

# Conservation Newsletter



## 2014 CONSERVATION FARMER AWARD

Representing the Pipestone SWCD is Wes and Sheila De Kam, pictured here with their family who are all apart of their operation. The De Kam's operate a 380 head dairy and also plant corn, wheat, and alfalfa in Southeast Pipestone County. The De Kam's are conservation minded operators that continually implement new conservation practices while increasing productivity on their farm. In recent years, they have installed a manure storage lagoon, planted cover crops to improve soil health, created a water retention basin for tile water recycling, and hosted a manure management field day. The De Kam's see the benefits of a multiple species rotation with cover crops. It's Wes' belief that we all have a responsibility to be stewards of the land and to pass the legacy of stewardship onto future generations.



The Pipestone Soil & Water Conservation District and the Natural Resources Conservation Service are Equal Employment Opportunity Providers and Employers

## Winter Manure Application

Winter is a critical time for application of manure. It's a period of time when producers are able to get into the field and haul manure for next year's crop. As with anything, winter application of manure doesn't come without its challenges and protection of water quality is one of many challenges. Simple guidelines have been set in place by Minnesota Pollution Control Agency for producers to follow in order to prevent manure run off from fields. These guidelines are as follows:

1. Application of manure onto frozen or snow covered soils should be adjusted to prevent run off or ponding of liquid manure during application.
2. Manure shall not be applied to frozen or snow covered soils in any of the following situations:
  - a. Within 300 feet of lakes, streams, open tile inlets, intermittent streams, drainage ditches without berms, or public water wetlands.
  - b. During periods of active snow melt.
  - c. When a high probability of a rainfall over 0.25 inches is forecasted within 24 hours of the end of the application period.
  - d. On slopes that exceed 2 percent for liquid manure application or 6 percent for solid manure.
  - e. Where tillage is up and down the slopes that exceed 2 percent.
  - f. Where water or ice occupies most of the tillage furrows.
3. All winter application sites should be identified in a manure management plan and must identify field slopes, proximity to waters, and soil and water conservation measures.



Follow these simple guidelines to stay within the rules of winter application of manure and to protect our water resources. Contact our office with any questions or to request assistance with manure management planning.

## 27 Years of Combined Service

As soon as Ed Loll returned from his first year in guard camp, he began working for The Pipestone Soil & Water Conservation District. He began his career in 1968 as a district technician where he spent most of his time assisting local farmers, surveying conservation projects, and running the district's tree program. After working as a technician, Ed spent over 7 years as the SWCD district manager before leaving the district in 1985. From 1985 to 2005 Ed spent much of his time raising his 3 sons, Chris, Brian, & Adam, selling trailers / seed, farming, doing DOT Inspections, and catching up with the local farmers at the coffee shop. In July 2005 Ed was appointed to the SWCD board as District 4 Supervisor of Altona, Troy, and Fountain Prairie townships. While serving on the board, Ed has shown every effort to better the residents of Pipestone County. He's served as a representative for the Redwood Cottonwood Rivers Control Area, the Southwest Prairie Technical Service Area, Area II, and the Coteau des Prairies RC&D. As chairman, he also assisted with the hiring of new employees.

Now that Ed has put in almost 10 years as a district supervisor, he has decided to let someone else fill his shoes. They will definitely be some big shoes to fill...



**~Thank you Ed for all of your dedication and knowledge that you have brought to the District over the years.**



# Conservation Bulletin

Pipestone Soil and Water Conservation District

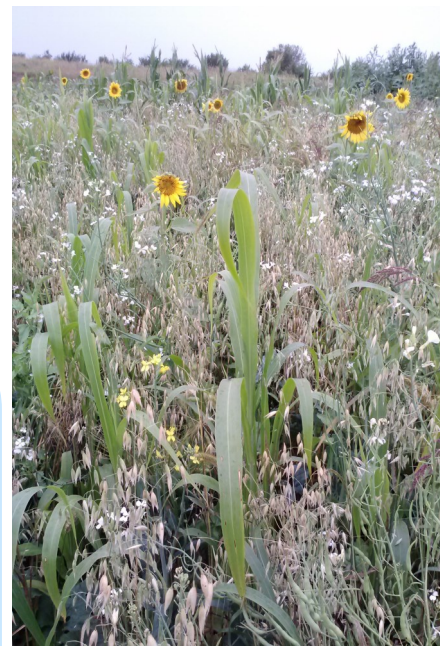
New to the Pipestone SWCD is the “Conservation Bulletin.” The Conservation Bulletin features specific individuals in Pipestone County that go above and beyond to try new things to not only better their operation, but the soil and water as well. It’s very important to thank these individuals for their everyday efforts in protecting our natural resources and for sharing their success stories with others.



## Ian Cunningham

Ian Cunningham is a fourth generation family farmer from Sweet township. Ian has a passion for conservation and is continually implementing new practices on his farm to protect his resources. Ian is a believer in the benefits of cover crops and is a big advocate for implementing cover crops into his operation. This article features one of Ian’s most recent cover crop ventures and his success story.

An important goal of Ian’s cover crop plan for 2014 was to provide additional forage for his 100 cows and calves. So Ian decided to plant 13 acres of cover crops in the spring. Then during the hot and dry month of August when pasture regrowth had begun to slow down, Ian sectioned off the area into 20 paddocks. Each day for the next 20 days Ian moved his herd from one paddock to another. This provided his cattle with a steady rate of gain and also allowed his pasture time to rest and prevented it from being overgrazed. Following the 20 days of Grazing, Ian replanted the area with a second cover crop that his herd grazed for an additional 10 days in late October. He then finished off the season by strip tilling the land to allow him to plant a corn crop in 2015.



**Above:** A diverse mix of cover crops will provide a wider range of benefits to both the cattle and soil fertility.



**Left:** Cattle graze down the cover crop mix. The background shows what the crop looked before the cattle started grazing.

**Right:** A cow takes a radish right from Ian’s hand. The cattle will eat the green tops off the radish first, then come back & pull the tuber up and eat that as well.





# Cover Crops: The Unseen Benefits

## Soil Biology

Soil contains hundreds of thousands of bacteria, fungi, insects, arthropods, microorganisms, and earthworms. All of these work in conjunction to cycle nutrients efficiently. Adding cover crops increases diversity and feeds these living things, improving soil fertility.

## Water Holding Capacity

Cover crop residue reduces evaporation and increases water infiltration. They also increase the amount of organic matter in the soil which holds the water in the soil profile for use by the growing crop.

## Nitrogen Advantage

Legume cover crops take nitrogen gas in the atmosphere and convert it into soil nitrogen that is usable by plants. Crops grown in fields after a legume can take 30 to 60 percent of the N produced from the legume, thus reducing the need for commercial N application.



**Left:** A turnip provides many benefits to soil quality. The biggest impact of a turnip is on soil fertility. They have the ability to take in the excess nutrients in the soil. Over time, the turnip will break down slowly releasing the nutrients back to the soil and increase organic matter.

**Right:** A radish is an excellent tool for increased soil health. These long tubers grow downward through the soil profile and work to break up the compacted layers of the soil. Also... as the tuber breaks down it provides an channel for water to infiltrate the soil.



Pipestone SWCD has cost share available for a wide range of conservation practices. If you are interested in the information found in this article or interested in other practices, contact our office at the number below and find out how we can assist you with your conservation needs.



## Pipestone SWCD

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**HELPING BRING YOU CLEAN WATER**





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**What's the deal with Cover Crops?**

This fall we have seen an increase in the number of acres planted to cover crops. Farmers are planting cover crops as a way to improve their organic matter & soil health. Soil health is improved by disturbing the soil less, growing a great diversity of crops, maintaining living roots in the soils, and keeping the soil covered with residue at all times.



*Corn strip-tilled into winter cereal rye.*

In Pipestone County we have several producers that are applying a cover crops on the same acres for five years. We will be looking for improvements in the soil after five years of cover crops. Most of these fields are in there first or second year and we will have more information on the results in the coming years. If you are interested in Cover Crops, Contact our local NRCS Office.

**Does extra Nitrogen ensure higher yields?**

University of Minnesota research shows that the answer is **NO**.

When applying nitrogen fertilizers, there are other key factors that need be considered in addition to your rate of application which largely affect your yield and the environment.

**Timing of application** can significantly affect the availability of nitrogen. Fall application of nitrogen is not recommended in SW Minnesota, soil temperatures must be below 50°F if you do fall apply nitrogen. Spring application or a split application is recommended.

**Soil nitrate tests** are a key management tool in determining residual nitrate. Soil tests should be collected from a depth of 6 – 24 inches in addition to the 0 – 6 inch samples. When using soil nitrate tests you should take your test results times 0.60 and reduce your Nitrogen Goal by that amount to account for available residual nitrogen in the soil.

**Nitrogen Rate** to some is as simple as taking your yield goal and applying 1 lb. of nitrogen per bushel of corn. This is not an acceptable method of nitrogen planning. The table above should be used to determine your nitrogen goal, based on your maximum return to nitrogen applied and Nitrogen Price divided by Crop value. An example calculation of the price/value ratio is if N fertilizer cost \$0.46 per lb. and corn is valued at \$3.00 per bushel, the ratio would be 0.46/3.00 = .15, your Nitrogen Goal or application rate for corn/soybean would be 100 lb. per acre minus you soil residual nitrogen.

By utilizing the recommended fertilizer application guidelines you are not only saving money but also protecting the environment.

**Table 1. Guidelines for use of nitrogen fertilizer for corn grown on soils considered to be highly productive.**

N Price/ Crop Value Ratio	Corn / Corn		Corn / Soybean	
	MRTN	acceptable range	MRTN	acceptable range
	-----lb. N/acre-----			
0.05	155	130 - 180	120	100 - 140
0.1	140	120 - 165	110	90 - 125
0.15	130	110 - 150	100	80 - 115
0.2	120	100 - 140	85	70 - 100

*MRTN = maximum return to nitrogen  
 University of Minnesota, Fertilizing Corn in Minnesota*

**No-Till Operators**

**Wanted** In Effort to protect Our precious Soils we are constantly trying to promote Cover Crops, Grassed Buffers, Waterways, and other Conservation Practices. In doing so the Pipestone SWCD has purchased a 10 foot Great Plains no-till drill for producers to utilize. If you are a no-till Operator and would like to be added to our list of Vendors, please contact our office.

Also, for producers interested in doing any no-till seeding in 2015, please be sure to let us know well in advance of when you are planning to seed. This will help us to schedule around rain events and other producers that are also wanting to use the drill.

**For more Information Call: 507-825-6765**

**Green Tips for Thanksgiving...**

- Carry Reusable Bags when you go shopping.
- Turn the Thermostat down at least 3 to 5 Degrees. If your holiday cooking doesn't warm up your house your guests will.
- Use real plates, utensils, and glasses as well as cloth napkins that can be washed and reused.
- Decorate with Nature. Consider using pinecones, evergreen branched, and hallowed out pumpkins as vases.
- Compost the scraps instead of tossing them in the garbage.
- Illuminate your home with candles in small glasses or carved sugar pumpkins.