

# Supplementary feeding principles

## Ian Blackwood

Livestock Officer, Extensive Industries  
Development, Paterson (Tocal)

## Ed Clayton

Former Livestock Officer

### Introduction

Early in a drought there is usually plenty of poor quality dry feed, which animals cannot use efficiently. Supplementary feeding at this stage aims to make better use of this feed by supplying those nutrients that the pasture is deficient in, so that animals can be cheaply maintained while decisions are being made.

Supplementary feeding is an option **only** when there is paddock feed available. When availability of paddock feed becomes limited, survival feeding or production feeding must be implemented.

- **Survival feeding** means providing an animal with the minimum feed it needs to stay alive (see Primefact 286 *Survival feeding in drought*).
- **Production feeding** means, for adult stock, sufficient food for successful breeding, or, for younger animals, sufficient food to meet growth and/or market targets (see Primefact 329 *Production feeding in drought*).

### Supplementary feeding principles

To be effective, the supplement you choose must make up for the main nutrient deficiencies in the paddock feed. Dry feed is often deficient in protein and sulfur. In cases where the feed is green but very short, it is the low energy intake which limits production.

The following principles for efficient use of supplements should be followed.

- Identify the most limiting components, usually protein, sulfur and/or metabolisable energy.
- Select supplements containing high levels of the identified limiting components.

- Balance the supplement to ensure efficient rumen function (contact your local NSW Department of Primary Industries Livestock Officer or Veterinary Officer for information on appropriate supplements for particular circumstances).
- Young and lactating animals have a greater need for protein.
- Choose feeding techniques which minimise disruption to the animals' digestive system.
- Cost out the program, taking into account alternative measures.
- Start feeding those animals with the greatest needs, for example pregnant ewes of low fat score, or weaners below critical liveweights.
- Monitor feed consumption, liveweight and condition, so that you can confirm that your strategy is working.

### Outcomes of feeding supplements to stock

When supplements are fed to stock, there are three possible outcomes, depending on whether energy supplements or protein supplements are used and on how the pasture and supplement interact during digestion:

- **Supplementation.** The supplement is eaten and pasture intake increases. This is a rare event.
- **Substitution.** The supplement eaten causes reduced pasture intake. This usually occurs when pasture is supplemented with a high-energy feed.
- **Complementation.** The supplement is eaten and pasture intake increases. This occurs when stock are grazing on dry pasture or crop stubble and the supplement improves the animal's ability to utilise the feed.

### Supplementary feeding management

Specific management tips and more information can be found in the following:

- Drought feeding and management of stock  
[www.dpi.nsw.gov.au/reader/drtfeeding](http://www.dpi.nsw.gov.au/reader/drtfeeding)



- Supplementary feeding of beef cattle in drought  
[www.dpi.nsw.gov.au/reader/drtsupfeeding](http://www.dpi.nsw.gov.au/reader/drtsupfeeding)
- Nutritive values of feeds  
[www.agric.nsw.gov.au/tools/fes/index](http://www.agric.nsw.gov.au/tools/fes/index)
- Animal health in drought  
[www.dpi.nsw.gov.au/reader/drthealth](http://www.dpi.nsw.gov.au/reader/drthealth)
- Primefact 307 *Drought strategies for the livestock producer*
- Primefact 279 *Drought hints for a beef cattle enterprise*
- Primefact 330 *Grain poisoning of cattle and sheep*
- Primefact 331 *Supplementary feeding of sheep*

## Acknowledgment

This edition of this Primefact is based on an earlier edition written by Ed Clayton, Former Livestock Officer, and Ian Blackwood, Livestock Officer (Beef Cattle).

---

© State of New South Wales  
through NSW Department of Primary Industries 2006

ISSN 1832-6668

Replaces Agnote DAI-167

Check for updates of this Primefact at:  
[www.dpi.nsw.gov.au/primefacts](http://www.dpi.nsw.gov.au/primefacts)

Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing (November 2006). However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up to date and to check currency of the information with the appropriate officer of New South Wales Department of Primary Industries or the user's independent adviser.

Job number 7069