

Deb Wilks

Feed Management Plan Template (6 20 06)

Farm Name: Werkhoven Dairy

Farm Location: (address and county)
Monroe WA

Name of Professional Nutritionist, contact information, and credentials:
Deb Wilks, PhD
509-386-7385

Date Feed Management Plan Written: _____

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.

Feed Management Plan Maintenance

The Feed Management Plan will be reviewed at _____ (what interval, i.e. yearly, etc) and changes noted.

Specific Farm Information

Type of livestock or poultry: (Indicate type, age, number of livestock)

dairy Holstein 800 total
710 - milk
90 - dry
Birth - 400 lbs Apr 2014

Type of livestock or poultry production facilities utilized (freestall, pens, feedlots, enclosed barns)

Freestall

Production goals (amount of weight, gain, milk production, egg production)

90 ~~100~~ lbs
3.7 ~~3.8~~ fat
3.0 ~~3.2~~ prot

Type of manure handling and application systems

sand separator
manure solid separator
injectors
flush barns

Resource Assessment

Please state what natural resource concern that the plan is being created to address.

Whole farm balance evaluation excess of what nutrient(s).

Nitrogen

Phosphorus

Soil test indicates a build up of nutrients due to land application of manure.

Nitrogen

Phosphorus

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

Narrative of those practices that have been adopted. Refer to the Farm Plan Assessment Checklist for a list of items. (And or insert checklist items here??)

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 (??need to say that it was a certified 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.

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.



DAIRY
Feed Management Plan Checklist

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. Feeding 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 following checklist is designed to assist dairy producers and their nutrient management advisor to determine feeding management factors that affect nutrient management. The checklist is meant to be used as an *on-farm* assessment tool. The factors contained in this assessment can be used as a guide to document or identify feeding management practices that will contribute to 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 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 in this checklist.

Dairy Name Werkhoven Dairy

Date Completed 6-21-06

Producer Signature _____

Adviser Signature _____

On the following pages is a list of feeding management practices that can affect nutrient balance. Please read through each feeding management consideration and record your answer.

Feed Management Considerations	Was it considered?		Will it be economical?		Will it be implemented?		Will it be considered in the future?		Environmental benefit
	Yes	No	Yes	No	Yes	No	Yes	No	
Targeting Nutrient Requirements									
Formulate multiple rations to meet nutrient requirements of cattle (high producing, low producing lactating, dry, multiple heifer groups)	✓		✓		✓		✓		N, NH ₃ , P
Analyze CP content of rations routinely	✓ <i>done forages</i>		✓		N/A		N/A		N, NH ₃
Analyze P content of rations routinely	✓ <i>done forages</i>		✓		N/A		N/A		P
Analyze K content of early lactation rations routinely (DCAD positive)	✓ <i>done forages</i>		✓		N/A		N/A		K
Analyze K content of pre-fresh ration routinely (DCAD negative)	✓ <i>done forages</i>		✓						K
Determine dry matter intake	✓ <i>done corn silage</i>		✓		N/A		N/A		N, NH ₃ , P
Monitor dry matter content of forages and wet feedstuffs	✓		✓		N/A		N/A		N, NH ₃ , P

Feed Management Considerations	Was it considered?		Will it be economical?		Will it be implemented?		Will it be considered in the future?		Environmental benefit
	Yes	No	Yes	No	Yes	No	Yes	No	
Ration Balancing									
Reformulate rations routinely for the following:									N, NH ₃ , P
a) Forage quality (NDF, ADF, CP, P, starch)	✓		✓		N/A		N/A		N, NH ₃ , P
b) Changes in ration feedstuffs	✓		✓		N/A		N/A		N, NH ₃ , P
c) Dry matter content of forages	✓		✓		N/A		N/A		N, NH ₃ , P
d) Formulate for positive or negative DCAD rations (Na, K, Cl, and S)	✓		✓		N/A		N/A		K
e) Balance rations using either rumen degradable protein or amino acid content	✓		✓		N/A		N/A		N, NH ₃

Feed Management Considerations	Was it considered?		Will it be economical?		Will it be implemented?		Will it be considered in the future?		Environmental benefit
	Yes	No	Yes	No	Yes	No	Yes	No	
Ration Management Practices									
Feed for limited feed refusal in lactating ration	✓								N, NH ₃ , P
Assess feedbunks routinely and maintain a consistent and fresh feed supply	✓								N, NH ₃ , P
Use total mixed rations									N, NH ₃ , P
a) Follow manufacturers suggested order of loading feeds in mixer	✓ depends on hay quality		✓		N/A		N/A		N, NH ₃ , P
b) Monitor loading and scale accuracy	✓		✓						N, NH ₃ , P
c) Evaluate mixing process	✓ depends on hay		✓		N/A		N/A		N, NH ₃ , P
Use computer grain feeders		✓		✓		✓		✓	
Clean feedbunks daily	✓								
Clean water troughs regularly	✓ 2x/wk		✓		N/A				

Feed Management Considerations	Was it considered?		Will it be economical?		Will it be implemented?		Will it be considered in the future?		Environmental benefit
	Yes	No	Yes	No	Yes	No	Yes	No	
Production Aids/Enhancers									
Direct fed microbials/yeast	✓		✓		N/A		N/A		
Rumensin	✓		✓		N/A		N/A		
BST	✓		✓		N/A		N/A		
Monitoring Tools									
Use Milk Urea Nitrogen (MUN) to assess nitrogen utilization	✓		✓		N/A		N/A		N, NH ₃
Monitor N intake/N output	✓		✓		N/A		N/A		N, NH ₃
Monitor water quality for minerals and nitrates	✓			✓		✓		✓	
Estimate P balance (Does milk P export approximate feed P import)	<i>no added P and no control over other feed P not considered beyond that</i>								
Monitor feed efficiency (lbs milk / lbs DMI)	✓		✓		N/A		N/A		N, NH ₃ , P

Feed Management Considerations	Was it considered?		Will it be economical?		Will it be implemented?		Will it be considered in the future?		Environmental benefit
	Yes	No	Yes	No	Yes	No	Yes	No	
Forage Management Practices									
Maximize the amount of home grown forages in ration	✓		✓		N/A				
Maximize quality of home grown forages (CP, NDF, NDF digestibility, lignin, starch) by adopting the following practices:			✓		N/A				
a) Harvest crop when nutrients such as protein (grass/legume) or starch (corn) are high and fiber is low	✓		✓		N/A				
b) Pack silage tightly, cover quickly, and use a proven silage additive	✓		✓		N/A				
c) Store different quality forages separately to match nutrient level of forages to nutrient requirement of animal	✓ hay only		✓		N/A				

d) Mechanically process corn silage	✓		✓	N/A				
e) Analyze all silages for fermentation profile, fiber digestibility, and particle size	✓		✓	N/A				

Information contained in this checklist assessment was developed by _____ . The suggested feeding management practices were the best management practices based on research and professional judgment.

Version Date March 2006