

Comparison of durum varieties

Dylan Bruce, Hart Field-Site Group

Key Findings

- The average grain yield for all durum varieties was 4.24 t/ha, with six out of eight varieties trialled high yielding at Hart in 2017.
- Grain protein and screenings levels were low, while test weight values were high.

Why do the trial?

To compare the performance of new durum varieties against the current industry standards.

How was it done?

Plot size 1.75 m x 10.0 m **Fertiliser** DAP (18:20) + Impact @ 100 kg/ha
Seeding date 9th of May 2017 UAN (42:0) @ 60 L/ha on 3rd July
 UAN (42:0) @ 60 L/ha on 2nd August

This trial was a randomised complete block design with three replicates and eight varieties. Fungicides and herbicides were applied as necessary to keep the crop canopy free of disease and weeds.

All plots were assessed for grain yield, protein, test weight, and screenings with a 2.0 mm screen.

Results and discussion

Durum grain yields ranged from 3.92 t/ha (Caparoi) to 4.44 t/ha (AGTD043), with a site average yield of 4.24 t/ha (Table 1). Six out of eight varieties trialled were high yielding including, Tamaroi, Sainly, DBA-Aurora, Tjilkuri, Yawa and AGTD043. Grain protein levels ranged from 9.6% to 11.0%, with Hyperno, DBA-Aurora and Caparoi meeting the 10% requirement for DR3 durum classification.

All varieties were well above the minimum test weight value of 76 kg/hL, averaging 80.1 kg/hL. Screening levels across all varieties were below 5%, ranging from 0.56% (Caparoi) to 3.41% (Yawa).

Table 1. Grain yield (t/ha), protein (%), test weight (kg/hL) and screenings (%) for durum varieties at Hart, 2017. Average grain yield (% of trial average) of Hart durum variety trials (2012-2017) and number of trials.

Variety	Grain yield		Protein		Test Weight		Screenings		Mean yield		No. of trials
	t/ha	% of site average	%	% of site average	kg/hL	% of site average	%	% of site average	%		
Caparoi	3.92	92	11.0	109	81.7	102	0.6	41	93	6	
Tamaroi	4.35	103	9.6	95	81.2	101	0.9	67	103	6	
Sainly	4.23	100	10.0	99	80.0	100	0.6	46	101	6	
Hyperno	4.06	96	10.0	99	79.5	99	1.7	122	97	6	
DBA-Aurora	4.26	100	10.4	103	79.9	100	1.2	87	101	4	
Tjilkuri	4.23	100	9.9	98	79.2	99	1.2	86	101	6	
Yawa	4.41	104	9.8	97	79.1	99	3.4	252	105	6	
AGTD043	4.44	105	9.9	98	80.6	101	0.8	58	-		
<i>DR1 receival standard</i>			>13		>76		<5				
Site Average	4.24	100	10.1	100	80.1	100	1.4	100			
LSD (P≤0.05)	0.26		0.73		0.66		0.60				

- Insufficient data (included in Hart durum variety trials for less than three seasons)

