



# GET Project Results 2008

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# GET Project Results

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- GET yield trials
- 2008 nursery seed build up



# GET 2008 Trials

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- Five Locations:
  - Croppa Creek (NSW)
  - Temora (NSW)
  - Warracknabeal (Victoria)
  - Red Banks (SA)
  - Meckering (WA)



# Trial Design

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- No of entries- 210
  - CIMMYT nurseries- 200
  - Standards-10
- Design- RBD
- No. of Reps-2



# Site Characterization

	Croppa creek	Temora	Warrackna beal	Red Banks	Meckering
Latitude	29.14915	34.40657	36.193.97	34.48219	31.57358
Longitude	150.05977	147.52177	142.45990	138.59181	116.94308
Soil Type	Grey Clay	Red brown	Brown med clay	Red loam	Grey sandy loam
Av. Rainfall mm	575	519	375	470	370
Rainfall mm (2008)	542	386	238	272	407



# Croppa Creek GET

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- Date of Sowing- 29/05/2008
- Pre-plant precipitation- 306 mm
- Growing season precipitation- 236mm
- Rainfall distribution was more or less even across growing season.



# Croppa Creek GET best entries

- Site mean- 3.9 t/ha
- Best check- GBA Ruby (4.31 t/ha)
- 26 entries out-yielded the check

Entry	Yield	% of Check
ZWC07- 65	4.82	112
ZWC07- 220	4.77	111
ZWC07-130	4.76	110
ZWC07-85	4.76	110
ZWE07-69	4.74	110
ZWC07-32	4.70	109
ZWE07-122	4.61	107
LSD (5%)	0.57	



# Temora GET

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- Date of Sowing- 18/06/2008
- Pre-plant precipitation- 200 mm
- Growing season precipitation- 186 mm
- Rainfall distribution was uneven across growing season with more rain till jointing stage. Moisture stress during flowering & grain filling stage.
- Locust damage to trial





# Temora GET best entries

- Site mean- 0.95 t/ha
- Best check- Frame (1.25 t/ha)
- 10 entries out-yielded the best check

Entry	Yield (t/ha)	% of Check
ZWC07-69	1.39	111
ZWC07-67	1.36	109
ZWE07-118	1.36	109
ZWE07-141	1.33	106
ZWC07-168	1.31	104
LSD (5%)	0.45	



# Warracknabeal GET

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- Date of Sowing- 06/06/2008
- Pre-plant precipitation- 101 mm
- Growing season precipitation- 137mm
- Rainfall distribution was uneven across growing season with majority of rainfall till early jointing stage. Moisture stress during flowering & grain filling stage.
- Frost incidence effected the yield.

# Warracknabeal GET best entries

- Site mean- 1.04 t/ha
- Best check- GBA Ruby (1.66 t/ha)
- Four entries out-yielded the best check

Entry	Yield (t/ha)	% of Check
ZWE07-56	2.02	122
ZWC07-247	1.97	118
ZWE07-232	1.76	106
ZWE07-141	1.75	105
LSD (5%)	0.45	



# Red Banks GET

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- Date of Sowing- 06/06/2008
- Pre-plant precipitation- 100 mm
- Growing season precipitation- 172mm
- Rainfall distribution was uneven across growing season with majority of rainfall till early jointing stage. Moisture stress during flowering & grain filling stage.



# Red Banks GET best entries

- Site mean- 1.04 t/ha
- Best check- Yitpi (1.42 t/ha)
- 18 entries out-yielded the best check

Entry	Yield (t/ha)	% of Check
ZWC07-296	1.66	117
ZWC07-43	1.66	117
ZWC07-146	1.61	114
ZWC07-81	1.58	112
ZWE07-145	1.57	112
ZWE07-5	1.55	111
LSD (5%)	0.38	



# Meckering GET

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- Date of Sowing- 11/06/2008
- Pre-plant precipitation- 153 mm
- Growing season precipitation- 254 mm
- Rainfall distribution was more or less evenly spread across growing season.



# Meckering GET best entries

- Site mean- 2.04 t/ha
- Best check- EGA Gregory (2.80 t/ha)
- None of the entries could out yield the best check

Entry	Yield (t/ha)	% of Check
ZWE07-179	2.69	96
Zwe07-110	2.67	95
ZWE07-105	2.66	95
ZWC07-146	2.64	94
ZWE07-171	2.64	94
ZWE07-56	2.64	94

# Best genotypes across GET (% of best check)

Entry	Croppa creek	Temora	Warracknabeal	Red Banks	Meckering
ZWC07-106	96	103	95	108	103
ZWE07-171	94	97	83	94	94
ZWC07-146	94	71	87	114	94
ZWC07-86	100	99	48	98	85
ZWC07-32	109	96	77	109	70





# 2008 seed build up nursery

Nursery	Lines	Minimum Wt (g)	Maximum Wt (g)	Average Wt (g)
ZWC08	245	13	60	30
ZWE08	141	19	67	38
ZWB08	79	19	60	39
Total	465			



# Timing of seed Arrival

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- Seed arrived in two lots
  - AWCC- seed arrived by mid June
  - SARDI Quarantine- seed arrived by end June



# Nursery build up operations

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- Location-

- Dookie

- Sown on 2/07/08
    - Plot size – 6 rows x 3.4 m
    - Supplementary irrigation

- Ballarat

- Sown on 3/09/08
    - Plot size- 6 rows x 4.0 m
    - Supplementary irrigation



# Assessments on Nursery

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- Days to heading/ Zadok scores
- Plant height
- Tillering
- Shattering
- 1000- grain wt
- Disease scoring (Stripe rust)
- Harvest wt



# Harvest weights

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- Total number of lines harvested- 465
  - Lines > 1000 g- 170
  - Lines > 800 g- 281
  - Lines > 500 g- 402



# Conclusion

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- Timely arrival of seed in right quantity (30 g) is recipe for the success of this project.
- Seed multiplication in summer build up by Agrisearch for distribution to breeders/conducting yield trials.
- Possibility of conducting multi location yield trials with reduced number of entries as indicated by CIMMYT breeders.



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