REGISTRATION OF OCTOPLOID HYBRID CLOVER GERMPLASM FROM THE CROSS OF TRIFOLIUM AMBIGUUM × T. REPENS

An octoploid (2n = 8x = 64) (Reg. no. GP-95, PI 546493) hybrid clover from the cross of *T. ambiguum* M. Bieb. (2n = 4x = 32) × *T. repens* L. (2n = 4x = 32) was jointly released by the Kentucky Agricultural Experiment Station and Grasslands Division, DSIR, New Zealand, in 1990. The octoploid hybrid clones (designated 8x-435) were produced by doubling the chromosome number of Hybrid 435 by in vitro colchicine methods (1).

Pollen stainability of the octoploid hybrid averaged 33.6% in greenhouse-grown plants and the pollen was tetrahedral. The chromosomes of the octoploid hybrid associated in meiosis as 2.64 univalents, 27.62 bivalents, 0.74 trivalents, 0.86 quadrivalents, and 0.10 pentavalents (2).

The 8x-435 hybrid is morphologically intermediate between the two parents, very similar to Hybrid 435, and does not exhibit the rhizomatous root habit of *T. ambiguum* or the stoloniferous habit of *T. repens*. Under field conditions, 8x-435 clover is slightly less vigorous than Hybrid 435 but apparently is nodulated by field strains of *Rhizobium* spp. Under greenhouse conditions, it flowers similarly to Hybrid 435 and is more self-fertile than Hybrid 435, producing 86 seeds from 2000 florets selfed. Very few seeds were produced from crosses among 10 8x-435 clones under field conditions in 1990. Backcrosses to *T. ambiguum* or *T. repens* have not been attempted.

The 8x-435 hybrid is not directly usable as a cultivar, but may be useful in breeding because it has higher pollen fertility than Hybrid 435. Up to five rooted propagules of an 8x-435 hybrid clone may be obtained from the Department of Agronomy, Agricultural Science Bldg. N, University of Kentucky, Lexington, KY 40546-0091.

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References and Notes
