

Title: Diversity of cultivated pearl millet in Benin northern

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Abstract

Millet (*Pennisetum glaucum* (L.) R. Br.) Is the 4th cereal produced in Benin. Compared to other cereals, millet has great nutritional value and potential for combating food insecurity. However, although cultivated, the level of diversity is still unknown. The diversity study will set the stage for in-situ conservation, the creation of a core collection and improved knowledge for breeding programs. Moreover, the importance and structure of diversity will also increase the effectiveness of breeding. It will also enable efficient management of genetic resources at the local and regional level. Specifically, it was a question of: determining the level of diversity existing within the millet accessions collected; establish the structure of this diversity through the agro-ecological zones; Identify areas of high genetic diversity and define in situ conservation strategies. To reach this objectives, simple sequence repeat (SSR) molecular markers were used for genetic diversity analysis and population structure. . In order to assess the level of genetic diversity, 14 polymorphic SSR markers were used to screen 114 accessions from different agroecological. An average of 0.405 was found for genetic diversity index. No specific structuration of accessions from each region under study was observed. The results confirmed diversity among cultivated Pearl millet in Benin and such diversity is not clustering according to geographical patterns.