

SUCCESSFUL ESTABLISHMENT IN THE WHEAT BELT

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 "Marombi"
 Coolah NSW

PROPERTY

"Marombi" is situated on the western side of Coolah, with an area of 670 ha, made up of 570 ha of arable land, 60 ha of creek flood country and 40 ha of scrub. The average rainfall is 640 mm per year, with the heaviest rainfall usually in January, February and March. Soils on "Marombi" run from heavy silt to brown loam, sandy loam and acid sand, with the distribution of soil types fairly even. We have divided the property into 56 paddocks with an average of 10 ha each. All paddocks are watered by trough from a pressure and reticulation system. At the present time we are running 2,000 XB ewes averaging 135 per cent lambs sold. We crop 80 ha with oats, winter barley and winter wheat, all used for grazing and grain recovery. Average grain recovery yields are 1.9 t/ha. A further 120 ha of wheat and barley are grown for use in a 200 sow piggery with average yields also 1.9 t/ha. Each year 100 ha or more, depending on season, are closed for three months in the summer/autumn for lucerne seed production.

AIMS

Our aim is to integrate the enterprises of prime lambs, lucerne seed, grain cropping and pig production. This necessitates the establishment and re-establishment of pastures on wheat country, with the result that the better the pasture the more profitable the property is as a whole.

TYPES OF PASTURE

On the better silt and brown soils we aim mainly for lucerne. Subclover is sown with lucerne on the lighter country and on the sandy soil, clover and serradella are sown. The varieties used at the moment, are Pioneer 581 lucerne, Nungarin and Dalkeith sub. clovers and Pitman serradella.

TYPES OF MACHINERY

Plough and scarifier are used to farm conventionally, with a 500 series McKay combine, fitted with a levelling bar, bandseeder and press wheel roller. A Computer Spray^R is used for herbicide spraying and a Merino^R mister is used for insecticides.

SOWING METHODS

We have found the best results on "Marombi" have been from sowing pasture with a cover crop, e.g. wheat, barley or lupins. Sowing is done with a 500 series combine, with the cover crop and pasture sown in alternative 35 cm rows. To achieve this result we block every second 35 cm wheat run, and every alternative 35 cm tube on the bandseeder. Behind the last row of tynes on the combine we drag a levelling bar just in front of the bandseeder, set to sow at 1.25 cm depth. Directly behind the pasture sowing tubes we pull a 10 cm press wheel which is mounted on a heavy roller. By using press wheels instead of a full roller we minimise the crusting effect, and also, because it only rolls a 10 cm strip every 35 cm, it has a direct beneficial effect on weed control, as overall rolling tends to germinate weeds as well as pasture.

SOWING RATES AND SOWING TIME

With the above method the cover crop is sown at half to two thirds the normal sowing rate giving the pasture more light, as well as not robbing it of too much moisture and nutrients. We have found that the yields of the cover crop are not adversely affected by the reduced sowing rates, as on most occasions the crop is sown early in the sowing season. March, April and May are the preferred sowing months. Therefore with this in mind, we definitely lean towards winter wheats, winter barleys and lupins to give us this flexibility.

ESTABLISHMENT OF PASTURE

Establishment falls into two phases on "Marombi" - (a) sowing pasture into original wheat country and (b) re-establishing of pasture on cropped country.

Phase 1 - This establishment is by far the easiest, as the country which has been cropped, probably for too long, is relatively free of weeds. The stubble from the previous year is burnt, if possible, to give a clean rubbish free fallow. The paddock is then conventionally fallowed and sown as described above.

Phase 2 - This involves re-establishing pasture into paddocks where existing pasture has run out due to droughts or weed invasion. The paddock has to be brought back into the cropping cycle to clean the weeds out. The process has to be planned depending on weeds present. The worst problem on our country is barley grass, for which at present, there is no spray (pre or post emergent) that will take it out of a crop situation. This means we have to start the control operation the previous September when the paddock is pasture topped with 250 mls of Roundup CT^R per hectare at the milk-dough stage of barley grass seed. After spraying, it can be grazed for the rest of the year until conventional fallowing starts about December/January. From here on the paddock is cropped for at least 3 years, taking advantage of the nitrogen build up left by the previous pasture cycle. The main consideration during this period is to get the country weed free for pasture sowing in the last crop year, remembering that it is more expensive to spray weeds out of a new pasture than out of a crop.

WEED CONTROL

Broad leaf weeds can virtually be eliminated, on our country, in the first two years. Not so weeds such as ryegrass and wire weed which need special attention. The most effective control for these two are the pre-emergence sprays Trifluralin, Yield^R, or Glean^R. Of these Glean^R can only be used for the first two years, due to its effect on the young pasture. Trifluralin is by far the cheapest, but needs more incorporation than the other two.

Ryegrass and black oats can also be taken out of a new crop, or pasture, with a post-emergent spray, at the two to four leaf stage, using Hoegrass^R at 1-1.5 l/ha.

SEED PREPARATION

Seed inoculation is essential on all the lighter country, below pH.5. On "Marombi" we tend now to double inoculate, in preference to lime pelleting the seed, as the lime builds up in the seed box and bandseeder tubes and very quickly gives erratic sowing rates and if not watched continuously they can block completely. On the dark soils the only seed treatment used is the insecticide Le Mat^R, to control blue oat mite. Seed treatment seems far more effective than post-emergence spraying.

SOWING RATES

If the country is in ideal condition we use one kg of lucerne and one kg of clover to the hectare. In cases where the paddock is cloddy, or has too much surface rubbish, it would be wise to increase the rates.

FERTILISER

On all the lighter country we use 45 kg/ha of D.A.P. fertiliser (19:20:0). No fertiliser is used on the higher fertility, heavier country. Over the past 30 years "Marombi" has had in excess of 2.5 t/ha of superphosphate on all the lighter country, which now has a phosphorus reading of 30 or more parts per million. The heavier soils are in excess of 150 parts per million of phosphorus. Chemical gypsum or sulphur fortified superphosphate (SF45) are periodically topdressed on pasture country.

INSECT CONTROL

The main worry in new pasture is the blue oat mite. On country sown with inoculated seed we spray with a mister using Le Mat[®] preferably straight after sowing and before the crop emerges.

As yet we have not had to spray any of the Pioneer 581 lucerne to control aphids.

Heliothis, a problem in late spring and summer, especially on lucerne seed crops can be easily controlled by spraying with endosulphan.

MAINTAINING GOOD PASTURES

On "Marombi", where most of our pastures are predominantly lucerne we have found that rotational grazing is most successful. This entails stocking a paddock at rates around 125 sheep or more per hectare, or more so that the paddock can be eaten out in 6 to 8 days. This means the new lucerne shoots, which sprout 6 days after grazing, are not eaten off again.

Lucerne should be allowed to flower, at least once a year, to maintain production. Grazing pressure on new pastures, from 6 to 12 months, can be quite heavy as long as the ground does not get too dry and powdery. We have found that in nearly all cases rotational grazing improves the pasture. The quickest way to ruin a lucerne stand is to set-stock it, especially in its main growing season.

SUMMARY

Our experience over the last 30 years has shown that if all the above practices have been successfully carried out, the chances of an A 1 pasture are around 70 per cent. The 30 per cent failure rate is due to weather conditions beyond our control. Remembering that if these practices have not been carried out effectively, the 70 per cent success rate drops dramatically. Consequently we find it is better to sow a smaller area properly each year rather than "rough in" large areas quickly.