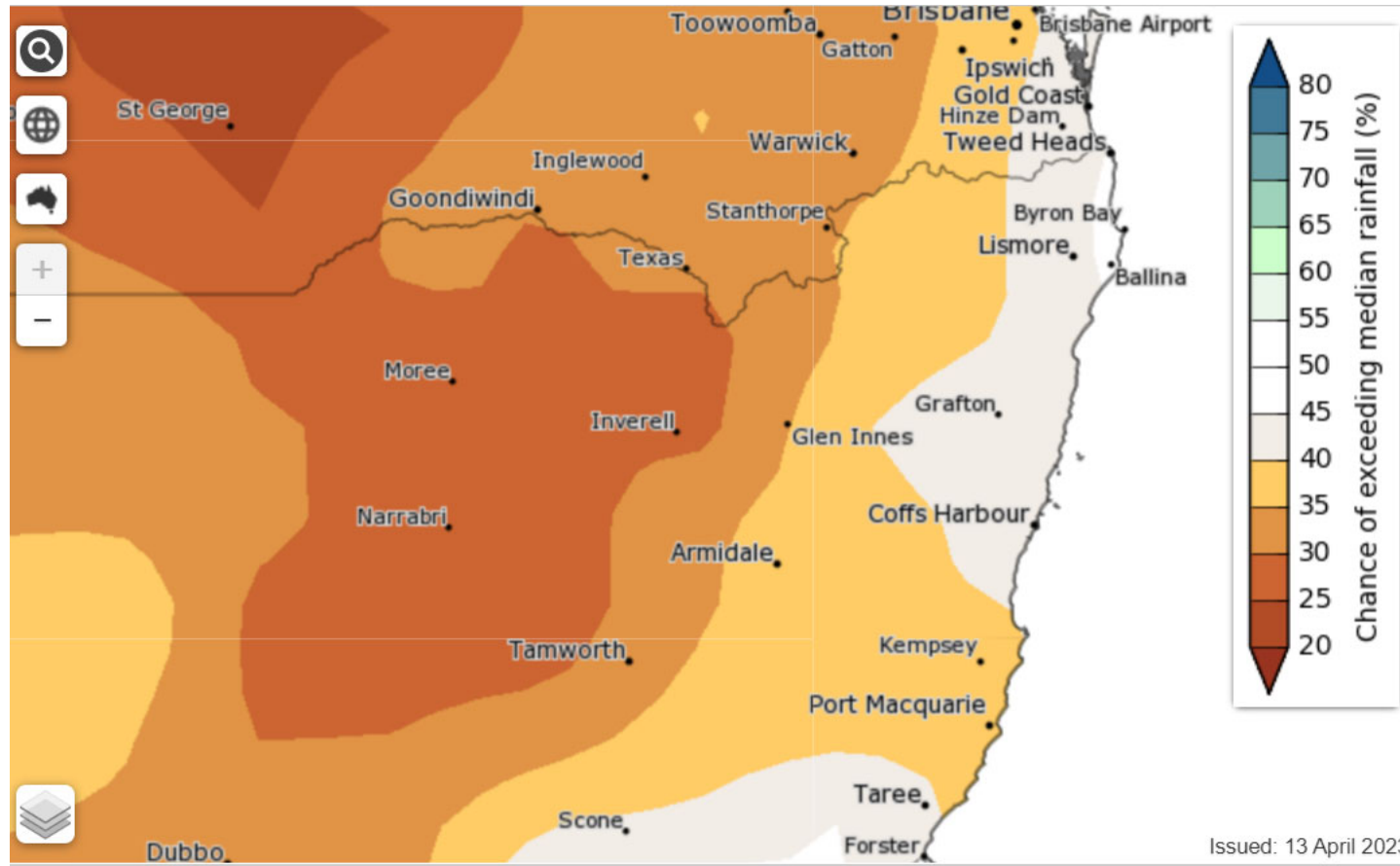


Balancing Nutrition and Cost: Feed Options for Livestock Graziers



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BOM seasonal outlook May to July



Overview



- How to compare the cost of different commodities
- Assessing which commodities to purchase to feed your sheep and cattle.
- Pros and Cons of different feeds

Metrics for comparing feed options

Cents per MJ of metabolisable energy

Dollars per kg of protein



Feed wheat

Cost per tonne = \$390

DM = 90%

ME = 13 MJ/kg DM

First, determine the cost per kilogram of dry matter. We must multiply the cost per tonne by 10 and then divide by the dry matter percentage:

Cost per kg DM = $\$390 \times 10 \div 90 = 43\text{c/kg DM}$

Now, to determine the cost per energy unit we must divide the cost per kilogram dry matter (determined above) by the energy concentration of the feed. Wheat has an average energy value of 13 MJ/kg. Therefore:

Energy cost = $43\text{c/kg} \div 13 \text{ MJ/kg} = \mathbf{3.3\text{c/MJ}}$



Local Land Services

Cottonseed

Cost per tonne = \$465

DM = 90%

ME = 13 MJ/kg DM

Cost per kg DM = $\$465 \times 10 \div 90 = 51.6\text{c/kg DM}$

Cottonseed has an average energy value of 13 MJ/kg. Therefore:

Energy cost = $51.6\text{c/kg} \div 13 \text{ MJ/kg} = 3.96\text{c/MJ}$

Comparing protein

Lupins

Cost per tonne = \$600

DM = 90%

CP = 32%

Cost per kg DM = $\$600 \times 10 \div 90 = 67\text{c/kg DM}$

Lupins have an average crude protein percentage of 32%. Therefore:

Protein cost = $67\text{c/kg} \div 32 \times 100 = \mathbf{\$2.09/kg CP}$



Comparing protein

Urea lick blocks

Cost per 20 kg block = \$36

CP = 40%

Cost per kg = $\$36 \div 20 = 180\text{c/kg}$

Therefore:

Protein cost = $180\text{c/kg} \div 40 \times 100 = \mathbf{\$4.5/kg CP}$



The Drought and Supplementary Feed Calculator app



Nutritional requirements of sheep and cattle during dry times: Stock have different nutritional needs at different stages of their life cycle.



Pulse grains:

Good source of protein and energy for sheep and cattle

Large seedpod has less wastage

Decreased chance of acidosis



Feeding straw

Has a low nutritional value

often requires additional supplementation to meet the animal's dietary needs.

Carefully evaluate the costs and benefits of using straw as a feed source during times of drought or feed shortages.



Whole cottonseed:



Popular feed option for
sheep and cattle

High in protein and
energy

Ability to feed in piles on
clean ground with
minimal wastage.

By-pass protein assists
with intake limitation

Don't need to feed every
day

Protein meals

High in protein

Can be an excellent source of essential amino acids, which are important for growth and development.

Easy to store and transport,

Often cost-effective when compared to other feed sources.

Don't need to feed every day

Troughs



Silage

Made by fermenting green crops such as corn, sorghum, or grass.

More suited as a cattle feed than to sheep from a disease and management perspective

Transporting silage can be challenging and often not cost-effective.

Pits vs wrapped



Cereal grains

- High level of energy
- High starch
- Often readily available
- Trail feed
- Corn less wastage
- Silo storage
- Long shelf life
- Risk of acidosis
- Consider a buffer



Cereal and Legume Hay

Staple feed for cattle in dry times.

Choose good quality hay that is free from mould and other contaminants

Easy storage

Easy introduction

Reduced risk of animal health

Legume will generally have higher energy and protein

Nitrate and prussic acid poisoning in stressed crops and post drought

Stores well



Urea



The aim of a urea supplementation program is to improve the rumen function and animal performance by supplying a small amount of urea and sulphur (N:S ratio of 10:1) to cattle on at least a daily basis during the dry season.

Effective urea supplementation can result in an increase in appetite of dry feed of 20–30%. This should be considered when determining stocking rates.

Abundant dry feed (over 2500 kg dry matter/ha)

Fortified Molasses

Abundant dry feed (over 2500 kg dry matter/ha)

Convenient

Molasses is a great source of energy up to 11MJ/Kg

Total protein up to 35% with levels of urea from 3-11%

Often have a large % water, makes them expensive

Difficult to control intake

Rain fast

Often contains trace minerals

Dead birds



Summary



Take a calculated approach to buying feed

Look at buying feed on a dry matter basis

Consider feed wastage

Storage

Feeding out

Questions?