

ENVIRONMENTAL MANAGEMENT NEWSLETTER

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TOP FIVE MISSING ITEMS FROM SUBMITTED NUTRIENT MANAGEMENT STRATEGIES

By: Maja Hurd, Environmental Specialist

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Listed below are the top five most common items that are missing from submitted nutrient management strategies when the Approvals, Certification and Licensing Unit receives them. This article is in response to questions posed at the Consultant meetings in February.

Overview of the operation:

This component of the strategy is vital to the reviewer since the reviewer does not have the opportunity to actually see how the operation functions. Make sure to include all the details about the operation, especially if they are unique to that particular operation.

Municipal tax roll numbers issues:

To speed up the approval process, ensure you have the correct roll number by going right to the local municipality or ask the operator for the tax bill. These sources will give you the most accurate information pertaining to all of the concession and lot numbers associated with the roll number. Be aware that some municipalities drop the first four digits of the roll numbers when printing their tax bills. If using NMAN 2, the software will suggest the first 4 digits based on the municipal information entered for the property. It will also check to make sure that all of the necessary 15 or 19 digits have been entered.

Farmstead sketches:

The farmstead sketch is hard to decipher or missing from the submission. When the sketches are incomplete, it is commonly the information about existing features that is missing, especially the dimensions of existing buildings and existing nutrient storages. The dimensions on the sketches must match those used in NMAN. It's important to ensure that the sketches are clear and decipherable. Whether you choose GIS software or to draw it by hand, clarity and readability is key.

Locations and distances in farmstead sketches:

Information regarding sensitive features such as surface water and tile inlets is missing in the submissions for approval. Most of the time, it's a case where there isn't any surface water or tile inlets present. You need to make sure that there is a note on the sketch regarding the absence of surface water or tile inlets.

Engineer's Commitment Certificate:

We frequently find that the engineer's commitment certificate (ECC) is missing from the submissions for approval which delays the approval process. To avoid significant delay, remember to include the ECC when submitting the strategy for approval. If there is a question regarding whether an ECC is required, feel free to contact either the local Environmental Specialist or the Approvals unit for guidance in your particular situation.

FOLLOW-UP FROM THE CONSULTANT MEETINGS- YOUR 'NEED TO KNOW' SUMMARY

By: Len Senyshyn, Manager—Approvals , Certification & Licensing
Vicki Lass, Training Coordinator

Thanks to everyone who volunteered to organize the meetings, and to those who attended. Each session had lively discussions and a variety of questions posted to the 'parking lot'. Based on your comments during the communication session, we will provide answers to your questions and a recap of the key information from the sessions in the upcoming newsletters. Our first summary is from the Approvals unit.

The recertification process for agricultural operation strategy or plan development certificates:

The Agricultural Operation Strategy or Plan Development Certificates are coming up for renewal. It is your responsibility to check the expiry date on your certificate. We recommend beginning the recertification process one year in advance of your certificate expiring. If you have questions or would like a study guide to get started please call us at 1-866-242-4460.

NMS renewal and registration—what do I need to know after five years?

If a farmer has a nutrient management strategy that was approved five years ago and there hasn't been any construction or transfers (of any part of the operation) during that time, you need to do two things to keep the farm in compliance.

1. Have a person certified under the regulation prepare a new strategy to reflect the operation as it is now.
2. Register the operation with OMAFRA.

If there haven't been any changes to the operation, a new strategy will be easy to prepare. All you need to do is review the original strategy and confirm that it is still in compliance. If there have been changes (for example: livestock changes and/or their management), you will need to adjust the strategy accordingly. Another reason for adjustment could be that in the past five years, it has become clear that some aspects of the strategy are not working as well as you thought. If the farmer has been diligent in doing their annual updates, preparing a new strategy should not be a difficult task.

The new strategy should be prepared at least 90 days before the five-year anniversary of the date the current strategy has been signed. The new strategy will expire five years after the date it was prepared.

To register the operation with OMAFRA, you need to complete the registration form on the OMAFRA website.

The next release of NMAN will allow you to print this form directly from NMAN. Otherwise you can attach the NMAN printout to the form rather than re-enter information. **But be careful, there are some sign-offs on the registration form that are not on the NMAN printout. Make sure that you have provided all of the required information and signed the form.**

Changes in dealing with liquid stored in solid storages for submitted strategies

In the past, we have allowed clients to manage runoff by stating that the storage will be designed to hold all runoff. Similarly, we have allowed milkhouse washwater to be added to solid manure. While the theory was good, in practice, it did not work. In many cases, the liquids and solids separate and need to be handled separately. We have also found that in some cases the storage has not been designed properly to hold the liquid.

In future reviews, if liquid prescribed materials are to be stored in a structure, we will consider this structure to be a permanent liquid nutrient storage. Consequently, it will have to meet all of the requirements of this type of structure.

Stale NMS: We want to hear from you about that application for approval

We have found that a number of strategies have gone stale. We have sent out the request for additional information (RAI), but have not received any response for several months. After such a long period, we are concerned with the currency of information contained in the original submission. In order to keep our files up-to-date and bring resolution to some of these matters, if we have not heard about an application in about six months, we will begin the process of refusing approval. We will ask for more recent information to be submitted. The reviewer of the submission will contact the strategy preparer and/or the applicant to confirm that nothing has been sent. Be advised, if OMAFRA has not received current information or if the review does not proceed at a more rapid rate, the Director will refuse the submission.

MANURE TESTING - WHAT IS MY MANURE REALLY WORTH?

By: Matt Wilson, Environmental Specialist &
Christine Brown, Nutrient Management Field Crops Lead

The significant rise in commercial fertilizer prices over the past few years has livestock producers looking at manure differently. While it is generally acknowledged that manure yields some nutrients for crop growth and organic matter for soil conditioning, farmers are starting to ask “what is my manure really worth”?

Is there really enough nutrients in the manure to replace fertilizer? The nutrient and dry matter content of manure will depend on a number of variables, including:

- livestock type
- livestock genetics
- feed ingredients
- type of bedding
- amount of washwater added
- where in the storage the manure is stored (top, bottom, middle).

By knowing exactly how much nutrients are supplied by the manure, you can accurately reduce the amount of fertilizer needed to meet crop requirements. A manure sample showing the total nitrogen, ammonium-nitrogen, phosphorus, potassium and dry matter content will give you the values you need to reduce your fertilizer amount and save you money. Manure sampling over several years is recommended in order to help create a database of the nutrients generated on your farm.

What is the cost for a manure sample?

A basic manure sample will cost around \$35. The sample will give the nutrient values for:

- total nitrogen
- ammonium-nitrogen
- phosphorus
- potassium
- dry matter content.

What is the value of the nutrients in the manure?

While the nutrient content of manure does depend on a number of variables and the annual price of fertilizer does fluctuate, the table below shows the potential for savings. The table uses average nutrient contents for livestock manure and 2009 projected fertilizer prices.

Manure Type	Available N	Available P	Potassium	Total Nutrient Value*
Solid beef 30% DM	3.5 lbs/ton	3.9 lbs/ton	12.1 lbs/ton	\$15.87/ton
Liquid Dairy	16.5 lbs/1000gal	7.4 lbs/1000gal	26 lbs/1000gal	\$40.61/1000gal
Liquid Hog	37.75 lbs/1000gal	14 lbs/1000gal	37 lbs/1000gal	\$73.42/1000gal

*Based on : Urea @ \$850/mt = \$0.84/lb, 11-52-0 MAP @ 1200/mt = \$1.05/lb, Potash @ \$1000/mt= \$0.73/lb

The table clearly shows the significant value of the nutrients found in manure. When you compare the nutrient values in the manure with the \$35 cost to do the sampling, it is clear that sampling is a good investment of time and money. By investing \$35 in a manure sample, you are gaining the knowledge and confidence to reduce or eliminate the supplemental fertilizer you would need to spread on your land.

Are there more opportunities to save money?

Combining manure tests with regular soil sampling is an even better investment as fields with low nutrient levels can be targeted to receive more manure and fields with high nutrient levels can receive reduced amounts of manure.

The more information you use to make application decisions, the greater confidence you will have that your crops are receiving the right amount of nutrients and that you are saving money by not applying excess nutrients.

MANURE TESTING - IS IT REALLY WORTH THE MESS?

By: Matt Wilson, Environmental Specialist & Christine Brown, Nutrient Management Field Crop Lead

What are the manure sampling requirements under the Nutrient Management Regulations?

Section 91(3) states that a farm requiring a nutrient management plan has the option to have its manure tested by an accredited lab or can use the default values found in the nutrient management protocol. The default values in the protocol are the same values used in the NMAN software database. Although a producer is never required to take a manure sample in the preparation of a nutrient management plan; it is clear from the chart in the previous article *Manure Testing - What is my manure really worth?* that there is significant economic value in manure. Knowing the exact nutrient values of a farm's manure allows for a more accurate nutrient management plan, and ultimately saves you money.

How do I take a manure sample?

For liquid manure, follow these steps:

1. Agitate manure storage thoroughly.
2. Collect random sub-samples of manure from various depths in the storage.
3. The sampling should take place while the storage is being emptied (i.e. every 10 loads or every 30-60 minutes from a drag hose pump).
4. Use a clean plastic pail to collect samples.
5. Mix 10-20 sub-samples thoroughly in a larger pail and transfer a small sample to a plastic jar (supplied by laboratory). Fill jar only half-full to allow room for gas build-up. Store in a cool place until sending the sample to the lab.
6. Consider taking another sample when applying to a different field to document the analysis for each field.
7. When results from the manure analysis are received, keep records and adjust any additional nutrient applications to the field.

To take a solid manure sample, follow these steps:

Solid manure is more difficult to sample because there is no agitation process, resulting in variations within solid storages. For this reason, it is recommended that samples be separated by the field the manure is applied to rather than by storage.

1. Samples of solid manure can be taken from the spreaders during application or from the top, middle and bottom of the storage.
2. On clean concrete or a plywood surface, take sub-samples (a forkful) of manure from several different loads throughout the application or from the different areas of storage.
3. Chop and mix the sub-samples together using a fork or shovel.
4. Divide the larger sample into four equal parts and discard three.
5. Continue to mix and subdivide until you have a sample that will fit into a plastic bag or sample jar.
6. Place sample jar into a plastic bag and ship to lab as per liquid sample.
7. Repeat sampling procedure if a portion of the manure will be applied to a different field or if the dry matter content is significantly different (dry vs "soupy"). Each storage system (or areas within the same storage with different dry matter contents) should have its own sample taken to reflect dry matter and specific nutrient content.

Manure samples should be stored in a cool place until they are shipped to a laboratory. Shipping a sample so that it arrives at the laboratory on a week day is recommended to ensure immediate processing. Sending samples through the post office is not recommended.

Knowing the analysis of manure from an operation and adjusting fertilizer rates accordingly can pay big dividends. Keeping track of the analysis over a series of years will help develop an average of the nutrients generated on the farm. Having up-to-date soil samples for the fields manure is applied to, is another key piece of the manure puzzle. With these tools, the manure application rates can be accurately determined and the maximum value of the manure can be realized.

NEW RESOURCES AND UPCOMING EVENTS

New nutrient management course calendar is now posted online.

You can access them here at <http://www.omafra.gov.on.ca/english/nm/cert/courses.htm>.

New Resources now available online:

Barn Fires: An increasing problem for Ontario farmers

Over the past five years, barn fires and fires in large farm structures have become an increasing concern. The evolution towards large-scale farm operations has further heightened the need to address the problem of barn fires and fires in large farm structures. In response, OMAFRA formed a Technical Advisory Committee on Farm Fires to address the fire safety risks to farm workers and emergency responders. The purpose of the committee is to reduce the potential for life and/or property loss by identifying best practices in the industry and potential changes to regulations.

Visit www.omafra.gov.on.ca/english/engineer/facts/barn_fire to learn more.

On-farm biodiesel production: looking at all the options to help you decide if it's right for you.

With the rising cost of petroleum-based diesel and heating fuel, there is a growing interest in determining if on-farm biodiesel production could be a feasible and economic farm-grown replacement for this farm input. This document provides background information on biodiesel and outlines many factors to consider when determining whether producing biodiesel on-farm for farm use would be a practical and economic option for your situation. Recommendations for further reading and study are also provided to assist you in evaluating the safety and fuel quality aspects of small-scale biodiesel production.

Visit <http://www.omafra.gov.on.ca/english/engineer/facts/biodiesel.htm> to learn more.

New Biogas Blog:

Communicating information and news can be a challenge. And the way people get information is evolving with the help of the internet. Blogs are useful for sharing your own info, but also for collecting and sharing other people's too. The Ministry started a biogas blog to bring our existing and new information to our biogas community. This is a pilot to learn how popular a blog is for our stakeholders to get news and industry developments and how we can improve our communications. The biogas blog will post information roughly weekly. Join us at <http://gobiogas.blogspot.com>.

Upcoming Events:

- Green Living Show—April 24 –26, 2009

WE WANT TO HEAR FROM YOU!

Do you have questions? Need more information? Have a comment about what you'd like to see in the next issue? Please contact your area Environmental Specialist at:

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