

Gascoigne[®]

State of the Art Milling Wheat

VARIETY SUMMARY

- Mid season maturity
- High and stable yield potential
- Triple rust resistance based on durable resistance genes, with stem rust immunity provided by Sr24



BREEDING

Bred in South Africa and selected for performance under high rainfall conditions in New Zealand by Plant and Food Research New Zealand (PFRNZ). Gascoigne was selected and identified in Australia by Drs Richard Richards and Garry Rosewarne. It was first trialled and evaluated in Australia by HRZ Wheats P/L in 2002 under the name HRZ02.15.

The line has undergone field testing in 2003, 2004, 2005, 2007 and 2008, and also entered into the NVT program in 2008 across the high rainfall zones of southern NSW, south west Victoria, SE South Australia and Ag Zones 3 and 6 in WA.



AREA OF ADAPTATION

This variety is most suited to medium rainfall regions of Australia, however, the large seed size and low screenings make it attractive to growers in variable environments.



MATURITY

Gascoigne is of mid season maturity and performs best if sown in mid to late May in southern NSW or mid May to early June in south western Victoria or SE South Australia. It flowers slightly earlier than Sunbri and 2-3 days after Chara.



GRAIN QUALITY

Gascoigne has APW classification in Victoria and is expected to receive similar classification in NSW and SA during 2009 (subject to LMA). It has good protein levels and is resistant to Blackpoint. Large grain size enables this line to perform well in tight finishes over a range of environments.



DISEASE AND PEST RESISTANCE

Gascoigne has good resistance to all three rusts, being well supported by multigenic adult plant resistance genes. It also has Sr24 to provide high levels of resistance to current Australian pathotypes of stem rust. It does not contain the VPM set of resistance genes and therefore does not rely on the now ineffective Yr17 gene complex.

Disease Resistance Table

| Variety | Stripe rust | Leaf rust | Stem rust | Yellow leaf spot | Powdery mildew | Septoria tritici | Crown rot | Common root rot |
|------------------|-------------|-----------|-----------|------------------|----------------|------------------|-----------|-----------------|
| Gascoigne | R | R | MR | MS-S | MR | MS | S | MS-S |
| Carinya | MR-MS | MR-MS | MR | VS | R | MS | S | MS-S |
| Ellison | MR-MS | R | R-MR | MR | R | - | MS-S | MS-S |
| EGA Gregory | R-MR | R | MR-MS | MS-S | R | - | S | MR-MS |
| H46 | VS | R | MR-MS | MR-MS | S-VS | VS | S | MS-S |
| Sentinel | R-MR | R | R | MR-MS | MS-S | MS | MS | S |
| EGA Wentworth | MS | S | MR | S-VS | MR | MS-S | S | MS-S |
| Young | MS | R | MR | MS-S | R | - | S | MS |
| Wyalkatchem | MS | R | MS | MR | S | - | S | MS-S |



YIELD

This line has performed particularly well across a range of eastern states locations, consistently out-performing main-season varieties from low yielding (site average of less than 2 t/ha) to high yielding trials (site average of over 6 t/ha).

Breeder Trials

| South East SA & South West VIC | | South East NSW | |
|-------------------------------------|-----------------------------------|----------------------------------|----------------------------------|
| Average 2004,05,07 & 08 % site mean | | Average 2004,05 & 08 % site mean | |
| Variety | All trials (12) Mean 4.83 t/ha | Variety | All trials (9) Mean 4.48 t/ha |
| Gascoigne | 113 | Gascoigne | 115 |
| Chara | 101 | Chara | 100 |
| Kellalac | 100 | Sunvale^ | 103 |
| Janz* | 98 | Janz* | 88 |

Source CSIRO *No trials in 2004 ^No trials in 2005

Independent Trials

South East NSW & North East VIC 2007 & 2008 % site mean

| Variety | June 07 | Grenfell 07 | Grenfell 08 | Devenish 08 | Wunghnu 08 | Yarrowonga 08 | Average |
|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------------|
| | Mean 1.70 t/ha | Mean 1.95 t/ha | Mean 3.58 t/ha | Mean 4.13 t/ha | Mean 2.07 t/ha | Mean 1.02 t/ha | |
| Gascoigne | 118 | 119 | 107 | 132 | 116 | 133 | 121 |
| Lincoln | 107 | 110 | 106 | 110 | 119 | 132 | 114 |
| Catalina | 103 | 112 | 106 | 102 | 116 | 129 | 111 |
| Ventura | 116 | 105 | 97 | 105 | 114 | 94 | 105 |
| Crusader | 114 | 110 | 99 | 104 | 107 | 77 | 102 |
| Bolac | 90 | 89 | 96 | 93 | 74 | 76 | 86 |

Source: Agritech trials for Hart Bros Seeds National Variety Trials



PLANT CHARACTERISTICS

Gascoigne is an awned semi-dwarf variety with medium height at maturity. (Similar to Diamondbird and Ventura). It has good lodging tolerance and strong straw.



ACKNOWLEDGEMENTS

Gascoigne was developed by the joint venture between CSIRO, GRDC and Crop & Food Research NZ known as HRZ WHEATS Pty Ltd.



PLANT BREEDER RIGHTS AND ROYALTIES

Gascoigne is protected by Plant Breeder Rights, any unauthorised commercial propagation or any sale, conditioning, export, import or stocking of propagating material of this variety is an infringement under the Plant Breeder's Rights Act, 1994.

Growers are allowed to retain seed from production of this variety for their own use as seed only.

An End Point Royalty of \$3.85 per tonne (GST inclusive), which includes breeder royalties, applies to this variety.

End Point Royalties are critical to the future development of the HRZ WHEATS breeding program.

For more information call **AWB Growers Service Centre** on **1800 054 433**
or visit **www.awbseeds.com.au**

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