



Agricultural Genetic Resources of the Alps - Establishment of a Long-Term Monitoring Program

Project Background

In the alpine region, with its diverse geographical areas and its difficult production conditions, a multiplicity of breeds and varieties have evolved which are particularly undemanding and robust. These are of particular interest because they have, unlike conventional breed lines, adapted to high altitude terrain, increased solar exposure and a short growing season. The



The famous researcher N.I. Vavilov described the Alps therefore as a “secondary genetic center”. Today it is still true in the alpine region that robust characteristics in animals and plants are of primary importance. In order to be armed against dry or wet, cold or hot years, great diversity, especially among cultivated plant varieties, is significant even today. In the mountains, it is not superior performance, but reliable average yield, that matters. Extensive cultivation of locally adapted breeds and varieties is moreover important toward the preservation and sustainable use of the alpine agricultural landscapes.

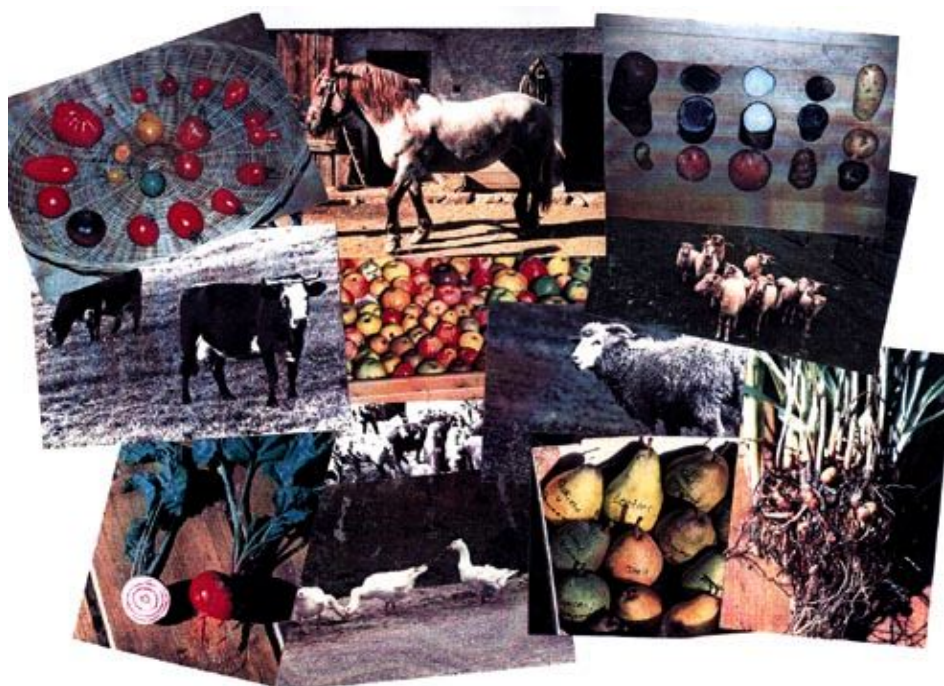
Working from this realisation, the St. Gallen office of Pro Specie Rara, at the behest of the Alpine Commission CIPRA, compiled the study “Agricultural Genetic Resources of the Alps (ISBN 3-905209-03-9); this first international report covered the entire region between the French maritime Alps and Slovenia. Included were not only the rare domestic breeds and cultivated plants, but also programs that were initiated for their preservation and an assessment of the insufficiently met commercial demand. It emerged that, in the realm of livestock, there are no current preservation efforts for around 40 of the scant 100 rare breeds. This study was a snapshot of the year 1993. But the status of rare breeds and varieties is constantly changing. Already at that time there was a need for ongoing assessment, which led to the founding, in 1995, of the Monitoring Institute in St. Gallen. In 2000/2001, this institute undertook a comprehensive updating of the original report (Haupt Verlag, Bern; ISBN 3-258-06669-8) and indicated where the situation had improved and where it had deteriorated. In this case, too, it became apparent that there was an urgent need to create a permanent monitoring infrastructure equipped with an early warning system.

Project Description

The existing project will lay the foundation for ongoing monitoring. High priority will be given to continuous updating of information and the installation of a warning system. The monitoring will be established for a 3-year trial period. If the system and the logistics prove effective, the resulting network and the monitoring work will be incorporated into the regular scope of tasks of participating countries, within the framework of the Alpine Convention (according to Art. 9 - 11 of the Protocol "Highland Agriculture" at the Alpine Convention of 1991). The project, created in collaboration with CIPRA, will have the following focal points:

- **Current Data**
Existing stocks of breeds will be continuously documented, the preservation of cultivated plant varieties will be tracked and supported through information exchange. Emerging knowledge about preservation organisations and individuals will be compiled and kept current within the framework of the project. An appropriate system of indicators will permit the accurate assessment of the degree of endangerment on an alpine-wide basis at any time. Corresponding computer models will be calculated and calibrated.
- **Network**
A network will be formed with the participating organisations and institutions, which will promote the exchange of practical knowledge, and will also facilitate a co-operative approach to breeding and preservation efforts. For the purpose of preserving alpine breeds and varieties, the transmission of knowledge regarding the special requirements of high altitude breeding and cultivation is particularly important.
- **Early Warning System**
The continuous increase of stocks and of related initiatives will permit the installation of a warning system for breeds and varieties: in the event of extreme endangerment, effective intervention can take place through the network or another appropriate organisation (such as the SAVE Foundation) in order to secure the short-term survival

of an endangered group of plants or animals. All relevant data will be accessible in a digital information system (data-bank).



St. Gallen,
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