

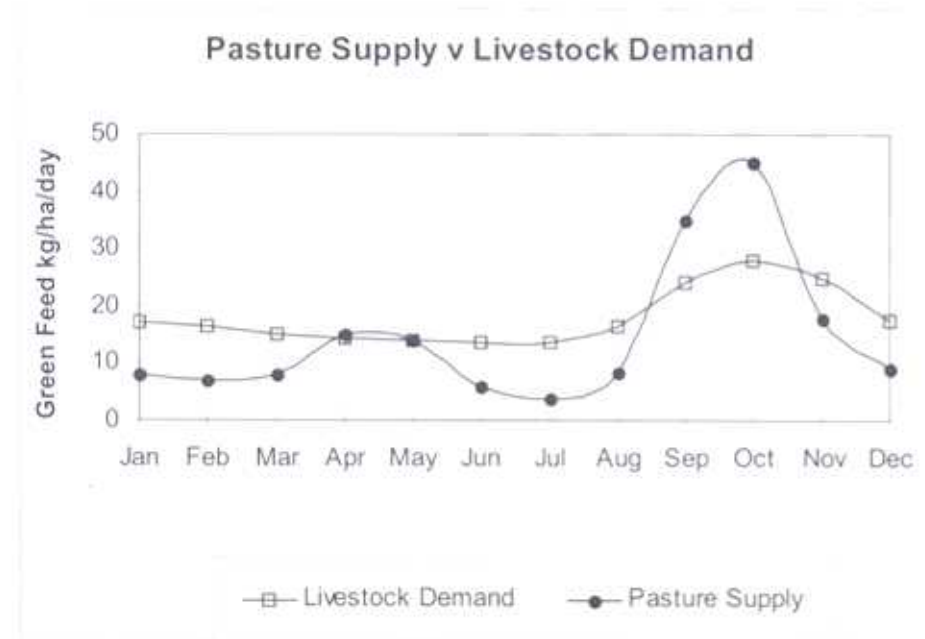
Tools to help balance the pasture feed supply

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Whether you're a livestock producer on the coast, Central West or Tablelands, it is possible to manage your pasture feed supply to reduce the annual feast to famine cycle.

Figure 1. Pasture feed supply



The degree of planning required depends upon your level of risk and how you assess your **past, current** and **future** climate, pastures, livestock and business situations.

A whole farm plan approach is required. Targeted action strategies can be implemented, including chosen fall-back options, forward market contracts, etc. to ensure the farm business and its goals are achieved.

Assessment of risk varies. Risk is affected by:

- External forces that can be controlled (eg. feed costs), or are beyond control, (eg. weather)
- Tactical/strategic targets chosen
- Time of the year and the timeliness of the decision/s
- Current market situation
- Intrinsic or \$ value?
- Past and current experiences
- Surrounding social and financial environments that influence farm decision making
- Information and resources available

The chosen strategies require questioning, monitoring and evaluation.

Figure 2 – Goulburn average monthly rainfall

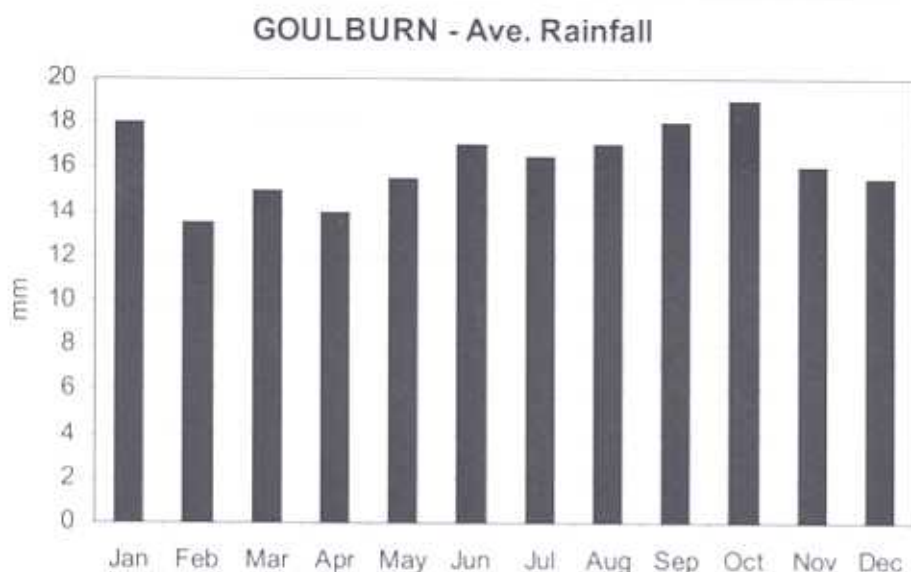
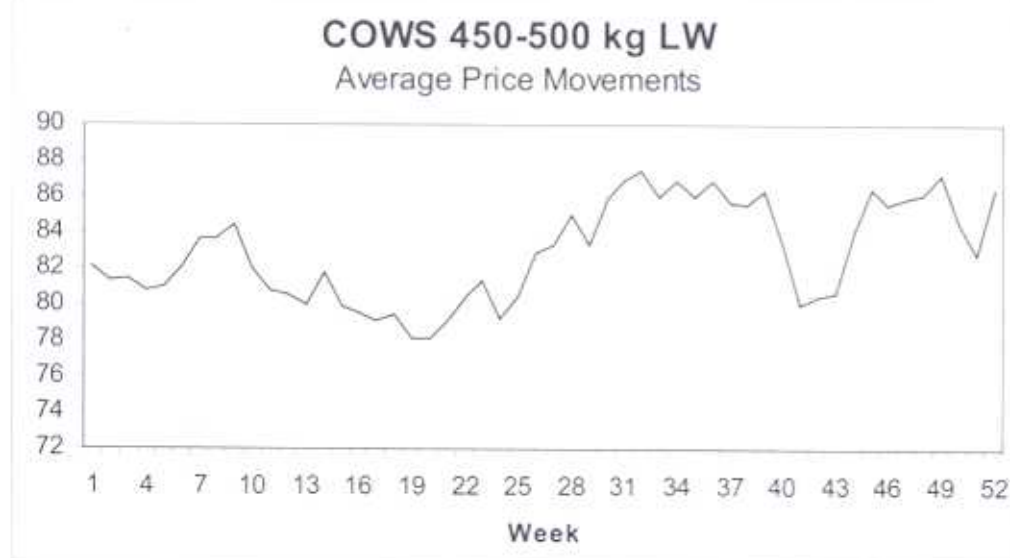


Figure 3 – Goulburn cow price movements



As an example, let's look at the strategy of 'locking up a paddock for increased grass seed set':

- What specific pasture species characteristics do I need to consider?
- What is the right class of stock to best utilise the pasture and achieve my targets?
- What is the minimum pasture benchmark for the pasture/livestock targets prior to lock up?
- What is the right time to de-stock to encourage the plant to run to stem and set seed?
- When do I consider a second graze and with what type of animals?
- When can it be re-grazed?
- How can I assess the impact of my grazing decisions?

When making early pasture/livestock decisions we can draw on several sources of information that help answer the 'unknowns'. Using computer decision support outcomes, for example, may allow producers to lower the level of risk by investigating different scenarios or 'what ifs'.

- Pasture growth rate (kg DM green/day)
- Animal growth rate (kg live weight/day)

- Animal intake (kg DM)
- Amount of supplementation
- Stocking density impact
- What is the financial breakeven point of the strategy?
- Climate and market predictions

Initially, there is a need to take stock of what you've got. The current herd/flock structure, livestock \$ values, pasture assessment (quantity and quality) and farm areas assigned to the broad pasture types to estimate seasonal pasture growth patterns.

Assess market targets and their alternatives which also allows you to identify local windows of opportunity. For example, excess grain to be utilised by sheep in a short seasonal dry spell with the opportunity to sell and/or take out forward contracts on the increased price movement.

Identify the management strategies that are profit drivers. For example,

- Review lambing and calving times in relation to feed supply.
- 45–55% balance between trading stock, such as, wethers, steers, cull females etc., and the breeding herd/flock. This is one of the secure ways of flexibly managing dry times. Trading units can be offloaded earlier, and at a price margin, without affecting the genetic breeding base within the livestock operation and also changes the stocking rate to the amount of available pasture on offer.
- Storing surplus feed from a high seasonal spring growth period in the paddock, shed or silo, to return short-term capital gains in a high demand period.
- Lowering the purchase price for livestock in the middle of a dry spell/drought and applying short term achievable growth strategies to target markets, eg. buying yearling cattle that are 350–380 kg/LW in store condition (fat score 2) and taking them to a short term weight gain of 380–420 kg store condition (fat score 2+). A high number of turnovers at smaller margins may maintain overall profit margin - (\$/kg beef per hectare). Finishing is a secondary requirement, costing 30% more and only possible in 3-4 years out of 10.

To help in decision making there are various tools, other than our own experiences, that can assist us manage pasture utilisation in a cost effective way, particularly in the Southern Tablelands, which experiences highly predictable seasons namely:

- 1) a mediterranean summer with a 12% probability that we will receive average to above autumn break rains,
- 2) spring where pastures would be growing at 60–120 kg/ha/day and feed quantities could vary from 3000 kg/ha to 7500–8000 kg/ha coming from a winter feed base of 750–1000 kg within three months.

It should be noted that animals will have huge compensatory gain or loss in liveweight and no fat deposition through these periods. This impacts on subcutaneous and intra muscular fat deposition in the animal and consequently meat eating quality.

How you prepare livestock for this situation will determine how long or short this weight loss or compensatory gain process continues. Being pro active with supplementary feeding with growing cattle in a difficult winter (where available pasture is below 800kg per ha) will reduce daily weight loss or even enable a small weight gain depending on the type and amount of supplement feed. More importantly it will enable these animals to accelerate compensatory weight gains earlier and longer as the spring flush of growth occurs.

In addition, there is a need to consider how animals actually graze pasture. Pasture composition, amount of green and dead material, selectivity, aspect, slope and the stocking density are essential factors to consider when high utilisation is expected from the grazing strategy. Emphasis on planning is just as important in the good seasons as the bad, eg. controlling wool micron in spring. A whole farm approach to pasture surplus and deficit is a way of achieving a balanced approach to minimising risk.

Computer decision support programs like Rainman, Grazfeed, ProPlus and the newly released program StockPlan help producers, professionals and industry to make forward planned decisions. Decision support models require current and future farm inputs to derive the desired outputs. For example,

- annual and seasonal rainfall variability, being the key climatic factors influencing the amount of pasture grown
- animal intake of pasture (kilograms dry matter) and livestock weight gain (kilograms gain/loss per day)
- paddock fodder budget as a surplus or deficit (kilograms dry matter green pasture).

A scenario analysis or 'what ifs' are then established to identify break-even or fall-back positions and final grazing strategies.

Example. In early March, Bureau of Meteorology indicated a neutral position for autumn breaking rains and ENSO has predicted a 70% chance of an El Nino affecting our weather patterns in September.

What needs to be considered?

- A pro-active, planned approach to the situation is desired. Producers should assess their level of risk by weighing up past experiences with current information, current livestock requirements, the declining feed resources, financial and human constraints; to determine the strategies they may employ over a short or long time frame.
- What is the information really saying? The immediate impact is unlikely to affect the Southern Tablelands in the spring environments, even with low winter early spring rainfall – spring pasture growth of 25-45 kg DM per day potentially could yield quantities around 2500–4000 kg DM available green, meeting all spring livestock requirements. It is how well we manage the quantity and the change in digestibility over the forthcoming months, when El Nino is having an impact, that will position us for the summer and following autumn/winter periods. This is particularly important if it is a 'Bob-tail' spring ie, an early summer, and the autumn break is late.
- Take stock of what you have got. Assess pastures for quantity, quality on a paddock basis. Assess livestock for physiological state, weight, fat score and place priorities on animal targets that impact on the viability of the enterprises. For example, strategic grazing with weaner sheep/cattle to achieve seed set in a newly direct drill paddock or feeder cattle forward contracted for February delivery requiring a gain of 0.6kg/hd/day.
- Fodder budget the farm using the decision support model ProPlus, inserting more specific livestock feed intake information from GrazFeed. Time frames need to be set for September and February, May and September of the following year. It is important to monitor the progress and identifying 'windows of opportunity' and 'triggers' for the fall-back options to start.
- Cost out all strategies to determine least cost, break-even position. If linked and monitored to the overall farm cash flow and the current debt structure, this will ensure long term viability, even if debt restructuring is required.

In balancing the pasture feed curve, it is important to focus management strategies that utilise feed on offer within the season. At the same time, recognise that green actively growing pasture drives animal performance. Litter or dead carry-over feed, whilst important for meeting conservation goals lowers livestock performance, impacts on pasture composition and quality, the way the animals will graze it and finally, utilisation.

It is important to juggle between stocking rate and the available resources. The class of stock, stocking density, timing, pasture species available, in the grazing strategy and decision, may be having a bigger impact on the sustainable system and long term viability of the enterprises.

Summary

Managing fluctuating feed supplies to meet both livestock and pasture targets over a range of different landscapes is challenging.

In some environments where there are major natural resource limitations (e.g. non-arable, low fertility, erodible and/or acid soils to depth) maintaining high ground cover and pasture stability (be it native or introduced) for conservation reasons may/or will override pasture utilisation goals.

In these situations, seasonal grazing where utilisation is less than 30% of total growth and the pasture is allowed to seed down regularly will be required. In other parts of your farm where there are no significant resource limitations and high capital expenditure has been undertaken with either lime, sowing, fertilising, fencing etc. (ie. a high input system), then targeting high pasture utilisation (70% or higher) and linking that to livestock and market targets is sound economics.

The critical issues are developing a flexible whole farm approach that is in harmony with your natural resources.

Reference

The Grazier's Guide to Pastures, NSW Agriculture, October, 2000