

Case Study: John Willmott - Eneabba

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OVER the past two years, Eneabba farm manager John Willmott (photo front page) has sown 890 ha to Fine Cut rhodes grass, Gatton panic and signal grass.

This August he will plant a further 600 ha to these subtropical perennial grasses.

His initial 60 ha planting in 2005 was a 'rough attempt', which left him determined to fine tune the process.

John manages five blocks, the equivalent of 8,097 ha, for Haydon Wilkinson.

Located west of Eneabba and 20 km from the coast, the farm (adjacent to Iluka's sand mine) is principally sand overlaying varying depths of clay and gravel.

Traditionally, the property has run up to 15,000 sheep plus 300 Angus-Hereford cross breeders and cropped 900 ha to a mix of wheat, lupins and oats. John is now overseeing a changeover to cattle with a reduced area devoted to cereal cropping.

Average rainfall has been 600 mm. However 2007 saw about half that amount fall and the previous year they had even less. Cereal crops south west of Eneabba did poorly and John says annual pasture paddocks that had barely been stocked were beginning to 'shift'.

On the contrary, the water table on parts of the property is just 15 cm below the soil surface and the water quality is good, making perennial grasses an ideal option.

John achieved an excellent establishment result with the subtropical perennial grasses planted in 2006 & 2007, which have since tapped into subsurface moisture and are booming.



Fig 1. The Soilrider tynes are manufactured in Perth.

Having saved about \$20,000 on hay last year, John is keen to see what grazing he can get out of the perennial grasses in forthcoming years.

At present he runs 2,500 sheep and 800 Angus and Angus-Hereford cross breeders, with future breeding aimed at pure Angus.

John is aiming for the feedlot market and turning off cattle at 450 to 500 kg, but in the future he may strike an alliance with a pastoral property.

Dividing some of the paddocks into 50 ha cells, so that they can be rotational grazed using a central watering point, is his next project.

John acknowledges the help and advice he has had from Dongara producer (and Evergreen committee member) Craig Forsyth, when it comes to discussing grazing management.

Modifying the seeder

John's inspiration and determination to plant these grasses came following a Grain & Graze field day hosted by the Mingenew-Irwin Group in autumn 2006.

Having seen Grant Bain's seeding gear, he set about modifying his own 24' wide Shearer combine.

"We wanted a seeder that was going to suit the local conditions and maximize the germination rate," John says. "Our two priorities were firstly to remove the non wetting soil and then to get an accurate seeding depth."

He settled for the Soilrider tyne, with adjustable closer plates, and 16 Soilrider units that cost him about \$10,000.



Fig 2. Soilrider tynes with press wheels were mounted on a cultitrash undercarriage under the Shearer wide seeder. Chamberlain plough discs were later added to remove the non wetting soil.

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Fig 3. Annual volunteer pasture on parts of the Eneabba property is principally brome grass and geranium.



Fig 4. Gatton panic was sown in a separate row to the Rhodes and signal grasses. This stand was established in August 2006.

He and two others spent three weeks making the modifications. He first cut off the existing tynes and replaced them with the undercarriage of a Horwood Bagshaw cultitrash. They set the discs up on 21" spacings, in line with the Soilrider tynes.

"The discs were not effectively moving the non wetting soil away from the seedbed, so we replaced them with worn Chamberlain plough discs," John says.

"The plough discs scalloped the dirt and threw it to one side, but we then found the dirt was being thrown into the next furrow, so we bolted some rubber mats (old conveyor belt) to bars to act as vertical dividers."

John works on a furrow depth of up to 7.5 cm and a sowing depth of 5–10 mm. "The furrow depth depends on the year," he says. "We went down to 7.5 cm (3") in 2006 as we were chasing moisture, but last year we worked on 3.75 cm (1.5")."

"Where the furrows blew in, the plants did not do as well, but they did germinate."

He concedes that he was lucky to get 10 mm of rain following sowing in 2006. "It was a case of water harvesting, the rain was diverted from the non wetting soil in the inter-row to the furrow and that moisture saved us," he says.

John fertilizes with 200 kg/ha of Super Potash 4:1 in the year following sowing and 150 kg/ha of Super Potash in subsequent years.

"We had a fantastic germination of blue lupins in the furrows which will provide useful background nitrogen," he says.

John had a theory that competition between the three types of grass at establishment was not a good thing, so he opted to keep the gatton panic seed separate from the rhodes and signal grass. To achieve this he welded dividers in the seed box.

Sandy paddocks that were scantily covered in geranium and brome grass, now boast a flourishing stand of subtropical perennial grasses. Having created a new microclimate, John believes that clover is coming back in these pastures for the first time in nearly a decade.

Recipe for success

Given his background, John approached the planting of the perennial grasses with the mentality of a 'cropper'.

Gatton panic, rhodes grass and signal grass seed was purchased 12 months in advance to get around any issues associated with seed dormancy.

Prior to sowing, John used 1.5 litres/ha of Roundup PowerMax as a knockdown herbicide, spiked with 20 mL of Hammer. He works to eliminate radish in those paddocks for two years before sowing the grasses.

"While weed control is very important, I still believe insect control at the time of sowing should not be underestimated," he says. "I use a bare earth insecticide when I spray the knockdown and if necessary, another insecticide following emergence."

The perennial grasses were sown in the second and third weeks of August, with the gatton panic in a separate row to the signal grass and rhodes grass.

Each of the grasses was sown at a rate of 1 kg/ha with fertilizer as a carrier at 20 kg/ha.

Having experienced non wetting soils in both South Australia and WA, John appreciates the importance of press wheels in producing a uniform germination.

There will be a Field Day on the Willmott property on Monday 31 March