Vol 24, No 4, page 54 August-September, 2003

Innovative low cost winter crop planter

By Gary Alcorn

LEADING EDGE

After 10 years of experimenting with various straight and parallel farming configurations John and Paul Foley reckon it's time to 'get serious about tramlining'.

The father and son team produces a range of summer and winter cereal, legume and fibre crops under centre pivot and lateral move irrigators just outside Allora on the Darling Downs basaltic uplands.

More than 30 years' experience in farm machinery design and fabrication (see box story) enabled the Foleys to assemble a purpose-built winter crop planter to match their tramline layout.

The result is a low-cost, accurate implement which forgoes looks for performance.

"We bought a 7.38 metre Orthman parallel linkage toolbar and fitted John Deere 32 mm square shank curly tines.

"Why? Because we had most of them on-farm, they're simple, robust, readily available and cheap," John Foley said.

The rig is required to sow wheat into irrigated country with raingrown margins on runs up to 1200 metres long. Sowing tine spacing is set at 230 mm

A major challenge when implementing permanent tramline layouts is to achieve a common wheeltrack width for all machinery — especially headers.

On the Foley farm the tramlines are 7.3 metres apart straddling eight 900 mm beds with all machinery satisfying either 1800 mm or 3600 mm wheeltrack configuration.

"We use a John Deere 4650 FWA which carries a

BACKGROUND

John Foley has a 30-year history in successful farm mechanisation. He is well known for his Allora field bin dryer which enabled farmers in all states to harvest high moisture grain before weather damage downgraded quality.

"Back then the first design took three and half exercise books of figures," he said. Today's Agridry grain dryer range is now marketed in seven countries. Other developments include solar aeration and CSIRO designed aeration controllers.

front-mounted 2000 FM2 Simplicity airseeder with seed and MAP hoppers.

“The Orthman bar has sowing tines set at 23 cm spacing fitted with 30 cm cultivator points, or we can fit spear points if we want to.”

The 230 mm spacing produces a more even plant population when sowing wheat at 107 kg per hectare.

John prefers 10 plants each with six strong primary tillers to six plants producing 10 tillers each.

Depth of planting remains uniform across the beds and wheeltracks thanks to the parallel linkage geometry, he said.

Tramlining combined with zero or minimum till improves soil tilth and cuts fuel costs.

The paddock of friable basaltic light clay soil being sown on June 14 had produced three consecutive maize crops and would grow two winter crops to make five in three years as part of a planned rotation.

“We worked it 14 days ago to apply urea. This is the first working in some years and will be the last for several seasons.

“As soon as the wheat comes off we’ll plant corn straight into the sanding stubble with the John Deere double-disc planter.”

Sowing both irrigated and dryland areas in the same pass is achievable thanks to a 12-volt air conditioner clutch unit and some sprockets which halves the sowing rate in the dryland zones — ‘on the go’.

This tractor/planter rig also uses radar to measure ground speed (7.6 km per hour for this operation) while seeding rate, fertiliser rate and area sown are shown on a monitor display.

John Foley and his purpose-built planter.

The low cost planter foregoes good looks for performances.