

MANAGING CATTLE ON LUCERNE

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Our property of 2480 hectares consists of a great mixture of soils, ranging from stoney black basalt to friable alluvial creek flats and also a mixture of chocolate and red loams.

The annual rainfall averages 700mm and our climate, being on the north west slopes, varies from very cold frosty winters to mild to warm summers with temperatures occasionally reaching 38°C, but not often.

"Pearsby Hall" consists of 1650 hectares of cultivation with the rest of the property being stony, to steep or timbered country, the latter creating a very valuable facility for the running of cattle in wet conditions. Our natural grasses are all well established following the removal of our sheep several years ago. The main grasses are blue grass (Dichanthium sericeum), wallaby grass (Danthonia linkii), paspalum (Paspalum dilatatum) on the creek flats and red grass' (Sorghum leiocladum) on the less fertile stoney ridges. (Ed. note: red grass in other areas is commonly Bothriochloa macra).

#### PASTURE DEVELOPMENT OVER THE PAST 4 YEARS:

Very good soil preparation was applied to country to be sown down with pasture.

The first year we sowed a pasture mix of 4kg wheat, 1kg WL514 lucerne, 1kg phalaris, 1 1/2kg Demeter fescue, 0.3kg Redquin red clover and 0.3kg Haifa white clover per hectare.

The mixture was achieved with the use of a Mix-all and was sown on top of the ground with a gyral air seeder and harrowed in with covering harrows behind the gyral. Being in a completely dryland situation we are very dependent on a week of showery weather conditions to start the establishment of new pastures.

In that first year the lucerne and variegated thistles were so dominant we did not harvest the wheat. The idea behind the pasture mix was to reduce bloat but that turned out to be a complete failure with lucerne being so dominant. After 4 years we are still sowing lucerne and still losing cattle from bloat although at a reduced number per year.

We now have 200 hectares of lucerne based pastures established and 200 hectares of phalaris, fescue and vetch pastures.

Every year, except in the first year we have sown a cover crop of barley with our pasture mix and 2 years ago averaged 2 1/2t/ha from a sowing rate of 12kg/ha of Grimmet barley. Sowing barley with the pasture mix causes no marketing problems, unlike undersowing with vetch which reduces market outlets as vetch is unacceptable to pig farmers.

#### PROFITABILITY OF LUCERNE PADDOCKS AND CATTLE:

With constant management, a little luck and a baling plant, lucerne will be very profitable in a long term programme.

Stocking rates on Pearsby have increased from 150 Hereford breeders to 500 in 4 years and at this stage we have not yet been pushed for feed in dry times.

All steers are placed in the feedlot during the winter period without any assistance from lucerne hay. This is mainly because of the high protein of lucerne, making it very difficult to combine with grain to get a 12 percent protein diet. Scouring must be avoided as it is harder to control in cattle in a feedlot.

With 400 hectares of prime cultivation switched out of grain production into pasture, either lucerne or grass, the profit over the last 2 years on Pearsby has been higher than in previous years.

Protein levels in our grain have been gradually falling and, being only small fertilizer users, we think it is time to spell our soils and get them back to their former shape. We know the soils are deficient in nitrogen and phosphorus.

We have a 1200 round-bale, non-taxable asset consisting of half lucerne hay and half cereal and pasture hay assuring us of some income and having the capacity to keep our good breeders if faced with drought. The question of drought needs to be constantly considered.

Each year, in early spring, we join approximately 150 one year old heifers on lucerne hay, there being very little solid food at that time. The lucerne hay acts as an effective flushing material so that after pregnancy testing usually only 8 to 10 percent of heifers are found to be empty.

The weaning of calves in the feedlot, with one electric wire inside the cables and eight round bales of lucerne in feeders, is a simple operation involving minimal man-hours. Bulls are spelled in the same manner thus making use of the feedlot for most of the year, even though not feedlotting cattle.

Most graziers talk only of their cattle losses, caused by bloat, not the increased profits from the extra cattle they are running.

To date I have lost 16 head of cattle on lucerne in the last 4 years. Considering that I lost 7 in the first year and, at times, ran up to 700 head of cattle on lucerne at any one time, I cannot speak highly enough of the biggest bloat killer in Australia.

#### PROBLEMS ENCOUNTERED WITH LUCERNE:

1. Bloat - you may think you know when the cattle can safely graze but you are really in a guessing game. (For example - I lost 2 weaner steer calves on really dry lucerne after being on lucerne for 3 weeks. Perhaps it may have been pulpy kidney. The symptoms are said to be the same).

2. Total committment - I always graze large numbers of cattle on small areas of lucerne if possible. You have to learn to run them in a very intensive operation requiring many hours of checking per week, and to accept not having a very relaxed mind whenever leaving the place.
3. Applying teric or agral to drinking water - it is impossible to have a controlled dosage if contour banks are holding water, if earth dam storages are used or there is a creek running through the lucerne paddock. They are very effective if controlled water is the only drinking source.
4. Disposing of bloated dead cattle.
5. Getting bloated cattle to stock yards - badly bloated cattle will not travel, therefore, it may be difficult to use a trocar or administer oil.
6. Grazing in wet weather - I never graze lucerne in wet weather. I therefore find it hard to justify the use of bloat capsules. Also, in this regard, I practice quick grazing and spelling the cattle off lucerne and on to other pastures where bloat is a lesser threat. The latter practice also contributes to optimum lucerne yields. Another consideration is that cattle must be at least 200 kg liveweight before capsules can be used, so that calves cannot be dosed.
7. Need for back-up paddocks at all times - this is why half our pastures contain no lucerne.
8. Changing weather conditions change the safety of lucerne - dewy mornings, changing winds and a light shower may cause dangerous situations.
9. Potential large losses - the risk of losing a large number of cattle at any one time is always present and 90 percent of times it will be a stud cow or good bull that will be lost, not the cull cattle.

#### MANAGEMENT OF LUCERNE BASED PASTURES:

1. Always shift cattle in wet times to prevent hard panning and prevent badly soiled lucerne.
2. Never graze cattle on lucerne if it is young and sappy. Usually lucerne, well in flower or setting seed and starting to deteriorate in colour, causes a lot fewer problems.
3. When planning lucerne pastures try to incorporate lighter, less fertile soils with heavy alluvial soils. In lighter soils the lucerne grows quickly and deteriorates quickly. This gives grazing more often than the alluvial soils which, as well, often cannot be grazed because of the bloat risk and baling is the only answer.
4. Try to plan lucerne paddocks to have some native grasses or creek strips to fill the bellies of hungry cattle before allowing them to eat any lucerne. This practice usually gives at least 6 hours with very little bloating.

5. After baling a paddock of lucerne cattle may be shifted into it. Usually the grasses are sweet and the cattle are unable to graze sappy lucerne mainly because the old stalks prevent any large intake of the small lucerne, close to the ground. This practice can be carried out for short periods only when the weather is dry.
6. If a lucerne paddock is not good enough to bale and too risky to graze, a suggestion would be to mow it down. Leave the lucerne for 2 to 3 days in rows and then move cattle in. They will really appreciate the dried lucerne and will seldom bloat. This practice has worked very successfully for me. The first time of trying it we had only a 5 ft. slasher but now, using a 12 ft. haybine, the operation is much quicker.
7. The uncertainty of bloat is always a big concern. I have achieved excellent results by grazing cattle on lucerne for 30 minutes then shifting them out. Next day, if no problems have been encountered, I extend to 45 minutes then shift them out and so on. When I can get to 1 1/2 hours with no problems, I leave the cattle in the paddock but check every individual beast at least 4 times per day. The only problem with this practice is the difficulty of moving cattle out of the paddock and this is where our faithful cattle dog pays his way. Moving cattle into the paddock is never a problem, they usually will be waiting at the gate.
8. Never plant more lucerne than you can manage. Large areas in one paddock will always be a worry in good seasons, with losses nearly a certainty.

#### SUMMARY:

If you are not prepared to lose cattle from bloat - leave the lucerne seed in the bag.

Persistence with intensive management on lucerne has its rewards even though a bloated dead beast is like a mini-hail storm on crops.

When grazing cattle on lucerne you must be aware that every day creates a different situation with the ever-changing weather conditions. Therefore, be prepared for alternative feeding, have future grazing plans and be prepared to make quick decisions.

The risk of losing good bulls or large numbers of cattle at any one time is always with you. The risk to your survival on the land is probably no greater than that proposed by other factors such as our ever changing seasons.

Being prepared to take risks with the best and most prolific pasture grown in the reasonably well-watered areas of Australia, will definitely pay in the long term. The resulting improvement to soil fertility, the necessity to have good fences around lucerne paddocks and the plant's ability to minimise soil erosion constitute a step in the right direction for assuring the future of our most important asset, namely the SOIL.