



# SAGIT RESEARCH SUMMARY

## SAN117: Farm Scale AquaTill Demonstration and Field Day

### IN A NUTSHELL

The features of the AquaTill Liquid Coulter were demonstrated to SA grain growers at a field day, with a separate trial assessing the hair-pinning of moist residue caused by disc seeders both with and without an AquaTill fitted.

The AquaTill Liquid Coulter reduced hair-pinning of lentil seeds in moist wheat residue and the findings were circulated to SA grain growers through methods including the SANTFA conference, social media and on YouTube.

### FAST FACTS

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#### THE DATES:

Start: 2017

Finish: 2017

#### PROJECT PARTICIPANTS:

SANTFA: Gregory Butler, Andrew Bird; Ben Marshman, Alec Bowyer.

#### THE PROBLEM:

Seeding being inhibited and/or delayed when crop residues become moist.

#### THE RESEARCH:

Showing that AquaTill allows sowing in moist conditions.

### BACKGROUND

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When crop residues become moist, seeding is inhibited and farmers are often forced to delay seeding until residues become sufficiently dry.

This project aimed to show that AquaTill offers farmers the potential to sow in moist conditions, enabling them to capitalise on the optimum time of sowing and offering their seeding operations greater efficiency.

### RESEARCH AIMS

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The core objectives of the project were to:

- To demonstrate the features of the AquaTill Liquid Coulter.
- To generate information to show potential advantages AquaTill can offer SA grain growers with better residue management during seeding.

### IN THE FIELD

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AquaTill Liquid Coulters were fitted onto every second disc on a section of a Morris RAZA seeder at Owen, SA.

Lentil seed was sown into a damp wheat residue and residue condition was monitored post seeding to assess the impact of hair-pinning.

A SANTFA technical officer counted lentil emergence per linear metre at five locations along the row six weeks after sowing.

## RESULTS

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Seeding with a disc into moist residue resulted in significant hair-pinning, with a strong correlation between hair-pinning and reduced seed germination.

The use of the AquaTill Liquid Coulter reduced hair-pinning and resulted in a significantly higher establishment of lentil plants in the row when disc-sowing into moist wheat residue.

## VALUE FOR GROWERS

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AquaTill offers farmers the potential to sow in moist conditions, enabling them to better capitalise on optimum time of sowing and offering efficiency to their seeding program.

The farm co-operators at Owen said the AquaTill liquid rate per hectare looks viable under the current farm infrastructure for row spacings at or greater than 381mm.



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### MORE INFORMATION:

Gregory Butler, South Australian No-Till Farmers Association

T: 0427 424 278

E: [greg@santfa.com.au](mailto:greg@santfa.com.au)