Performance of wheat varieties in the 1997 season

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Wheat yields in 1997 were generally below average to average across the Wimmera, Mallee, Central and North Eastern cropping zones. The 1997 season favoured early maturing varieties such as Silverstar, Krichauff and Worrakatta and resulted in poor yields from later maturing varieties such as Cellular and Rosella. Durum wheats performed very poorly under the drought conditions.

There are several exciting new varieties for growers, in particular Diamondbird for growers on acid soils, Krichauff on boron toxic soils where CCN is under control, Silverstar across the whole region for its CCN resistance, yield potential and AH quality and Goldmark for its CCN resistance, broad adaptation and possible niche for noodle production in the future.

Frame remains a good choice for growers in the Mallee and northern Wimmera, particularly where boron toxicity is a problem. Ouyen will perform well for Wimmera and southern Mallee growers.

Bread Wheats

- **Diamondbird** - An AH quality wheat for the acid soil areas. A very good replacement for Katunga. Diamondbird has resistance to stem, stripe and leaf rusts and Septoria tritici. It is susceptible to CCN.
- **Frame** - Has proven to yield well in the northern Wimmera and Mallee, which may be in part due to its moderate tolerance of high soil boron. Frame is outclassed for yield in the Wimmera but performs moderately well in the central and eastern cropping zones. Frame is resistant and moderately tolerant to CCN. However its moderately resistant-moderately susceptible reaction to stripe rust may pose a risk to growers in high rust years. Frame is APW quality.
- **Goldmark** - A mid season variety with good yield potential across all cropping zones. Its slightly later maturity was a disadvantage in the dry conditions of 1997. Goldmark has moderate acid soil tolerance, CCN, stem, stripe and leaf rust resistant. It is APW quality in Victoria and AH in southern NSW. Goldmark is particularly suited to the production of instant noodles and may be specifically marketed for this product in the future.
- **Goroke** - CCN resistant line with resistance to stripe, stem and leaf rusts. Goroke has tended to yield best in the Wimmera. It is APW quality and has averaged 0.6% lower protein than Meering in Victorian trials.
- **Krichauff** - Has boron tolerance and is resistant and tolerant to both species of root lesion nematodes. Krichauff is CCN tolerant but **susceptible**. Its moderately resistant susceptible reaction to stripe rust may pose a risk to growers in high rust years. Krichauff has yielded particularly well in the northern Wimmera/southern Mallee which is likely to be associated with soils containing high levels of soil boron. A good option where CCN is controlled. Krichauff has yellow colour in the flour which makes it well suited for production of Yellow Alkaline Noodles, however this is a disadvantage for the production of other products. Final classification of Krichauff has not been made but it will be either ASW or APW in Victoria.
- **Ouyen** - Has CCN resistance and AH quality. Ouyen is prone to physiological yellowing as is Cocamba, however this does not appear to effect grain yields. Ouyen has averaged 0.8% lower protein than Meering in Agriculture Victoria trials. Ouyen is a consistently high yielding line across the Wimmera and Mallee.
- **Silverstar** - A very early maturing (similar to barley) variety with good yield potential in all areas and AH quality. Silverstar has CCN, stem and stripe rust resistance. Its early maturity makes it ideally suited to the Mallee and Wimmera and it is expected to find a niche in SA, WA and southern NSW. It has a tendency to have higher levels of screenings than other varieties. Silverstar is also a good option for late sowing.
- **Worrakatta** - A sister line to Krichauff with similar agronomic, disease and grain quality characteristics. Worrakatta is susceptible to CCN and moderately susceptible to stripe rust, which poses a risk to growers in high rust years. It would only be suitable for the Mallee, where Krichauff is probably a better choice. Trials in South Australia indicate Worrakatta has averaged 0.7% lower grain protein than alternative varieties.
- **Yanac** - Mid season line, with hard noodle quality, good rust resistance, some boron tolerance but CCN susceptible. Yanac has not lived up to expectations for yield and is now outclassed.

Biscuit Wheats

- **Bowie**. Awnless biscuit wheat with moderate levels of resistance to CCN, and good stripe stem and leaf rust resistance. Probably the best choice of biscuit wheats available at present.
- **Buckley** - Awnless biscuit wheat with resistance to CCN. Its MR-MS reaction to stripe rust is marginal for the areas in which biscuit wheats will be grown. Buckley is also susceptible to stem and leaf rusts.
- **Wyuna** - Current standard for biscuit wheats in Victoria. Has good yield potential but is CCN susceptible. Its MR-MS stripe rust reaction is marginal for the areas in which biscuit wheats are grown. Wyuna is susceptible to stem rust and moderately susceptible to leaf rust.

Table 1. Victorian wheat variety yield, maturity, protein and screenings comparisons (% Meeri

	Mallee		Southern Mallee/North. Wimmera		Wimmera		Central		North East		Relative Maturity
	94-97	97	94-97	97	94-97	97	94-97	97	94-97	97	(days)
Bread Wheats											
Beulah	**108***		**98***		**102***					87	+1
Diamondbird		95		88	**85****	82		112	**108***	100	+1
Frame	**107***	103	**101***	103	**95***	83		104	**104*****		+1
Goldmark	**104**	99	**102**	91	**94**	79	**102**	105	**96**	87	+3
Goroke	**99**	96	**94**	94	**101**	92	**96**	95	**91**	92	+2
Janz	**106**	102	**100**	99	**101**	96	**102**	102	**91**	96	=
Kellalac					**96**	59		101	**103*****		+9
Krichauff	**110***	107	**108***	111	**99***	103	**104***	107	**99***		-2
Meering	**100**	100	**100**	100	**100**	100	**100**	100	**100**	100	=
Ouyen	**106**	102	**105**	100	**103**	94	**97****				+1
Rosella	**97**	85	**100**	88	**96**	75	**108**	107	**98**	97	+7
Silverstar	**108**	105	**97**	105	**110**	111	**104**	105	**99**	94	-7
Worrakatta	**106***	105	**110***	113	**115***	115	**103****		**104*****		-2
Yanac	**95**	88	**95**	82	**95**	67	**98**	96	**94**	93	+4
Biscuit wheats											
Buckley					**97****	94	**111****	107		87	+2
Bowie					**100**	85	**102**	93	**102****	89	+2
Wyuna			**94****		**102**	90	**106**	107	**98***	103	+4
Durum wheats											
Yallaroi		74				45					=
911966		80				64					+1
911025		76				61					+1

***One years data only, **Two years data only, *Three years data only

[#]Note screenings values are higher than would be expected from commercial samples. Plot harvested seed usually contains more broken grain. Also broken and small grain as this is not removed in the harvesting process. These values should be evaluated in relative not absolute terms.