epiphytotics in 1981 and 1982, FC 711 had a mean disease index of 2.9 (scale of 0 to 7) compared with 2.7 for FC 703 (resistant check) and 5.8 for FC 901 (susceptible check). The percentage of harvestable roots for the three lines was 68, 72, and 12, respectively. With a set of 10 male sterile testers, the hybrids involving FC 711 had lower average sucrose production than several other resistant germplasms in the program, primarily as a result of lower sucrose content. However, the diversity of this FC 711 germplasm provides the potential for breeders to develop highly productive hybrid varieties with currently used monogerm male sterile parents. Hence, this germplasm is released for potential use as a pollinator, or as a source for development of pollinators in the breeding of rhizoctonia-resistant hybrid varieties by sugarbeet breeders.

Breeder seed is maintained by USDA-ARS, and will be provided to sugarbeet breeders in quantities adequate for reproduction. Written requests for seed should be made to Sugarbeet Production Res., USDA-ARS, Crops Res. Lab., Colorado State Univ., Fort Collins, CO 80523.

REGISTRATION OF RHA 309, RHA 310, AND RHA 311 SUNFLOWER GERMPLASM
(Reg. Nos. GP 11 to GP 13)

J. F. Miller, T. J. Gulya, and W. W. Roath

Three nonoilseed sunflower (Helianthus annuus L.) germplasm lines, RHA 309, RHA 310, and RHA 311, were developed cooperatively by USDA-ARS and the North Dakota Agricultural Experiment Station, Fargo, N. Dak., and released in 1982. These lines are selections from previously released lines RHA 293 and RHA 294 and are an improvement in combining ability, uniformity, and other characters. The lines have fertility restorer genes in a cytoplasmic male sterile background and are released for use as male parents in nonoilseed hybrids. RHA 309 has basal, recessive branching and RHA 310 and RHA 311 have upper, recessive branching, all of which have an extended period of pollen production.

RHA 309 is an S₄ single plant selection derived from the parental line RHA 293. RHA 293 was a composite of seed of nine F₅ lines from the cross cms HA 155/HIR 34/2/RHA 282. RHA 309 was specifically selected for a high degree of basal branching and uniformity in seed quality characteristics (achene size and color). Flowering date and plant height of RHA 309 are equal to those of RHA 293. In testcrosses with female lines cms HA 288 and cms HA 292, hybrids have been 12% higher in yield and more uniform in hull color characteristics (primarily black with white stripes down the sides) when compared with Hybrids 883 and 923. The mean yield of Hybrids 883 and 923 was 2210 kg/ha. The hybrids did not differ from the checks in flowering date, height, seed size over a 20/64 inch screen, and nutmeat percentage.

RHA 310 is an S₄ single plant selection derived from the parental line RHA 294. RHA 294 was selected from a multiple cross involving cms PI 343763, Bonita Giant/Manchurian, HA 304, and cms HA 305. In testcrosses with female lines developed by industry breeders, RHA 310 flowers (primary bud) 3 d later than RHA 294 and will flower 1 d later, were 5 cm taller, and were equal in yield, even though the hybrids were earlier flowering. The hybrids involving cms PI 343763, Bonita Giant/Manchurian, HA 304, and cms HA 305. In testcrosses with female lines cms HA 288 and cms HA 292, hybrids have been 12% higher in yield and 1 d earlier in flowering than the checks.

Even though the hybrids were earlier flowering, maturity dates were equal to the check hybrids.

Limited quantities of seed of each germplasm are available from the Seedstocks Project, Agronomy Dep., North Dakota State Univ., Fargo, ND, 58105.

REGISTRATION OF ARK 2301, ARK 2307, AND ARK 2309 TRITICALE GERMPHASM
(Reg. Nos. GP 6 to GP 9)

K. D. Beatty and I. L. Eldridge

Four triticales (X Triticosecale Wittmack) for release as parental germplasm for forage and grain-type triticales in Arkansas and other mid-south and southeast locations. Grower acreage of triticle continu-riticle primarily for annual forage production and calf operations.

The germplasm lines originated from introductions from California planted in 1976-1977 at Keiser, Ark., Research and Extension Center. Limited seedability had been applied to the parental sources in 1977-1978 season. The lines have been grown in Winter or Spring Triticeae Nurseries sponsored by the University of Arkansas. All lines have been evaluated statewide since 1977. All lines are consider-riticle types although this has not been cytologically confirmed. The seed of the RHA 309, RHA 310, and RHA 311 lines was processed as they came from the production nursery. The seed of the Ark 2301, Ark 2307, and Ark 2309 lines was processed as they came from the production nursery. The seed of the RHA 309, RHA 310, and RHA 311 lines was processed as they came from the production nursery. The seed of the Ark 2301, Ark 2307, and Ark 2309 lines was processed as they came from the production nursery.