

A. DO3-21 (unnamed as yet) *Kronos Durum* \mathcal{R}

B. Origin and Breeding History of Arizona Plant Breeders DO3-21

DO3-21 was derived by Arizona Plant Breeders, Inc. from a F₂ head selection made in a genetic male sterile facilitated recurrent selection population. This population was developed by the University of Arizona and released as AZ-MSFRS-86 Quality Enhanced Spring Durum Wheat Germplasm.

The F₂ population of this germplasm was grown in Arizona in the fall of 1987 and a single head was selected in the spring of 1988 to be grown as an F₃ head row in Montana. Four heads were selected from this F₃ row and seeded in Arizona as an F₄ plot of four single rows in the fall of 1988. Twenty-four (24) heads were taken from one F₄ row within the plot and seeded in Montana in the spring of 1989. Eighteen (18) uniform, non-segregating F₅ rows were bulked to form the F₆ generation. This F₆ generation was used for testing and a bulk increase to the F₇ generation in Arizona during the fall of 1989. The bulk F₇ Seed was used to plant a small increase during the summer of 1990 in Montana. The F₈ seed harvested from Montana was designated basic seed and was used to produce breeders seed during the winter of 1990 in Arizona.

Kronos Durum (Spring)

- C. Spring durum with light green leaves and upright early growth habit similar to WestBred 881. Leaves tend to be slightly larger and darker than 881.

The heading date for D03-21 is the same as 881 and about two weeks earlier than D03-5 and Turbo. Plant height of D03-21 in recent trials was 40 inches compared to 43 and 40 for Turbo and 881 respectively.

Mature plants and head coloring is white, similar to 881 with white awns. The seed heads of D03-21 are longer and more tapered than 881 and more lax than both 881 and Turbo. The rachis internode lengths of D03-21 is almost 2 times as long as 881. The rachis of D03-21 appears to have less pubescence than 881. The beak on the glume is similar to 881 in size and length.

D03-21 being a semi-dwarf may have a few tall variance but the frequency has not been established at this time.

- D. Evidence for supporting this identity was given in (C) above.
- E. D03-21 is adapted to desert Southwest areas of Arizona and California where WestBred 881 and WestBred Turbo are grown.
- F. Three classes of certification will be recognized beyond the Breeders class. These being Foundation, Registered and Certified. PVP will be sought with a title option.
- G. Breeders seed will be reconstituted by head-rowing from Breeders seed.
- H. No restrictions.
- I. Seed samples of experimental D03-21 will be provided upon request.

Breeder: Arizona Plant Breeders, Inc.
Al Carleton

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ARIZONA
PLANT
BREEDERS, INC.



February 6, 1998

Mr. Keith Pheifer
Manager
Washington Crop Improvement Association
414 S. 46th Ave.
Yakima, WA 98908

Dear Keith,

Arizona Plant Breeders, Inc., the breeders of "Kronos" spring durum, would like to amend the description of "Kronos". During the past season, a few red colored kernels that appear to look more like spring wheat have been found in all classes of Certified "Kronos". No wheat type plants have been observed in field inspections in Washington, Idaho, California and Arizona.

I would like to describe that "Kronos" seed may have a range of 0-15 red kernels in all classes of seed Certification.

We intend to head-row "Kronos" again and try to remove this variant from the variety.

Thanks for considering my request. Have you been back to Saudi Arabia lately? It's been a long time since we visited. I hope to see you in Tucson at the National Seed Certification meeting in June.

Respectfully yours,



A.E. Carleton
President, Arizona Plant Breeders, Inc.