

# Plant Chat

Summer 2016 Volume 16, Issue 3  
A Newsletter Published Quarterly by the Bismarck Plant Materials Center  
for NRCS Field Offices in North Dakota, South Dakota, and Minnesota

## Cover Crops at the PMC

In the past decade, cover crops have become a hot topic among producers and landowners who are concerned about current unsustainable farming practices. The consequences of heavy tillage in cropping rotations are visible across a large expanse of farmland in the North Central Region. There is ample evidence of soil erosion across the rolling countryside. There are also concerns with the health of these soils as water infiltration levels and organic matter continue to decrease over time.

Cover crops are becoming a significant tool to enhance soil health, reduce soil erosion, and improve water quality. As producers consider incorporating cover crops into their farming system, many have questions about species, varieties, and combinations of cover crops available to them.

To help answer those questions, USDA-NRCS Plant Materials Centers across the country are involved in studies to evaluate cover crops and enhance producer awareness and understanding of different cover crops and their role for improving the productivity and health of our soils.



**Seeding with the no-till plot drill near Rochester, Minnesota on June 7, 2016**



**Thirteen days after seeding cover crops into killed grass sod near Albert Lea, Minnesota**

The Bismarck Plant Materials Center (PMC) is currently involved in some of these studies and practices. The PMC is utilizing no-till practices in the seed production fields. In 2013, it began a multi-year national soil health study that includes continuous cropping with cover crop mixes seeded after a grain harvest each summer. Soil health and biomass production are being monitored. In 2014, the PMC seeded an assortment of different cover crop species in separate plots to evaluate establishment success, vigor, weed competition, growth habits, winter survival, and pollinating insect activity. This year the PMC is evaluating 32 varieties of 8 cover crop species as part of a national PMC trial.

In 2015, the PMC participated in off-center cover crop demonstration plantings at Bison, South Dakota and Rolla, North Dakota. The PMC provided and planted the seed in separate plots of individual species and mixes at each location. This year, the PMC received field office requests for 7 off-center demonstration cover crop plantings. The weather cooperated, and 6 locations were seeded during the first two weeks of June. Those planting sites are located at the following NRCS field office locations: Bison, South Dakota; Fessenden, North Dakota; and Albert Lea, Rochester, Long Prairie, and Fergus Falls, Minnesota. Field office and district staff assist with maintaining these plots and are evaluating and collecting data from them during this growing season. The information will be summarized and utilized to make local recommendations on cover crops. The field offices plan to offer educational field day events and/or self-guided tour opportunities for the public this summer. We would encourage interested producers and stakeholders to contact these offices for details.



**2016 cover crop variety adaptation study at the PMC**



**Warm-season mix in the 2015 cover crop demonstration planting near Rolla, North Dakota**



**2015 Field Day event at cover crop demonstration planting near Bison, South Dakota**



**Cowpea plot in the 2015 cover crop demonstration planting near Rolla, North Dakota**