

STARTER CONCENTRATE INTAKE INFLUENCED BY VOLUME OF MILK FEEDING

How should a calf rearer balance milk or milk replacer with starter concentrate feeding?

On one hand, we want to feed enough milk or milk replacer long enough to be sure calves mature rapidly – that way they stay healthy.

On the other hand, we don't want to feed too much milk replacer too long to unnecessarily delay starter concentrate intake and rumen development – that way they stay healthy.

Living on milk replacer until rumen develops

The balancing act for any calf rearer is to seek the right ration for calves at different stages of development.

Until the lining of the rumen has developed enough to absorb nutrients from concentrate fermentation, the calf has to live on milk or milk replacer. That rumen growth process takes a minimum of about 3 weeks. Remember, those 3 weeks only start after a heifer begins eating a handful of concentrate daily and has access to water. This is not the same as the calf being 3 weeks old.

Lots of natural variation among calves

Concentrate intake measurements available from a New York dairy farm suggest we may expect to start this 3 week countdown at different times depending on milk/milk replacer intake.

Calves fed about 570g/day of milk powder probably will begin this regular starter concentrate intake around 2 weeks. This would be around 4.3litres/day of whole milk. But there is a lot of variation around this average.

A few of these calves were observed to start eating concentrate regularly at 1 week of age. Others on the same milk ration didn't begin regular intake until they were nearly 3 weeks old.

Higher rates of milk replacer feeding delay concentrate intake

Calves with higher rates of milk replacer feeding can be expected to start regular concentrate intake later.

Our observations suggest that at 850g/day of milk replacer powder, initial daily significant concentrate intake averaged 18 days.

At 1.3 kg/day of milk replacer powder, this average date for initial regular starter concentrate intake was delayed until 26 days. This would be around 9.5-9.8litres/day of milk replacer.

Remember, however, that a great deal of variation was present in all feeding groups. A few calves begin much earlier and some start much later than the average.

No substitute for daily observation

Averages give us an idea of what to expect. Maybe they suggest what is "normal." That's the animal science side of management.

But, there is no substitute for good animal husbandry – one must watch calves individually. When weaning a heifer, it's ideal to know that she, as an individual animal, has been regularly eating some concentrate for at least 3 weeks. Among my own calves (Sam Leadley) I could depend on nearly 90% of them to follow the same pattern of concentrate intake – I only had to keep track of the other 10% that were the "laggards" – they needed to start weaning later than the others.

We want to be fairly certain that calves have the rumen competence to make the switch to dry feeds without excessive stress. Thus, it is important to combine our scientific knowledge about rumen development with good animal husbandry to achieve superior results when weaning calves.