High Rainfall Zone farming systems

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The High Rainfall Zone System project is a sister project to the Hyper Yielding Crops and focuses on expanding research results from the Hyper Yielding Crop Focus Centre into broadacre trials on farm. With no results or recommendations from the Focus Centre for the first season of the project a trial design was created in consultation with SEPWA and DPIRD that included treatments of deep ripping, time of sowing and variety. There were two sites implemented, one in South Stirlings and the other in West Cranbrook.

At the Cranbrook site there were two ripped and unripped strips, two times of sowing, two wheat varieties and a barley treatment. Ripping occurred on the 14 April to 450mm with sowing on the 20 April and 13 May. The first time of sowing included Scepter and Illabo treatments while the second sowing included another Scepter and a Planet barley treatment.

The later sown Scepter and early sown Illabo yielded significantly higher than the early April sown Scepter treatments with an average increase in yield of 0.88 t/ha. This indicates that an early sowing time does work in the region but it needs to be with a longer season variety to achieve the same yields as Scepter length cultivars sown in May. Longer season varieties sown early can better utilise subsoil moisture and reduce waterlogging; and if needed grazed as a dual-purpose crop.

Long-season wheats can be sown before April 20, with minimal frost risk, yet still yield the same as scepter sown in mid to late May.

There were no significant differences in yields for any varieties or times of sowing after being ripped, indicating that soil compaction was not a constraint that limited yield at this site. For a full result breakdown from this trial and the South Stirling site, our trials review booklet will be out shortly.
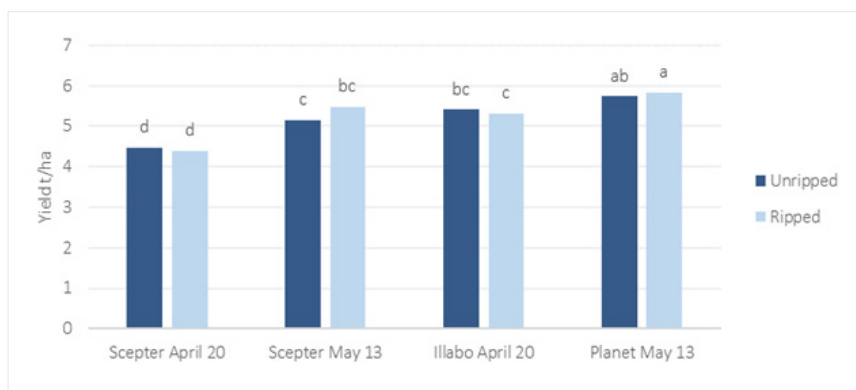

Figure 1: Grain yield results of ripped and unripped strips for Scepter, Illabo and Planet sown over two times of sowing. Site location at West Cranbrook, WA.