

KEENAN DRY COW SYSTEM MANAGEMENT FOR COWS ON PASTURE

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Take home messages

- **In all systems of milk production, the Keenan dry cow strategy (DCS) should be adopted for the whole dry period ie. the last 8 weeks before calving, if the full benefits in terms of easier calvings, improved cow health, less body condition loss after calving and better lactational and fertility performance are to be achieved.**
- **With respect to maiden heifers, a shorter period of 6 weeks may be possible.**

The application of Keenan Dry Condition Strategy (DCS) is relatively straightforward. When dealing with cows, where it is intended that pasture will comprise a significant part of the milking cow ration, the position needs good control over pasture intake during the dry period. However, with careful planning, recognising the farms potential to grow grass as well as the farmer's aspirations in terms of the amount of milk to be produced from grass, it is possible to implement the DCS, irrespective of seasonality of calving or grass availability.

In all instances, the dry cows should be separated from the milking herd at the time of drying off and held as one group. In-calf maiden heifers should be introduced to this group not later than 6 weeks prior to their expected calving. The DCS ration should contain approximately 50% chopped straw with the balance provided as the intended lactation ration (pasture/silage, grain and a supplementary protein (soya, canola meal, beans)) as required to achieve a ration crude protein content of 13%. Up to 2.5k g DM good quality grass silage per cow per day can be provided as a suitable substitute for grazed grass when pasture will comprise a significant part of the lactation ration. Dry cow minerals need to be included in the TMR but anionic salts will not be required unless the herd has an unfortunate history of high incidence rates of milk fever.

At pasture all cows and heifers should be retained on bare paddocks, with the amount of pasture being controlled to achieve a total grass intake of not more than 2.5 kg DM/cow/day. Electric fencing can be used where necessary to control grass supply. The alternate method to control pasture intake is to let the dry herd graze for 1 hour only then be moved back to a bare paddock. The Keenan DC ration should be fed to the cows while grazing, preferably in a suitable feed trough, with the amount offered being sufficient to achieve *ad libitum* intake. In preparing the dry cow total mixed ration (TMR), it will be important to take account of the amount of pasture likely to be consumed by reducing the inclusion rate of grass silage. Feeding additional straw (unchopped) in a ring feeder should not be necessary and is not to be encouraged. The DC ration should contain suitable dry cow minerals and where grass may have high levels of protein (eg. spring grass) it may be advisable to reduce the protein content of the straw based ration to avoid excessive protein intakes.

In all situations it is important that the cows are not allowed to over-consume pasture at the expense of the straw based dry cow ration. Daily intakes of the dry cow ration

should not be less than 9.5kg DM/cow. Daily straw based ration intakes should be monitored and where they are starting to fall it will be important to reduce grass availability and increase the amount of TMR being offered. Failure to adopt this strategy will prevent many of the benefits of the DCS from being achieved.

During the last 8 weeks before calving when the DCS is being applied, no attempt should be made to change cow body condition. Where over-conditioned cows are evident in the herd it may be advisable to dry these off a month early, especially as they are likely to be lower yielding. For the first 2 to 3 weeks keep these cows on a separate bare pasture with only long straw or hay provided in a ring feeder. After this period of restricted feeding, the cows can then be fed a controlled amount (maximum 7kg DM/cow/day) of Dry Cow ration until 7/8 weeks before calving, at which point the full Dry Cow ration should be provided. In contrast under-conditioned cows will need to be fed a higher nutrient dense ration prior to the normal dry period feeding. Once again it would be advisable to dry these cows off early and after milk production has ceased, a ration containing modest levels of ME (11 MJ/kg DM) and protein (14%), typical of a beef TMR, could be fed *ad libitum*. Not later than 7 weeks before calving however these cows must be transferred fully to the DC TMR.

After calving all cows must be given sufficient time to establish good intakes if the full benefits of Dry Cow Strategy in terms of reduced body condition loss and improved fertility are to be achieved. Relatively high levels of chopped straw feeding should be maintained over these first few days and the temptation to turn the cow into lush pasture until she has fully recovered from calving must be avoided. On many farms it may be possible to maintain a small maternity group until at least 4/5 days post-calving, continuing to feed the Dry Cow Ration with additional nutrients provided to support the initiation of milk production.