

# Triticale maximum yield experiment

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## Key messages:

- Triticale responded to nitrogen (N) and fungicide in the last three years.
- In 2007, the response was to either N or fungicide.
- The variety Tobruk yields as well as Kosciusko when not grazed. Tobruk did not respond significantly to fungicide.

## Aim:

To assess the level of input required to maximise the yields of triticale grown after wheat.

## Method:

A replicated experiment was established using differing levels of post emergent N and fungicide to assess yield.

## Results:

**Table 5: Summary of yield and gross margin returns for Triticale**

Treatment Description	Dry Matter (t/ha)	Grain Yield (t/ha)	GM (\$/ha)	Long Term
0 N	2.6	1.2	270	65
20 N <sup>1</sup>	4.0	1.5	349	80
40 N <sup>1</sup>	3.8	1.7	408	100
60 N <sup>1</sup>	3.6	1.6	357	91
80 N <sup>1</sup>	3.3	1.5	284	88
100 N <sup>1</sup>	3.4	1.5	277	84
120 N <sup>1</sup>	3.4	1.3	176	84
Fungicide <sup>2</sup> 0 N	2.8	1.5	365	79
Fungicide <sup>2</sup> 20 N	4.0	1.8	466	101
Fungicide <sup>2</sup> 40 N	3.9	1.9	466	108
Fungicide <sup>2</sup> 60 N	3.6	1.6	348	101
Fungicide <sup>2</sup> 80 N	3.3	1.5	299	95
Fungicide <sup>2</sup> 100 N	3.4	1.5	261	98
Fungicide <sup>2</sup> 120 N	2.9	1.3	171	100
Tobruk + 40 N	3.4	1.5	316	
Tobruk + 40 N + Fungicide <sup>2</sup>	3.7	1.7	385	
Endeavour + 40 N	2.3	1.1	186	
Endeavour + 40 N + Fungicide <sup>2</sup>	3.0	1.2	227	
Average	3.3	1.5		
LSD	0.5	0.2		
CV	23%	16%		

1 – Rate of post emergent N applied at Z31.

2 – One application of 500 ml/ha of 125 g/L Triadimefon fungicide at Z30, Variety – Kosciusko unless stated.

**Location:** Balldale  
**Growing Season Rainfall:**  
 Annual: 392 mm (avg 504 mm)  
 GSR: 221mm (avg 312 mm)  
**Soil:**  
 Type: Red Chromosol  
 pH (H<sub>2</sub>O): 4.8  
 P (Colwell): 37 mg/kg  
 Deep Soil N: 86 kg/ha  
**Sowing Information:**  
 Sowing date: 23/5/2007  
 Fertiliser: 90 kg/ha MAP  
**Row Spacing:** 180 mm  
**Paddock History:**  
 2006 – Wheat  
 2005 – Wheat  
 2004 – Canola  
 Variety: Kosciusko  
**Plot Size:** 1.5 m x16 m  
**Replicates:** 4

**Observations and comments:**

- Addition of 40 kg/ha of N significantly increased the yield of triticale.
- Addition of fungicide did not significantly increase yield where N was used.
- Fungicides increase yield in the absence of N.
- The most economic treatment (gross margin) was 40 kg/ha of N with or without fungicide.
- Tobruk yielded as well as Kosciusko, but Endeavour (dual purpose) yielded significantly worse than Kosciusko.

**Sponsors:**

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