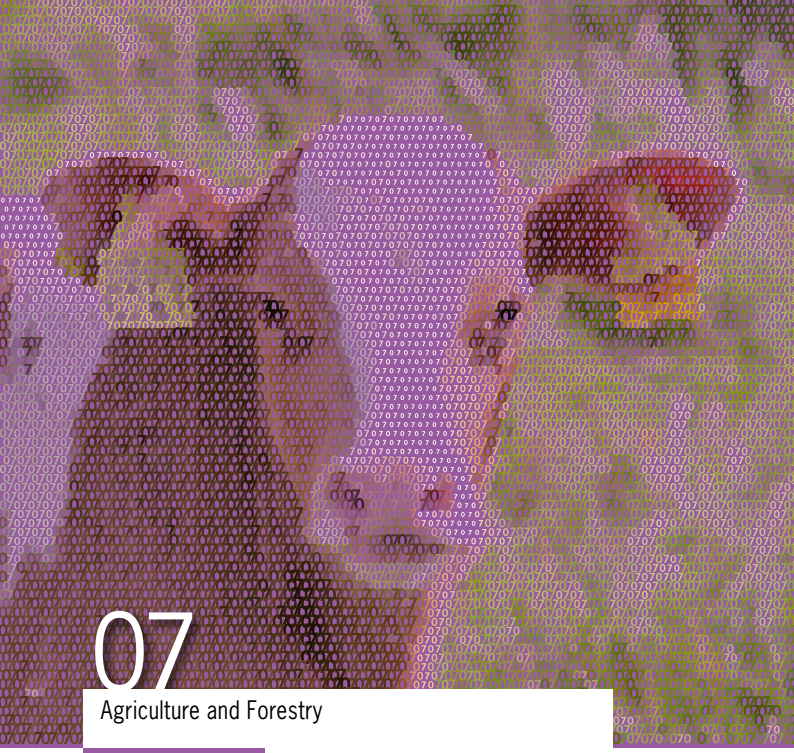


07

Agriculture and Forestry

1112-1300

Swiss Agriculture

Pocket Statistics 2013

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Federal Department of Home Affairs FDHA
Federal Statistical Office FSO

Neuchâtel, 2013

GLOSSARY

The terms listed in the glossary are indicated in the text with an asterisk (*).

Gross value added (GVA)
Gross value added is the increase in the value of goods resulting from the production process. In the National Accounts, the gross value added is obtained by subtracting the intermediate consumption from the output.

Livestock unit (LSU)
The livestock unit allows different types of livestock to be compared with one another. One LSU corresponds to the feed eaten and solid and liquid manure produced by a 650 kg cow. On this basis, conversion factors which depend on the age and sex of the animal are used (for example, a sheep which is more than 1 year old is equivalent to 0.17 LSU).

Annual work unit (AWU)
The annual work unit corresponds to the work of one full-time job over a year (based on 280 working days).

Agriculture
The term is used in a strict sense and does not include horticultural services and small production units.

Utilised agricultural area (UAA)
Area used for crop production, excluding summer pastures and woods.

Farm
All the workers, equipment and means of production used to produce agricultural products. On the basis of the FSO's agriculture census, one farm corresponds to the following minimum standards: 1 hectare of UAA* or 30 ares under specialised cultivation or 10 ares of crops grown under protection or 8 sows or 80 fattening pigs or 300 poultry.

Output
The value of the goods and services produced for sale or for private final consumption (by producer households), for intermediate consumption on the farm (for example, forage for milk production) or for the production of fixed assets (plantations or livestock). Changes in stock are also taken into account.

NOTES

Indices
The indices are produced by dividing an annual figure by the figure for the reference year and multiplying it by 100. This enables completely different figures to be compared, provided that the same reference year is used (for example, 1996=100).

Rounded figures
Figures are rounded up or down, which means that when the figures are added together they may differ from the total.

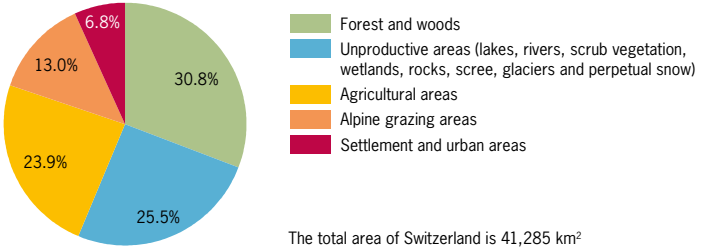
Sources
The source is only given when the data is not provided by the FSO.

CONTENTS

For several years agriculture in Switzerland has been in a state of upheaval. The figures in this pocket statistics give an overview of the status and the changes in individual areas of Swiss agriculture.

Context

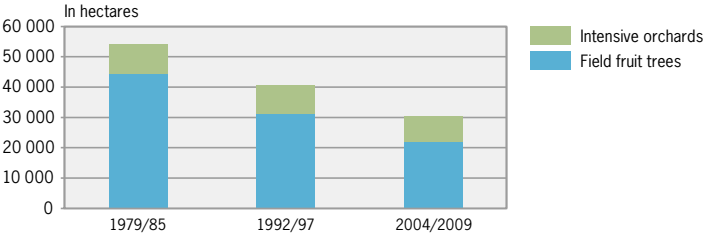
Land use
Areas surveyed between 1992 and 1997



Agricultural and alpine grazing areas together make up more than one third of the total area of Switzerland and therefore have a significant influence on the landscape.

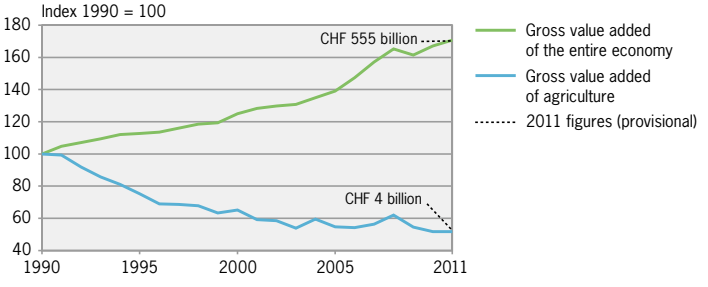
In the traditional fruit-growing areas, for example in Northwestern Switzerland, in Eastern Switzerland and in the canton of Zug, field fruit trees have declined. The result is a change in the landscape.

Fruit growing area



Database: Switzerland excl. Canton Graubünden (34,180 km² = 82,8% total surface area of Switzerland)

Gross value added (GVA*) of agriculture and the Swiss economy
At current prices



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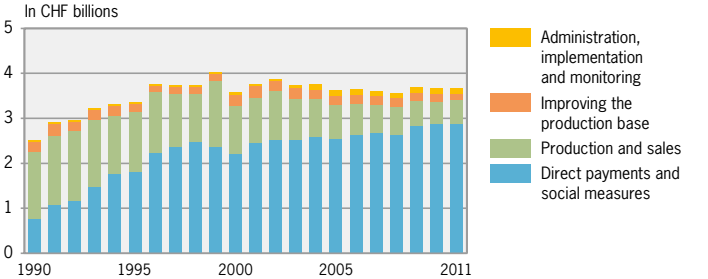
Between 1990 and 2011, agriculture's share in the gross value added* of the Swiss economy fell from 2.3% to 0.7%. In 2011 agriculture represented 89% of the gross value added of the economy's primary sector.

In 2011 the Swiss Confederation spent CHF 3.7 billion on the agricultural and food sectors. Of this amount, 79% was paid as direct payments and social contributions to the entitled farms.

Federal expenditure on agriculture and food



Source: Federal Finance Administration

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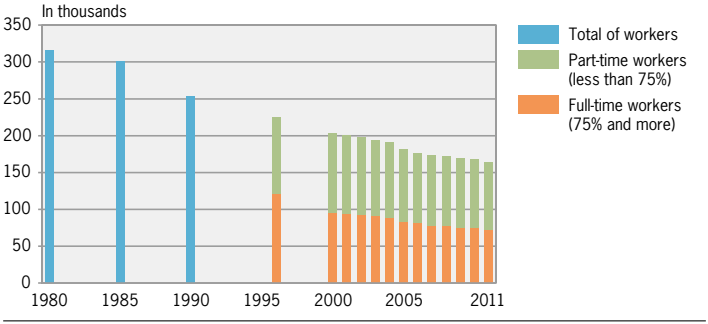
Jobs in agriculture



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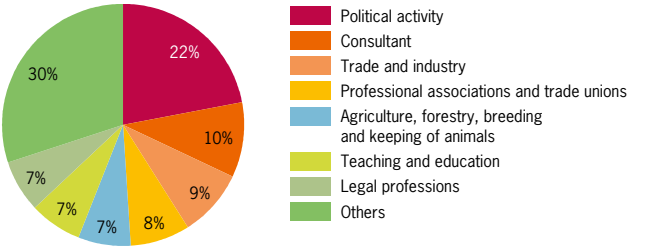
In 2011, 164,000 persons worked in agriculture, half as many as in 1980. 56% of them worked part-time. For every 50 persons in Switzerland's resident population, on average one person works in agriculture.

From 1987, agriculture and forestry was continually represented in the Swiss Parliament by between 22 and 27 members from the farming community. With the 2011 elections, their number fell to 18.

Occupational breakdown of Members of National Council and Swiss Council of States, 2011



Data based on information provided by Council Members

Source: Parliamentary Services

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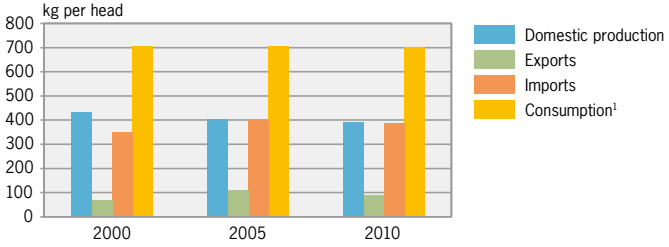
Domestic production, exports, imports and consumption of foodstuffs



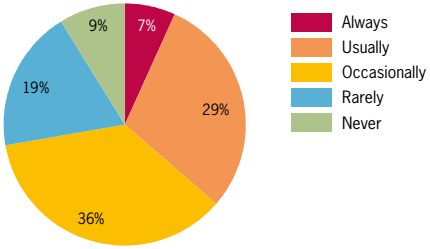
[1] Does not represent quantities actually consumed as losses (e.g. unsold or spoilt food) are not recorded completely

Source: Swiss Farmers' Union, SFU Statistics

In 2010, by weight, the domestic production was approximately 56% of all food consumed in Switzerland. The amount of imported food was higher in 2010 than in 2000 and was almost equal to domestic production. Crop products made up the bulk of the imports.

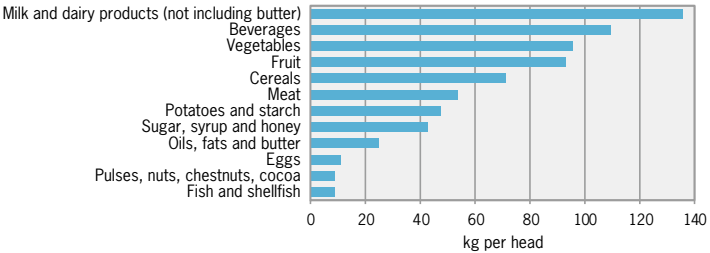
People living in towns are more likely than those living in rural areas to consume organic food. Women are more likely than men to do so. The main two reported reasons for not consuming organic food are price (42% of persons who never or who do not exclusively eat organic products) or insufficient range of products (28% of persons).

Consumption of foodstuffs from organic production, 2011
As % of resident population (15 to 74 year-olds)



Source: Omnibus Survey 2011

Food consumption[1], 2010



[1] Does not represent quantities actually consumed as losses (e.g. unsold or spoilt food) are not recorded completely

Source: Swiss Farmers' Union, SFU Statistics

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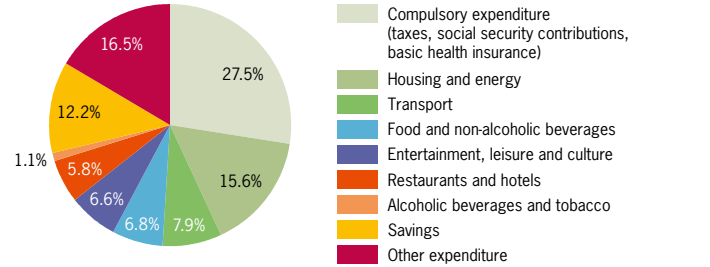
In 2010 approximately 700 kg of food were consumed per person. 54 kg of food consumed was meat, which is 11 kg less than in 1980.

In 2010 households spent roughly one eighth of their budget, i.e. on average CHF 1200 per month on food. At approximately CHF 150 per month, meat was the largest expenditure item amongst food.

Household expenditure, 2010

Proportion of gross household income



Average number of persons per household: 2.2

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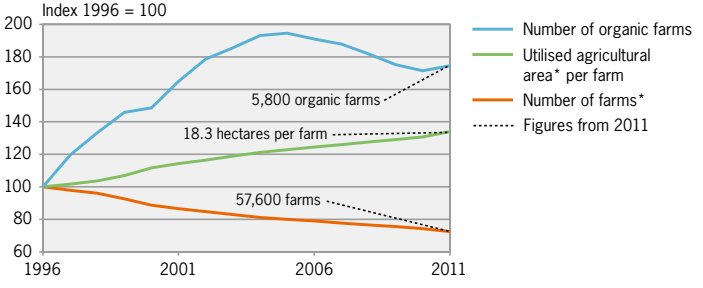
Structures

Farms and utilised agricultural area



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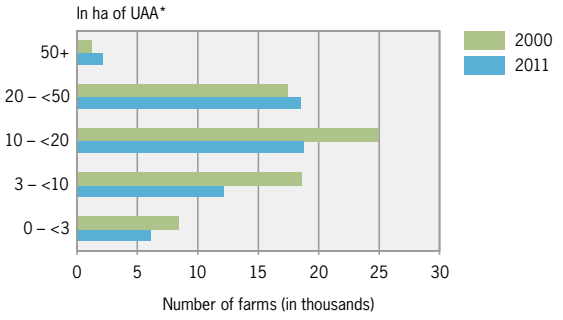
The number of farms continued to fall, from over 70,500 farms in 2000 to 57,600 farms in 2011. The number of farms in the plain region as well as those with less than 20 hectares of utilised agricultural area saw a particularly strong decline from 2000. At the same time farms have grown larger. Compared with the previous year, the average utilised agricultural area per farm increased by 0.4 hectares to 18.3 hectares.

Farms by size category



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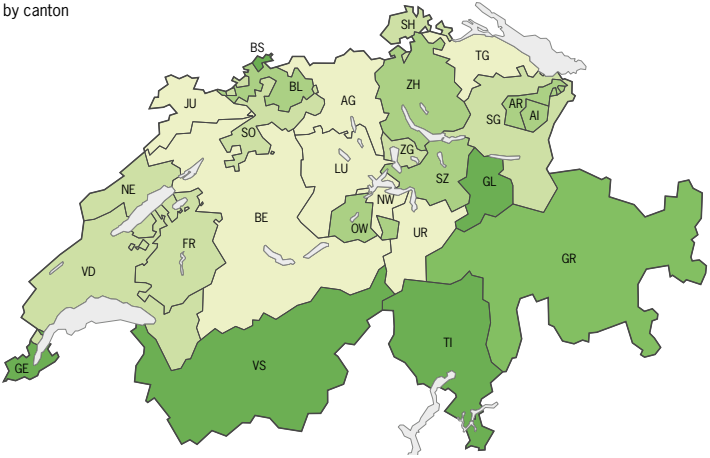
Leased area in 2010

by canton



Percentage of leased area in utilised agricultural area (UAA)

< 45.0 | 45.0 – 49.9 | 50.0 – 54.9 | 55.0 – 59.9 | ≥ 60.0 | CH: 47.2 %

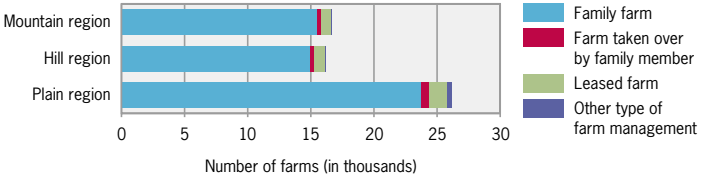
Source: Census of agricultural farms

© FSO

In 2010, 47% of the agricultural area* was leased (excluding usufruct). This means that more than half of agricultural land is owned by those farming it. The largest percentages of land under lease were found in the cantons of Basel-Stadt, Valais and Geneva.

Some 94% of farms were family farms or farms that were taken over by a family member.

Farm management type, 2010



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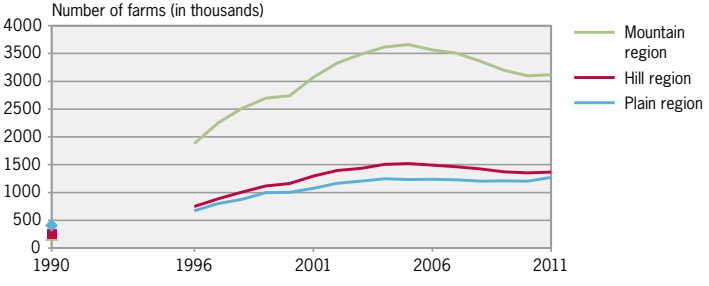
Organic farms by region



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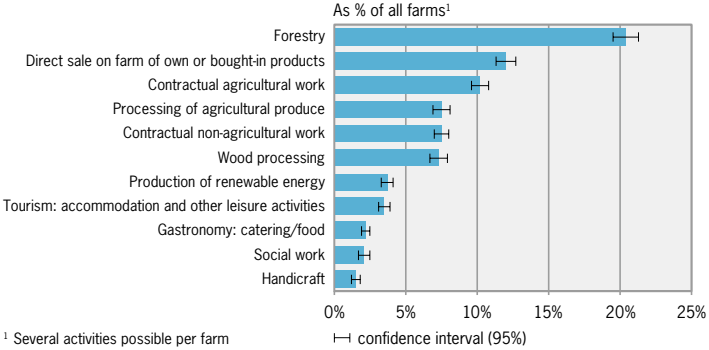
Up until 2005, farms converting to organic farming were mostly found in the mountain region. After this period, these farms also showed the sharpest decline in organic farming. In 2011, organic farms registered a slight increase in all regions compared with the previous year.

In 2010, 45% of farms had family members who held an additional job in connection with the farm. This was most frequently forestry, direct sale of farm produce or agricultural work for other farms.

Diversification within the farm in 2010



[1] Several activities possible per farm

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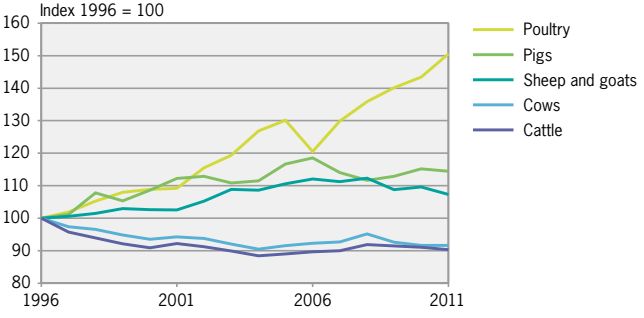
Growth in numbers of livestock



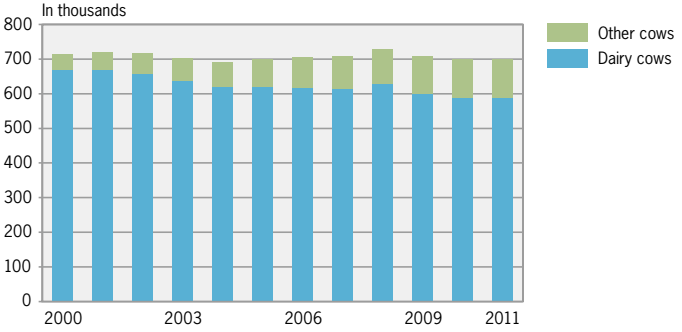
By 2011 the number of pigs, sheep and goats was higher than in 1996. Beef cattle and cow numbers were lower. After 1996 poultry numbers increased greatly. In 2006, due to the risk of bird flu, poultry numbers suffered a temporary decline from which they have since recovered. The increase concerned mainly the number of broiler chickens.

Numbers of livestock on farms*
In thousands[1], in May

	2001	2006	2011
Cattle	1610	1570	1580
of which cows	720	710	700
Horses	50	60	60
Sheep	420	450	420
Goats	70	80	90
Pigs	1550	1630	1580
Poultry	6810	7520	9390

[1] Rounded

Cow numbers



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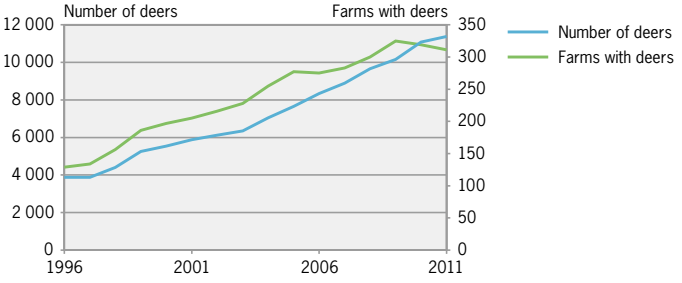
The number of dairy cows fell by 12% from 2000. But in the same period of time the number of “other cows”, which mainly include suckler cows, more than doubled.

Although the keeping of deer on farms is a niche market, it has seen strong growth in recent years. In 2011, 11,000 animals were kept, in particular fallow and red deer. The average herd-size per farm was 37 deer. They are ready for slaughter at 15–16 months.

Deer keeping



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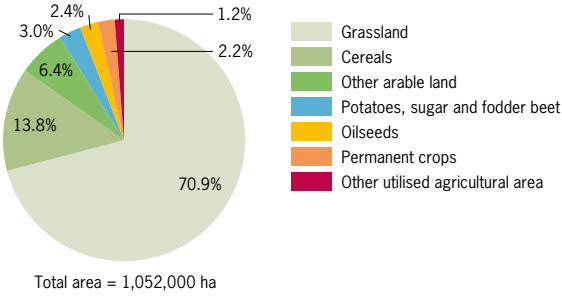
Use of utilised agricultural area, 2011
Excluding alpine areas



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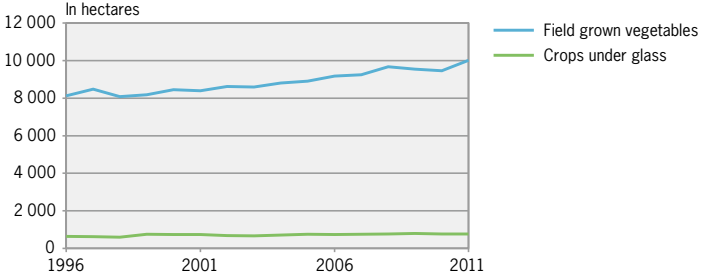
Between 2000 and 2011, utilised agricultural area decreased by 21,000 hectares. This corresponds to an average annual land loss of almost the size of the Lake of Murten. Grassland makes up 70.9% of the utilised agricultural area*.

The cultivation of field grown vegetables has increased in recent years. In 2011, the largest areas of field grown vegetables were found in the cantons of Bern, Aargau, Zurich and Vaud. Overall vegetable cultivation has expanded.

Area of open grown vegetables and crops under glass



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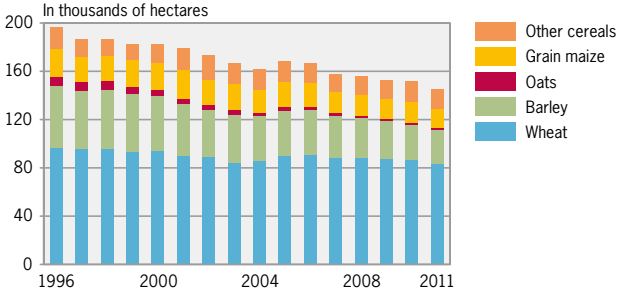
Area under cereals



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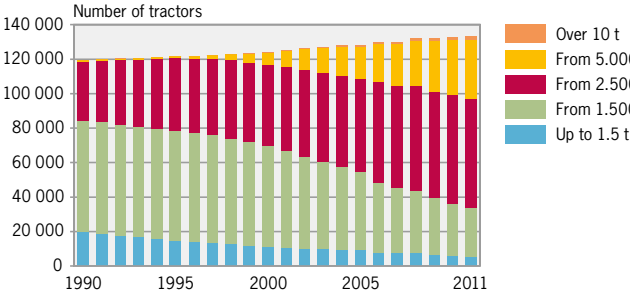
In 2011, 23,000 farms* grew cereal crops. The area on which cereals are grown fell by 26% from 1996. Bread cereals were grown over an area of 83,000 hectares and for feed cereals the figure was 63,000 hectares.

From 1990 to 2011 the number of tractors increased by 12% to 134,000 vehicles, with a shift towards heavier tractors. Approximately 1000 tractors, i.e. fewer than 1% were equipped with a particle filter. In addition, some 2500 combine harvesters were in use in 2010.

Agricultural tractors[1] by total weight



[1] With green registration plates, including forestry tractors

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Canton key figures, 2011

	Farms	Jobs	Utilised agricultural area*	Cattle	Dairy cows	Pigs
		In thousands	In thousands of hectares	In thousands	In thousands	In thousands
ZH	3 879	11.8	74	95	36	43
BE	11 713	34.6	190	318	124	278
LU	4 994	14.2	78	151	62	424
UR	633	1.6	7	12	4	3
SZ	1 711	4.4	24	44	17	27
OW	692	1.7	8	17	8	12
NW	493	1.3	6	12	5	12
GL	404	1.1	7	12	5	2
ZG	593	1.8	11	20	9	21
FR	3 099	8.8	76	134	50	83
SO	1 557	4.3	33	45	16	31
BL/BS	994	3.3	22	28	10	11
SH	615	1.8	16	17	3	21
AR	788	1.7	12	23	10	22
AI	521	1.1	7	15	6	26
SG	4 449	11.6	72	140	59	188
GR	2 588	6.8	55	74	17	7
AG	3 635	10.5	61	89	28	102
TG	2 866	8.9	50	75	39	199
TI	1 177	3.0	14	10	4	3
VD	4 040	13.2	110	113	34	42
VS	3 734	9.6	37	32	11	1
NE	926	2.4	32	42	15	7
GE	411	1.7	11	3	0	1
JU	1 105	3.0	41	58	15	15
Switzerland	**57 617**	**164.1**	**1 052**	**1 577**	**589**	**1 579**

ZH: Zurich, BE: Bern, LU: Lucerne, UR: Uri, SZ: Schwyz, OW: Obwalden, NW: Nidwalden, GL: Glarus, ZG: Zug, FR: Fribourg, SO: Solothurn, BS: Basel Stadt, BL: Basel Landschaft, SH: Schaffhausen, AR: Appenzell Ausserrhoden, AI: Appenzell Innerrhoden, SG: St. Gallen, GR: Graubünden, AG: Aargau, TG: Thurgau, TI: Ticino, VD: Vaud, VS: Valais, NE: Neuchâtel, GE: Geneva, JU: Jura

Canton key figures, 2011 (continued)

	Proportion of grassland in the UAA*	Proportion of organically managed UAA*	Output of agriculture	Subsidies[1]
	In %	In %	In CHF[2] per hectare	In CHF[2] per hectare
ZH	56	9	10 900	2 400
BE	74	10	8 800	2 900
LU	81	6	12 000	3 100
UR	98	12	5 200	3 600
SZ	93	11	6 600	3 300
OW	98	29	8 700	4 100
NW	98	15	8 100	3 600
GL	98	21	6 000	3 500
ZG	80	13	10 200	3 000
FR	69	4	9 300	2 800
SO	67	10	7 300	2 500
BL/BS	71	14	8 800	2 500
SH	33	4	9 200	2 300
AR	98	18	8 000	3 200
AI	97	4	9 600	3 300
SG	90	10	10 100	3 100
GR	94	56	4 500	3 800
AG	54	7	10 600	2 500
TG	61	9	16 200	2 700
TI	84	14	9 200	3 000
VD	45	4	10 400	2 500
VS	76	16	14 100	3 300
NE	85	4	6 600	2 400
GE	23	4	20 000	2 200
JU	74	9	5 400	2 600
Switzerland	**71**	**11**	**9 700**	**2 900**

[1] Data according to regional accounts for agriculture. They are mainly comprised of direct payments.

[2] Rounded to the nearest hundred

Production, yields and income

Animal production[1]
In thousands of tonnes

	2001	2006	2011
Meat			
Cattle	138	135	144
Pigs	234	244	249
Sheep	6	6	5
Poultry	50	52	73
Cow's milk	3874	3878	4119
Chicken's eggs	36	36	41

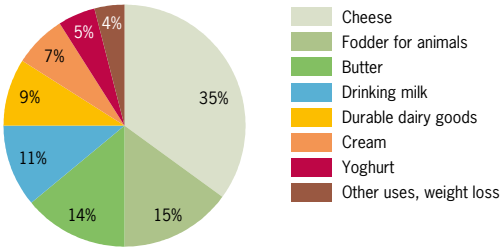
[1] Gross domestic production

Source: Swiss Farmers' Union, SFU Statistics

From 2000, an increase in meat production was registered, in particular for poultry meat.

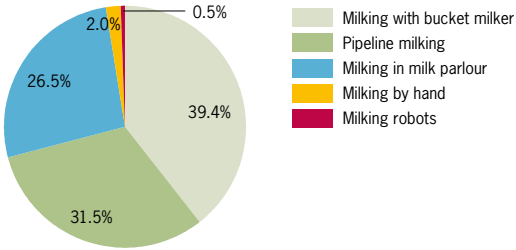
Between 2010 and 2011 the milk yield increased again. Just over a third of the milk yield is used to make cheese. Emmentaler AOC and Gruyère AOC are the cheeses produced in the greatest quantity. Butter manufacture also increased from 37,000 tonnes in 2000 to 49,000 tonnes in 2011.

Milk processing, 2011



Source: Milk statistics, SFU Statistics

Milking systems[1], 2010



[1] Several milking systems per farm possible

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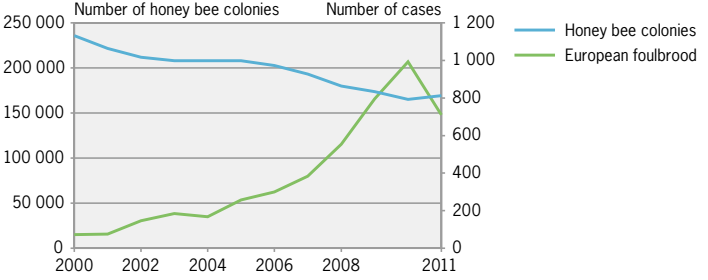
In 2010, the bucket milker (15,000) was most widespread, followed by pipeline milking (12,000) and milking parlours (10,000). 760 farms still milked their cows by hand.

The number of honey bee colonies decreased. In the past 10 years the honey bee disease foul brood has become widespread. The falling number of cases in 2011 shows that measures introduced to combat the disease are working.

Honey bee colonies and foul brood



Source: Swiss Farmers' Union, SFU Statistics / Federal veterinary office FVO © FSO

Crop production[1]
In thousands of tonnes

	2001	2006	2011
Cereals	1079	1013	972
Potatoes	518	392	512
Sugar beet	1050	1243	1828
Vegetables	292	289	425
Fruit and berries	307	356	435

2011: provisional

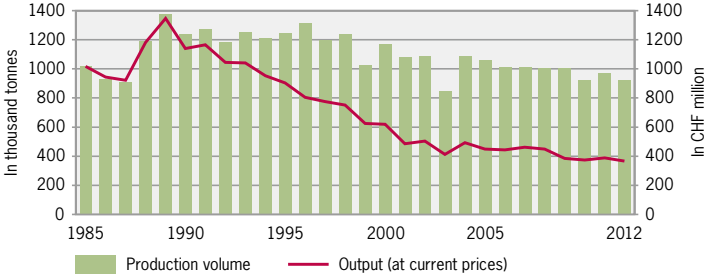
Source: Swiss Farmers' Union, SFU Statistics

[1] Gross production minus losses in the field and on the farm

Plant yields are largely dependent on the weather. 2011, with its warm spring, was ideal for crop production, resulting in a good harvest.

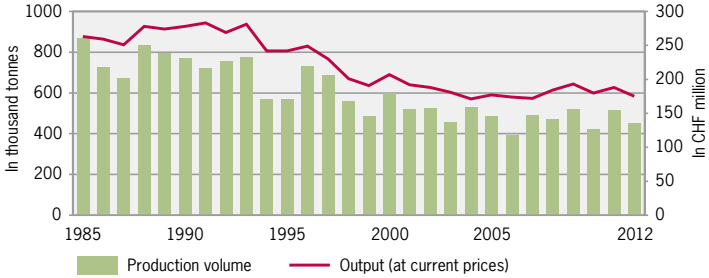
The output value of cereals has been more than halved since 1985. Due to falling prices, the growing of cereals has decreased overall (Page 15).

Cereal production and output*



2011: provisional, 2012: estimate

Potato production and output value*

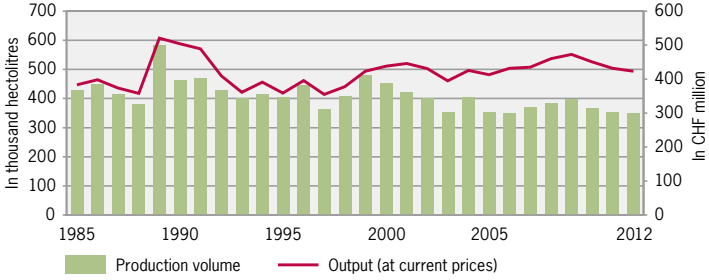


2011: provisional, 2012: estimate

Between 1985 and 2011 the area for growing potatoes almost halved. Parallel to this decline, the yield and output value fell too. In 2012 the estimated output was CHF 175 million.

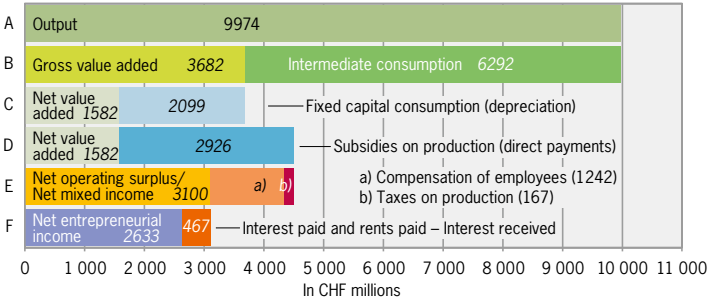
Approximately 40% of grapes were pressed by the winegrowers themselves. The price for wine grapes fell by 13% from 1985. Wine prices, however, rose. The output value of self-pressed wine was estimated at CHF 423 million in 2012.

Self-pressed wine: production and output*



2011: provisional, 2012: estimate

Economic accounts for agriculture, 2012[1]
At current prices



[1] Estimate

The simplified structure of the economic accounts for agriculture is as follows:

A) The total output* is the value of all the goods and services produced by agriculture (page 23).

B) The gross value added* is obtained by subtracting the intermediate consumption, in other words, the expenditure on all the goods and services used during the production process.

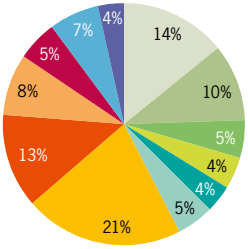
C) Depreciation (fixed capital consumption) is subtracted from this to give the net value added.

D) The subsidies (direct payments) are added as resource to the net value added.

E) The net operating surplus or the net mixed income (for self-employment) is obtained by subtracting the taxes on production and the compensation of employees.

F) To give the net entrepreneurial income of the agricultural sector, interest on debt and rent is then deducted. This allows self-employed people working in agriculture to pay their household expenses and income tax and to fund their pensions. This amount can be defined as the “remuneration for self-employed work and own capital”.

Details of output, 2012[1]



Vegetable and horticultural products
Forage plants
Fruit and grapes
Wine
Cereals
Other vegetable products

Milk
Cattle
Pigs
Other animals and animal products
Agricultural services
Non-agricultural secondary activities (not separable)

[1] Estimate

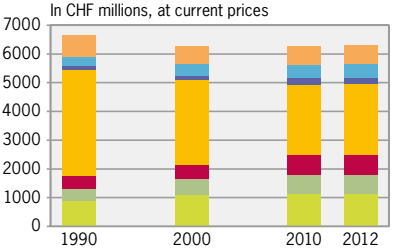
Total value = CHF 9.974 billion

© FSO

The output value of the Swiss agricultural sector fell below CHF 10 billion in 2012, 10% less than in 2000.

Roughly 40% of intermediate consumption was spent on feed (including home-grown feed). Agricultural services were increasingly contracted to carry out specialised procedures such as tillage, harvesting with special equipment, artificial insemination etc. The share of these costs in intermediate consumption rose from 6% (1990) to 11% (2012, estimate).

Intermediate consumption in agriculture

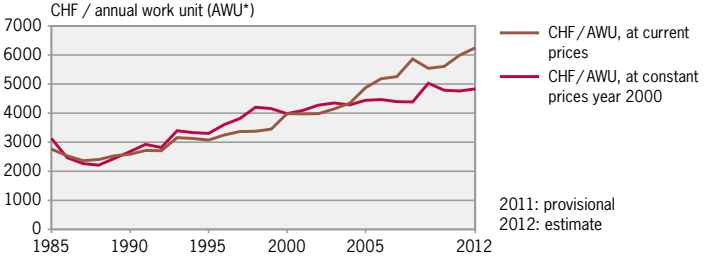


Seeds, plants, fertiliser and plant protection products
Energy
Vet and medicines
Feedstuffs
Maintenance of buildings and machinery
Agricultural services
Other goods and services

2012: estimate

© FSO

Energy costs



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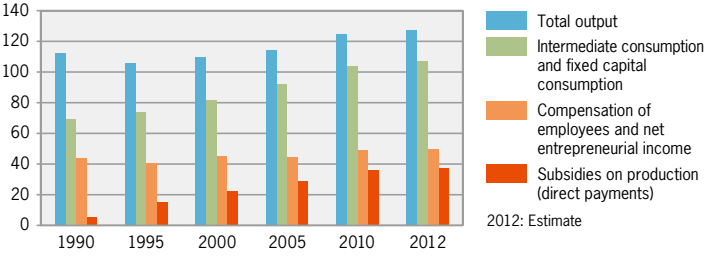
Agriculture's total costs for energy (electricity and fuel) increased. The share of electricity in energy intermediate consumption (to constant prices) was 42% in 2000, rising to 51% in 2012.

Production costs continued to rise. Thanks to improvements in labour productivity and the provision of direct payments, average compensation of labour in agriculture (at current prices) increased from the beginning of the 2000s.

Output, income and subsidies in agriculture per work unit
In CHF thousands per annual work unit (AWU*), at current prices



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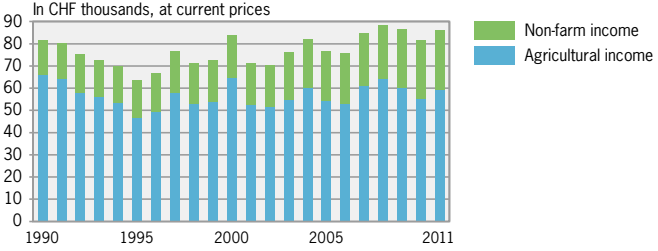
Total income per farm

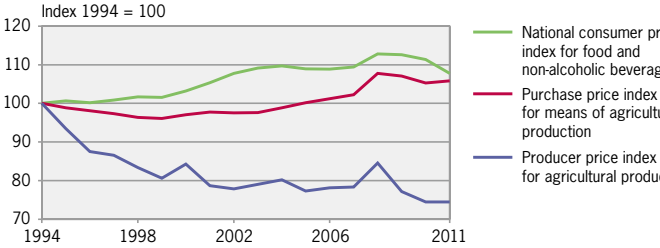


Source: Agroscope Reckenholz-Tänikon ART (Farm Accountancy Data Network) © FSO

The average income from work per family member was CHF 43,500 in 2011 and the agricultural income per farm was CHF 59,500. A farming household earned almost a third of its total income outside of agriculture.

Up until 2008, food became increasingly expensive for consumers. Since this time, food has tended to become less expensive. Producer prices continued to fall. Especially between 2008 and 2011, falling milk prices, as well as lower returns on pigs for slaughter affected the evolution of the producer price index.

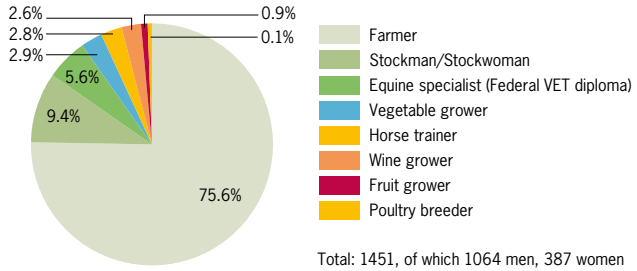
Price indices



Sources: FSO / Swiss Farmers' Union, SFU Statistics © FSO

Social factors

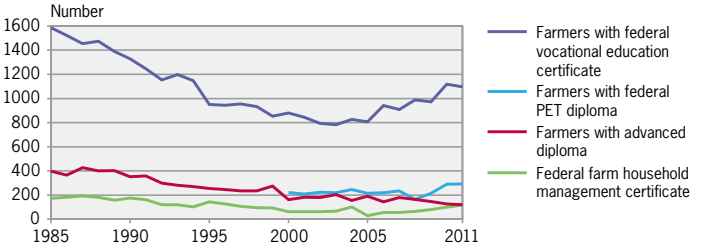
Education in crop production and livestock breeding, 2011
Federal vocational education certificates



© FSO

In 2011 a total of 1451 apprentices obtained a Federal VET diploma in crop production and livestock breeding. The number of people completing an apprenticeship in farming fell significantly until 2005. Since then, interest in this apprenticeship has grown again. In 2011 the figure was 1097 people, of whom 137 were women. In 2011, 92 people successfully completed the new Federal VET certificate in agriculture for the first time.

Education in agriculture
Vocational qualifications



Sources: FSO / Swiss Farmers' Union, SFU Statistics

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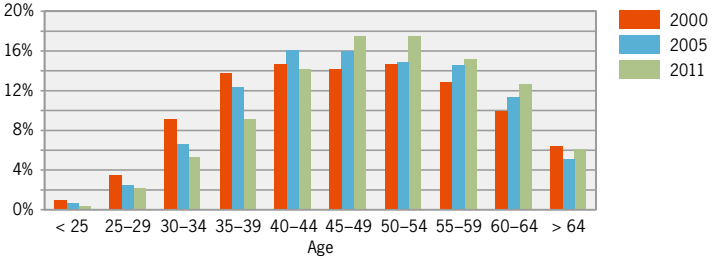
Proportion of farmers[1] by age group



[1] As % of farmers whose age is known (approx. 90%)

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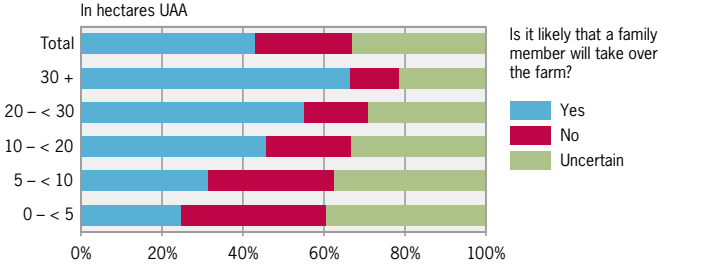
Between 2000 and 2011 the age pyramid of farmers shifted to the right. In 2011 half of farms were managed by persons aged over 50.

For 43% of farms that are managed by a person aged over 50, the succession within the family is likely. The larger the farm, the greater is the likelihood that a family member will take over the running of the farm.

Farm taken over by family member in 2010
Responses of farmers aged over 50 by class of farm size



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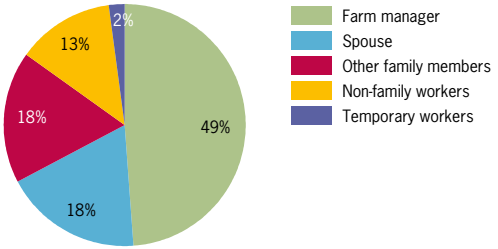
Hours worked for the farm, 2010



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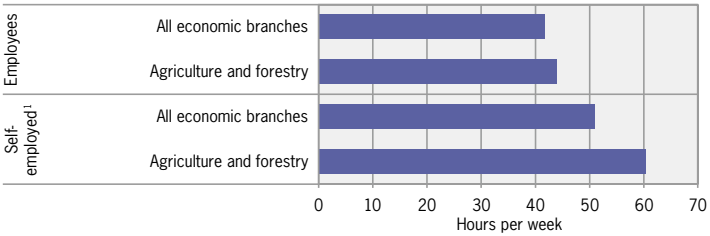
85% of all hours worked on farms in 2010 were carried out by family members. Other workers carried out the remaining 15% of the labour input.

The normal weekly hours worked by employees and self-employed persons who work full-time in agriculture and forestry are higher than the average of all economic sectors.

Normal weekly working hours for full-time employed people, 2011



[1] Including self-employed people and employees in their own company (joint stock company and limited-liability company)

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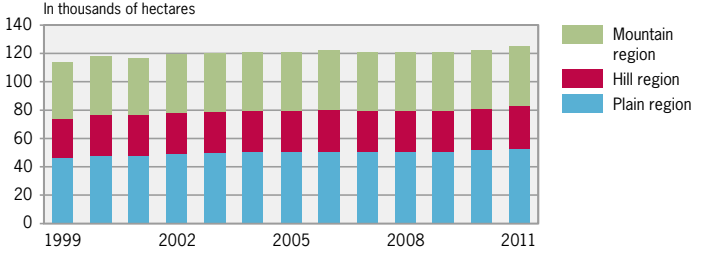
Effects on the environment

Ecological compensation areas
Areas eligible for subsidies[1]

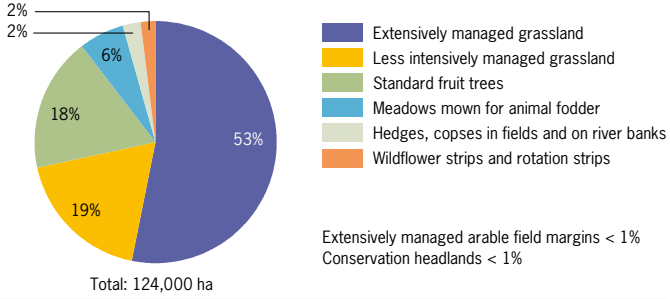


[1] The number of standard fruit trees is converted into units of area. One tree corresponds to one are

Source: Federal Office for Agriculture © *FSO*

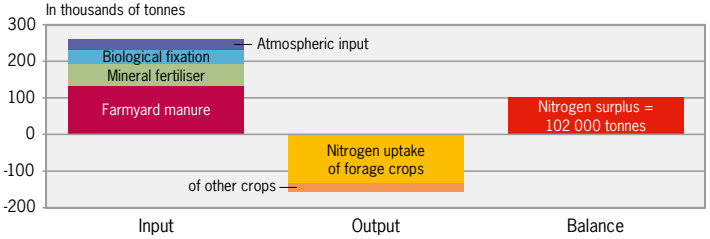
In 2011 around 124,000 hectares of ecological compensation areas were entitled to subsidies. In the plain region they increased by 15% between 1999 and 2011. In more elevated regions there was no increase. Most of the ecological compensation areas are extensively managed grassland.

Ecological compensation areas, 2011
Ecological compensation areas eligible for subsidies



Source: Federal Office for Agriculture © *FSO*

Nitrogen balance of agricultural land, 2010[1]
Amounts of nitrogen inputs and uptake from agricultural soil



[1] According to the OECD (Organisation for Economic Cooperation and Development) method

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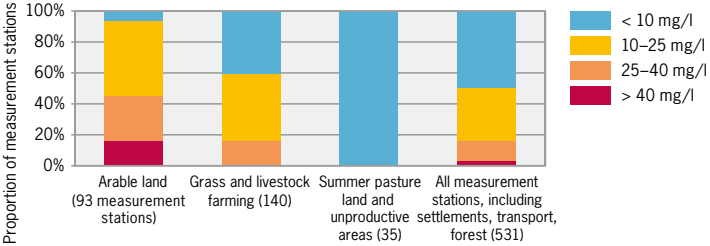
Half of nitrogen inputs come from farmyard manure. Together with mineral fertilisers, biological fixation and inputs from the air, this results in a surplus of nitrogen. Emissions into the environment in the form of ammonia in the air or nitrates in groundwater cause problems.

Although water quality in Swiss lakes, rivers and streams has been constantly improving over recent years, in agricultural areas nitrate concentrations remain too high.

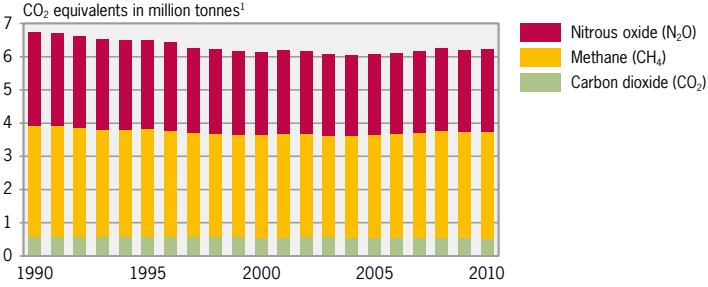
Maximum nitrate concentration in groundwater, 2011
According to land use in catchment areas



The Swiss Federal Ordinance on protection of lakes and rivers requires concentrations of nitrate in groundwater to be at the most 25 milligrammes per litre.

Source: NAQUA National Groundwater Monitoring, Federal Office for the Environment FOEN *© FSO*

Greenhouse gas emissions from agriculture



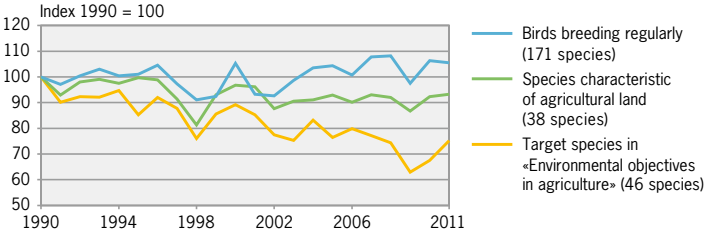
[1] Non-CO_2 greenhouse gas emissions are converted according to their global warming potential

Source: Federal Office for the Environment © *FSO*

In 2010 agriculture was responsible for 11% of greenhouse gas emissions in Switzerland. 84% of all methane emissions and 78% of all nitrous oxide emissions came from agriculture, in particular from cattle and fertilisers.

Over the past twenty years, the trend for all bird species that breed regularly in Switzerland has been marginally positive. In 2008, as part of the "Environmental Objectives for Agriculture", the Federal Offices for Environment and for Agriculture have classified 46 key and target species. Despite an increase in 2010 and 2011, their numbers have shown a negative trend since 1990.

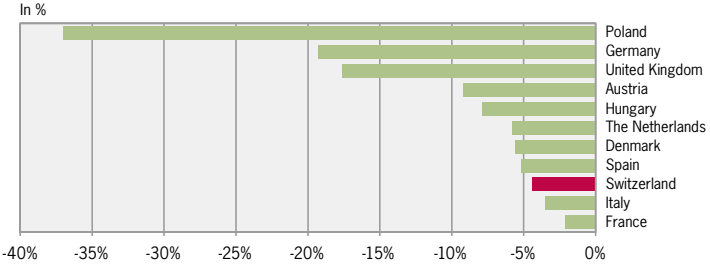
Population of breeding birds



Source: Swiss Ornithological Institute Sempach, Swiss Bird Index® © *FSO*

International comparisons

Trend in number of farms between 2007/2010

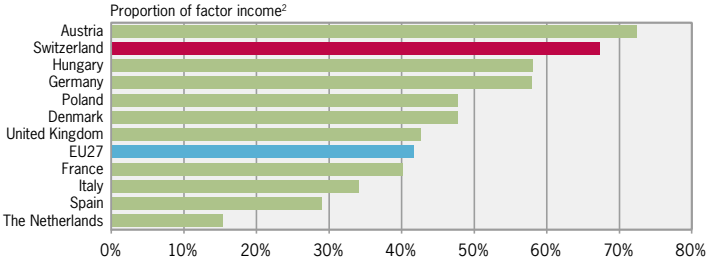


Source: Eurostat © *FSO*

In European comparison Switzerland belongs to those countries where the structural change in agriculture has been rather small. This is in contrast to Poland where farms have declined by almost 40% in five years.

In European countries, State aid to agriculture is an important part of the income of the agricultural sector. In Switzerland and Austria subsidies accounted for over 60% of factor income in 2010.

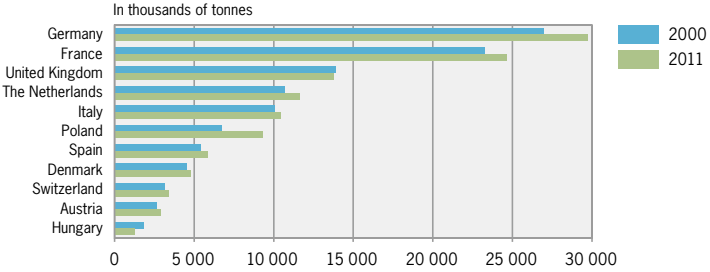
Subsidies[1], 2010



[1] Including subsidies on products and other subsidies on production
[2] Factor income = net value added + other subsidies on production - taxes on production (page 22)

Source: Eurostat © *FSO*

Collection of cow's milk[1]



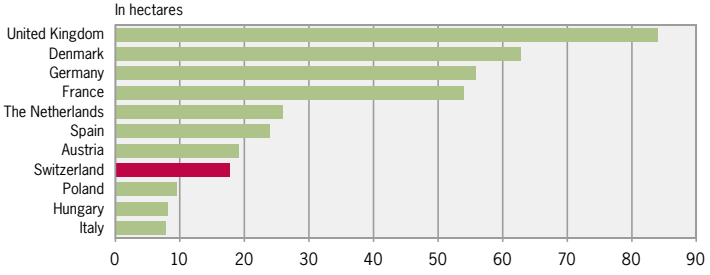
[1] Data covers cow's milk collected in farms by dairies.

Sources: Eurostat / Swiss Farmers' Union, SFU Statistics

Germany and France are the EU's largest milk producers. Both produced more milk in 2011 than in the previous year.

The size of farms depends on the type of organisation, the form of crop or animal production as well as climatic and topographic conditions.

Utilised agricultural area by holding, 2010



Source: Eurostat

Key figures at a glance

Trends of the past 10 years according to a selection of 10 key figures:

Social factors

Key figure	Page	Trend[1] 2002–2011	Trend[1] 2010–2011
Annual labour income per farm	25		
Normal weekly working hours	28		

Economy

Key figure	Page	Trend[1] 2002–2011	Trend[1] 2010–2011
Number of farms	9		
Number of jobs	6		
Gross value added	5		
Producer price index	25		

Environment

Key figure	Page	Trend[1] 2002–2011	Trend[1] 2010–2011
Number of organic farms	9		
Ecological compensation areas	29		
Nitrogen input[2]	30		
Populations of breeding birds in agricultural areas	31		

[1] When the difference in the key figure average between 2002/2004 and 2009/2011 or between 2010 and 2011 is greater than +/-3%, we speak of an increase or decrease. Otherwise the indicator is indicated as stable.

[2] Trends for 2001–2010 und 2009–2010

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