

Triticale: variety guide

The Seed Professionals

Berkshire^(b)

Purpose-bred grain only variety for high yield and superior feed quality traits for pigs

Features

- Improved ileal digestible energy—13 MJ/kg compared to Tahara at 12 MJ/kg
- Reduced fibre content—5 to 10% less than Tahara
- Excellent yield—equivalent to best grain only varieties currently available
- Good straw strength
- Quick to mid-season maturity
- Moderately resistant to WA and Jackie strains of stripe rust

Endeavour^(b)

A dual purpose triticale with excellent dry matter production and grain recovery

Features

- Resistant to current strains of stripe rust at both seedling and adult growth stages
- Excellent dry matter production
- High yield after grazing
- Good straw strength

Tobruk^(b)

A long season versatile triticale—grain only or dual purpose

Features

- Seedling susceptible but adult plant resistant to the Jackie strain of stripe rust
- Strong winter habit
- Excellent yield after grazing compared to all other varieties in the NSW mixed cereal trials
- Easy threshing
- In some environments it is affected by stripe rust head infection

Comparative information

Varietal characteristics are summarised in Table 1 and Table 5 (stripe rust). Yield data is in Tables 2 and 3 and dry matter production data is in Table 4.



Waratah Seed Company members inspecting triticale varieties at Waratah member Highleaze Seeds trials, Smeaton, Victoria

Table 1 Varietal characteristics and disease resistance ratings (source I&I NSW)

| Variety | Grazing production | Straw strength | Flowering/ grain maturity | Stem rust | Leaf rust |
|--------------------------|--------------------|----------------|------------------------------|-----------|-----------|
| Berkshire ^(b) | no | good | quick/mid | MR | R |
| Bogong ^(b) | no | very good | quick | R | R |
| Chopper ^(b) | no | very good | very quick | MR | R |
| Endeavour ^(b) | quick, early | very good | mid | R | R |
| Hawkeye ^(b) | no | good | mid | MR–R | R |
| Jaywick ^(b) | no | good | quick/mid | MR–R | R |
| Tahara | no | moderate | quick/mid | R | R |
| Tobruk ^(b) | quick, early | very good | quick | R | R |

Disease resistance: MS–S moderately susceptible to susceptible; MS moderately susceptible; MR–MS intermediate; MR moderately resistant; R resistant

Table 2 Predicted average yield in Victoria and New South Wales, 2004-10

| Variety | Predicted grain yield ^Y (t/ha) | | | | | |
|------------------------------|---|-----------------|-----------------|-----------------|-----------------|------------------|
| | Victoria | | | New South Wales | | |
| | North east | South west | Mallee | North east | North west | South east |
| Berkshire^ϕ | 2.93 (8) | 4.38 (6) | 2.59 (4) | 4.82 (6) | 3.68 (4) | 4.71 (14) |
| Bogong ^ϕ | 3.03 (8) | 4.45 (8) | 2.72 (7) | 5.24 (6) | 3.96 (4) | 5.03 (14) |
| Chopper ^ϕ | 2.80 (6) | 4.00 (6) | 2.47 (5) | 4.29 (5) | 3.31 (3) | 4.17 (11) |
| Hawkeye ^ϕ | 2.85 (10) | 4.33 (16) | 2.58 (8) | 4.62 (7) | 3.60 (5) | 4.64 (17) |
| Jaywick ^ϕ | 2.84 (10) | 4.28 (10) | 2.53 (8) | 4.89 (7) | 3.61 (5) | 4.61 (17) |
| Tahara | 2.57 (12) | 3.79 (20) | 2.39 (10) | 4.23 (8) | 3.32 (6) | 4.12 (21) |
| Tobruk ^ϕ | 2.82 (10) | 4.18 (22) | na | 4.55 (8) | 3.61 (6) | 4.48 (21) |

^Y The number of experiments is shown in brackets. The more trials, the greater the reliability of the data.

Table 3 Predicted average yield in South Australia, 2004-10 for main season trials

| Variety | Predicted grain yield ^Y (t/ha) | | | | | |
|------------------------|---|-----------|---------------|----------------|----------------------|----------------------|
| | South east | Mid North | Murray Mallee | York Peninsula | Upper Eyre Peninsula | Lower Eyre Peninsula |
| Berkshire ^ϕ | 4.83 (3) | na | na | na | 2.16 (4) | 3.23 (4) |
| Bogong ^ϕ | 5.13 (4) | 3.85 (4) | 1.82 (4) | 2.65 (4) | 2.40 (7) | 3.52 (8) |
| Chopper ^ϕ | 4.31 (3) | 3.68 (3) | 1.59 (3) | 2.26 (3) | 2.04 (6) | 2.97 (6) |
| Hawkeye ^ϕ | 4.61 (5) | 3.47 (5) | 1.66 (5) | 2.28 (5) | 2.11 (9) | 3.09 (10) |
| Jaywick ^ϕ | 4.64 (5) | 3.46 (5) | 1.66 (5) | 2.30 (5) | 2.08 (9) | 3.05 (10) |
| Speedee | na | 2.84 (5) | 1.39 (5) | 1.93 (5) | 1.76 (9) | 2.48 (8) |
| Tahara | 4.17 (6) | 3.21 (6) | 1.56 (6) | 2.17 (6) | 2.04 (11) | 2.82 (12) |
| Tobruk ^ϕ | 4.79 (6) | 3.47 (3) | na | 2.28 (3) | 2.08 (3) | 2.92 (6) |

^Y The number of experiments is shown in brackets. The more trials, the greater the reliability of the data.



Berkshire at Henty Machinery Field Day site
Photo: Di Holding



Tobruk (left) and Endeavour (right) showing their excellent dry matter production at Henty Machinery Field Day site
Photo: Di Holding

Table 4 Dry matter production and grain yield (recovery) after grazing in New South Wales, 2004-2009

| Variety | Southern NSW (% site mean) | | | Northern NSW (% site mean) | | |
|------------------------------|----------------------------|------------------|------------------|----------------------------|--------------|------------------|
| | Dry matter 1 | Dry matter 2 | Grain yield | Dry matter 1 | Dry matter 2 | Grain yield |
| Breakwell [Ⓛ] ▲ | 111 | 118 | 102 | 107 | 102 | 101 |
| Crackerjack | 121 | 98 | 111 | 113 | 92 | 119 |
| Endeavour[Ⓛ] | 120 | 115 | 123 | 110 | 105 | 119 |
| Tobruk[Ⓛ] | 91 | 124 | 135 | 83 | 118 | 132 |
| Marombi [Ⓛ] wheat▲ | 76 | 86 | 112 | 80 | 94 | 118 |
| Eurabbie [Ⓛ] oats | 135 | 117 | 108 | 131 | 105 | 97 |
| Urambie [Ⓛ] barley | 100 | 125 | 121 | 95 | 109 | 124 |
| Site mean | 1.82 t/ha | 1.94 t/ha | 3.23 t/ha | 2.40 t/ha | t/ha | 2.02 t/ha |

Source: I&I NSW Mixed Cereal trials

Stripe rust

Table 5 Response of triticale varieties to pathotypes of wheat stripe rust in Australia (source PBI, Cobbity)

| Variety | Tobruk pathotype | Yr17-27 pathotype |
|------------------|---------------------------|-------------------|
| Berkshire | MS | MS |
| Bogong | MS | MR |
| Chopper | MR-MS (MS-S) [Ⓟ] | MR |
| Endeavour | R-MR | MR |
| Hawkeye | MR (MS) [Ⓟ] | MR |
| Jaywick | MR (MS) [Ⓟ] | MR |
| Tahara | MS | MR |
| Tobruk | MS-S | MR |

[Ⓟ] some plants are more susceptible to the disease, noted in brackets

Table 6 Stripe rust response descriptors for triticale (source PBI, Cobbity)

| | |
|--------------|--|
| VR | Highly resistant: no visible symptoms |
| R | Highly resistant: occasional symptoms of infection including necrotic flecks and small stripes without sporulation |
| R-MR | Resistant: symptoms evident and may include stripes with necrosis and chlorosis |
| MR | Moderately resistant: sporulating areas arranged in stripes |
| MR-MS | Intermediate: sporulating areas arranged in stripes with some chlorosis |
| MS | Moderately susceptible: sporulating stripes and affected leaf area up to 70% |
| MS-S | Moderately susceptible to susceptible: sporulating stripes merging into broader leaf areas supporting symptoms; chlorosis and necrosis evident; leaf area affected up to 90% |
| S | Susceptible: sporulation across the whole leaf surface with no stripes but with evidence of chlorotic and necrotic areas |
| S-VS | Susceptible to very susceptible: abundant sporulation across the leaf surface with some chlorosis |
| VS | Highly susceptible: abundant sporulation across the whole leaf area with no evidence of chlorosis or stripes |

Further information

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