Stubble Heights vs Windspeed

Nineteen measurements were done at the NSS site for the Windspeed Trial during the summer period. This trial is assessing the differences in windspeed reduction across a range of stubble heights and orientation.

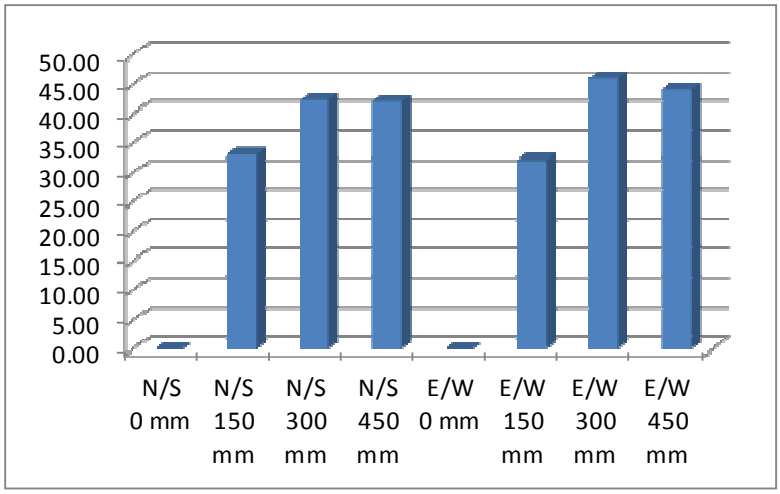
In 2010, wheat was sown at two different orientations—N/S and E/W. This was then harvested at three different heights—150mm, 300mm and 450mm. A fourth treatment of nil stubble is used as the comparison. The windspeeds are measured 1 m above the stubble and at ground level (0m).

In 2011, Lentils were sown into this wheat stubble and measurements such as disease pressure, podding height etc. were taken to assess whether the stubble height & orientation had any effect on these (see following pages).

SUMMARY

- **Know your most damaging prevailing winds and sow your crops at right angles to this**
- **Leave your stubble standing as high as possible (keeping in mind what your seeding bar can get through!)**
- **On extreme days eg. a northerly, large reductions in windspeed and hence erosion risk, are achieved if the stubble is at right angles to the wind (or somewhat against it!)**
- **Fencelines that run in the same direction as the prevailing wind may be better off being double sowed**

Orient.	Height	Stubble Type	1 m	0 m	% Reduction
			km/hr	km/hr	
N/S	0 mm	Wheat	16.57	11.34	31.58
N/S	150 mm	Wheat	15.38	5.45	64.56
N/S	300 mm	Wheat	14.58	3.81	73.86
N/S	450 mm	Wheat	14.42	3.81	73.57
E/W	0 mm	Wheat	16.05	9.99	37.74
E/W	150 mm	Wheat	14.35	4.33	69.79
E/W	300 mm	Wheat	15.78	2.55	83.85
E/W	450 mm	Wheat	15.16	2.75	81.86



Results from 19 measurements from Dec 2010 through to May 2011

The results show an improvement in windspeed reduction of up to 45% by the stubble, when compared against the nil stubble.

Interestingly, the stubble height giving the highest amount of windspeed reduction, regardless of orientation, was the 300mm height.

Government of South Australia
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