

CALVING EASE

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Grain Feeding in an Accelerated Growth Program

The September 1999 Calving Ease described basic requirements needed before a producer should consider starting an accelerated growth program for dairy heifer calves. Milk feeding experiences and guidelines were outlined in the October 1999 issue. This month we are focusing on the third part of the three-part series – getting calves weaned and eating starter grain.

CHOICE OF STARTER GRAIN

At Noblehurst we tried feeding a pelleted starter rather than a textured feed with calves on an accelerated growth program. It was a flop! For the calves consuming nearly three pounds of milk replacer powder daily pelleted grain intake was nearly zero even at seven weeks of age. For the same feeding program with textured grain calves began eating substantial amounts around four weeks. We may force limit-fed calves (one pound of powder or less daily) to consume pelleted feed in order to survive. Our experience with calves fed milk replacer at two or three pound levels daily clearly indicates better consumption with textured starter. What makes the difference in rumen development is not the starter fed but starter consumed. Palatability may be the crucial factor for accelerated growth calves.

FLUID INTAKE AND WEANING

All of us like to wean calves without any break in their daily gains. Also, we would like to limit the stress so that none of them get sick. So, without having heifers drop in rate of gain or get sick, how do we decrease the amount of milk fed in order to encourage greater consumption of starter grain?

One propose method of weaning high fluid intake calves is to reduce the dry matter content of the mix by one-half at weaning time while continuing to feed the same volume of fluid. For example, for calves receiving two pounds of powder daily in two three-quart feedings preweaning, we would continue two three-quart feedings but reduce the total powder to only one pound.

In order to evaluate this idea we compared average age at weaning (calves weaned when over thirty five days old and eating two or more pounds of starter for three days in a row) for two groups of fifty calves. Preweaning both groups were fed approximately two pounds of powder daily in six quarts of mix. One group at thirty-five days received only the morning milk feedings (one pound of powder) and continuous free choice water along with starter grain. The other group at thirty-five days continued to receive both AM and PM milk feedings but they were half strength – one-half pound powder AM and PM for a total of one pound daily. Each group ate the same amount of milk replacer powder each day. The constant-volume group weaned an average of ten days later than the AM-only

group. We only weighed ten calves out of each group so it's hard to be certain of our results but we did not observe any significant differences in average daily gain.

REDUCING MILK TO PROMOTE GRAIN INTAKE

It is a pretty well established general rule that given a choice calves will drink milk rather than eat grain. If cost was not a factor we could pour free choice milk into calves and get great gains. Then at three months or so we could work on getting rumen development. But cost is a factor.

Our accelerated growth program's goal is to get optimum gains in the preruminant phase of growth. Then, at roughly four weeks of age we increase our emphasis on rumen development. Abrupt weaning of rumen-incompetent calves has been demonstrated to result in weight losses in the range of two or more pounds daily as well as serious morbidity problems until competence is achieved. Clearly, most producers want to achieve rumen competence prior to weaning.

Most calf raisers feed enough energy and protein from milk replacer to meet most newborn calves' maintenance needs and genetically determined needs for growth. As calves grow these combined needs exceed the nutrients provided by milk replacer. The calves will begin to eat starter grain as an alternative source of energy and protein. This assumes calves have discovered that grain is food!

If a calf raiser feeds a small amount of milk most calves by three or four weeks of age will discover starter grain and begin to eat substantial amounts of it. The calves that lag behind in beginning to eat starter grain get stressed out and frequently are treated for pneumonia. If a calf raiser feeds a large enough amount of milk replacer most calves by three or four weeks of age will discover grain and begin to eat only small amounts of it. The difference is primarily in the amount rather than the timing.

During a recent feeding trial we fed some calves that were the same age 2.9 pounds of milk replacer daily. As you might have predicted, larger calves with higher maintenance requirements started digging into the starter grain sooner than smaller calves. Among the larger calves (ninety-five pounds at birth and larger) significant starter grain intake (greater than one cup daily) began at an average of eighteen days. These same calves began regularly eating two pounds of starter grain daily at an average of thirty-nine days. The smallest calves took proportionately longer both to begin eating starter grain and to get up to two pounds daily.

Through the process of trial-and-error we eventually worked out a routine that balances on one hand high dry matter intake from milk replacer early in life with on the other hand the need to encourage early rumen development. We start reducing the amount of milk replacer fed around the fourth or fifth week depending on the level of milk replacer powder fed. We have a lot of experience with calves fed two pounds of powder daily. At thirty-five days nearly all of these calves are eating at least a pound of starter daily. At this time we cut out the PM milk feeding – remember they have continuous free choice water. After this milk replacer reduction starter grain consumption usually at least doubles with three to five days. Most of these calves are ready to wean between forty four and forty eight days averaging approximately 1.8 pounds daily gain birth through fifty-six days with a pneumonia treatment rated under five percent. At rates higher than two pounds of milk replacer powder a day we see a wider spread among calves pretty much related to birth weight. We use a two-step reduction in milk feeding starting at four weeks. The larger calves wean around forty-five days. The smallest ones wean about fifty-five to sixty days.

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