

Crop Production

Get ready for spring manure application

By NATALIE RECTOR



WHAT can you do to improve manure management on your farm? It all depends on where you're currently at and how far you want to go.

The Michigan Agriculture Environmental Assurance Program has a system in place to help producers voluntarily move from Right to Farm compliance to developing a formal Comprehensive

Key Points

- Soil testing costs can often return tenfold in fertilizer savings.
- Manure applications can reduce the need for purchased phosphorus.
- Sample manure for nutrients during agitation.

Nutrient Management Plan to on-farm verification. No matter how far you want to progress, the beginning steps are all the same.

The basics to being on the right road include:

- keeping soil tests current
- establishing a base line of nutrients generated by manure sampling
- calculating the rate per acre of manure applications
- calculating N-P₂O₅-K₂O per acre
- adjusting fertilizer applications to account for the manure nutrients
- keeping records of manure applications
- applying manure to the root zone

and keeping it in the root zone until it can be recycled to crop production

Several hundred dollars spent on soil testing will often return tenfold on the savings in fertilizer or improvement in crop performance.

Prioritize fields

Soil tests and crop rotations should be used to direct manure applications. Lower testing fields should be prioritized for receiving manure applications. This will build up levels in lower testing fields and decrease phosphorus build-up in fields that are already high. Over time, this strategy will reduce the need for purchased phosphorus.

Manure nitrogen will be most profitable when applied ahead of corn or other crops that require high amounts of the nutrient.

The crop rotation should determine the manure application rates. One goal is to never oversupply nitrogen from manure beyond the need or removal value of the next crop.

Use a manure test to determine how many nutrients are in the manure and use this to determine the desired rate per acre. Depending on the soil P test, some rates of manure may need to be decreased to be in conformance with Right to Farm guidelines.

Sometimes the right agronomic rate is not the correct rate. Thin manure streams, such as milking-center wastewater, may be low in nutrients but watery enough that the rates should be determined based on soil water-holding capacity. This is important on tile-drained fields.

Estimating the rate of manure per acre can be done by several methods. It should be done for each manure storage system, type of manure and manure spreader. Calibration information can be found at www.rootzone.msu.edu.

Sample after agitation

Manure sampling is not an exact science, but the most representative samples are those taken during mixing and loading. Take samples after any agitation, taking several sub samples and combining them together for one representative sample.

If the consistency of manure varies, sample from the different types. (For example, dairy manure containing sand bedding may need to be sampled from the liquid top portion, the intermediate slurry stages and, finally, the sand solids from the bottom of the storage, keeping each fraction separate.) Send frozen samples to a laboratory.

Recordkeeping is more important than ever and is called for in the Right to Farm guidelines so you will be afforded nuisance protection. It is even more important for on-farm nutrient management.

Pre-sidedress nitrate soil tests are an additional assurance that sufficient, and not excessive, nitrogen is readily available to the future corn crop. These soil samples need to be taken within a week to 10 days of nitrogen sidedress applications and provide time to sidedress nitrogen fertilizer if the tests indicate more is needed.

Rector is a Michigan State University Extension nutrient/manure management agent.

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A strong, healthy plant can often mean the difference between a great harvest and a bad year. Disease pressure, extreme heat and drought can all contribute to a poor crop. Although growers cannot control the weather, they can focus on management techniques that lead to better Plant Health™.

Disease control is the foundation of **Plant Health**. Managing for **Plant Health** is about optimizing the condition of the crop during its life cycle – allowing it to reach its maximum yield and quality potential. That's because foliar diseases can weaken plants, sapping their energy and resulting in poor growth and greater susceptibility to environmental stresses. Under these stresses, the bottom line is reduced yields.

However, growers are better able to increase **Plant Health** by making a planned application of **Headline**® fungicide to control foliar diseases. By using **Headline**, growers are seeing plant growth and stress tolerance advantages such as better standability, stronger stalks, more pods, better pod fill, bigger ears and increased yields. Growers invest a lot in their crop each year and should protect that investment with a planned application of **Headline**.

"To me, **Plant Health** means more bushels per acre – our beans yielded more," said Alan Grossman, who grows 1,800 acres of soybeans and 1,000 acres of corn in Corydon, Kentucky. According to Grossman, he averages about 5 bushels of beans more per acre. "Where **Headline** was used, the plants stayed greener longer. Some of our beans were on what we call 'thirsty' ground. I think **Headline** helped those plants to handle the stress better."

Superior disease control for better **Plant Health** offers the benefit of maximizing the yield and quality potential of soybeans and corn. **Headline** field trials conducted since 2002 show increased yields under a range of growing conditions. This was particularly true in regions where heat stress and drought were problematic. The advantages of **Headline** help crops handle heat stress and drought better so crops have enough strength to take advantage of favorable late-season growing conditions.

Indiana grower Dan DeSutter applied **Headline** to boost **Plant Health** in 2006. Not only did **Headline** improve **Plant Health** in his corn and soybeans, but it also improved his bottom line.



Dan DeSutter of Attica, Indiana, trusts **Headline** for disease control and to improve **Plant Health** in his corn and soybeans.

"Several of the corn hybrids we planted this year responded dramatically to the **Headline** application. We saw a yield advantage close to 30 bushels per acre better with **Headline**," said DeSutter, who applied **Headline** to 500 acres of corn, as well as to soybeans.

He credits healthier plants that withstood some of the stress conditions in the field during 2006 with the yield result. "We saw better **Plant Health** and plants staying intact through stressful conditions."

Phil Shonk, with AgriGold Hybrids, saw similar results with his customers in West Central Indiana.

"The corn treated with **Headline** is visually obvious, right to the row, compared to the untreated area of the field," Shonk said. "**Plant Health** benefits yield by keeping the plant alive longer, giving the ears time to fill out and boosting standability. It all adds up to higher yields and profits."

In 2006, in more than 1,000 on-farm corn trials and 750 on-farm soybean trials, **Headline** produced consistently higher yields and positive returns on investment. The average yield advantage of **Headline** treated corn ranged from 12 to 15 bu/A, while **Headline** treated soybean trials showed a 4 to 8 bu/A advantage.

For more information on how you can help maximize your yield with a planned application of **Headline** fungicide, talk to your BASF retailer or visit www.agproducts.basf.com

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