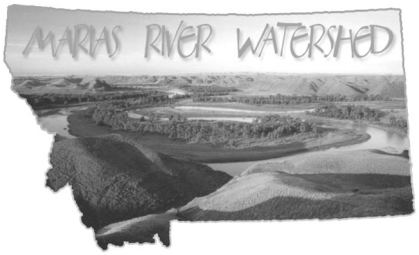
Volume 5, Issue 2

Quarterly Newsletter
Spring 2012




# Marias River Watershed

# NEWSLETTER

**Website**: www.mariasriver.com

Protecting and Improving The Land and Resources

## SALINE SOIL RECLAMATION

*By Jane Holzer, MSCA*

Montana Salinity Control Association (MSCA) is a strong advocate to not wasting time and money by only planting grain, alfalfa or grass in the salty areas – it is rarely very successful. It is better to spend money on seed, fertilizer, herbicide, fuel, equipment and technical assistance to solve the saline problem.

*Saline soil can be brought back into production through a change in land use management on the recharge area*

Saline soil can be brought back into production through a change in land use management on the recharge area creating the problem. The key is to address the land management and not focus on the symptom of the problem, or where the white salt crust occurs. MSCA has many success stories to support this approach.

First, find the location of the 'recharge area' or where the soil moisture is leaching below the rooting zone and building up the artificial water table. Next, plant perennial forage crops (hay and/or grazing or CRP forage) in the identified recharge area. Finally, over a period of years, the water table will be lowered so the salts are leached below the root zone in the saline seep by precipitation. The MSCA monitoring wells allow producers to measure the water table level trend over time. The trend is concrete data to show progress or improvement in the saline area. The formerly saline area can be brought back into production with a grass mixture or return to cereal grain.

There is no charge to have MSCA staff provide an Initial Review of the saline situation. At that point, MSCA will provide ideas for reclaiming individual saline areas and explain the technical assistance that is available. Natural Resources Conservation Service (NRCS) provides technical and financial assistance to implement saline reclamation plans. **You can contact MSCA in Conrad, MT (406) 278-3071** anytime to find out more information, or work through the local conservation district and NRCS to organize the Initial Review.

If you are interested in implementing a plan and want technical and financial assistance, options could include the Environmental Quality Incentive Program (EQIP) and Conservation Reserve Program (CRP). You need to be thinking into the future for any natural resource conservation practices. Pass on this information to neighbors that may not be aware of the MSCA opportunities.


With just three easy steps, you can do your part to help stop the spread of aquatic invasive species, like plants, mussels and whirling disease.

**The Board & Regional Chairs:**

Paul Kronebusch-Chairman

Barb Cole-CoChairman

Lawrence Bold

Roy Doore

Coo Coo Boggs

Ramsey Offerdal

John Rappold

**The next regular MRW Quarterly Meeting is scheduled for Tuesday April 10 at 1:00pm, Marias River Electric, Shelby**

**Conservation District Contacts:**

Pondera 406-278-7611 ext. 101

Glacier 406-873-5752 ext. 101

Liberty 406-759-5778 ext. 102

Toole 406-434-5234 ext. 113

Big Sandy 406-378-2298

Hill 406-265-6792 ext. 101

Chouteau 406-622-5627 ext. 101

*This newsletter was compiled and edited by Kody Farkell, PCCD Administrator*

# Effective Cover Cropping In The Midwest

*By Jane Holzer, MSCA*

It was my privilege to represent MT SWCS Chapter at the 'Effective Cover Cropping in the Midwest' conference in Decatur, Illinois December 7-8, 2011, along with Kate Norvell. It is not easy to get to Decatur; we flew in an 8-passenger plane from Chicago! The pilots load and unload the luggage. There are no taxis – but the van driver and ride to the conference center will not be soon forgotten either.

Midwest cover cropping to date is not widely adopted or very intensive. Producers tend to utilize single or two species as cover crops, if at all. Many fields are tilled in the fall and left uncovered over-winter. It was shocking to see the black, tilled fields from the airplane. The no-till corn and soybean rotation does NOT build up the O.M. in Illinois where there is deep, black soil. At best, the OM can remain static.

Midwest producers aerially apply seed from planes or broadcast with specialized equipment into standing, maturing corn and soybeans. They use annual ryegrass planted in the fall as their primary cover crop, maybe adding radishes. Wheat acreage is very limited due to the better income potential with the corn/soybean rotation and pushing that with continuous corn. They know it isn't sustainable – but they just can't beat the price. They will drill-seed cover crops following wheat harvest.

There would be major concern in MT with annual ryegrass in wheat rotations due to disease with a monoculture of cool-season grass crops. There needs to be at least a 14-day 'green bridge' between the dead wheat residue and when annual ryegrass (or wheat) is planted. Annual ryegrass could have a place where excess nitrogen is present from manure-applications and/or N-leaching. It is a N-scavenger, not a N-fixer. It might also work following sugar beets or potatoes to reduce erosion, but in a cocktail.

One of the best comments made by a speaker was "It's the Organic Matter – Stupid"! I thought that put everything into perspective – regardless of the climate or soil conditions. This speaker said every 1% OM is worth 1000 lb Nitrate in top 12 inches that will mineralize 2-4% annually. That would mean 3% OM could produce 60 lb/ac N/year – in the ballpark for MT crop-fallow conditions too.

Hans Kok with Indiana Conservation Cropping Systems Initiative used an Excel spreadsheet for a model to help determine what cover crops to choose and seeding dates and rates. This was developed as a Midwest Cover Crop Council Decision Tool. This concept would be wonderful if adapted to Montana conditions – perhaps something the MT Chapter could pursue.

A terminology I liked and will use is that cover crop cocktails are 'biological horsepower". Radishes DO NOT need to be huge to be effective; deep roots will still be established. Huge radish roots are for coffee shop talk! Wheat plants will grow deeper following cover crops, chasing the old root channels.

Challenges that can be addressed with cover crops:

1. Low fertility
2. Soil erosion
3. Weed competition
4. Pests
5. Slow water infiltration
6. Disease
7. Poor cash crop yields and quality

Gabe Brown, well-known for his success in Burleigh Co, ND with cover crop cocktails has the philosophy that these are not problems. They are symptoms of poor soil health. Agriculture production should imitate native range – meaning have diversity. Monocultures are not natural – big detriment to soil health. Track the soil OM levels over time – but use the starting point of native range OM.

With subsequent years of cover crops in the same fields, soil health improves so cover crops establish better each year. After first year cover crop, the subsequent cash crop will need same or more fertilizer but rate diminishes with each cover crop year. Montana needs to think about using cover crops in the same fields repeatedly in order to manifest the greatest soil health improvement. In other words, focus on the same field(s) over a period of time; ex. have a cover crop 3 out of 5 years in same field, rather than planting cover crop once across more fields.

Golden Triangle producers should experiment with seeding dates. While seeding cocktails in April-May appeared to be the logical approach for winter wheat country, later seeding dates seems to work best elsewhere in MT and other states. If we follow the approach of same field for repeated cover crops, then only that acreage would have the Risk Management insurance penalty for continuous crop status.