Evaluation of Improved Pearl Millet Varieties with Farmers in West Africa

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Abstract

Participatory varietal selection trials were conducted to evaluate farmers’ preferences and the performance of improved pearl millet (*Pennisetum glaucum* L. R. Br.) varieties in Burkina Faso, Mali and Niger during the 2002 and 2003 seasons. Farmers from the pearl millet growing ecological zones were selected with the assistance of local partners, based on their willingness to test the improved pearl millet varieties, availability of land and accessibility to the fields. The trials were conducted with 195 farmers from 23 villages, who tested 11 improved pearl millet varieties, with their local variety acting as controls. Within a country, three villages were selected in each agro ecozone (region), while ten farmers were selected in each village except Dogon-Doutchi in Niger, which had five. Each farmer tested one to two pearl millet varieties. The characteristics in the improved pearl millet varieties preferred by farmers were maturity cycles of 80 – 90 days, high grain yield, long (30 – 100 cm) and compact panicles, high tillering with panicles, adaptation and acceptable taste. Out of eleven tested improved pearl millet varieties, farmers preferred the varieties SOSAT C88, ICMV IS 89305, ICMV IS 92222, ICMV IS 92326, ICMV IS 94206 and ICMV IS 99001. Farmers preferred their local varieties Balbou, Kapelga, Toronio, Niou and Haini Kirey mostly for the characteristic of adaptability and taste. The improved varieties gave yields ranging from 7 to 147 gm$^{-2}$ compared to the locals that gave 12 to 134 gm$^{-2}$. The variety trials emphasise the need to integrate farmers and other users and use of wide crosses that incorporate landraces in the improvement of pearl millet varieties. To sustain the adoption of improved varieties, village seed production should then be promoted.

Keywords: Farmers preferences, participatory variety selection, pearl millet, West Africa

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