

Feed Management Plan Template (01. 25. 09)

Producer's
Name: _____
Address: _____

Address: _____
Town, State,
Zip: _____

Farm Name: _____
Phone: _____
Fax: _____
e-mail: _____

Consultant's
Name: _____
Address: _____
Address: _____
Town, State,
Zip: _____

Business Name: _____
Phone: _____
Fax: _____
e-mail: _____

Planner's Name: _____
Address: _____
Address: _____
Town, State,
Zip: _____

Business Name: _____
Phone: _____
Fax: _____
e-mail: _____

General Purpose and Background

Feeding management is one of six components of a Comprehensive Nutrient Management Plan (CNMP) as defined by the Natural Resource Conservation Service. Feed management practices may reduce the volume and nutrient content of manure and may be an effective approach to minimizing the import of nutrients to the farm. Feed Management as part of a CNMP should be viewed as a “consideration” but not a “requirement” as some practices will not be economical on some dairies. The Feed Management Plan (FMP) is designed to assist the producer with documentation of those practices that affect whole farm nutrient management and contribute towards achieving nutrient balance at a whole farm level. Nitrogen and phosphorus are the two nutrients that are required to be managed as part of a FMP in a CNMP. When nitrogen and phosphorus imports exceed nitrogen and phosphorus exports there is an imbalance at a whole farm level. These imbalances may lead to impaired water quality in nearby water bodies due to both surface runoff or leaching of nutrients to ground water. Excess nitrogen can also be volatilized and contribute to impaired air quality. Potassium is a nutrient that can lead to production and health problems if it is not monitored in dairy rations, therefore it is included as a nutrient to monitor.

Specific Purpose

- Supply the quantity of available nutrients required by livestock and poultry for maintenance, production, performance, and reproduction; while reducing the quantity of nutrients, especially nitrogen and phosphorus, excreted in manure by minimizing the over-feeding of these and other nutrients.
- Improve net farm income by feeding nutrients more efficiently.

Date Plan Written: _____

The Plan will be reviewed at (what interval, i.e. yearly) and by whom: _____

Manure Management and Application- Additional data collection for FNMP\$ evaluation tool (step # refers to step in FNMP\$ tool)

List group numbers from above to matching facility types. Continue through data collection table describing each facility and how manure is managed.

2a) Producer's name of manure management facility/system or location (Step1)

Identify most closely matching manure system:

Choose One

EXAMPLE

Facility 1

Facility 2

<i>Group #s/ Producer's name</i>	Slurry: groups 1&2 (lactating cows)		
Open lot or feedlot - scraped or stockpiled solids			
Open lot or feedlot - composted solids			
Runoff Collection System from Open Lot			
Manure pack under roof			
Manure pack under roof -composted			
Bedded pack for swine (e.g. hoop building)			
Bedded pack & compost for swine (e.g. hoop building).			
Solid/semi-solid manure & bedding held in roofed storage			
Solid/semi-solid manure & bedding held in unroofed storage			
Liquid/slurry storage in covered storage			
Liquid/slurry storage in uncovered storage	X		
Storage (pit beneath slatted floor)			
Poultry manure stored in pit beneath slatted floor			
Poultry manure on shavings or sawdust held in housing			
Poultry manure on shavings or sawdust held in housing - Composted			
1-Cell anaerobic treatment lagoon			
Multi-cell anaerobic treatment lagoon			

2b)

Is runoff Collected (feedlot only)? Yes/No (Step 2 cont)	NO		
Additional Notes:			

3) Manure Application Method (Step 4)

Choose one

	EXAMPLE	Facility 1	Facility 2
Injection			
Immediate Incorporation			
Sprinkler including pivot			
Big Gun Irrigation			
Flood irrigation			
Dragline with injection toolbar			
Dragline with Aerway toolbar			
<i>Surface Application:</i>			
Dragline- Surface application			
Surface Broadcast	X		
a. Days from application to Incorporation	1		
b. soil conditions: Cool Soils Warm, Wet Soils Warm, Dry Soils	COOL SOILS		

4) Manure characteristics (Step 3)

	EXAMPLE	Facility 1	Facility 2
% Ash (Optional)			
Harvested (after Storage; if sand or soil is added)	20%		
Dry weight of Bedding added (tons/ yr) <i>Excluding soil or sand</i>	Sand		
% Moisture	92%		
Liquid or slurry? Yes/ No	YES		
<i>Additional Manure Characteristics (Optional) (Step 4a&b)</i>			
% N retention	unknown		
% Organic N available to crop	unknown		
% Ammonium N available to crop	unknown		
% P retention	unknown		
P availability to crop %	unknown		

5) Equipment characteristics for manure application (Step 5)

Choose One: I, II, OR III

EXAMPLE

Facility 1

Facility 2

I. Spreader or Tanker Application: Injection, immediate incorporation, OR surface broadcast			
a. Equipment (Choose One)			
Truck Mounted -			
3000 gallon tanker			
4000 gallon tanker			
16 ton spreader			
20 ton spreader			
22 ton spreader			
28 ton spreader			
Tractor Pulled -			
3000 gallon tanker surface			
3000 gallon tanker injection			
4200 gallon tanker surface	X		
4200 gallon tanker injection			
6000 gallon tanker surface			
6000 gallon tanker injection			
9500 gallon tanker surface			
9500 gallon tanker injection			
10 ton spreader			
16 ton spreader			
20 ton spreader			
22 ton spreader			
b. Operating parameters (**Optional)			
Road Speed (mph)/Pipe laydown speed**	UNKNOWN		
Field Speed (mph)/Single irrigation application rate**			
Swath Width (feet)**	20		
Number of application rigs	2		

5) cont.

EXAMPLE

Facility 1

Facility 2

II. Towed Hose Application:			
Dragline with injection toolbar, Dragline with Aerway toolbar, OR Dragline- Surface application			
a. Equipment (Choose One)			
Liquid/ Slurry Supply method			
Aluminum Pipe			
Delivery hose			
Dragline hose			
b. Operating parameters (**Optional)			
Number of Rigs			
Pipe/hose laydown speed (hours/mile)**			
Average field speed (mph)**			
Application Swath Width (feet)**			
Number of passes before equipment is moved to next field**			
Setup time per subfield (hours)**			
Maximum application rate (1000 gal/acre/pass)**			
Length of dragline hose**			
III. Big Gun Application:			
a. Equipment (Choose One)			
Traveling Gun -Alum pipe - 300 gpm, 250' width			
Traveling Gun -Alum pipe - 400 gpm, 300' width			
Traveling Gun -Delivery Hose - 300 gpm, 250' width			
Traveling Gun -Delivery Hose - 400 gpm, 300' width			
b. Operating parameters (**Optional)			
Pipe/hose laydown speed (hrs/mile)**			
Average pull speed (hrs/mile)**			
Irrigation spray spread width (ft) **			
Number of passes before equipment is moved to next field**			
Setup time per subfield (hrs)**			
Maximum application rate (1000 gallons/acre/pass)**			
Length of travel for one pull**			
Liquid/Slurry Supply method (<i>choose one</i>)			
Aluminum Pipe			
Delivery hose			
Dragline hose			
Number of traveling guns			

6) Equipment characteristics for Nurse Tank or Truck

(Spreader, Tanker, OR Towed Hose Application only)(Step 5)

EXAMPLE

Facility 1

Facility 2

Nurse tank/truck hauls manure to field? Yes/No	YES		
<i>If YES, Nurse Tank/ Truck for hauling to field: (choose one)</i>			
Liquid tanker truck	X		
OTR Nurse truck - 10 tons dry haul			
OTR Nurse truck - 15 tons dry haul			
OTR Nurse truck - 20 tons dry haul			
Number of Nurse tank/ truck rigs	1		

Crop Options:

<u>Grains</u>	<u>Stovers/Straws</u>	<u>Grasses/Hays</u>		<u>Hi Moisture Forages</u>	<u>Food Crops</u>
Barley Buckwheat Corn Millet Oats Rye Sorghum Soybeans Sunflower Wheat	Barley Straw Corn Stover Oat Straw Rye Straw Sorghum Stover Soybean Stover Wheat Straw	Alfalfa mid-bloom Birdsfoot trefoil Bluestem, mature Bluestem, early heading Brome Grass Clover, red Fescue, Tall, full-bloom Millet, foxtail Orchardgrass, latebloom	Prairie hay, mature Reed canarygrass Small grain hay, boot Small grain hay, dough Soybean hay Switchgrass Timothy, mid-bloom Vetch, hairy Wheat Grass	Alfalfa Haylage, mid-bloom Corn Silage Small Grain Silage, dough Sorghum-Sudan Silage Sorghum Silage	Potatoes Sugar Beet Roots Sugar Beet Tops Sweet Corn Dry Beans Popcorn (grain)

Summary of Feeding Practices and Equipment/Technologies utilized on the farm

Narrative of those practices that have been adopted and/or insert the completed Farm Plan Assessment Checklist.

Include how diet formulation was achieved, to what standards (ie., NRC or proprietary recommendations, etc).

Indicate when lab analyses were conducted on feeds and by what lab.

Indicate if nutrient analysis of drinking water was included in diet formulation.

Note the expected volume of manure excreted on manure storage requirements.

Note the potential of any feed byproducts fed and their impact on nutrients in manure.

Note the impact of feed management practices, animal management practices, and diet manipulation on manure odors, pathogens, animal health and well-being.

Note use of manure on farm for production of forages and crops.

Make note of use of manure analysis (as excreted or stored) to estimate the impact of feeding strategies.

Record of Feed Sampling and Feed Analysis

Describe routine feed analysis plan.

- What feeds need to be sampled and when
- What analyses need to be performed

Note why feeding rates for N and P may differ from recommendations (i.e. it is less expensive).

The following records need to be kept for five years:

Records of feed analysis and ration formulation, including initial ration formulation prior to development of FMP.

Record of the initial estimate of the impact of adopted feed strategies on manure content.

Record of any manure analysis that was done after the feeding strategy was implemented.