

EXHIBIT "A"

*To WASHINGTON
CROP Improvement*

ORIGIN AND BREEDING HISTORY

'RIA'

'D 5318B' is a semi-dwarf spring durum developed by Farmers Marketing Corporation from AZ-MSFRS-86 Quality Enhanced Semi-dwarf Durum Germplasm released by the University of Arizona Agricultural Experiment Station. D 5318B was derived from a single F₂ head selection from the male sterile facilitated recurrent selection population. A single F₃ row was grown in Arizona in 1987. Fifteen heads were seeded in separate rows at Post Falls, Idaho that summer. Eight of these appeared uniform and fertile and were bulked for increase at Yuma in 1988. Yuma production exhibited a rather strong segregation for white and black awns. Spikes with white were selected and head rowed at Yuma in 1989. A single F₆ row was selected as better than the rest and increased at Mt. Vernon, Washington that summer to produce present breeder seed. It has been evaluated for performance 1990 to 1994. A small increase of this breeder seed was made in 1992 at Maricopa. Remnants of this increase was utilized to plant a small foundation increase in 1994. Heads were obtained from this planting for headrowing in 1995 for future breeder seed.

In performance, D 5318B has been uniform and stable. After an initial removal of a common wheat mixture, approximately 1 in 500 off-type plants, some slightly taller and a rare plant with black awns were removed from the foundation increase.

Because of the possibility of seed set on unidentified male sterile plants and the history of black awns segregation in the original population, male sterility and/or black awns may appear in the following generations at possibly .001%.

EXHIBIT "D"

D 5318B is a semi-dwarf spring durum. Juvenile growth is erect. Flag leaf is erect, green and not twisted in the boot stage of growth. At maturity, stem spike and awns are white. Spikes are large, wide and slightly curved at maturity, and inclines at 30° angle. Spike mid-dense, more nearly round than Reva and tend to be longer. Lodging at maturity is similar to Yavaros, more than for the slightly shorter Reva or Duraking. Plants are shorter than Mexicali 75 or Yavaros 79.

Test weight and kernel weight has average slightly less than for Reva or most of the other desert durums. Otherwise, seeds are quite similar to Reva. Elliptical, with shallow crease and rounded cheeks. Very bright and yellow and free of black point. Glumes are large and long and glabrous with apiculate shoulders. Beaks are 4 mm in length and 1 mm wide. Awns are very long.

D 5318B has been tested and is adapted to the irrigated production areas of Arizona and California where desert semi-dwarf durums are grown. Overall semolina quality is good, similar to Reva, quite satisfactory for making pasta for domestic markets, specialty markets, and would be suitable for "identity preserved" markets.

Breeder seed of D 5318B is to be maintained by Farmers Marketing Corporation by growing headrows when necessary to maintain purity. Breeder seed will be constituted by growing headrows and discarding all non-conforming and segregating rows prior to harvest.

D 5318B will be sold by variety name only as a class of certified seed. Seed production will be limited to three generations beyond breeder seed; Foundation, Registered and Certified.