180, and 191 cm, respectively, compared with 185 cm for the check hybrid cmsHA 292/RHA 310. Days from planting to flowering of hybrids with RHA 329 to RHA 334 were 70, 69, 72, 71, and 72 days, respectively, compared with 71 days for the check hybrid cmsHA 292/RHA 310. Percentage of achenes passing over a 50/160 cm (20/64 in.) round hole screen for hybrids with RHA 329 to RHA 334 were 73, 46, 54, 73, 63, and 57%, respectively, compared with 76% for the check hybrid cmsHA 292/RHA 310. All hybrids had distinct black and white achene color and striping, and were equal to the check hybrids in percentage of kernel. These lines produced hybrids that were significantly more uniform in height and flowering, and had more upright head positions than the check hybrids.

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

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References and Notes

REGISTRATION OF THREE NONOILSEED SUNFLOWER GERmplASM POPULATIONS AND FIVE NONOILSEED SUNFLOWER GERmplASM BULK POPULATIONS

SUNFLOWER (Helianthus annuus L.) germplasm populations, ND-NONOIL 1 (Reg. no. GP-51), ND-NONOIL 2 (Reg. no. GP-52), and ND-NONOIL 3 (Reg. no. GP-53), and five nonoilseed germplasm bulk populations, ND-NONOIL B1 (Reg. no. GP-54), ND-NONOIL B2 (Reg. no. GP-55), ND-NONOIL B3 (Reg. no. GP-56), ND-NONOIL B4 (Reg. no. GP-57), and ND-NONOIL B5 (Reg. no. GP-58), were developed cooperatively by the USDA-ARS and the North Dakota Agricultural Experiment Station, Fargo, ND, and released in 1985. The three populations and five bulk populations are available for use in sunflower breeding and development programs. These releases provide germplasm with improved yield and seed quality characteristics for development of superior nonoilseed hybrids.

ND-NONOIL 1 is a random-mated population of 29 lines derived from the open-pollinated cultivar ‘Sundak’ after three cycles of selection for yield and seed quality. Sundak was released jointly by the USDA and the North Dakota Agricultural Experiment Station in 1973. ND-NONOIL 2 is a random-mated population of 18 lines derived from the cross CRR-01-1-2/RHA 329 to RHA 334. The procedure of selection and testing was the same for all three populations. The first step of the cycle was to select plants from five crosses. Plant selection within each generation was made to improve achene size, achene color, and self-fertility. Considerable variability exists in the populations for head size and head inclination. ND-NONOIL 2 has some restoration genes present; however, all plants exhibit a single-headed characteristic.

ND-NONOIL B1, ND-NONOIL B2, ND-NONOIL B3, ND-NONOIL B4, and ND-NONOIL B5 resulted from five cycles of selection of F2 lines from five crosses. Plant selection within each generation was made to improve achene size, achene color, and self-fertility. Considerable variability exists in the populations for achene size and achene color. Selected plants that performed best in the populations and population bulks were bulked to form the released populations.

Limited quantities of seed of each germplasm source are available from the Seedstocks Project, Agronomy Department, North Dakota State University, Fargo, ND.

References and Notes