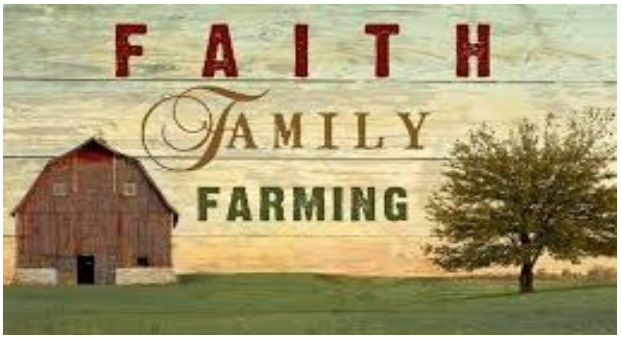
The Food and Agriculture Organization of the United Nations has declared 2014 the International Year of Family Farming.



Western New York CROP MANAGEMENT

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July 8, 2014

WHITE MOLD OF SOYBEANS AND FOLIAR FUNGICIDES

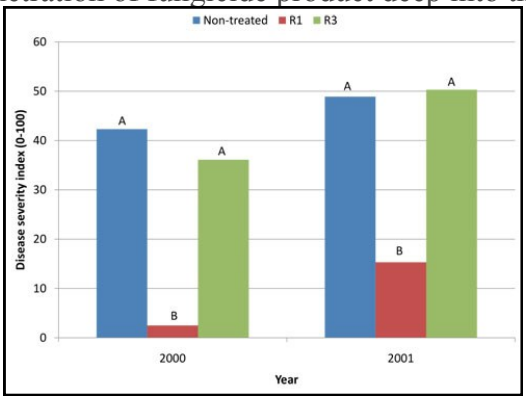
Now is the time to make a decision regarding white mold fungicide applications.

Posted on **June 27, 2013** by **Martin Chilvers**, Michigan State University Extension, Department of Plant, Soil and Microbial Sciences

With the wet conditions that we've been experiencing and the possibility of cool, wet conditions during soybean flowering, now is the time to consider if a fungicide application should be made. The last time we saw widespread white mold across the north central region was 2009, which was brought on by record cool temperatures across the region in July.

Before making that fungicide application, there are a few things to consider. Has there been a history of white mold in the field in question? How susceptible is the variety that I planted? Do I have high plant populations or narrow rows? All of these things can influence the amount of disease that develops.

Be realistic about the control that will be achieved with foliar fungicides – complete control is unrealistic. In various university spray trials, white mold was reduced from 0 to 60 percent. Once disease symptoms are present in a crop, it is too late to save infected plants. If fungicides are to be used they should be applied at the beginning of flowering (R1) with a possible follow up application a week or two later. Research shows that fungicide applications at beginning of flowering provide a higher level of control than those made at beginning of pod development. As the disease cycle is dependent on infection through flower petals, it is essential to get fungicide on to protect flowers. This includes correct timing as well as good penetration of fungicide product deep into the foliage.



The effect of thiophante methyl application timing on white mold disease incidence; adapted from Mueller et. al 2004

If the decision to spray is made, Michigan State University Extension advises keeping replicated non-sprayed check strips in the field to see how the fungicide application performed under your conditions. It is important to have replicated strips and to place them in areas that are representative of the field. This is important as low areas that hold moisture or where cool air pools will be at greater risk for developing disease than other areas of the field.

Foliar Fertilization for Soybeans

This article was authored by Ron Gelderman, former Professor & SDSU Extension Soils Specialist.

Soybeans

There has been much press and interest for foliar fertilization of soybean - especially for micronutrients based on plant analysis. In general, foliar fertilization has not proven effective unless there is severe deficiency of a particular nutrient.

Soybean requires large amounts of the macronutrients N, P, and K and smaller amounts of secondary and micronutrients to produce maximum yields. About 4.9 lbs of nitrogen (N), 1.1 lbs of P2O5, 2.4 lbs of K2O and 0.4 lbs of sulfur are contained in a bushel of soybean. On the other hand, micronutrients such as zinc, iron, manganese, copper and boron are taken up as a fraction of a pound on an acre basis. The amount that is actually needed is less than what is taken up in most cases but those levels are not well defined because micronutrient deficiencies in soybean are rare, especially in South Dakota with our relatively high fertility soils. Because of the large need, foliar application is usually not considered for macronutrients and are better applied as a soil application. In high soybean yield situations, there is some evidence that added in-season (about early pod) N (20-30 lbs/a) may be beneficial but the uptake of the applied N is mostly from the soil rather than foliar.

A review of foliar fertilization studies conducted by Iowa State revealed that only about 15% of the fields had a yield increase and the average yield response over all fields was less than 1 bu/a. There was not a good method to predict which fields would respond to the foliar application. Low soil testing fields gave a higher probability of response than high testing soils, but tissue analysis for P and K concentrations was not a reliable diagnostic tool.

In South Dakota, there has been foliar fertilization studies on 14 soybean sites, three corn and two small grain sites over the past 35 years. These studies had multiple treatments covering almost all the macro, secondary and micro nutrients. There was only one positive response and that was added foliar phosphorus (P) to very P deficient corn. There were four treatments that caused yield declines, either from leaf burn or other unknown causes.

There also has been much interest in adding manganese with glyphosate applications to soybean. Most of these positive responses took place in Indiana on high organic matter, high pH soils – soils on which we would anticipate a micronutrient deficiency but just not a problem in South Dakota.

The bottom line? Foliar nutrient applications seldom pay on soybean and are more likely to cause yield declines. In addition, plant analysis is not a good predictor of fertilizer response to added nutrients. Soil testing is a much better indicator of nutrient need. Unless a rescue operation is needed, most nutrient applications should be done prior to or at planting.

Ohio strengthens laws for Agricultural Producers

By Lori Whittington

Below is an article taken from the Mansfield News Journal, Mansfield Ohio (June 16, 2014, authored by T. Hill). I have often wondered while reading articles written about nearby states, how or when something like this will come our way. I have always felt it prudent to know what is going on beyond our state borders to compare NY challenges. I hope you find this informational, if not interesting.

MANSFIELD — North central Ohio's agricultural producers already must be licensed to apply pesticides on their fields. Soon they will have to be certified to put down fertilizers as well.

The extra requirement, signed into law earlier this month by Gov. John Kasich, comes in response to the habitual greening of several of Ohio's larger bodies of water. Lake Erie, Buckeye Lake and especially Grand Lake St. Marys, in western Ohio, have in recent years been beset with harmful algal blooms.

Agricultural runoff, particularly the phosphorus found in fertilizers, is considered a principal cause of the blooms.

"There are some issues with dissolved reactive phosphorus. In the 1970s and '80s, there were problems with particulate phosphorus becoming attached to the soil. With the advent of no-till, we saved a lot of erosion and particulate phosphorus didn't go with the runoff. But soluble phosphorus moves with the water, so there are new issues. That's why they're looking at it so intently," said Mike Hall, administrator of the Crawford County Soil and Water Conservation District.

"I've seen the soil-test levels, and they're not sky-high. I don't think it's a big problem in our county. You'll always have some bad actors out there, but for the most part, fertilizer is applied in a conscientious, environmentally safe way that stays within accepted agronomic practices."

Far less safe is Grand Lake St. Marys, once again filling up with cyanobacteria, which thrives on phosphorus and produces liver and nerve toxins dangerous to animals and people.

The city of Celina spends $450,000 every year now to fight the blue-green algae in the lake, according to the office of Sen. Rob Portman, R-Ohio. Toledo spent $3 million last year to keep Lake Erie's toxic algae out of its water supply. Earlier this month, warnings about toxic algae went up on Buckeye Lake for the fourth straight year.

A variety of agricultural organizations, beginning with the Ohio Farm Bureau, which worked with the Statehouse on the legislation, support the new law requiring fertilizer certification.

"The law will install accountability and responsibility for the farmer to properly apply fertilizer very similar to the pesticide law," said John Hildreth, administrator of the Richland County Soil and Water Conservation District.

"In order to be successful in today's crop production, the highest level of management has to be in place to ensure positive financial profit margins. The overuse of fertilizer will quickly plunge the farming operation into negative gain. Long gone are the days of simply applying fertilizer by the guess-and-by-golly method of application."

Local agricultural producers did not return requests for comment.

Ohio's new water-quality law, which will go into effect in 2017, is the first of its kind in the nation. It will require farmers growing crops on more than 50 acres to become certified to apply fertilizer, or hire someone who is.

"We feel it's a good, balanced bill. We worked with the bill's sponsors on policy when we realized this was coming. It has an educational component addressing the four R's of nutrient management," said Tony Seegers, director of state policy for the Ohio Farm Bureau, referring to the practice of "Right Rate, Right Time, Right Place and Right Form."

According to Hildreth, a lot of the area's farmers already are there.

"Many operators have GPS technology that allows for precision applications. This technology also can be used to apply only the fertilizer needed by interfacing with the soil tests. If one area needs more potash, the fertilizer unit can adjust for the soil requirement by using GPS programming," he said.

Seegers doesn't think the new law will have much practical impact on the way ag producers operate.

"Farmers will be able to get their pesticide license and fertilizer certification at the same time," he said.

Cont. on Page 4

"That may be possible. It will depend on how the rules are written in the end," said Jason Hartschuh, Crawford County agriculture and natural resources program coordinator for The Ohio State University Extension. "The law will be administered through the Ohio Department of Agriculture, but my understanding is OSU Extension will be involved in a lot of the training."

State organizations, such as the Ohio Environmental Council have noted that the law does not address issues with cold-weather manure application, which the group says it will continue to highlight.

"There's no law that says you can't apply it in the wintertime, although we don't recommend it. Liquid manure is a little more volatile, and you can lose the ammonia if it runs off quickly, but usually the manure gets tied up in the soil rather quickly," Hall said.

"There's not a law against it per se, but you are not allowed to apply it on frozen ground unless you have approval from the ODA," Seegers said.

Added Hartschuh, "There are a lot of different restrictions, depending on snow cover and how far you are from ditches, for instance."

All of the agriculture officials, while acknowledging farmers have a large role to play in reducing phosphorus runoff into Ohio's waterways, noted that they're not the only ones at fault.

"That's very true. There are lots of other sources, including nutrient sludges in the bottoms of lakes that cycle up naturally," Hartschuh said.

"The source of that phosphorus is what's debatable and arguable," Hall said. "Agriculture plays a role, to be sure, but is it all our fault? No. Storm runoff from cities and failing septic systems are part of it as well."

Seegers said he's hopeful the new water-quality law can make a difference, "but algal blooms didn't happen overnight," he said. "This is one component of what should be a comprehensive plan. There needs to be a holistic approach in Ohio to runoff, but unfortunately, some of these issues are outside state control."

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CAFO Update

By Lori Whittington

For those of you on the ECL (Environmental Conservation Law) Permit, please be advised your permit expired on June 30, 2014. A DRAFT Interim CAFO ECL permit GP-0-14-001 was issued 6/18/14 in its place. ECL permittees should print out a new copy of this permit and keep it in their CNMP (it is available on the DEC website, or by contacting your CAFO planner). Other than changes to dates and permit number, essentially very little has been altered in this interim permit.

The Interim Permit automatically renews the expiring general permit, GP-0-09-001, which went into effect on July 1, 2009, and was modified on July 29, 2013 (2013 Modified Permit). The Interim Permit would continue the provisions in the 2013 Modified Permit to allow DEC more time to discuss potential permit modifications with stakeholders and to wait for a court decision on the current lawsuit.

The compliance deadline for medium CAFOs to fully implement all structural practices was June 30, 2014. That deadline is not being extended in the Interim Permit. This does not apply to CAFOs permitted under the Clean Water Act CAFO Permit GP-04-02 that has been indefinitely extended. If you have any questions regarding your permit or these changes, please contact your CAFO Planner.

Improving Crop Production, Soil Health & the Environment –
See how they all work together
Soil Health Workshop – Donn Branton's Farm
Tues, Aug. 19, 2014 3:00 – 8:30 pm
6536 E. Main Rd/Rte. 5, Stafford NY 14143
(4 mi. east of Batavia; 2.5 mi. west of LeRoy)
DEC and CCA Credits will be available

Cost: Preregistration $5; Walk-ins $10

Preregistration, sponsors, special needs: Dennis.kirby@ny.nacdnet.net

or 585-589-5959

3:00 Registration, DEC & CCA sign-up, Equipment Exhibits, Sponsor Exhibits, Networking

3:50 Introductions and welcome!

4:00 Unlocking the Secrets in the Soil – *Frank Gibbs, Wetland & Soil Consulting Services, Rawson, Ohio,* Improve your bottom line by improving your soil health and reducing chemical inputs

4:45 Using Cover Crops in Tough Northern Climates – *Eric Kaiser, Kaiser Lake Farms, Napanee, Ontario, Canada,* Building soil health using cover crops and modified no-till north of Lake Ontario

5:15 Adapt-N for Fine-Tuning Nitrogen Applications on Corn – *David DeGolyer, WNY Crop Management,* Results of a study of Adapt-N use on local farms over the last 2 years

5:40 Cornell Soil Health Test – What It Can Tell You About Your Soils – *Carol MacNeil, Cornell Vegetable Program,* Assessing your soil's physical, biological and chemical health

6:00 DINNER – Pulled Pork and the Fixings

6:30 Farmer Panel on Building Soil Health -

Hugh Dudley, Hu-Lane Farm, Albion – Cash Crops & Vegetables

Casey Kunes, Hemdale Farms, Seneca Castle – Dairy & Vegetables

Ken Van Slyke, Portageville – Dairy & Compost sales

Donn Branton, Branton Farms, Stafford – Cash Crops & Vegetables

Robert Clement, Stafford – Landlord

7:30 Frank Gibbs in the Soil Pit – See what is happening below the soil surface

7:00 View Reduced Tillage and Cover Crop Seeding/Interseeding Equipment

8:30 Distribution of DEC Certificates, and Adjourn