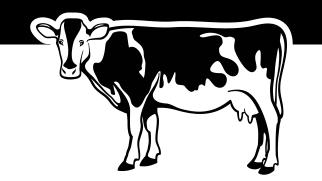


ANIMAL CARE PROTOCOL RECORD KEEPING BOOK



Compiled for Pennsylvania dairy farm families by:



Dairy EXCELLENCE

Veterinarian Review Sign-Off year ____/___/

FACILITY INFORMATION		
Facility Contact		
Name	 Phone	
Facility Location		
Facility Name	 	
Address	 	
City		
VETERINARIAN INFORMATION		
Veterinarian		
Name	 Phone	
Clinic		
Name	 	
Address	 	
City		
HERD HEALTH PLAN		
Signature	 Date	
DRUG TREATMENT RECORDS		
Signature	Date	

VETERINARIAN-CLIENT-PATIENT RELATIONSHIP

I hereby certify that a valid Veterinarian-Client-Patient Relationship (VCPR) is established for the above listed owner and will remain in force until canceled by either party.

"Upon execution of this Agreement and the establishment of the VCPR, Producer, on behalf of himself and his present or past legal representatives, predecessors, successors, assigns, agents and heirs, hereby releases and forever discharges Veterinarian from any and all claims, actions, disputes, damages or demands, at law or in equity, that Producer could or may bring in regard to Producer's participation in, or disqualification from the FARM program. Producer expressly waives any right or claim of right to assert here after that any claim in such regard has through ignorarice, oversight or error, been omitted from the terms of this Agreement."

"In addition, upon execution of this Aareement and the establishment of the VCPR, FARM, on behalf of itself and its present or past legal representatives, predecessors, successors, assigns, agents and affiliates, hereby releases and forever discharges Veterinarian from any and all claims, actions, disputes, damages or demands, at law or in equity, that FARM could or may bring in regard to Veterinarian's participation in the VCPR; or Producer's participation in, or disqualification from the FARM program.

FARM expressly waives any right or claim of right to assert hereafter that any claim in such regard has through ignorance, oversight or error, been omitted from the terms of this Aareement."

Veterinarian

Signature _____

Date

Facility Representative

Signature _____ Date _____

Background on National FARM Program



Open to all U.S. dairy farmers, co-ops and processors, the National Dairy FARM (Farmers Assuring Responsible Management) Program works with dairy farmers, the producer community and industry partners to show customers and consumers that the dairy industry is taking the very best care of cows and the environment, producing safe, wholesome milk and adhering to the highest standards of workforce development.

Created by the National Milk Producers Federation in partnership with Dairy Management Inc., FARM helps ensure the success of the entire industry by demonstrating that U.S. dairy farmers are committed to producing the best milk with integrity. Most of the milk handlers, including dairy cooperatives and independent processors, in Pennsylvania require the dairy farm families supplying their markets to participate in the National FARM Program.

The program includes four program "areas" which it uses to work with dairy farmers, cooperatives, processors, and industry partners to hold the industry to the highest standards. Those four silos are Animal Care, Environmental Stewardship, Antibiotic Stewardship, and Workforce Development. The Animal Care Program is the cornerstone FARM Program in which all dairy farm families are required to participate.

The FARM Program provides best practices that farmers must follow for every cow and calf on the farm. Those practices are outlined in the SOP sections of this book. The FARM Program also includes on-farm evaluations by trained evaluators and third-party verification by a qualified third-party entity who evaluates a statistically significant percentage of farms each year to ensure the integrity of the program.

Participation in the National FARM Program requires a close relationship with your veterinarian and stewardship and education of your employees, both those who are family and non-family. It also requires you to keep records of the treatments you are administering to your herd to ensure protocols are being followed and any withdrawal periods are met. More information about the National FARM Program can be found at nationaldairyfarm.com. You should also contact your cooperative or milk handler representative to learn more about the program and its expectations for your farm.

- How to Use This Book

This book was compiled by the Center for Dairy Excellence, using resources from the National FARM Program, AllTech, the American Association of Bovine Practitioners, Mid-Maryland Dairy Veterinarians and Valley Mobile Veterinary Services. Its intent is to help Pennsylvania dairy farm families comply with National FARM requirements associated with record keeping. One book should cover one program year, with another book started for each additional program year.

- 1. On the front cover of the book is the Veterinarian Client Patient Relationship Agreement form which every farm must complete to comply with National FARM guidelines. Every farm must have this form completed by their veterinarian each year to be in compliance. Completing the form on the front cover of this book meets that requirement.
- 2. Examples of SOPs (standard operating protocols) for areas associated with the National FARM Program are included on the top pages. Please note, these are intended to serve as examples only and do not alone satisfy FARM standards. Along with these examples are blank spaces for you to fill in specific protocols for your farm after consulting with your veterinarian. You must clearly outline the specific protocol you follow in each area to comply with FARM requirements. The person assigned to be responsible for each herd management area should add their name and signature to the page of that respective protocol area.
- 3. On page 3 is information regarding training family and non-family employees on animal care practices. Farm families should read over this area and request additional papers from their cooperative or milk handler if they do not have enough space in the section to include all employees. Fact sheets and other resources, including training videos, can also be found in the Training Resources and Education Library of the National FARM website at nationaldairyfarm.com.
- 4. The bottom pages are intended for dairy farm families to record daily medicine usage. The FARM 4.0 guidelines require all farms to have written records of the medicine they administer to animals in their dairy herd. This log is modeled after the Daily Treatment Sheet provided by the National FARM Program. You can transfer the information to individual animal records that are kept either manually or through a computer -based system.

Completing all the sections of this book can help you comply with National FARM requirements. You can share this with your FARM evaluator when they visit your farm.



The National FARM Program requires that all farm employees sign a Dairy Cattle Care and Ethics Agreement annually. Any family or non-family employee with stockmanship, calf care, non-ambulatory, euthanasia or fitness to transport animal care responsibilities needs a training record for those specific responsibilities. Below are forms for four employees to sign the agreement and acknowledge trainings they have received. For additional employees, either copy this page or download the "Dairy Animal Care and Ethics Agreement and Training" template found at nationaldairyfarm.com.

Employee 1	Employee 2	Employee 3	Employee 4
EMPLOYEE NAME	EMPLOYEE NAME	EMPLOYEE NAME	EMPLOYEE NAME
FARM NAME <u>DAIRY CATTLE CARE ETHICS AGREEMENT</u> "I confirm my commitment to the highest standards of animal care by hereby agreeing that proper animal care is the responsibility of every individual who is around animals, including me. I understand that animal abuse, neglect, harm and mishandling are unacceptable and will not be tolerated. I will immediately report any signs of deliberate animal abuse, neglect, harm or mishandling to a supervisor or other individual(s) responsible for enforcement of proper animal care."	FARM NAME <u>DAIRY CATTLE CARE ETHICS AGREEMENT</u> "I confirm my commitment to the highest standards of animal care by hereby agreeing that proper animal care is the responsibility of every individual who is around animals, including me. I understand that animal abuse, neglect, harm and mishandling are unacceptable and will not be tolerated. I will immediately report any signs of deliberate animal abuse, neglect, harm or mishandling to a supervisor or other individual(s) responsible for enforcement of proper animal care."	FARM NAME <u>DAIRY CATTLE CARE ETHICS AGREEMENT</u> "I confirm my commitment to the highest standards of animal care by hereby agreeing that proper animal care is the responsibility of every individual who is around animals, including me. I understand that animal abuse, neglect, harm and mishandling are unacceptable and will not be tolerated. I will immediately report any signs of deliberate animal abuse, neglect, harm or mishandling to a supervisor or other individual(s) responsible for enforcement of proper animal care."	FARM NAME DAIRY CATTLE CARE ETHICS AGREEMENT "I confirm my commitment to the highest standards of animal care by hereby agreeing that proper animal care is the responsibility of every individual who is around animals, including me. I understand that animal abuse, neglect, harm and mishandling are unacceptable and will not be tolerated. I will immediately report any signs of deliberate animal abuse, neglect, harm or mishandling to a supervisor or other individual(s) responsible for enforcement of proper animal care." SIGNATURE
DATE: ///	DATE: //	DATE: / / / / / DAIRY CATTLE CARE TRAINING RECORD DESCRIPTION OF TRAINING:	DATE: /
SIGNATURE DATE://	SIGNATURE DATE://	SIGNATURE DATE: / DESCRIPTION OF TRAINING:	SIGNATURE DATE://
SIGNATURE DATE://	SIGNATURE DATE://	SIGNATURE DATE://////	SIGNATURE DATE: // Description of training:
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SIGNATURE///	SIGNATURE DATE://	SIGNATURE///	SIGNATURE//

1

THE BOVINE PHYSICAL EXAM – ABNORMAL OBSERVATIONS

- Both the National FARM and Dairy Quality Assurance Programs are focused on ensuring dairy cattle are maintained in a manner resulting in safe products for the consumers.
- These guidelines are intended to ensure proper administration of medicine, which will prevent residues and carcass defects (bruises)

- When Treating Animals

Important Things to Remember:

- Injection site location
 - Always give medicine in the neck,
 - in front of the shoulder SQ and IM
- This includes hormones too
 - DO NOT INJECT MORE THAN 10 CC
 PER INJECTION SITE
- More than 10 cc of any drug can extend the meat withhold and cause residues
- Consider needle size
- Use 18-gauge needles (green) for SQ and IM injections with thin fluids
- Use 18-gauge needles for calves (regardless of viscosity of fluids!)
- Use 16-gauge needles (white) for SQ and IM injections with thick fluids
- Oxytetracycline, Excenel, Penicillin
 - Use 14-gauge needles (brown) for IV injections
- Change needles after every cow
 - Prevents dullness and burrs on needles
 - Ensures cleanliness on injection site
 - Prevents disease spreading
 - Don't put a used needle back into product bottle
- Use disposable syringes
 - Do not disinfectant (alcohol, bleach) this will neutralize and destroy vaccines, making ineffective
- Record the following information
 - Animal identification
 - Date of treatment
 - Drug used (serial number and expiration date optional)
 - Amount used
 - Location of injections (and amount in each site)
 - Milk and Meat withhold

HEAD

- General attitude droopy ears, eyes sunk in
- Odor of breath sweet, rotten
- Swellings around jaw, neck, brisket, joints

RECTAL TEMPERATURE

- Normal temperature 101.5-102.5
 - Varies with time of day (morning is more accurate) and outdoor temperature (falsely elevated in summer when hot outside or in sun)
 - Increases with stress or exercise (getting the cow up or agitated)

HEART AND LUNGS

- Heart rate and character
 - Normal heart rate 48-80 beats per minute (average 60)
- Breathing rate and character
 - Normal respiratory rate 24-48 (average 30)
 - Nasal discharge, coughs, panting, forceful breaths
- Abdominal pain
 - Withers pinch/grunt Push down hard on the cow's withers
 - o Cow will bend backbone if no pain
 - o Cow will not bend backbone or will grunt
 - if painful
 - o While pinching withers, check for air under skin
 - Stiff walk

GASTROINTESTINAL TRACT – stomachs and intestines

- Pings (note side, size) can indicate a LDA, RDA/RTA, normal gas in intestines, cecal torsion
- Lack of rumen fill left side and flank sunken
- Lack of rumination OR cud chewing
- Manure diarrhea, absent, dry, bloody, mucus
- Rumen bloat

UDDER

- The quarter hardness, redness, swelling, heat, edema, painful to touch, gangrenous (black and blue)
- The milk flakes, clots, stringy, watery, bloody, CMT results
- Regional lymph nodes swelling
 - Two lymph nodes located at top of rear quarters

OVARIES AND UTERUS

- Vulvar swellings and/or tears
- Vaginal/uterine discharge odor, consistency
- Retained placenta
- Cycling information last heat cycle, breeding date

FEET/LEGS

• Lameness, swellings, ulcers/abscesses

TRAINED PERSON (SIGNATURE)

(DATE)

2

Farm Name:

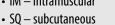
Veterinarian: _

Veterinarian Phone Number:

Cow ID	Time of 1	freatment	Pen	Condition		Tre	atmen	t Plan		Withd		Calcu	lated	Actual Date and	Remarks
	Date	Time		Treated	Treatment	Dosage	Route of Admin.	Frequency of Treatment	Duration of Treatment	Tin Milk (Hours)	ne Meat (Days)	Period	lrawal Expires Meat	Time in Tank	Example: initials of person treating or testing
1234	4/15/20	8:00 AM	1	Mild Mastitis	Oxytocin	2cc	lm	every milking	4 Milkings	0 hrs	0 days				
4321	4/1/20	11:00 AM	3	Mastitis w/ Hard Quarter	Pirsue	l tube/ quarter	IMM	every 24 hours	2 days	36 hrs	9 days	4/3/20 PM	4/10/20	AM on 4/5/20	
1428	4/1/20	1:45 PM	4	Dry treat	Tomorrow	l tube/ quarter	IMM	once at dry off	Once	72 hrs	42 days	4/4/20 PM	5/16/20	AM on 5/17//20	

ABBREVIATIONS FOR TYPES OF APPLICATIONS: • Add three bullets: • IM – intramuscular

• IV – intravenous



EXAMPLE CALF CARE PROTOCOLS

NEWBORN CALF CARE

Move to individual clean dry pen

• Provide ample bedding, and ensure bedding is always clean and dry.

Dip navel with 7% lodine

• DO NOT use teat dip – the emollients actually promote bacteria growth in the umbilical cord Give 4 quarts of good quality colostrum within the first 6 hours of life (ideally as soon as possible)

- Can use frozen colostrum from another cow thaw in hot water
- Can use powdered colostrum follow bag instructions for mixing
- Using a Brix refractometer can ensure high levels of antibodies in the colostrum

Recommended Vaccines at birth

- Give an oral product containing *E.coli* and *Clostridium* antibodies (ex. Bovine E.colizer + C from Novartis)
- Give an oral product containing *Rota Virus* and *Corona Virus* antibodies (ex. Calf Guard from Pfizer) 30 minutes prior to feeding colostrum!
- Give an intranasal product containing *Bovine Rhinotracheitis* and *Parainfluenza Virus* and *Bovine Respiratory Synctial Virus* antibodies (ex. Inforce -3 from Zoetis)
- Place a clean calf blanket on the calf as soon as possible in temperatures under 50 degrees F. • Do not take calf blankets on and off. It is best to leave the blankets on through weaning depending the second
- on temperatures.

Identify calf with permanent identification!!

Begin providing grain and water within first 3 days of life

– Disbudding Procedures –

- Your veterinarian should work with you to develop written protocols for disbudding that work best within their farm management system.
- Disbudding should be completed when the calf is young and should be performed at the youngest
 age possible. Debudding should be completed within the first 8 weeks of life.
- Acceptable methods for disbudding include application of caustic paste or an electric/gas iron to destroy the horn producing corium.
- The application of local anesthetics to minimize the need for excessive restraint should be utilized, based on what your veterinarian recommends.
- The use of caustic paste is less effective and discouraged after the calf is 2 weeks of age and ideally should be applied within the first few days of life.

WEANING/POST-WEANING CARE

Weaning

- Calves should be weaned no earlier than 4 weeks.
- The best indicator for weaning is a measure of grain intake by the calf.
- Wean calf when she eats 2-3 pounds of grain per day for 7 days.
- Do not give any vaccines between 3-5 weeks of age they may not be effective!

Disbud, Inspect navel for any issues, and check for extra teats

SPECIFIC CALF CARE PROTOCOLS:

r + C from Novartis)	Colostrum Mana	gement: How Muc	h:	Dottle	🗆 Esophageal Feeder
d from Pfizer)		How soor	after birth:		
	Method for Movi	ng Calf to Hutch:	Carrying	□ Walking	□ Vehicle
and	Other Protocols	Associated with Ne	wborn:		
degrees F.					
ing depending	Permanent ID:	Plastic tag	🗆 Metal tag	🗆 RFID	
	Milk Feeding:	□ Milk □ Mill	k Replacer		
		How Much:	How Ofte	en:	
	Feed and Water	Provided by Day 3:	How Much Feed	l:	
J that work					prior to use to ensure
at the voungest		e. The fron should b tion of skin and hor		norn bud until a	copper ring is visualized

- Fly spray will be applied during fly season. Waiting until after fly season is over is not an acceptable reason to delay disbudding.
- Calves should be restrained for disbudding in a way that minimizes stress and the risk of injury to the animal and the operator. Employees should be trained on safe, low stress handling and be provided the time and resources necessary to achieve this type of handling.
- The use of a squeeze chute, tilt table, calf cart or halter may accomplish proper head restraint.

PERSON RESPONSIBLE

4

SPECIFIC DISBUDDING PROTOCOLS:

lype of pa	in medici	ne used:													
Method o	f Disbuddi	ing:													
Age at Dis	budding:		Pe	erson Responsi	ble:										
Farm Name: Veterinarian: Veterinarian: Veterinarian Phone Number:															
Cow ID	Time of 1	Treatment	Condition		Tre	atment	Plan		Withd			lated	Actual Date and	Remarks	
	Date	Time		Treated	Treatment	Dosage	Route of	Frequency of	Duration of	Tin Milk	ne Meat	N · I	lrawal Expires	Time in Tank	Example: initials of person
							Admin.	Treatment	Treatment				Meat		treating or testing

EXAMPLES OF VACCINATION AND PREVENTATIVE TREATMENT PROTOCOLS

A vaccination program is something developed specifically for each dairy farm. You should work with your veterinarian to determine what the vaccination program for your dairy cows and heifers should be. Below are general recommendations regarding vaccinations.

HEIFERS 4 - 12 MONTHS

- There are many vaccine products available. Whatever you choose, it should include protection for IBR, BVDV Type 1, BVDV Type II, BRSV, PI3, 5-Way Lepto.
- These vaccines are often referred to as 9-way or 10-way products.
- Other vaccines available include Lepto hardjo, H. somnus, Clostridium products
- Modified-live vaccines must be used the day they are mixed together
- A booster should be given 4 weeks after initial vaccine.

YEARLING HEIFER CARE

- Vaccinations
 - Booster protection for respiratory/abortion diseases
 - o Should include some form of protection for *IBR*, *BVDV Type I*, *BVDV Type II*, *BRSV*, *PI3*, *5-way Lepto*, *H. somnus*
 - o Other vaccines available include Lepto hardjo, Staphylococcus aureus
 - Monitor weight and height growth

COW CARE

- Vaccinations
 - Booster protection for respiratory/abortion diseases annually
 - o Should include some form of protection for *IBR*, *BVDV Type I*, *BVDV Type II*, *BRSV*, *PI3*, *5-way Lepto*, *H. somnus*
 - o Some modified-live vaccines can be used in pregnant cows follow label directions
 - Other vaccines available include *Lepto hardjo, Neospora caninum, Foot rot, Staph aureus* mastitis, *Mycoplasma*, and others
- Trim feet 1-2 times per year

DRY COW/HEIFER CARE

- Dry-treat all 4 quarters of the udder 45-60 days prior to calving date
 - Examples of products labeled for dry-cow treatment include Spectramast-DC, Quartermaster, Cefa-dry/Tomorrow, Orbenin DC. Consult Veterinarian to Identify Best Option for Your Farm.
- Teat sealant products are available to help prevent mastitis exposure (ex. Orbeseal)
- Vaccinations
 - Use a product to help prevent E.coli (coliform) mastitis
 - o Follow the label instructions some include 2-3 doses every 3 weeks (ex. J-5 from Pfizer)
 - Use a product to help with scour prevention in calves (ex. Scour Bos, Novartis)

General Vaccine Information

- There are many vaccination programs available. Each farm should have a program tailored to their individual farm operation. Such programs should have a basic vaccination program and additional specific vaccines for specific problems diagnosed on each individual farm. Speak to your veterinarian about specific programs.
- There are many good vaccines on the market. The examples provided are only suggestions and many others are available!
- Handle vaccines with care. Keep vaccines refrigerated (not frozen)
- Follow label directions.
- If you are raising bulls for bull studs, DO NOT vaccinate unless the stud requests specific vaccines. Keep the bulls isolated so that they are not exposed to other animals.

		SPECIFIC HERD VACCINATION	I PLAN	
	Age	Product	Dosage	Meat Withhold
Calves				
Heifers				
Cows				
	1	1	1	1

TRAINED PERSON (SIGNATURE)

(DATE)

Farm Name:

Veterinarian:

Veterinarian Phone Number:

Cow ID	Time of 1	reatment	Pen	Condition		Tre	atment	t Plan					lated	Actual Date and	Remarks
	Date	Time		Treated	Treatment	Dosage	Route of Admin.	Frequency of Treatment	of	Milk	Meat	Period	lrawal Expires Meat	Time in Tank	Example: initials of person treating or testing
							Aumm.	meatment	Treatment	(nours)	(Duys)	MIIK	Meal		

6

EXAMPLES OF CALVING AND TRANSITION COW CARE

STAGES OF CALVING

Stage 1. Preparatory (Two to six hours)

The cervix dilates. The cow beings to "nest." The water sac will rupture at the end of this stage.

What you can do

- 1. Ensure a clean, dry maternity pen check progress frequently.
- 2. Do not move the cow as it gets close to her calving date

Stage 2. Delivery (One hour or less)

The calf enters the birth canal. The cow has abdominal contractions and pushes.

What you can do

- 1. Reach into cow to assess progress
 - a. Clean the vulva with warm water and soap
 - b. Use a clean rectal sleeve and lots of lubricant
- 2. Determine the position and presentation of the calf and adjust if possible a. Front legs with feet pads down and head present *Normal*
 - b. Front legs with no head
 - i. Do not pull until the head is up with the legs
 - c. Back legs and tail with feet pads pointed up i. Calf can be pulled this way
- Clean off the newborn calf's nose. Thump on its chest to stimulate breathing. Sit the calf up to ease breathing and to cough out fluid.
- a. Dip navel in 7% Tincture of lodine (Do not use teat dip!)
- **4. CHECK FOR A TWIN CALF!!!** Re-clean vulva and reach back in to check! a. Most breech calvings (backwards calf) will have a twin calf!
- 5. Evaluate Cow immediately post-calving
- a. Check vulva and uterus for tears
- b. Try to get cow up and standing shortly after calving
- 6. Consider Support Therapies for Difficult Calving
 - Consult Your Veterinarian to discuss specific treatment protocols

When to call the veterinarian

1. Calf is in a presentation that you are unable to manipulate and pull after approximately 1.5 hours

- 2. Cow is in active labor for more than two to three hours
- 3. Cow is in active labor but is not advancing (no calf present)

TRAINED PERSON (SIGNATURE)

(DATE)

8

Farm Name:

Veterinarian:

Veterinarian Phone Number: _

Cow ID	Time of 1	freatment	Pen	Condition		Tre	atmen	t Plan		Withd			lated	Actual Date and	Remarks
	Date	Time		Treated	Treatment	Dosage	Route of	Frequency of	of	Milk	ne Meat	Period	rawal Expires	Time in Tank	Example: initials of person treating or testing
					ļ		Admin.	Treatment	Treatment	(Hours)	(Days)	Milk	Meat		treating or testing



- b. Dystocia with assistance grade dystocia on a 1-5 scale (5 = difficult)
- c. Record any medicine adminstered.

Stage 3. Cleaning (two to twelve hours)

The placenta is considered retained after 12 hours.

1. Record the calving in a record book

Stage 4. Post-Partum Cows

a. Single or twins

The placenta/afterbirth is expelled.

What you can do

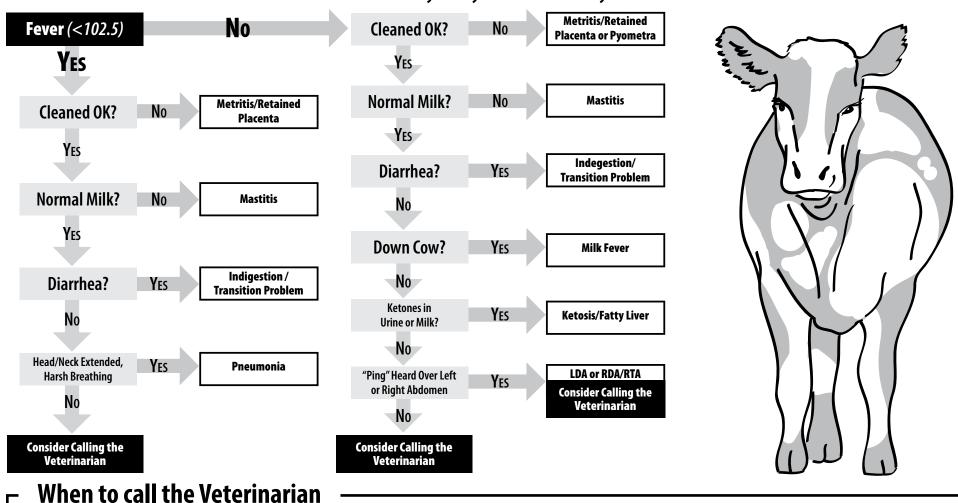
What vou can do

- 1. Follow Fresh Cow Record Sheet and Flow Sheet for Disease Guidelines
- 2. Monitor and Record her temperature 1-2 times per day for the first 10 days after calving.
- 3. Monitor her attitude, appetite, milk production, and manure
- 4. Call the veterinarian is she is very sick or treatments are not working!

SPECIFIC HERD PROTOCOLS ON CALVING AND TRANSITION COW CARE: _

Fresh Cow Flow Sheet

- Provided by Valley Mobile Veterinary Service



Call the vet if...

- You have never seen a disease like this before, or if this looks like a disease you are used to dealing with but this case is much worse than you have experienced before.
- You have treated the cow according to the written health protocols but she has not improved.
- The treatment protocol for that specific disease leads you to a point where it recommends calling in the veterinarian.
- You are uncertain whether to euthanize or not.

When contacting the vet, have available...

- Approximate age (lactation number), days in milk or days since calving, open or pregnant (and how far along)
- Last few milk weights
- History of problem
- What she is doing now chewing cud, acting painful, down, breathing hard, etc.
- Current rectal temperature
- What have you done so far treatments, procedures, etc

10

Farm Name:

Veterinarian:

Veterinarian Phone Number:

Cow ID	Time of	Treatment	Pen	Condition		Tre	atmen	t Plan					lated	Actual Date and	Remarks
	Date	Time		Treated	Treatment	Dosage	Route of Admin.	Frequency of Treatment	of	Milk	Meat	Period	rawal Expires	Time in Tank	Example: initials of person treating or testing
							Aumm.	meatment	Treatment	(Hours)	(Duys)	MIIK	Meal		

GUIDELINES FOR TROUBLESHOOTING COMMON ILLNESSES

HYPOCALCEMIA/MILK FEVER

How to Recognize

- Down cow just fresh, may have head tucked into flank
- Cold ears, subnormal temperature
- Staggering cow unsteady on her feet
- Measure urine pH within 48 hours prior to calving (pH strips) • Urine pH > 8.5 has almost a 100% chance of developing milk fever

Pre-Treatment

Down cow

• Take a sample of blood, place in a red top tube, place in a refrigerator

Treatment (Discuss with veterinarian)

Weak/staggering cow

KETOSIS/FATTY LIVER

How to Recognize

- Cow 1-2 weeks fresh, can be up to 6 weeks fresh
 Initial high milk production with a gradual decrease in milk production
- Possibly overweight but losing weight, off-feed, dull and lethargic
- Ketone odor on breath, urine, milk
 - o Use urine keto-sticks or milk ketone powder to determine severity of ketosis (dark purple in 10 seconds = ketosis)
- o Sweet smelling breath
- May stagger, show bizarre behavior
- May lead to a LDA/RDA, so treat early and aggressively!

Pre-Treatment

• Take a sample of blood, place in a red top tube, place in a refrigerator

Treatment (Discuss with veterinarian)

• **Supportive therapy** (*Discuss with veterinarian*)

- Positive response to treatment
 - o Belching, cow moves her head
 - o More regular heart rate and breathing rhythm
 - o Muscle tremors, Defecation/urination or tail twitching
 - o Standing up

When to Call Veterinarian

- Down cow and unable to get a vein for IV Calcium treatment
- Cow does not respond within several hours after IV Calcium treatment
- Down cow has been treated with IV Calcium 2-3 times and cow is still down

- o + 10 cc B- complex vitamins IV or IM or SQ
- o + CMPK boluses or 1 bottle of calcium
- o + Rumen starters oral probiotic gels, yeast pills, pumping her stomach

When to Call Veterinarian

- Cow is still off-feed after 2 days of treatment or develops a LDA
- Unable to get a vein for IV dextrose
- Unable to pump stomach

TRAINED PERSON (SIGNATURE) (DATE)

12

Farm Name:

Veterinarian:

Veterinarian Phone Number: _____

Cow ID	Time of 1	freatment	Pen	Condition		Tre	atment	t Plan			me V		lated Irawal	Actual Date and Time in Tank	Remarks
	Date	Time		Treated	Treatment	Dosage	Route of Admin.	of	Duration of Treatment	Milk	Meat	Period	Expires Meat		Example: initials of person treating or testing

GUIDELINES FOR TROUBLESHOOTING COMMON ILLNESSES

RETAINED PLACENTA/METRITIS

How to Recognize

- Cow 4-7 days fresh with a fever
- Cow has not cleaned completely after 12 hours or at all
- Off-feed, +Ketone odor on breath and urine
- Foul smelling, red watery or yellow chunky discharge from vulva

Possible Treatments (Discuss specific protocols with veterinarian)

- Consider Oxytocin and/or Prostaglandins (lutalyse)
- Gently "tug" on placenta after day 3 at milkings or when oxytocin is given
- If systemically sick (fever, lethargic, off-feed), consider pain relief and anti-inflammatories (aspirin, banamine)
- Antibiotic treatment excenel/naxcel or penicillin
 - Discuss Antibiotic Treatments with Veterinarian
 - See Antibiotic Usage and Withholding Chart on Page 25
- Utilize Support Therapies
- 10 cc B-complex vitamins
 - Consider hypertonic saline solution and dextrose IVs as treatment options
- Do not "treat" her uterus with intrauterine compounds oxytetracycline, chlorhexidine, etc!! You may cause more damage to her uterus than is already present!!

When to Call Veterinarian

- Cow does not respond to treatment protocol and continues to worsen in severity
- Cow is still off-feed after 2 days of treatment or develops a LDA
- Have her "checked" at next herd check to assess her uterine progress

SPECIFIC HERD PROTOCOLS FOR METRITIS: _____

LEFT OR RIGHT DISPLACED ABOMASUM

How to Recognize

- Off-feed, Small amounts of pasty feces
- "sprung rib" last rib on left side may appear to be pushed out of line
- PING on left or right side high pitched sounds
- LDA
- Ping found on left side over the last 4 rib spaces or in the fossa
- May be a low LDA
- RDA
- Large ping found on right side over the rib cage
- Cow very painful and restless, dehydrated, very sick!!
- +Ketone odor on breath and urine
- Check for other "fresh cow" diseases to predispose her to a twisted stomach
 Ketosis #1 cause
 Mastitis or udder sores
 Tough calving
 - Retained placenta/metritis
 Sore feet/Ulcers
 Milk Fever

Possible Treatments (Discuss specific protocols with veterinarian)

• Supportive therapy

- Give pain relief and anti-inflammatories aspirin or banamine
- + 10 cc B- complex vitamins IV or IM
- + CMPK boluses or 1 bottle of calcium SQ
- + Rumen starters oral probiotic gels, yeast pills, pumping her stomach
- Do not pump the cow's stomach on the same day in which the vet is coming to do a surgery. It makes it more difficult to roll her if she was just pumped full of fluids.
- + Consider dextrose and hypertonic saline solutions as possible treatments.

When to Call Veterinarian – have an extra person around to help please

- LDA Toggle (by rolling her)
- LDA Surgery (by rolling her)
- Follow veterinarian recommendations for post-procedure treatments and care.
- Discuss other treatment with veterinarian

PNEUMONIA

How to Recognize

- Off-feed, down in milk, droopy head/ears/neck
- Increased respiratory rate and/or effort
- Yellow mucus nasal discharge
- May or may not have a fever!
- Hear wheezes, crackles, whistles, congestion in upper long fields with stethoscope
- Best prevented by maintaining ideal temperature and proper ventilation

Possible Treatments (Discuss specific protocols with veterinarian)

- Supportive therapy
 - Give pain relief and anti-inflammatories aspirin or banamine
 - Other treatments IV dextrose, B vitamins, CMPK boluses,
- rumen starters/probiotics, hypertonic saline, Lasix/Furosemide • Allow for plenty of access to water – she will need to drink more!
- Anow for plency of access to water she will need to drink mo
 Antibiotics
 - Discuss Antibiotic Treatments with Veterinarian
 - See Antibiotic Usage and Withholding Chart on Page 25

SPECIFIC HERD PROTOCOLS FOR PNEUMONIA:

TRAINED PERSON (SIGNATURE)

(DATE)

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SPECIFIC HERD PROTOCOLS FOR DISPLACED ABOMASUM:

Farm Name: ____

_____ Veterinarian: ______

Veterinarian Phone Number: ____

Cow ID	Time of	Treatment	Pen	Condition		Tre	atmen	t Plan			rawal		lated	Actual Date and	Remarks
	Date	Time		Treated	Treatment	Dosage	Route of	Frequency of	Duration of		ne Meat		drawal Expires	Time in Tank	Example: initials of person
							Admin.			(Hours)	(Days)				treating or testing

GUIDELINES FOR TROUBLESHOOTING COMMON ILLNESSES - MASTITIS

Procedures to diagnose and treat mastitis in dairy herd

MILK CULTURING

- Great tool for managing any dairy herd
- By looking at milk sample, you cannot determine which bug is causing mastitis!!
- Why is it important to know the "bug" infecting your cow?
- o Mastitis can be the leading cause of production losses in a dairy cow's lactation and possibly even the reason for culling her from the herd.
- o Management of infected cow
 - Treatment options Culling options
 - Milk quality control (lower SCC, increased production, dipping)
 - Milking order in parlor (milk infected cow last)
- Results in 24-36 hours of getting sample to the clinic!
- o E.coli (Coliform)
- o Contagious Staph aureus vs. Non-contagious Staph species
- o Contagious Strep agalactia vs. Non-contagious Strep species
- o Mycoplasma cultures go to Penn State (takes about 10 days)

MILK COLLECTION PROCEDURE

- 1. Wash and dry hands before handling udder.
- 2. If teats are dirty, clean with teat dip and dry with paper towel.
- 3. Scrub teat ends with alcohol use gauze, cotton ball, or paper towel a. Start at the teat farthest away from you.
 - b. Avoid touching the teat ends with your arm or hand once cleaned
- 4. Remove the cap from the sterile milk tube and hold the cap with its inner surface turned downward. Hold the tube as close to sideways as possible to prevent contamination falling into tube.
- 5. Carefully strip some milk into the tube.
 - a. Start with the teat closest to you and finish with the farthest away teat to avoid contamination b. Dip teats after finished collecting sample.
- 6. If the sample got contaminated (such as letting the milk run off your hand into the tube, touching a teat, cow goes to the bathroom, etc.), discard the tube and sample and start over again.
- 7. Label tube with cow identification number/name.
- 8. Place sample on ice or refrigerate as soon as possible. You can also freeze the samples if they aren't going to be cultured within two days.

Note: If a mastitic quarter has already been treated with an intramammary product (Pirsue, Today, Quartermaster, Cefalak, etc) or any other intramammary antibiotic treatment, it is best to wait at least 4-5 days before culturing. Once a sample is taken, you can treat the quarter with an antibiotic.

EXAMPLES OF MASTITIS TREATMENTS

- Pirsue Labeled for Staph species, Strep. agalactia, Environmental streptococcus species o Milk withhold - 36 hours
- o Meat withhold 28 days
- Spectramast-LC Labeled for Environmental Staph. Species, Strep. dysgalactia, E. coli
- o Milk withhold 72 hours
- o Meat withhold 2 days
- Quartermaster Labeled for Staph aureus
- o Milk withhold 96 hours
- o Meat withhold 60 days or 96 hours after calving
- Spectramast-DC Labeled for Staph aureus, Environmental streptococcus species
- o Milk withhold 0 hours after 30 day dry period
- o Meat withhold 16 days
- Orbenin DC Labeled for Staphylococcus aures and Streptococcus agalactiae
- o Milk withhold 0 hours
- o Meat withhold 28 days

SPECIFIC HERD PROTOCOLS FOR MASTITIS DIAGNOSIS AND CULTURING: _

TRAINED PERSON (SIGNATURE) (DATE)

16

Farm Name: **Time of Treatment** Condition Withdrawal Calculated **Actual Date and** Cow ID Pen **Treatment Plan** Remarks Withdrawal Time **Time in Tank** Treated Dosage Duration Treatment Frequency Route Example: initials of person **Period Expires** Meat Milk Date Time of of of treating or testing Admin. Treatment Treatment (Hours) (Days) Milk Meat

Veterinarian:

Veterinarian Phone Number:

GUIDELINES FOR TROUBLESHOOTING COMMON ILLNESSES - MASTITIS

Commonly found mastitis organisms

It's important to note that the guidelines for troubleshooting illnesses included in this book are intended to serve as guidelines only. Please work with your veterinarian to outline your own protocols in the "specific herd protocol" sections provided.

COLIFORMS

- Characteristics
- Includes E.coli, Klebsiella, Enterobacter
- From the environment dirty bedding, muddy pens, contaminated teats, teat end lesions
- Watery and/or yellow milk or no milk
- Animals may be severely ill or down
- Goals of treatment
 - o Reduce toxin load and prevent release of more toxins
 - o Kill bacteria
 - Supportive treatment for cow Some cows will die despite aggressive therapy
 Early recognition and aggressive therapy is the key to success!
- Prevention
 - o Vaccine helps prevent severity of mastitis and only if used according to label
 - o Teat sealants

Treatment

- Take a milk culture sample from affected quarter(s)
- Frequent stripping of affected quarter(s) every two hours
- o May be enough treatment if only a mastitis case and not systemically ill!!!
- Give pain relief and anti-inflammatories and anti-endotoxin relief banamine
- Fluid therapy hypertonic saline, dextrose
- Other supportive treatments B-complex vitamines, CMPK boluses/bottle, rumen care
 Antibiotics
 - o Intramammary antibiotics may or may not be effective in coliform cases
 - o Discuss Antibiotic Treatments with Veterinarian
 - o See Antibiotic Usage and Withholding Chart on Page 25

ENVIRONMENTAL STREPTOCOCCOS SPECIES

- Includes Strep. dysgalactiae, Strep. uberis
- From the environment dirty bedding, muddy pens, contaminated teats, teat end lesions
- May be resistant to intramammary antibiotics and difficult to treat/cure o Can be a "recurring" mastitis

ENVIRONMENTAL STAPHYLOCOCCUS SPECIES

- Includes Coagulase-Negative Staph.
- From the environment dirty bedding, muddy pens, contaminated teats, teat end lesions
- Tend to respond well to intramammary antibiotics

STAPHYLOCOCCUS AUREUS

- Contagious mastitis
 - Lives and grows in the teat and udder
 Spreads from cow to cow during milking hands, equipment, and towels
- Mainly subclinical mastitis or repeat clinical mastitis
 - Check SCC Staph. aureus cows tend to have recurring high SCC
- Difficult to treat/cure
 - o Resistant to penicillin-type antibiotics Today, Cefalak
 - Extended therapy protocol with Pirsue
 Minimum of 5 day, maximum of 8 days
 - of daily treatments o Attempt to cure at dry-off
 - Dry-off with normal dry-cow treatments
 (ex. Quartermaster)
- Discuss Antibiotic Treatments with Veterinarian
- See Antibiotic Usage and Withholding Chart on Page 25

- Preventative measures
 - Milking technique Use separate towels for prepping/ cleaning each cow, Milk infected cows last, Dry treat all cows, Use an approved post-teat dip, Prevent liner slips during milking
 - o Staph aureus vaccine may not be very effective

OTHER ORGANISMS CULTURED

- Mycoplasma
 - o Cultures sent to PSU
 - o Difficult to treat/cure
- Yeast

 Difficult to treat/cure

TRAINED PERSON (SIGNATURE)

(DATE)

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SPECIFIC HERD PROTOCOLS FOR MASTITIS TREATMENT:

Veterinarian Phone Number: Farm Name: Veterinarian: Withdrawal Calculated Time of Treatment Condition **Treatment Plan Actual Date and** Cow ID Pen Remarks Withdrawal **Time in Tank** Time Treated Dosage Treatment Duration Route Frequency Example: initials of person Period Expires Date Time Milk Meat of of of treating or testing Admin. Treatment Treatment (Hours) (Days) Milk Meat

GUIDELINES FOR TROUBLESHOOTING COMMON ILLNESSES - LAMENESS

1

SOLE ULCERS AND ABSCESSES

• Usually on the bottom of the claw

- May rupture out along coronary band
 May cause swelling of the foot and
- further up leg
- Can be mildly or severely lame
 90% of front foot lameness is located
- on the inside claw90% of rear foot lameness is located on the outside claw

Treatment

- Pare away undermined sole and drain abscess
- Apply an antibacterial/antiseptic wound dressing (ex. lchthammol)
- Wrap with vet-wrap
- If needed, glue a block to the non-affected claw

HAIRY HEEL WART

- Caused by a contagious bacterial infection
- Severely painful, reddened area of skin at the heel of the foot, between the claws
- May have "hair" growing from lesion

Treatment

- Wrap foot with vet-recommended solution or powder on a bandage o Discuss Treatment with Veterinarian to Identify Protocol
- Use a Copper Sulfate foot bath
- Give supportive pain relief aspirin or banamine

FOOT ROT

- Caused by a contagious bacterial infection of the skin between the claws
- Foot may be swollen if bones and tendons are infected
- Foul smelling black rotten discharge between the clows

• Treatment

- Expose affected area by cleaning and scraping away dead tissue
- Wrap foot with vet-recommended solution or powder on a bandage
 o Discuss Treatment with Veterinarian to Identify Protocol
- Give supportive pain relief aspirin or banamine
- Systemic antibiotics if severe naxcel, excenel, excede, tetracycline, penicillir
- Vaccine is available

PREVENTION OF FOOT PROBLEMS/LAMENESS

	Routine Hoof TrimmingThe best way to prevent foot problems	Specific Protocols for Routine Trimming:
21	Trim each cow at least two times per lactation	
$\left(\right)$	Once in dry period, once after peak lactation	
\sim	Cow Comfort	
	• For mature cow weighing 1,600 pounds, stall space allotted should measure 50 inches in width by 120 inches in length.	Specific Protocols related to Cow Comfort:
	Tie stall barns	
	 Lots of bedding on top of mattresses at least 4 inches 	
	Free stall barns	
	 Lots of bedding on top of mattresses at least 4 inches 	
	Keep alleys clean to prevent disease spreading	Specific Protocols for Foot Baths:
e claws	Foot Baths	
	Clean feet (water bath) before foot bath	
	Don't let cows drink foot baths	
	These disinfectants are options for footbaths:	
	Copper Sulfate	
	 Good for foot rot and toughening up hoof wall 	
	Use a 5% solution if used daily	Specific Protocols to Address Lameness:
	Use a 10% solution if used only every 2-3 days	·
	• Formalin	
	• Kills most everything – is toxic to people too!	
	Use a 3-5% solution	
	Can burn feet if not properly acclimated	
llin		
	TRAINED PERSON (SIGNATURE)	(DATE)

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Farm Name:

Veterinarian:

Veterinarian Phone Number: _

	Cow ID	Time of 1	ſreatment	Pen	Condition		Tre	atment	t Plan		Withd		Calcu		Actual Date and	Remarks
		Date	Time		Treated	Treatment	Dosage	Route of Admin.	of	Duration of Treatment		Meat	Period	rawal Expires Meat	Time in Tank	Example: initials of person treating or testing
								Autom.	neatment	neatment		(54)3)	WIIIK	Meat		
ľ																

Goals for down cattle care include preventing further injuries, maximizing their chance of recovery, ensuring welfare, and keeping both the cow and her human caretakers safe.

STEPS:

- 1. Assess the cow and area to assess the situation. Worker safety is a priority so remember to provide a safe down-cow working zones. Re-route healthy cattle around the down cow.
- 2. Ask yourself:
 - a) Are there obvious injuries or illnesses preventing her from standing? If it is an illness, use "Troubleshooting Common Illnesses" to assess the situation and provide treatment.
 - b) Is the floor slippery or wet? If so, provide sand or other material to provide traction. Ensure cow has enough lunge space to allow her to get up.
 - c) How is the cow lying? If she is lying normally and has enough lunge space, that encourage her to stand. If her legs are split apart, protect yourself as you put her legs back together. Use halter to restrain her and hobbles to provide support.
 - d) Is the cow lying flat out? She may be off balance. Get help to halter her and to place a rope low on the down rear leg. Tuck the down rear leg forward, then while pulling the rope under her to keep the leg tucked, roll the cow onto her sternum. She will need to be propped if she immediately tires to lie flat again.
 - e) Is she caught or trapped by anything? If yes, then it's a simple fix by removing the obstruction.
- 3. If she still can not get up after going troubleshooting the above questions, then you will need to first move her to a more secure location. This will require a team of individuals to assist you with moving her.
- 4. With the aid of a halter, tie her head to rear leg (bundling her), so she can be rolled onto a suitable surface – either a mat or piece of plywood would work. Apply traction by pulling the surface underneath, gliding her to a more secure location.

- Considerations for Euthanasia

Refer to National FARM Euthanasia Decision Making Tree for considerations.

Signs and/or symptoms

metabolic condition

- Sick cow unable to stand for >48 hours even with assistance/hip lifter
- Acute injury/trauma with poor prognosis
- Acute pain from an infectious or

Action Plan

- Have designated .22 rifle with .22 long ammo in secured area or safe designated as for use in euthanasia.
- If cow able to walk, move to empty bedded sick cow pen
 Downer cows must be dealt with where they are
- Load .22 rifle with .22 long ammo from the safe in office labeled "euth"
- Follow diagram to side as guide to discharge bullet in correct spot on head
- Use skid loader to remove cow to prepared compost pile with first 12 hours after death

TRAINED PERSON (SIGNATURE)

(DATE)

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DOWN COW PROTOCOLS:

easons for Immediate Euthanasia:
unnartiva Cara hafara Maving
upportive Care before Moving:
1ethod of Movement:
reparation to Move:
fter Care Location:
chedule for feed and water:

- While bundled, roll her into a skid steer bucket; tip the bucket back and lift just high enough for ground clearance and drive her to a suitable area. Modified skid steer attachments (buckets) designed for moving down cows are available.
 Large slings or helly bands are available to lift cattle and help them remain standing. Elotation tanks are
- 6. Large slings or belly bands are available to lift cattle and help them remain standing. Flotation tanks are another option. Hip lifts are not an acceptable approach to moving down cattle.

DOWN COW MANAGEMENT:

Goals for down cattle care include preventing further injuries, maximizing their chance of recovery, ensuring welfare, and keeping both the cow and her human caretakers safe.

- A bedded pack or pasture may be the best location in which to recover, but down cows must NOT be left outside.
- Down cows must be turned from side to side every four to six hours
- Down cows should be kept sitting up and not lying on their side, which speeds up muscle damage. If necessary, keep them propped up.
- Down cows should have access to both feed and water.
- When the cow is not standing in 12 hours after being moved to a suitable surface, the veterinarian must be consulted to determine a diagnosis of the underlying condition. If she is unable to stand within the first 24 hours or so, her chances of ever standing again are slim. The cow must be euthanized.

□ Isolated from other cows?

Access to feed and water?

Sheltered from weather?

Protected from predators?

Criteria for Euthanasia: _

*Refer to Euthanasia Decision Making Tree on nationaldairyfarm.com.

SPECIFIC EUTHANASIA PROCEDURES:

Person Responsible for Making Decision: _____

Method of Euthanasia: Gunshot Captive Bolt Veterinarian

Confirmation of Death:

Description of Disposal Plan: _____

BIOSECURITY

GENERAL GUIDELINES WHEN PURCHASING NEW COWS:

Purchase animals from a reputable source

- Avoid auctions where multiple animals are mixed from multiple farms
 Diseases are more likely to spread when animals are co-mingled from multiple sources
- Try to purchase directly from a farm (no "middle-man" or "middle-farm")
 Ex. Herd dispersal sale

Ensure the animals are healthy

- All animals should be vaccinated with a 9-way or 10-way vaccine at least 3 weeks before being transported.
 - 9-way vaccines include IBR, BVDV, BRSV, PI-3, 5-way Lepto
- Have animals "tested" prior to purchase or immediately upon arriving at your farm
 - BVDV-PI This is essential!!!! (These animals may look perfectly healthy!)
 Ear notch test for calves or blood for heifers/cows
 - Johne's Disease
 - Blood ELISA test or fecal culture
 - Optional testing
 - TB
 - Brucellosis
 - Respiratory panel serology BVDV, IBR, BRSV, PI3
 - Reproductive panel serology 5-way Lepto, Neospora, BVDV
 - Milk culture staph aureus, mycoplasma

Require paperwork regarding transaction

- Health chart stating examined by veterinarian
- Registration papers
- Breeding information accurate pregnancy checks
- Vaccination status

On arrival at your farm

- Quarantine or separate all new arrivals
 - Perform testing as needed before mixing new additions in with rest of herd
 - Keep isolated for a minimum of 4 weeks
 - Watch for any signs of infectious disease nasal discharge, decreased appetite, diarrhea, fever, etc.

FITNESS TO TRANSPORT

- The American Association of Bovine Practioners defines "fitness for transport" refers to the animal's ability to withstand transportation without compromising their welfare. Fitness to sell.
- Identify:
 - How are family and non-family employees trained to identify animals fit to transport?
 - Who is authorized to make the decision to transport for culling or other purposes?
 - What type of transportation is utilized to transport?
 - How are reasons for culling recorded?
- Who is ultimately responsible for deciding whether to transport for slaughter or euthanize? How is that decision made?

• Do not transport to slaughter if:

- Cancer eye or blindness in both eyes
- Fever greater than 103°f
- Contains drug residues
- Shows evidence of peritonitis, fractures or lameness (4 or 5 on a 5-point scale)
- Cows with unreduced prolapses
- · Cows that are calving or have a high likelihood of calving during transport
- Distended udders causing pain and ambulatory issues
- Suspected central nervous system symptoms
- Visible open wounds
- Keep good records to ensure residue avoidance
 - Document animal identification, treatment records, and antibiotic withdrawals to ensure residue avoidance.

SPECIFIC HERD PROTOCOLS RELATED TO BIOSECURITY AND FITNESS TO TRANSPORT:

TRAINED PERSON (SIGNATURE)

(DATE)

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COMMON MEDICINES, DOSAGES, AND WITHHOLDINGS – 2020

This information is updated as of November 2020 and is good through November 2021. For updated information, please visit the National FARM website at **nationaldairyfarm.com**.

NAME	PURPOSE	DOSAGE	FREQUENCY	ROUTE	MILK W/H	MEAT W/H	NOTES
Oxytocin	Uterine contraction, milk letdown	1-2 cc	Up to 4 x/day	IM or IV	0	0	Cow can become addicted!
Dexamethasone	Anti-inflammatory, ketosis	1-2 cc/100 lbs	Once a day	IM, IV, SQ	0	0	Do not give to a pregnant cow!
B-complex	Vitamin for energy	1-2 cc/100 lbs	Once a day	IV, IM, SQ	0	0	Include in sick cow treatment
Hypertonic saline	Rehydration	1-2 1 L bottle	Once a day	IV	0	0	Have plenty of water available!
50% Dextrose	Ketosis	1⁄2 500 cc bottle	Once	IV	0	0	
Lasix	Diuretic – reduce edema	1 cc/100 lbs	Once a day	IM	48 hours	2 days	
Aspirin	Anti-inflammatory, Reduce fever	4 boluses	Twice a day	Orally	0	0	
Banamine (flunixamine)	Anti-inflammatory, Reduce fever	1-2 cc/100 lbs	Once a day	IV	36 hours	4 days	Not labeled for IM use
Banamine transdermal	Anti-inflammatory, Reduce fever	3cc/100 lbs	Once a day	Topically	0	8 days	Not in lactating cows!
Meloxicam (15 mg)	Anti-inflammatory, Reduce fever	3 tablets/100 lbs	Once a day	Orally	96 hours	21 days	For dehorning
Lidocaine	Local anesthetic	3-5 cc per horn bud	Once	SQ	0	14 days	For dehorning
Naxcel (ceftiofur)	Antibiotic	1-2 cc/100 lbs	Once a day	IM or IV	0	4 days	Keep refrigerated once mixed. NO Extralabel usage!
Excenel (ceftiofur)	Antibiotic	1-2 cc/100 lbs	Once a day x 5 days	SQ or IM	0	4 days	No Extralabel usage.
Excede (ceftiofur)	Antibiotic	1.5 cc/100 lbs	Once, Repeat in 4 days	SQ (base of ear)	0	14 days	No Extralabel usage.
Penicillin G	Antibiotic	2 cc/100 lbs	1-2 times a day	IM	>96 hours	>20 days	Test milk before adding to bulk tank! Check with vet for Meat W/H
Oxytetracycline	Antibiotic	4.5 cc/100 lbs	Once a day (IV), EOD (SQ/IM)	IV, IM, SQ	96 hours	28 days	Test milk before adding to bulk tank!
Micotil (tilmicosin)	Antibiotic	1.5 cc/100 lbs	Once, repeat in 2 days	SQ	NA	28 days	Not in lactating cows! Do not inject yourself!!
Nuflor (florfenicol)	Antibiotic	6 cc/100 lbs	Once, repeat in 2 days	SQ	NA	44 days	Not in lactating cows!
Resflor (florfenicol + flunixin)	Antibiotic	6 cc/100 lbs	Once, repeat in 2 days	SQ	NA	46 days	Not in lactating cows!
Baytril (enrofloxacin)	Antibiotic	3.4-5.7 cc/100 lbs	Once	SQ	NA	28 days	NO Extra label usage! Not in lactating cows!
Zactran (gamithromycin)	Antibiotic	1.8 cc/100 lbs	Once	SQ	NA	35 days	Not in lactating cows!
Zuprevo (tildipirosin)	Antibiotic	1 cc/100 lbs	Once	SQ	NA	47 days	Not in lactating cows!
Draxxin (tulathromycin)	Antibiotic	1.1 cc/100 lbs	Once	SQ	NA	28 days	Not in lactating cows!
Spectramast LC	Mastitis antibiotic	1 tube	Once a day	lmm	72 hours	2 days	
Pirsue	Mastitis antibiotic	1 tube	Once a day	lmm	36 hours	28 days	
Today	Mastitis antibiotic	1 tube	Twice a day	lmm	96 hours	4 days	
Tomorrow	Mastitis antibiotic	1 tube	Once	lmm	72 hours	42 days	
Orbenin DC	Mastitis antibiotic	1 tube	Once	lmm	0 hrs	28 days	
Quartermaster	Mastitis antibiotic	1 tube	Once	lmm	96 hours	60 days	
Spectramast DC	Mastitis antibiotic	1 tube	Once	lmm	0 (after 30 day dry)	16 days	
Vaccines	Most vaccines			SQ		21-28days, up to 60	READ LABEL DIRECTIONS AND PER VACCINE PROTOCOL

* Any medicines that are extra-labeled must be prescribed by the veterinarian on record.

Guidelines on Stockmanship and Handling Cattle

Understanding how to handle cattle and effectively move them from one area to another with minimal stress is a critical aspect to animal welfare. The five guidelines below are adapted from an AllTech brochure on the "Five Simple Rules for Moving Cattle."

- Knowing her flight zone. As prey animals, cows will react differently when they are approached from different directions. Here is a diagram that outlines a cow's flight zone. Always remember to be calm and consistent when approaching and handling cattle.
- 2) Approach animals calmly and with a slow pace. You need to remember to move cows at their own pace. A cow's head being down is an indicator that she is moving at her own pace. If her head is up, she is most often agitated. Cows also are social creatures and move in order of their rank, with the lead cow always out in front.
- A consistent routine is critical. Cows are creatures of habit. Strictly adhere to a schedule for moving and milking them.



Credit: California Dairy Research Foundation

After three weeks of a consistent schedule, the cows will adapt to that schedule. Also, never raising your voice or using violent or abrupt motions will maintain calmness in the herd.

- 4) Obstacles should be removed. Walkways and holding pens should be clean and dry. If high-slip areas exist, putting down sand can enhance the ease in which the cows move through the area. Any obstacles, like ridges on gates, that could cause injuries should also be removed. Providing extra space to avoid overcrowding is also helpful to allow the cows to move with ease and avoid each other if needed.
- 5) A cow should be gently guided. Cows should be allowed to move into the parlor on their own. If they need to be herded in, you should walk around the pen and approach them utilizing their flight zone. Do not approach them directly from the front or within their blind spot in the back.

For Additional Resources, Visit:

National FARM Website: Here you will find record-keeping templates, posters, protocol sheets, and training videos, along with a wealth of other resources, to help you implement the FARM Program on your farm. Visit nationaldairyfarm.com to learn more.

Center for Dairy Excellence: The Center has added a section to its website where it will compile resources tailored to Pennsylvania dairy farms to assist in implementing the FARM Program. Those resources can be found at centerfordairyexcellence.org/animal-welfare-resources/.

Your herd veterinarian and milk handler/cooperative representative are also helpful resources in finding what you need to meet the requirements of the National FARM Program. Their contact information should be written in below:

Milk Handler/Cooperative FARM Contact:

Phone Number:

Herd Veterinarian:

Phone Number:

To order another book, contact:



DairyEXCELLENCE

The Center for Dairy Excellence 2301 North Cameron Street, Room 407 Harrisburg, PA 17110 Phone: 717-346-0849 Email: info@centerfordairyexcellence.org