Mestizo was tested extensively in 35 environments of the semiarid highlands of Mexico (trials conducted at locations above 1800 m above sea level) for yield and agronomic traits at varied locations from 1993 to 1997. In the semiarid highlands, Mestizo averaged 1399 kg ha\(^{-1}\) and outyielded Pinto Nacional, the main landrace in its seed class in the region, by 30%. At locations with irrigation, Mestizo averaged 2213 kg ha\(^{-1}\) with a highest yield of 3713 kg ha\(^{-1}\).

Mestizo averaged 40 cm tall and exhibits a short vine type III indeterminate growth habit, with pod distribution in the lower half of the canopy. Mestizo has white flowers and blooms 40 d after planting. Mestizo is a short-season cultivar that matures 89 d after planting, with a range in maturity from 76 to 91 d, depending on season and altitude. Mestizo matures 7 d earlier than 'Villa', and earlier than most landraces in its seed class. Breeder and Foundation seed of Pinto Mestizo was designed to combine disease resistance and local adaptation with semiupright plant architecture. Bayer Victoria is a midseason cultivar of indeterminate growth habit (type III) developed for the semiarid highlands of Mexico. Olathe (B23/5958-B-1) is a pinto bean with a semiupright indeterminate type II plant architecture (in the highlands of Mexico) released by the bean program at Colorado State University (Wood and Keenan, 1982). The F\(_1\) plants were advanced in the field, and early generation selection was practiced in the F\(_2\) population and then in the F\(_3\) and F\(_4\) families, following the pedigree method. Individual plants were selected on the basis of plant vigor, pod load, and disease resistance. The F\(_4\), F\(_5\), and F\(_7\) families were advanced in a winter nursery at Los Mochis, Sinaloa, on the west coast of Mexico. F\(_9\), F\(_10\), and F\(_11\) families were planted in rows at the Valle del Guadiana Experiment Station in Durango, Mexico, and selections were made between and within rows based on disease reaction, plant vigor, earliness, and commercial seed traits. The F\(_{10}\) breeding line PT91325 was entered into replicated trials in 1993.

The recurrent parent, B94 (Russell et al., 1971), is an AES commercial seed class. Breeder and Foundation seed of Pinto Mestizo was maintained at the Valle del Guadiana Experiment Station, and small samples for research purposes can be obtained from the corresponding author.

**Acknowledgments**

The authors thank Eng. Román Zandate, Dr. Benito Cázares-Enríquez, MS. Roberto Ochoa-Márquez, and MS. Samuel Nuñez-Gonzalez for their help in field trials. We are also indebted to the Bean/Cowpea-CRSP, USAID Grant No. DAN-G-SS-86-00008-00.

**References**


**Registration of GEMS-0001 Maize Germplasm**

**Resistant to Leaf Blade, Leaf Sheath, and Collar Feeding by European Corn Borer**

GEMS-0001 (Reg. no. GP-363, PI 614142) maize (*Zea mays* L.) germplasm, which is resistant to damage caused by the European corn borer [*Ostrinia nubilalis* (Hübner)], was released by the Agricultural Research Service, USDA, in July 2000. GEMS-0001 is derived from the cross *Pura* 144 (PI 503806) × B94. Breeding lines from PI 503806 × B94 were advanced by three generations of backcrossing to B94. Throughout the breeding program, donor plants were selected by evaluating their resistance to feeding by European corn borer larvae on leaf blades and on leaf sheaths and collars. Plants were artificially infested with larvae, and selected plants with reduced feeding were carried forward in the breeding effort. Seeds from the third-generation backcross were grown in Ames, IA, in 1999, and plants were full-sib mated to obtain a seed increase for release and distribution.

The recurrent parent, B94 (Russell et al., 1971), is an AES 800 maturity stiff-stalk synthetic inbred line selected for its high-yield performance in single-cross tests. GEMS-0001 flowered 5 d later than B94 at Ames, IA, in 1998, and 3 d later than B94 at Stoneville, MS, in 1999. The donor parent, PI 503806, is a tropical maize from southwestern Peru chosen for its resistance to leaf-blade feeding damage caused by first-generation European corn borer (*Abel et al., 1995*) and leaf-sheath and collar-feeding damage caused by the second generation of this insect (*Abel et al., 1998*). The resistance expressed in PI 503806 is not based on high levels of 2,4-hydroxy-7-