

ABSTRACT

Durum wheat (*Triticum turgidum* L.) is one of the major food crops with a long history of cultivation in Ethiopia and the country is home of secondary diversification. However, many of the landraces have been lost and the Institute of Biodiversity Conservation began restoration and on-farm conservation activities. On-farm (*in situ*) conservation of crops is a relatively new approach and the practicalities of its implementation are still on the learning process globally. Along these lines, the study attempted to assess the incentives available to farmers to sustain on-farm conservation of durum wheat landraces for the foreseeable future. Formal and informal surveys, on-farm trials, laboratory analysis and feeding experiments were carried out to identify valuable quality traits of the landrace wheats to farmers related to utility (direct uses), production and marketing.

The study revealed that the loss of landrace wheats was serious in the study area. The estimates show that 77% of the formerly available diversity (25-30 years ago) was lost. Factors that contributed to the loss were multifaceted, including displacement by improved bread and durum wheat varieties, expansion of tef as a cash crop, changes in land use and cropping patterns, lack of policy support, and failure to restore the local seed supply system for landrace wheats. Farmers grow landraces for use in their daily diet, meeting socio-cultural and religious needs, for feed and marketing. Despite their long-term absence from the locality (> 2 decades) and the presence of many improved varieties, farmers still assign special values to the landraces and are committed to maintain them on-farm.

In addition, the laboratory analysis and feeding experiments showed that the landrace wheats have straw with better feed quality than their high input, improved counterparts. The landraces evaluated under on-farm trials also performed competitively in terms of grain yield and gave slightly higher economic returns. Furthermore, consultation with selected food industries revealed that some landraces meet the quality standards for pasta processing. Demand by these industries is substantial and shows the existence of potential markets for the landrace wheats off-farm, to meet needs beyond subsistence. Based on these findings, therefore, the researcher concludes that there are market and non-market incentives for farmers to continue growing the landrace wheats. The study underlines that local availability and access to seeds as the prime factor determining on-farm survival of the landraces. Recognizing and addressing the needs of farmers (both as producers and consumers of landrace wheats) is a key element in the efforts made to safeguard on-farm survival of the crop genetic resources for the long future.