

Conservation of rare breeds - the Austrian way

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Summary

After a short introduction featuring the situation of in situ conservation in Austria the main part deals with ex situ conservation of national Animal Genetic Resources in a genebank.

Building a national cryo-reserve or genebank is an international und national obligation which is enclosed in many treaties and agreements on agro-biodiversity. Many national genebanks are currently established. The central issue is the maintenance of a maximum of genetic variability. Nevertheless there are several possibilities of building and using a national cryo-collection.

Some basic questions concerning the purpose, extent, responsibilities, acquisition, maintenance, documentation, access, use and replenishment of the collection should be asked to avoid unnecessary costs and to prevent loss of valuable material later on.

Although the material for a cryo-collection may come from different sources and should be stored in several locations for safety reasons having one central database for documentation is indispensable.

A genetic archive may house somatic cells and genomic DNA as a backup of the national breeding stock besides frozen semen and embryos for breeding purposes. Although today the technical problems of revitalising a breed from somatic cells are not solved satisfactorily such a collection is highly effective in storing as much genetic variability as possible.

For the complete reconstruction of a breed already lost embryos as well as semen should be stored. Oocytes may be recovered cheaply from slaughter material and fertilised and cultivated in vitro to establish transferable embryos. To support in vivo conservation mainly semen is used. Semen produced according to EU-standards is a valuable help if an endangered breed is a transboundary breed as well. In the case of an emergency even epididymal semen from slaughter animals with documented sanitary status may be used besides semen from registered AI-stations.

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