

# MBNS Colostrum Protocols

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## Colostrum Quality Evaluation

- (1) Collect colostrum from the cow within 2 hours of giving birth.
  - a. Clean and disinfect the udder. Collect colostrum into a sanitized container (see sanitation protocols).
- (2) Determine the %Brix of each colostrum sample or pooled sample.
  - a. Less than 22% Brix to not feed as first colostrum feeding.
    - i. Add 150 grams (6 scoops) of FORTIFY per gallon and only feed to calves once they have received 4 quarts of higher quality colostrum.
  - b. Greater than 22% Brix: Add 75 grams (3 scoops) of FORTIFY per gallon

Note: Mix well, preferably using a mixer. Mix in warm colostrum (~100°F or 37°C).

- (3) Pasteurize or Store colostrum immediately.
  - a. Pasteurize at 140°F (60°C) for 60 minutes. Fortify after pasteurizing. Never pasteurize after you have added Fortify.
  - b. Refrigerate (39°F or 4°C) if fed within 24 hours
  - c. Freeze (-4°F or -20°C) if stored greater than 24 hours.
- (4) MB Nutritional Sciences will test the Colostrum Cleanliness every few months or if there is an increase in early life scours and/or mortality by performing total plate counts on colostrum at the time of feeding.
  - a. Take samples in a milk vial and store in a refrigerator.

## Feeding Colostrum

- (1) Warm colostrum in a water bath to 100°F and feed within 15 minutes of reaching temperature.
- (2) Use an esophageal feeder to feed 4 quarts (Holstein) or 3 - 4 quarts (Jersey) within 2 hours of birth.
  - a. Option: Feed an additional 2 quarts of colostrum within 12 hours of birth.
- (3) Alternatively: Feed 2 quarts within 2 hours of birth by nipple bottle, another 2 quarts within 8 hours of birth, and another 2 quarts within 16 hours of birth.

- (4) MB Nutritional Sciences will routinely test total serum proteins to assess success of passive transfer of immunoglobulins (Ig), greater than 5.5 g/dL.

**Figure 1.** Approximate distribution of %Brix of colostrum from Holstein cows collected within 6 hours of parturition.

