In Missouri tests, MO-20 yielded significantly more forage than Empire over a 3-year period when harvested under hay and frequent close-clipping regimes. In comparisons with commercially available trefoil cultivars, MO-20 has produced higher or equal yields of forage in nine states in and bordering the North Central Region.

Exploitation of this genetic material will hopefully lead to development of new cultivars with better yields, or greater persistence, or both for the southern Corn Belt.

Fifteen grams of syn 3 seed are available for each applicant upon written request and agreement to appropriately recognize its source if this germplasm contributes to the development of a cultivar. Request seed from P. R. Beuselinck, Agronomy Dep., 216 Waters Hall, Univ. of Missouri, Columbia, MO 65211.

REGISTRATION OF MP 919 AND MP 926 LEAFLESS FIELD PEA GERMPLASM
(Reg. No. GP 40 and GP 41)
S. T. Ali-Khan

Two lines of leafless field pea (Pisum sativum L.), MP 919 (Reg. No. 40) and MP 926 (Reg. No. 41) were developed at the Agriculture Canada Research Station, Morden, Manitoba. MP 919 and MP 926 were developed by using 'Century' and 'Trapper' cultivars as recurrent parents, respectively, in a backcross breeding program. These two yellow-seeded cultivars are extensively grown in Canada, the USA and Australias. The leafless non-recurrent parental line used in the backcrossing program was obtained from John Innes Institute, Norwich, United Kingdom. MP 919 and MP 926 are homozygous for the recessive gene af, which reduces leaflets to tendrils. The development of stipules is normal due to the presence of the dominant genes S/St.

The initial crosses were made in 1974 and the F1 plants were selfed. The F2 leafless types were backcrossed to the recurrent parents. This cycle of backcrossing and selfing was repeated three times. Leafless plants in the third cycle were selected on the basis of seed size, seed color, seed shape and smoothness of seed coat. These single plants were selfed for three generations and further individual plant selections were made in the S3 populations. Seed was increased from these individual plants.

The selected leafless lines, including MP 919 and MP 926, were evaluated in replicated trials at Morden from 1978 to 1980. MP 919 was extensively evaluated during 1980 in Cooperative Tests at 10 locations across Canada. Yield, seed size and maturity of MP 919 and MP 926 were similar to the respective recurrent parent, Century or Trapper, and the leafless lines were more resistant to lodging, especially in large plots where solid seeding was used.

Other advantages of leafless peas include better penetration of insecticide sprays, more uniform drying at maturity, easier combining, reduced amounts of crop residue and lower levels of disease inoculum.

One hundred seeds of each line may be obtained from the Agriculture Canada Res. Sta., P.O. Box 3001, Morden, Manitoba R0G 1J0.

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