

Agroecological and Socioeconomic Determinants of Conserving Diversity On-Farm: The Case of Wheat Genetic Resources in Ethiopia

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Abstract : Conservation of crop genetic resources presents a challenge of identifying specific determinants driving maintenance of diversity at farm and agroecosystems. The objectives of this study were to identify socioeconomic, market and agroecological determinants of farmers' maintenance of wheat diversity at the household level and derive implications for policies in designing on-farm conservation programs. We assess wheat diversity at farm level using household survey data. A household decision making model is conceptualized using microeconomic theory to assess and identify factors influencing on-farm rice diversity. The model is then tested econometrically by using various factors affecting farmers' variety choice and diversity decisions. The findings show that household-specific socioeconomic, agroecological and market factors are important in determining on-farm wheat diversity. The significant variables in explaining richness and evenness of wheat diversity include distance to the nearest market, subsistence ratio, modern variety sold, land types and adult labour working in agriculture. The statistical signs of the factors determining wheat diversity are consistent in explaining the richness, dominance and evenness among rice varieties. Finally, the study implies that the cost-effective means of promoting and sustaining on-farm conservation programmes is to target them in market isolated geographic locations of high crop diversity where farm households have more heterogeneity of agroecological conditions and more active family adult labour working on-farm.

Keywords : diversity indices, dominance, evenness, on-farm conservation, wheat diversity, richness

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