SEEDER TRIAL

Researcher: Bill Gardner WestVic AgServices P/L

Site: Streatham

These results are related to the trial printed on page 71 of the *1998 Field Day Book.*

BACKGROUND

Seeding systems try to address a range of complicated issues. The need to minimum soil disturbance is paramount, this having been shown to reduce crop susceptibility to waterlogging. So the first step for most is to move away from a cultivation situation approach, to some kind of minimum tillage one. The most important requirement for this is high break out pressure of tynes, so conventional C tyne combines are not suitable. There is an array of tynes and points which are available, and research to date in SA suggests that spear points and seeding boots which are integral to these give significantly better results. Again there is a range of points available to fit to tynes. Inverted T points, such as superseeder, Caldow, and Baker work well drilling pasture and crops, although speed must be kept slow for these to work properly.

AIM

To assess a number of farmer owned and modified seeders for direct drilling.

Co-operator name : Neil Vallance Irrigated : No

METHODS

Parwon Barley sown using a number of different sowing machines with different tynes. Seed was weighed in and out of the seeders so that accurate seeding rates could be calculated. Plots were 34m wide and 720m long. Plots were harvested separately as 300m long by 8m wide (header width) strips and weighed with a grain weighing trailer.

Sowing Date : 2nd July 1998
GSR+Irrigation (mm) : 352mm (April - November) Decile 3
Fertiliser applied (kg/ha) : 150 kg/ha of Pivot 15

PADDOCK HISTORY

Year	***Crop type***
1997	Pasture
1996	Pasture
1995	Pasture

RESULTS

Treatment	*Urea*	*Ripping*	*Plants /m2*	*Seed rate kg/ha*	*Seeds /m2*	*Estab. %*	*Yield T/ha*
International combine with a John's undercarriage and 4 inch points				175.5	103	243	69	3.43
Alfarm airseeder fitted with two carts. Tynes modified with a double shoot boot.			Yes	116.5	100	247	47	2.63
Connor Shea Scari Seeder fitted with Sanderson points and Agmor sowing boots.			Yes	186.5	123	304	61	3.73
Alfarm airseeder fitted with two carts. Tynes modified with a double shoot boot.		Yes	Yes	154.5	101	249	62	2.83
Janke airseeder with 6 row bar. Front two bars band fertilizer			Yes	164.5	91	224	74	3.60
Janke airseeder with 6 row bar. Front two bars band fertilizer.		Yes	Yes	185.5	100	247	75	3.50
Napier combine with ripping tynes and Janke sowing tynes.				145.5	95	235	62	3.65
Agrodrill fitted with Caldow points.				166	81	200	83	3.70
Napier combine with conventional tynes.				170	95	234	73	3.59

Observations and critical comments relating to interpretation of results :

- Rhizoctonia was a problem in all of the plots. It did not appear to favour any of the treatments.
- Plot 5 occurred on an old headland.
- Plot 9 had a sowing gap (of about 30cm) in the middle of the plot that affected about a third of the plot.