



Wheat variety development

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Summary

Best options for the 2003 season are:

- Yitpi for low rainfall, sodic or light textured soils, particularly where boron levels are high.
- Annuello for low to medium rainfall areas where the domestic market is targeted to achieve a price premium.
- Mitre for medium rainfall, alkaline to slightly acid soils.
- Chara for medium to high rainfall and irrigation on neutral to acid soils.
- H45 as a late sowing option where CCN is controlled. Be aware of the stripe rust risk.

New varieties:

Bread wheat – BABBLER

Susceptible to CCN, resistant to stripe and stem rust, but moderately susceptible to leaf rust. Similar in performance to Janz, APH in NSW. PlantTech has the marketing rights.

Suited to low and medium rainfall environments.

Bread wheat – ANNUELLO

Several hundred tonnes of Annuello seed is likely to be available to growers for multiplication in 2003. Annuello has the combination of rust and CCN resistance and is not prone to screenings. It has excellent AH grain quality which will be preferentially sought by the domestic flour milling industry. Annuello is similar to Janz in plant type and adaptation but with improved rust resistance and higher yield. Marketed by Graintrust/PlantTech.

Adapted to low and medium rainfall areas.

Bread wheat - RUBRIC

Red grained mid maturity wheat with very large grain size and which will be marketed in a closed loop under contract to AWB. Approx 90t of seed will be available for sowing in 2003. Subject to further evaluation by the domestic milling industry.

Best adapted to low to medium rainfall environments.

Bread wheat – WYALKATCHEM

Wyalkatchem has proven to have excellent yield potential in the recent dry years in Victoria. It has adequate resistance to stem and leaf rust, but is susceptible to stripe rust and CCN. Its poor stripe rust resistance will limit its production in Victoria to low rainfall regions. Wyalkatchem is currently classified as ASW quality in Victoria. Its short stature and reduced straw may make it attractive for stubble retention systems as does moderate yellow leaf spot resistance. Marketed by PlantTech.

Adapted to low rainfall areas.

Bread Wheat – WI99069

Released from the AGT – University of Adelaide program in 2002, CCN susceptible. Stripe rust reaction is too susceptible for cultivation in Victoria. APW quality in South Australia but currently ASW in Victoria.

Issues:

Rust

A race of stripe rust virulent on the Yr17 gene from VPM is now widespread and lower levels of resistance will be expressed in the varieties Camm and Bowie. Camm is now marginal for stripe rust while Bowie is still adequate. The Stem rust and leaf rust resistance of VPM is no longer effective in Western Australia due to new races of these rusts. If these races move to eastern Australia lines carrying these genes (Camm, Bowie) will be susceptible.

The detection of stripe rust in Western Australia in 2002 may have some implications for eastern Australian growers as the prevailing winds are from the west and the race of rust involved is new in Australia. Data to date indicates that current eastern Australian varieties carry resistance to this race.

High levels of stripe rust have been detected on the variety H45 in New South Wales during 2002, particularly on irrigation crops. This is a potential threat to H45 crops across the region and growers should be aware that H45 may carry high levels of stripe rust this year.

The minimum disease resistance suggested for varieties grown in the southern region, are indicated in the table below and if varieties chosen have at least this minimum level of resistance, then the potential for losses to growers will be low.

Table 1. Minimum levels of disease resistance suggested for wheat in the southern region

Annual rainfall	Rust			Yellow leaf spot	Septoria tritici
	Stem	Stripe	Leaf		
Low < 350 mm	S	MR-MS	MS	S	S
Medium 300-550	MS	MR	MS	S	MS
High > 500 mm	MR	MR	MR	S	MS

2002 grain yield:

No sites from the Wimmera produced useful grain yield in 2002. Seven sites in the Mallee were harvested and the grain yields are presented in Table 2. Yitpi, Mitre, WI99069 and Wyalkatchem had the highest yields. Large maturity effects are notable in the data with the winter wheat Wylah and the later maturing Chara producing relatively poor yields under the highly moisture stressed conditions.

Table 2. Wheat variety grain yield (% Yitpi) 2002 in Victoria.

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