

Animal welfare and health issues, dairying and drought

NSW Department of Primary Industries

Livestock Officers (Dairy)

Animal welfare

Be prepared in a drought

The management of livestock, stocking rates and nutrition are closely linked to animal health and welfare. Drought management plans must consider the best ways to adjust stocking rates and manage feed supplies for livestock.

The welfare of animals is always important, but during droughts animal welfare must be given more attention. Tough decisions will have to be made, and producers who have drought-affected stock will need to consider the effects of any intended actions on their animals. Any decision made must be humane and reasonable.

Act early

Delaying action may seem logical, but lost time usually reduces the number of options available. Therefore, you must act early while stock are fit and strong.

Relieve animal suffering

If the situation has deteriorated to the point where stock are suffering, you must immediately relieve the situation by feeding or agisting stock, or sending stock to slaughter. In desperate cases, stock may need to be humanely destroyed. It is not an option to just let nature take its course.

NSW legislation

Prevention of Cruelty to Animals Act 1979 states that:

'A person in charge of an animal shall not fail to provide the animal with food, drink or shelter, or any of them, which, in each case, is proper and

sufficient and which it is reasonably practicable in the circumstances for the person to provide'.

This means that even in a drought the carer of an animal must provide at least maintenance feed to prevent the animal from distress and starvation.

Further information

- The RSPCA.
- NSW DPI – Primefact 310 *Humane Destruction of Stock*.
- NSW DPI – Primefact 327 *Animal Welfare in Drought*
- *NSW Prevention of Cruelty to Animals Act*.
- Australian Model Code of Practice for the Welfare of Animals. Various reports.
- Department of Agriculture, Fisheries and Forestry website www.daff.gov.au
- District Veterinarian, Rural Lands Protection Boards.
- Private Veterinary Practitioners.

Dairy animal health issues in a drought

Drought conditions can increase animal health problems if precautionary measures are not taken

Diet related issues

Animal health problems may result with diets that do not meet the minimum requirements for fibre, energy, protein and minerals, or that are grossly out of balance. Rapid changes in the diet will also cause digestive problems.

The main health problems are **ketosis** and **acidosis** (grain poisoning). Both conditions can cause a rapid loss in bodyweight, drop in intake and milk production, sick cows and death.

Ketosis can occur in freshly calved cows fed low energy diets. Affected cows can have a sweet smelling 'acetone' breath. Indicators of acidosis are



low milk fat concentrations (e.g. below 3.4% for an all-year round Holstein Friesian herd) and diarrhoea. At a more advanced stage, acidosis can cause lameness and gut pain in affected cows.

High grain with low fibre diets can result in acidosis. A sudden change in the type of grain - especially to wheat - can also result in acidosis. Dairy cows can consume up to 12kg of grain per day if the fibre level in the diet is adequate, i.e. over 25% neutral detergent fibre and the grain is fed with the forage. Daily neutral detergent fibre intake should come from 75% forages. The feeding of buffers (sodium bicarbonate) or additives (monensin) can reduce the incidence of acidosis. Feeding high grain diets to reduce the risk of acidosis is discussed in detail in Primefact 550 *Feeding dairy stock during drought*

Urea may be fed as a nitrogen source when the feed is protein deficient. Urea is toxic and should only be fed to stock more than 6 months old. Maximum daily intake should be less than 100g per day for adult stock or 0.02% of bodyweight. (eg 400 kg X .02% = 80g).

Urea poisoning risk

At these high feeding levels of urea, it is important to introduce urea slowly in the diet (eg over 7-10 days) and to feed it in at least two meals a day. Grain-based concentrates should contain a maximum of 1.2% urea. Feeding 150g of urea in once-a-day in a grain supplement will probably cause urea poisoning.

Symptoms of urea poisoning include a lack of co-ordination and aggressive behaviour. It is wise to use caution when feeding urea. (See Primefact 550 *Feeding dairy stock during drought*)

Both macro and micro **minerals** are essential for normal body functions. Mineral imbalances will be more pronounced during drought feeding because of lack of green forage and increased grain feeding.

Prolonged mineral imbalances can result in metabolic diseases such as grass tetany and milk fever.

Cows can tolerate mineral imbalances for less than one month. On-going mineral imbalances are seen as a more significant problem.

Feeding single component diets can result in specific mineral imbalances. Keep in mind that grain is low in calcium; legumes are high in calcium but low in phosphorus; summer forage crops are low in sulphur and tropical grass diets are low in sodium.

All feeds should be checked for their mineral content and rations adjusted to meet the herd's needs.

It is also important to consider mineral ratio. For example, the calcium:phosphorus ratio, since imbalances affect the availability and absorption of the minerals, and can therefore affect production and reproduction.

Trace, or micro, minerals are only required in very small amounts and excess levels can be extremely toxic.

Vitamin deficiencies

Vitamins are essential in small amounts for good health and production.

Vitamin A

Vitamin A is required for both production and reproduction, is stored in the liver and is obtained from green pasture, hays with good green colour and yellow maize. Even a short green pick is enough to supply adequate quantities of the vitamin.

Cattle on dry feed have lower stores of vitamin A, and all classes of cattle will be deficient in vitamin A after only three months without green pasture. Vitamin A supplements can be added to the grain portion of the diet. Vitamin A, D and E injection can provide sufficient vitamin A for three months

Vitamin E

Green pasture is the best source of vitamin E. Grains and hays are fair to good sources of vitamin E, although considerable variation does occur.

There is a relationship between vitamin E and selenium deficiencies. Vitamin E deficiency induces symptoms similar to those of selenium deficiency.

Vitamin E supplements can be added to the grain portion of the diet. Vitamin E injection can provide sufficient vitamin E for three months

Internal parasites

During drought, dairy cows are under physical stress. Limit all unnecessary movement and yarding of stock. If you intend to treat stock for parasites or to administer injections, carry out all procedures during a single yarding, but first check the treatment will not harm stock. If you suspect internal parasites in stock, treat all stock with a registered product according to label instructions.

The presence of worms can decrease the cow's ability to use feed effectively. Poor nutrition may cause stock to have a lower resistance to parasite infestation.

Worm burdens can increase if stock are regularly fed on the ground in the same area. Close grazing of pasture can increase the chance of picking up worms. Before treating dry cows ensure that the withhold period of the treatment is less than the

remaining time of pregnancy, otherwise milk will have to be withheld after calving.

If stock have access to wet areas, which may be the only green feed on the farm, consider treating for liver fluke. Seek veterinary advice before drenching for liver fluke in milking cows. Do not forget to drench herd bulls against internal parasites.

External parasites

Ticks, lice and buffalo flies have a greater effect on animals in poor condition or under stress. Apply appropriate treatments to control these parasites according to label instructions. Always check that the product is suitable for the type of animals such as milking cows. Observe all withholding periods.

Some products require the user to be trained in Chemical use and application. Ensure that suitably trained people handle and use these products.

Clostridial and other environmental diseases

Ensure that all animals are part of an effective 5-in-1 or 7-in-1 vaccination program. The incidence of clostridial diseases increases when animals graze short and sparse pastures. Hand-feeding on the ground may also increase the incidence.

Phosphorus deficient cattle may seek out the carcasses of dead animals. Stock must not have access to carcasses of dead animals. All dead animals need to be disposed of promptly and appropriately. Burning is preferred although burying is permitted in some areas.

Botulism is a disease that occurs when animals eat decomposed animal tissue. Dead vermin, such as rats or rabbits, can become trapped during hay baling, silage making or processing grain and are a common source of the botulism toxin.

Botulism will rapidly kill cattle and horses that consume contaminated feed. Botulism can be prevented by vaccination and it is recommended that cattle receiving most of their forage as conserved fodder (hay and/or silage) should be vaccinated against botulism.

Plant poisoning

Hungry animals may consume poisonous plants that they would not normally eat. Poisonous plants include bracken fern, red lantana, castor oil plant, smartweed, mother of millions, green cestrum, rock fern, variegated thistle and fireweed. Contact the Rural Lands Protection Board for a list of poisonous plants in your area.

Prevent animal access to poisonous plants, or remove the problem plants. Animals in poor condition will have a more severe reaction to the poisoning and take longer to recover, or may die.

Contact your veterinary practitioner or District Veterinarian if you see symptoms such as peeling skin (particularly areas of pale skin), photosensitivity, 'tucked up' animals, which are down and kicking at their under-belly, rapid fall in milk production or other unfamiliar symptoms.

Further information:

- NSW DPI on website: www.dpi.nsw.gov.au
- NSW DPI Realistic Rations manual at www.dpi.nsw.gov.au/reader/dlink-realrations
- District Veterinarian, Rural Lands Protection Boards.
- Private veterinary practitioners.

Recovering from the drought

The recovery phase after a drought should not be ignored. NSW DPI has detailed information on its website www.dpi.nsw.gov.au to provide assistance for farmers with the many decisions that need to be made after the drought breaks.

There are opportunities to re-appraise enterprises and farm operations, to assess your farm's future earning capacity, and to plan in order to cope better in future droughts.

Acknowledgement

This Primefact was originally part of the Dairying and Drought publication (Agnote DAI-281, Second Edition, November 2002) and was prepared by professional officers from NSW Agriculture's (now NSW DPI) Dairy Products Sub-program. The team was Ross Coomber (Coffs Harbour – retired), Tony Dowman (Kempsey), Col Griffiths (Kyogle) and Brad Granzin (formerly NSW DPI, Wollongbar). They were coordinated by Alex Ashwood (Wollongbar – retired). This edition revised by Ms Helen Burns, Development Officer, E H Graham Centre for Agricultural Innovation, WWAI.

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ISSN 1832-6668

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Job number 7480