



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Eidgenössisches Volkswirtschaftsdepartement EVD
Bundesamt für Landwirtschaft BLW

Preservation Strategies for Swiss Breeds

Urnäsch, 13.09.2012



Agenda



1. **Importance of Biodiversity**
2. **State of Risk 2011**
3. **Legal bindings and dispositions**
4. **Conservation of farm animal genetic resources (AnGR)/projects**
 - 4.1 **Economic Value of Swiss Breeds**
 - 4.2 **Projects**
5. **National Gene Pool - Cryoweb**
6. **Monitoring - EFABIS**
7. **National Plan of Action**



1. Importance of Biodiversity









- Worldwide 50 to 300 varieties of plants and animals are lost daily because of nature and mankind influences
- Animal genetic diversity is crucial for food security and rural development allowing farmers to develop new breeds in response to:
 - changing conditions like climate change
 - new diseases
 - threats
 - new knowledge of human nutritional requirements
 - changing market conditions or changing of social needs

Agriculture needs biodiversity - biodiversity needs agriculture



2.

SPECIES	BREED	N _e 2010/2011	STATE OF RISK 2011 criteria according to:		
			EAAP	FAO	Switzerland
	Original Simmental	2`056	not at risk	not at risk	endangered
	Original Swiss Braunvieh	1`232	not at risk	not at risk	endangered
	Eringer	1`180	not at risk	not at risk	endangered
	Evolène	143	minimally endangered	endangered	endangered
	Grey Cattle	450	not at risk	not at risk	under observation
HORSES	Freiberger	733	not at risk	not at risk	Under observation
	Swiss Landrace	306	not at risk	not at risk	Under observation
	Swiss Large White	1`008	not at risk	not at risk	Under observation
	Bündner Oberländer	547	not at risk	endangered	endangered
	Brown-headed meat	2`668	not at risk	not at risk	under observation
	Engadine	1`031	not at risk	not at risk	endangered
	Mirror	719	not at risk	not at risk	endangered
	Swiss Black-Brown Mountain	2`477	not at risk	not at risk	under observation
	Swiss White Mountain	7`176	not at risk	not at risk	under observation
	Valais Blacknose	2`736	not at risk	not at risk	under observation
Valais Red	419	endangered	not at risk	endangered	
	Appenzell	327	not at risk	not at risk	endangered
	Booted	263	not at risk	not at risk	endangered
	Coloured Chamois	2`001	not at risk	not at risk	under observation
	Capra Grigia	209	minimally endangered	not at risk	endangered
	Grisons striped	667	not at risk	not at risk	endangered
	Nera Verzasca	337	not at risk	not at risk	endangered
	Peacock	360	not at risk	not at risk	endangered
	Saanen	1`842	not at risk	not at risk	under observation
	Toggenburg	972	not at risk	not at risk	under observation
	Valais Blacknecked	898	not at risk	not at risk	endangered
	Swiss Feh	no Info. yet	no Info. yet	no Info. yet	endangered
	Swiss Fox	no Info. yet	no Info. yet	no Info. yet	endangered
	Appenzell Barthuhn	694	unknown	endangered	endangered
	Appenzell Spitzhauben	748	unknown	endangered	endangered
	Schweizerhuhn	1`333	unknown	not at risk	endangered
BEEES	Dark Landrace Bee*	no Info. yet	no Info. yet	no Info. yet	endangered



3. Legal bindings and dispositions –

The Federal Office for Agriculture **FOAG** belongs to the Federal Department of Economic Affairs (FDEA).

It promotes a multifunctional agriculture, contributing to:

- ensure the provision of adequate food for the population;
 - maintain natural resources and rural landscape;
 - maintain a decentralisation of settlements throughout the country
-
- ***Swiss Constitution***
 - ***Agriculture Act***
 - ***Ordinance for Livestock Breeding***





3. Legal bindings and dispositions

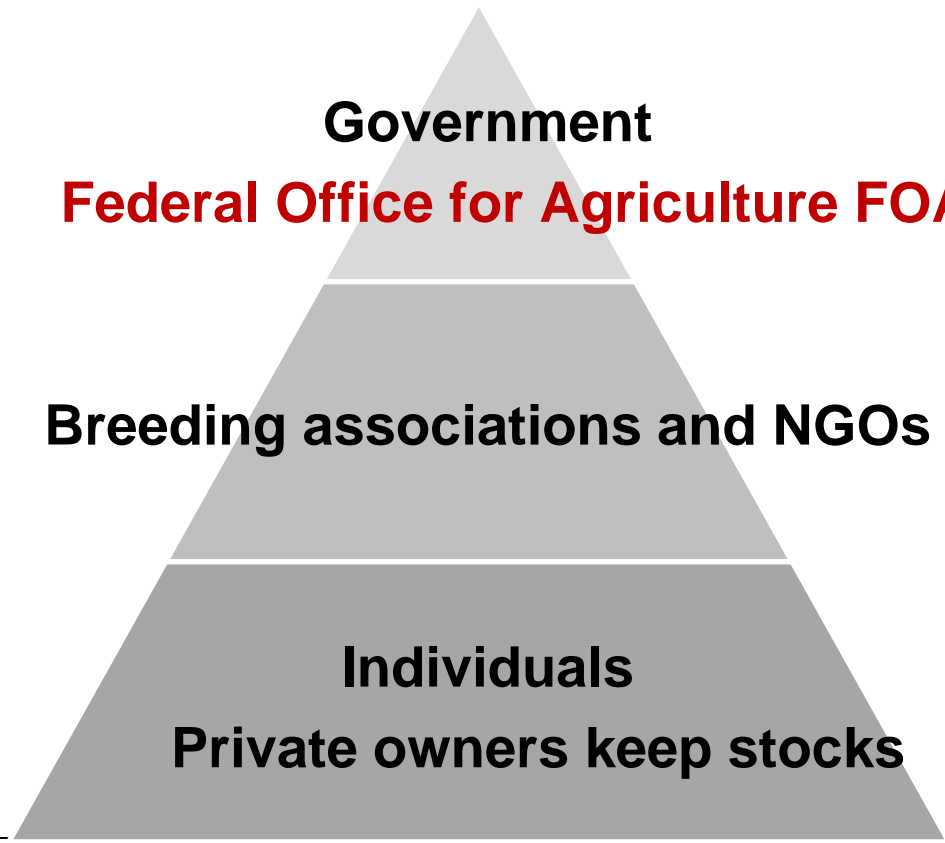


- 1994 Ratification of CBD by the Swiss Parliament
- 1999 Revision of the ordinance for livestock breeding:
Introduction of article 16: This article grants funds to support the conservation of Swiss breeds (**CHF 900'000**)
Introduction of article 17: this article grants funds to support research projects for animal genetic resources (**CHF 100'000**)
- 2007 Global Plan of Action (**GPA**) for AnGR adopted by the International Technical Conference on AnGR for Food and Agriculture Interlaken, Switzerland, 3 - 7 September 2007
- 2008 – 2011 Adaptation of the ordinance for livestock breeding:
Definition of Swiss breeds: origin in Switzerland or managed in a herdbook in Switzerland before **1949**.
Adaptation of the ordinance for livestock breeding: Funds granted for the **longterm storage of cryomaterial** to recognized organizations.



4. Conservation of Farm Animal Genetic Resources / Projects

Who is involved?





4.1 Economic Value of local Swiss Breeds

Economic value can be divided into 3 values...



...landscape care value
booted goats maintain
valuable
areas

...traditional value
Eringer – cow fight



...economic value
Products of the
Appenzeller goat –
Milk and cheese



4.1 Economic Value of local Breeds and Varieties



Overview of current co-financed projects in FOAG and their values

- **Grisons striped goat (economic & landscape care value)**
- Peacock goat (economic & landscape care value)
- Appenzell goat (economic & traditional value)
- Nera Verzasca goat (economic & traditional & landscape care value)
- **Evolene/Eringer cows (traditional value)**
- Original Swiss Braunvieh (economic & traditional value)
- National Genpool for cattle (Research)
- **Swiss Chicken Conservation (economic value)**
- Valais Blacknose sheep (economic & traditional value)
- **Estimation of breeding value of bees (Research)**
- Dark landrace Bee (economic value)
- **Swiss rabbits races (economic value)**
- **Genetic diversity of the Freiburger horse (Research)**
- Monitoring of Swiss breeds (Research)



4.2 Projects – Contributions for projects (CHF 4'248'841.00)

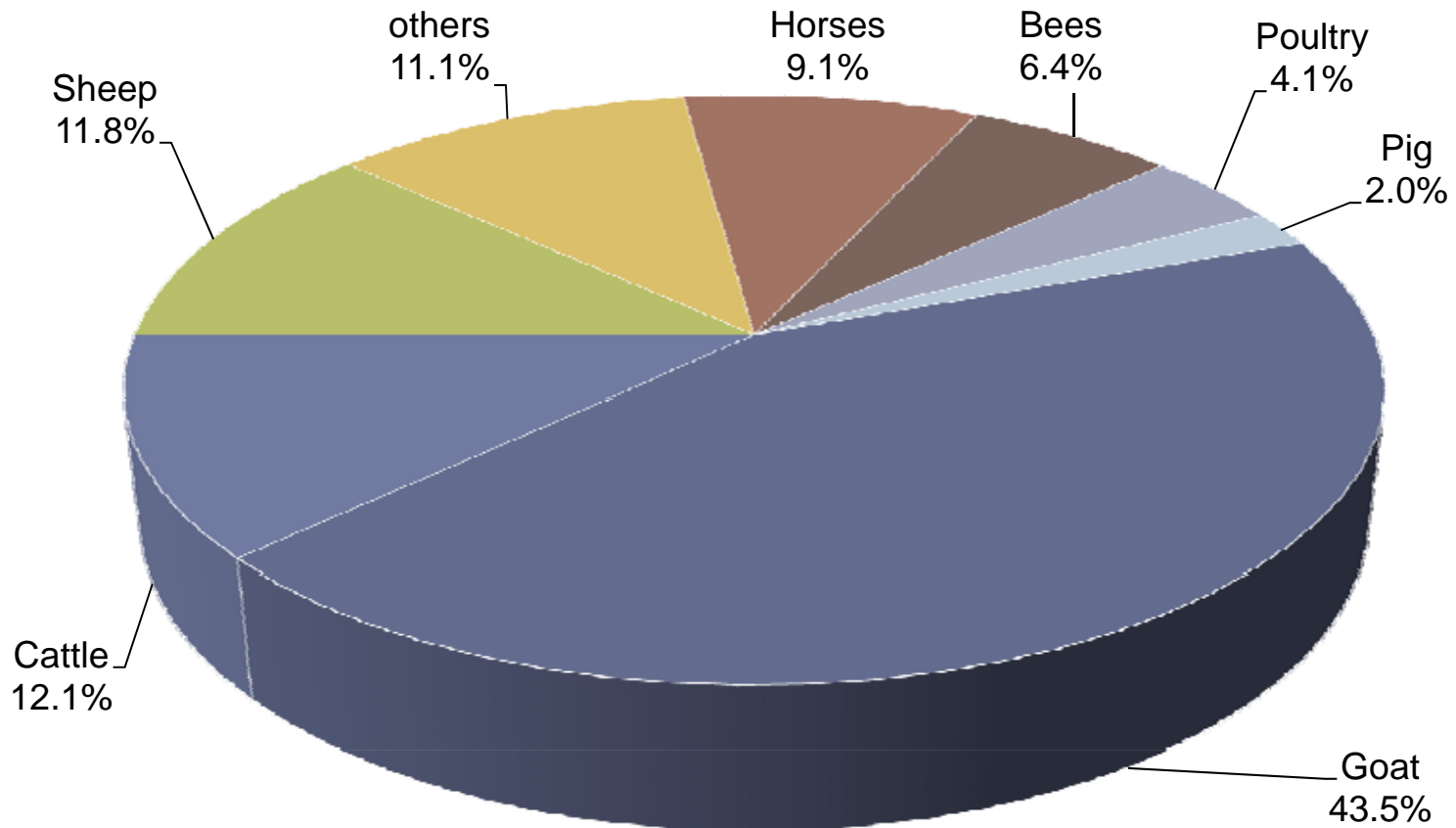
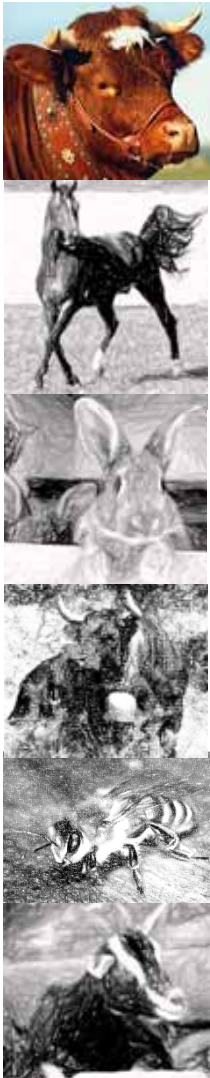


Fig. Contributions for projects to breeding organizations between 1999 and 2010 (CHF 4'248'841.00) according to species

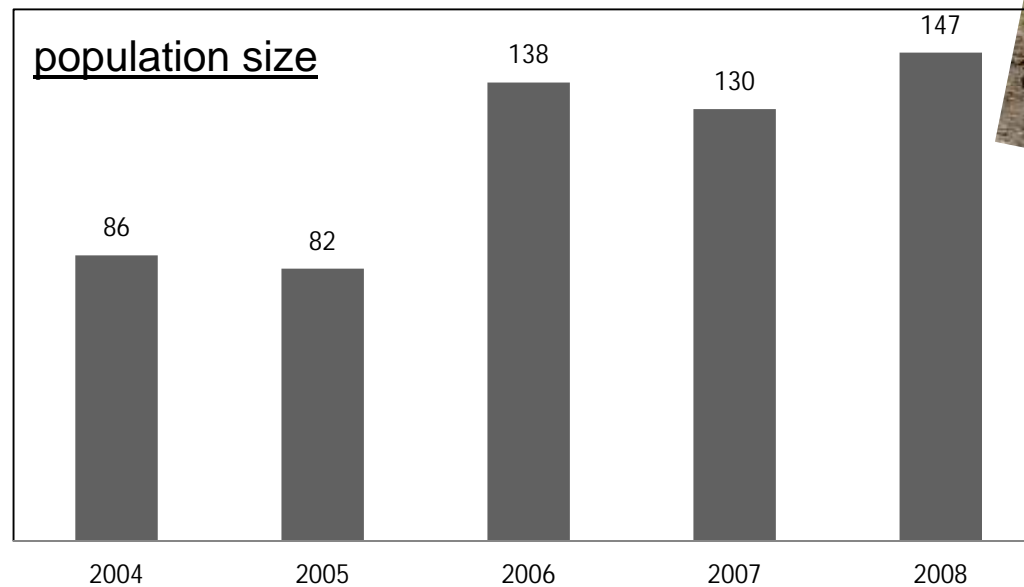


4.2 Projects – Evolène cattle, conservation in-situ/ex-situ of the genetic base



Goals:

- *preserve the genetic base (marketing)*
- *establish gene bank*
- *make breeding progress*





4.2 Projects – Preserve rabbits: Swiss Feh and Swiss Fox

Goals:

- *preserve Swiss rabbit breeds*
- *establish herd-book*
- *attract new breeders*
- *promote products (meat/fur)*





4.2 Projects – Endangered Swiss Chicken Conservation / Promotion of Appenzell Spitzhauben, Schweizer Huhn and Appenzell Barthuhn



Goals:

- *establish herd-book*
- *ensure qualitative and quantitative improvement of the breeding population*
- *promote products*
- *strengthen public relation*

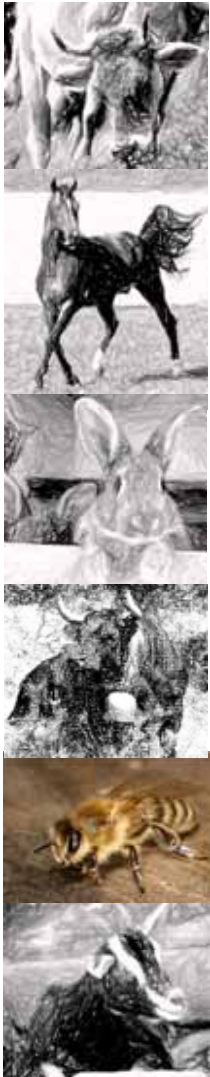




4.2 Projects – Estimation of breeding value (Apis mellifera)

Goals:

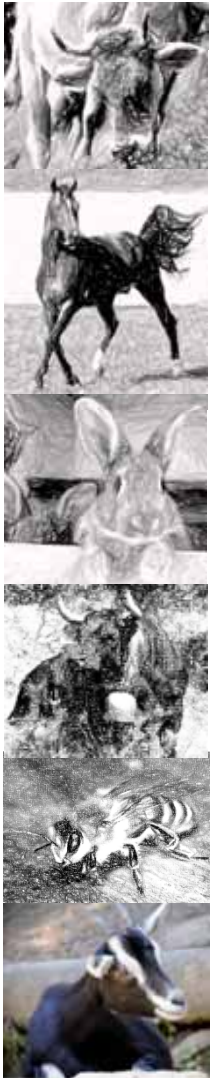
- *ensure sustainable preservation of apis mellifera mellifera*
- *adapt Beebreed database to requirements of breeding organizations*
- *improve tested Mellifera colonies trough breeding value*



Development of number of tested colonies	
Year	Total
2010	126
2011	166



4.2 Projects – Meat marketing of Grison Striped fall kids



Goals:

- *preserve Grison Striped goats by production means*
- *ensure qualitative and quantitative improvement of the breeding animal population through marketing of kid meat*





5. National Genpool - Cryoweb



CRYOWEB - A Web Documentation System for Animal Gene Banks

In **Switzerland** Cryoweb is used for the following species :



- cattle (Swissgenetics )



- horse (National Stud )



- goats (Swiss Government )



- pigs (Suisag )



6. Monitoring - EFABIS

EFABIS



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EUROPEAN FARM ANIMAL BIODIVERSITY INFORMATION SYSTEM
Eidgenössisches Volkswirtschaftsdepartement EVD
Bundesamt für Landwirtschaft BLW



EFABIS – European Farm Animal Biodiversity Information System

Federal Office for Agriculture is responsible for the management and continuous updating

For example:

- population size
- breeding males / females
- in-situ programmes
- pictures

www.efabis.ch



7. National Plan of Action



Regarding the Global Plan of Action for Animal Genetic Resources adopted in 2007 in Interlaken, Switzerland has reached a lot of strategic priorities of the 4 Priority Areas.

4 Strategic Areas and 23 priorities		achievement in Switzerland
Characterization, Inventory and Monitoring of Trends and Associated risks	1-2 priorities	+++++
Sustainable Use and Development	3-6 priorities	++++
Conservation	7-11 priorities	++++
Policies, Institutions and Capacity-building	12-23 priorities	+++

+++++ = 100% achieved

Since Switzerland started its conservation activities long before 2007, the National Plan of Action is an on-going procedure



Thank you for your attention



Switzerland. Naturally.