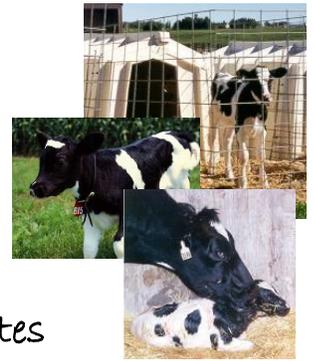


Calving Ease

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Weaning Calves for Success

- Maintaining a post-weaning growth rate around 2 pounds a day is an acceptable index for a successful weaning program.
- Weaning calves from a high-volume (8-12 quarts/day) and high-fat liquid diet (e.g., whole milk, greater than 20 percent fat milk replacer) presents special challenges.
- Longer duration weaning programs are more successful than shorter ones.

A Successful Weaning Program

One index of a successful calf enterprise for the milk feeding phase is to have calves double their weight in the first 60 days (see www.calfandheifer.org Gold Standards I). Depending on when calves are weaned (42, 49, 56, 63 days) their rate of growth at the end of milk feeding will vary. Earlier weaning = lower rate of gain/day; later weaning = higher rate of gain/day. When on farms where they are successful in doubling birth weights by 60 days I often find that calves finish weaning at 49 days and move to transition housing at 56 days. Their growth that last week on milk (42-49 days) is usually between 1.9 and 2.1 pounds per day.

Thus, we are looking for a weaning program that will maintain that rate of growth, 2 pounds per day, in the transition calf housing.

Defining a Weaning Program

- Age (days) at beginning of weaning
- Maximum milk intake before weaning begins
- Length (days) of the weaning period
- Reduction in total volume vs. “watering down, constant volume” methods
- Many small steps down vs. one or two large steps

What seems to work well

1. Hold off beginning weaning until at least 28 days. I see more successes when weaning starts at 35 days. I have observed dairies in countries like Italy, United Kingdom, and Australia regularly start weaning at 56 to 60 days.
2. Feed adequate amounts of milk that is seasonally appropriate for the farm’s location. This usually means calves are consuming 8 to 12 quarts daily between two and five weeks of age. Computer-controlled feeders, mob feeding and ad lib acidified feeding make it possible to gradually increase the amount fed as calves grow. Twice-a-day manual feeding programs can

step-up the amount feed once a week to achieve “full-feeding” rates by the time calves are 21 days old.

3. High-fat products like whole milk when fed at 8 or more quarts per day will initially depress calf starter intake. Many calf care persons report only minimal starter consumption until calves are 21 to 28 days old. Remember we need to plan on three more weeks from when regular starter consumption begins before we fully withdraw all milk – this allows adequate time for rumen papillae growth.
4. Research comparing weaning period length shows a definite advantage for at least ten days. Because many calf care enterprises operate on weekly cycles the most appropriate length then becomes two weeks.
5. One way to reduce dry matter intake is to water-down the milk fed according to a schedule that begins with 100 percent milk and gradually moves to 100 percent water. Another way to reduce dry matter intake is to continue feeding the pre-weaning product (e.g., whole milk) and gradually decrease the volume. Research has demonstrated that (a) both methods result in healthy calves, and (b) the volume-reduction method results in more rapid increases in calf starter grain intake than the water-down method.
6. Common rates of reduction that seem to be successful in maintaining post-weaning dry matter intakes include (a) with a computer-controlled automatic feeder feeding 10 to 12 liters/day set the program to decrease volume fed by 1 liter/day; (b) with ad lib acidified feeding with “all-in, all-out” groups gradually decrease the amount of time the group has milk available; (c) with mob-feeding and twice-a-day manual feeding programs drop back to once-a-day feeding with the volume equal to 60 to 50 percent of the daily amount fed.

References: P.P. Nielson and Others, “The effects of teat bar design and weaning methods on behavior, intake, and gain of dairy calves.” J. Dairy Sci. 91:2423-2432 (2008). M. A. Khan and Others, “Pre- and Postweaning performance of Holstein female calves fed milk through step-down and conventional methods.” J. Dairy Sci. 90:876-885 (2007). B. C. Sweeney and Others, “Duration of weaning, starter intake, and weight gain of dairy calves fed large amounts of milk.” J. Dairy Sci. 93:148-152 (2010). M.A. Khan and Others, “Effects of milk ration on solid feed intake, weaning and performance in dairy heifers.” J. Dairy Sci. 94:1071-1081 (2011)

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