

Handling the sand with mouldboarding

Article by Bob Leeson

Tom and Kay purchased their 800 ha property in 2002. It has approximately 200 ha of very light sandy ridges interspersed with small areas of quite good swampy flats with a reasonably high water table.

The sand country profile is 10–12 cm of grey non-wetting sand with some evidence of plant roots then 2–3 cm of firmer grey non-wetting sand before running into good yellow sand.

It appears that the plant roots would not grow through the second sand layer because of some structural reason (maybe acidity?) as it did not seem to be a very hardpan preventing root penetration.

After having attended some Evergreen Field Days at Grant Bain's at Walkaway and Bob Wilson's at Lancelin, and observed what they had achieved on light country, Tom began trying to establish subtropical perennial grasses in 2006.

Modified machinery

He modified an International A61 culti-trash undercarriage by removing the rear row of discs, spacing the front row to 0.5 m and fitting press wheels. He also put on two scalloped discs on one end to see if they made any difference but they don't appear to have. It is a relatively cheap and very effective machine.

A quick look

Grower: Tom and Kay Kelly

Location: Mogumber, Northern Agricultural region

Soil type: Sand

Annual rainfall: 550 mm

Enterprises: Sheep and cattle



His earlier efforts at growing perennials were very mixed. They ranged from total failure through to reasonable establishment. There was enough successful areas and good growth to give Tom the confidence to persist but

after some areas had been reseeded twice and still not getting as good a coverage as he wanted he started to doubt whether it was financially viable trying to grow perennials on that particular country.



Very poor establishment in the strip that wasn't Mouldboard.
(Photos: Bob Leeson)

Perennial success in whole-farming systems

LEFT: Excellent perennial pasture establishment following mouldboard ploughing.

RIGHT: The modified culti-trash combine that Tom uses to sow perennial pastures.

Mouldboard ploughing

However in 2011 he got talking to a chap about mouldboard ploughing and after a fair bit of consideration decided to give it a trial. He had a contractor come in and plough 12 hectares, he then sowed across the plough runs with 8 kg/ha of Evergreen Northern Mix and without fertiliser. The results have been astounding compared to the control strip that was left unploughed.

By ploughing it has enabled the seed to go directly into the yellow sand which made a far better seed bed and was less prone to getting buried too deep by any winds.

I discussed with Tom about the sowing rate which was way over the top. Apart from being expensive, that rate of seed numbers is not sustainable.



While there might be an excellent germination the plants will naturally thin out due to availability of nutrients and more importantly moisture. The recommended rate of 4 kg/ha of Evergreen Northern Mix is more than adequate under reasonable sowing conditions.

The mouldboard ploughing has certainly added to the cost of

establishment, but nothing compares to an inadequate plant density or total failure. With the stand Tom has now, with good management he can look forward to many years of increased production and major soil improvement. This is not also taking into account the personal satisfaction of 'getting it right'. ✓

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