Advances in Crop Science and Technology
ISSN: 2329-8863

Importance of Participatory Variety Selection and Participatory Plant Breeding in Variety Development and Adoption

Temesgen Begna*

Ethiopian Institute of Agricultural Research, Chiro National Sorghum Research and Training Center P. O. Box 190, Chiro, Ethiopia

Abstract

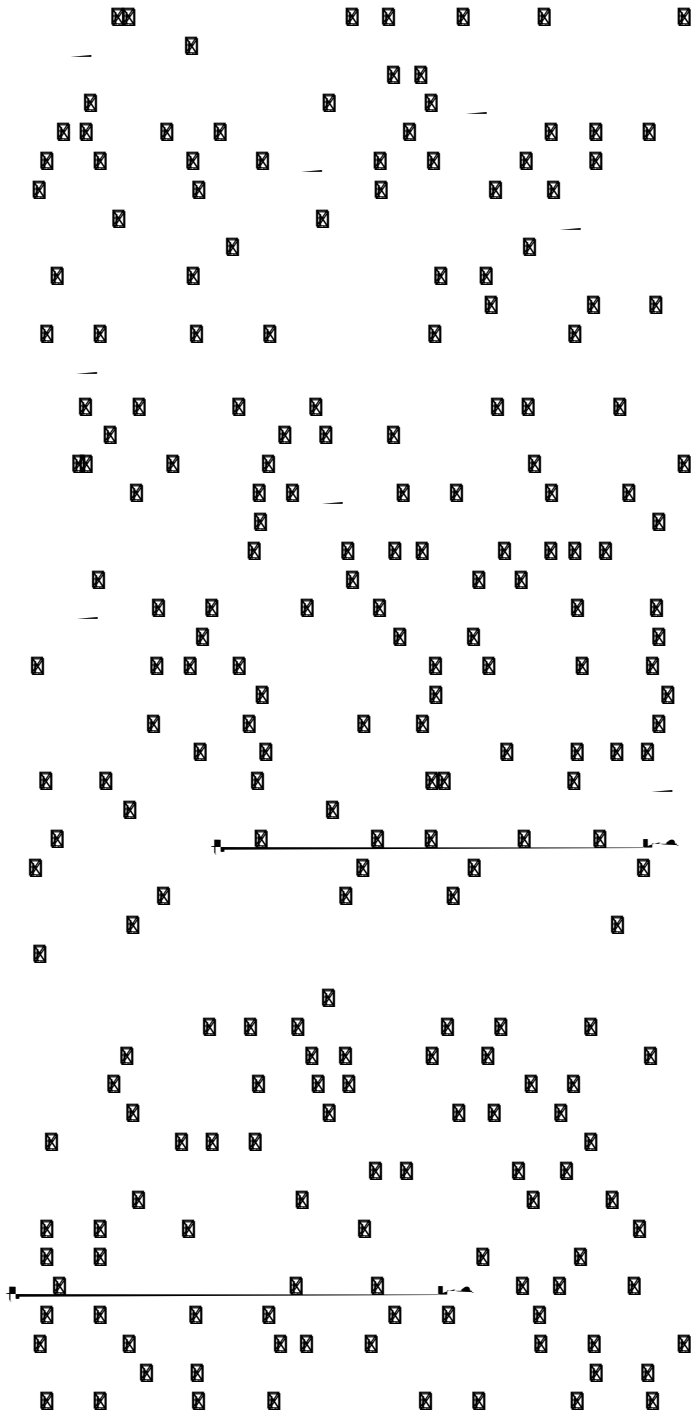
Participatory varietal selection and participatory plant breeding are two new terminologies that include both old and new concepts and procedures. The difference between participation [illegible] and at local research centres in a variety of environments, as well as comparing these varieties to local farmer varieties, while farmers are often involved in decision-making throughout the breeding process, not just in the final testing of advanced breeding lines, in participatory plant breeding. Farmers are the primary beneficiaries of a participatory variety selection program because they are the end-users of agricultural technologies. The participatory variety selection method provides researchers valuable feedback that allows them to focus their research program to properly meet the demands of farmers. The poorest farmers should to profit from new varieties by promoting collaboration between plant breeders and farmers. However, Poor farmers in marginal areas continue to produce obsolete crop varieties that are low yielding, susceptible to pests and disease and are less fitted to farmers' actual challenges and opportunities. These farmers have little exposure to new varieties, and those that have been released are frequently unsuitable for marginal areas. Therefore, participatory variety selection is very critical to introducing improved crop varieties to new growing environments based on farmers preferred traits and selected improved crop varieties In order to enhance improved crop varieties, farmers' preferences must be taken into account across regions and growing seasons that farmers will accept. Generally, participatory varietal selection and participatory plant breeding are the way to overcome the issue of local adaptation and demand driven improved technologies. Participatory Varietal Selection and client-oriented breeding are two methods used to achieve farmers' profitability with improved crop varieties.

Keywords: [illegible]

***Corresponding author:** Temesgen Begna, Ethiopian Institute of Agricultural Research, Chiro National Sorghum Research and Training Center P. O. Box 190, Chiro, Ethiopia; E-mail: tembegna@gmail.com

Received: Jan-22-2022, Manuscript No: acst-22-52205, **Editor assigned:** Jan-24, 2022, PreQC No: acst-22-52205(PQ), **Reviewed:** Jan-31-2022, QC No: acst-22-52205, **Revised:** Feb-07-2022, Manuscript No: acst-22-52205(R), **Published:** Feb-16-2022, DOI: 10.4172/2329-8863.1000497

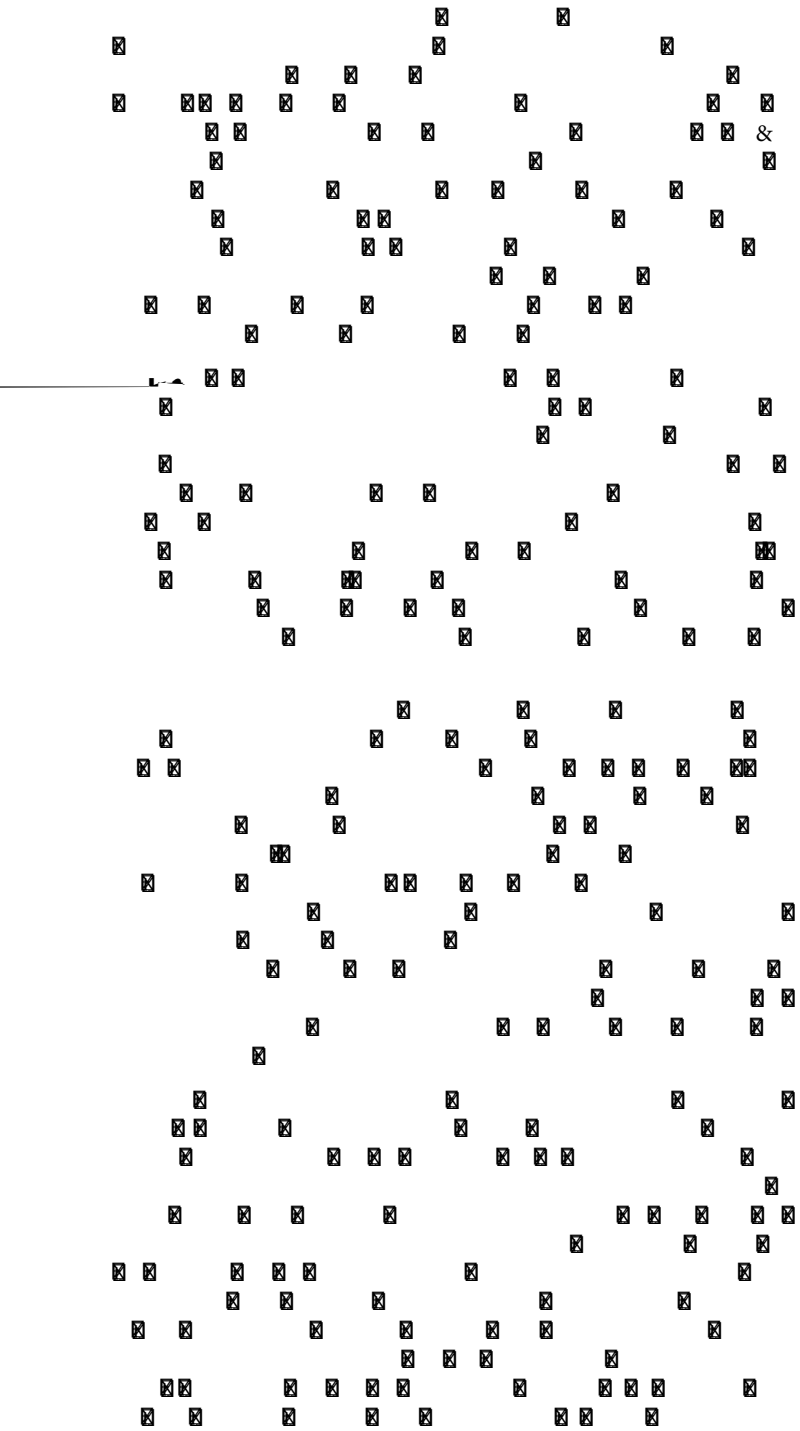
Citation: Begna T (2022) Importance of Participatory Variety Selection and Participatory Plant Breeding in Variety Development and Adoption. Adv Crop Sci Tech 10: 497.



Relevance of Participatory Plant Breeding:

Farmers' selection criteria

Figure 2: Development of improved and relevant crop varieties with farmers.



References

1. Ashby JA (2009) The impact of participatory plant breeding. Plant breeding and farmer participation, 649-671.

2. Bellon MR (1991) The ethno-ecology of maize variety management: a case study from Mexico.

28. Soleri D, Smith SE, Cleveland DA (2000) Evaluating the potential for farmer and plant breeder collaboration: a case study of farmer maize selection in Oaxaca, Mexico. Euphytica 116: 41-57.

29. Sperling L, Ashby JA, Smith ME, Weltzien E, McGuire S (2001) Participatory plant breeding: A framework for analyzing diverse approaches.

30. Sperling L, Loevinsohn ME, Ntabomvura B (1993) Rethinking the farmer's role in plant breeding: Local bean experts and on-station selection in Rwanda. Exp Agric 29(4): 509-519.

31. Tarekegne W, Mekbib F, Dessalegn Y (2019) Performance and Participatory Variety Evaluation of Finger Millet [Eleusine coracana (L.) Gaertn] Varieties in West Gojam Zone, Northwest Ethiopia. East Afr J Sci 13: 27-38.

32. Teshome A, Fahrig L, Torrance JK, Lambert JD, Arnason TJ, Baum BR (1999). Maintenance of sorghum (Sorghum bicolor, Poaceae) landrace diversity by farmers' selection in Ethiopia. Economic botany 53: 79-88.

33. Thapa DB, Sharma RC, Mudwari A, Ortiz-Ferrara G, Sharma S, et al. (2009) ts RrforCwF9>BDC ( )TjEMC 0.076 Tw 1.62 0 Td[(Sperling L, P7124-1/Actuad(31.)Tj/Span<ActualTextFEFF0009>BDC ( )TjEMC -0.051 Tw 1.62 0 2d[(Sperling L,)Tvery WF /

Variety 1valuatiotua66o6(of Fingeean)-0.6(expe.6(bTD0bett) Tw 0described a(bTD0highly clice -orice ed ean)-0.6(expe. I.23-/A -20.3)TjF1T/orCdicd[(esor,c