

DETAILED INSTRUCTIONS FOR COMPLETING MANURE STORAGE AND HANDLING PLANS & SCHEDULES

Whenever a check box appears, mark the appropriate boxes with to indicate choice.

The plan must be signed on the certification page by the person preparing the plan, or the plan is void. Manure management plans may be completed by the operator or by a Professional Agrologist working on behalf of the operator.

Throughout the plan, G.P.S. coordinates are requested, if available. These coordinates are not essential for registration, but help to ensure the field(s) are accurately identified. It is recommended that G.P.S. coordinates be provided as an amendment if not available at the time of the initial plan submission.

If you require technical assistance, please contact your local Manitoba Agriculture, Food and Rural Initiatives District Office or consult a Professional Agrologist.

Section A – Operation Information

- **G.P.S.** Provide G.P.S. in decimal degrees if available.
- **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.

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

- Use the worksheet in Schedule A to determine your animal units.
 - 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 Regional Agricultural Representative office or Regional Manitoba Conservation office.
 - Do not double count animals.
- In Section B, only fill in the animal units of the species that combines to a total of 300 A.U. or greater.
- At the top of Section D, fill in the total A.U.'s from that animal type in the box provided.
- Those ordered to file by director's order or Environment Officer's Order must submit Schedule A.

Section D – Manure Information for Land Application

- Ensure one page is submitted for each type of livestock in your operation with 300 or more animal units (A.U.)
- 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 analysis report.
 - Indicate the total nitrogen, total P, 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 Regional Manitoba Agriculture, Food and Rural Initiatives office or Regional Manitoba Conservation office.
 - If the manure is being checked 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 or more animal units (A.U.).
- Ensure one page is submitted for each type of manure e.g 1 page for solids, one page for liquids.
- If no manure is to be spread in this plan year, indicate this by checking no manure

Crop Year

- This is the year in which the nutrients will be taken up. Manure is to be used like a fertilizer. For example, a fall application in 2004 (after August 15) on a field used for a cereal will be used as a fertilizer in the 2005 growing season. Therefore crop year would be 2005.

Legal 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

G.P.S. Coordinates

- If available, provide G.P.S. coordinates of spread field. Format should be decimal degrees, with Latitude above Longitude: e.g. one corner would be :

Latitude = N	49.13716
Longitude =W	097.55209

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.).

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 Manitoba Agriculture, Food and Rural Initiatives (MAFRI), and may also be available at <http://geoapp2.gov.mb.ca/website/mafri/>
- For those with GIS mapping software, the information is available through the Manitoba Land Initiative at <http://mli.gov.mb.ca> .

Soil Nitrate Nitrogen Column

- This information can be obtained from the soil analysis report.
- Ensure soil testing procedures as indicated on the attached sheet have been followed.
- Ensure you attach a copy of the soil analysis reports to this plan. Alternatively, you may submit the soil test up to 14 days prior to manure application.

Target Yield Column

- Indicate an anticipated target yield for the crop year that is reasonable on that site.
- Contact your Regional Agricultural Representative office or refer to Manitoba Crop Insurance Data should you have difficulty in estimating this target yield.

Crop Nitrogen Recommendation Column

- This information can be obtained from the MAFRI Soil Fertility Guide, available from your local MAFRI office. 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 Regional Agricultural Representative, 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 application must not result in soil nitrate in excess of regulated limits.

Manure Management Plans must be submitted by July 10 for fertilization programs beginning in the fall and by February 10 for fertilization programs beginning in the spring. Plans submitted after the July or February dates will be subject to a \$100.00 administration fee.

Submit completed and signed Manure Management Plans, together with all the required analysis reports to the **Environmental Livestock Program, Manitoba Conservation, Box 46, 200 Saulteaux Crescent, Winnipeg MB R3J 3W3** (Phone: 204-945-3789/Fax: 204-948-2420).

Laboratories Acceptable to the Director

As of June 28, 2004, the following Laboratories (alphabetical order) are approved for use in analyzing soil for nitrate levels:

Agvise Laboratories
Cantest
Enviro-Test Laboratories
Norwest Labs

This list is subject to change pending a comprehensive review of methods and reporting format. Consultants or other laboratories may subcontract to these laboratories. Manure Management Planners are advised to check Manitoba Conservation's website at <http://www.gov.mb.ca/conservation/regoperations/livestock/> for current listings.

As Western Ag. Laboratories and Midwest Laboratories subcontract soil nitrate analysis to one of the above, they are considered acceptable as long as reporting requirements meet the expectations of Manitoba Conservation.

Note: Plans must be certified by operator on Page 5. If the plan is prepared for the operator, it must be certified by a Professional Agrologist on Page 5. Incorrect/incomplete information voids this Manure Management Plan.

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.** The Soil Fertility Guide produced by Manitoba Agriculture, Food and Rural Initiatives is the only guide for fertility recommendations officially recognized by Manitoba Conservation. 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, freeze 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 30°C (**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.

SCHEDULE A - ANIMAL UNIT WORKSHEET

ANIMAL UNIT ¹ (A.U.) INVENTORY LIST				
	A.U. Produced by One Livestock		Number of Livestock of Each Type	A.U. for Each Livestock Type
Dairy Milking Cows (including associated livestock)	2.000	X	_____	= _____
Beef Beef Cows ² , inc. associated livestock	1.250	X	_____	= _____
Backgrounder ⁴	0.500	X	_____	= _____
Summer pasture/replacement heifers ³	0.625	X	_____	= _____
Feedlot cattle ⁴	0.769	X	_____	= _____
Hogs Sows, farrow to finish	1.250	X	_____	= _____
Sows, farrow to weanling	0.250	X	_____	= _____
Sows, farrow to nursery	0.313	X	_____	= _____
Weanlings	0.033	X	_____	= _____
Grower/finishers	0.143	X	_____	= _____
Boars (artificial insemination operations)	0.200	X	_____	= _____
Chickens Broilers	0.0050	X	_____	_____
Roasters	0.0100	X	_____	_____
Layers	0.0083	X	_____	_____
Pullets	0.0033	X	_____	_____
Broiler Breeder Pullets	0.0033	X	_____	_____
Broiler Breeder Hens	0.0100	X	_____	_____
Turkeys Broilers	0.010	X	_____	_____
Heavy Toms	0.020	XX	_____	_____
Heavy Hens	0.010		_____	_____
Horses (PMU) Mares, including associated livestock	1.333	X	_____	_____
Sheep Ewes, including associated livestock	0.200	XX	_____	_____
Feeder lambs	0.063		_____	_____
Other livestock or operation type - please inquire with your regional agricultural engineer or livestock specialist				

¹ One animal unit is defined as the number of livestock required to excrete 73 kg (160 lbs) of nitrogen in a 12 month period; please refer to the *Farm Practices Guidelines for Beef/Dairy/Hog/Poultry Producers in Manitoba* for more information.

² Do not include calves or replacement heifers; e.g. for 100 cow calf pairs with 30 replacement heifers, simply enter 100.

³ Weaned calves; do not include cow numbers.

⁴ Cattle on finishing rations intended for slaughter.

SCHEDULE B - MANURE TREATMENT

COMPLETE THIS SECTION OUT ONLY IF TREATING MANURE

Legal Location of facilities:		Effluent Storage Duration (months):	
Manure Treatment Category (Choose 1):			
<input type="checkbox"/> Anaerobic Digestion <input type="checkbox"/> Aerobic Digestion <input type="checkbox"/> Mechanical Solid/Liquid Separation <input type="checkbox"/> Chemical Solid/Liquid Separation <input type="checkbox"/> Combustion for Energy Production <input type="checkbox"/> Composting <input type="checkbox"/> Other (Specify): _____			
End use of Effluents (End products of treatment)			
Liquid effluent:		<input type="checkbox"/> Reused in the livestock operation facilities <input type="checkbox"/> Other (describe) _____	
<input type="checkbox"/> No liquid effluent <input type="checkbox"/> Land applied (fill in section E)		<input type="checkbox"/> Reused in the livestock operation facilities <input type="checkbox"/> Other (describe) _____	
Solid effluent:		<input type="checkbox"/> Reused in the livestock operation facilities <input type="checkbox"/> Other (describe) _____	
<input type="checkbox"/> No solid effluent <input type="checkbox"/> Land applied (fill in section E)		<input type="checkbox"/> Reused in the livestock operation facilities <input type="checkbox"/> Other (describe) _____	

Note: If effluents are transferred to a third party, complete transfer form.

SCHEDULE C – TRANSFER OF MANURE OR EFFLUENT TO A SECOND PARTY

COMPLETE THIS SECTION OUT ONLY IF TRANSFERRING MANURE OR EFFLUENT TO A SECOND PARTY

<u>Manure Transfer Category</u>	<input type="checkbox"/> Given/Sold for use as a fertilizer on fields not listed in section E ¹ <input type="checkbox"/> Given/Sold for Use as Compost Ingredient <input type="checkbox"/> Given/Sold for Greenhouse Use <input type="checkbox"/> Given/Sold for use other than as a fertilizer <input type="checkbox"/> Pelleted and Sold to Retailer <input type="checkbox"/> Composted and Sold to Retailer <input type="checkbox"/> Other _____		
<u>Details about Receiving Party</u>²			
Name _____	Name _____		
Address _____ _____	Address _____ _____		
Tel. _____	Tel. _____		
Cell. _____	Cell. _____		
Fax _____	Fax _____		
Legal Location of Delivery Site(s):	Legal Location of Delivery Site(s):		
_____	_____		
_____	_____		
_____	_____		
_____	_____		

¹ Land application of manure from this operation must be accounted for. If the operation is involved in this land application either directly or indirectly, the lands should be listed in section E.

² If there are more than two receiving parties, attach additional sheets containing the appropriate information.