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Participatory Variety Selection — Farmer Participation in Testing and Evaluating New Cultivars of Groundnut, Sorghum and Pearl Millet in Chad

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Abstract

In Chad, like in many developing countries, seed saving is important. Chadian farmers apply positive mass selection to produce their own seed. They are keen to try new varieties, yet access is limited. The project “Opérationnalisation de la filière semencière au Tchad”, financed by the Swiss Agency for Development and Cooperation, seeks to improve access of small-scale farmers to quality seed of appropriate varieties in view of improving their food security and income.

In 2016, the project helped the Agricultural Research Institute of Chad to introduce a broad range of cultivars of groundnut, sorghum and pearl millet from neighbouring countries. The first evaluation of this material was done in farmers’ fields using participatory variety selection. Farmers tested all new cultivars in their fields under their own practices at sixteen different sites across the southern and the eastern part of Chad. Before harvest, around 30 farmers per site evaluated the varieties.

The evaluations showed that farmers appreciate several of the new cultivars and provided insights about their preferences: Farmers who assessed sorghum cultivars in the South of Chad prefer long and large panicles with “a lot of grains”. They appreciate erected and goose-necked panicles, as these are less attacked by birds. White and grey grains are appreciated for cooking of traditional dishes whereas red grains are preferred for local beer brewing. To farmers it is important that the grains can easily be removed from the glumes. They appreciate both fine stems for livestock feeding and strong stems for construction. Farmers are interested in sorghum varieties with sweet stems because they can sell the stems in local markets. The evaluations also yielded a rich body of insights into farmers’ preferences and selection criteria for pearl millet and groundnut.

In 2017, the most preferred varieties are tested in multi-locational trials and at the same time introduced into seed multiplication for later diffusion.

Keywords: Chad, farmers’ preferences, participatory variety selection, seed systems