

Increased Sustainable Performance with Cattle Genetics Adapted to Grassland

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The key to long term success

Herd

Choice of the breed adapted to the environmental and climatic conditions

People

Essential nutrient intakes for human health

Society

Economic development and poverty reduction

Environment

Respect and improvement of the environment and animal health

Country

Economic independence in the import of fodder and supplements

Planet

Responsible production in keeping with environmental and climate change

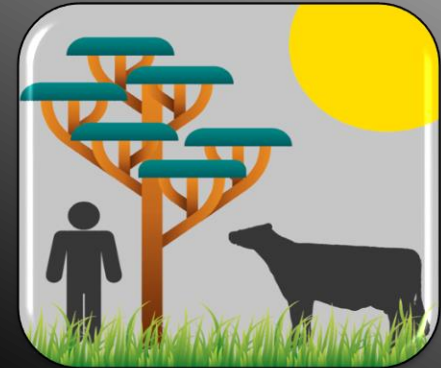
Sustainable Performance



Economic
Growth



Responsible
Production



Health
Impact

Economic Growth

What does the breeder want?



Economic Growth



- Long productive life of a dairy cow is cost effective
- Amortize the rearing phase costs
 - Breeding
 - Veterinary (vaccination)
 - Feeding
- Optimize the genetic potential which is truly expressed from the 3rd lactation
- Mortality rate of dairy cows in Switzerland: 2%



E: und Z: Studach Engelbert + Andreas, Reggenswil, 9402 Mörschwil
Nach der Wägung vom 15.10.2008 weist Morchel eine Lebensleistung von sagenhaften 190'319 kg Milch auf.
Studach's Regal MORCHEL
CH 110.2541.0497.2.

Economic Growth



- Farmers need cows able to walk kilometers, e.g. to go to the Alps
- Resistant to disease
 - lower veterinary costs
- Still produce with low-input
 - self-reliant
- Robust cows = insurance and exchangeable asset



Keleki, the Alps, Switzerland. 2017

Economic Growth



For the breeder:

- Excellent growth intensity of heifers
- Good milk yield
- Sale of heifers and sale of dairy x beef breed crosses
- Surplus heifers as breeding animals

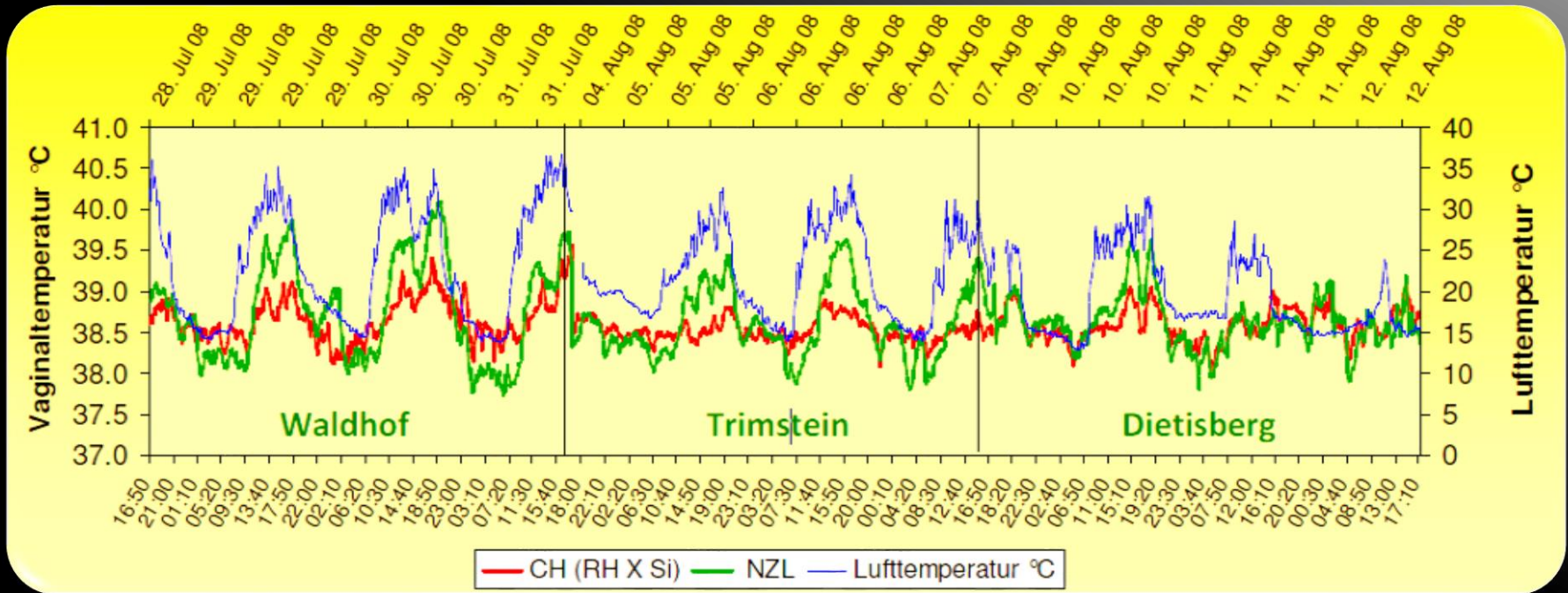
For the society:

Level of self-sufficiency in Switzerland in 2014 for

- animal products 100 %
 - Milk & milk products 115 %
 - Veal 98 %
 - Beef 86 %

Economic Growth

Heat
resistancy



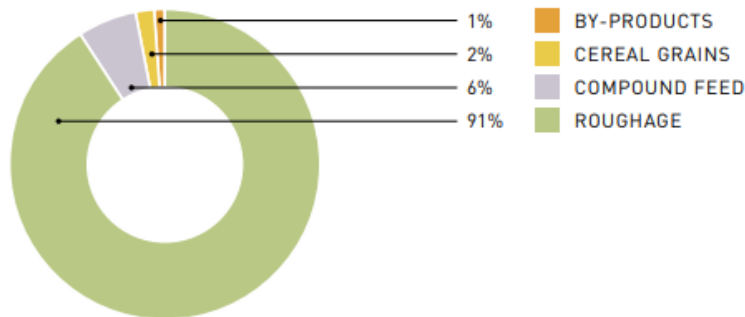
Swiss High School of Agriculture – Project Grassland Cow Genetics 2007 -2010

Economic Growth

Pasture adapted

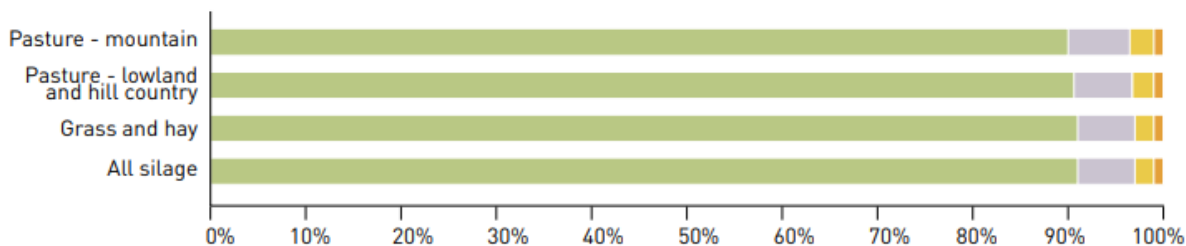


DISTRIBUTION OF FEEDSTUFFS USED



Breeding efficient pasture adapted cows – less cost

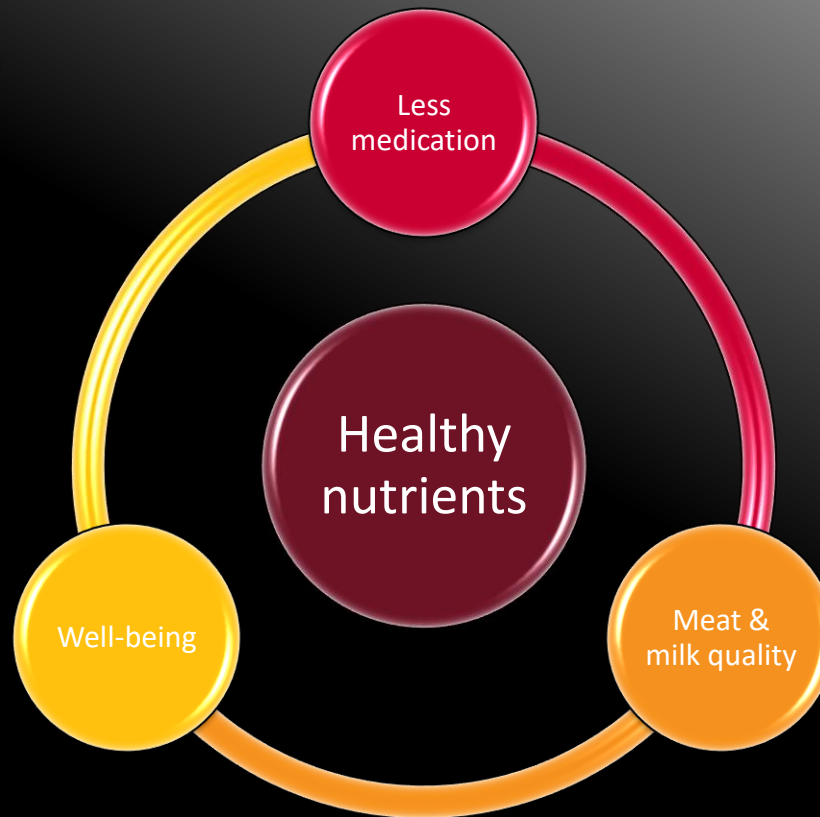
FEEDING BASKETS (% CONSTITUENTS) OF DIFFERENT FEEDING SYSTEMS



FAO, IDF and IFCN. 2014. *World Mapping of Animal Feeding Systems in the Dairy Sector*. Rome

Health Impact

What does the consumer want?



Health Impact

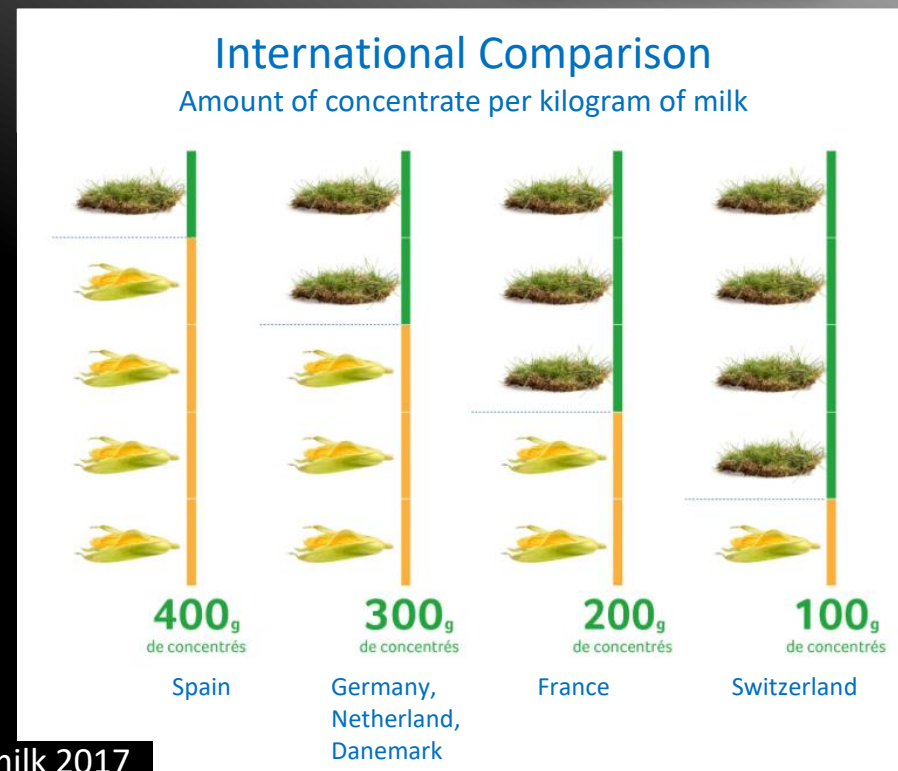
Breeding for well adapted and pasture cows

Grass-fed beef is higher in:

- B-vitamins and vitamin E, K
- beta-carotene
- trace minerals like magnesium, calcium, and selenium

Milk fat from grass-based diets is healthier for the human diet because it has more:

- Conjugated linoleic acid
- Omega 3



Health Impact

Breeding pasture and robust cows:

- Less stress, better performance
- No need of hormones
- No antibiotics for growth performance
- Less medication

-> Better for human health

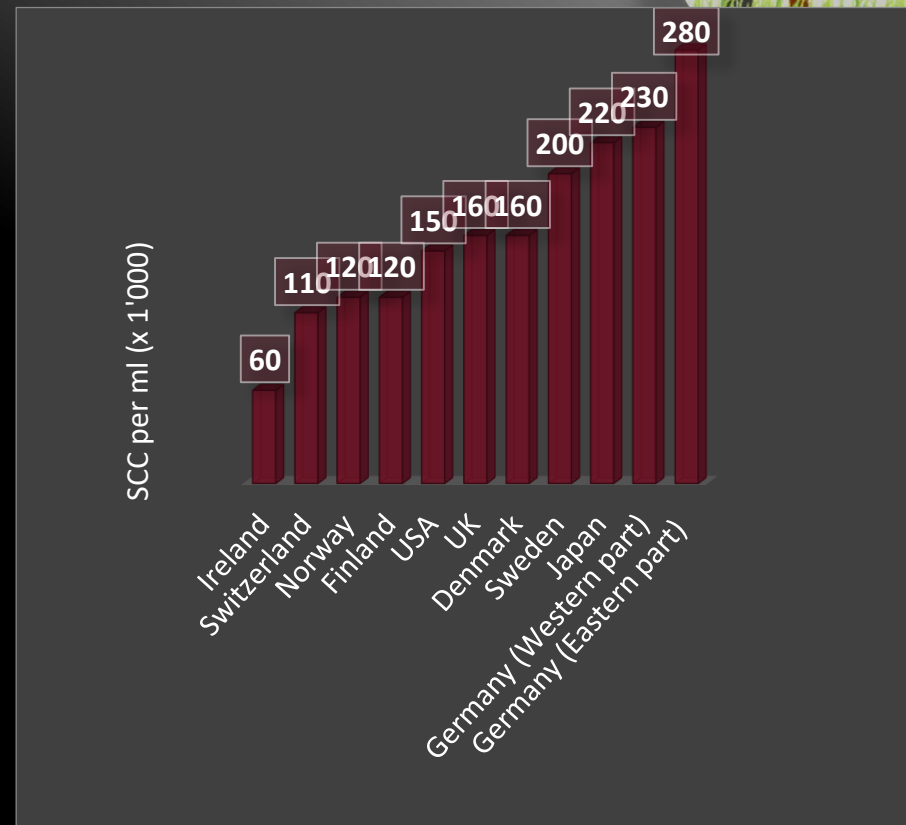
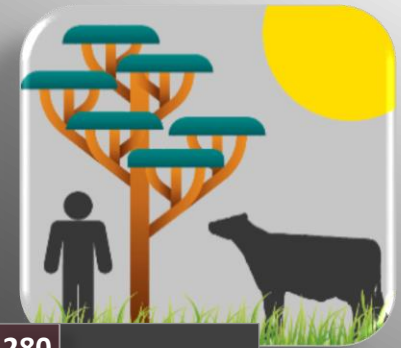


Oeschinensee, Switzerland

Health Impact

Breeding for udder health and milk quality

- High SCC Impact of cheese yield, texture and taste
- Choosing the genes for beta casein - A2 genes better milk
- Breed selection for %fat and %protein in the milk
- Attached udder and good conformation



According to IFCN Dairy Report 2017

Health Impact

The right breed in the right environment:

- Increased optimal longevity, fertility and health of the cow
- Stress resistant can insure cattle production
- Robustness capacity of self-regulation in environments
-> easy to care for
- Added-value or public and ecological services
- Culture and tourism

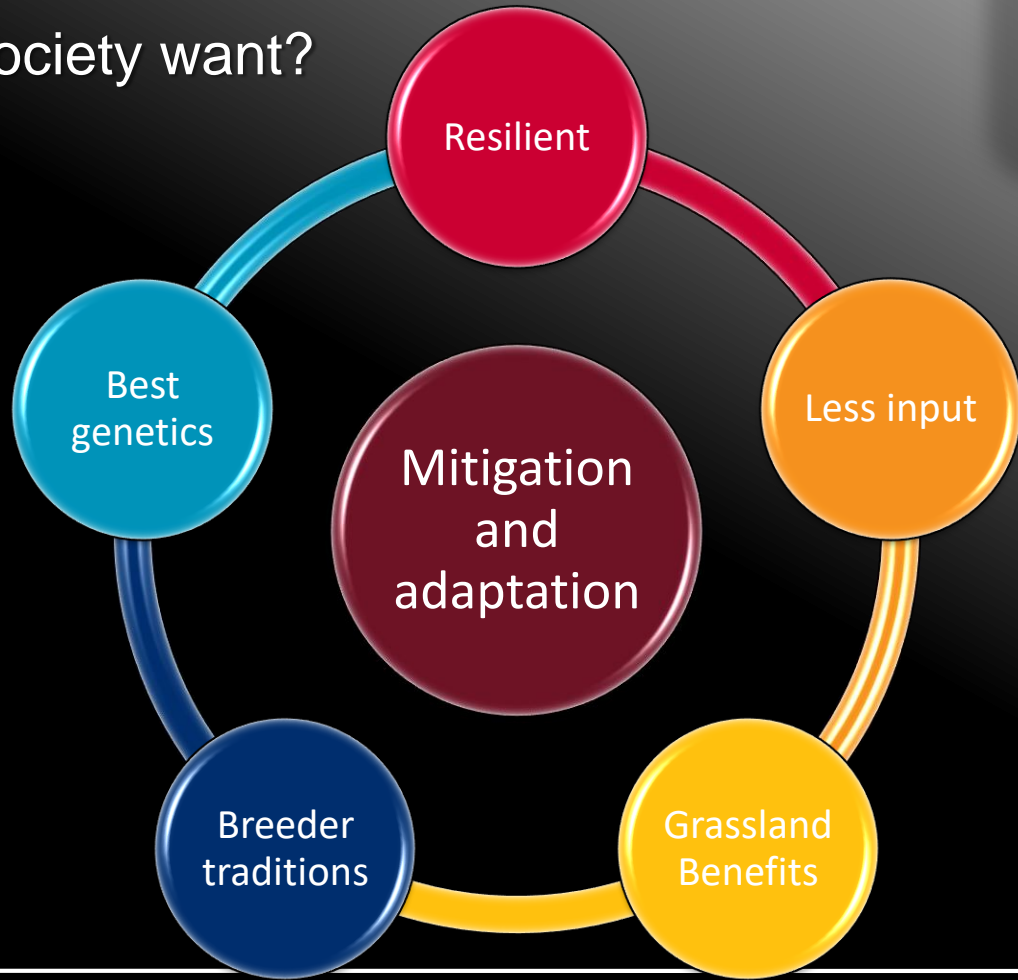


Switzerland produces more than 450 cheese varieties
200,000 tonnes of cheese are made in Switzerland

Responsible production



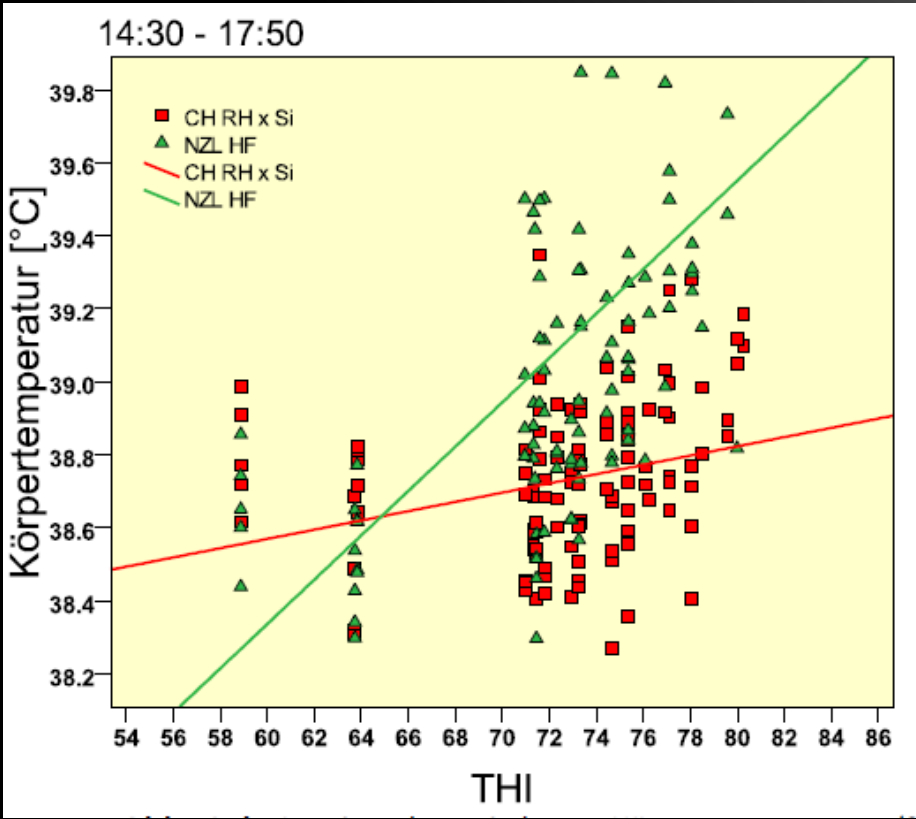
What does society want?



Responsible production

Breeding to face temperature variations

Resilient



Modeste, breeder in Burkina Faso

Swiss High School of Agriculture – Project Grassland Cow Genetics 2007 -2010

Responsible production

Breeds adapted to pasture

Less
input



- No competition with human-edible concentrate feed - Feed no Food
- Use of land pasture
- Breeds which have a great feed conversion of dry matter feed

“My herd is eating higher dry matter intakes with fewer metabolic disorders and more efficient production and reproduction.” Anton Smit, President Brown Swiss Breeder, South Africa



Cow in pasture in South Africa ; Anton Smit

Responsible production

Use of the natural resources

Grassland
benefits



- Animal manure as nutrient
- Soil fertility and quality through natural process
- Sustain natural pasture and terrestrial ecosystems
- Seed scarification and dispersal
- Shrub and fire control
- Part of the landscape



Simmental cows on Pasture in the Alps

Responsible production

Swiss Family Farming – 80% are members of breeding associations

Swissgenetics is a farmer cooperative

- Choose the best genetics for their environment
- Participate in the definition of the breeding goals
- Invest in their chosen breed for long-term impact

Breeding tradition



Swissmilk 2018

Responsible production

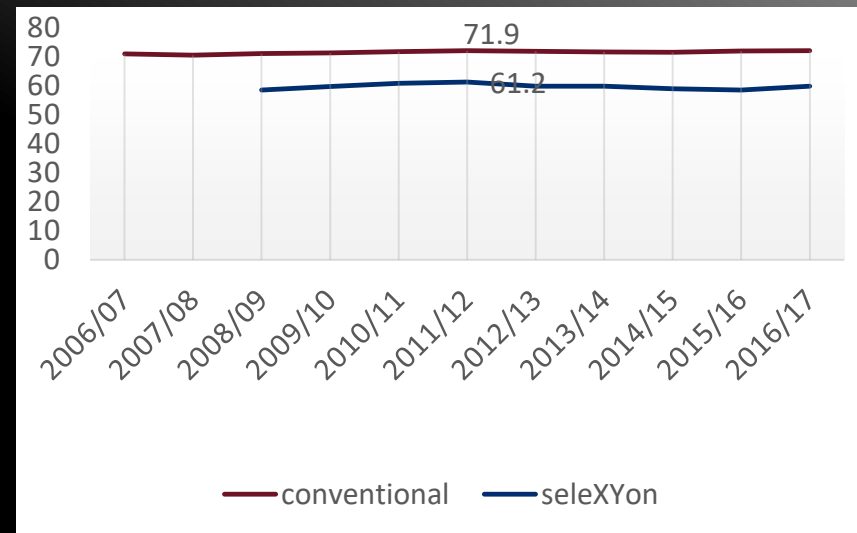
Cattle farming is a long process
Switzerland has a strong tradition

Best genetics



- Quality and strong services
- Genomic selection
- Reproduction technologies:
 - embryo transfer
 - semen sexing
 - sperm vitality
- Ex situ conservation

Non Return Rates 56 Days



Swissgenetics Statistics 2017

The ideal breed for your production system

	Dual-purpose breeds					Dairy breeds		
	Simmental	Swiss Fleckvieh	Original Braunvieh	Eringer	Grauvieh	Brown Swiss	Red Holstein	Holstein
Fertility	+++	+++	+++	+	+	+	+	+
Cheese / Protein	+++	++	+++	++	+	+++	+	+
Milk production	+	++	+	+	+	++	+++	+++
Udder health	+++	+++	+++	+	++	+	+	+
Meat production	+++	++	+++	+++	+++	/	/	/
Lifetime	+++	+++	+++	+++	+++	+++	+	+
Heat resistancy	++	++	+++	++	+++	+++	+	+
Conformation	+++	+++	+++	*	*	+++	+++	+++
Robustness	+++	+++	+++	+++	++	++	+	+
Pasture	+++	+++	+++	+++	+++	++	+	+

+++ = Excellent, ++ = Very Good, + = Good, / = Not relevant, * = No data

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