or no storage should use the early winter period to spread on riskier fields on the farm and save the less risky fields for the later winter, and high runoff, months of February and March. Regardless of whether your farm has storage or not, having a manure spreading plan that outlines the most and least risky fields is important for all periods of the year.

Concrete frost. “Concrete frost” is commonly used to describe a condition when most of the pore space in the surface of the soil is occupied by frozen water. During conditions when snow melts or rain falls in the winter, the water on the soil surface begins to infiltrate the soil and then is frozen when it reaches the frost layer below. In some situations, the upper profile of the soil becomes nearly saturated with water which freezes during the night when temperatures drop below freezing.

Concrete frost decreases the soil’s ability to infiltrate water and nutrients or bind with applied manure (the soil is less porous - like concrete). It takes higher temperatures and a longer time to thaw concrete frost compared to frost formed in unsaturated soils. Weather patterns including multiple thaws with melting snow or winter rain events result in substantial development of concrete frost throughout Wisconsin.

Ice crust. While concrete frost can form under a snowpack or on bare soil, ice crusts are formed when rain falls on soils that are very cold. Most commonly, we see crusts develop when rain falls on soils without snow cover. Ice crusts over an inch thick have been observed, but any thickness of ice prevents proper contact of manure to the soil.

Spreading manure in the winter has unique challenges. Weather conditions that greatly increase the risk of loss include: the presence of concrete frost, development of an ice crust on the soil surface, and the amount and condition of the snow cover. In the late fall and early winter (October - December) in Wisconsin, fields are often harvested and may be frozen. However, there typically is not significant snow cover, concrete frost, or ice crusted soil that is common in late winter. Manure applied during the time period before these conditions develop has a lower chance of losing nutrients through surface runoff than applications made later in the winter (February - March).
Considerations for Early Winter Manure Application, continued.

Story continued from Page 6

Amount and condition of snow cover. There are two important factors to consider when evaluating the risk of manure applied on snow. First, take a look at how much snow is present. If there is more than 6-12 inches in the area you are planning to spread, the manure will not be able to come into contact with the soil. UW Discovery Farms data has shown that manure applied on top of a few inches of snow, especially in the early winter months, does not typically increase the risk of nutrient loss. This is because the manure achieves good soil contact and nutrients can attach to the soil as the sun radiates heat on the dark manure, slowly melting the snow. As the wintertime months progress and the snowpack becomes more dense or concrete frost develops in the soil, the potential for nutrient loss increases. In general, less snow on an area means a better chance for manure to bind with soil and stay in the field when runoff events happen later in the season.

Snow depth is not always a good indicator of the amount of water in the snowpack. During the early winter months, the snow is often light, easily blown around, and not densely packed. On the other hand, the snowpack in late winter or early spring has often undergone some thawing cycles and is typically more dense.

A manure application on a few inches of light snow is less risky than the same application on a dense snow pack or slush. Manure applied on dense snow pack or slush has very little chance of binding with the soil before runoff occurs.

Concerns with winter spreading can be addressed if farmers understand the risks associated with varying soil conditions and consider weather forecasts prior to spreading on frozen ground. Spreading just before snowmelt or a winter rain event significantly increases the risk of manure and nutrient movement. Manure applications should also be avoided on deep and/or dense snowpack or if concrete frost or ice crusting of the soil is evident. This is not always possible, so applications made during these conditions should be done on internally drained fields (closed depressions) or low sloped (flat) fields to minimize the potential for loss. The key to reducing nutrient loss during winter manure application is to understand the local conditions and have a winter spreading plan in place.

Upcoming Events

UW Discovery Farms Winter Conference

Date: December 11
Where: The Wilderness - Glacier Canyon Convention Center for “Ag at the Head of the Table: Innovative Partnerships to Address Water Quality Targets.”

Registration is $60 for a full day of information and lunch.
Visit: uwdiscoveryfarms.org to register

Thanks to our partners!
Cover Crop Test Plot

Yahara Pride Farms has partnered with the University of Wisconsin Extension to create a Cover Crop Test Plot which is meant to identify the effects of cover crop usage on future yield, nutrient holding capacity of soil, profitability and runoff in the Yahara watershed. Through this test plot, the best seed types/seed type combinations, planting times and planting rates will be determined for our watershed.

Once the study is completed, results will be posted in our newsletter as well as our website. This study is crucial in determining the most effective way for farmers in our watershed to utilize this conservation practice.

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<thead>
<tr>
<th>Seed Type</th>
<th>Seed Rate- Pounds per Acre</th>
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<tbody>
<tr>
<td>Winter Rye</td>
<td>100</td>
</tr>
<tr>
<td>Barley</td>
<td>100</td>
</tr>
<tr>
<td>Annual Ryegrass</td>
<td>20</td>
</tr>
<tr>
<td>Oats</td>
<td>60</td>
</tr>
<tr>
<td>Rye/Radish</td>
<td>Rye: 100, Radish: 2</td>
</tr>
<tr>
<td>Barley/Radish</td>
<td>Barley: 100, Radish: 2</td>
</tr>
<tr>
<td>Barley/rye</td>
<td>Barley: 40, Rye: 60</td>
</tr>
<tr>
<td>Rye/peas/radish</td>
<td>Rye: 60, Peas: 25, Radish: 2</td>
</tr>
</tbody>
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If you have any questions about seeding rates or details of the Cover Crop Test Plot, please contact Heidi Johnson, Crop & Soils Agent of UW Extension at 608-224-3716 or johnson.heidi@countyofdane.com.