

# PRACTICE FOR PROFIT

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## AIM

This trial was designed to investigate the crop growth, yield and gross margin response of a number of wheat varieties commonly grown in the district to changes in management input strategy.

## BACKGROUND

This trial was designed to investigate the response of four commonly grown wheat varieties (Arrino, Wyalkatchem, Calingiri and Bonnie Rock) to increasing seeding rate, fertiliser, disease management and weed management strategies. Low, District, High and Active Management strategies that ranged in cost from \$68-\$242 /ha were applied to each variety. Crop growth, disease infection, yield and gross margin were measured. Management practices are explained below.

- **Low** input treatments are based on a farmer delivering grain to the bin at the lowest possible cost, regardless of seasonal conditions (\$68.35 /ha).
- **District** average inputs are based on what is considered common grower practice in the Liebe Group area (\$113.17 /ha).
- **High** input treatments simulate a paddock with high yield potential matched with increased management inputs to maximize yields and profitability (\$242.32 /ha).
- **Active** treatments are dependent on seasonal conditions and are determined by the Liebe R&D Committee (\$107.45 /ha).

This trial is intended to run over 10 seasons, with this being the seventh year.

## TRIAL DETAILS

Property	Steve & Lee Anne Carter, Xantippe
Plot size & replication	12m x 10m x 3 replications
Soil type	Sandy loam
Sowing date	3/6/07
Seeding rate	50-80 kg/ha as per protocol
Fertiliser (kg/ha)	As per protocol
Paddock rotation	2003 = Pasture, 2004 = Wheat, 2005 = Wheat, 2006 = Pasture
Herbicides	As per protocol
Growing Season Rainfall	113mm

## RESULTS

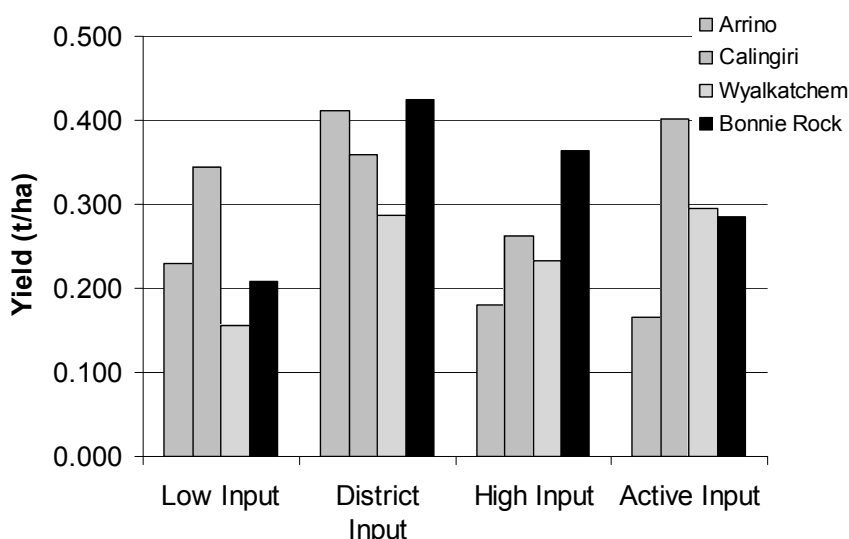


Figure 1: Yield (t/ha) for each variety relative to Management Strategy.

**Table 2:** Results and Analysis of Variance for Yield (t/ha), Grain Quality and Gross Margin (\$/ha).

Treatment		Yield t/ha	Protein %	Specific Wt kg/hL	Screenings %	Gross Margin \$/ha
1	LOW Arrino	0.23	15.5	79.0	1.1 c	21.55 a
2	LOW Calingiri	0.34	13.9	80.1	1.3 bc	68.45 a
3	LOW Wyalkatchem	0.16	14.9	80.0	0.9 c	-7.31 abc
4	LOW Bonnie Rock	0.21	14.8	65.1	2.5 a	12.64 a
5	DISTRICT Arrino	0.41	15.1	79.9	1.3 bc	48.63 a
6	DISTRICT Calingiri	0.36	15.1	77.6	1.9 ab	26.11 a
7	DISTRICT Wyalkatchem	0.29	14.6	78.0	1.1 c	-1.84 ab
8	DISTRICT Bonnie Rock	0.42	14.5	79.2	2.5 a	51.53 a
9	HIGH Arrino	0.18	15.5	79.2	1.4 bc	-131.13 d
10	HIGH Calingiri	0.26	15.5	79.3	1.2 c	-139.76 d
11	HIGH Wyalkatchem	0.23	15.7	78.8	1.3 bc	-151.85 d
12	HIGH Bonnie Rock	0.36	15.3	78.3	2.2 a	-100.43 cd
13	ACTIVE Arrino	0.17	15.5	79.0	0.9 c	-177.52 d
14	ACTIVE Calingiri	0.40	14.9	79.4	1.4 bc	-85.42 bcd
15	ACTIVE Wyalkatchem	0.30	14.9	79.5	1.0 c	-127.21 d
16	ACTIVE Bonnie Rock	0.28	14.9	79.9	2.3 a	-131.05 d
<b>LSD (P=.05)</b>		<b>NSD</b>	<b>NSD</b>	<b>NSD</b>	<b>0.76</b>	<b>95.52</b>
<b>CV</b>		<b>45.95</b>	<b>3.9</b>	<b>6.92</b>	<b>29.93</b>	<b>0</b>
<b>Replicate F</b>		<b>5.162</b>	<b>1.093</b>	<b>0.892</b>	<b>0.838</b>	<b>4.647</b>
<b>Replicate Prob(F)</b>		<b>0.0121</b>	<b>0.3485</b>	<b>0.4212</b>	<b>0.443</b>	<b>0.0178</b>
<b>Treatment F</b>		<b>1.347</b>	<b>1.901</b>	<b>1.302</b>	<b>4.678</b>	<b>6.76</b>
<b>Treatment Prob(F)</b>		<b>0.2381</b>	<b>0.0672</b>	<b>0.2645</b>	<b>0.0002</b>	<b>0.0001</b>

Means followed by the same letter so not significantly differ (P=0.05, LSD).

#### COMMENTS

This trial was severely limited by dry conditions, with yields ranging from 0.16 to 0.42 t/ha, with no significant differences between any variety or management input level.

Highest gross margins were associated with lowest expenditure (as would be expected in a very dry year), and there was no significant difference between any of the low or district management practices for any variety grown. Additional spending on the High or Active treatments simply lead to higher losses, as in a year with only 113 mm growing season rainfall, crops were unable to benefit from additional inputs.

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