

CEREAL VARIETY UPDATE FOR 2009

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Take Home Messages

- Seasonal conditions again had a major impact on 2008 National Variety Trials (NVT) trial results in NSW, especially in the south western areas.
- It is important to understand the major stripe rust pathotypes and their essential features in explaining the variation that can be experienced in variety response during the growing season. The widespread occurrence of the 'Jackie' pathotype in 2008 allowed Yr17 wheats to perform well, although a mid season resurgence of the 'WA Yr17' pathotype caused problems in certain Yr17 varieties. The new 'Jackie Yr27' pathotype will cause further complications in variety choice and stripe rust management.
- Use genotype response to time of sowing to assist with the selection of wheat varieties.

Yield Results 2008 (Across Sites 2008 data unavailable at time of publication)

- Average early sown site yields ranged from 1.55 t/ha (Oaklands) to 3.85 t/ha (Canowindra). Willbriggie irrigated 9.29 t/ha.
- Average main season site yields ranged from 1.18 t/ha (Condobolin) to 3.66 t/ha (Quandialla). Willbriggie irrigated 9.22 t/ha.
- Average long season site yields ranged from 4.24 t/ha (Boorowa) to 5.46 t/ha (Cumnock).
- Average triticale site yields ranged from 2.31 t/ha (Temora) to 4.92 t/ha Cowra. Jerilderie irrigated 6.26 t/ha.
- Average dryland barley site yields ranged from 1.50 t/ha (Condobolin) to 5.80 t/ha (Quandialla). Jerilderie irrigated 5.07 t/ha.

Newer varieties

Long season wheat varieties

Frelon (WRTA0107) Long season winter wheat suited to medium-long season environments. Red feed grain quality. Similar maturity to Mackellar. Highleaze Seeds.

Amarok Red grained feed wheat. Maturity between Brennan and Chara. No formal disease ratings have been completed (currently under evaluation). Very good leaf disease resistance. Short straw with excellent standability. GrainSearch.

LongReach Beaufort (LR1078). Awnless, red grained feed wheat. Feed classification. Suitable for late April to mid May sowing in mid-long season environments. R stripe rust; MR-MS yellow leaf spot. GrainSearch.

Main season wheat varieties

Espada (RAC1263) (complex cross involving RAC875, Excalibur, Kukri, Krichauff). AH* SNSW. Mid season type, showing wide adaptation and good levels of resistance to leaf, stem and stripe rust. MR-MS to yellow leaf spot and MS-S to *Septoria tritici* blotch. Boron tolerant but MS to CCN and S to RLN (*P. neglectus*). Produces large grain with low screenings. AGT Seeds.

Gascoigne Φ_{min} . (HRZ02.15) Bred in South Africa and selected for performance under high rainfall conditions in New Zealand. Most suited to medium rainfall regions. Mid season maturity for a mid to late May sowing in southern NSW. Large seeded with low screenings. Good Yellow Alkaline Noodle colour. R for stripe and leaf rust, MR for stem rust. MS-S for yellow leaf spot. AWB Seeds.

Sunvex Φ_{min} . (SUN434H) (CNT3/4*3765//2*Cunningham/ 3/2*Sunvale). A Sunvale derivative. APH for SNSW, AH NNSW. Mid to late maturing line with similar maturity to Sunvale. Rated R to stem rust, MR to stripe rust and MR-R to leaf rust. MR to yellow leaf spot; R-MR to blackpoint; MS to crown rot. AGT Seeds.

Waargan Φ_{min} . (WW12410) A widely adapted, ASW* quality, very early maturing spring wheat, similar to H45. Derived from Janz with very high yield potential in medium to low rainfall environments. Moderately intolerant of acid soils. MR (APR) to stripe rust, MR-MS to stem and leaf rusts, MS to *Septoria tritici* blotch and black point. AGT Seeds.

Durum varieties

Caparoi Φ_{min} . (TD20F) A mid season maturity, semi-dwarf durum variety with excellent yield potential. APDR* classification. Resistant to stem rust and yellow leaf spot and has adequate resistance to leaf and stripe rust, RLN (*P. thornei*), common root rot and black point. Good lodging and shedding resistance. AWB Seeds.

Hyperno Φ_{min} . (WID22209) (cross between Kalka sister line and Tamaroi). A mid season maturity durum with excellent yield potential for NNSW and Qld. APDR* classification in NNSW. Maturity similar to Bellaroi, R to stem and leaf rust. R-MR to stripe rust. MR to yellow leaf spot, blackpoint and sprouting and VS to crown rot. Good level of sprouting and black point tolerance. AGT Seeds.

Saintly Φ_{min} . (WID22279) (cross between Kalka sister line and Tamaroi). An early maturing, awnless durum targeted for South Australia. Well suited to short growing season. Approximately 7 days earlier in maturity than Kalka. Exceptional yields, particularly in tough finishes to the growing season. MR to stem rust and stripe rust; R leaf rust. MR to sprouting and blackpoint. Very good semolina and pasta quality. AGT Seeds.

Zulu Φ_{min} . (TAMSR) A high yielding feed-quality durum likely to be best suited to the high yield potential medium to high rainfall and irrigated production zones. Earlier than Janz but later than H45, similar to Yallaroi and Wollaroi. Good level of resistance to all three rusts. MR-MS to yellow leaf spot. AGT Seeds.

QAL3362 Φ_{min} . (WW3362) Soft grained biscuit wheat. Slow maturity with similar adaptation to Bowie. Agronomically similar to Bowie. Moderate straw strength. MR-MS to the 134 E16 A+ Yr17+ pathotype.

NB: Quality classifications. * indicates a default quality classification and is under review.

Barley varieties

Commander Φ_{min} . (WI3416-1572) A malting quality (provisional) variety with low to medium fermentability, suitable for domestic and some export brewing markets. High yielding, mid to late maturing. Plump grain size compared to other malting varieties. May lodge under high yield conditions. First malting variety released following the formation of Barley Breeding Australia. ABB Seeds.

Hannan Φ_{m} . (WABAR2321) Feed. High yielding, plump grained early maturing variety. Erect early growth habit. Moderate straw strength, good standing ability and head retention. Undergoing testing for domestic malting. If accepted for malting likely to be under contractual arrangements with local maltster. Moderately resistant to scald, susceptible to powdery mildew. Moderate susceptibility to pre-harvest sprouting. COGGO Seeds.

Hamelin Φ_{m} . (WABAR2104) Malt. High yield and brighter grain than Stirling. Moderate risk of pre-harvest sprouting. Susceptible to scald, net form of net blotch, powdery mildew and leaf rust. Fungicide application and integrated disease management strategies need to be used.

Hindmarsh Φ_{m} . (VB0324) Feed. Erect, semi dwarf variety, which flowers earlier than Schooner, and is widely adapted to low and medium rainfall areas. Hindmarsh appears to have excellent yield potential, grain plumpness better than Schooner, and high test weight. It has resistance to CCN, moderate resistance to scald, mildew and net form of net blotch but is moderately susceptible to spot form net blotch. Developed by VIC DPI. AWB Seeds.

Lockyer Φ_{m} . (WABAR2288) High yielding, plump grained medium maturing variety. Good straw strength, good standing ability and good head retention. Intermediate resistance to scald, net form of net blotch and powdery mildew. COGGO Seeds.

Roe Φ_{m} . (WABAR2310) Feed. High yielding, plump grained early maturing variety. Good straw strength, good standing ability and good head retention. Intermediate resistance to powdery mildew. COGGO Seeds.

Shepherd Φ_{m} . (NRB03470) Slightly later than Grout, but is similar in growth habit with erect vigorous early growth. Best adapted to the medium rainfall areas of northern New South Wales and Queensland. Shepherd is resistant to leaf rust and has improved resistance to Powdery mildew over Gairdner, Skiff, Fitzroy, and Commander. Reasonable resistance to NFNB, similar to Commander and an improvement over Binalong, Grimmett, Mackay Skiff, and Tallon but susceptible to SFNB. Exhibits very good malting characteristics and is under commercial malt evaluation in 2008. AWB Seeds.

New Triticale varieties

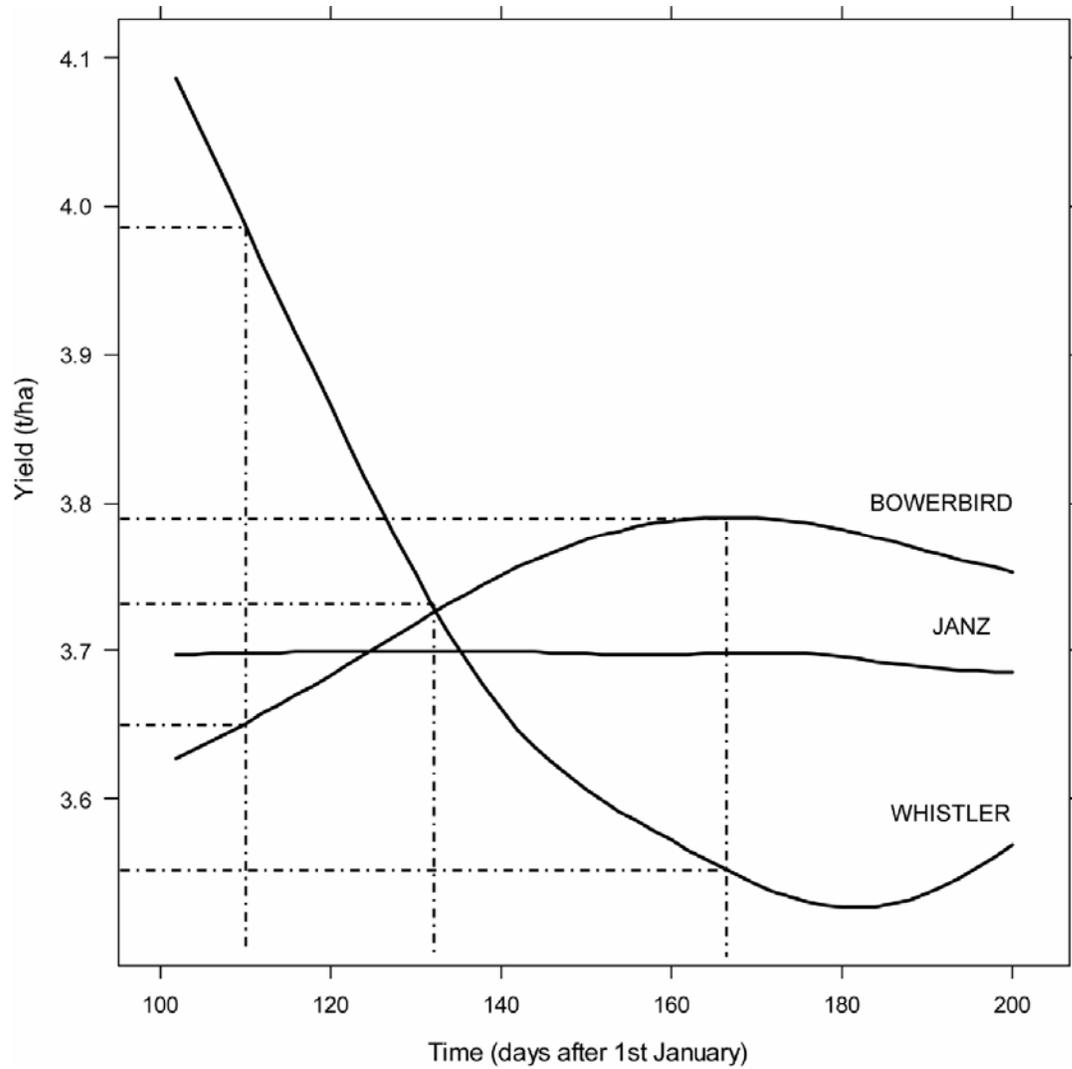
Bogong Φ_{m} . (H127). An early season maturing variety. Maturity is 1-2 days faster than Everest and Treat. Widely adapted spring variety that performs best in medium to high rainfall or late maturing environments. Strong straw. UNE2008. ABB Seeds.

Canobolas Φ_{m} . (H418) An early to mid season maturing variety. Maturity is 1-2 days faster than Everest and Treat. Spring variety, suited to the NSW Slopes and Tablelands. Strong straw. A high level of acid tolerance. UNE 2008. ABB Seeds.

Wheat genotypes and their response to time of sowing

Climate and weather conditions greatly influence the performance of new wheat cultivars both for yield and quality. One of the key management factors used to manage this variation is time of sowing (TOS). There seems to be three basic types of genotype response to time of sowing; early genotypes, late genotypes and adaptive genotypes. These represent those genotypes which yield better when sown early, late and those which perform similar over all sowing times. Figure 1 shows three such genotypes; Whistler (early performer), Bowerbird (late starter) and Janz (adaptive). All three genotypes achieve roughly the same yield at around 130 days (early May) and yields greatly increase or decrease as the time of sowing increases for Whistler and Bowerbird. Janz however performs similarly no matter how early or late the sowing time.

Figure 1: Predicted genotype response for time of sowing for Bowerbird, Whistler and Janz.



References: Yield performance of time of sowing on NSW wheat variety trials from 1998-2007; Chris Lisle, Peter Martin, NSW DPI.

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