

## Application for Variety Certification

### A. Variety Name:

D 3240 (Pending name: Globe) *Approved for certification by ACIA*

### B. Origin and Breeding History:

D 3240 was derived from an F<sup>2</sup> head selection made in World Wide Wheat, L.L.C.'s (W<sup>3</sup>) 1993 Male Sterile Facilitated Recurrent Selection (MSFRS) quality durum population. In the F<sup>3</sup> generation, a "best plant" head selection was made at Moscow, Idaho under severe Hessian fly pressure. Best Plant Selection continued through the F<sup>6</sup>. A breeder seed strip of D 3240 was grown in Ronan, Montana in 1997. This F<sup>7</sup> increase is the basic germplasm. One acre was planted at Maricopa, Arizona in 1998 to produce Foundation Seed. Approximately 1 in 500 male sterile and off type plants was rogued from the breeder strip in Montana. And, as is frequently the case with genetic MSFRS durum population breeding, genetic sterile and/or black awned plants may occur in the Foundation seed increase at a rate in the range of 1 to 500 because of seed set on unidentified male steriles. To reduce or eliminate these occurrences in the future, new head rows are being grown in 1998 for the 1999 Foundation planting.

### C. Detailed Description:

D 3240 is a semi-dwarf spring durum with excellent semolina and pasta qualities. Yield comparable with Duraking & Ria, and substantially better than for Durex and Reva. Juvenile growth is erect. Heads are white, dense, awned, very wide and oblong. Glumes are long, wide, white and pubescent. Shoulders are elevated. Beaks are acuminate, 2mm long and pubescent with a dark tint on the back side. Seeds are elliptical, amber, long, wide and very large. The brush is short and collared. The germ is mid-sized. Cheeks are rounded. Anther color is yellow. Flag leaf at booting is green and erect. At maturity in the 1998 increase at Maricopa, both in a foundation seed field and within individual head rows, some coloration of awns is observed. Awn color may range from white to tan or brown.

Because of a general lack of durum disease presence in Arizona, pathogen reaction is generally unknown.

#### C1. Agronomic Averages:

- ◆ Yield of D 3240 for five location years 5,983 lbs. per acre, less than Duraking, but more than Ria.
- ◆ Average test weight for five location years was 64.2 lbs. per bushel. Probably very similar to Ria, and only slightly less than Duraking.

## Application for Variety Certification

- ◆ Average seed weight was 59.7 grams per 1,000 kernels, this is considerably more than Duraking and the other comparable varieties.
- ◆ Average plant height for five location years was 35.4 inches; 1.6 inches taller than Duraking.
- ◆ Average percent lodged for five location years was similar to Duraking, Ria and Reva, but considerably more than Durex.
- ◆ Average date of 50% headed was the same as for Reva, one day later than Duraking and two days later than Ria.

### C2. Quality:

- ◆ Average grain protein percent at 12% moisture was 13.07%, higher than Duraking and less than Ria, Reva and Durex. Analysis by the California Wheat Commission Laboratory in 1996 at 12.71% was intermediate between Duraking and Ria.
- ◆ Semolina analysis by the California Wheat Commission Laboratory for 1996 Maricopa Production:  
Flour and semolina extracted was 76.6% and 66.4%, respectively, was outstanding.  
Semolina protein level at 12.04%, less than Ria but 1.25% more than Duraking.  
D 3240 had the least specks of the varieties compared.  
Alveograph W value was very high.
- ◆ Semolina gluten content at 37.1% wet and 15.2% dry was outstanding; much higher than Ria & Duraking.
- ◆ Spaghetti color was very good. Much better than Duraking and better than Ria.
- ◆ Cooked spaghetti weights were similar for D 3240, Duraking and Ria.
- ◆ Cooking loss for D 3240 was the least of any varieties tested.
- ◆ Firmness was excellent at 7.28 g/cm; much superior to Duraking and near that of Ria.

### D. Performance Data:

Grain Yields – Five Location Years, pounds per acre

Maricopa, AZ	D 3240	Duraking	Yavaros 79	Ria	Reva	Durex
W <sup>3</sup> Maricopa, AZ 1995	6,428	6,826	6,798	6,122	6,015	5,695
W <sup>3</sup> Maricopa, AZ 1996	7,420	7,515	7,438	7,393	6,660	6,340
W <sup>3</sup> Maricopa, AZ 1997	4,830	4,568	4,199	4,524	4,359	3,960
U/A Maricopa, AZ 1996	6,110	6,890	-	5,414	5,854	4,062
U/A Gila Bend, AZ 1996	5,125	5,563	-	5,018	4,742	5,196
AVERAGE	5,983	6,272	*6,145	5,894	5,430	5,052