

CALVING EASE

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Weaning Calves

There are as many opinions about the best way to wean calves as there are persons caring for calves. However, we do have some research information and field observations that may be helpful in sorting out personal preferences from practices that actually improve calf care.

Weaning = reduced rate of gain: First, no matter at what age calves are weaned or the method used there will be a drop in rate of gain. In work completed at the University of Tennessee calves were weaned at either five or seven weeks of age. At five-week weaning the rate of gain dropped from 2 to 0.5 pounds per day (seventy-five percent) during the week following weaning. At seven-week weaning the rate of gain dropped from 2.3 to 1.3 pounds per day (forty-four percent) during the week following weaning.

Second, the rate of gain for calves in this research project came back to preweaning levels rapidly. On the average, only about a week was needed to recover lost ground.

Therefore, plan on some reduced rate of gain along with weaning no matter how you accomplish weaning. Post weaning these calves need extra attention to make early diagnoses of health problems so that treatments can be timely. In order to focus our observation efforts I prefer wean all calves on the same day of the week. For example, for my calves weaning happened on Monday.

Remember, too, at least in this research and in my personal experience, the earlier calves are weaned the greater the decrease in rate of gain. If rate of gain is an indicator of stress level, then the younger calves are weaned (for example twenty-eight to thirty-five days compared to forty-nine to fifty-six days) the more closely we need to watch them for symptoms of infections.

Weaning Readiness and Grain Intake: I had a conversation recently that prompted me to go back to NRC 2001 tables that show estimated rates of growth based on calf starter grain. I selected a one hundred and sixty pound (73 Kg) calf housed in an outdoor hutch in April (40° F). I fed the calf an eighteen percent crude protein starter and free choice water. It took just over three pounds of grain daily just to meet the calf's maintenance needs ("as-fed" at ninety percent dry matter).

Do you recall we have been saying about grain intake and weaning readiness? “A calf is ready to wean when she regularly consumes two pounds of starter daily.”

What if we want the calf to continue her rate of gain during the week before she was weaned? Let’s say that she was gaining a 1.7 pounds a day. This spring how much calf starter grain does my one hundred sixty pound calf need to eat to meet both maintenance and growth needs? My calculations show around six pounds of calf starter grain daily. Warmer summer weather probably would reduce this feeding rate about one pound a day.

Therefore, if we expect calves to bounce back from weaning and continue gaining 1.7 pounds a day, do we need to rethink our threshold for grain intake at weaning? Do we want to meet just maintenance needs? Or, do we want to minimize the post-weaning dip in gains and continue preweaning growth rates? Should we be aiming at something greater than three pounds a day grain intakes preweaning?

Gradual compared to Abrupt Weaning: In one study calves being fed about three gallons of milk daily were weaned abruptly or over three gradual weaning periods of four, ten or twenty-two days. Abruptly weaned calves lost weight in the nine-day period after weaning. Overall, calves weaned gradually over 10 days had the best post-weaning weight gains.

Other work has compared two kinds of gradual step-down weaning programs. One program maintained a constant volume of liquid fed over the weaning period. Water was introduced to step-down the amount of milk solids fed in a twice-a-day feeding program.

The alternative step-down program used the original milk replacer mix and reduced the amount of milk solids fed by eliminating one of the two daily feedings. Calves weaned on the once-a-day feeding program increased their calf starter grain intake more rapidly than those calves fed the full volume of watered-down liquid daily.

Therefore, we are most likely to maintain preweaning growth rates during the seven to fourteen days post-weaning by using some kind of gradual weaning program. One that spreads out over seven to ten days appears to optimize gains. The once-a-day step-down program encourages calves to increase their grain intakes the most.

Sources: J.D. Quigley, III, J.J. Rejman, and K.R. Martin "Response of Peripheral Blood Mononuclear Cells to Mitogenic Stimulation in Young Calves," *Journal of Dairy Science* 77:259-263. B.C. Sweeney, D.M. Weary and A.M.dePassile "Duration of weaning, starter intake, and weight gain of dairy calves fed large amounts of milk," *Journal of Dairy Science* 93:148-152.

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