

## **THE VALUE OF HOMEGARDENS AND ITS MANAGEMENT FOR THE IN-SITU CONSERVATION OF AGROBIODIVERSITY IN AN ENVIRONMENT OF CHANGE OF LAND-USE IN EASTERN TYROL (AUSTRIA)**

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The decrease of the diversity of plant species in natural ecosystems and of species or varieties in managed ecosystems is discussed in many scientific papers and is seen as a threat for nature and for the sustainable development of the human society. An ethnobotanical study with the focus on the recent development of diversity of species and varieties in 196 alpine homegardens of small peasant farmers from 12 communities of Eastern Tyrol (Austria), realized in 1997 and 1998, and interviews with 23 elderly women who reported ancient management techniques in gardens, shows a different trend in that certain case study.

Until the 60ies mean occurrence of species per homegarden did not exceed 10 species. Today a mean of 42 species can be found within a homegarden. At district level not more than the total of 51 species have been recorded until the 60ties. Today at least 587 species are grown in the homegardens in the region. 79 cultivated species in these gardens have some kind of endangered status and can be found on the Austrian red list of endangered ferns and flowering plants.

Plants grown in homegardens are used in a variety of different ways, whereby the plants grown have undergone significant change. Homegardens were previously dominated by spices and herbs for medical purposes. Vegetables and crops for consumption were grown outside the garden at several plots within a crop rotation. Most plots are now used as pasture. Now gardens are dominated by ornamentals, vegetables and herb species. New species have been introduced in homegardens in the last 20 years (e.g. about 400 species used for decoration, 45 used as spices, and 38 used as vegetables). Today, 420 of the 587 cultivated species are used for decoration. Fewer species, but with a higher abundance, are used for food (147), medicinal (79) and other purposes.

Homegardens with high agrobiodiversity in Eastern Tyrol are therefore a result of the recent 40 years. Homegardens are living gene banks where landraces, obsolete cultivars, rare species and endangered species are preserved. This agrobiological conservation can be characterized as an independent adaptive response of female farmers, due to their emic perceptions of changing internal and external processes.