Manitoba
Conservation

Detailed Instructions for Completing Manure Storage and Handling Plans & Schedules of the Manure Management Plan Form

Whenever a check box appears, mark the appropriate box(es) with ☒ to indicate choice.

If you require technical assistance, please contact your local Manitoba Agriculture, Food and Rural Initiatives (MAFRI) Office or contact Manitoba Conservation.

Deadlines for filing your operation's Manure Management Plan (MMP)

- MMPs must be submitted by July 10 for fertilization programs beginning in the fall or by February 10 for fertilization programs beginning in the spring. Plans submitted after these July or February deadlines will be subject to a $100 plus GST administration fee. Submit completed and signed MMPs, together with all the required analysis report(s) to the:

  Livestock Section, Environmental Services
  Manitoba Conservation
  1007 Century Street, Winnipeg, MB.
  R3JH 0W4
  Phone: 204-945-3078
  Fax: 204-948-2420

Section A – Operation Information:

- **G.P.S.** Provide G.P.S. in decimal degrees (optional)
- **Corporate file #** All registered corporations have a corporate file number. Please provide if available.
- **Affiliate** If the operation is affiliated with a larger corporation, list the larger corporation here.
- **Manure management plan required to comply with a Director's Order or an Environment Officer Order** If the operation was ordered to file a plan by Manitoba Conservation as a condition of the Order, indicate and insert Order Number.
- Those ordered to file by director's order or Environment Officer's Order must submit Schedule A.

Section B - Animal Unit (A.U.) Inventory:

- Use the worksheet in Schedule A to determine your A.U.'s.
  - Determine the category in which your livestock operation fits.
  - Calculate and indicate the A.U.'s for each type of livestock in your operation.
  - If you are unsure as to which category your livestock operation fits into, contact your local MAFRI office or any Manitoba Conservation office.
  - Do not double count animals.
- Only include the A.U.'s of the species that combines to a total of 300 A.U. or greater.

Section C – Manure Storage Systems Information:

- Indicate all types of livestock manure that is stored and the location(s) of all storage facilities along with the anticipated storage duration. This includes central and temporary field storage locations.

Section D – Manure Information for Land Application:

- At the top of Section D, fill in the total A.U.'s from that animal type in the box provided.
- Ensure one page is submitted for each type of livestock manure in your operation with 300 or more A.U.'s.
- For the manure analysis section:
    - Ensure manure nitrogen ("N_{total}") content is filled out on this form.
    - If manure has been sampled, attach a copy of the lab analysis report.
    - Indicate the total nitrogen, total phosphorus, NH_4 and % solids if available.
    - If manure nitrogen content is being estimated, please use a reliable source of information and indicate this source on the plan.
- If you require assistance arriving at this estimate, please contact your local MAFRI office or any Manitoba Conservation office.
- If the manure is being sampled in the field by a custom applicator, please indicate this along with the method used by the applicator.

Section E - Field Application Summary:

- Ensure one page is submitted for each type of livestock operation with 300 A.U.'s or greater.
- Ensure one page is submitted for each type of manure (e.g. one page for solids, one page for liquids).
- If no manure is to be spread in this plan year, indicate this by checking the appropriate box.

Crop Year

- This is the year in which the nutrients will be taken up by the crop. Manure is to be used like a fertilizer. For example, a fall application in 2008 (after August 15) on a field used for a cereal will be used as a fertilizer in the 2009 growing season. Therefore the crop year would be 2009.

Legal Land Description

- Indicate the legal location as ¼ Section, Township, Range, or River Lot(s) and Parish **(**e.g. SW 30-14-3W or RL 110-115 Baie St. Paul).

Field Size Column

- Indicate only the field acreage on which manure will be applied, considering recommended setbacks and excluding land that may not be suitable for application (e.g. low areas, brush, sink holes, etc.).

Land: Own, Lease, or Agreement Column

- For each field listed, indicate if your operation owns, or leases the property or has an agreement to spread manure. Use letters O, L, or A, respectively.

Soil Class and Subclass Column

- This refers to the soil class as described under the heading "Soil Capability Classification for Agriculture" in *The Canada Land Inventory* Report no. 2, published in 1972 by the Government of Canada, Department of the Environment.
- Both Class (1-7) and subclass (limiting factor(s)) must be included for the plan to be registered.
- This information is available from your local MAFRI office, and may also be available on their website at http://geoapp2.gov.mb.ca/website/MAFRI/index3.html

- For those with GIS mapping software, the information is available through the Manitoba Land Initiative at http://mli.gov.mb.ca.

Target Yield Column

- Indicate an anticipated target yield for the crop year that is reasonable on that site.
- Contact your local MAFRI office or refer to Manitoba Agricultural Services Corporation data should you have difficulty in estimating this target yield.

Soil Nitrate Nitrogen Column

- This information can be obtained from the soil analysis report.
- Ensure proper soil testing procedures as indicated on the attached sheet have been followed.
- Ensure you attach a copy of the soil analysis report(s) to this plan. Alternatively, you may submit the soil test prior to manure application. It is recommended to send it in at least 14 days prior to manure application to ensure that Manitoba Conservation staff has time to review the information.

Soil Phosphorus Column

- This information can be obtained from the soil analysis report. The soil phosphorus analysis must be done via the Olsen method.
- Ensure proper soil testing procedures as indicated on the attached sheet have been followed.
- Ensure you attach a copy of the soil analysis report(s) to this plan. It is recommended to send it in at least 14 days prior to manure application to ensure that Manitoba Conservation staff has time to review the information.

Laboratories Acceptable to the Director

- As of June 1, 2009, the following laboratories (listed in alphabetical order with a link to their Internet web page) are approved for use in analyzing soil for both nitrate-nitrogen and phosphorus levels:

A & L Canada Laboratories Ltd.	(1-519-457-2575 in London, ON.)
ALS Laboratory Group	(1-800-668 9878 in Winnipeg, MB.)
Agvise Laboratories	(1-701-587-6010 in Northwood, ND. and 1-320-843-4109 in Benson, MN.)
Bodycote Testing Group	(1-780-438-5522 in Edmonton, AB.)
Cantest Ltd.	(1-204-772-7276 in Winnipeg, MB.)
Midwest Laboratories Canada	(1-877-245-8378 in Calgary, AB.)

- Note that Western Ag Laboratories (Location: Saskatoon, SK.) can conduct the soil nitrate-nitrogen analysis, it does not analyse for soil phosphorus by the Olsen method.
- This list is subject to change pending a comprehensive review of methods and reporting format(s).
- Consultants or other laboratories may subcontract to these laboratories. Manure Management Planners are advised to check Manitoba Conservation's Internet website at http://www.gov.mb.ca/conservation/envprograms/livestock/index.html for current listings.

Crop Nitrogen Recommendation Column

- This information can be obtained from the MAFRI Soil Fertility Guide, available from your local MAFRI office or from another acceptable source. In the event one is provided with your soil test report, use the lower of the two values.

Manure Application Rate Column

- Report your intended application rate in gallons per acre (or tons per acre). Your local MAFRI office or a Professional Agrologist can also be of assistance for this step.

Application Method Column

- Choose one of the following and put the corresponding letter on the form:
  A. Broadcast and incorporate after 2 days,
  B. Broadcast + Incorporate after 3 days.
  C. Broadcast and incorporate within 2 days.
  D. Broadcast and no incorporation.
  E. Broadcast and no incorporation on forages.
  F. Injection.
  G. Irrigation and incorporation within 3 days.
  H. Irrigation and no incorporation. NB: Aerway or similar is considered broadcast +Incorporate for purpose of plan.

Additional Nitrogen Fertilizer Column

- If applicable, please indicate the amount of commercial fertilizer that will be applied in addition to the manure.
- Note that fertilizer and manure applications must not result in soil nitrate in excess of the regulated limits.

Additional Phosphate Fertilizer Column

- If applicable, please indicate the amount of commercial fertilizer that will be applied in addition to the manure.

Manure Applicator

- Please enter the applicator name and phone number and if applicable, his/her licence number. Due to recent changes to *The Pesticides and Fertilizers Control Act* regarding the *Manure Regulation*, Commercial Manure Applicators and Off-Farm Manure Applicators are required to hold a valid MAFRI applicator licence.

Section F - Certification:

- Plans must be certified by the operator on Page 5 of the MMP form. If the plan is prepared for the operator, it must be certified by person certified to prepare plans on behalf of the operation. Incorrect/incomplete information voids this MMP.

Traditional Composite Soil Sampling Procedure

Other acceptable soil sampling procedures include the "Benchmark" soil sampling procedure, the "Grid" soil sampling procedure and the "Landscape Directed" soil sampling procedure. Additional information on these procedures can be obtained from your local Manitoba Agriculture Food and Rural Initiatives office. **Note that soil samples for manure management plans must be to the 60 cm (2 ft) depth for nitrate-N analysis and to the 15 cm (six inch) depth for soil P analysis via the Olsen (sodium bicarbonate) method.** The Soil Fertility Guide produced by Manitoba Agriculture, Food and Rural Initiatives is officially recognized by Manitoba Conservation for fertility recommendations. Whereas, recommendations from laboratories or input dealers should only be used when application rates are lower than in this guide.

Reliable results can only be made if the samples are fully representative of the field or area from which they are taken. In addition, proper sampling and sample handling procedures must be followed.

Selecting Areas to Sample

Soil sampling is normally done on an individual field basis with a single composite sample representing the whole field. Individual fields that are not uniform should be divided into smaller sampling units with a single composite sample representing each unit. The soil in each of these sampling units should have the same colour, texture, cropping history and fertilizer or manure treatments. Look for differences in slope, erosion, crop growth and yield. Any area that is different in these features and which is large enough to have manure applied at a different rate should be sampled separately. Problem areas such as saline spots, poorly drained potholes, and eroded knolls should not be sampled unless they represent a significant portion of the field. If they do, obtain separate samples. All abnormal areas such as old manure piles, burn piles, haystacks, corrals, fence rows or farmstead sites should also be avoided as well as locations of past chemical or fertilizer spills. Samples should not be taken along headlands, within 15 metres (50 ft) of field borders or shelterbelts or within 45 metres (150 ft) of built up roads. If the field has been cultivated, take the sample from the compacted soil in the wheel track.

Sample one location per 2 hectares (5 acres) to a depth of 60 cm (2 ft). In all cases, however, a minimum of 15 sample locations per individual field or sampling unit should be taken. A single composite sample is then formed from 15 or more samples.

Equipment and Supplies

Special augers or probes designed for soil sampling must be used. These may be hand or hydraulic powered and are often available from fertilizer dealers. Independent firms may also be available to custom sample fields. Use two clean, labeled plastic pails for collecting samples. Information sheets, sample containers and shipping boxes are available from the lab conducting the analysis.

Note that all mechanical and hydraulic samplers may yield poor samples on very dry or very wet soils. In all cases avoid getting the topsoil in the subsoil samples, or subsoil in the topsoil samples. For example, in very dry soils, be careful not to let topsoil spill into the hole before taking deeper samples.

Handling Samples

Take care to keep samples clean and uncontaminated. Clean the probe, take a few samples from the new field and discard them before proceeding with actual sampling. Send samples to the laboratory immediately. If this is not possible or if a delay of more than 48 hours is anticipated, cool or dry the samples. Follow these steps to dry samples:

- mix the soil in each container thoroughly, breaking lumps to less than 12 mm (1/2 inch);
- remove about 0.5 litre (1 pint) of soil and spread on a piece of clean paper;
- completely dry at a temperature of not more than 30ºC **(do not dry in an oven at a high temperature since this can change the phosphorus, potassium, and sulphur levels);**

- care should be taken to avoid contamination of the samples with foreign materials such as commercial fertilizer, manure, salt, baking soda, water, dust, etc. (e.g. samples should not be dried on old fertilizer or feed bags or in areas where fertilizers have been handled);
- a fan may be used to ensure constant air flow over samples and enhance drying.

Once the sample is thoroughly dry, fill the soil sample cartons. Label each carton with the correct field number and sample depth. Complete an information sheet for each field.