

# Improving the early management of dry-sown cereal crops

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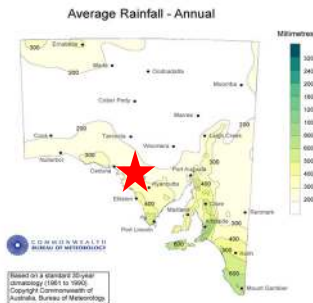
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# SARDI Minnipa Agricultural Centre

- 1100 hectare property, established in 1915, 109 years of working with growers
- Combines commercial broad-acre cropping and livestock programs with research activities
- Deliver agricultural research and extension across Eyre Peninsula
- Annual rainfall of 325 mm, growing season rainfall of 242 mm



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- With larger seeding programs more growers are trying dry sowing
- On upper EP in 2017 and 2018, limited soil moisture at seeding resulted in lower plant establishment
- This raised questions about the soil factors which reduce germination and establishment

This research from 2019 to 2021 assessed the impact of management on wheat seed establishment on three different soil types in field trials and pot experiments for the impact of;

- NP fertiliser type and fertiliser placement
- herbicides
- seed dressings



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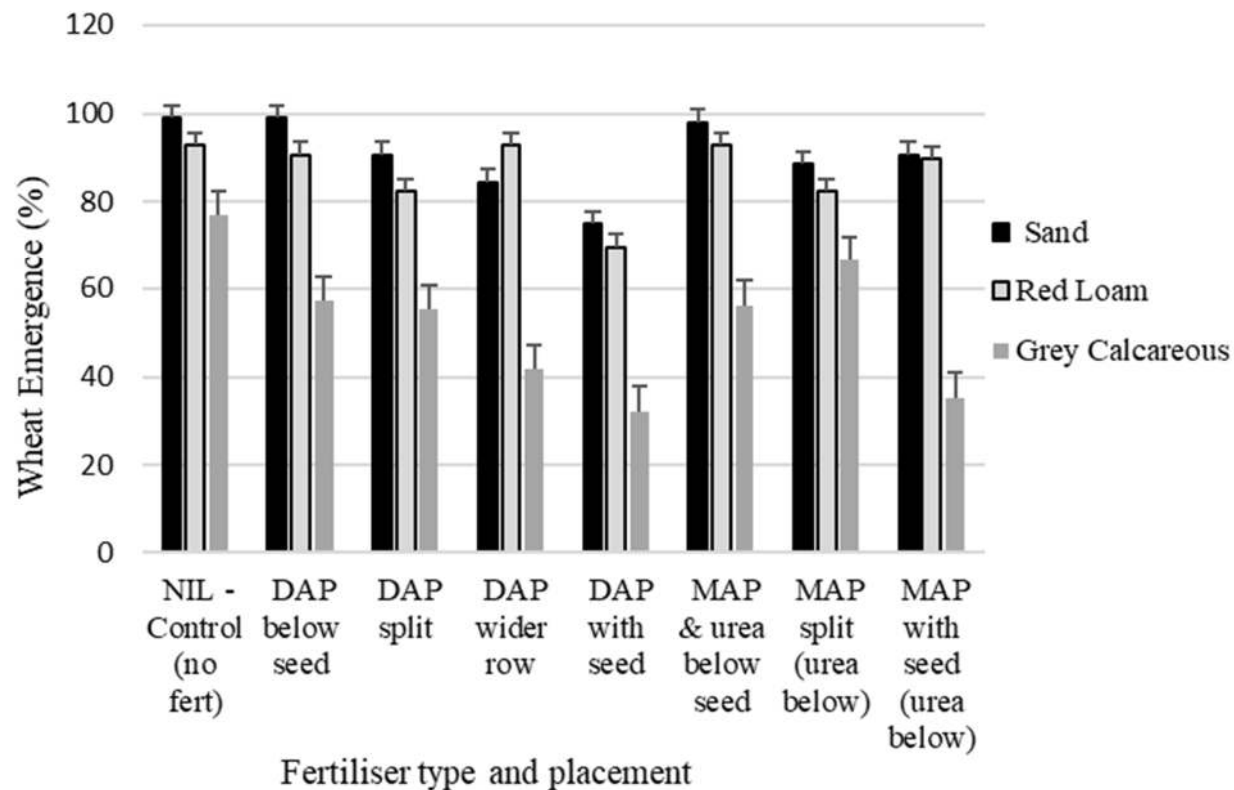


Figure 1. Effect of fertiliser type and placement on wheat emergence 2020 (% of seeds sown) in pots averaged for red loam, sand, grey calcareous sandy loam after 56 days. Columns with a different letter are statistically different at  $P \geq 0.05$ .

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Fertiliser effect on plant establishment - 1 July  
LSD (0.05) = 7.54

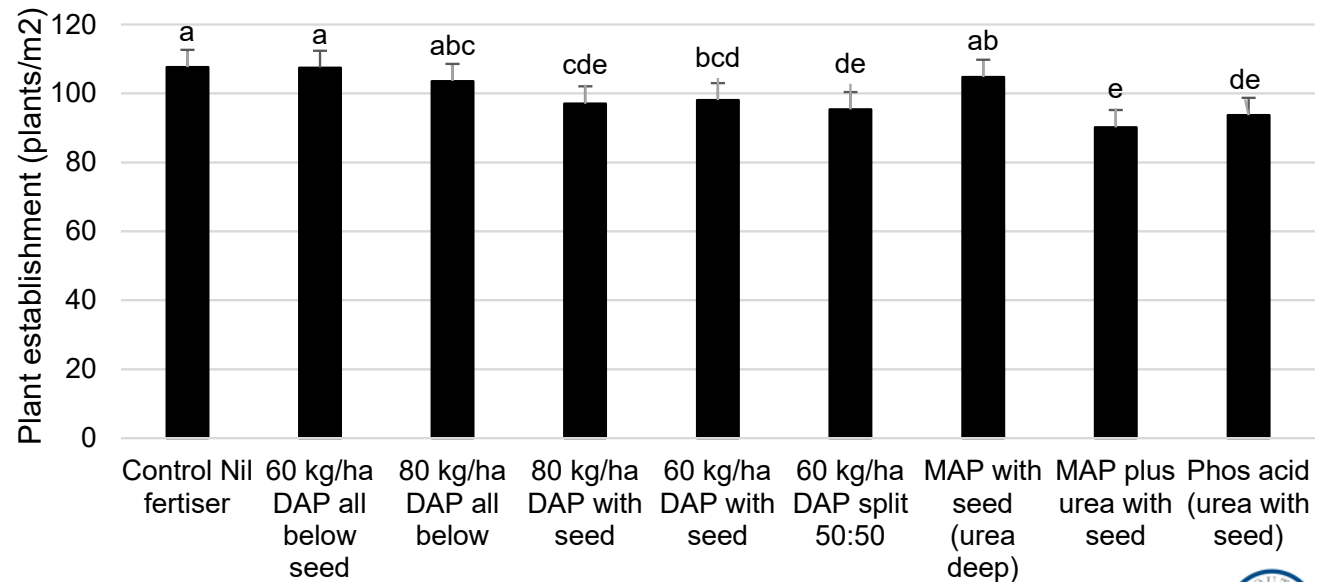


Figure 2. Plant establishment of Razor CL Plus wheat over the three trial sites, Minnipa red loam and sand and Streaky Bay with different fertiliser treatments on 1 July, 2020. Different letters indicate a significant difference between treatments at  $P \geq 0.05$ .



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Fertiliser Placement	Soil		
	Grey calcareous sandy loam - Cungena	Grey calcareous sandy loam - Streaky Bay	Red loam Minnipa
Nil	97	96	96
DAP below seed	93	97	100
DAP split	89	85	90
DAP with seed	<b>68</b>	<b>58</b>	93
<b>LSD (P=0.05)</b>		10	

Streaky Bay  
DAP with seed

Streaky Bay  
No fertiliser



Table 1. 2019 Pot experiments - Soil type and fertiliser placement effect on % seedling emergence after 16 days.



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- When dry sowing fertiliser type and separation from the seed is important
- Fertiliser placed 3 cm below the seed improved plant establishment
- Increasing seeding rate can increase plant establishment

## Questions ?

For more information Eyre Peninsula Farming Systems Summaries or listen to SAGIT podcast

