Hart Beat

Hart Field-Site Group Inc
www.hartfieldsite.org.au

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Discussing stubble, nutrients & organic matter with Harm van Rees.


The lunch time crowd gathers in readiness for Rob Kerin's address.

HART FIELD DAY 2012

At the 2012 Hart Field Day a small plane circled over the site a few times and we've been unable to find out who it was. We're just curious in case they took some aerial snaps! If you happen to know, please get in touch: admin@hartfieldsite.org.au


Chris Preston speaking at 'Controlling ryegrass in break crops' session. Hart Field Day 2013

HART BEAT 2014
Additional sites

We're looking to feature even more Yield Prophet sites in Hart Beat next year.

If you'd be interested in allowing us to use your place (particularly if you're further north or west), or an established site please let us know.

All we need is good soil water characterisation data from your property and access to your rainfall data – we do the rest!

Contact: **Sarah Noack**
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Hart (sandy clay loam)

The season so far

Annual rain to date: 404mm
GSR to date: 352mm
GSR decile: 8.0
Current predicted PAW: 59mm
PAWC: 206mm (currently 29% full)

Crop growth

Variety: Mace wheat **Sowing date:** 1st May
Nitrogen fertiliser: 65 kg N/ha

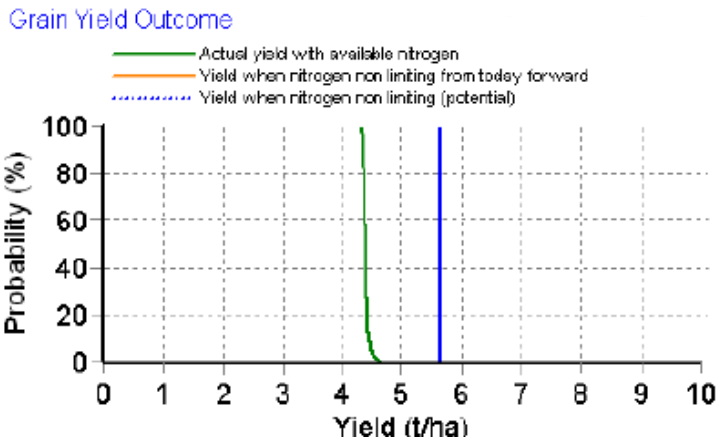
Site information as of 1st October 2013

Grain yield predictions

These estimates are based on a 50% probability

Yield t/ha	Sown 1st May (see graph)	Change since last report	Sown 20th May	Change since last report
Grain	5.0	-0.2	5.2	0.2

French & Schultz grain yield estimate:
100% WUE: 5.4 t/ha, 80% WUE: 4.3 t/ha
This model assumes that there was 0mm stored moisture, 110mm of evaporation and decile 5 (28mm) rainfall for the rest of the season.



This graph shows the chance of reaching the corresponding yield given weather, soil conditions and agronomic inputs to date, and historical climate data (100yrs) to simulate remainder of the season.

Pinery (silty clay loam)

The season so far

Annual rain to date: 359mm
GSR to date: 332mm
GSR decile: 9.0
Current predicted PAW: 38mm
PAWC: 79mm (currently 48% full)

Crop growth

Variety: Mace wheat **Sowing date:** 1st May
Nitrogen fertiliser: 65 kg N/ha

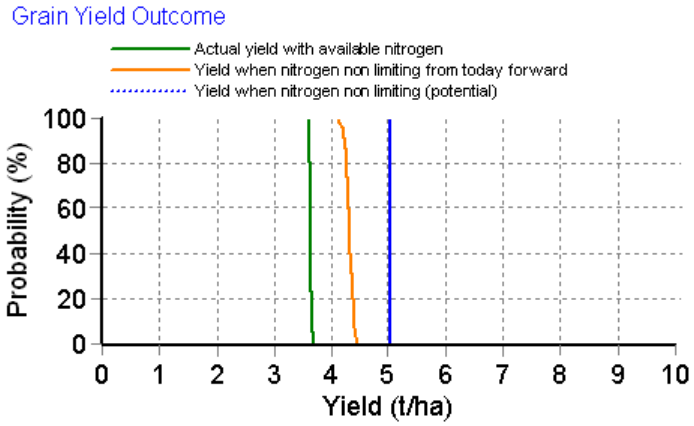
Site information as of 1st October 2013

Grain yield predictions

These estimates are based on a 50% probability

Yield t/ha	Sown 1st May (see graph)	Change from last report	Sown 20th May	Change since last report
Grain	4.3	0.0	4.0	0.4

French & Schultz grain yield estimate:
100% WUE: 5.0 t/ha, 80% WUE: 4.0 t/ha
This model assumes that there was 0mm stored moisture, 110mm of evaporation and decile 5 (29mm) rainfall for the rest of the season.



This graph shows the chance of reaching the corresponding yield given weather, soil conditions and agronomic inputs to date, and historical climate data (100yrs) to simulate remainder of the season.

Kybunga (clay loam)

The season so far

Annual rain to date: 406mm
GSR to date: 374mm
GSR decile: 9.0
Current predicted PAW: 78mm
PAWC: 262mm (currently 30% full)

Crop growth

Variety: Mace wheat **Sowing date:** 1st May
Nitrogen fertiliser: 65 kg N/ha

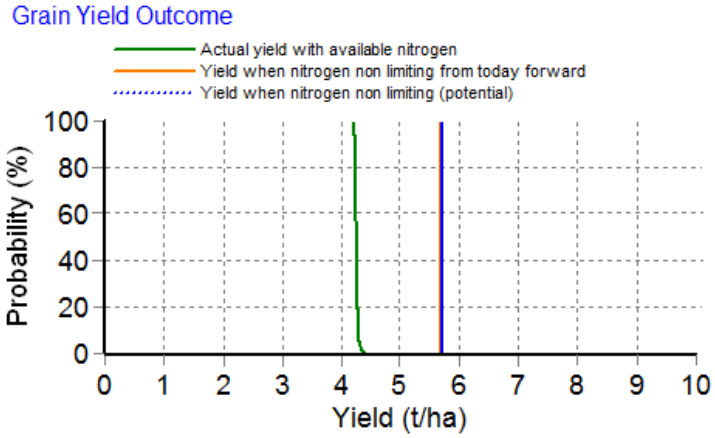
Site information as of 2nd October 2013

Grain yield predictions

These estimates are based on a 50% probability

Yield t/ha	Sown 1st May (see graph)	Change from last report	Sown 20th May	Change since last report
Grain	5.0	-0.2	5.1	-0.1

French & Schultz grain yield estimate:
100% WUE: 6.0 t/ha, 80% WUE: 4.8 t/ha
This model assumes that there was 0mm stored moisture, 110mm of evaporation and decile 5 (34mm) rainfall for the rest of the season.



This graph shows the chance of reaching the corresponding yield given weather, soil conditions and agronomic inputs to date, and historical climate data (100yrs) to simulate remainder of the season.

Spalding (red brown earth)

The season so far

Annual rain to date: 356mm
GSR to date: 317mm
GSR decile: 7.0
Current predicted PAW: 32mm
PAWC: 143mm (currently 22% full)

Crop growth

Variety: Mace wheat **Sowing date:** 1st May
Nitrogen fertiliser: 65 kg N/ha

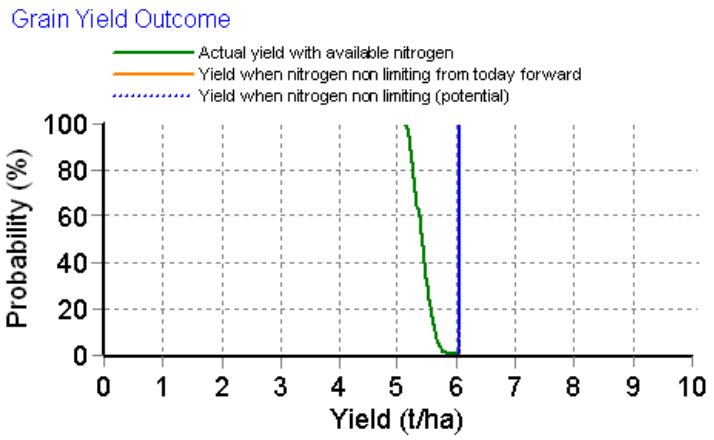
Site information as of 1st October 2013

Grain yield predictions

These estimates are based on a 50% probability

Yield t/ha	Sown 1st May (see graph)	Change from last report	Sown 20th May	Change since last report
Grain	5.7	-0.2	5.4	-0.3

French & Schultz grain yield estimate:
100% WUE: 4.7 t/ha, 80% WUE: 3.8 t/ha
This model assumes that there was 0mm stored moisture, 110mm of evaporation and decile 5 (30mm) rainfall for the rest of the season.



This graph shows the chance of reaching the corresponding yield given weather, soil conditions and agronomic inputs to date, and historical climate data (100yrs) to simulate remainder of the season.

Farrell Flat (red clay loam)

The season so far

Annual rain to date: 426mm
GSR to date: 386mm
GSR decile: 7.0
Current predicted PAW: 77mm
PAWC: 172mm (currently 45% full)

Crop growth

Variety: Mace wheat **Sowing date:** 1th May
Nitrogen fertiliser: 65 kg N/ha

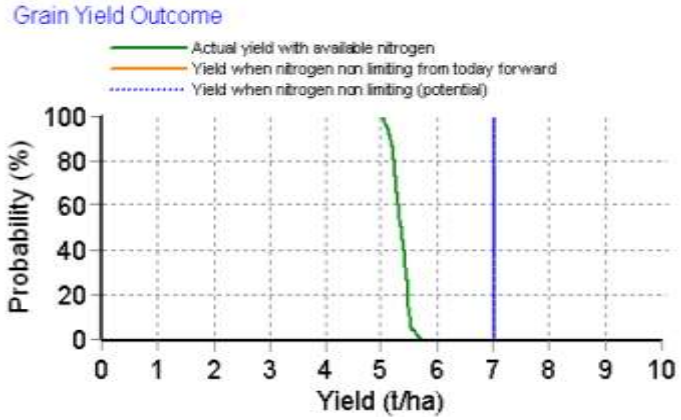
Site information as of 1st October 2013

Grain yield predictions

These estimates are based on a 50% probability

Yield t/ha	Sown 1st May (see graph)	Change from last report	Sown 20th May	Change since last report
Grain	6.1	-0.3	6.2	-0.1

French & Schultz grain yield estimate:
100% WUE: 6.2 t/ha, 80% WUE: 5.0 t/ha
This model assumes that there was 0mm stored moisture, 110mm of evaporation and decile 5 (36mm) rainfall for the rest of the season.



This graph shows the chance of reaching the corresponding yield given weather, soil conditions and agronomic inputs to date, and historical climate data (100yrs) to simulate remainder of the season.

Tarlee (clay loam)

The season so far

Annual rain to date: 393mm
GSR to date: 360mm
GSR decile: 8.0
Current predicted PAW: 48mm
PAWC: 113mm (currently 42% full)

Crop growth

Variety: Mace wheat **Sowing date:** 1st May
Nitrogen fertiliser: 65 kg N/ha

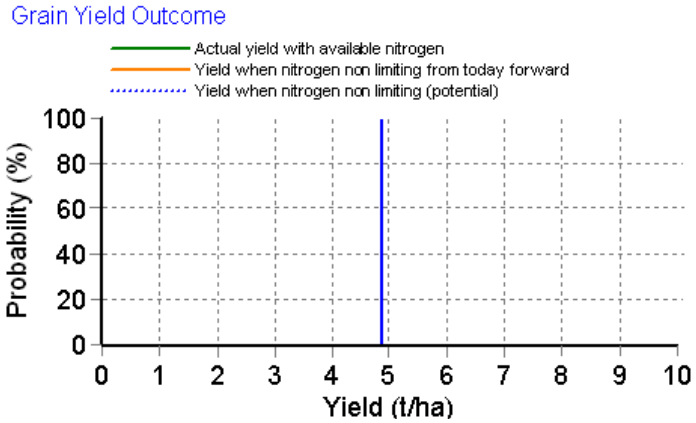
Site information as of 1st October 2013

Grain yield predictions

These estimates are based on a 50% probability

Yield t/ha	Sown 1st May (see graph)	Change from last report	Sown 20th May	Change since last report
Grain	4.9	0.0	5.3	0.0

French & Schultz grain yield estimate:
100% WUE: 5.8 t/ha, 80% WUE: 4.7 t/ha
This model assumes that there was 0mm stored moisture, 110mm of evaporation and decile 5 (42mm) rainfall for the rest of the season.



This graph shows the chance of reaching the corresponding yield given weather, soil conditions and agronomic inputs to date, and historical climate data (100yrs) to simulate remainder of the season.

Controlling summer weeds in adverse weather conditions using larger droplet size

GRDC Grains Research & Development Corporation

The benefits of controlling summer weeds to conserve soil moisture and fertility are well known. However, the control of summer weeds can be difficult to achieve, given limited spraying opportunities and hard to kill weed species.

In the summer of 2012 trials were setup in three locations in the Mid-North to measure the efficacy of coarser spray droplets and adverse weather conditions, on the control of silver leaf nightshade (*solanum elaeagnifolium*) and heliotrope (*heliotropium europaeum*).

The data presented in this article comes from the Mintaro site which was sprayed in early February for heliotrope (Image 1). Spraying conditions were very warm (29-33°C) with a delta T of 15 and an average wind speed of 8 km/h (gusts up to 17 km/h).

Image 1. Target weed species at Mintaro, heliotrope (10-20 cm height) approximately 3 plants/m^2.

The control of heliotrope 24 days after treatment (DAT) with Spray.Seed using a range of droplet sizes and two water rates (60 or 90 L/ha) are presented in Figure. 1.

The alternating extremely coarse treatment produced significantly lower control of heliotrope with the low water rate (83%). Using the same droplet size and increasing the water rate improved control (92%), but was still below the other treatments (93-98%).

There was no significant difference between the other droplet sizes or water rates. The results show that for contact herbicides such as Spray.Seed extremely coarse droplets can reduce weed control, with the low water rate resulting in the largest reduction.

A second herbicide treatment using a glyphosate mix was also investigated. Generally for the droplet sizes tested, the low water rate resulted in increased control (64-79%) compared to the higher water rate (61-72%), except for the alternating coarse and coarse twin nozzle droplet sizes.

For full details from all three sites, nozzle type, orifice size, pressure and speed see the 2012 Hart Trials Results Book, page 65

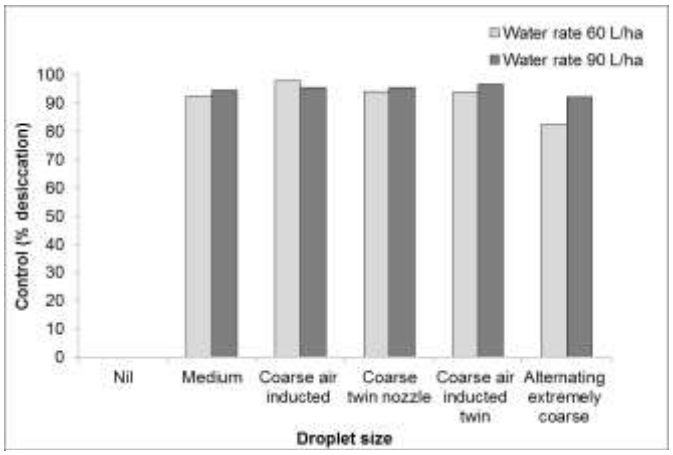


Figure 1. Control (% desiccation) of heliotrope at 24 DAT using Spray.Seed and a range of droplet sizes and water rates.

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