



# Jersey Heifer Scenario

AWJAC 2015  
Team Scenario

# Questions to Answer

## **Individuals only need to answer Question 1**

1. Please perform an assessment of the welfare of the dairy heifers. Present and discuss positive and negative aspects, and their relative weights.
2. The producer is considering changing the housing system for his replacement dairy heifers. Describe 3 changes that you would recommend to the producer, and explain why these changes would benefit the welfare of his heifers.

# Farm Overview

- 167-acre pasture and cropland in Columbus, Ohio
- Relevant buildings include:
  - Manager's office
  - Calf room
  - Calf hutches
  - Bedded pack for growing heifers
  - 1 barn with free stalls and pasture access for dry cows and growing heifers
  - 1 calving area with straw bedded concrete
- Back up power generator on site
- Water is pumped from a well

# Herd Information

- 100 milking Jersey cows
- 160 replacement heifers born and raised on-site
- Bull calves leave farm
  - Transported to local stockyard within 1 week

# Dystocia Protocol

- Dams are visually examined once per hour for signs of calving
- If the cow has not shown progress 60-70 min after the calf's feet become visible, or if mal-presentation is obvious, the farm manager is called
- Farm staff/manager using disinfected chains to pull out the calf
- If the dystocia becomes too difficult, the herd veterinarian is called

# Newborn Management

- **Colostrum**

- Cows are milked at the next milking (1 to 12 h after calving)
- Storage: Colostrum is refrigerated until it is fed to the calf, any extra colostrum is frozen
- Quantity: 3 quarts fed to each calf
- Quality: Assessed using visual scoring system
- Feeding frequency: Calves usually fed colostrum once, but weak calves get a second feeding 12 h later
- Feeding method: all calves are fed with esophageal feeder

- **Navel hygiene**

- Navels are dipped with iodine within 24 h of birth

# Medications for heifers

- All vaccines, antibiotics, and other medical supplies are stored on-site
  - Full-time staff and the herd veterinarian make decisions regarding medications
  - Any full-time staff member can administer medications
- Medicine cabinet is kept locked at all times
- Medical records kept in calf room

# Physical Modifications

- All calves are ear tagged and tattooed when they are ~7 d old
- Disbudding
  - Occurs when calves are 7 to 21 d of age
  - Electric Dehorner 30X cordless hot-iron
  - 4.5 mL of lidocaine is injected subcutaneously 10 min before the procedure
  - 1 mg/kg Meloxicam is administered immediately post-procedure





# Pre-Weaning Nutrition and Feeding

- Calves fed with a commercial milk replacer specifically designed for Jerseys
- Fed with bottles for first 2 d, then trained to drink from buckets
- Milk feeding occurs twice daily (5am and 5pm)
- Milk allowance totals 15% of the calf's body weight
- Calves receive starter *ad libitum* from 2 d of age
- *Ad libitum* access to water from birth

# Weaning

- Calves are weaned from 7-9 wk of age
- At 7 wk of age, calves are fed milk once per day (*ad libitum* access to starter and water)
- At 8 wk of age, calves are not provided milk but stay in hutches (*ad libitum* access to starter and water)
- After weaning, calves are moved into small groups in loose housing

# Post-Weaning Nutrition and Feeding

- Heifers provided free choice alfalfa hay and grain *ad libitum* until 6 months of age
- Limit-fed with energy-dense TMR from 6 months to calving

# Reproduction

- Heifers are artificially inseminated (AI) at about ~12 mo old
- Estrus detection (mounting/standing) performed by staff
- All heifers bred with sexed-semen
- Palpated 60 d post-breeding to confirm pregnancy

# Supplemental Information

In order to ensure smooth flow around the farm, information on the following slides is NOT posted at the farm

# Personnel

- Farm manager
  - MS in Animal Science
  - Worked on dairy farms since 2000
  - 20 years experience working on dairy farms
- 1 full-time staff member
  - 2 years of experience
  - MS in Animal Science
- 10 undergraduates
  - Work part-time to gain experience in dairy management
  - Varied levels of experience

# Training

- Manager gives all students hands-on training for their jobs and instructs them with regard to specific work-related hazards
- All staff are trained on the following regarding heifer calves:
  - Calving/dystocia
  - Colostrum management and feeding protocols
  - Basic handling skills

# Handling

- Pre-weaning
  - Newborns are carried to hutches
  - Calves halter trained at 3 wk old
- Post-weaning
  - Calves walked to post-weaning group pens with halter
  - Heifers are moved to new pens according to age
  - Slaps on the rump, pushing, or tail twisting used to move difficult heifers
  - Prods never used



# Routine Management

- Heifers are observed in their hutches or pens a minimum of 2 times/day
  - During feeding
  - During stall and pen cleaning

# Calf/Heifer Vaccination Protocol

Age	Vaccine	Provides protection against
1 day	Inforce 3	Pneumonia
4-5 mo	Bovishield Gold FP Ultrachoice 7 RB-51	Pneumonia, abortions 7 Clostridial diseases Brucellosis abortion
Booster +1 mo	Bovishield Gold FP Ultrachoice 7	Pneumonia, abortions 7 Clostridial diseases
1 year	Bovishield Gold FP Ultrachoice 7	Pneumonia, abortions 7 Clostridial diseases
1 <sup>st</sup> pregnancy exam	Leptoferm 5	Abortions
6-8 wk pre-calving	Bovishield Gold FP J-Vac Scourguard 4KC	Pneumonia, abortions Mastitis Diarrhea protection (calf)
Booster +1 mo	J-Vac Scourguard 4KC Ultrachoice 7	Mastitis Diarrhea protection (calf) 7 Clostridial diseases

# Removal/Mortality (2014)

- Culling Rate
  - 9% in the last year
- Mortality Rate
  - Stillbirth (dead within 24 h): 4.5%
  - Pre-weaning: 11%
  - Post-weaning: 5.4%
- If on-farm euthanasia is necessary, it is performed by the veterinarian or farm manager using using a sodium pentobarbital solution

# Morbidity (2014)

- Navel infections: 4%
- Diarrhea: 41% pre-weaning, 3% post-weaning
- Respiratory disease: 21% pre-weaning, 3% post-weaning