Registration of ‘Ontagota 89’ Sesame

‘ONTAGOTA 89’ SESAME (Sesamum indicum L.) (Reg. no. CV-5, PI 561706) was developed at the Northwest Agricultural Research Center (CIANO-INIFAP-SARH), Ciudad Obregón, Sonora, Mexico. It was released in 1989 as a high-yielding cultivar with tolerance to root rot [incipit by Macrophomina phaseolina (Tassi) Goidanich], and adapted for production in northwest Mexico.

Ontagota 89 was derived from the cross ‘Eva’/‘Pachequeño’ //Instituto 27/CIANO 27. ‘Eva’ is an early-maturing commercial variety released by the University of California Riverside Experiment Station. Pachequeño is a tall, late-maturing landrace cultivar. Instituto 15 is a tall and intermediate-maturing cultivar released by CIANO in 1960. ‘CIANO 27’ is a short, intermediate-maturing and nonbranching cultivar released by CIANO in 1960. Selections were made from the segregating population using the pedigree method. Ontagota 89 originated as an F1, F2, and F3 plant selection, bulked in the F2 generation, and designated as CD156-5. It was tested in regional yield trials at several locations in northwestern Mexico.

Ontagota 89 is a nonbranching, late-maturing cultivar. When seeded during the first 2 wk of May, it begins flowering =66 d after planting and reaches physiological maturity at 115 d. Mature plants of this cultivar average 163 cm in height; height to the first capsules averages 70 cm.

Ontagota 89 produces three white flowers per leaf axil. The capsules are bicafered, semidescisive, oblong-narrow, with some pubescence and average 28.0 mm long and 8.0 mm wide. The average seed number per capsule is 84 and the lateral capsules are arranged 45° on the stem or branches. The seed is creamy white and ovate in form, with rounding margin and acute extreme, averaging 3.0 mm long and 2.0 mm wide. Seed weight averages 2.7 g 1000 seed-1, with a test weight of 59.8 kg hL-1.

Ontagota 89 was tested at Ciudad Obregón, Sonora, over a period of 6 yr and averaged 1264 kg ha-1. It outyielded the local check cultivar Yori 77 by 18%. Seed on Ontagota 89 has an average of 400 g kg-1 oil, 311 g kg-1 protein and 176 g kg-1 carbohydrates. The average oil, protein, and carbohydrate content of Yori 77 is 429, 292 and 167 g kg-1, respectively. The fatty acid composition of oil from Ontagota 89 seed averages 389 g kg-1 oleic acid, 419 g kg-1 linoleic acid, 130 g kg-1 palmitic acid, and 65 g kg-1 stearic acid with an oil iodine number of 111.0. The oil composition of the check cultivar, Yori 77, averages 415 g kg-1 oleic, 420 g kg-1 linoleic, 105 g kg-1 palmitic, and 59 g kg-1 stearic acid, with an iodine number of 113.5.

Seed of Ontagota 89 was distributed to seed-producing organizations in Sonora in 1990. Breeder seed will be maintained by CIANO, Apartado Postal 515, 85000 Ciudad Obregón, Sonora, Mexico. Additional information on the performance and characteristics of Ontagota 89 has been published (1).

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References and Notes

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Registration of ‘Cherokee’ Red Clover

‘CHEROKEE’ RED CLOVER (Trifolium pratense L.) (Reg. no. CV-23, PI 560138) was developed by the Department of Agronomy, Institute of Food and Agricultural Science, University of Florida, and released in October 1991. The original population from which Cherokee was selected consisted of approximately 12% ‘Nolins’, 14% ‘Tensas’, and 74% reseed selections from evaluations of plant introductions at Gainesville and Ft. Pierce, FL, in 1976, 1977, and 1978. A bulk of this seed (Cycle 0 seed) was planted in rows on the Agronomy Farm at Gainesville in fall 1978. Seed was bulk-harvested from the most vigorous, early-flowering plants in spring 1979 (Cycle 1 seed). This seed was planted in rows at the same location in late October 1979. The earliest, flowering, most vigorous 20% of the established plants in this planting were selected and allowed to intercross. Seed was harvested from selected plants in spring 1980 (Cycle 2 seed).

For the next selection cycle, Cycle 2 seed was planted in greenhouse flats in fall 1980 and transplanted to field plots after 6 wk. Plants grew through the winter; they were mowed off in mid-March and allowed to regrow. The most vigorous and early-flowering 20% of plants were selected and allowed to intercross. At seed harvest, all selected plants were undercut with a peanut lifter and root systems were classified as either heavily galled or mostly not galled due to infection by root-knot nematodes (Meloidogyne spp.). Seed from 616 mostly not-galled plants was bulked (Cycle 3 seed). Selection cycle 3 was managed in a similar fashion in the 1981-1982 season, except that plants were not selected for nematode galling. Selection pressure was =10% (=600 plants selected from an initial population of near 6000). Selection cycle 5 was initiated in fall 1982 by transplanting 6-wk-old plants into field plots in mid-November. In spring 1983, initial shoot growth of all plants was removed and 20% of the plants were selected based on regrowth vigor and early flowering. Selected plants were allowed to intercross and seed was bulk harvested (Cycle 5 seed). Numbers of plants contributing to the various selection cycles ranged between =500 and 1000. In fall 1983, a field of =0.1 ha at the Green Acres research farm near Gainesville was direct-seeded in rows using Cycle 5 seed. No selection pressure was imposed on this planting, and the seed increase was harvested in summer 1984. After two seasons of testing at various locations in Florida, an additional breeder seed increase was produced in Oregon in 1987. Cherokee was tested under the experimental designation FL5.

Cherokee is a semi-nondormant red clover, with most plants initiating flowering stems in daylengths of 12 h. Under typical spring growing conditions in Florida, Cherokee will flower 10 to 14 d earlier than ‘Kenstar’. Cherokee is generally adapted to the southeastern USA as far north as Tennessee, and west until persistance becomes limited by annual rainfall. In most of these areas it persists as a biennial/perennial, but in peninsular Florida it is grown as an annual. In cultivar evaluation trials across the lower coastal plains, Cherokee has shown superior early-season dry matter (DM) yields compared with other red clover cultivars. It has yielded less than crimson clover (Trifolium incarnatum L.) at early harvests, but produced higher total season yields because of persistence later into the season, and was comparable in yield to ‘Florida 77’ alfalfa (Medicago sativa L.) during the spring months (1). At more southern locations, Cherokee was usually superior in DM yield compared with more dormant red clover cultivars developed in areas further north (2).

Cherokee has lower (P < 0.05) root galling and nematode reproduction (egg mass score) in response to the root knot nematodes [Meloidogyne arenaria (Neal) Chipwood; M. hapla]