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Feed on offer photo gallery : for annual pastures during the green period

Mandy (Catherine Amanda) Curnow

Lifetimewool (Australia)

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Feed on Offer Photo Gallery

for annual pastures during
the green period



includes targets for:
pasture management
sheep management



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Department of
Agriculture and Food



lifetimewool
more lambs, better wool, healthy ewes

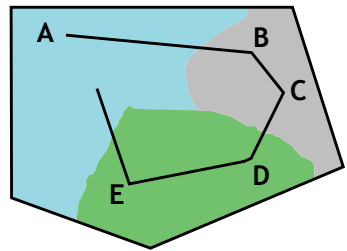
What is Feed on Offer?

Food on Offer, or FOO, is the amount of pasture available for sheep to eat. It is measured as dry matter per hectare, and then used to budget feed available and stocking rates for a given period.

FOO includes all green material above the ground and it is reported in kilograms of dry matter per hectare (kg DM/ha).

Using this booklet to assess FOO

- Draw a simple sketch of the paddock to be assessed.
- Divide the paddock into areas (roughly the same size) of similar pasture growth and mark a sampling path (transect) around the paddock that takes in each area (such as the diagram).
- Drive/walk the transect and at each sampling point record an estimate of the FOO using the FOO photo cards in this booklet, making sure that assessments are at random intervals (don't miss areas that are bare or are uneven).
- Calculate paddock average FOO by adding all estimates and dividing by the number of estimates. The greater the number of estimates, the more accurate the paddock FOO will be.



Do your own accuracy check

To check the accuracy of your assessments, find a spot that is similar to your calculated paddock average and cut (using a scapel) all pasture to ground level in a 33x 33cm square. Sort the sample to remove all dirt, stones, faeces and sticks and all dead material. It may also need to be rinsed to remove excess soil. (If the sample is rinsed it should then be spun in a salad spinner to remove excess water prior to drying).

Drying may take 12-36 hours in an oven at 80°C. If using a microwave oven, weigh the sample, place in a safe dish, place a cup of water next to the pasture sample and dry on high power for 10 mins. If the pasture is limp or still feels damp, dry for another 5 mins. If the weight of the sample changes after another 2 mins drying, continue to dry until the sample stays the same weight.

After drying, the sample must be weighed, preferably to nearest gram. By multiplying the dry sample weight by 100 you get the amount of pasture in Kg DM/ha. This is your FOO level.

Tips

Remember FOO around the paddock varies considerably due to:

- Proportion of bare ground to plant cover - patches of bare ground reduce the average FOO, ie if the pasture at the assessment point is 500 kgDM/ha FOO but there is 20% bare ground, reduce the estimate by 20% to get the average FOO of the sample site.
- Density of pasture – it is important to feel how thick the pasture is as some pastures can look denser than they really are and will give poor estimates.
- Composition – different species have different branching characteristics or the stems of some species thicken earlier in the season than others, making FOO larger than it appears.

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Further photos can be found at www.lifetimewool.com.au

This booklet can be used with the feed budget calculators found at www.agric.wa.gov.au/sheep or with feed budgeting tools from lifetimewool at www.lifetimewool.com.au

Autumn - Early Winter

Establishment phase

Successful pasture establishment at the season break is vital to ensure the persistence of annual pastures.

Grazing before seedlings are at the 4 to 6 leaf stage can dramatically limit establishment due to:

- uprooting of small seedlings resulting in reduced plant density
- removal of leaf area (defoliation) resulting in reduced growth of seedlings.

Decreasing grazing pressure, applying fertiliser (particularly nitrogen in grassy pastures) or sowing pasture seed, can improve plant density and effective pasture establishment.

Grazing pressure on establishing annual species during autumn-early winter can be reduced by either supplementary feeding or by deferred grazing.

Tips

Remember there is usually a lot of bare ground at this time. Make sure your assessment takes into account the amount of bare ground and reduce your estimate accordingly.

Pasture Height - For the same pasture height, autumn FOO is usually only half that of spring FOO and ungrazed pastures will tend to be taller for the same FOO than well grazed pastures.

Most plants have high moisture content at this early age and therefore will have relatively low FOO for their appearance compared with spring pastures.

Target FOO

- | | |
|--------------|---|
| 500 kg DM/ha | minimum FOO required to establish pasture after the break |
| 700 kg DM/ha | minimum FOO required to maintain pregnant ewes |

Autumn - Early Winter



400 kg DM/ha FOO (paddock average)



800 kg DM/ha FOO (paddock average)



100 kg DM/ha F00

clover



500 kg DM/ha F00

clover



300 kg DM/ha F00

clover



1000 kg DM/ha F00

clover



100 kg DM/ha F00

grass



500 kg DM/ha F00

grass

Autumn - Early Winter



300 kg DM/ha F00

grass



1000 kg DM/ha F00

grass



200 kg DM/ha F00

mixed pasture



500 kg DM/ha F00

mixed pasture

Autumn - Early Winter



300 kg DM/ha F00

mixed pasture



1000 kg DM/ha F00

mixed pasture



100 kg DM/ha F00

stubble



400 kg DM/ha F00

stubble



200 kg DM/ha F00

stubble



600 kg DM/ha F00

stubble

Mid Winter

Vegetative phase

During mid-winter pastures are actively growing, however, growth is affected by plant density and leaf area, soil moisture and temperature.

The general rule for pasture management is - the higher FOO is, the greater the pasture leaf area, the faster pasture growth is, ie

Higher FOO = higher leaf area = faster pasture growth.

Moderate grazing pressure can be sustained once seedlings are at the 4-6 leaf stage. Once thickening of leaves is underway, grazing during this phase improves tillering of grasses and branching of clovers.

Grazing in winter is also important to assist weed control in the paddock and maintain palatability of the pasture by promoting young shoot growth.

Tips

The heavier the grazing pressure, the more tillering and branching is encouraged, which will increase FOO but decrease the height of the pasture.

Throughout July and August, pastures will appear shorter for the same FOO than in June. Clovers will be shorter than grasses for the same FOO.

Target FOO

1000 kg DM/ha desirable FOO going into winter

1500 kg DM/ha optimum FOO for single bearing ewes
leading up to lambing

1800 kg DM/ha optimum FOO for twin bearing ewes leading
up to lambing



1200 kg DM/ha FOO (paddock average)



1600 kg DM/ha FOO (paddock average)



1000 kg DM/ha F00

clover



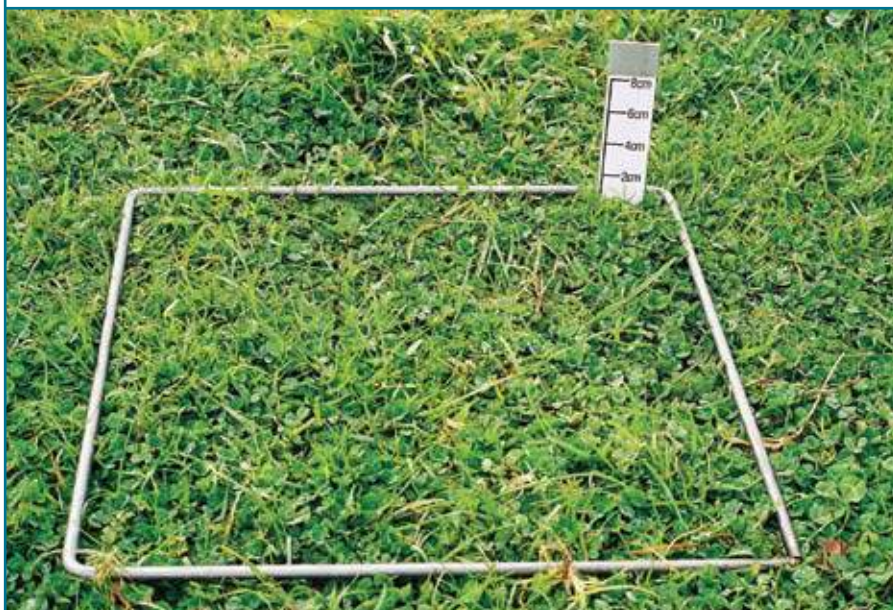
1500 kg DM/ha F00

clover



1200 kg DM/ha FOO

clover



1600 kg DM/ha FOO

clover



1000 kg DM/ha F00

grass



1500 kg DM/ha F00

grass



1200 kg DM/ha FOO

grass



2000 kg DM/ha FOO

grass

Spring

Reproductive phase

The reproductive phase of an annual pasture occurs in spring and is characterised by flowering and seed set. Grazing management during spring can influence pasture composition in both the current year and the following season. Overgrazing during flowering will reduce seed production due to removal of the flowering parts. This may affect annual grasses more than sub clover.

Tips

Pastures are rapidly changing in spring with branching and thickening of stems and leaves, which increases the weight for the volume of pasture.

Throughout August and September, grazed pastures will be shorter at the same FOO than in July. Clover at the FOO targets below will be very short and well branched.

Large seed heads on species such as capeweed and barley grass are heavy and a high proportion of these in the pasture increases FOO considerably.

Grazing pressure and the resulting amount of branching is a very important influence on FOO. Spring pastures that have not had heavy grazing will not be very dense and consequently weigh less than tightly grazed pastures.

Consider pasture insect control in pastures of more than 1500 kg DM/ha FOO.

Target FOO

1500 kg DM/ha	minimum FOO through spring to increase clover content optimum FOO for single bearing ewes into lambing
1800 kg DM/ha	optimum FOO for twin bearing ewes into lambing
2000 kg DM/ha	near maximum intake of sheep optimum FOO for lactating twin bearing ewes



1700 kg DM/ha FOO (paddock average)



2500 kg DM/ha FOO (paddock average)



1200 kg DM/ha FOO

clover



1800 kg DM/ha FOO

mixed pasture



1500 kg DM/ha F00

clover



2500 kg DM/ha F00

clover



1700 kg DM/ha F00

grass



2500 kg DM/ha F00

grass



1500 kg DM/ha F00

grass



2500 kg DM/ha F00

grass



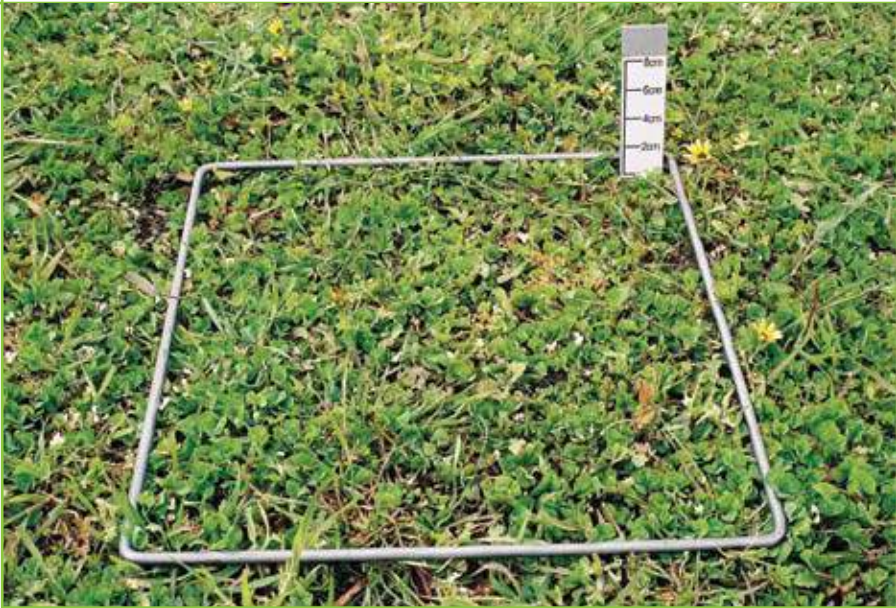
1200 kg DM/ha FOO

mixed pasture



2500 kg DM/ha FOO

mixed pasture



1800 kg DM/ha FOO

mixed pasture



3500 kg DM/ha FOO

mixed pasture

lifetimewool has management guidelines for ewe flocks that optimise profit through increasing production from both the ewe and her progeny over it's life time.

For more information on lifetimewool please contact:

Mandy Curnow

or

Chris Oldham

DAFWA 08 98928 422

DAFWA 08 9368 3511

www.lifetimewool.com.au

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