

Arrivato[®]

Durum Wheat

VARIETY SUMMARY

- Arrivato (Italian translation, "Newcomer")
- White grained, semi-dwarf durum (*Triticum durum*)
- Resistance to leaf, stem and stripe rusts
- Suited to medium to high rainfall environments
- Resistant to CCN
- Mid season maturity (similar to Tamaroi)
- Large grain size

BREEDING

Arrivato (4210.23) was bred by New Zealand Crop and Food Research in 1987 and was first brought to Australia in 1995 for evaluation by Heritage Seeds. Arrivato has been commercialised by Seednet under an exclusive licensing agreement.

AREA OF ADAPTATION

Arrivato is best adapted to regions receiving medium to high rainfall (>600 mm average annual rainfall) throughout Victoria, NSW, and SA. Arrivato has been trialed throughout Northern and Southern NSW, Victoria and South Australia and has been found to be well suited to these environments. Arrivato's suitability to WA and Queensland is currently being evaluated.

DISEASE RESISTANCE

Arrivato has excellent tolerance to stripe, leaf & stem rust, with a resistance rating of 8 - for all three types. Arrivato has shown good tolerance to yellow spot, black point and is CCN resistant.

Across Sites and Years Analysis: 1998 - 2004 - Main season sown

Yields of varieties and lines expressed as a % of Janz, number of experiments in which grown and probability that variety has higher yield than Janz

Janz t/ha	North East 1998 - 2004			North West 1998 - 2004			South East 1998 - 2004			South West 1998 - 2004		
	84 expts	3.77 yld	prob	100 expts	3.14 yld	prob	94 expts	4.38 yld	prob	72 expts	3.12 yld	prob
Arrivato	11	103	0.85	14	102	0.71	8	100	0.56	7	101	0.57
EGA Bellaroi	11	102	0.71	15	101	0.57	12	99	0.31	9	98	0.33
Janz	84	100		100	100		94	100		72	100	
Wallaroi	51	95	0.02	60	95	0.03	19	91	0	13	92	0

SOIL TYPE

Durums perform best in neutral-alkaline soils. Acidic soils should be avoided (<pH 5).

MATURITY

Arrivato has similar maturity to Tamaroi & Wallaroi. In southern NSW, a late May sowing is considered ideal. Please refer to your local DPI guide for recommended sowing window for each region.

PLANT CHARACTERISTICS

Arrivato is a white grained, dark awned semi dwarf variety similar in height to Tamaroi & Yallaroi. Arrivato will tiller well under favourable conditions. Arrivato has good straw strength and moderate resistance to lodging.

QUALITY

AWB Ltd has undertaken extensive quality testing of Arrivato, including evaluation by collaborating laboratories in Italy. The results have shown Arrivato to be a classic hard grained durum. Arrivato has exhibited high 1000 kernel weights, indicating large grain size. Semolina yields are good and Arrivato has shown superior granularity and low ash levels in comparison to Tamaroi & Yallaroi.

YIELD

In table 1, Over the past 6-years, Arrivato has been exceptionally well on both broadacre dryland and irrigation. Arrivato is being used as the standard for high yielding wheats for irrigation systems.

Table 1. Long term yield Data 1998 -2004 in NSW DPI trials

**AGRONOMIC GUIDELINES****Sowing**

- Due to Arrivato's large seed size we recommend using the following formula to correctly determine seeding rate. Seed counts are supplied with newly purchased seed.

1000 Seed Weight (grams)	x	Target Plant Population	÷	100	÷	Establishment % x Germination %
.....	
= Your Seeding Rate.....kg/ha						

- The minimum recommended sowing rate for Arrivato is 80kg/ha and growers should aim for a plant density of 150-200 plants/m². Sowing rates should be increased for late sowing.
- It is advised that a seed fungicide treatment be used for protection against Bunt and Smut infection.

Nutrition

In order to maximize grain yield and quality, durum requires relatively large inputs of nitrogen (N). Specific local advice should be sought in regards to optimum N management, however crops should generally receive up to 50 units of N either at, or prior to, sowing. Durum (ADR1) requires grain protein to be \geq 13%. Nitrogen application of 25 to 50 units at flowering may help achieve this protein level, provided that soil moisture is sufficient to enable uptake of the applied N.

- Australian soils are commonly deficient in phosphorus (P). Generally, 3kg P per tonne of grain yield is removed by a wheat crop, and fertilizer applications are often required to help maintain soil P levels. Soil testing can readily diagnose soil P deficiency, in which case the application of higher rates of P may be necessary.

- Durum has a relatively high zinc requirement. Tissue testing between 8 and 10 weeks after sowing can help diagnose Zinc deficiency. Between 15 and 20 mg/kg is regarded as a minimum tissue concentration at early tillering. 300g/ha of Zn, applied as 1.5 kg/ha of zinc sulphate heptahydrate (ZnSO₄.7H₂O) will normally be sufficient to correct deficiency. This compound is highly water-soluble and can be applied through a conventional boom spray.

Weed control

The emergence and early seedling vigour of durums is often lower than in conventional wheats, and is appreciably lower than barley. Therefore, pre- and early post-emergent weed control is important to enable good crop establishment and good early competition with weeds.

- A number of pre and post-emergent herbicides are registered for use in durum. Caution should be exercised until more data on herbicide tolerance specific to Arrivato has been collected. To date, no extraordinary sensitivity to any registered herbicide has been observed in Arrivato, however, Durums are generally sensitive to herbicides belonging to Group B (Sulfonylureas).
- Where residual pre-emergent herbicides are used, seed must be sown beneath the herbicide layer.

**PLANT BREEDER RIGHTS AND ROYALTIES**

Arrivato 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 \$3.30 per tonne (GST inclusive), which includes breeder royalties, applies to this variety.

ACKNOWLEDGEMENTS

Arrivato was bred by New Zealand Crop and Food Research and brought to Australia for evaluation by Heritage Seeds.



For more information call **Seednet on 1300 799 246**
or visit **www.seednet.com.au**

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