Early White is a white, flinty-grained, early-maturing midaltitude population. It is moderately resistant to E. turdicum, P. sorghi, and MSV, and is short stunted and lodging resistant. Early White required 68 d to 50% silk emergence across five midaltitude locations in Cameroon and Nigeria in 1991, 4 d earlier than the medium-maturing check 'Kasai' and 6 d earlier than TZMSR. One cycle of full-sib and two cycles of half-sib family selection were performed in CIMMYT subtropical Population 34 in the Cameroon midaltitudes under heavy natural leaf blight and rust infection. Recombinations were made from 26, 14, and 19 families in the respective cycles. Early flowering S1 lines from the TZMSR population were testcrossed onto the improved Population 34, and 15 selected testcrosses were recombined to form Early White. Following three cycles of ear-to-row recombination and mild selection in the midaltitude zone of Cameroon, 340 plants were selected and selfed in the MSV screening nursery. The population was reconstituted from more than 300 S1 plants selected and recombined in the MSV screening nursery the following season.

Synthetic-4-White is a medium-statured, white-grained, varietal synthetic, intermediate between flint and dent, and classified as late maturing, requiring an average of 74 d to 50% silk emergence across the 1991 Nigeria and Cameroon midaltitude test sites. It is resistant to E. turdicum, P. sorghi, and MSV, as well as to lodging. It is moderately resistant to ear rots. Synthetic-4 was the highest yielding open-pollinated variety in the midaltitude trials of Cameroon and Nigeria in 1991, with 7.7 Mg ha\(^{-1}\) at 150 g kg\(^{-1}\) grain moisture, 1.0 Mg ha\(^{-1}\) higher than the TZMSR derivatives. The varietal synthetic was formed by three generations of balanced recombination from 10 Cameroon midaltitude white and yellow inbred lines: M87, M131, 87036, 88069, 89258, 89292-293, 89302, and 89310. These inbreds were extracted from TZMSR and crosses of TZMSR with East African midaltitude germplasm. Synthetic-4 was screened in the MSV nursery and 350 selected plants were recombined to form the final MSR-su population, inoculum concentration, or age at inoculation. This suggests that ICML 22 has a broad genetic base for resistance to Indian populations of the downy mildew pathogen.

ICML 22 is classified as photoperiod insensitive. At 13.6 h daylength, it flowered in 36.1 ± 1.1 d. At a reduced daylength of 9 h, it flowered in 37.4 ± 0.5 d, and at 15 h it flowered in 36.1 ± 0.4 d.

ICML 22 is a restored line when crossed into the cytoplasm. It is early maturing (64 to 68 d), short (7 to 11 cm), and profusely tillering (3 to 6 reproductive tillers). It produces short (7 to 11 cm), compact, cylindrical heads of moderate size (dry 

Registration of ICML 22 Photoperiod Insensitive, Downy Mildew Resistant Millet Germplasm

ICML 22 (Reg. no. GP-30, PI 572474) pearl millet (Pennisetum glaucum (L.) R. Br.) germplasm line was released by the International Crops Research Institute for the Semi-arid Tropics (ICRISAT) in November 1992. This line was selected for its high yield potential, resistance to downy mildew caused by Sclerospora graminicola, and resistance to other diseases and pests. ICML 22 is resistant to Indian populations of the downy mildew pathogen.

ICML 22 is a valuable germplasm source for developing photoperiod insensitive and resistant to certain isolates of S. graminicola. This germplasm is currently being used in ICRI programs worldwide to develop new cultivars with improved resistance to downy mildew and other diseases. ICML 22 is currently being used in ICRI programs worldwide to develop new cultivars with improved resistance to downy mildew and other diseases.

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