

BIODIVERSITY IN HOME GARDENS IN NYÍRSÉG-TISZAHÁT REGION, HUNGARY: AGROMORPHOLOGICAL TRAITS USED FOR DISTINGUISHING AND SELECTING BEAN VARIETIES MAINTAINED ON-FARM

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In modern European agriculture, landraces of field and vegetable crops survive today in marginal areas where they were able to adapt to specific conditions, or where there is a market demand of their high quality product. Farmers have “incentives” to grow varieties when they possess the traits and characteristics that satisfy their objectives. Small-scale farmers who produce for their own or local consumption typically have a range of objectives and constraints and they care about many different aspects of a variety—not only those related to how well the variety grows on certain soil, disease, and rainfall conditions, but also those associated with how well the grain and stover serves for feed, fodder, staple foods and special dishes prepared for special occasions. As part of a project to strengthening the scientific basis of *in situ* conservation of agricultural biodiversity on-farm, participants in Hungary are working to reveal the mechanisms acting in an advanced economy for or against landraces’ survival and their sustainable use. We propose that landraces conservation in advanced economies can be better understood by revealing the traditional knowledge related to the traits used for distinguishing and selecting these varieties. Since 1997, several sites have been surveyed to investigate the extent of landrace materials in farmers’ fields. Nyírség-Tiszhát region is one of the targeted areas of the project. Landraces identified in the collection missions were found in home gardens. Most of the home gardens in rural Hungary have evolved from the plots that households were permitted to cultivate privately during the period in which agriculture was collectivised (1960-1989). Ranging in size from an estimated 0.5-1 ha, these garden areas have long played a significant role in meeting subsistence needs of rural households. While field crops have been generally grown on large-scale, fully mechanized farms, home gardeners have specialized in labour intensive production of preferred varieties and crops. These small repositories of genetic diversity are cultivated entirely with family labour. The names given to local bean varieties are correlated with some of the crop's agro-morphological traits, especially seed colour (e.g. fehérbab=whitebean, feketebab=blackbean, barnabab=brownbean) and can also have some reference to their traditional use (menyecskebab=young wife’s bean). The seed selection process is predominantly based on traits identified during the vegetation period (shorter for fresh consumption, longer for intercropping with maize), pod length and shape, pod colour (in general yellow and white colours are preferred) and shape of seeds. The selection of a particular variety for quality is determined in part by postharvest handling and processing. The taste and cooking time are the primary quality parameters used for the selection and maintenance of a specific variety at the household level.