

Basin Buzz

Photo Credit: John Alves, Mystic Wanderer Images)

Winter 2016

DEMONSTRATION FARM NETWORK

Connecting Farmers with technology, innovative practices and each other!

The Lower Fox River Demonstration Farm Network had a great year in 2015!

Implementation of a variety of cover crops and tillage practices, testing of interseeding equipment and reduced disturbance manure application strategies are just some of what was done in 2015.

Yield and cost data are currently being analyzed and will be shared at future events.

Over 250 people participated in Network events, including meetings, tours and field days held throughout the year.

We hope you will join events in 2016.

Join us!

FARMER LUNCHEON & RUNOFF ROUNDTABLE - **JANUARY 27**

- Hear Brent Petersen, Brown County LCD, present on Demonstration Farm practices and soil health
- Participate in a panel discussion including local farmers, Jeff Polenske (Tilth Agronomy), and a perspective on farmer watershed councils
- Join in small group discussions with other farmers and conservation professionals

Liberty Hall

800 Eisenhower Drive • Kimberly, WI 54136

RSVP FOR FREE LUNCH BY JANUARY 20

(920) 391-4620 or zenz_rl@co.brown.wi.us

This event is free and open to all farmers!

Participating Farms:

- Van Wychen Farms, operated by George Van Wychen
- Tinedale Cropping, operated by Scott Theunis
- Brickstead Dairy, operated by Dan Brick
- Nettekoven Farms, operated by Greg

Demo Farm
Farmer
Luncheon

SIGN UP NOW!

2016 FUNDS & ASSISTANCE

Interested in streambanks, waterways, cover crops, interseeding, buffers, nutrient management planning or other conservation practices?

Contact your local County Land Conservation Department or NRCS office today!

Unique, flexible cost-sharing opportunities are available in 2016 for those who own or operate land located within either the Plum Creek or Kankapot Creek watershed (see map in the center of this newsletter). Funding opportunities include:

- Residue Management (\$18.50/acre for reduced or no tillage at planting time)
- Harvestable Buffers (up to \$6,000/acre)
- Cover Crops, Grassed Waterways & more...

For questions or more information, please contact Jeremy Freund at (920)574-6965 or jeremy.freund@outagamie.org

Contact your Land Conservation Department or local NRCS office to determine if funding is available for your project.

Brown County LWCD: (920) 391-4621
Calumet County LWCD: (920) 849-1442
Outagamie County LCD: (920) 832-5073
Winnebago County LWCD: (920) 232-1950
Outagamie County NRCS: (920) 733-1575
Brown County NRCS: (920) 884-9210
Winnebago County NRCS: (920) 424-0329
Calumet County NRCS: (920) 849-1444

Riparian buffers reduce erosion and protect from runoff

Quit Treating Your Soil Like Dirt!

Nettekoven using gypsum to bring fertility & soil health to his fields

Greg Nettekoven and his wife Karon took over the Nettekoven family farm in 1988. Conservation and soil health have always been a priority to Greg, so when he turned his family's 760 acre beef and hog operation into working lands for a cash grain operation and noticed soil erosion from washing and top soil blowing away he knew he had to do something.

Greg and Karon have been working with Natural Resources Conservation Service in Wisconsin for years and improving soil health through tillage practices and cover crops. The Nettekovens grow corn, soybeans and winter wheat as well as a variety of cover crops such as red clover, cereal rye, spring barley, tillage radish and Austrian peas.

In 2014, Greg and Karon became one of four farms in Northeast Wisconsin to partner with Glacierland RC&D to demonstrate the use of FGD gypsum as an agricultural soil amendment.

"I've heard gypsum can improve water infiltration. This should be a good test on the project field because it is a heavy clay soil."

-Greg Nettekoven

Gypsum is approximately 23% calcium and 19% sulfur in its pure form. Commercial gypsum applied at a rate of 1 ton/acre will supply 320 lbs of sulfur and 400 lbs of calcium per acre. Today, crops have less sulfur sources available to them since sulfur impurities were mostly removed from fertilizers. There has also been a decrease in atmospheric sulfur deposits since coal-fired power plants were required to install emission scrubbers. When these decreases are combined with the increased sulfur demand of high yielding crops, a sulfur deficiency is emerging in the Midwest.

In addition to supplying crop nutrients, gypsum is gaining attention in the conservation field for its ability to improve soil health.

Many soils in Northeast Wisconsin contain clay and tend to be compactable. This limits crop root growth, soil biological activity, residue breakdown and infiltration. According to Ron Chamberlain,



Greg Nettekoven



Ron Chamberlain, Gypsoil, presenting at Sept 30 field day

Chief Agronomist and Director of Research at Gypsoil, this leads to lower crop yields and increased runoff. Runoff erodes soil and moves nutrients into Wisconsin streams and rivers increasing the potential for algal blooms and watershed impairment.

“Gypsum changes soil chemistry which allows the clays to aggregate into stable bundles,” says Chamberlain. “The pore spaces between aggregates allow water and air to infiltrate which reduces runoff and makes an ideal environment for soil biology and crop roots. Crops produce more and runoff is reduced.”

“I decided to participate in the project to see if some of the benefits you read about would work on our land,” says Nettekoven, “I’ve heard gypsum can improve water infiltration. This should be a good test on the project field because it is a heavy clay soil. I want to see how the gypsum affects earthworms and soil tilth. Hopefully, to see better yields too.”

Contact Molly Meyers, Agricultural Conservation Specialist, Glacierland RC&D at mgc@glacierlandrcd.org or 920-680-6484 for more information.



Gypsum use in Wisconsin

Gypsum use has been steadily increasing since 2009 both as a soil amendment and a source for sulfur. Alfalfa growers are reporting that where sulfur is limiting, they are measuring a crop yield and quality response to gypsum often in the first cutting after application. Other farmers are reporting that often by the second year of gypsum application, their soils are absorbing rainwater better, crops are developing more roots deeper in the soil, crop residue is disappearing faster and they see more earthworms.

Ongoing watershed research is indicating a lower concentration of dissolved phosphorus in runoff and tile water where gypsum is used.



Great things are happening in the

Lower Fox River Watershed

Demo Farm - Van Wychen Farms



Photo Credit: USDA

Photo Credit: USDA

George & Nick Van Wychen interseeded Red clover between corn rows, growth at time of corn grain harvest

Demo Farm - Nettekoven Farms



Photo Credit: USDA

Greg & Karon Nettekoven no-till planted soybeans into cover crops



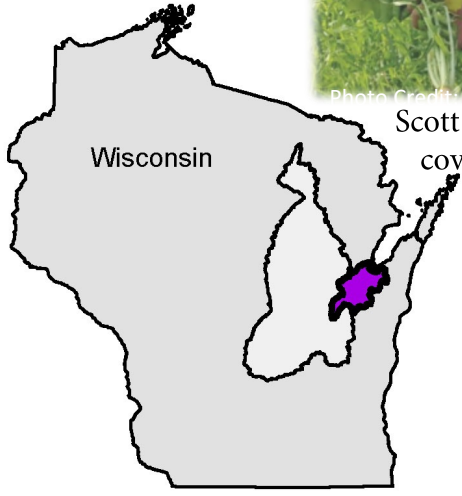
Photo Credit: USDA

Demo Farm - Tinedale Cropping



Photo Credit: USDA

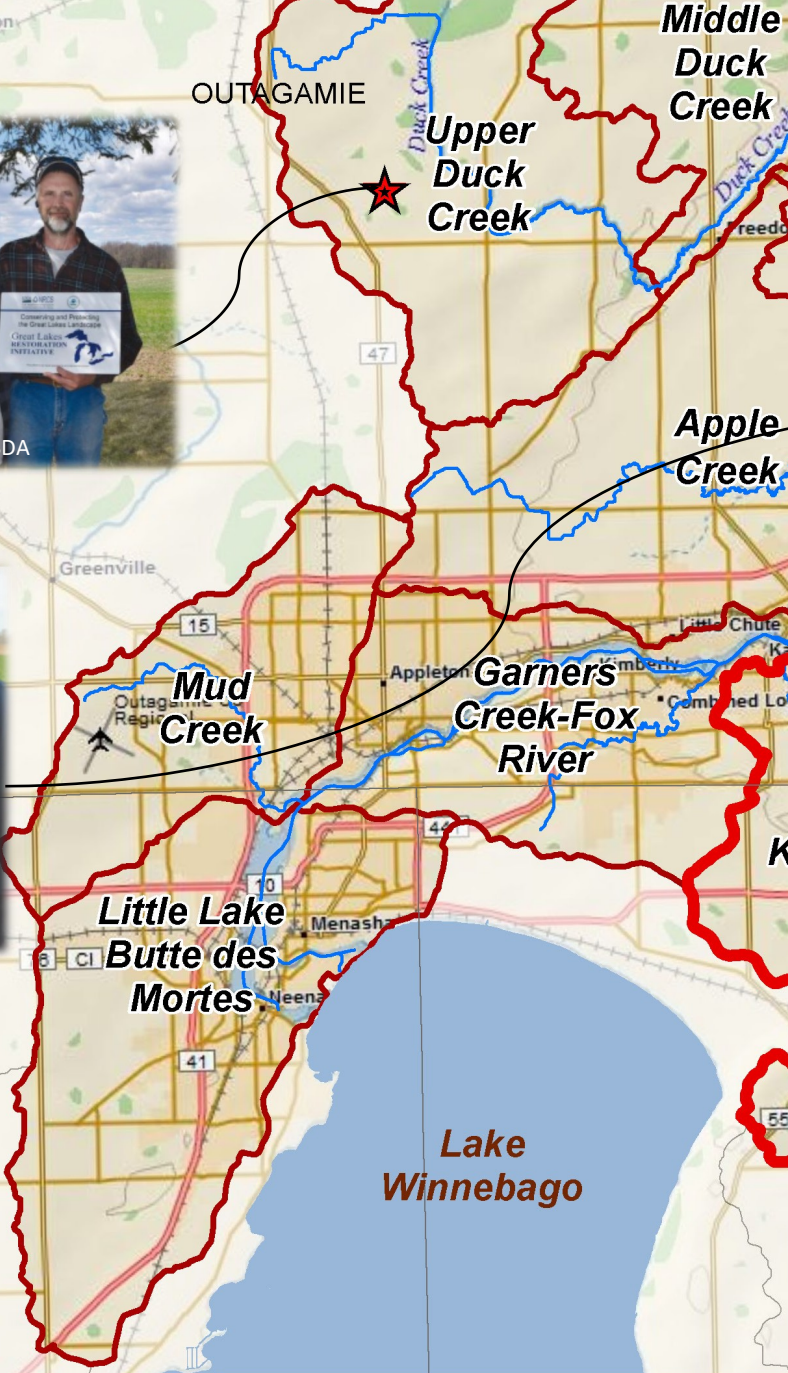
Scott Theunis shows radish cover crop on his farm.



Wisconsin

NEBAGO

Butte des Morts



Middle Duck Creek

Upper Duck Creek

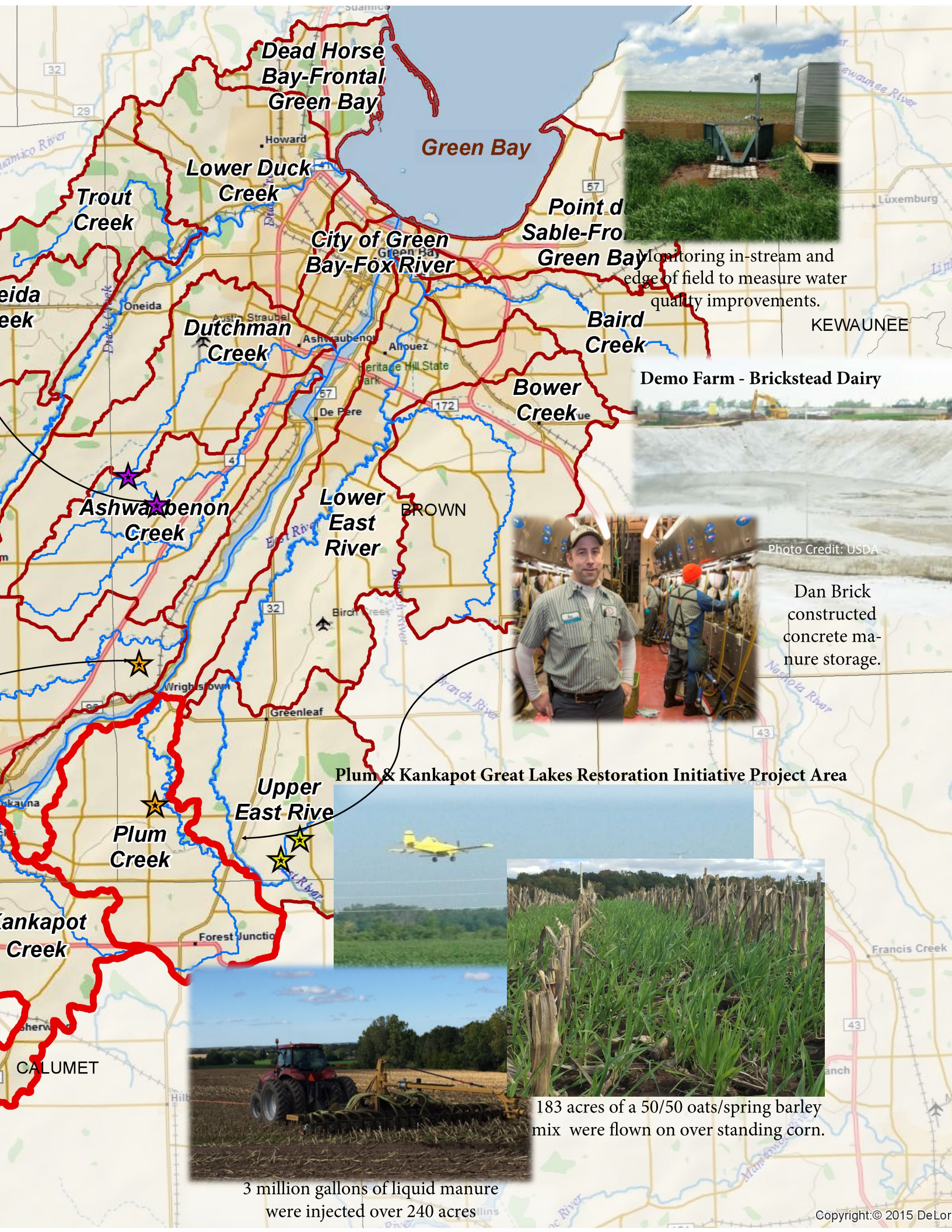
Apple Creek

Mud Creek

Garners Creek-Fox River

Little Lake Butte des Morts

Lake Winnebago



Monitoring in-stream and edge of field to measure water quality improvements.

Demo Farm - Brickstead Dairy

Photo Credit: USDA

Dan Brick constructed concrete manure storage.

Plum & Kankapot Great Lakes Restoration Initiative Project Area

183 acres of a 50/50 oats/spring barley mix were flown on over standing corn.

3 million gallons of liquid manure were injected over 240 acres

SOLVING THE MANURE APPLICATION/COVER CROP DILEMMA

You've heard about the benefits of cover crops but late harvests in the past and a manure pit to empty have you questioning the likelihood of getting a crop established before winter....

Alternative planting methods for cover crops including interseeding and aerial fly-on (check out the 1st issue of the Buzz online for more information - www.fwwa.org/basinbuzz) allow cover crops to be planted even when harvest is late in the season.

To address the need to apply manure to fields after harvest, Outagamie County has purchased a wavy coultter manure injector unit for farmers in or near the Plum and Kankapot Creek watershed to demo on their farms at no cost. This equipment allows manure to be incorporated into a growing cover crop.

Did we solve the manure application/cover crop dilemma? Try it for yourself and let us know!



CHECK IT OUT!

This unit is available to farmers with cropland in or near the Plum and Kankapot Creek watershed (see map in center of newsletter) to **DEMO for FREE**. The farmer is required to provide the tractor, supply the manure to the unit and apply at a rate that meets their nutrient management plan.

For more information, call Andy (920) 574-7539 or Jeremy (920) 574-6965.



SNAPPLUS 15 release now available

SnapPlus (Soil nutrient application planner) helps farmers make the best use of their on-farm nutrients, as well as make informed and justified commercial fertilizer purchases.

By calculating potential soil and phosphorus runoff losses on a field-by-field basis while assisting in the economic planning of manure and fertilizer applications, SnapPlus provides Wisconsin farmers with a tool for protecting soil and water quality.

To download the software or to register for training visit:
<http://snapplus.wisc.edu/>

Photo Credit: UW Board of Regents - www.snapplus.wisc.edu

Watershed Celebration



Tuesday, March 1, 2016

Oshkosh Convention Center
Oshkosh, WI

Hors d'oeuvres Reception/Silent Auction
4:30 - 5:30 p.m.

Watershed Hero
Impact Award Presentations
5:30 - 6:00 p.m.

Dinner
6:00 - 7:00 p.m.

Photographic Journey of the Watershed
Presentation by Andrew Sabai
7:00 - 8:00 p.m.

Register online www.fwwa.org or call (920)915-5767 for more information

READY TO EXPLORE GYPSUM?

Gypsum ($\text{CaSO}_4 \bullet 2\text{H}_2\text{O}$)

Provides valuable nutrients and can improve physical properties of soil (especially those with high clay content)

Gypsum is a fine powder, damp to the touch, similar to slightly damp flour



Gypsum Application

Gypsum can be applied to soils with common spreading equipment that is used to apply other bulk, non-granular materials.

Gypsum does not have to be incorporated. It is very water soluble (200x more soluble than limestone) and will move through the soil profile with water. While it does not have to be, it can be incorporated through tilling without impairing its activity.

Gypsum is typically applied in the spring prior to planting or in the fall after harvest. Due to its flour like consistency, gypsum should be applied on low wind days and 2-3 days ahead of any large rain event to avoid wash out. The recommended application rate is 1 to 2 tons per acre, depending on soil type. A soil test prior to application is recommended.

Benefits of Using Gypsum

Gypsum improves soil quality by changing the soil chemistry and allowing clay to aggregate into stable bundles. The pore spaces between bundles allow water and air to infiltrate, making an ideal environment for soil biology and crop roots. Gypsum is a source of sulfur for plants and provides calcium which can stimulate root growth.



“Patience my Young Padawan” - Yoda

The Benefits of gypsum cannot be seen immediately. It can take two years’ worth of applications or more before the full benefit is realized. To see the benefits of gypsum for yourself, apply gypsum to test plots, leaving untreated control checks in the field.

Contact NRCS to inquire about cost sharing opportunities:

Outagamie County: Lynn Szulczewski (920) 733-1575

Winnebago County: Merrie Schamberger (920) 424-0329

Brown County: John Malvitz (920) 884-9210

Calumet County: Joe Smedberg (920) 849-1444



PO Box 1861
Appleton, WI 54911

Basin Buzz

For more information on topics in this newsletter or to Sign up online to receive the Basin Buzz via email visit: www.fwwa.org/buzz

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UPCOMING EVENTS



- Demonstration Farm Farmer Luncheon & Runoff Roundtable, January 27—FREE Event, all farmers welcome!
- GrassWorks Grazing Conference—January 14-16
Wisconsin Dells www.grassworks.org
- Outagamie County Forage Council Meeting - January 28
Doxbee's, Seymour 9:30-3:30
- Watershed Celebration - March 1 - Oshkosh 4:30-8:00

INSIDE THE BUZZ

- Demonstration Farm Network—update
- 2016 Funds and Assistance
- Gypsum & Soil Health: Spotlight on Nettekoven Farm
- Great things are happening in the Lower Fox River Watershed!
- Manure Injection
- SnapPlus 15
- Exploring Gypsum

Find more information on upcoming events online www.fwwa.org/Buzz