

CHAPTER 9

Animal health and welfare



This chapter outlines some key management factors and diseases that need to be considered.

Key messages

- **You are obliged to provide proper and sufficient food, water and shelter to stock at all times.**
- **Many diseases affecting cattle can be a greater problem in drought due to the stressed condition of stock.**

If you have any concerns about the health and welfare of your stock during a drought, contact your local veterinarian or District Veterinary Officer.

Health and welfare problems in beef herds in a drought

Droughts inevitably result in less-than-adequate amounts of paddock feed. The effects of this shortfall on animal health will depend on the class of livestock (e.g. steers versus pregnant cattle), the body condition of the cattle as they enter a drought and the length of time feed is short.

Classes of livestock affected

Breeding stock

Cows in late pregnancy should receive priority in feeding programs as the growing foetus greatly increases the cow's energy requirements. A breeding cow's energy intake needs to continue to rise after calving and peak at six weeks into lactation.

Information on energy and protein requirements of breeding cattle can be found in Chapter 6, Tables 6.2 and 6.3.

A fat pregnant cow encountering an energy deficiency will burn its own body fat to supply energy. This will work for a short time, but if the energy shortfall continues, the cow may suffer from pregnancy toxaemia or ketosis. A sudden decrease in energy in a heavily pregnant cow can lead to pregnancy toxaemia; a more gradual or chronic decrease in energy can predispose the cow to ketosis.

In both conditions, the liver becomes affected by the mobilised fat and the cow becomes sick due to liver failure and the effect of the breakdown products of the fat. Cows become staggy and go down, are unable to rise, refuse to eat or drink and eventually die. Prevention by supplementary feeding is preferable to treatment, which is often unsuccessful.

A light-conditioned pregnant cow, encountering a drought, will continue to lose condition, become weak and go down. Compared to the cow affected with pregnancy toxaemia, this cow is not sick, but physically lacks the strength to rise. Pay attention to feeding these cows in early to mid-pregnancy; they will become a real problem with this condition if the drought extends into their last three months of pregnancy.

The two most important factors affecting pregnancy rates in cows are body fat score at calving and the level of nutrition after calving. See Chapter 4 for further information on impact of nutrition and fat score at and post calving.

It is a good management practice when pregnancy testing, to request your veterinarian to identify cows expected to be early and late calvers (this will require relatively early pregnancy testing from about six weeks after the end of joining).

In times of drought, early calvers have higher conception rates in the following joining than late calvers.

If the late calvers are identified, it is possible to sell them or preferentially feed them to improve their body condition score at calving and consequently increase their conception rates.

Similarly, bull fertility is related to body condition. Semen quality is determined about two months before joining, so it is essential to maintain bulls in good body condition well before mating starts.

Dry stock

Dry stock have the lowest feed requirement and should not be overfed at the expense of breeding stock.

Grain feeding problems

There are many advantages in using grain to feed cattle in drought, however there are also some potential animal health problems (see Chapter 7).

Poisoning and chemical residues

Poisoning can be a problem as hungry animals will eat plants they would not normally eat (e.g. bracken fern) and find other poisons, such as arsenic and lead, in their pursuit of feed.

Take care with garden trimmings, which are often poisonous, and lawn clippings with organochlorine (e.g. heptachlor, chlordane), as these may result in unacceptable residues in meat at slaughter. Refer to the end of Chapter 5 for information on chemical residues.

Hungry stock, including transported or yarded cattle, should be fed some hay before being released onto a fresh paddock or 'failed' crop to minimise the risk of some poisonings and photosensitisation.

Urea poisoning

Urea is a useful supply of non-protein nitrogen for the rumen microbes but take care when supplementary feeding. For example, poisoning occurs when excess urea is consumed:

- as a result of inadequate mixing of feed or roller drum mixes
- when lick blocks crumble or develop a dish from licking that can hold rain water and dissolve urea.

Signs of toxicity include abdominal pain, shivering, salivation, bloat and death.

Diagnosis and treatment is best made by a vet, but an emergency treatment that may give relief is oral vinegar at a dosage of four litres for an adult beast.

The effect of disease on drought-affected cattle

Conditions that afflict normal cattle can have more serious effects on cattle in poor body condition.

Internal parasites (worms and fluke)

Those classes of cattle that may not normally be treated (e.g. mature cows that are not normally worm drenched) may need treatment during feed shortages.

An increase in the rate of pick up of larvae (e.g. by cattle grazing short green pasture) and the reduced nutrition of the stock can increase susceptibility to the effects of a parasite burden.

By the time scouring is visible, the animal's gut will have already been severely damaged, adding to the problems of an animal already under nutritional stress.

Severe parasite burdens will reduce the effectiveness of an expensive drought-feeding program. The basis for an appropriate program during dry times is monitoring for worm burdens and effective drenching. See your local animal health adviser for more advice.

Lice

Lice will have a worse effect on cattle when they are in poor condition. The amount of damage to hides, trees, fences, gates and troughs is proportional to the number of lice. Cattle lice numbers build up in the cooler months reaching a peak toward the end of winter.

Bottlejaw

Bottlejaw or fluid under the jaw is normally caused by low blood protein. This may occur in association with liver fluke, and can also occur in worm-infested stock and stock in poor condition. It can also be a symptom of Johne's disease (paratuberculosis).

Coccidiosis

Coccidiosis is another disease that can occur in cattle under stress and congregating to be hand fed. Severe scouring of blood-stained faeces will occur. This condition is normally seen in younger stock.

Pulpy kidney (enterotoxaemia)

Pulpy kidney is an acute toxæmia caused by clostridial bacteria in the intestine. A change of diet and thus a slowing of the movement of food through the gut – such as during grain feeding, lot feeding, periods of time off feed when yarding and transporting – provides the ideal environment for pulpy kidney to occur.

Cattle under 2-3 years old are most susceptible to pulpy kidney. Generally, the best conditioned, fastest growing stock are the ones most likely to develop the condition.

There is no practical treatment and most affected stock will die.

The disease can be prevented by vaccination.

Previously vaccinated stock should be vaccinated with a pulpy kidney or 5-in-1 or 7-in-1 booster two weeks before the start of hand feeding or before a major change in feed type. Unvaccinated stock require two doses – six weeks and two weeks before starting to feed. Pregnant cows should have a booster about two weeks before calving is expected to start. This will protect the calf for six to eight weeks. Calves need two vaccinations – one at marking, and the second about four weeks later.

In high-risk circumstances, vaccine protection may only last for three months, so repeated vaccination should be considered.

Pneumonia and calf diphtheria

Nutritionally stressed stock and early-weaned calves are more susceptible to respiratory diseases, including pneumonia and calf diphtheria. These diseases can be exacerbated when stock congregate around feed troughs. Veterinary attention should be sought if you suspect any disease.

Pinkeye

Pinkeye can be a greater problem in drought, with increased dust and stock congregating around feed troughs.

Welfare considerations of drought

The welfare of animals is always of the utmost importance. Stock owners and managers have an obligation to, at all times, provide proper and sufficient food, water and shelter for stock under their care. Failure to do so contravenes the *Prevention of Cruelty to Animals Act (1986)* and may result in prosecution and, in extreme cases, seizure of affected livestock.

Where sufficient food and/or water requirements cannot be met, cattle should be moved or agisted where feed and water is sufficient or they should be sold or humanely slaughtered.

Producers should act early while stock are fit and strong, as delays usually reduce the number of choices available. Any decisions must be humane and reasonable.