REGISTRATION OF BROWN LOAM SYNTHETIC NO. 2 WHITE CLOVER GERMPLASM

BROWN LOAM SYNTHETIC No. 2 drought-tolerant white clover (*Trifolium repens* L.) germplasm (Reg. no. GP-1) (PI 512040) was released by USDA-ARS and the Mississippi Agricultural and Forestry Experiment Station in 1987. In 1976, N.C. Edwards selected 27 white clover clones from the site of a former white clover variety test following a severe drought at the Mississippi Brown Loam Experiment Station, Raymond, MS. These drought tolerant clones had survived from 1 July 1976 to 1 Nov. 1976 with 159 mm (6.3 in.) of rainfall. During this moisture deficit period, there were 63 d with only 23 mm (0.79 in.) of rainfall. Twenty replications of the clones were planted in a polycross nursery in the fall of 1977. Five clones with severe disease symptoms were eliminated prior to flowering. Polycross seed was harvested in 1978 and polycross progenies of the remaining 22 clones were evaluated for 3 yr and compared to 'Regal' and 'Tillman'. The synthetic also had significantly less PSV than Regal or Tillman. The synthetic exceeded Regal and Tillman in the second, third, and fourth year of testing (3).

White clover is affected by virus diseases, which cause serious damage and reduce persistence. Alfalfa mosaic virus (AMV), clover yellow vein virus (CYVV), peanut stunt virus (PSV), red clover vein mosaic virus (RCVMV), and white clover mosaic virus (WCMV) are common in white clover. Of these, PSV is most destructive. The incidence of infection and damage caused by viruses increases with the age of a clover stand. Virus infections were monitored using the enzyme-linked immunosorbent assay (ELISA) (2, 4). The drought tolerant synthetic had significantly less PSV than Regal or Tillman. The synthetic also had significantly less CYVV than Regal and Tillman. Differences in infection with AMV, RCVMV, and WCMV were not significant. Selection for PSV resistance apparently occurred concurrently with selection for drought tolerance and improved persistence. In addition to virus resistance, preliminary results indicated moderate tolerance to a North Carolina population of the stem-rot fungus, *Gloeosporium solani* (caused by *Glomerella cingulata*), and anthracnose resistance. Both 65G-251 and Uniharvest have seed shatter resistance. SNLL-87 is a winter-hardy, disease resistant (gray leaf spot resistance), soft-seeded, narrow-leafed (blue) lupin germplasm (Reg. no. GP-1) (PI 63840) was released by USDA-ARS and the Georgia Agricultural Experiment Station, Coastal Plain Experiment Station on 12 June 1987. SNLL-87 (1) was selected from the cross ‘WH-1’ (a winter-hardy selection from Portugal) × ‘Rancher’ (2), a sweet cultivar. SNLL-87 is a winter-hardy, disease resistant (gray leaf spot resistance), soft-seeded, narrow-leafed (blue) lupin germplasm (Reg. no. GP-1) (PI 63840) was released by USDA-ARS and the Georgia Agricultural Experiment Station, Coastal Plain Experiment Station on 12 June 1987. SNLL-87 (1) was selected from the cross ‘WH-1’ (a winter-hardy selection from Portugal) × ‘Rancher’ (2), a sweet cultivar. SNLL-87 is a winter-hardy, disease resistant (gray leaf spot resistance), soft-seeded, narrow-leafed (blue) lupin germplasm (Reg. no. GP-1) (PI 63840) was released by USDA-ARS and the Georgia Agricultural Experiment Station, Coastal Plain Experiment Station on 12 June 1987. SNLL-87 (1) was selected from the cross ‘WH-1’ (a winter-hardy selection from Portugal) × ‘Rancher’ (2), a sweet cultivar.

REFERENCES AND NOTES

5. W.E. Knight, M.R. McLaughlin, G.L. Windham, and N.C. Edwards. 1987. Germplasm and Forage Crop Improvement Lab., P.O. Box 5367, Mississippi State, MS 39762-5367. Request seed from G.A. Pederson, Forage Research Unit, Crop Science Research Laboratory, P.O. Box 5367, Mississippi State, MS. Twenty grams of seed of Brown Loam Synthetic No. 2 will be maintained by USDA-ARS at Commercial Seed Production in the West. The 22 clones and seed with seed shatter resistance. This germplasm was developed and released cooperatively by the USDA-ARS and the Georgia Agricultural Experiment Station, Coastal Plain Experiment Station on 12 June 1987. SNLL-87 (1) was selected from the cross ‘WH-1’ (a winter-hardy selection from Portugal) × ‘Rancher’ (2), a sweet cultivar. SNLL-87 is a winter-hardy, disease resistant (gray leaf spot resistance), soft-seeded, narrow-leafed (blue) lupin germplasm (Reg. no. GP-1) (PI 63840) was released by USDA-ARS and the Georgia Agricultural Experiment Station, Coastal Plain Experiment Station on 12 June 1987. SNLL-87 (1) was selected from the cross ‘WH-1’ (a winter-hardy selection from Portugal) × ‘Rancher’ (2), a sweet cultivar.