



Southwest MN IPM STUFF

All the pestilence that's fit to print

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This newsletter and the advice herein are free. You usually get what you pay for.

Crop weather

Rainfall, air and soil temperatures, degree-days, soil moistures, and other current and historical weather data for the University of Minnesota Southwest Research and Outreach Center (SWROC), a little spot about two miles west of Lamberton, MN, can be found at <http://swroc.cfans.umn.edu/weather>. Other ROCs also keep up on crop weather and growing conditions.

It is spring and the shorter nights have prompted me to attempt another year of the IPM stuff newsletter. We hit the vernal (spring) equinox on Monday, March 20, 2017 at 5:29 am CDT give or take a few minutes. After the long, dark days of winter, the nights have now shortened to equal days and they will continue to shorten until June 21. Agriculturalists are aware how day length affects biological processes.

After a rough start, the winter has been relatively mild. More and more species of migrant birds are starting to show up and early spring plants have started to shoot new growth. The tulips in my yard survived the below zero temperatures March 14th to 17th, only to succumb to an overweight cottontail. At the University of Minnesota Southwest Research and Outreach Center (SWROC), winter wheat and rye and experimental winter barley varieties had greened up considerably and some retained green leaves all winter. Moist soils helped and, other than the barley, the grains all appeared to have survived the late-winter cold snap well. The persistence of green wheat leaf tissue means that some pathogens (rusts for example) may have survived the winter here. Perhaps, even a few bird cherry-oat aphid colonies were able to survive the winter nestled in the green crowns.

Alfalfa had also broke dormancy. Much of the re-growth was injured by frost, but I suspect in most cases, the crowns will be fine and have enough reserves to send out new shoots. We will need some time to see if any stand loss occurred.

Bt Corn

There is an updated version of the **Handy Bt Trait Table** available. The authors have made a change to the 2017 version, adding a column to reflect insect populations where resistance to Bt has developed. The most recent update and references for Bt resistance can be found at: <http://msuent.com/>.

This past fall and winter, some growers wondered: [should I reduce the Bt trait acreage in the 2017 corn crop to cut production costs?](#) This recent University of Minnesota Extension Crop News article provides some answers. There is not a single right or wrong answer...most of you guessed correctly. For those of you who do not get the Crop News Blog, I recommend subscribing. I try to make IPM Stuff complementary to Crop News and don't often forward other newsletters.

A look back

Huh...it looks like IPM Stuff has existed in one form or another for nearly 20 years. I started this job at Lamberton in April after the extremely nasty winter of 1996-97. Each one of those 20 years has been different with respect to growing conditions, pest problems, yields, and farm profitability.

A great many changes in MN agriculture have happened since 1997.

Tile drainage, improved crop genetics and crop protection technologies have combined to increase yields.

The size, complexity, and cost of farm machinery has increased and folks can do more faster. Heck, tractors are even driving themselves now! Advances in computer technology have led to increases in data uses for management decisions and created more than a few data analysis "rabbit holes".

We have had some new crop pests show up. Soybean aphids arrived in Minnesota in 2000 and have completely changed farmers' and ag professionals' attitudes on pest management in soybeans. The adoption of herbicide resistant and insect resistant (Bt) GMO crops started about the time as I started this Integrated Pest Management (IPM) position. In addition to the advantages produced by GMO traits and conventional host plant resistance, several effective new pesticides have been developed, labeled and adopted. Unfortunately, weeds, insects and crop diseases have adapted to our "management improvements" with resistance. Examples include weeds resistant to multiple herbicides and western corn rootworm resistant to multiple Bt proteins. Southern Minnesota sugarbeet growers recently saw how rapidly a fungicide resistant disease problem can develop. Resistant pests have increased the cost and complexity of pest management over the years.

After a recent period of high crop prices and farm profitability and we are back to a more typical environment where good management is needed for profitability. IPM concepts can help with that.

While my NCAA bracket choices indicate my predictive skills are pretty darn poor, I am still betting that the 2017 growing will have new and different challenges and successes than the previous 19 years.

Happy trails,

Bruce Potter
Extension IPM

University of Minnesota Southwest Research and Outreach Center
23669 130th Street
Lamberton, MN 56152
Phone: 507.752.5066
Cell: 507.276.1184
Fax: 507.752.5097
E-mail: bpotter@umn.edu
<http://swroc.cfans.umn.edu/ag-programs/pest-management>
Facebook: <https://www.facebook.com/swroc>
Twitter: <https://twitter.com/SWMNpest>

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