Summer 2018

FARM BILL BIOLOGIST PARTNERSHIP NEWSLETTER

Updates From the Field:

Soils and Sod

On Wednesday, June 6, 2018, the Meeker SWCD partnered with the Meeker County Pheasants Forever Chapter to host an educational field day on the effects of CRP cover on the soil. The research project that spearheaded the field day was conducted by University of Wisconsin River Falls Professor of Soil Science Holly Dolliver, and her undergraduate student Stella Pey. Stella, Holly, and several other students spent the summer of 2017 analyzing the soils at a farm south of Watkins, MN. They carefully selected four plots of similar Koronis (Mollic Hapludalfs) soil type, slope aspect and position on the landscape.

Stella Pey demonstrating the water infiltration rate test

The difference between the plots is that one plot has been under continuous crop for 80+ years, one plot has been under CRP cover for 5 years, one plot has been under CRP cover for 30 years, and one plot has never been disturbed as it is a fence line between two properties. At each plot the following tests were performed: water-infiltration rate, carbon-dioxide flux, bulk density, aggregate stability, total microbial biomass, and total organic carbon. The final published results won't be available for general release until later this summer, but the preliminary results show significant differences across the plots. Overall, CRP establishment had positive impacts on soil quality with some properties responding fairly quickly to conservation efforts and other responding more slowly.

Far Left – Undisturbed fence line – 24 inches of A horizon topsoil

2nd from left – 30 years of CRP – 14 inches of A horizon topsoil

3rd from left – 5 years of CRP – Nearly 10 inches of A horizon topsoil

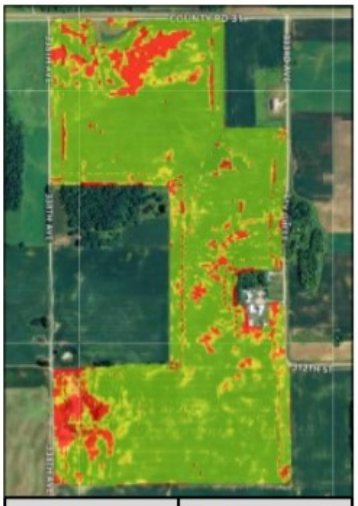
Far right – continuous row-crop – 8 inches of A horizon topsoil

* Photos and article courtesy of Josh Pommier, MN Senior FBB

Precision Planning: Managing Agronomics, Budgets, and Conservation

Corn/Soybean Rotation

Conventional Tillage



Parameter	Value
Average Yield	226.6
Profit/Ac	$110.51
ROI	17.70%
Field Profit	$24,277.10

Corn/Soybean Rotation

Cover Crops and No-Till

CRP

Parameter	Value
Average Yield	240.5
Profit/Ac	$137.74
ROI	26.60%
Field Profit	$30,257.10

Do you know where the profitability line lies on each acre of an operation? Pheasants Forever is working with farmers to identify unprofitable acres, examine their Return On Investment (ROI) and explore management scenarios while keeping an eye on the bottom line. Precision data, combined with customizable crop budgets, result in high resolution maps highlighting profit and ROI, break-even points of each acre, and expense reductions needed to be profitable. MN's Pheasants Forever Precision Ag Specialist is able to help farmers manage each field, acre by acre, as a business.

Everyone has those areas that seem to underperform more years than not. Maybe it's wet or sandy areas that just never produce no matter what inputs you throw at them. In the Midwest, 5% - 20% of all fields are consistently unprofitable. Whether those acres are highly erodible or consistently wet, revenue negative acres are often the most environmentally sensitive.

Precision Ag Specialists use precision machine data and crop budgets to determine business performance (including profitability and return on investment) at 10ft resolution within a field. The Profit Zone Manager application has scenario-development tools that allow users to develop the best precision business plan for each unique acre and farming operation.

What does Precision Ag Business Planning through Pheasants Forever Include?

- One-on-one consultation with local Pheasants Forever staff trained in Precision Ag Business Planning
- Unlimited whole enterprise data processing
- Specialists will review, acre by acre, field by field, your operation to evaluate yields, return on investment, profitability, and more to find you ways to increase your bottom line
- Alternative options for low profit areas, including budgets, to make informed and economical decisions

For more information regarding Precision Ag Planning, please contact:
Jennifer Hahn
651-485-7848
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Partner Profile - Ryan Galbreath—NRCS

Ryan Galbreath currently serves as the State Resources Conservationist for the Minnesota Natural Resources Conservation Service (NRCS). He grew up in central Wisconsin, and after graduating high school, enlisted in the Army. Ryan attended the University of Wisconsin Platteville where he earned a degrees in Soil and Crop Science and Ornamental Horticulture. He learned about NRCS in a soils class and discovered the opportunity for work study. Since that opportunity through NRCS he has never looked back. Ryan's career with NRCS started as a Student Intern and progressed through the ranks, serving as a Soil Conservationist, District Conservationist, Area Resource Conservationist and now the State Resource Conservationist.

"These positions have allowed me to see the different levels of management and administration of conservation. As a conservationist I have come to enjoy the way every day is different and the new challenges it brings" states Ryan.

He lives near the town of Elmwood WI with his wife Holly and their two sons Elliot (5) and Emmett (8 mos.). Together they enjoy gardening, outdoor activities, and country living.

"My career in conservation has been very rich with satisfaction and I look forward to many more rewarding years. It is always an honor to work with so many outstanding conservationists and various partners and I thank each and every one of them for all they do" - Ryan Galbreath, NRCS State Resource Conservationist.

Pheasants Forever and Quail Forever would like to thank you, Ryan, for everything you do for conservation in Minnesota and we look forward to many more years of working with you!

"A true conservationist is a man who knows that the world is not given by his fathers, but borrowed from his children."
- John James Audubon

NRCS staff at National Pheasant Fest and Quail Classic in Minneapolis 2/2017. Pictured from Left to Right: Shannon Carpenter, Julie MacSwain and Ryan Galbreath.

Plant Profile - Prairie Turnip

"The earth laughs in flowers."
- ***Ralph Waldo Emerson***

Prairie Turnip (*Pediomelum esculentum*) is a native perennial plant that belongs in the Fabaceae (Bean/Pea) Family. This plant is typically found in dry prairies, sometimes rocky soils. In Minnesota bloom time is generally in early summer, around May or June. Flower colors varies from light blue to purple.

Leaves are palmate, with each leaf containing 5 leaflets. Each leaflet is narrow and hairy, reaching up to 2" in length. The upper sides of the leaves are fairly smooth, with the underside covered with flattened hairs.

The stems are covered with long white hairs and the plants reaches heights of 12-16 inches. It is a fairly stalky plant that will send out several branches. Later in the season, the plant will break off from the ground, turning into a sort of tumble-weed, allowing it to disperse its seed throughout the prairie.

There are several other common names used for this plant including Indian Breadroot and Prairie Apple. As these common names might imply, the root of the plant is large and starchy and used by Native Americans as well as pioneers as a food source or for tea.

*Article and photos courtesy of Gemma Kleinschmidt, PF Senior FBB

"It is an incalculable added pleasure to any one's sum of happiness if he or she grows to know, even slightly and imperfectly, how to read and enjoy the wonder-book of nature."
- ***Theodore Roosevelt***

Farm Bill Biologist Quarterly Highlights: April 1st—June 30th 2018

Landowner Contacts	1,253 Contacts
Contracts (CRP, RIM, EQIP, Etc.)	59 Contracts
Impacted Acres (Contracts, Monitoring, Etc.)	40,926.08 Acres

"A land ethic, then, reflects the existence of an ecological conscience, and this in turn reflects a conviction of individual responsibility for the health of the land. Health is the capacity of the land for self-renewal. Conservation is our effort to understand and preserve this capacity."
- ***Aldo Leopold***

Contact a PF Biologist Near You:

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Jeff Potts - Blue Earth County - (507) 508-0615, jpotts@pheasantsforever.org

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Sara Reagan - Lac qui Parle County - (507) 829-0778, sreagan@pheasantsforever.org

Eric Ressel - Houston County - (262) 339-7586, eressel@pheasantsforever.org

Nick Smetana - Watonwan County - (608) 797-3375, nsmetana@pheasantsforever.org

Luke Thoma - Todd County - (320) 232-7079, lthoma@pheasantsforever.org

Pheasants Forever Farm Bill Biologist Jeff Potts working with a landowner on voluntary conservation practices.

About The Farm Bill Biologist (FBB) Position:

Pheasants Forever Farm Bill Biologists are staff who specialize in conservation programs and habitat planning. They work with landowners who are interested in voluntary conservation programs.

These positions are made possible due to the support of the following partners and the Farm Bill Assistance Partnership (FBAP) :

Minnesota Board of Water and Soil Resources (BWSR), Legislative-Citizen Commission on Minnesota Resources (LCCMR), Natural Resources Conservation Service (NRCS), Farm Service Agency (FSA), Minnesota Department of Natural Resources (MNDNR), Soil and Water Conservation Districts (SWCD), Environment Trust Fund and local Pheasants Forever Chapters.