

Timely seeding - is a re-think necessary in South Australia?

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Current advice for seeding wheat, *Triticum aestivum*, in the mid-North of South Australia recommends sowing in early May, even if 'break' rainfall occurs earlier. It was also reported that late maturing cultivars did not require earlier seeding than the locally recommended mid-season varieties (1). These findings contrast to those in Victoria (2) and Western Australia (3) where the value of earlier sowing, and matching an appropriate maturity genotype with a given time of sowing have been demonstrated. Consequently a study was undertaken to determine the effect of sowing date on grain yield at Roseworthy.

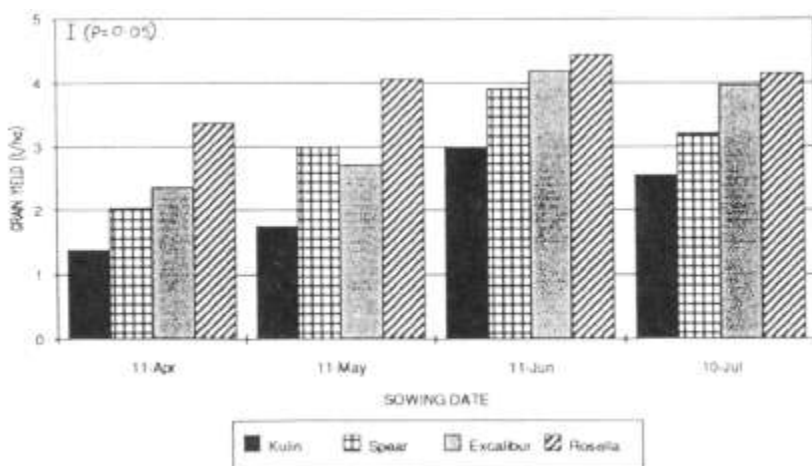
## Methods

In 1992 4 wheat cultivars representing early- (Kuhn), mid- (Spear and Excalibur) and late- (Rosella) maturity types, were sown 4 times (11 April, 11 May, 11 June and 10 July) at seeding rates of 30, 60 and 100 kg/ha. The growing season (April to October) rainfall was 441 mm.

## Results and discussion

All 4 cultivars achieved their highest grain yield when sown on 11 June (Fig. 1). Grain yield increased with higher seeding rate ( $P < 0.05$ ) and there was an interaction ( $P < 0.05$ ) between time of sowing and cultivar. Rosella produced the highest yield at each sowing date, the differences being significant for the April and May plantings. This yield advantage may be partially attributed to the lower incidence of the leaf diseases, stripe rust *Puccinia striiformis*, and leaf rust *P. recondna*, on Rosella.

The results demonstrated the value of a long-season cultivar, Rosella, for early planting; this contrasts with earlier work (1). In this abnormally wet growing season (10 mm more than the long-term average), Rosella maintained its advantage through to later sowings. It is likely that the long season also accounted for the optimum sowing date of June rather than earlier plantings.



**Figure 1. The effect of sowing date on grain yield of 4 wheat cultivars (mean of 3 seeding rates).  
References**

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