

CALVING EASE

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Quality of Starter Grain

It's no secret. Calves eat more clean, fresh palatable starter grain than grain that's dirty, stale and unpalatable. They start eating it sooner, too.

That observation is the basis of recommending that calf grain containers be checked daily. Many successful calf raisers replace the starter grain offered to the youngest calves daily as well. They feel the "freshness" factor favors early acceptance.

What about composition?

Composition could refer to protein or energy level. That's not what we want to consider here, however. This discussion is focused on the physical makeup of the grain mix. One such measure is the presence of very fine particles. We often refer to these as "fines." The exact proportion in any starter grain would depend on the size of the screen used to remove them for measuring. Using a 0.8mm screen, we have observed starter grain mixes that range from nearly zero to as high as thirty-five percent.

Why are these fine particles significant for calf feeding? Nearly everyone agrees that they have a depressing effect on consumption. The greater the proportion of fines, the lower the starter grain consumption. We have observed that this is especially true for the youngest calves. In addition, since the fines all end up in the bottom of the grain bucket or pan they often soak up moisture. This mush either freezes in the winter or molds in the hotter weather. The odors from the moldy grain seem to repel the calves, further depressing intake.

If the minerals, vitamins and coccidiostat are not captured in pellet form they end up in these fines, too. When the fines are cleaned out of the pails the supplements get thrown out as well.

Importance of Pellet Quality

Many textured starter grains are composed of sixty-five to seventy-five percent pellets (by weight). They contain the supplementary protein ingredients used to complement other common feeds such as corn and oats. Also, most mills choose to mix the coccidiostat, vitamins, minerals and salt into the pellet.

This places a double importance on pellet quality. As long as only a few pellets crumble the impact is small. Palatability is not changed markedly. The calves continue to eat the pellets in the intended proportion to the other grains.

When many pellets crumble the ingredients they contain tend to be eaten at a rate lower than intended by the manufacturer. We have observed that the crumbled pellets, especially in a mix containing molasses, turn into a soft mush. Along with any fines in the bottom of the bucket, this mush is often left uneaten. Now, remember that in order to get the desired protein intake the mill depends on pellet consumption to bring up the percent protein above that of corn and oats. The uneaten proportion of pellets can substantially reduce the true, consumed protein content of the starter grain.

The same problem applies to the feed supplements. Just as the high protein feeds are added proportionally to pellets assuming high pellet integrity, supplements are added the same way. When lots of pellets crumble, pellet consumption is disproportionately low. The coccidiostat, vitamins, minerals and salt are then consumed at a rate lower than intended by both the manufacturer and the calf raiser.

What Constitutes "Less Desirable" Starter Grain Quality?

When we examined five textured starter grain mixes these percentages were found (read down):

	Sample A	Sample B	Sample C	Sample D	Sample E
Pellets	75	68	56	60	36
St.Flk. Corn	17	21	22	0	0
Crack. Corn	0	0	0	15	24
Oats/Hulls	8	11	7	19	9
Roast.SoyBns.	0	0	0	6	1
Beet Pulp	0	0	0	0	3
Sm. Particles	0	0	15	0	19
Fines <0.8mm	0	0	0	0	8
Total Percent	100	100	100	100	100

In general, we have observed earlier acceptance with feeds like Samples A, B and C than the other two starters. Calves under four weeks of age appear in better body condition on starter grains like Samples A and B than Samples D and E. Naturally, individual farms may have slightly different experiences based on milk feeding programs and grain bucket management.

In a quarter-pound sample (use milk replacer cup to measure equivalent of eight ounces of powder to get this much starter grain), really good quality pellet mixes have so little crumbled, soft pellet contents it's hard to sort out. When we are able to sort out more than one-tenth of the pellet contents as soft and crumbled, this, too, is unacceptable.

If you know of someone that doesn't currently receive Calving Ease but would like to, tell them to **WRITE** to Calving Ease, 11047 River Road, Pavilion, NY 14525 or to **CALL** either 716-591-2660 (Attica Vet Assoc. office) or 716-343-8128 (Offhaus Farms office) or **FAX** (716-591-2898) or **e-mail** sleadley@servtech.com . A limited number of back issues may be accessed on the Internet at www.americanprotein.com/calf/calnotes/APCcalnotes.htm and clicking on the link, Calving Ease.