

# **Feeding Strategies For Autumn Pasture Saving**

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## **Introduction**

Pasture is the springboard to higher profits for both grazing and cropping enterprises. Attention to improved pasture production and utilisation has been the key to success in the TARGET 10 program of the dairy industry and specialist beef, prime lamb and wool producers are now following. In the Mallee pasture rotations are recognised as the best way of improving soil fertility and controlling certain cereal diseases, as well as providing high quality feed for livestock.

The recent development of High Input farming in south western Victoria has challenged conventional wisdom in that area on the fertiliser requirements of pastures, showing that higher fertilizer rates profitably produced greater amounts of better quality pasture than when district average fertiliser rates were used. This was demonstrated on commercial farms.

**A question being asked in the Mallee is whether corresponding benefits could result from improved pasture management. That is, could early pasture growth and soil nitrogen levels be profitably increased by fertilising sown pasture with , say, 4 kg/ha of phosphorus and then avoiding pasture damage by not grazing it for 4-8 weeks after germination.**

This article discusses what the potential benefits from fertilising pasture and avoiding grazing for 4-8 weeks (autumn saving) might be and how they might be obtained.

## **Conventional wisdom in the Mallee**

Conventional wisdom suggests that a pasture response to phosphorus (P) will occur when, (1) soil P levels are less than 10 mg/kg., (2) P is applied in the growing zone and not just as a top-dressing and (3) there is a good break between April and July. A good break means that the amount of rainfall and resulting soil moisture level is adequate to promote vigorous growth.

Early grazing can reduce pasture growth when it is waterlogged and pugging occurs or it is overstocked. The critical period is for 4 weeks after the break if the break is early, and up to 8 weeks when the break is later and the weather cold.

Grazing can be avoided altogether and the pasture used as green manure. This strategy has disadvantages, (1) that total pasture production and soil nitrogen supplied will be decreased and (2) that the opportunity to produce and sell meat or wool as a valuable bi-product will be lost.

**Given that grazing is very much a part of farming in the wheat/sheep and sheep/wheat zones, we cannot continue to ignore potential profits arising from better integration of cropping and grazing practices. Perhaps it is time also to test the validity of some of our traditional practices.**

## **Autumn saving - a new concept**

Autumn saving means saving some paddocks of autumn-grown pasture for grazing in winter when pasture availability and growth are limited by low temperature. The term has been used for many years in southern Victoria..

The concept is new in the Mallee. There is usually no surplus autumn pasture. On the contrary, with the traditional practice of autumn lambing, the demand for abundant high quality feed is highest in late autumn at the very time when the amount and quality of the pasture available is lowest. So to

introduce autumn saving without changing the time of lambing would aggravate this problem. It is a question of priorities. **There is a need to analyse all the options, assess the risks and measure the impacts of any changes made from a whole-farm perspective.** This is especially important when new ideas are being adopted.

It is important not to lose sight of the primary objective. This can be illustrated. For the dairy farmer, producing milk is the name of the game. Yet by selecting cows for higher milking ability, farmers will also be selecting for higher susceptibility to milk fever and grass tetany. These disorders cause many sleepless nights and kill many cows. Should the farmer concentrate on solving the milk fever problem or keep selecting cows for high milk production? He could solve the milk fever problem completely by milking herefords, but he would go broke in the process! So if higher cereal yields resulting from increased pasture production is the primary objective, and autumn saving will achieve higher pasture production, then options for managing any consequent problems need to be examined and solved to facilitate achievement of the primary objective.

## **The Issues**

### **1. When will autumn saving be of benefit?**

The greatest benefit will obviously occur when seedling damage due to overstocking or pugging (trampling in muddy conditions) is prevented. A slow break can also result in pasture damage if stock eat the young pasture into the ground. Loss of body weight and deaths due to hypocalcaemia are additional reasons to remove the sheep and force them onto supplements, rather than allow them to chase an inadequate green pick. The benefits for pasture from total destocking under good growth conditions have not been assessed. However it could be prudent to remove the sheep to paddocks where high soil N levels would be less important (eg. paddocks to be sown with grain legumes or barley) until the pasture was established.

### **2. What are the supplementary feeding options?**

Supplementary feeding should normally continue through and for several weeks after the autumn break to prevent or control excessive body weight loss, hypocalcaemia, pregnancy toxaemia, lamb losses at or soon after birth and tender wool.

**The range of supplements that can be used and their total cost will depend on lambing management and the timing of the break.**

**Ewes with lambs at foot require 2 to 3 times as much energy and nearly double the amount of crude protein required by ewes in early pregnancy.** Ewes in the last 4 to 6 weeks of pregnancy require 50% more energy and 33% more crude protein than ewes in early pregnancy. The differences are greater in ewes carrying twins.

Poor quality hay or stubble can meet the needs of dry ewes or store-condition ewes up to 6 weeks before lambing, but late-pregnant or lactating ewes are unable to eat sufficient poor-quality hay to maintain their body condition. Late-pregnant or lactating ewes require either good quality hay or cereal concentrates. Fat ewes within 6 weeks of lambing require a higher proportion of concentrates than sheep in store condition.

**The cost and associated problems with supplementary feeding will be increased by either an early lambing pattern or a late break. Only the lambing pattern can be managed.** Many farmers have already changed to late winter lambing. Benefits apart from the lower cost of supplements include higher lambing percentages, less mis-mothering, higher lamb growth rates and less pregnancy toxaemia and tender wool and higher wool yield in the ewes. These benefits probably outweigh the early-lambing advantage of higher prices per head for spring sucker lambs, especially if the lambing tail to be carried over summer can be reduced by raising the fertility of rams or selling them to specialist prime-lamb finishers. Note that the regularly publicised developments with the Murray Mallee Prime

Lamb Group finishing system comparisons and progress towards having the Mallee declared an Ovine Brucellosis Control Area, should both reduce problems with late lambs.

### **3. How should supplements be fed?**

Problems with a slow break have already been discussed. Stock containment areas are especially suitable in this circumstance and funding assistance for construction is available through DCNR. Other details are available from Agriculture Victoria. Alternatively, supplementary feeding can take place in paddocks where pasture growth is less important than weed control.

Troughs and hay racks should be used for long-term supplementation and when pugging is likely, to reduce wastage. Up to 10% of grain will be wasted if it is fed on the ground, increasing to 20% in muddy conditions.

In cold, windy weather, the ration should be increased by about 20% to compensate for the extra energy lost as body heat.

Feeding out should generally occur not more than three times a week so that shy feeders will have access to grain after the more assertive ewes have left. However ewes in late pregnancy or lactation should be fed daily.

### **4. Changing from supplements to pasture.**

**Sudden changes in the composition of rations are to be avoided, whether from pasture to grain or from grain to pasture.** This is because the microbes responsible for ruminal fermentation and digestion have to change according to the diet. So if indigestion and consequences such as scouring and pulpy kidney are to be avoided, change gradually. Ideally, no more than one hours grazing a day should be allowed initially, increasing the daily access to pasture over two weeks before allowing full grazing.

Tender wool normally accompanies the autumn break, resulting from the sudden nutritional change. In the Mallee tender wool results in a maximum price discount because it occurs in the centre of the staple, six months after shearing in spring. We do not fully understand the reasons why tenderness or breaks occur and cannot provide recommendations to totally prevent them. However the problem is worse when nutrition is inadequate and the ewes are stressed by lambing at the break.

### **5. Deciding whether it was all worth while.**

Unless progress is monitored by taking some key measurements, it is possible that you will never really know whether the changes made were profitable. This will need to be done over time to be sure that a measured change was not just a seasonal or chance fluctuation. And it will need to include physical as well as financial measurements so that it will be known that the profits relate to changes in production and not just to changes in commodity prices.

By measuring performance, goals and objectives can be properly evaluated, reviewed and where necessary, changed. Conventional wisdom is there to be challenged, validated and refined. Ideally this is best done through facilitated producer groups.