

Department of Agriculture, Trade and Consumer Protection
Division of Agricultural Development
Agricultural Development & Diversification Program (ADD)
Grant Project Final Report

Contract Number: 18040

Grant Project Title:

Development of a Wisconsin Dairy Farm Biosafety Quality Assurance Program – Phase II, Modules 3-6

Amount of Funding Awarded: \$23,500

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Final Report – DATCP 18040
Development of a Wisconsin Dairy Farm Biosafety Quality Assurance Program: Phase II
UW-Madison, Dept. of Dairy Science
Pamela Ruegg, DVM, MPVM – Project

July 1, 2003 to June 30, 2004

Project Activities and Key Results:

The objective of this project is to complete the development and evaluation of a comprehensive dairy farm quality assurance program that can be implemented by Wisconsin dairy farms of all sizes and farm structures. The participating farms also serve as demonstration sites for best management practices that enhance dairy farm biosecurity, food safety and dairy product quality.

This project was completed on schedule and all expected outcomes were achieved.

During the period of July through December 2003 the following activities took place:

- Materials were developed for Modules 4 (Microbial Risk Assessment), 5 (Ensuring Animal Wellbeing) and 6 (Marketing Healthy Cull Cows).
- The materials for Modules 4 and 5 were successfully tested on the 4 enrolled farms.
- Module 6 materials were developed and the first section was tested.
- The process of performing a quantitative risk assessment for each module was developed and successfully tested on the farms
- Supporting materials for previous modules were developed

During the period of January through June 2004 the following activities took place:

- Materials for the final modules were completed and tested on the 4 enrolled farms
- Supporting materials for previous modules were developed
- Revision of previous module materials based on farm testing
- Discussions with potential industry partners for broader testing of the completed program after the ADD project is completed

Final Results of the project.

Methods. In this project, four dairy farms were enrolled in a model biosafety program to develop and test the program. The four participating farms helped to develop and evaluate 6 modules of a Biosafety, Quality Assurance program. The structure of the program was based on the format used in the successful Milk Money program and included the following modules:

		Month					
1-6	7-9	10-12	13-15	16-18	19-21	22-24	
Enroll and complete 4 Milk Money team meetings	Biosecurity	Managing Johne's Risk	Quality Milk Production	Reducing Microbial Hazards	Ensuring Animal Wellbeing	Marketing Health Cull Cows	WISCONSIN QUALITY ASSURED HERD
							Begin process over

During a previous DATCP ADD grant, the farms completed the first 3 modules of the program (Biosecurity, Johnes Control and Quality Milk Production). In phase II of the project (this grant), the enrolled farms completed the final 3 modules (assessment of microbial risks, ensuring animal well being and cull cow management). Farms were visited each month for risk assessments and development of farm plans. Appropriate testing was provided for the farms using cost-sharing.

Use of results This pilot program was used to develop the final modules for a statewide quality assurance program that will allow Wisconsin dairy farmers to differentiate their products as “Wisconsin Quality Assured.” We are continuing to develop this concept with a project that combines the use of RFID with biosecurity and food safety. We have obtained funding from both the WLIC and the WMMB to continue to develop this project on 16-20 pilot farms located throughout Wisconsin over the next 2-3 years. The concept of progressive improvement using the modules defined in this project will be combined with the use of individual animal RFID to attempt to bring value back to the farmers. The pilot project will begin in August 2004.

Agricultural Business Development Potential and Viability. The success of this project will allow *the use of new marketing practices related to Wisconsin dairy products*. Farmers that successfully complete the Dairy Farm Biosafety Quality Assurance program will be able to be differentiated from other farms. This program will allow purchasers of milk to pay premiums for herds that implement best management practices that result in reduced risks to consumers. Completion of the biosafety quality assurance program can be leveraged as a unique marketing tool by farms that are marketing farmstead dairy products to further differentiate their products. It will also enhance the overall image of products that originate from Wisconsin Dairy farms.

“MORE MONEY – “Ensuring Animal Care” Meeting 1

Meeting one date: _____ Farm owner _____

Team Members (enter number of team members present at this meeting)

___ Farm Owner ___ Farm Employees ___ Vet ___ Dairy FR ___ UWEX ___ Other _____

Core Information for last 30 days				
• Number of Animals:				
Dry:	No. cattle	1 st	2 nd +	No. cattle added:
Preg.Heifers:	Heifer Calves	Herd Bulls:		No. cattle culled:
Source of Replacements: Home Other				No. cows died:
				No. Calves died:
• Production Data			• Disease Data	
RHA:	lbs		No. cows treated for mastitis:	
Milk per cow per day:	lbs		No. cows treated for respiratory disease:	
% Fat:	% Protein:		No. cows with diarrhea:	
SCC:	Bacteria:		No. cows aborting:	
• List any important current concerns				No. of Calves treated with antibiotics:
1.				No. Days Milk Withheld for treatment:
2.				No. bulk tank milk samples performed:

• Reviewing Past Performance

Review the Action Plan of Previous Modules – What actions are not yet completed?

Module No.	What actions items remain?	Who was responsible?	Is this issue still important?

• What outstanding actions will be completed before the next module?

Action	What will be done?	Who will be responsible?
1		
2		
3		

- **Fill out the Animal Care Assessment Checklist and Discuss it with your management team.**

Animal Care Management Goals

Based on the risk assessment, List no more than 3 goals that address the concerns you identified and the target dates for completion.

	Describe the goal	Target date to complete the goal
1		
2		
3		

Animal Care Plan

Select the most critical actions from the table above that you will complete before the next meeting. Include who will be responsible for each action to be completed before the next meeting.

Action	What will be done?	How will the results be evaluated?	Who will be responsible?
1			
2			
3			
4			
5			
6			

Schedule Ensuring Animal Care Meeting 2

DATE: _____ Time: _____ Location: _____

Is there anything that needs to be brought to the next meeting (i.e. records, people)? Yes No
 If Yes, who is responsible? _____

Notes:

Risk	Max. Score	Herd	Comments
Nutritional Management (25%)			
a. Cow diets are reviewed by a qualified nutritionist.	10		
b. Feedstuffs are analyzed.	10		
c. Dry matter intakes are known.	5		
d. Production levels meet breed expectations.	10		
e. Body condition scores meet expectations.	10		
f. Water supplies are adequate.	5		
g. Calves meet breed specific growth standards.	5		
h. Calves receive colostrum.	5		
Risk subtotal	60		
Animal Health (29%)			
a. Animals are individually identified.	10		
b. Disease performance meets industry standards.	10		
c. Adult cow mortality is within industry standards.	10		
d. The culling rate is within industry standards.	5		
e. Animals receive appropriate veterinary care.	10		
f. Downer cows receive appropriate care.	10		
g. Euthanasia is performed humanely.	5		
h. Sick animals are isolated from healthy animals.	5		
Risk subtotal	65		
Housing & Environment (23%)			
a. Cow housing meets current design standards.	10		
b. Cows are clean and free of manure.	5		
c. Cows are not overcrowded.	5		
d. Animals have continuous access to feed & water.	10		
e. Floors are properly constructed.	5		
f. Animals have opportunity for exercise.	5		
g. Pastured animals have shade, windblocks & water.	5		
h. Calf housing meets current industry standards.	10		
Risk subtotal	55		
Husbandry (13%)			
a. People handling animals have been trained.	5		
b. Methods are used to minimize painful procedures.	10		
c. Animals have healthy feet and legs.	10		
d. Feet are regularly trimmed by trained personnel.	5		
Risk subtotal	30		
Handling (10%)			
a. Facilities for restraint are humane & accessible.	5		
b. Animals are comfortable with handlers.	5		
c. The use of shock devices is minimal.	5		
d. Animals are transported humanely.	5		
e. Animals exhibit normal behavior.	5		
Risk subtotal	25		

Nutritional Management

a.	Cow diets are reviewed by a qualified nutritionist.	Are cow diets reviewed by a qualified nutritionist?	0 = All diets are reviewed by an independent PhD nutritionist; 3 = most diets are reviewed by a competent nutritionist; 5 = lactating cow diets are reviewed by a person with nutritional training at least 2X/year; 7 = occasionally diets are reviewed; 10 = no review of diets	0 = always 3 = most 5 = 2X/year 7 = rarely 10 = never
b.	Feedstuffs are analyzed.	How frequently are nutrient compositions of individual feedstuffs analyzed?	0 = Nutrient analyses are obtained for all forages and purchased feeds; 3 = Nutrient analyses are obtained for most forages and purchased feeds; 5 = nutrient analyses are obtained for some forages only, some book values are used; 7 = occasional nutrient analyses are performed, usually book values are used; 10 = never analyze feeds	0 = always 3 = most 5 = some 7 = occasional 10 = never
c.	Dry matter intakes are known.	How frequently are dry matter intakes calculated?	Regular = dry matter intakes are calculated using weighback and determination of moisture on a regular schedule; Estimated = no weighback but moisture is occasionally determined; Never means no weighback, no moisture determinations.	0 = regular 3 = estimated 5 = never
d.	Production levels meet breed expectations.	Do herd production levels meet industry normals for your area?	Holsteins >20,000 lb RHA if confinement; >18,000 lb RHA if IRG; Jerseys: >17,500 lb RHA if confinement, > 16,000 if IRG.	0 = always 3 = frequently 5 = usually 7 = rarely 10 = never
e.	Body condition scores meet expectations.	What percentage of the herd has BCS that do not meet industry standards?	Dry off = 3.25 to 4.0; Calving = 3.5 – 4.0; Peak = 2.5 to 3.0, Late lactation = 3.0 to 3.75	0 = >10% of herd, 3 = >25% of herd, 5 = 50% of herd 7 = >50% of herd 10 = unknown
f.	Water supplies are adequate.	Do all animals have continuous access to clean water?	Yes = Water intakes are known for all age groups and water supplies are free of debris and stagnant water. Sometimes = Some water supplies are unknown or dirty/stagnant. Never = Water intake is unknown for some age groups and water supplies are stagnant and dirty.	0 = Yes 3 = sometimes 5 = never
g.	Calves meet breed specific growth standards.	Do calves meet expected growth standards for their breed?	Yes = calves are regularly measured and growth is compared to standards; Usually = calves are occasionally measured and meet growth standards. Unknown = calves are not measured	0 = Yes 3 = usually 5 = unknown
H	Calves receive colostrum.	Do calves receive appropriate amounts of colostrum?	Yes = all calves are hand fed at least 4 liters of colostrum Usually = all heifer calves and most bull calves receive at least 4 liters of colostrum Unknown = calves are left with the dam to suckle	0 = Yes 3 = usually 5 = unknown

Animal Health				
a.	Animals are individually identified	Are individual animal records maintained?	Always = animals are individually identified and have permanent complete treatment & health records, Usually = adult cows are individually identified and have permanent treatment records; Sometimes = adult cows are individually identified, temporary treatment records are maintained; Rarely = adult cows are individually identified, few or no treatment records are maintained, Never = no animal ID or treatment records	0 = always 3 = usually 5 = sometimes 7 = rarely 10 = never
b.	Disease performance meets industry standards.	Are industry standards for the prevalence of common diseases met?	Always = the herd maintains prevalences of common diseases {lameness, digestive, respiratory, mastitis, calf diseases, reproductive, cardiovascular} ≤ industry standard; sometimes = sometimes the rate of 1 or more diseases exceeds industry standards; rarely = the prevalence of 1 or more diseases always exceeds industry expectations; never = rate of 1 or more diseases is unknown	0 = always 3 = usually 5 = sometimes 7 = rarely 10 = never
c.	Adult cow mortality is within industry standards.	How many cows have died within the last 12 months?	Always = ≤3 % of adult cows have died during the last year. Usually = adult cow mortality 4-6%; sometimes = adult cow mortality 6- 8%; rarely = adult cow mortality 9-10%; never = adult cow mortality exceeds 10%	0 = always 3 = usually 5 = sometimes 7 = rarely 10 = never
d.	The culling rate is within industry standards.	How many cows have been culled in the last 12 months?	Always = less than 35% of adult cows culled during the last year. Sometimes = 36-50%; never= exceeds 45%	0 = always 3 = sometimes 5 = never
e.	Animals receive appropriate veterinary care.	Is a licensed veterinarian involved in the health management of your herd?	Always = diagnosis and treatment of disease is under supervision of a licensed veterinarian (SOP & Protocols), all surgeries are performed by a licensed veterinarian, a preventive health care program is in place and the veterinarian visits the farm on a regular, scheduled basis; Usually = some mild diseases are diagnosed and treated without veterinary input, all surgeries are performed by a licensed veterinarian, a preventive health care program is in place and the veterinarian visits the farm on a regular, scheduled basis; Sometimes = many diseases are treated without veterinary input, all surgeries are performed by a licensed veterinarian, the veterinarian visits the farm on a regular, scheduled basis; Rarely = most diseases are treated by lay people, the veterinarian only visits when called to examine sick animals; Never = the veterinarian only makes emergency visits	0 = always 3 = usually 5 = sometimes 7 = rarely 10 = never
f.	Euthanasia is performed humanely.	How are mortally ill animals euthanized?	Always = All morbid animals that are not expected to recover are humanely euthanized by trained personnel according to AABP standards; Sometimes = some sick animals are euthanized by untrained personnel; Never = personnel that euthanize animals have not been trained.	0 = always 3 = sometimes 5 = never
g.h	Downer cows receive appropriate care.	How are downer cows handled?	Always = downer cows receive prompt veterinary treatment, are housed in comfortable, well bedded stalls and are humanely euthanized if recovery is not expected; Sometimes = downer cows receive veterinary treatment, some downer cows may be dragged to be moved to a more comfortable location; Never = downer cows are neglected or dragged and may not receive veterinary care	0 = always 3 = usually 5 = sometimes 7 = rarely 10 = never
h.i	Sick animals are isolated from healthy animals.	Where are sick animals housed?	Always = there are no shared stalls for sick and healthy animals of any age group, sick cows are milked separately from healthy cows; Sometimes – sick animals in some age groups are housed with healthy animals, sick and healthy cows are milked using the same milking machines; Never – sick and healthy cows are housed together	0 = always 3 = sometimes 5 = never

Housing and Environment

a.	Cow housing meets current design standards.	What criteria were used to design animal housing areas?	Always = all age groups in housing built to current industry standards; Usually = most age groups in housing built to current industry standards; Sometimes = some age groups in housing built to industry standards; Rarely = one age group in housing built to industry standards; Never = housing relatively unchanged for >15years	0 = always 3 = usually 5 = sometimes 7 = rarely 10 = never
b.	Cows are clean and free of manure.	What percentage of cows have leg and udder hygiene scores that exceed standards?	Always = leg hygiene scores of <25% of animals exceed 2 & udder hygiene scores of <15% of animals exceed 2; sometimes = some seasons hygiene scores exceed standards; never = hygiene scores usually exceed standards.	0 = always 3 = sometimes 5 = never
c.	Cows are not overcrowded.	How many cows per stall are there in each group?	Always = Cow density never exceeds 1 cow per stall; Sometimes = cow densities are sometimes 120%; Never = cow densities exceed 120% most of the time.	0 = always 3 = sometimes 5 = never
d.	Animals have continuous access to feed & water.	How many hours of access do animals have to feed and water?	Always = clean water and feed in clean bunks is available for >22 hours to all age groups; Usually = Most animals have >20 hours of access to clean water and feed; Sometimes = feed or water availability is restricted seasonally or for selected age groups at some time; Rarely = Feed & water access is limited for 2 or more groups; Never = Access to feed & clean water is restricted to <12 hours per day	0 = always 3 = usually 5 = sometimes 7 = rarely 10 = never
e.	Floors are properly constructed.	What is the condition of floor surfaces in cow traffic areas?	Always = all floor surfaces are grooved, non-slip surface or covered with sand; Sometimes = some floor surfaces are slippery or seasonally covered with ice; Never = all floor surfaces are slippery.	0 = always 3 = sometimes 5 = never
f.	Animals have opportunity for exercise.	How much time do animals have to move freely?	Always = adult cows are housed in freestalls or pasture, baby calves are housed in hutches, heifer calves are housed in groups; Sometimes = some age groups are housed in tie stalls, stanchions or crates; Never = Animals are always housed in tie stalls, stanchions or crates and do not have access to pasture.	0 = always 3 = sometimes 5 = never
g.	Pastured animals have shade, windblocks & water.	Do pastured animals have access to shade, windblocks and clean water?	Always = all age groups; Sometimes = some age groups do not have access; Never = no shade or windblocks are available.	0 = always 3 = sometimes 5 = never
h.	Calf housing meets current industry standards.	Are calves housed in facilities which meet current industry standards?	Always = baby calves are in clean, well bedded individual pens that allow them to stand, lie and groom themselves, heifer calves are in well bedded dry areas with appropriate space requirements; Sometimes = some calves are housed in areas that allow contact with adult cows; Never = calves are tied or group housed at a young age in a wet, dirty environment	0 = always 3 = usually 5 = sometimes 7 = rarely 10 = never

Husbandry				
a.	People handling animals have been trained.	What is the level of training of the animal handlers?	Always = all animal handlers have written job descriptions and have been trained in proper animal handling techniques. Sometimes = Some jobs have written descriptions and some animal handlers have been trained; Never = no training or written job descriptions for animal handlers.	0 = always 3 = sometimes 5 = never
b.	Methods are used to minimize painful procedures.	What methods are used to minimize painful procedures such as dehorning & tail docking?	Always = veterinarians perform or have trained all operators to use appropriate local anesthesia or other techniques which minimize pain; Usually = occasionally some procedures are performed without local anesthesia; Sometimes = some procedures are performed by untrained personnel without local anesthesia; Rarely = trained personnel use local anesthesia only rarely; Never = personnel performing procedures have not been trained and do not use local anesthesia.	0 = always 3 = usually 5 = sometimes 7 = rarely 10 = never
c.	Animals have healthy feet and legs.	What proportion of animals have locomotion scores >1 and/or hock lesions?	None = <5% of adult cows have locomotion scores >1 and/or hock lesions; Occasional = 6-10% of adult cows have locomotion scores >1 and/or hock lesions; Some = 11-15% of adult cows have locomotion scores >1 and/or hock lesions; Many = 16-25% of adult cows have locomotion scores >1 and/or hock lesions; Most = >25% of adult cows have locomotion scores >1 and/or hock lesions;	0 = None 3 = Occasional 5 = Some 7 = Many 10 = Most
d.	Feet are regularly trimmed by trained personnel.	What is the trimming frequency and level of training of the trimmers?	Always = cows are trimmed twice a year by professional trimmers or trained farm personnel; Sometimes = Cows are trimmed <2X a year by professional trimmers or trained farm personnel; Never = Cows are never trimmed.	0 = always 3 = sometimes 5 = never

Handling				
a.	Facilities for restraint are humane & accessible.	Are adequate facilities for restraint and handling available?	Always = all animals can be humanely restrained in a timely manner, chutes are in excellent working condition, floor surfaces are not slippery and there are adequate facilities for procedures such as hoof trimming; Sometimes = facilities for some procedures require use of excessive physical force; Never = no chutes or individual stanchions are available, most restraint is through physical force	0 = always 3 = sometimes 5 = never
b.	Animals are comfortable with handlers.	Is unnecessary distress avoided when moving animals?	Always = animals are moved quietly and firmly without fear, slipping or rushing, animals do not exhibit fear of humans; Sometimes = some animals fear human, animals sometimes rush, some animals fall when moved; Never = animals exhibit fear of humans, animals are driven or run, many animals fall or strike objects when being moved.	0 = always 3 = sometimes 5 = never
c.	The use of shock devices is minimal.	When are electrified devices used to move animals?	Never = no electric prods, no cow trainers and no electrified crowd gates are used; Sometimes = occasional use of electric prods, cow trainers or electrified crowd gates; Always = daily use of electric prods, cow trainers or electrified crowd gates.	0 = Never 3 = sometimes 5 = Always
d.	Animals are transported humanely.	Are animals transported in a safe and humane manner?	Always = all animals are loaded without excessive force, running, use of prods, or falling down, animal density in trucks is appropriate for age and climate; Sometimes = some prods or excessive physical force are used, animals occasionally fall down when loading, animals are occasionally crowded; Never = physical force and prods are routinely used to load animals, animals are rushed and fall down, trucks are overcrowded.	0 = always 3 = sometimes 5 = never

“MORE MONEY – Ensuring Animal Care Meeting 2

Today's date: _____ Farm owner _____

Team Members (enter number of team members present at this meeting)

____ Farm Owner ____ Farm Employees ____ Vet ____ Dairy FR ____ UWEX ____ Other _____

Core Information for last 30 days				
• Number of Animals:				
Dry:	No. cattle	1 st	2 nd +	No. cattle added:
Preg. Heifers:	Heifer Calves	Herd Bulls:		No. cattle culled:
Source of Replacements: Home Other				No. cows died:
				No. Calves died:
• Production Data			• Disease Data	
RHA:	lbs		No. cows treated for mastitis:	
Milk per cow per day:	lbs		No. cows treated for respiratory disease:	
% Fat:	% Protein:		No. cows with diarrhea:	
SCC:	Bacteria:		No. cows aborting:	
• List any important current concerns			No. of Calves treated with antibiotics:	
1.			No. Days Milk Withheld for treatment:	
2.			No. bulk tank milk samples performed:	

• Reviewing Past Performance

Review the Outstanding Actions Plan of The Previous Module – What actions remain?

Module No.	What actions items remain?	Who was responsible?	Is this issue still important?

• What outstanding actions will be completed before the next module?

Action	What will be done?	Who will be responsible?
1		
2		
3		
4		
5		

•

• Review the Actions from the Animal Care Plan

Task Number	What was accomplished?	Who was responsible?
1		
2		
3		
4		
5		
6		

Were the goals of the Animal Care Plan achieved for your farm?

Program Goals	Outcome			
	Completed	Progress made	No progress	Dropped goal
1.				
2.				
3.				

• List the goals that have not been completed and limitations to completion

	Describe the Goal	Limitations to successful completion
1		
2		
3		
How can the limitations be overcome?		
1		
2		
3		

Future Animal Care Plans

Will you continue to work on controlling Ensuring Animal Care in the future?

Yes No

If yes, list 1 to 6 tasks that will be completed before the next meeting. Make sure to assign a person who will be responsible for each item and a method of determining the outcome.

	What will be done?	Who will be responsible?	Target Date to Assess results
1			
2			
3			
4			
5			
6			

Reassess your team dynamics.

Has this module been useful? Yes No

The next module is : **Limiting Exposure to Fecal Pathogens**

When and where is the next meeting?

DATE: _____ Location: _____

Is there anything that needs to be brought to the next meeting (i.e. records, people)?

Yes No

“MORE MONEY – “Minimizing Transmission of Fecal Pathogens” Meeting 1

Meeting one date: _____ Farm owner _____

Team Members (enter number of team members present at this meeting)

Farm Owner _____ Farm Employees _____ Vet _____ Dairy FR _____ UWEX _____ Other _____

Core Information for last 30 days				
• Number of Animals:				
Dry:	No. cattle	1 st	2 nd +	No. cattle added:
Preg.Heifers:	Heifer Calves	Herd Bulls:		No. cattle culled:
Source of Replacements: Home Other				No. cows died:
				No. Calves died:
• Production Data			• Disease Data	
RHA:			lbs	No. cows treated for mastitis:
Milk per cow per day:			lbs	No. cows treated for respiratory disease:
% Fat:	% Protein:			No. cows having diarrhea:
SCC:	Bacteria:			No. cows aborting:
• List any important current concerns				No. of Calves treated with antibiotics:
1.				No. Days Milk Withheld for treatment:
2.				No. bulk tank milk samples performed:

• Reviewing Past Performance

Review the Action Plan of Previous Modules – What actions are not yet completed?

Module No.	What actions items remain?	Who was responsible?	Is this issue still important?

• What outstanding actions will be completed before the next module?

Action	What will be done?	Who will be responsible?
1		
2		
3		

- **Fill out the Fecal Pathogen Assessment Checklist and Discuss it with your management team.**

Fecal Pathogen Management Goals

Based on the risk assessment, List no more than 3 goals that address the concerns you identified and the target dates for completion.

	Describe the goal	Target date to complete the goal
1		
2		
3		

Fecal Pathogen Plan

Select the most critical actions from the table above that you will complete before the next meeting. Include who will be responsible for each action to be completed before the next meeting.

Action	What will be done?	How will the results be evaluated?	Who will be responsible?
1			
2			
3			
4			
5			
6			

Schedule Fecal Pathogen Assessment Meeting 2

DATE: _____ Time: _____ Location: _____

Is there anything that needs to be brought to the next meeting (i.e. records, people)? Yes No

If Yes, who is responsible? _____

Notes:

Risk	Max. Score	Herd	Comments
History of Previous Diagnosis (20%)			
a. Previous diagnosis of Salmonella	15		
b. Previous diagnosis of Johne's disease	10		
c. Previous diagnosis of Listeria or Campylobacter	5		
Risk subtotal	30		
Replacement Management (17%)			
a. Management of Colostrum	5		
b. Source of milk for calves	5		
c. Diagnosis of calf diseases	5		
d. Personnel access and sanitation	5		
e. Calf housing	5		
Risk subtotal	25		
Housing & Environment (21%)			
a. Housing of sick cows and cull cows	10		
b. Maternity pen	10		
c. Access of birds	2		
d. Adult cow housing	5		
e. Premilking cow preparation	5		
Risk subtotal	32		
Nutritional Management (12%)			
a. Use of animal derived products	5		
b. Source of water	5		
c. Feed storage systems	3		
d. Feed handling systems	5		
Risk subtotal	18		
Manure Management (10%)			
a. Manure handling system in barn	5		
b. Equipment used to handle manure	5		
c. Manure storage and disposal	5		
Risk Subtotal	15		
Risks to Workers (20%)			
a. Source of milk used for human consumption	10		
b. Awareness of disease risks	10		
c. Cleanliness of hands and clothing of animal handlers	10		
Risk subtotal	30		

History of Previous Diagnosis

a.	Previous Diagnosis of Salmonella	Has Salmonella been diagnosed in any animals on this farm?	0 = never isolated from calves or adult cows, no animals with symptoms suggestive of the disease; 3 = never isolated but animals have suspicious symptoms and no diagnostic tests have been performed; 5 = Salmonella was isolated more than 1 year ago but no recent animals have symptoms; 8 – Salmonella was isolated from 1 or more animals 6-12 months ago; 10 = Salmonella was isolated from 1 or more animals within last 6 months; 15 = the herd has experienced a recent outbreak of Salmonellosis	0 = never, 3 = never but suspicious, 5 = once, in the past, 8 = within the last year, 10 = diagnosis is 1 or more animals; 15 = recent outbreak
b.	Previous Diagnosis of Johne's disease	Has Johne's disease been diagnosed in any animals on this farm?	0 = never isolated from any animals, no animals with symptoms, or classified A under WI program; 3 = a few animals with symptoms, <=5% of tested animals positive; 5 = some suspicious animals, no testing performed; 8 = occasional symptoms, 5-15% of tested animals positive; 10 = ≥15% of tested animals are positive (or WI "D" status)	0 = never or WI classified A, 3 = ≤5% positive; 5 = never tested; 8 = 5-15%; 10 = >15%
c.	Previous Diagnosis of Listeria monocytogenes or Campylobacter	Has Listeria monocytogenes or Campylobacter been isolated from any animals or milk samples on this farm?	0 = no suspicious symptoms (circling disease or calf diarrhea) and no history of isolation; 3 = occasional, rare symptoms (circling disease or other suspicious neurological disease) but not confirmed; 5 = yes	0 = never, 3 = suspected; 5 = Yes

Replacement Management

a.	Management of colostrum	What is the source of colostrum?	0 = dam of calf; 3 = pooled from several cows; 5 unknown	0 = dam; 3 = pooled; 5 unknown
b.	Source of Milk	What is the source of milk for preweaned calves?	0 = whole milk that is obtained from healthy cows and pasteurized or milk replacer; 3 = raw milk from healthy untested fresh cows; 5 = raw waste milk from treated cows or cows of unknown status	0 = pasteurized milk or milk replacer; 3 = healthy, untested cows; 5 = unknown or treated cows
c.	Diagnosis of calf diseases	How frequently are diagnoses of calf diseases obtained?	0 = a veterinarian always examines sick calves or performs autopsies and appropriate tests to arrive at a diagnosis; 3 = Diagnosis of calf diseases occurs only when initial attempts at treatment have failed; 5 = never	0 = always; 2 = most of the time; 3 = occasionally; 4 = rarely; 5 = never
d.	Personnel access and sanitation	What actions are taken by workers to minimize cross contamination between animal groups?	0 = workers handling calves do not handle sick cows, they wash their hands after treating sick calves and clean their boots before entering calf housing areas; 3 = workers handle calves first (before other animal groups) and wear clean boots before entering calf housing areas; 5 = no precautions are taken	0 = extensive precautions; 3 = moderate precautions; 5 = no precautions
e.	Calf housing	What actions are taken to minimize the contact between healthy calves and fecal contamination?	0 = preweaned calves are isolated from contact with other calves (and cows) and housed in hutches that have been appropriately disinfected, weaned calves are free of manure and housed in age appropriate groups; 3 = calves may occasionally contact each other, stalls may be soiled with manure, some group housing is used; pens are cleaned before new calves are added; 5 = calves have contact with adult cows and other calves, manure is not removed from pens before adding new calves, sick calves remain in contact with health calves	0 = extensive; 3 = some; 5 = none

Housing and Environment

a.	Housing of sick & cull cows	Do sick cows have the opportunity to contaminate housing area with manure?	0 = all sick cows and cull cows are isolated from the healthy herd and there is NO opportunity for cross contamination with manure; 5 = manure from some sick and cull cows is sometimes spread throughout the facility; 10 = sick cows remain with healthy cows and their manure is commingled and spread throughout the facility	0 = no; 3 = rarely; 5 = sometimes; 8 = frequently; 10 = always
b.	Maternity pen	How clean and dry is the maternity pen?	0 = bedding in the maternity pen is always dry and free of manure, cows never become soiled with manure, soiled bedding is removed after each calving; 5 = soiled bedding is removed once a day, cows occasionally become soiled with manure; 10 = bedding in the maternity pen is frequently wet and cows are frequently soiled with manure, bedding is changed infrequently and new bedding is supplied 1-2 times a week	0 = always 3 = sometimes 5 = never
c.	Access to birds	Do birds have access to cow housing areas?	0 = no; 1 = occasionally; 2 = always	0 = no; 1 = sometimes 2 = always
d.	Adult cow housing	Does adult cow housing allow cows to remain clean?	0 = <15 % of udder hygiene scores and <25% of leg hygiene scores are "dirty"; 3 = 16-25% of UHS & 26-40% of LHS are "dirty"; 5 = >25% of UHS & >40% of LHS are "dirty"	0 = yes; 3 = usually 5 = no
e.	Premilking cow preparation	Are teats adequately prepared using predipping and forestripping?	0 = premilking cow preparation includes predipping and forestripping; 3 = one of the practices is used; 5 = neither predipping nor forestripping are included in the premilking process	0 = yes; 3 = sometimes; 5 = never

Nutritional Management

a.	Use of animal derived products	How frequently are animal derived products included in diets?	0 = no tallow, no meat, bone meal, poultry waste or blood are used in diets; 3 = occasional use of tallow, blood, poultry waste or porcine derived products; 5 = regular use of animal derived products	0 = never; 3 = sometimes; 5 = regular use
b.	Cleanliness of water sources	Are water sources clean and free of fecal contamination?	0 = all water sources are chlorinated, water tanks are clean and visibly free of fecal contamination, no surface water sources are used; 3 = most water sources are clean and visibly free of fecal contamination, no surface water is used; 5 = water tanks have visible soil and contaminants, surface water may be used in some groups	0 = yes; 3 = some; 5 = none
c.	Feed storage systems	Are feed storage facilities covered and remote from manure storage?	0 = all feed is stored in covered areas far away from manure storage; 2 = most feed is stored in covered areas far away from manure storage; 3 = feed sources are not covered or are stored near manure storage.	0 = all; 2 = some; 3 = little
d.	Feed handling systems	What efforts are made to minimize fecal contamination of foodstuffs?	0 = separate buckets are used to handle manure and feed, farm traffic patterns are designed to prevent fecal contamination of feed bunks; 3 = separate buckets are used but some farm traffic may allow for feed to become cross contaminated with manure; 5 = no effort is made to minimize cross contamination of feed with manure	0 = extensive efforts; 3 = some efforts; 5 = no efforts

Manure Management

a.	Manure handling system in barn	How frequently is manure removed from cow traffic areas?	0 = alleys and holding areas are cleaned frequently each day, manure does not mix between age groups, animals, manure does not accumulate in cow traffic areas; 3 = manure occasionally accumulates in cow traffic areas, some manure mixes between groups; 5 = manure frequently accumulates in cow traffic areas and mixes between age groups	0 = frequently; 3 = occasionally; 5 = rarely
b.	Equipment used to handle manure	What measures are used to minimize fecal contamination of farm equipment?	0 = Manure handling equipment is used exclusively to handle manure and is kept isolated from farm traffic areas; 3 = some' cross contamination occurs; 5 = equipment is used for multiple purposes including manure handling and other farm chores no attempts at minimizing cross contamination are made.	0 = extensive; 3 = some; 5 = none
c.	Manure storage and disposal	How is manure stored and disposed of?	0 = Manure is stored remotely from cattle and no access is possible; 3 = some animals have the opportunity to contact manure from other groups of cattle; 5 = there is extensive opportunity for groups of cows to contact manure.	0 = no access by cattle; 3 = some access; 5 = extensive access

Risks to Workers

a.	Source of milk used for human consumption	Does anyone on the farm drink raw milk?	0 = all milk on the dairy is processed before consumption; 5 = raw milk or raw milk products are occasionally consumed by some people on the dairy; 10 = raw milk is regularly consumed by farm workers or sold to others.	0 = no; 5 = sometimes; 10 = regular consumption
b.	Awareness of disease risks	How many farm workers and visitors are aware of diseases that can be spread by manure?	0 = all farm workers and visitors are aware of the risk of fecal diseases such as Salmonella, cryptosporidiosis, campylobacteriosis, and others; 3= most farm workers and visitors understand the risks; 5 = some farm workers and visitors are aware of the risk of fecal diseases; 8 = few farm workers and visitors understand the risks; 10 = Farm workers and visitors are not aware of the risk of fecal contamination.	0 = all; 3 = most; 5 = some; 8 = few; 10 = none
c.	Cleanliness of hands and clothing of animal handlers	What measures are taken to ensure worker hygiene?	0 = Animal handlers wear protective clothing that is changed after handling sick cows or high risk animals, veterinarians wear clean coveralls on each farm, workers wash hands and clean or change boots before handling healthy cows; 5 = boots are washed or changed but protective clothing is not changed between animal groups; 10 = no measures are taken to minimize fecal contamination of clothing, boots are not changed or washed, veterinarians wear coveralls to several farms.	0 = extensive measures are taken; 5 = some measures are taken; 10 = no measures are taken

“MORE MONEY – “Minimizing Transmission of Fecal Pathogens” Meeting 2

Today’s date: _____ Farm owner _____

Team Members (enter number of team members present at this meeting)

Farm Owner _____ Farm Employees _____ Vet _____ Dairy FR _____ UWEX _____ Other _____

Core Information for last 30 days				
• Number of Animals:				
Dry:	No. cattle	1 st	2 nd +	No. cattle added:
Preg.Heifers:	Heifer Calves	Herd Bulls:		No. cattle culled:
Source of Replacements: Home Other				No. cows died:
				No. Calves died:
• Production Data			• Disease Data	
RHA:		lbs	No. cows treated for mastitis:	
Milk per cow per day:		lbs	No. cows treated for respiratory disease:	
% Fat:	% Protein:	No. cows having diarrhea:		
SCC:	Bacteria:	No. cows aborting:		
• List any important current concerns				No. of Calves treated with antibiotics:
1.				No. Days Milk Withheld for treatment:
2.				No. bulk tank milk samples performed:

• Reviewing Past Performance

Review the Outstanding Actions Plan of the Previous Module – What actions are not yet completed?

Module No.	What actions items remain?	Who was responsible?	Is this issue still important?

• What outstanding actions will be completed before the next module?

Action	What will be done?	Who will be responsible?
1		
2		
3		
4		
5		

• Review the Actions from the Fecal Pathogen Plan

Task Number	What was accomplished?	Who was responsible?
1		
2		
3		
4		
5		
6		

Were the goals of the Animal Care Plan achieved for your farm?

Outcome

Program Goals	Completed	Progress made	No progress	Dropped goal
1.				
2.				
3.				

• List the goals that have not been completed and limitations to completion

	Describe the Goal	Limitations to successful completion
1		
2		
3		
How can the limitations be overcome?		
1		
2		
3		

Future Plans to Control Fecal Pathogens

Will you continue to work on controlling Fecal Pathogens in the future?

Yes No

If yes, list 1 to 6 tasks that will be completed before the next meeting. Make sure to assign a person who will be responsible for each item and a method of determining the outcome.

	What will be done?	Who will be responsible?	Target Date to Assess results
1			
2			
3			
4			
5			
6			

Reassess your team dynamics.

Has this module been useful? Yes No

The next module is : **Selling Healthy Market Cattle**

When and where is the next meeting?

DATE: _____ Location: _____

Is there anything that needs to be brought to the next meeting (i.e. records, people)?

Yes No

“MORE MONEY – “Marketing Healthy Cattle” Meeting 1

Meeting one date: _____ Farm owner _____

Team Members (enter number of team members present at this meeting)

____ Farm Owner ____ Farm Employees ____ Vet ____ Dairy FR ____ UWEX ____ Other _____

Core Information for last 30 days				
• Number of Animals:				
Dry:	No. cattle	1 st	2 nd +	No. cattle added:
Preg.Heifers:	Heifer Calves	Herd Bulls:		No. cattle culled:
Source of Replacements: Home Other				No. cows died:
				No. Calves died:
• Production Data			• Disease Data	
RHA:	lbs		No. cows treated for mastitis:	
Milk per cow per day:	lbs		No. cows treated for respiratory disease:	
% Fat:	% Protein:		No. cows having diarrhea:	
SCC:	Bacteria:		No. cows aborting:	
• List any important current concerns			No. of Calves treated with antibiotics:	
1.			No. Days Milk Withheld for treatment:	
2.			No. bulk tank milk samples performed:	

• Reviewing Past Performance

Review the Action Plan of Previous Modules – What actions are not yet completed?

Module No.	What actions items remain?	Who was responsible?	Is this issue still important?

• What outstanding actions will be completed before the next module?

Action	What will be done?	Who will be responsible?
1		
2		
3		

- Fill out the Market Cattle Assessment Checklist and Discuss it with your management team.**

Market Cattle Management Goals

Based on the risk assessment, List no more than 3 goals that address the concerns you identified and the target dates for completion.

	Describe the goal	Target date to complete the goal
1		
2		
3		

Market Cattle Plan

Select the most critical actions from the table above that you will complete before the next meeting. Include who will be responsible for each action to be completed before the next meeting.

Action	What will be done?	How will the results be evaluated?	Who will be responsible?
1			
2			
3			
4			
5			
6			

Schedule Market Cattle Assessment Meeting 2

DATE: _____ Time: _____ Location: _____

Is there anything that needs to be brought to the next meeting (i.e. records, people)? Yes No

If Yes, who is responsible? _____

Notes:

Risk	Max. Score	Herd	Comments
Farm History & Knowledge of Dairy Beef Markets (15%)			
a. Farm history of condemnation	5		
b. Knowledge of dairy beef value	5		
c. Knowledge of dairy beef markets	5		
Risk subtotal	15		
Prevention of Carcass Residues (25%)			
a. Animal ID	5		
b. Treatment records	5		
c. Dry cow management	5		
d. Calf practices	5		
e. Drug usage	5		
Risk subtotal	25		
Prevention of Carcass Defects (25%)			
a. Injection site knowledge	5		
b. Injection site practices	10		
c. Cattle handling	5		
d. Cattle housing	5		
e. Cleanliness of market cattle	5		
Risk subtotal	25		
Marketing Healthy Cattle (25%)			
a. Physical exam of market cattle	10		
b. Knowledge of condemnation risks	5		
c. BCS	5		
d. Neurological risks	5		
Risk subtotal	25		
Market Cattle Plan (10%)			
a. Feeding thin cows	5		
b. Dairy beef production certification	5		
Risk Subtotal	10		

Farm History & Knowledge of Dairy Beef Markets (15%)				
a.	Farm History of Condemnation	How frequently have carcasses from your farm been condemned at slaughter?	0 = never or > 5 years ago; 2 –very rarely & only on postmortem exam; 3 = – rarely & only on post-mortem exam; 4 = occasionally – antemortem or postmortem exam; 5 = yes – multiple times per year, both antemortem and postmortem exam	0 = never; 3 = rarely; 5 = multiple times a year
b.	Knowledge of dairy beef value.	Rate your knowledge of dairy beef by answering the following true or false questions.	<ol style="list-style-type: none"> 1. Dairy beef is used only for ground beef <false – dairy beef is also used for steaks in mid-priced restaurants and for precooked beef entrees> 2. Dairy beef makes up 15-20% of daily beef production <True>. 3. Market cows can supply up to 15% of total cash returns for a dairy <True – assuming 30% cull rate> 	0 – all 3 correct 3 – 2 wrong 5 – all wrong
c.	Knowledge of dairy beef markets.	When are market cow prices usually highest and lowest?	Market cow prices are usually lowest in Oct-Dec and highest in Mar-Apr).	0 – both lowest and highest were correct 3 – lowest or highest incorrect 5 – both incorrect

Prevention of Carcass Residues (25%)				
a.	Animal ID	Are all animal individually identified?	0 = yes; 3 = some; 5 = none	
b.	Treatment records	Are permanent treatment records maintained on all cattle & checked before shipment?	0 = yes; 2 = for most treatments; 3 = some treatments are recorded; 4 = occasionally recorded; 5 = never	
c.	Dry Cow Management	When dry cows or fresh cows require shipment are treatment records checked?	0 = always; 2 = usually; 3 = sometimes; 4 = rarely; 5 = never	
d.	Male Calf Practices	Do male calves receive hospital milk or medicated milk replacer?	0 = never or not applicable; 3 = yes but calves have ID & appropriate withdrawal times are maintained; 5 = no ID on male calves and no records of consumption	
e.	Drug usage	How is extralabel drug usage monitored to prevent carcass residues?	0 = extralabel drugs are never used; 2 = all extralabel drug usage is under supervision of a licensed veterinarian & products have labeled withdrawal periods, no extended withdrawal products (aminoglycosides) are used; 3 = extralabel drugs are under supervision; but some extended withdrawal products are used; 4 = some extralabel usage is not supervised by a licensed veterinarian; 5 = uncontrolled drug usage	

Prevention of Carcass Defects (25%)

a.	Injection site knowledge	What site should be used for all IM injections?	0 = neck for all cattle; 5 = other	
b.	Injection site practices	Describe the injection practices (site, needle gauge and frequency of changing, volume given in 1 location) used on your dairy	0 = injections are given subcutaneously if possible, IM injections are given in neck for all ages of cattle, 16-18 gauge ½ -1.5” needles used, needles are changed ever 10 animals, no more than 10 cc are given in any one site; 5 = whole muscle cuts are used for occasional injections, needles are changed infrequently; up to 20 cc may be given in 1 site; 10 = few subcutaneous injections are given, most IM injections are given in whole muscles	
d.	Cattle handling	Cattle are loaded onto trucks humanely to avoid bruising.	0 = Employees are trained to move and load cattle, no electric prods are used, the loading area in brightly lit and solid walls are used for loading chutes and ramps, animals rarely fall when loading; 3 = no training, electric prods are sometimes used, walls may not be solid; 5 = no training, frequent use of electric prods, dark areas for loading and animals often fall when loading.	
e.	Cattle housing	Housing of market cattle prevents bruising.	0 = market animals are housed in comfortable housing with good footing. 3 = market animals are housed in areas that are sometimes uncomfortable and with some areas of poor footing; 5 = housing for cull animals is not comfortable and animals lie on concrete and often slip	
f.	Cleanliness of market cattle	Are cull animals clean when loaded?	0 = all market animals are visually examined before or during loading to ensure minimal manure contamination; 3 = some animals may be covered with manure; 5 = market cattle are usually dirty after loading	

Marketing Healthy Cattle (25%)

a.	Physical exam of market cattle	How are animals examined before loading for sale?	0 = all market cattle are examined for fever, lameness, cancer eye, swollen lymph nodes, bruising, and general illness, animals with disorders are not shipped; 5 = some animals are visually examined, most do not receive physical exams, some sick cows are shipped; 10 = sick cows are routinely shipped, animals are not examined before shipment	
b.	Knowledge of condemnation risks	What are the top 4 reasons dairy cows are condemned?	0 = low BCS (<2.0), lameness, mastitis or swollen udders, tissue knots or abscesses	
c.	BCS	What is the usual BCS of your market cattle?	0 = all cattle are 2.5-4.0 BCS when shipped; 3 = some cattle are thinner than 2.5 or fatter than 4.0 when shipped; 5 = most cattle are thinner than 2.5 or fatter than 4.0 when shipped	
d.	Neurological risks	How frequently do you send cows with neurological symptoms to market?	0 = never, 3= sometimes; 5= frequently.	

Market Cattle Plan				
a.	Feeding thin cows	Do you ever dry off and feed thin market cattle to increase their value?	0 = yes, most thin market cattle are fed to increase value; 3 = some thin market cattle are fed; 5 = no thin market cattle are dried off and fed	
b.	Dairy beef production certification	Have you completed the dairy beef certification course? www.dairybeef.ucdavis.edu	0 = yes, 5 = no	

“MORE MONEY – “Marketing Healthy Cattle” Meeting 2

Today's date: _____ Farm owner _____

Team Members (enter number of team members present at this meeting)

___ Farm Owner ___ Farm Employees ___ Vet ___ Dairy FR ___ UWEX ___ Other _____

Core Information for last 30 days				
• Number of Animals:				
Dry:	No. cattle	1 st	2 nd +	No. cattle added:
Preg.Heifers:	Heifer Calves	Herd Bulls:		No. cattle culled:
Source of Replacements: Home Other				No. cows died:
				No. Calves died:
• Production Data			• Disease Data	
RHA:	lbs		No. cows treated for mastitis:	
Milk per cow per day:	lbs		No. cows treated for respiratory disease:	
% Fat:	% Protein:		No. cows with diarrhea:	
SCC:	Bacteria:		No. cows aborting:	
• List any important current concerns				No. of Calves treated with antibiotics:
1.				No. Days Milk Withheld for treatment:
2.				No. bulk tank milk samples performed:

• Reviewing Past Performance

Review the Outstanding Actions Plan of The Previous Module – What actions remain?

Module No.	What actions items remain?	Who was responsible?	Is this issue still important?

• What outstanding actions will be completed in the future?

Action	What will be done?	Who will be responsible?
1		
2		
3		
4		
5		

• Review the Actions from the Market Cattle Plan

Task Number	What was accomplished?	Who was responsible?
1		
2		
3		
4		
5		
6		

Were the goals of the Market Cattle Plan achieved for your farm?

Program Goals	Outcome			
	Completed	Progress made	No progress	Dropped goal
1.				
2.				
3.				

List the goals that have not been completed and limitations to completion

	Describe the Goal	Limitations to successful completion
1		
2		
3		
How can the limitations be overcome?		
1		
2		
3		

Reassess your team dynamics.

Has this module been useful? Yes No

Future Plans

Do you need to continue to improve management of the following issues?

- 1. Biosecurity Yes No
- 2. Antibiotic usage Yes No
- 3. Control of Johne’s disease Yes No
- 4. Animal well-being and care Yes No
- 5. Fecal pathogens and human health Yes No
- 6. Marketing healthy cattle Yes No

When will you meeting again with your management team?

Don’t know _____

1-2 months – DATE: _____

3-4 months – DATE: _____

In the future: _____

We won’t meet again _____

If you are meeting again, list 1 to 6 tasks that will be completed before the next meeting. Make sure to assign a person who will be responsible for each item and a method of determining the outcome.

	What will be done?	Who will be responsible?	Target Date to Assess results
1			
2			
3			
4			
5			
6			

When and where is the next meeting?

DATE: _____ Location: _____

Is there anything that needs to be brought to the next meeting (i.e. records, people)?

Yes No