

AGRI-BUSINESS STEWARDSHIP NEWSLETTER

*Brought to you by the Michigan Agri-Business Association
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The objective of this document is to provide you with current and helpful information regarding water protection, and the Michigan Agriculture Environmental Assurance Program (MAEAP).

Developing a comprehensive nutrient management plan optimizes nutrient use, protects environment

For crop advisors and growers, the period of time following harvest and before planting is spent analyzing information for the last growing season and using that information to make better decisions for the upcoming season. Nutrient management planning is one of the most important planning process undertaken during this time, and is one of the most valuable when it comes to protecting the air, land and water.

Nutrient management planning begins with an accurate assessment of soil fertility levels. Today, intensive soil sampling programs such as grid or zone approaches allow for a detailed evaluation of nutrient levels across the field. Soil sample data can then be combined with site characteristics such as soil type, past field history including yield maps, and future productivity zones to estimate yield potential. This use of previously collected data and forward projection provides a detailed assessment of nutrient needs – giving farmers and crop advisors a high resolution, comprehensive look at every part of a field.

Using the data compiled during soil sampling, prescription fertilizer application plans can be developed that manage crop nutrient accurately and precisely. Variable rate application technologies can specifically apply the recommended fertilizer rates across the field, limiting potential nutrient losses by avoiding over application in areas with already sufficient nutrient levels. With today's technology – both in terms of more accurate soil sampling and more accurate application and equipment steering – every part of a field can be treated with precise amounts of nutrients to maximize benefits, and protect the environment.

In addition, with complete, predeveloped nutrient management plans in use across the farm, the timing of applications can be improved and optimized. For example, application can more easily be coordinated in response to spring weather events. The high intensity rainfall events that are increasingly common today serve as a potential transport mechanism for surface applied, non-incorporated fertilizers. By using weather forecasts and considering the nutrient loss potential for fields, applications can be easily routed to low impact areas – once again, in combination with data gathered as farmers and advisors plan the season ahead.

Through the development of complete nutrient management plans for a farm, sources of nutrient losses can be limited while avoiding possible water transport of nutrients into waterbodies.



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