# Institutional and legal framework for ex situ conservation at national level

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## 1 Historical overview of gene bank development in Switzerland

For over 50 years, Swissgenetics has been collecting and storing cattle semen. Horse semen has over many years been collected and stored in the National Stud in Avenches. Goat semen has been collected over the last 10 years, first by Swissgenetics and later by Capgènes, France. It is actually stored by Swissgenetics in Bütschwil, Switzerland. It was only in 2009, that the Federal office for Agriculture (FOAG) decided to build up a National Genepool with core semen of native Swiss breeds of the following species: cattle, sheep, goats and horses. FOAG was very fortunate, that Swissgenetics agreed to collaborate and to allocate semen of endangered Swiss cattle breeds to the so called National Genepool. Since 2000, FOAG had co-financed through specific projects the collection of semen from endangered Swiss goat and sheep breeds. Unfortunately, within a reorganization of the pig breeding association, all old semen of Swiss pigs had been eliminated before 2009. In 2011, the official inspection of the semen storage facilities in Bütschwil did no longer approve the storage of sheep semen together with goat semen and all sheep semen was eliminated.

## 2 Objective(s) of national cryopreservation programme/policy

### 2.1 Collection goals

The National database for cryomaterial shall contain all sample descriptions of semen from rare Swiss breeds stored in the gene banks of Artificial Insemination (AI) centres and, if existing, of Universities involved in projects with rare breeds. From all donors the following data is available: Life number donor, Name donor, Birth date donor, Breed donor, Life number sire, Name sire, Birth date sire, Breed sire, Life number dam, Name dam, Birth date dam, Breed dam. In order to be able to enter data correctly, all indications on straws should follow EU-regulation: Identification of the AI Center, IBR-status (only in cattle, IBR neg. or IBR pos.), Breed (in full writing or in code), Life number of donor, Charge number (production date is accepted). Further optional information is: Name of animal, Number in AI-Station, Species. The National Genepool shall continuously be updated with new semen from all species. For semen of sheep and goats, specific projects are needed to finance the collection. An initial project for the collection and storage of pig semen will be co-financed between 2012 and 2015.

### 2.2 Collection categories

Core semen (50 to 100 doses) shall be collected from cattle, horse, sheep, goats, pigs of Swiss origin.

### 2.3 Achievements until today

Until today, thanks to concluded agreements between Swissgenetics, respectively breeding organisations and the Federal Office for Agriculture, the following points for rare breeds have been documented: Semen collection and semen storing, access rights to semen stock and data transfer could be regulated. Co-financed projects have enabled the Swiss Goat Breeding Association to collect semen of endangered and not endangered Swiss goat breeds and will be carried on for the next years.

### 2.4 Future plans

In 2012, FOAG will conclude an agreement with SUISAG, the Swiss pig breeding organization, for the collection of semen from endangered Swiss pig breeds. The same year, a new project will have to be worked out in order to collect semen of young, untested goats, because Swiss legislation renders it almost impossible to reintroduce the goats from France. For sheep semen it is planned to develop a sheep semen collection project in 2013. Pictures and other information regarding the animals will subsequently be inserted to the CryoWEB.

# 3 Participation of stakeholders: responsibilities/roles by stakeholder/actor

## 3.1 Laws, regulations or arrangements between stakeholders

The Swiss ordinance for animal breeding has defined an article allowing the FOAG to financially support storage of semen in the different locations. The different stakeholders: Swissgenetics, the National Stud, SUISAG and the Swiss Goat Breeding Association are responsible for the selection of male animals for the continuous collection of semen. The first three stakeholders manage on their own the data transfer into the CryoWEB database. Goat and sheep semen data will be introduced by FOAG with the help of Swissgenetics. The utilization of semen for research, reintroduction or revitalization of a breed is regulated in agreements with the different stakeholders

## 3.2 Transboundary issues/arrangements

No transboundry arrangements have been established, yet.

# 4 Decision making process

## 4.1 Type of material

So far, only semen data has been introduced into the CryoWEB database. For the next few years, it is not planned to introduce any other material.

## 4.2 Collection targets (populations, individuals)

Semen shall be collected from not related and valuable individuals, to ensure high biodiversity.

# 5 Storage and documentation

## 5.1 Storage facilities and rules

Storage facilities are AI centres which respect international regulations.

## 5.2 Data management and documentation

All data is documented in CryoWEB and a summary will be introduced once per year to EFABIS and uploaded once per year to DAD-IS. Until end of 2011, a total of 137 horse semen samples (Franches Montagnes breed) and 660 cattle semen samples of different breeds have been entered into CryoWEB. Of these samples, 143 are from pure Simmental bulls, 6 from Original Braunvieh and 10 from Brown Swiss. Data uploading of the majority of cattle semen samples of the National Genepool into CryoWEB is still pending.

## 5.3 Gene bank security

The security of the National Genepool is assured by the different stakeholders.

# 6 Sanitary arrangements/regulations

All sanitary arrangements and regulations follow the international standards.

# 7 Legal issues (related to genetic material and data)

## 7.1 Ownership and IP

Within the National Genepool, cattle semen is owned by Swissgenetics, horse semen is mainly owned by the National Stud/Swiss Government (only very few stallions belong to private owners), sheep and goat semen is mainly owned by Swiss Government and pig semen will be owned by SUISAG and the Swiss Government.

## 7.2 Collecting new material: Articles and conditions in Material Acquisition Agreements [translated agreement]

Semen for all native endangered breeds will be continuously collected according to the passed agreements. These agreements are not public.

## 7.3 Access to gene bank: Articles and conditions in Material Transfer Agreements [translated agreement]

Designed Administrators of Swissgenetics, the National Stud, SUISAG and FOAG have unlimited access to the data collected in CryoWEB as they are responsible for the introduction of the information. These agreements are not public.