

TRANSITION DAIRY COW MANAGEMENT

The importance of preparing a dairy cow for the next lactation has been recognised for several decades. With increasing knowledge of the physiology of dairy cows, and the important contribution that good pre-calving management can make to both parturition and the subsequent lactation, transition management has taken on a new dimension within the last 10 to 15 years. Parturition itself represents a major challenge/insult to the cow and is a period when serious problems can occur, which to differing extents, may affect cow health, subsequent lactational performance and overall profitability.

Any review of transition management should examine what is involved in the physiological changes that occur as the in-calf cow moves into lactation. It should examine the underlying causes of some of the major production disorders as well as focussing on the establishment of good feed intakes post-calving to achieve satisfactory levels of milk production. Any review should attempt to provide some practical aspects involved in managing cows to achieve uneventful calvings, successful lactations intakes and good overall fertility.

The transition period

Drying off. There is no specific definition of the transition period in terms of duration, and whilst it is generally acceptable to consider commencement at the time of drying-off, it is debatable as to when it is concluded. Drying-off normally occurs at 60 days prior to expected calving; earlier drying off can result in over conditioned cows prior to calving whilst delayed drying

off, often seen with higher yielding cows, can affect yields in the subsequent lactation. Cows yielding 10-12 litres milk per days are relatively easy to dry off, with either intermittent or abrupt cessation of milking. Higher yielding cows can be more difficult.



Prior to drying off cows could be eating upwards of 3% of body weight which will fall rapidly to only 2%, after removal of the cow's lactation demands. Involution of udder tissue occurs at this time, while at the same time the developing foetus

will require additional nutrients as the cow moves to completion of the final third of her pregnancy. Overall this increased demand will be relatively modest but the associated increased proportion of the cow's abdominal cavity being occupied by the expanding uterus will have a major effect on space available for the rumen. As this constriction on the rumen continues, overall feed intake will be affected, and in such situations, it may be advisable to compensate for possible reductions in total nutrient intake by increasing overall ration nutrient density.

Foetal and mammary development

Together with the cow's maintenance energy requirements (approx. 70MJ/day), coupled with foetal and mammary development, minimal ME requirement during late pregnancy of between 90-95MJ/day are required, with a protein content of 13-14%. This can be achieved ►

by feeding a ration of modest ME density without compromising foetal growth.

Calf weight

Total feed consumption during the dry period is unlikely to exceed 2% of body weight but in most circumstances will be sufficient to meet the animal's total requirements provided the ration is of suitable energy and protein density. Where underfeeding does occur, for whatever reason, birth weight and survival rate of the calf may suffer. In contrast, over feeding during the transition period can result in cows becoming over conditioned, often resulting in oversized calves. Both conditions can increase the incidence of dystocia, whilst overfat cows may encounter other problems such as poor intakes, fatty liver and ketosis once lactation has commenced.

Feed intake

After drying off, the cow's appetite declines rapidly but for at least the first part of the transition period, levels approaching 2% body weight are achievable under most dietary regimes. Thus, a 625kg dry and pregnant dairy cow should consume between 11.5 and 12.5kgDM/d, with few cows likely to consume more than 13kgDM/day. Closer to calving, total feed intakes start to decline, most noticeably from approximately 7 days prior to actual calving date. Keeping intakes up pre calving will promote better intakes faster post calving.

As the in-calf cow moves towards lactation, protein requirements to support increasing foetal demands will increase. Developing tissue in the udder will also increase overall protein demands. Mineral supplementation is also a critical element of good transition management.



Summary

We must look at pre partum cows as a very important animal on farm. She must be prepared correctly for her next lactation in so many different ways as outlined above. Many different levels exist in this preparation to make the transition to lactation as smooth as possible.

The importance of hygiene to health and performance

Keeping cows housed presents many challenges in terms of bedding cleanliness, microbial challenge and udder health. Whilst many changes can be made to reduce the risk of disease on farm, a simple and cost effective means is by using a desiccant and antimicrobial product such as Biosuper. Biosuper can be applied to straw courts or directly into cubicles.



Biosuper has the following benefits:

- Absorbs moisture
- Kills bacteria
- Reduces pH
- Neutralizes ammonia
(this is unique to Biosuper)

Biosuper has been proven to be an effective tool in the prevention of many diseases from mastitis to digital dermatitis.

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Contact us to find out more about optimising performance and profitability:

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