

Department of Agriculture WA Wheat CVT

Aim: To compare the performance of wheat varieties in the M2 rainfall zone.

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Company: Wesfarmers Landmark

Farmer: Graham Barnes

Location: Kenney Road, Wubin



Background: Research to find new and better performing wheat varieties.

Trial Details:

Plot size and replication	1.6 x 20m Plots - Triple Replicated
Soil type	Red Loam
Sowing date	18 th June
Conditions at sowing	Reasonable Soil Moisture
Machinery	Knife Points and Press Wheels
Seeding rate	75 kg/ha
Fertiliser	Agstar @ 80 kg/ha / Urea @ 50 kg/ha
Herbicides and Insecticides	Pre - Trifluralin @ 1.5 L/ha Logran @ 35 g/ha Post - Monza @ 25 g/ha DC-Trate @ 1%

Results:

Variety	%age Protein	%age Screening	Hecto Weight	%age of Untreated	Yield kg/ha
Wyalkatchem	14.80	1.82	80.90	100%	652.64
Arrino	16.30	2.19	80.10	85%	557.90
Brookton	14.20	3.65	82.18	82%	534.05
Cadoux	15.10	2.04	81.10	75%	492.16
Calingiri	15.10	4.03	79.82	59%	382.78
Carnamah	15.40	1.74	79.00	65%	424.48
Eradu	16.40	1.49	82.82	77%	504.53
H45	14.80	6.87	79.76	102%	665.10
Halberd	15.40	6.05	78.56	61%	395.78
Stiletto	15.40	3.52	81.60	77%	505.67
Stylet	15.20	3.14	81.92	83%	541.15
Westonia	14.90	3.87	78.36	77%	503.74
Yitpi	16.00	2.89	78.64	65%	423.19
WAWHT2281	15.50	4.89	81.28	107%	695.73
WAWHT2454	14.20	2.91	82.28	93%	609.59
WAWHT2530	14.50	4.33	80.36	90%	585.89
WAWHT2531	14.90	4.16	77.76	86%	564.52
WAWHT2549	15.90	1.61	79.30	76%	497.87
WAWHT2468	15.50	3.04	82.18	72%	472.61
WAWHT2404	15.40	1.97	83.10	92%	603.21
WAWHT2405	14.70	2.53	84.54	76%	497.90

Interpretations/Comments: The 2002 season was one of the worst on record in the Dalwallinu Shire. When interpreting these results this must be taken into account. A variety such as Calingiri that has performed extremely well in recent times, really did not perform in a season where the growing season rainfall was a mere 134 mm's. The same can be said for Carnamah, Yitpi and even Halberd (which have all yielded in the top 20% of varieties the previous two years).

The other point to make is that the co-efficient of variation is reasonably high - at 19.87, this is approximately five above what is considered to be an effective co-efficient of variation. In short, this means that the variation in yields between the replicates of the same variety was not consistent enough.

Summary:

- Bonnie Rock (WAWHT2281) is showing promise as a new high yielding variety for the Medium to Low rainfall zones.
- The yields reflected the season in that the highest yielding variety (Bonnie Rock), only yielded 695 kg/ha. The growing season rainfall was only 134 mm's with no real opening or finishing rainfall event.
- Protein was unusually high for most varieties, with screenings averaging around 1 - 4%. Hectolitre weights were generally reasonable. These quality aspects were typical for the 2002 season - differences can be attributed to different varieties and their length to maturity.
- Wyalkatchem has again performed reasonably well as the 3rd highest yield. It was also the 3rd highest yielder in the CVT conducted at Dalwallinu in 2001 - which suggests that it can yield consistently well in a range of conditions.
- As with the 2000 and 2001 seasons, the results of this CVT are data for an unusually dry year, and should be treated as such. In an average season, the results between varieties would more than likely be very different.