

GrazFeed is a decision support tool developed by CSIRO to help graziers improve the profitability of livestock production, through more efficient use of pastures and supplementary feeds.

GrazFeed is regarded as the industry benchmark for the nutrition of grazing animals in temperate Australia

GrazFeed®

– managing the nutrition
of sheep and cattle

Making the most of pastures

GrazFeed can help graziers or their advisers:

- decide what level of annual production a particular pasture will support
- minimise the cost of supplementary feeding
- select the most suitable feeds
- use only the amount of feed required to maintain stock or meet a production target.





What is GrazFeed?

GrazFeed is an easy-to-use computer program that provides a simple way to calculate the energy and protein requirements of sheep and cattle grazing a particular pasture. It will run on any personal computer under Windows™.

Feed requirements are based on the Australian feeding standards. Without such a program, it is difficult to use the feeding standards due to the difficulty of estimating the amount of food eaten and the quality of the diet that grazing animals are able to select from a particular pasture.

GrazFeed overcomes these problems by taking into account the type of animal, the availability and quality of the pasture, selective grazing and interaction with supplementary feeds (eg the substitution of supplements for pasture).

GrazFeed then predicts the liveweight change of the animals after estimating, where appropriate, foetal growth, milk production, growth rate of unweaned young and wool growth.

GrazFeed is suitable for any breed of sheep or cattle and for any pasture except the shrub vegetation of semi-arid rangelands.



Using GrazFeed

Users describe the pasture available to the animals in terms of the weight and digestibility of the green and dead herbage. Although this can be an initial challenge, several thousand graziers have acquired these skills through the PROGRAZE courses, designed to teach producers pasture and animal assessment skills. Local Dept. of Agriculture advisory offices and private consultants can provide more information on regional PROGRAZE courses.

	Green	Dead	
Weight of herbage:	<input type="text" value="0.5"/>	<input type="text" value="0.8"/>	t DM/ha
Mean DM digestibility of herbage:	<input type="text" value="70"/>	<input type="text" value="45"/>	%
Percentage of legume in the pasture:	<input type="text" value="10"/>		
The main grasses in the pasture are:	<input type="text" value="Temperate"/>		
Steepness of the land:	<input type="text" value="Level"/>		
Month:	<input type="text" value="October"/>		
Latitude:	<input type="text" value="35"/>	° <input type="radio"/> N <input type="radio"/> S	

Although the main purpose of GrazFeed is to predict the animal production that the available pasture can support, supplementary feeding may be necessary at some times of the year.

The user must describe the supplements that may be offered to the animals. These can be easily made up by selecting from a wide range of feeds, the composition of which can be adjusted by the user.

GrazFeed can test the effect of up to six feeding levels of the specified supplement on a range of animal classes: male or castrate, or females that are dry, pregnant or lactating. Alternatively, the user can set a target weight gain or milk yield and GrazFeed will estimate the weight of the supplement required, if the target is achievable for the pasture and supplement specified.

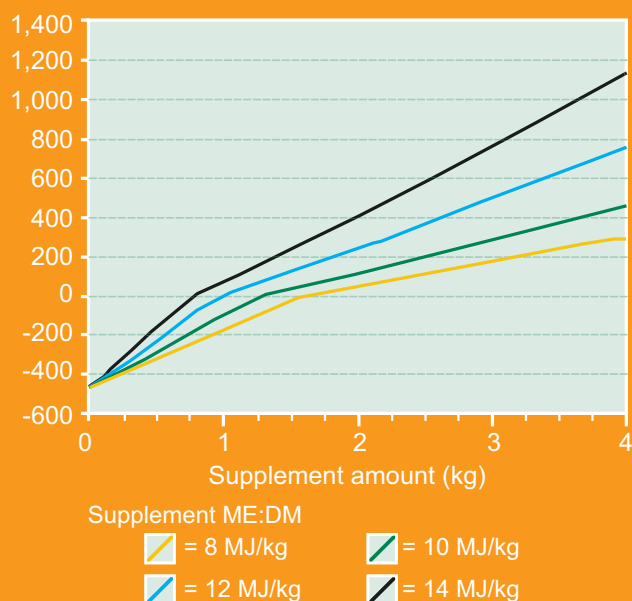
A table of results summarises the feed intakes, animal production and feed costs. More detailed tables show the composition of the diet, the use of dietary energy and protein for animal production, the effect, where appropriate, of chilling on metabolism and miscellaneous outputs, such as the emission of methane. Interpretive comments attempt to pinpoint the main constraints to animal production, e.g. the weight of herbage or its concentration of rumen-degradable protein.

The role of the user is important; GrazFeed's estimates of pasture intake and animal production will only be as good as the user's description of the pasture and the animals grazing it.



Weight gain (g/day) vs Supplement amounts

Young steers grazing poor herbage show a large response to the quality of the supplement used



ADDITIONAL FEATURES

Stocking rate calculator

To help the user appreciate the relationship between the growth rate of the pasture and the rate at which it is removed by the grazing animal, GrazFeed also incorporates a stocking rate calculator. For a particular estimate of pasture growth, this provides short-term estimates of either the potential stocking rate or the duration of grazing at a specified stocking rate.

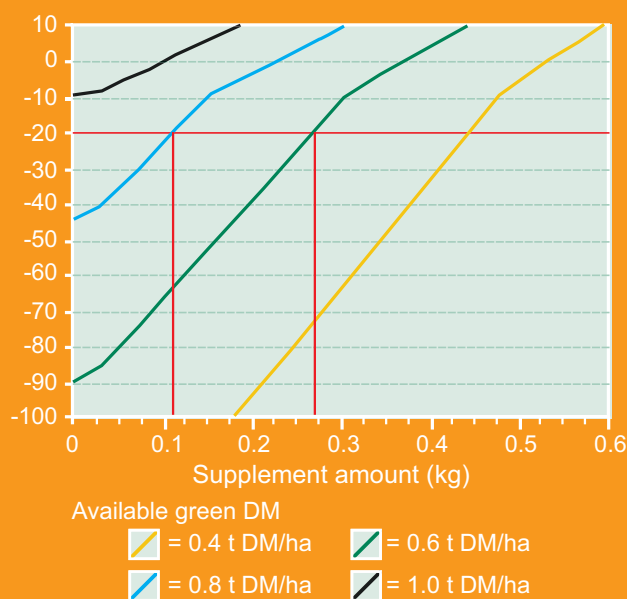
Rapid testing of feed conditions

Another powerful facility enables the user to plot the response of the animals to a wide range of feeding conditions. An example is the effect of changing the energy or protein concentration of the supplement on the response of the animals to increasing levels of supplement.

Help on animal nutrition

A detailed context-sensitive Help facility not only guides the user through the operation of the program but also provides information on the biological functions that GrazFeed uses to make its predictions.

The amount of supplement needed to restrict the maternal weight loss by twin-bearing pregnant ewes in late pregnancy to a safe level depends on the amount of pasture available



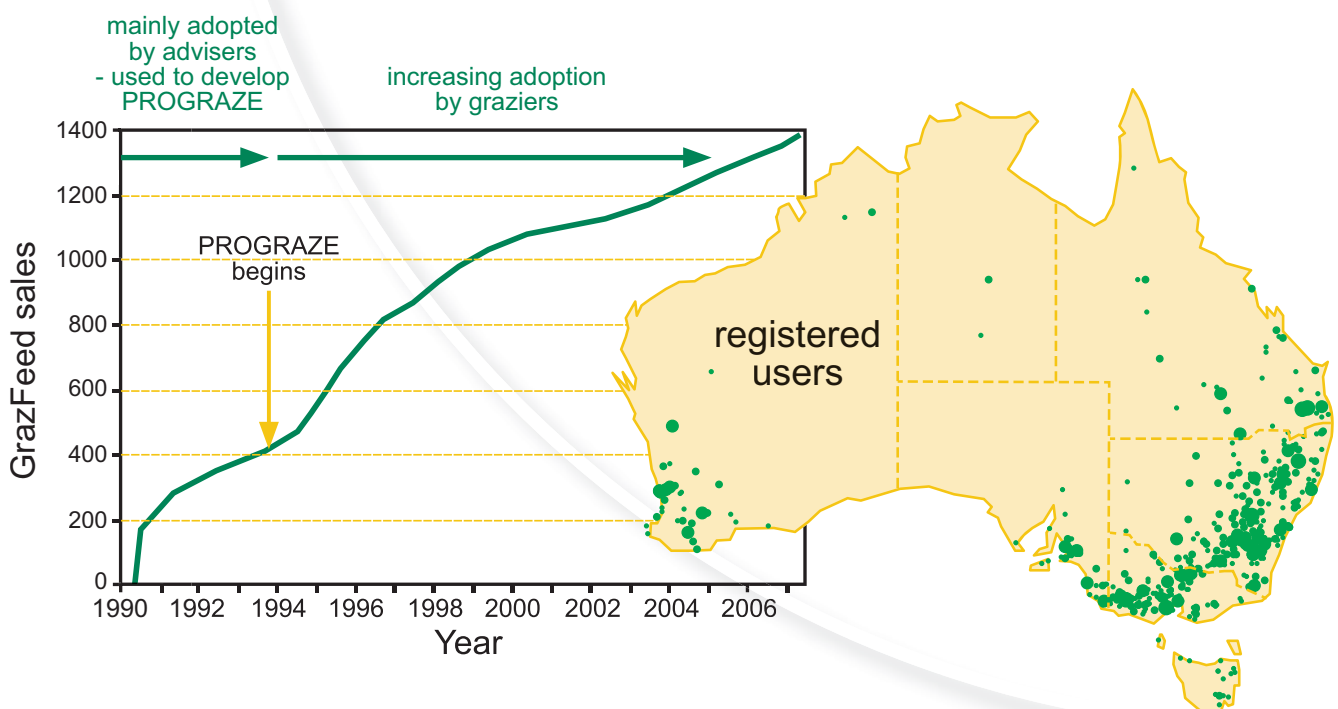


Adoption

Since its initial release in 1990, GrazFeed has been widely adopted by advisers, both private and within state departments. In 1992, NSW Agriculture estimated that, through a more efficient use of supplementary feeds, GrazFeed saved sheep graziers about \$7.5 million dollars in NSW alone, in an average year.

In the early years, sales of GrazFeed to graziers made up less than 15 per cent of the total, but since the start of the PROGRAZE courses in 1994, graziers have accounted for more than 50 per cent of sales.

At present, there are more than 1400 registered users of GrazFeed, of which more than half are graziers. Most of these are in southern Australia, but the program is equally applicable to any region of temperate pasture. The program is also designed for animals grazing tropical pastures and has been used successfully in Queensland, with testing still continuing.





End-users

Apart from graziers and their advisers, GrazFeed is widely used by educators training tomorrow's farm decision-makers. Lecturers find that it is an excellent aid in teaching the nutrition and feeding management of grazing animals. GrazFeed is used in several universities around Australia.

Producers with feedlots for finishing prime lambs have found GrazFeed an invaluable tool for their business.

GrazFeed is also useful for feed manufacturers and their sales representatives, as an aid to providing appropriate feed supplements.

Finally, scientists use the program, knowing that it enables them to apply recognised feeding standards to experimental situations with grazing animals.



**For information
on pricing and purchase, contact:**

Horizon Agriculture Pty Limited
PO Box 598, Roseville, NSW 2069
Email: horizonag@hzn.com.au
Website: www.hzn.com.au/grazfeed.htm

**For technical information
about the program, contact:**

CSIRO Plant Industry Communications Unit
GPO Box 1600, Canberra, ACT 2601
Phone: 1300 363 400
Email: grazplan@csiro.au
Website: www.grazplan.csiro.au



Horizon Agriculture
LINKING SCIENCE TO PRODUCTIVE SOLUTIONS

