



Hart Beat

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

September 2010 Issue 10



Hart Field Day Tuesday, 21st September 2010

Gates open 9am.

Featuring:

- New state-wide variety releases.
Farmers registering by 10am go into the draw to win 2t new release certified seed.
- Lunch time Guest Speaker, Neil Wandel, former Mid-North farmer, CBH Chairman & large scale WA broad-acre farmer.

New trials include:

Fence-line weed control	Barley grass & wild oat control
Barley agronomy	Soil moisture probes
Soil acidity	Lentil agronomy & harvesting

On display:

SARDI trials machinery Sponsors marquee & machinery display

Don't miss 2 special presentations on Climate Change in 2010, with Peter Hayman, SARDI.

Lunch & refreshments available, incl coffee! Bar facilities from 4pm.

YIELD PREDICTIONS

All sites have had significant rainfall since our last Hart Beat newsletter.

Water Use Efficiency (WUE) can be lower in wetter years, so as always, treat yield predictions with caution.



2010 HART FIELD DAY TRIALS AND SPEAKERS – the full list

Pulse & oilseed herbicide tolerance

Sam Holmes, Holmes Farm Consulting
Craig Davis, AW Vater & Co

Oat varieties

Pamela Zwer, SARDI
Sue Hoppo, SARDI

Triticale varieties

James Edwards, Australian Grain Technologies (AGT)

Durum varieties & agronomy

Kenton Porker, SARDI
John Green, Farmer, Durum Growers Association

Wheat Varieties

Rob Wheeler, SARDI

A changing climate - 2010 update

Peter Hayman, SARDI

Re-vegetation & windbreaks

Millie Nicholls

Fenceline weed control

Chris Preston, University of Adelaide

Barley grass & wild oat control

Ben Fleet, University of Adelaide

Barley varieties

Jason Eglinton, University of Adelaide

Sowing date, flowering date & heat stress

Dion Bennett, AGT
Glenn McDonald, University of Adelaide

Pre-emergent herbicides & annual ryegrass

Jason Sabeeney, Syngenta
Rob Griffith, Bayer CropScience
John Both, Nufarm
Allan Mayfield, Allan Mayfield Consulting

Barley agronomy

Kate Burke, John Stuchbery & Assoc

Canola varieties & agronomy

Trent Potter, SARDI

Pasture varieties & production

Ian Freebairn, Seed Distributors
Alan Humphries, SARDI

Croptopping cereals

Jeff Braun, Agrilink Agricultural Consultants

Crop sensors & nitrogen rates

Sam Trengrove, SPAA

Phosphorus fertilisers

Bob Holloway, University of Adelaide
Therese McBeath, University of Adelaide

Pulse varieties & agronomy

Wayne Hawthorne, Pulse Australia
Michael Lines, SARDI

Soil moisture probes

Greg Butler, SANTFA
Leighton Wilksch, Landmark
Peter Toome, Adcon Telemetry
Tanya Liddell, MEA - Measurement Engineering Australia

Stored moisture & stubble retention

Chris Lawson, SARDI
Peter Hooper, Hart Field-Site Group Inc

Soil acidity

Andrew Harding, Rural Solutions SA
Brian Hughes, Rural Solutions SA

Lentil agronomy & grain quality

Larn McMurray, SARDI
Kyle Holman, Farmer

Hart

Site information as of 15th September 2010

Soil type: Sandy clay loam
 PAWC: 201mm
 Average annual rainfall: 400mm
 Average GSR (Apr to Oct): 305mm

The season so far

Annual rain to date: 366mm
 GSR to date: 291mm (100mm since last report)
 GSR decile: 6.5
 Maximum temp since sowing: 26.7°C
 Minimum temp since sowing: -1.4°C
 Average temp accumulation per day: 10.1°C
 Current predicted soil N status: 40kg/ha
 Current predicted PAW: 80mm
 Current push probe depth: 85cm

Grain & hay yield predictions

Yield prophet estimate: (Date of report 15/09/2010)

These estimates are based on a 50% probability

Yield t/ha	Sown 14 th May (see graph)	Change from last report	Sown 5 th May	Change from last report
Grain	4.6	+1.4	3.0	0.0
Hay	8.0	+1.5	3.0	-0.4

French & Schultz grain yield estimate:

100% WUE: 4.2t/ha, 80% WUE: 3.4t/ha
 This model assumes that there is 110mm of evaporation and decile 5 (48mm) rainfall for the remainder of the growing season.

Pre-sowing soil nitrogen and water

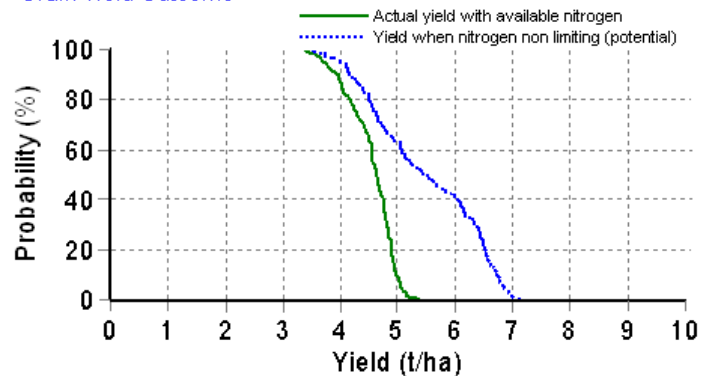
(measured 15th March)
 Soil N prior to sowing (0-90cm): 68kg/ha
 Plant available water at sowing (0-90cm): 0mm

Crop growth

Variety: Gladius
 Sowing date: 14th May
 Nitrogen fertiliser: 51kgN/ha
 Targeted plant density: 150 plants per square metre
 Current growth stage: Mid head emergence (GS55)
 Predicted date of flowering (GS65): 4th October

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.

Grain Yield Outcome



Condowie

Site information as of 15th September 2010

Soil type: Sandy loam
 PAWC: 127mm
 Average annual rainfall: 349mm
 Average GSR (Apr to Oct): 252mm

The season so far

Annual rain to date: 297mm
 GSR to date: 259mm (90mm since last report)
 GSR decile: 8.5
 Maximum temp since sowing: 27.7°C
 Minimum temp since sowing: -0.8°C
 Average temp accumulation per day: 11.6°C
 Current predicted soil N status: 155kg/ha
 Current predicted PAW: 58mm
 Current push probe depth: 90cm

Grain & hay yield predictions

Yield prophet estimate: (Date of report 15/09/2010)

These estimates are based on a 50% probability

Yield t/ha	Sown 29 th April (see graph)	Change from last report	Sown 15 th May	Change from last report
Grain	5.0	+1.6	5.0	+2.4
Hay	6.0	+0.3	7.0	+1.5

French & Schultz grain yield estimate:

100% WUE: 3.8t/ha, 80% WUE: 3.1t/ha
 This model assumes that there is 110mm of evaporation and decile 5 (43mm) rainfall for the remainder of the growing season.

Pre-sowing soil nitrogen and water

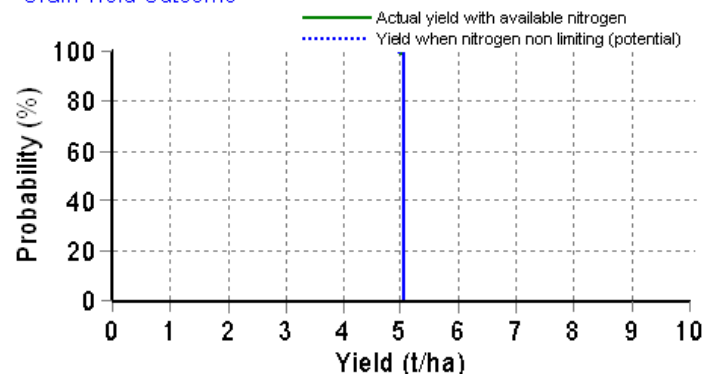
(measured 15th March)
 Soil N prior to sowing (0-90cm): 215kg/ha
 Plant available water at sowing (0-90cm): 0mm

Crop growth

Variety: Gladius
 Sowing date: 29th April
 Nitrogen fertiliser: 6kgN/ha
 Plant density: 120 plants per square metre
 Current growth stage: End of flowering (GS69)
 Predicted date of mid dough (GS75): 27th September

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.

Grain Yield Outcome



Spalding

Site information as of 15th September 2010

Soil type: Red brown earth
 PAWC: 150mm
 Average annual rainfall: 434mm
 Average GSR (Apr to Oct): 322mm

The season so far

Annual rain to date: 379mm
 GSR to date: 340mm (102mm since last report)
 GSR decile: 8.0
 Maximum temp since sowing: 25.5°C
 Minimum temp since sowing: -4.1°C
 Average temp accumulation per day: 9.5°C
 Current predicted soil N status: 32kg/ha
 Current predicted PAW: 132mm
 Current push probe depth: 100cm

Grain & hay yield predictions

Yield prophet estimate: (Date of report 15/09/2010)

These estimates are based on a 50% probability

Yield t/ha	Sown 6 th May (see graph)	Change from last report	Sown 15 th May	Change from last report
Grain	6.0	0.0	6.1	+0.4
Hay	8.0	-0.3	8.2	-0.1

French & Schultz grain yield estimate:

100% WUE: 5.8t/ha, 80% WUE: 4.6t/ha
 This model assumes that there is 110mm of evaporation and decile 5 (58mm) rainfall for the remainder of the growing season.

Pre-sowing soil nitrogen and water

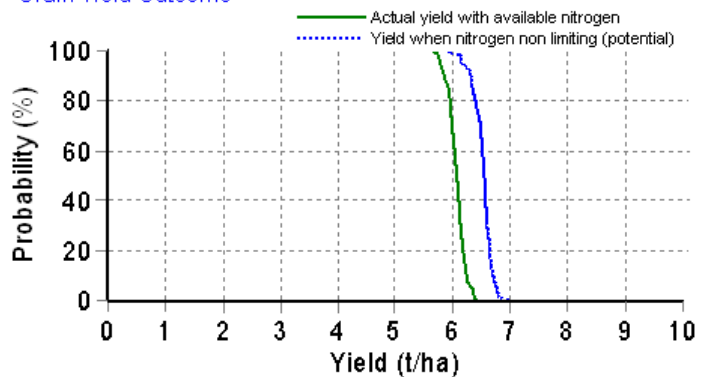
(measured 15th March)
 Soil N prior to sowing (0-90cm): 102kg/ha
 Plant available water at sowing (0-90cm): 0mm

Crop growth

Variety: Gladius
 Sowing date: 6th May
 Nitrogen fertiliser: 42kgN/ha
 Targeted plant density: 150 plants per square metre
 Current growth stage: Tip of awns (GS49)
 Predicted date of flowering (GS65): 24th September

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.

Grain Yield Outcome



Tarlee

Site information as of 15th September 2010

Soil type: Clay loam over clay on rock
 PAWC: 122mm
 Average annual rainfall: 469mm
 Average GSR (Apr to Oct): 350mm

The season so far

Annual rain to date: 419mm
 GSR to date: 387mm (153mm since last report)
 GSR decile: 7.5
 Maximum temp since sowing: 27.8°C
 Minimum temp since sowing: -0.2°C
 Average temp accumulation per day: 11.2°C
 Current predicted soil N status: 28kg/ha
 Current predicted PAW: 159mm
 Current push probe depth: 90cm

Grain & hay yield predictions

Yield prophet estimate: (Date of report 15/09/2010)

These estimates are based on a 50% probability

Yield t/ha	Sown 13 th May (see graph)	Change from last report	Sown 5 th May	Change from last report
Grain	6.1	0.0	5.8	-0.1
Hay	7.5	-0.3	7.1	-0.3

French & Schultz grain yield estimate:

100% WUE: 6.9t/ha, 80% WUE: 5.5t/ha
 This model assumes that there is 110mm of evaporation and decile 5 (69mm) rainfall for the remainder of the growing season.

Pre-sowing soil nitrogen and water

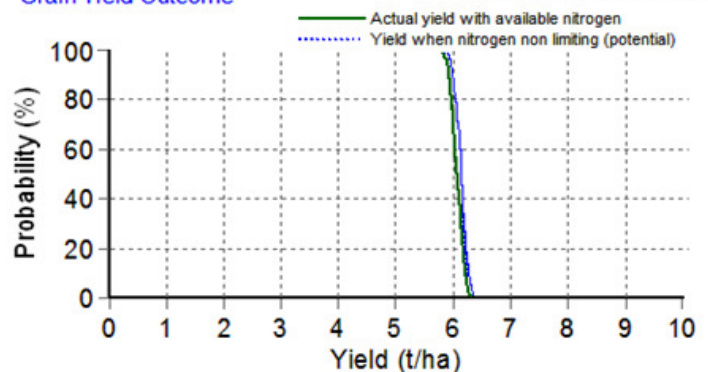
(measured 13th April)
 Soil N prior to sowing (0-90cm): 103kg/ha
 Plant available water at sowing (0-90cm): 35mm

Crop growth

Variety: Correll
 Sowing date: 13th May
 Nitrogen fertiliser: 50kgN/ha
 Targeted plant density: 150 plants per square metre
 Current growth stage: Mid head emergence (GS55)
 Predicted date of dough (GS75): 9th October

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.

Grain Yield Outcome



Hart Beat



Hart Field Day Program Tuesday, 21st September 2010

www.hartfieldsite.org.au

Enquiries:
Sandy Kimber 0427 423 154 admin@hartfieldsite.org.au

Time	Welcome Matt Dare, Chairman, Hart Field-Site Group Inc							
10:00am	Opening Choose your own program - each session lasts for 30 minutes							
	1	2	3	4	5	6	7	8
10:30	A Herbicide tolerance	D Durum agronomy	K Sowing date & flowering	H Fenceline weed control	M Barley agronomy	N Canola varieties	S Pulse varieties	
11:00	B Oat varieties	C Triticale varieties	L Pre-emergent herbicides	O Pasture varieties	R Phosphorus fertilisers	T Moisture probes	V Soil acidity & lime	W Lentil agronomy
11:30	A Herbicide tolerance	E Wheat varieties	G Revege & windbreaks	I Barley grass & wild oats	P Crop topping cereals	Q Crop sensors	S Pulse varieties	U Water use efficiency
12:00	F A changing climate	H Fenceline weed control	J Barley varieties	K Sowing date & flowering	L Pre-emergent herbicides	N Canola varieties	T Moisture probes	W Lentil agronomy
12:30	Lunch - Guest speaker: Neil Wandel, WA farmer and Chairman, CBH Group							
1:30	A Herbicide tolerance	E Wheat varieties	I Barley grass & wild oats	M Barley agronomy	O Pasture varieties	R Phosphorus fertilisers	S Pulse varieties	U Water use efficiency
2:00	D Durum agronomy	J Barley varieties	K Sowing date & flowering	L Pre-emergent herbicides	P Crop topping cereals	T Moisture probes	V Soil acidity & lime	W Lentil agronomy
2:30	B Oat varieties	E Wheat varieties	G Revege & windbreaks	H Fenceline weed control	M Barley agronomy	N Canola varieties	Q Crop sensors	U Water use efficiency
3:00	C Triticale varieties	D Durum agronomy	F A changing climate	I Barley grass & wild oats	J Barley varieties	O Pasture varieties	R Phosphorus fertilisers	



Rainfall and soil water characteristics for the WUE sites

Site	Average annual rainfall (mm)	Soil type	Drained upper limit (mm to 150cm)	Crop lower limit (mm to 150cm)	Plant Available Water Capacity (mm)
Condownie	350	Sandy loam	376	249	127
Hart	400	Sandy clay loam	683	482	201
Spalding	430	Red brown earth	469	319	150
Tarlee	470	Clay loam over clay on rock	511	348	163

Hart Field-Site Group contact information

Sponsorship enquiries

Matt Dare, Chairman, 8846 3006

Trials information

Peter Hooper, 8842 3230

Membership enquiries

Sandy Kimber, 8842 1718

Email

admin@hartfieldsite.org.au



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