Department of **Employment, Economic Development and Innovation**

Dry cow feeding

Technical note 10

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Dry cow management is critical to a cow's performance and health in the next lactation. Metabolic disorders, feed intake after calving, fertility and milk production and composition are strongly influenced by feeding in the dry period. Refer to Technical note 16: *Nutrition and animal health*.

Important aspects of the dry period

- The main aim of the dry period is to prepare the mammary gland for the next lactation. The ideal length of the dry period is 60 days.
- The recommended drying off method is to stop milking abruptly. Reduce feed intake by 50–70% for 2–3 days to reduce nutrient supply and reduce milk synthesis.
- Then feed to maintain body condition through the dry period. Dry cows off in good condition—BCS of 5–5.5 out of 8 (photo below) and maintain this condition score until calving. Dry cows should not gain or lose more than 0.50 of a condition score during this period.
- Fattening cows in the dry period can lead to health problems including displaced abomasums, udder oedema and ketosis at calving. However, if cows are already overfat at drying off, they should not lose weight during the dry period, or they may be subject to fatty liver and ketosis.
- Feed far-of dry cows (60 to 21 days prior to calving) and close up springers (21 to 0 days prior to calving) separately, as they require a different ration formulation.

Nutrient recommendations for the dry cow diet

- Daily intake should be 1.8–2% of the cow's body weight. For example, a 600 kg cow will require 11–12 kg DM/day.
- Balance the diet: aim for a neutral detergent fibre (NDF) content of approx. 40% (80% of the NDF coming from forage), a starch content of 2–3%, sugars 3–4% and crude protein of approx. 10-13%; heifers will benefit from a higher crude protein diet of 15%.
- Cows fed a low energy diet tend to have a higher incidence of retained placentas.
- Ensure adequate mineral and vitamin levels in the diet:
- Calcium—0.44% of the diet DM.
- Phosphorus—0.22% of the diet DM. Low P intake can increase the risk of milk fever, downer cow syndrome, retained placentas and anoestrus after calving.
- Magnesium—0.11% of the diet DM.
- Potassium—0.51% of the diet DM.
- Sodium—0.10% of the diet DM or limit salt intake to 30 g/cow/day to minimise oedema (build-up of fluid) in the naval and udder area.
- Selenium—0.30 ppm in the total diet to reduce the incidence of retained placenta.
- Vitamin E—1200 IU/day. Deficiency can lead to educed disease resistance, increased calving disorder, and potential vitamin deficiency for the newborn calf in the colostrum.
- Feeding 3–12 grams of niacin (vitamin B3).

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Recommended feeds in the dry ration

- Base the dry cow ration on forages including good quality, long-stemmed hay. This will maintain rumen function, rumen muscle tone and aid in healing the rumen wall lining.
- Ensure the diet is balanced. Keep an eye on excess protein (high nitrogen forages), calcium (lucerne) and potassium (molasses) in the dry cow diet.
- Minimise concentrate level in the total ration, but use sufficient amounts for adequate energy and protein levels.
- Do not feed rumen buffers such as sodium bicarbonate as this will increase the sodium content of the diet and increase the risk of milk fever and retained placenta.

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Further information

- DEEDI website www.deedi.qld.gov.au for the Nutrition Plu$ Technical Note series
- Protein Plu$ checkbook (Published 2006 by DPI&F, Queensland)
- Feed Plu$ CD v4.0 (Published 2008 by DPI&F Queensland)
- Condition magician booklet (Published 2003 by DPI Victoria)
- www.dairyinfo.biz

The project is funded and supported by the Department of Employment, Economic Development and Innovation (DEEDI), and Dairy Australia.

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