

# **Planning to manage feed requirements through the booms and busts**

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When planning to capitalise on a good season, or limit risk in a seasonal dry spell or drought, a risk management plan requires a positive approach to the situation, a clear understanding of the targets you are trying to achieve and thoughtful strategies within the time frame to act and review.

Producer decision making in these situations is not easy due to the complexity and interaction between the farm resources that producers have to work with. Sometimes decisions can be irrational due to the poor timing of the decisions and lack of planning.

Seasonal forecasts are valuable pieces of information to help develop a plan to capitalise on a better season ahead or worst case season, when the option may be destocking, feeding or bringing forward management operations such as weaning. Rainfall probability maps can be found at:

[http://www.bom.gov.au/climate/ahead/rain\\_ahead.shtml](http://www.bom.gov.au/climate/ahead/rain_ahead.shtml)

Seasonal forecasts allow you to identify trigger points for action within the plan. There is a need to place a weighting on the forecast for example, optimistic/ neutral/ pessimistic and use past experiences to guide the decisions.

The next step is to set the planning period and identify the climate trigger factors. Regardless of seasonal outlook, across Australia the average planning period is 1-2 seasons (3-6 months) long and generally it is a summer/autumn problem.

With the timeframe set, there is the need to conduct a risk assessment of all the farm resources such as pasture, livestock, water supply, finance and labour.

Initially, pastures and livestock assessment are required. What is the total potential pasture supply (kg DM per hectare) for the farm verses the demand (animal intake) in total kilograms dry matter? This requires a pasture assessment of each paddock across the farm and an estimation of the potential pasture growth for the timeframe set. From this a pasture surplus or deficit can be determined. Examples from decision support tools to help make these calculations are shown in the charts and tables below;

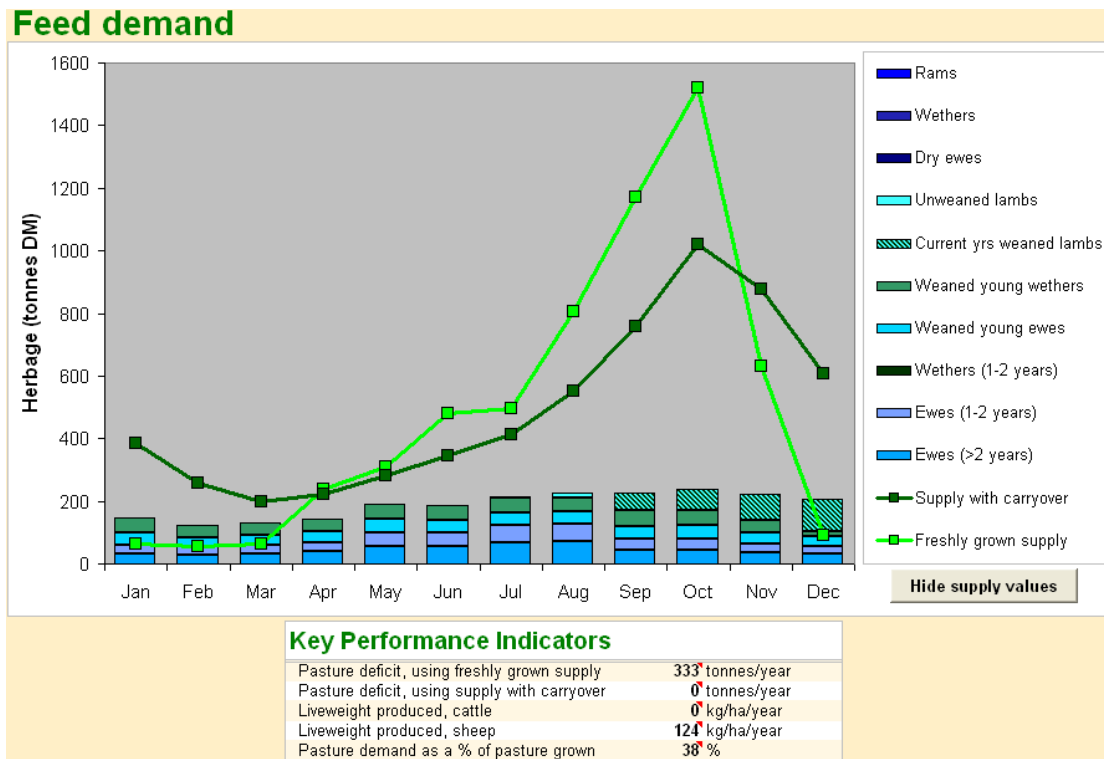
## **Feed Supply and Demand calculator**

<http://www.mla.com.au/Publications-tools-and-events/Tools-and-calculators/Feed-demand-calculator> (instructions for use of the calculator are available on the website).

The feed demand/supply graph indicates an early spring destock or start tactical supplementation to survive a shortfall in summer pasture in December

as pasture growth has rapidly declined and there is minimal amount of carry-over feed on offer.

### Western Riverina of NSW (November, 2012)



### ProPlus

<http://www.dpi.nsw.gov.au/agriculture/profarm/courses/prograze-plus>

The chart indicates pasture residue for the end of the month in the nominated paddocks (WA1-WA4) after running a 100 breeding cow herd for vealer production, with 1.0 breeding units per ha and cutting silage (150-200 bales @ 750 kgs/bale) available for supplementary feeding from January to April.

### Western Australia (November, 2012)

Results of Grazing Plan Calculations - C:\PROPLUS\Southern WA [Modified]

Planning Period: Oct 12 to Mar 13    Property Name: Southern WA    Date: 27-11-2012    Pasture Threshold: 1000

| Pdk No   | 1    | 2    | 3    | 4    | Farm Average |
|----------|------|------|------|------|--------------|
| Pdk Name | WA1  | WA2  | WA3  | WA4  |              |
| Oct      | 3764 | 3614 | 2440 | 4464 | 3570         |
| Nov      | 3810 | 4364 | 2574 | 1675 | 3106         |
| Dec      | 3810 | 3748 | 1826 | 1675 | 2765         |
| Jan      | 3306 | 3136 | 1826 | 1675 | 2486         |
| Feb      | 3055 | 2632 | 1575 | 1171 | 2108         |
| Mar      | 2579 | 2327 | 1324 | 779  | 1752         |
| DSE/ha   | 13.2 | 14.4 | 9.3  | 4.5  | 10.4         |

ProPlus can also graphically represent intake, pasture growth rate per paddock and whole farm pasture availability over time.



The transfer of surplus pasture growth from the spring to the summer by making silage gives producers the option of continuing to target high weight gain in sale stock and potentially sell in a higher price market.

Once completed, producers are able to devise strategies that fully utilise surplus feed or target a limited and dwindling feed base.

The following questions and strategies may be considered.

| Good season ahead  | Seasonal dry spell  |
|--|---|
| Across the timeframe, what potential surplus fodder will I have on hand?                       | What livestock/stocking rate can my pastures support across the set timeframe?  |
| How best to utilise it?<br>Buy more livestock?<br>Do nothing, drought reserve in the paddock?  | If I sell 2 full age groups of breeders, will this support the extra feed needed to be purchased?                     |
| What strategy gives me the best dollar return considering the new inputs?<br>Bang for my buck! | After I destock and purchase fodder what will my flock/herd structure and cash flow look like 5 years down the track. |
| What cash is required or do I need to negotiate an extension in my                             | Have I planned and acted early enough or witness market failure for   |

|  |   |
|--|---|
| overdraft?   | the sale stock?   |
| What market?<br>When to start?<br>What price buy/sell? | If I choose to feed, how much per head per day and at what cost?          |
| Fallback options, review and balance on the cash flow  | When and what to buy-back livestock to return cash flow to normal?        |
|  | Do I have enough resources especially labour, to manage a feeding option? |
|  | Do I need to extend my overdraft?   |
|  | What if the timeframe is extended – fallback options required?            |

When trying to answer many of the above questions, producers want the strategies to have minimal disruption to the farm operations, cash flow/debt and the family.

Past experiences will guide producers' strategies. Computer decision support tools (DST) can also aid in the planning and decision making. They give an insight into the impact of the strategies.

StockPlan® and GrazFeed™ are DSTs'. Within StockPlan®, Drought Pack program allows you to calculate the quantity and cost of fodder required to feed on a per head per day basis, per month and total for the selected planning period.

<http://www.dpi.nsw.gov.au/agriculture/emergency/drought/planning/general/stockplan>

Sheep Nutrition for MyFarm

**For: March**

|               | Dry Ewe | Pregnant Ewe | Early Lactating Ewe | Late Lactating Ewe | Weaned Lamb | Hogget | Wether | Ram |
|---------------|---------|--------------|---------------------|--------------------|-------------|--------|--------|-----|
| Weight kg     | 50      |              |                     |                    | 21          |        |        |     |
| Gain g/day    | 0       |              |                     |                    | 50          |        |        |     |
| Supplement %  | 100     |              |                     |                    | 100         |        |        |     |
| Feed 1        | oats    |              |                     |                    | oats        |        |        |     |
| Feed 1 %      | 100     |              |                     |                    | 100         |        |        |     |
| Feed 2        | oats    |              |                     |                    | oats        |        |        |     |
| Feed 2 %      | 0       |              |                     |                    | 0           |        |        |     |
| As fed kg/day | 0.65    |              |                     |                    | 0.47        |        |        |     |
| Cost \$/day   | 0.10    |              |                     |                    | 0.07        |        |        |     |

Restore    Next Month>    Copy to Next Month>    © Drought Pack

The supplement figures should be above 75%. If a value is entered below 75% then the metabolizable energy (ME) of the pasture must be known. See manual for more details.

Im Pack program allows you to test different destock/feeding strategies, using data from Drought Pack, by showing you the future impacts on the herd or

flock numbers/structures and future cash flow. It allows restocking decisions to be tested.

Sheep Option 1

Breeding | Buy In | Stock Prices, Feed Cost and Trading Option | On Hand | Sales and Income

**Reset table to match pre-drought structure.**

|                       |        |         |       |       |       |       |       |
|-----------------------|--------|---------|-------|-------|-------|-------|-------|
| Approx. Flock DSE     | 5684   | 4982    | 5339  | 5235  | 5462  | 5680  | 5678  |
| Year                  | Normal | Drought | 1     | 2     | 3     | 4     | 5     |
| No. Ewes mated        | 2500   | 2040    | 2274  | 2498  | 2497  | 2497  | 2497  |
| Max age at joining    | 5      | 5       | 5     | 5     | 5     | 5     | 5     |
| % Lambs weaned        | 100.0  | 100.0   | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Adult death %         | 2.5    | 2.5     | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   |
| Weaner death %        | 3.0    | 3.0     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| % Cull ewes           | 1.0    | 1.0     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| % Fail to rear sold   | 83.3   | 83.3    | 83.3  | 83.3  | 83.3  | 83.3  | 83.3  |
| Own Maidens mated     | 556    | 556     | 556   | 556   | 556   | 556   | 556   |
| Maiden ewes available | 1229   | 1212    | 1212  | 989   | 1103  | 1212  | 1211  |

Cull age groups: Drought | Culls | Culls | Culls | Culls | Culls

Breeder selling: DROUGHT YEAR at (net price per head) \$ 105

|        |   |   |   |      |      |
|--------|---|---|---|------|------|
| Age    | 1 | 2 | 3 | 4    | 5    |
| %      |   |   |   | 50.0 | 50.0 |
| Number |   |   |   | 236  | 224  |

% Sold

|                       |   |
|-----------------------|---|
| Ewes                  | 0 |
| Wethers               | 0 |
| Net price per head \$ | 0 |

Print | OK | Cancel | Help

### GrazFeed™

<http://www.csiro.au/en/Outcomes/Environment/Biodiversity/grazfeed.aspx>

assists in tactical nutritional management of sheep and cattle when grazing and feeding supplements. It uses a model of diet selection, feed intake and nutrition including the mass and digestibility of herbage, plus attributes of grazing livestock to model the performance of meat (daily weight gain/loss), wool and milk.

An example illustrated below, is for lactating ewes (with singles) grazing perennial pastures rapidly declining in digestibility. The model would indicate low milk yield and lamb growth rate, and that weaning needs to be considered to maintain the condition of the ewe and preserve next year's income. Improved weaner growth rates may be necessary through supplementation.

The screenshot shows the 'GrazFeed V5.0.2 - [Outputs]' window. The 'Contents' pane on the left has 'Brief Results' selected. The main area displays a table titled 'Brief Results' with the following data:

|                         | Weight of supplement (kg) | Supplement cost (\$/head) | Intake of DM |                 | Weight gain (g) | Milk yield (kg) | Clean wool (g) |
|-------------------------|---------------------------|---------------------------|--------------|-----------------|-----------------|-----------------|----------------|
|                         |                           |                           | Pasture (kg) | Supplement (kg) |                 |                 |                |
| <a href="#">Mothers</a> | 0.00                      |                           | 1.00         | 0.00            | -37             | 0.3             | 7.3            |
| <a href="#">Young</a>   |                           |                           | 0.75         | 0.00            | 53              |                 |                |

Decision support tools can be an effective aid in decision making, but there is the need to supply accurate inputs so plausible outputs are achieved.

Once strategies are in place and acted upon, there is the need for continued monitoring and fine tuning to be able to hit the desired target.

Where demand is sufficient, *Making More From Sheep* State Coordinators (<http://www.makingmorefromsheep.com.au/contact.htm>) can assist with organising local workshops on how to use the tools mentioned above.

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