Calf Health Module
An In-Depth Assessment Tool for Calf Management

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NYSCHAP
NYSCHAP is based on using Best Management Practices along with basic Biosecurity at its core. Modules spin off for more detailed information in several areas.

NYSCHAP Background
✦ An integrated disease prevention program that utilizes a team of advisors to develop a farm-specific herd health plan.
✦ Objectives of this plan are to:
  ➢ Increase herd’s health, productivity and profitability
  ➢ Assure food safety, public health and consumer confidence
  ➢ Promote environmental stewardship

Key NYSCHAP Points
✦ Established in 1998 and sponsored by NYSDAM
✦ No enrollment fee for participation
✦ Herd Veterinarians are compensated for their time in the planning process by NYSDAM
✦ Herd plans are herd specific and created within the goals and resources of the farm operation.
Calf Health Module

- Added in 2012
- Calf Health is a major concern
  - Calf death rates are estimated at 7.8% (NAHMS 2007)
  - High calf morbidity rates
- The DL receives ~100 cases monthly
- In past year over 1200 cases of enteritis alone.

Calf Management

- Many areas to manage when raising dairy calves:
  - Colostrum Management
  - Nutrition
  - Environment
  - Disease
  - Management Practices/Labor

“It’s not difficult…Right?”

- It is easy to say dairy calves only need to be in a clean, dry environment and fed well. But this is not very specific.
- The proof is in the details –
  - What is the definition of being fed well?
  - How much bedding is enough?
  - What about identifying disease issues and then how are they dealt with?

How does your operation compare?

- Mortality
  - <5% 24 hours to 60 days of age
- Morbidity
  - <25% 24 hours to 60 days of age
- Growth Rate/Nutrition
  - 1.7 to 2.0 lbs average daily gain or
  - Double the birth weight and grow 4-5” by weaning
The intention of this module

- An assessment tool to use with your vet to ask the right kind of questions to:
  - Determine disease issues
  - Assess all management areas
  - Create goals: ie. death rate, growth rate, labor efficiency, etc.
  - Define any necessary changes and implement them within the resources of the farm

Rarely is it just one cause

- Most of the time there are multiple disease pathogens present on a farm
  - Example: All of these were found on one work up for several calves with scours.
    *E. coli*  *Salmonella*  *Crypto.*  *Coronavirus*  *Rotavirus*
- Which is the culprit? Most likely they all had an impact on creation of disease.

Rarely one size fits all

- Different farms have different sets of challenges.
- This module can be used for a total overview of calf management or
- It can be used for specific areas by choosing to review certain sections of the worksheets.

A farm may want to review this module if…

- Develop a plan specific to your farm

  - Farm Goals
  - Management Resources
  - Farm Assessment
  - Good Calf Management
If the maternity pen is more crowded than the holding area.....

V. Maternity Environment
- Is calving area used exclusively for calvings (lame, sick cows, etc.)?
- Types of maternity areas used (group pack, pasture, individual pen, tiestall, etc.)?
- If group pack—what is the maximum number of cows at any one time (recommend >80 sq ft/cow)?
- What percent of calves are born outside of calving area?
- What type of bedding is used for maternity area?
- What type of surface is below the bedding?
- How often is clean bedding added?
- How often is the area completely cleaned & rebedded?
- How long does the cow stay in the maternity area?
- What type of ventilation is in maternity area?
- Is it different for different seasons?

If there are more flies found in the colostrum than on the entire farm.....

X. Handling and Storing Colostrum
- How long does colostrum sit before it is processed for feeding or storage?
- Do you pasteurize colostrum? If yes, what type of unit, time and temperature?
- How do you judge colostrum quality (lactation #, volume, color, thickness, colostrometer, Midland test, refractometer)?
- Do you pre-chill colostrum before storing? It is recommended that colostrum is chilled to 60 F within 30 minutes of collection.
- Do you add a preservative prior to storage? If yes, what?
- Do you store colostrum in refrigerator or freezer?

If your water clinks when it comes out of the faucet...

When do you begin to offer water to calves?
- Is water fed free choice? If no, what is the frequency & amount offered?
- Is the frequency and amount adjusted seasonally? See Addendum for expected water intakes.
- How soon after offering liquid feed is water available to calf?
- How is water handled during periods of freezing?
- How hard is the water (palatability)?
- Has the water been analyzed for mineral content (sulfates)?
- Do you use a water softener? (Increase in sodium may lead to increase in osmotic imbalance in intestine)

Worksheets
- There are three assessment worksheets:
  - Base – covers overview of calf management and issues
  - Enteric - specific to enteric issues
  - Respiratory - specific to respiratory issues

These worksheets are very detailed – to outline the entire picture of what is happening on a farm.
Worksheet Resources

Many of the individual sections of the worksheets have resources that are referred to aid in what is considered Best Management Practices and Accepted Industry Goals.
Included Resources

- Benchmarks/Goals
- Colostrum Mgmt
- Passive Transfer
- Colostrometer
- Cleaning Equip.
- Housing Info.
- Ventilation
- Liquid Feed Mgmt
- Pasteurizer Info.
- Milk Replacer Mgmt
- Management of milk combinations
- Acidified Milk
- Milk Solids Calculator
- Health Scoring Charts

Example

- 1,000 cow dairy that raises all replacements.
- Hutches w/ 40-50 wet calves
- 9/13 – HTST continuous flow pasteurizer
- Feed 2.5 qts 2x/day for first week then 3 qts 2x/day
- A common, mild, transient scours changed to severe with death loss in 12/13
Herd Plan Example

**Diagnostics of Liquid Feed**

- Have cultures been performed on as-fed liquid feed? Yes
  - If yes, at what point? Right after preparation before first calf is fed/after last calf is fed
  - How often are cultures performed on? Started 3 weeks ago
  - As fed liquid feed right after preparation? Yes
  - As fed liquid feed before first calf is fed? Yes
  - As fed liquid feed after last calf is fed? Yes

- Have you cultured colostrum? Yes
- Cultures on rinse samples from articles used in feeding? No
- Cultures on environment (maternity pen, newborn holding areas, calf conveyance, housing)? Yes, maternaty pen

**Pasteurizer**

- Does your hot water source match the pasteurizer demand? Yes?
- Is milk stored prior to pasteurizing? Yes, old bulk tank
- If yes, how long and at what temperature? Less than 1 day at 38 F
- Is milk stored after pasteurizing and cooled to 110-120°F? No, fed next feeding
- How quickly is milk fed after pasteurizing? 1-3 hours

**Diagnostics**

- Have necropsies been performed? Yes
  - If yes, results: lungy good, stomach okay, no fat, enlarged intestinal lymph nodes, inflamed small intestine
- Any Salmonella testing on the herd been done? Yes
  - If yes, results: fresh cow fecals and colostrum positive
- Have there been any laboratory tests performed including antibiotic sensitivities? If yes, results: Positive Crypto fecals, no positive BVD, PI, k-99 E. coli

**Treatments administered: Include product, route, dose, frequency:**

- Electrolytes: Resolv 2qts 1-2X on 1st day
- Fluids: LRS or isotonic saline, SQ, L1 liter
- Anti-inflammatories: Banamine, IM, 1-2cc once
- Antibiotics: Naxcel IM 1cc/100 lbs, 1X/daily if appear septic
- Bio-Mos
- Other

See Cornell University NYS Veterinary Diagnostic Laboratory website for detailed information on Diagnostic Plans:
http://ahdc.vet.cornell.edu/docs/Bovine_Diagnostic_Plans_Panels.pdf

**Free Access to worksheets and resources**

*This module can be used in conjunction with the NYSCHAP program through your herd and/or state veterinarian*

*Farms do not have to be enrolled in NYSCHAP to take advantage of the materials*

*All NYSCHAP information, risk assessments, forms and resources are available on-line:*
https://ahdc.vet.cornell.edu/sects/NYSCHAP/
Questions???

NYSCHAP Website: https://ahdc.vet.cornell.edu/sects/NYSCHAP/

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