Flowering of most plants from B68195-25 is 8 days later than Gila and 5 days later than Royal, although some plants flower as early as Gila. Early-maturing lines can be obtained by selection.

In field disease nurseries in Arizona, B68195-25 has been resistant to root rot (Phytophthora drechsleri Tuch), rust (Puccinia carthami), and Verticillium wilt (Verticillium albo-atrum). An occasional plant has been affected by an unidentified yellow. B68195-25 does not have resistance to root rot and wilt equal to that of the highly resistant breedling ‘Briggs’.

In 1 year of testing, B68195-25 compared favorably with all other high-yielding cultivars in early plantings from 15 December to 15 January at Mesa, Marana, and Yuma. For 2 years, yield of B68195-25 from later plantings in February at Mesa averaged 1.8, 1.7, 1.3, and 2.2 times higher than the yield of Royal, ‘AC-1’, ‘Rio’, and Gila, respectively. Oil content of B68195-25 ranged from 42 to 44%.

B68195-25 germplasm was composed as an F₃ derived from the double cross (12812 × 12025) × (12417 × 377-29); then B68195-25 was derived as an F₅ selection from B6915-2. The pericarp of 12812 and 12417 have very thin hulls, resulting in high percentage of oil of the achene. The three-layered seed coat color of the parent is: light tan for both prominent layers (inner and outer epidermis) for 377-29; and brown for both prominent layers of the remaining two parents. Seed with light colored seed coats yield light colored oil from oil extraction. 12025 has a light-tan pericarp with a very thin phytomelanin content in the thin pericarp. The two prominent layers of the seed coat are light tan. Because the parent 12417 yields a dark-colored, low-quality oil*, B68195-25 was tested for oil quality characteristics. In 1970 cold extraction of oil in the laboratory yielded a light-yellow oil that heated bleached to a clear color at 300°C. A bleach of color by heat suggests good oil quality. In 1972 and 1973, laboratory extraction of oil from B68195-25 under temperatures between 90 and 130°C yielded a light yellow oil that heat-bled. The 130°C is the approximate temperature of commercial screw-type oil expellers now in use. B68195-25 should be tested for oil quality with a commercial extraction mill before it is released as a cultivar. Seed stock will be maintained by L. H. Zimmerman, Dep. of Plant Sciences, Univ. of Arizona, Tucson, AZ 85721.

REGISTRATION OF CORNERSTONE MALE-STERILE WHEAT GERMLASM
(Reg. No. GP 74)

C. J. Driscoll

'Cornerstone' wheat, (Triticum aestivum L. var. durum), was developed as a chromosomal male-sterile line at the University of New South Wales, Australia. Cornerstone was derived from the chromosomal 4A/’Pitic 62’ following application of pollen from the latter cultivar. The male-sterile line was crossed once to normal Pitt 62 and then condensed with Condon, with selection for heterozygosity in this backcrossing and selfing cycles. Selffertile with a male-sterile segment, this line contains homozygous male sterile and fertile segments or bivalents. The chromosome segments in this line consists of 21 bivalents.

The mutant locus (or deleted segment) to as the 310 mutant, is located on the 4A chromosome.

Male sterility appears to be complete, having indehiscent anthers. Heterozygotes, which contains homoygous male sterile and fertile segments, produce a hybrid of hybrid wheat and for production of F₂

REGISTRATION OF D6962 DURUM WHEAT GERMLASM
(Reg. No. GP 73)

J. S. Quick, J. D. Miller, and B. J. Donnelly

'D6962' (Triticum turgidum L. var. durum), CI 17487, is a spring durum wheat developed by the North Dakota Agric. Exp. Stn., North Dakota State Univ., Fargo, in cooperation with the ARS, USDA. D6962 was selected from the cross 'Leeds'/D65152 made in 1966. D6962 was selected from the cross 'Leeds'/D65152 made in 1966.


**Driscoll, C. J. 1972. XYZ system of producing hybrid wheat.