

## Application for Variety Certification

### A. Variety Name:

D1128 (Topper)

### B. Origin and Breeding History:

D1128 is a semidwarf spring durum which was derived from a F<sub>2</sub> head selection made from World Wide Wheat, L.L.C.'s quality desert durum population grown at Maricopa Arizona in 1991. A "best plant" head selection was made at Post Falls Idaho in the fall of 1991. Quality screening began with the F<sub>4</sub> in 1992 and yield evaluation with the F<sub>5</sub> in 1993. Best Plant Selection continued through the F<sub>7</sub> in 1995 and head rows were grown for the basic breeder seed. One acre of Foundation Seed was produced at Maricopa Arizona in 1996. Genetic male sterile and off type plants were rogued from the foundation seed planting in 1996 at a rate of less than 1 in 500. Because of outcross seed set or unidentified male sterile plants which are associated with black awns, subsequent seed fields may be expected to have up to 1 in 500 male sterile or black awned plants.

### C. Detailed Description:

D1128 is a high yielding semidwarf spring durum with good semolina and pasta qualities. Juvenile growth is erect. Heads are dense and tend to be flat sided and tapering on the flat side, awned and white at maturity. Glumes are white, long and wide. Shoulders are elevated to apiculate. Beaks are acuminate and 6mm long. Seeds are elliptical, long, vitreous and amber. The brush is short and not collared. The germ is mid-size. Checks are rounded. Anthers are yellow. Flag leaf at booting stage is green and not recurved. At maturity, D1128 is somewhat similar to Bravadur in appearance. Because of a general lack of durum disease presence in Arizona, disease reaction is generally unknown.

### CI. Agonomic Performance Description:

- ◆ Average yield of D1128 for seven location years was 96% of the high yielding Duraking at 7,109 pounds per acre.
- ◆ Average test weight for five location years was 64.1 lbs. Versus Duraking at 64.3 and Yavaros 79, the champion of all time, at 65.1.
- ◆ Average date 50% headed for five location years was March 21, the same as for Yavaros 79 and three days later than Duraking.
- ◆ Average plant height at maturity was 39.2 inches for five location years. This was equal to Yavaros 79, four inches taller than Duraking and 3.6 inches taller than Rio.
- ◆ Average percent lodged at maturity for five location years was less than Duraking and all the other varieties, except for Durex.

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### C2. Quality Performance Description:

- ◆ Average grain protein for five location years at 12% moisture was 13.9%, intermediate between Duraking, Ria and Reva & Durex.
- ◆ An average modified SDS sedimentation rate for two location years was 7.9 for D1128 vs. 7.0 for Duraking and 10.4 for Ria.
- ◆ Seed size in 1996 was smaller than either Duraking or Ria.
- ◆ Semolina analysis by the California Wheat Comm. Lab. In 1996:  
Semolina yield was good. Slightly less than Ria and 1.2% less than for Duraking.  
Alveograph W value was less than Duraking; considerably less than for Ria.  
Alveograph P/L value was superior to either Ria or Duraking.  
Wet gluten percent, at 36.1%, was 1.1% better than Ria and 4.6% greater than Duraking.  
Dry gluten percent was slightly higher than Ria and 2.4% better than for Duraking.
- ◆ Spaghetti-Pasta analysis by the California Wheat Commission Laboratory in 1996:  
Spaghetti color score at 8.0 was intermediate between Ria at 9.0 and Duraking.  
Cooked spaghetti weights were similar for D1128, Duraking and Ria.  
Cooking loss for D1128 was slightly more than for Duraking; and Ria.  
Firmness of spaghetti was very good at 6.65 g/cm; less than Ria at 7.55 and more than for Duraking at 6.36.

### D. Performance Data:

Grain Yields - Seven Location Years  
Pounds per acre

<u>Location</u>	D1128	Duraking	Yaveros 79	Ria	Reva	Durex
W <sup>2</sup> Maricopa Arizona 1993	8178	8608	8629	8471	7556	7446
W <sup>2</sup> Maricopa Arizona 1994	7536	8057	7629	7124	6774	6894
W <sup>2</sup> Maricopa Arizona 1995	7077	7288	7301	6722	6015	5695
W <sup>2</sup> Maricopa Arizona 1996	7243	7949	7349	8130	7441	6989
W <sup>2</sup> Maricopa Arizona 1997	4776	4568	4199	4524	4359	3969
U/A Mac Arizona 1995	7000	7594	--	7081	6277	5718
U/A Gila Bend Arizona 1995	5773	5702	--	4752	4594	5049
<b>Average</b>	<b>6799</b>	<b>7109</b>	<b>(7021)</b>	<b>6686</b>	<b>6197</b>	<b>5966</b>