selected for the next generation. Recurrent selection was continued for four generations. Numbers of plants within a generation varied from 900 to 3,640. Selection intensity for vigor varied from 2.8 to 7.1%. After plants were selected for vigor, further selection was conducted for seeds per head which varied in intensity among generations from 2.1 to 16.1%. Progenies representing the four generations were compared in a manner similar to the selection experiments. This evaluation was conducted in 1979 and 1980. Seed of Ky M-1 was harvested in 1980 from approximately 660 plants of generation 4 that had been randomly intracrossed and intercrossed with approximately 582, 624, and 500 plants from generations 1 to 3, respectively, and with about 100 plants of the base population (generation 0).

For vigor of spaced plants scored on a scale of 1 = most to 9 = least vigor or forage yield, generation 4 was 5.9 compared to 6.7 for generation 0. Respective figures for groups were 6.8 and 1.3 for heads per plant; 10.2 and 2.4 for seeds per head; and 72 and 13 for seeds per plant.

Although the forage and seed yields of Ky M-1 are significantly greater than those of the base population, improvement will be necessary before the material is ready for release as a cultivar. Nevertheless, the Ky M-1 line represents a wide range of variability that should be available for further selection.

Up to 20 g of seed of Ky M-1 germplasm may be obtained upon written request and agreement to make acknowledgment of the source when this germplasm is used in the development of a new cultivar, hybrid, or germplasm. Breeder seed of these lines is maintained in germplasm quantities by the North Dakota Agricultural Experiment Station and the Department of Agronomy, North Dakota State University, Fargo. These lines, alone and inbred lines developed at the Agricultural Experiment Station, North Dakota State University, Fargo. These lines, alone and in hybrid combinations, were evaluated for yield and agronomic performance. ND249, ND250, and ND251 were released because of their apparent potential as parents to produce early hybrids with good yields, low ear moisture, and high test weights. These inbreds appear to be adapted to short season areas such as central North Dakota.

ND249 (Reg. No. PL 60) was selected from Rumanian Syn. D. This line was developed by self-pollination and selection for agronomic type for seven generations. ND249 silks about 9 days earlier than ND408 and 4 days earlier than ND474 at Fargo, N. Dak. This inbred typically produces medium short plants with ears borne a little less than midway up the stalk. Plants have short, wide leaves and relatively large tassels. Long, thick ears with 18 to 22 rows of deep kernels are borne on medium length shanks. In North Central Corn Breeding Research Committee (NCR-2) tests in 1981, ND249 was rated susceptible to Northern corn leaf blight (caused by Helminthosporium turcicum Pass.), Diplodia stalk rot (caused by Diplodia maydis (Berk.) Sacc.) dwarf mosaic virus (MDMV), and maize chlorotic dwarf virus (MCDV). Low ear silking is in keeping with a moderate lodging GCA effects for stalk lodging percentage and above average in stalk lodging. ND249 is AES200.

ND250 (Reg. No. PL 61) was selected from a cross of two early Wisconsin experimental inbreds pollinated for nine generations with selection for plant and ear traits during each generation. ND250 produced plants which silk about the same time as ND408 with large tassels; long, medium-wide leaves; and medium tall height. Ears with 14 to 16 rows of moderately deep kernels are borne on medium long shanks. This inbred was not tested for disease reaction in the 1981 uniform inbred NCR-2 trials. ND250 produced high GCA effects for yield and lodging GCA effects for ear moisture at harvest in diallel trials. Stalk lodging GCA was slightly above average. Maturity of ND250 is AES200.

ND251 (Reg. No. PL 62) also was selected from Syn. D with seven generations of self-pollination and selection for plant and ear traits. ND251 plants silk about 2 days earlier than ND408 and ND249 and ND250 plants and have ears placed slightly below midplant. Short plants have short, wide leaves and large ears with 16 to 18 rows of medium-depth kernels are borne on short shanks. In the 1981 NCR-2 tests, ND251 was rated susceptible to Northern leaf blight, Southern leaf blight, Diplodia stalk rot, and Northern corn rootworm. Scab (caused by Helminthosporium maydis (Nisik and Miyake)] was not tested. Northern corn leaf blight, eyespot, Northern corn rootworm, corn stunt, and anthracnose leaf blight, and scabs. ND251 is AES200.