

# 2019



07

Agriculture and  
forestry

Neuchâtel 2019

## Food and Agriculture

Pocket Statistics 2019



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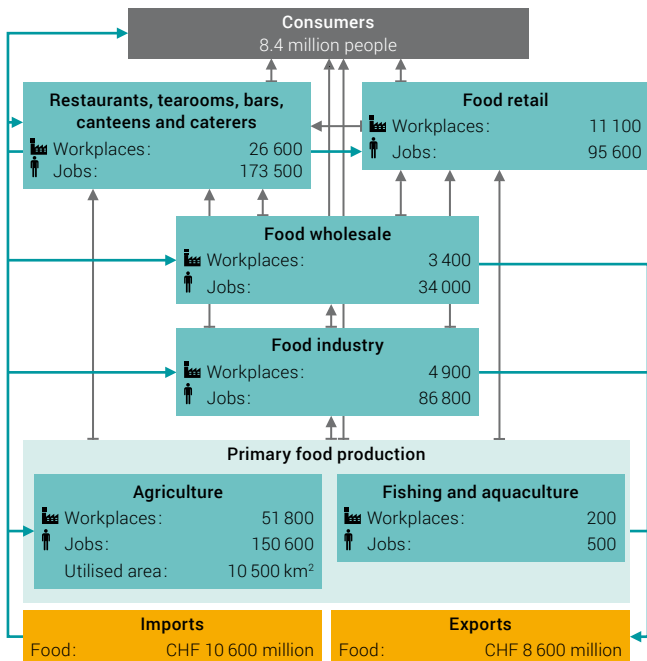
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These Pocket Statistics provide concise data, facts and useful information about Switzerland's food supply chain, with a focus on agriculture. The key figures give an overview of the status and changes in individual areas.

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# 1 Overview

## The food supply chain in Switzerland, 2016<sup>1</sup>



— domestic food flows    — food flows with the rest of the world

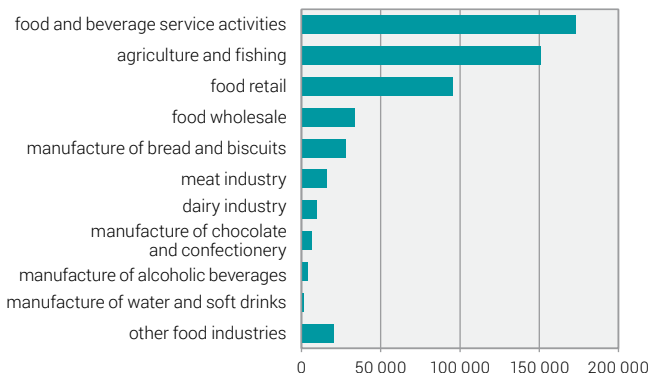
<sup>1</sup> workplaces and jobs, 2016: provisional

Sources: FCA – Foreign trade statistics;  
FSO – STATENT, STATPOP, Farm structure survey

© FSO 2019

## Jobs in the food supply chain, 2016<sup>P</sup>

### Number of jobs



<sup>P</sup> provisional

Source: FSO – STATENT

© FSO 2019

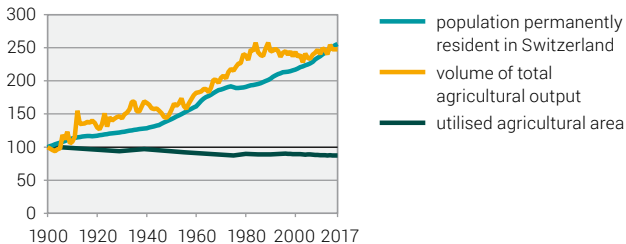
The food supply chain describes the different processes from raw material production in agriculture and fishing to processing and from retail to the food on consumers' tables. It has key economic significance for Switzerland.

In 2016, some 100 000 businesses operated in the food supply chain. Of Switzerland's total workforce of around 5 million, approximately 548 000 persons, representing 11% of jobs, worked within the food supply chain in 2016. Most were employed in food and beverage establishments and primary production (agriculture and fishing).

## 2 Context

### Population and agriculture

Index 1900=100

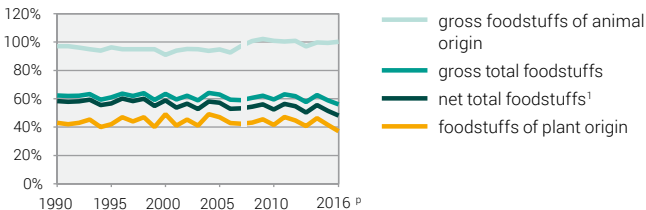


Sources: FSO – EAA, STATPOP, Farm structure survey

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### Self-sufficiency rate

By usable energy



<sup>1</sup> excluding animal products manufactured from imported feed

<sup>P</sup> provisional

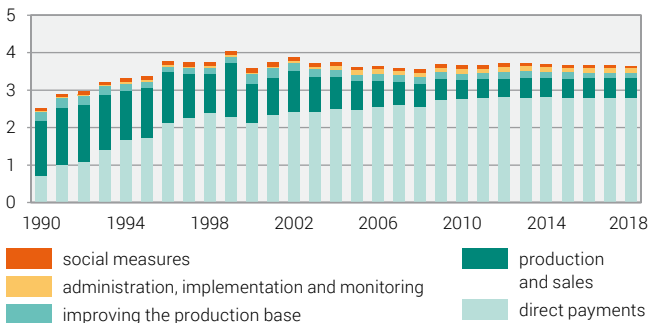
new calculation method since 2007

Source: SFU – Food balance sheet

© FSO 2019

## Federal expenditure on agriculture and food

CHF billions



Source: FFA – Federal budget

© FSO 2019

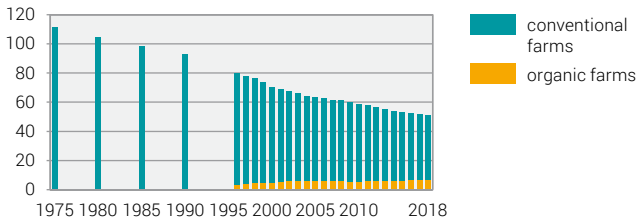
Since the early 20th century, Switzerland's resident population has grown by a factor of 2.6, to over 8.4 million (2017). At the same time, breeding and technical progress in agriculture has seen food production increase. This has meant that around 60% of food consumption (in terms of usable energy) has been covered by domestic production over the past 20 years. In 2016 this figure was 56%.

The Confederation spent some 5.2% of its total budget on supporting food production (2018). This is intended to ensure that through sustainable and market oriented production, agriculture can make a key contribution to supplying the population with food, conserving natural resources, preserving the countryside, allowing decentralised land settlement and ensuring animal welfare.

## 3 Agricultural structures

### Farms

Thousands of farms

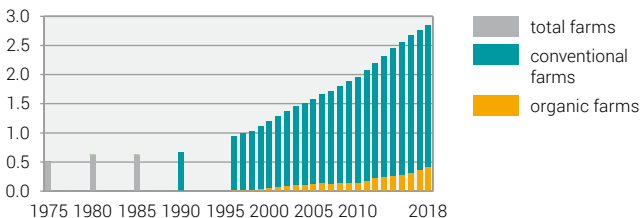


Source: FSO – Farm structure survey

© FSO 2019

### Farms with 50 ha and more

Thousands of farms



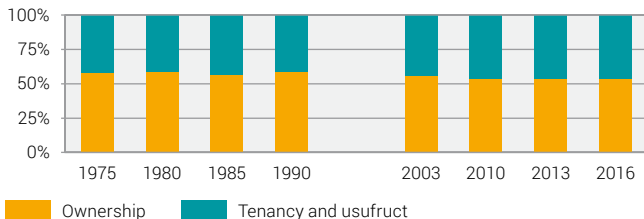
Source: FSO – Farm structure survey

© FSO 2019



## Landownership

### Share of utilised agricultural area



1975–1990: Farm Structure Survey (full survey);  
from 2003 sample survey with extrapolation

Sources: FSO – Farm structure survey, complementary surveys

© FSO 2019

The number of farms declined from 111 302 in 1975 to 50 852 in 2018. The remaining farms now cultivate an area that is twice as much the size per farm compared with 1975. As a result, the number of large farms with 50 or more hectares increased. These accounted for 6% of all farms in 2018.

Since the 1990s, organic farms have gained increasing importance. The number of organic farms increased while the number of conventional farms fell. The share of organic farms thus increased from 1% in 1990 to 14% in 2018.

Increasingly, less land is owned by the active farmers. The share of agricultural area that was owned decreased from 58% in 1975 to 54% in 2016 while the share of leased land (incl. usufruct) increased.

## Numbers of livestock

Thousands (rounded)

	1998	2008	2018 <sup>1</sup>
cattle	1 640	1 600	1 540
of which cows	740	730	690
equines	60	80	80
sheep	420	450	340
goats	60	90	80
pigs	1 490	1 540	1 420
chickens	6 570	8 470	11 530

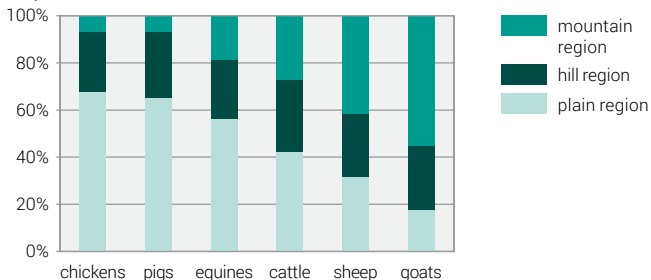
<sup>1</sup> From 2015 reference day moved from early May to 1 January.

Source: FSO – Farm structure survey

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## Livestock by region, 2018

### Proportion of animals

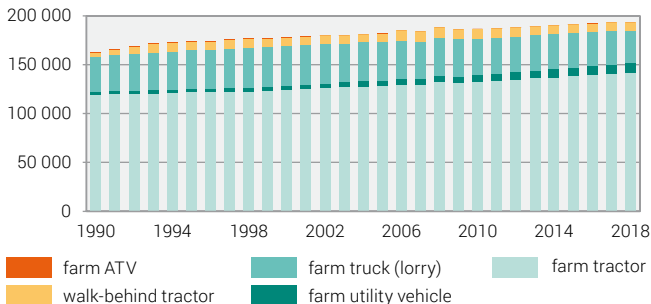


Source: FSO – Farm structure survey

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## Agricultural vehicles

Number of vehicles



Source: FSO, FEDRO – Stock of vehicles

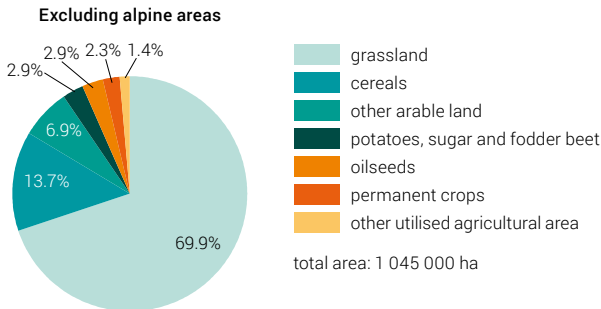
© FSO 2019

Cattle numbers fell by 6% between 1998 and 2018. The number of cows also declined. The number of goats, equines (horses, hinnies, mules, ponies, little horses and asses) and especially the number of chickens increased during these 20 years.

Chickens, pigs and equines were mostly reared on lowland farms. Meanwhile, goat and sheep farming is typical of hill and mountain regions.

There have never been so many registered agricultural vehicles as in 2018. The number of tractors increased from 119 000 in 1990 to 141 000 in 2018. Although the number of agricultural vehicles that were newly registered in 2018 was lower than that of the previous year (2930 in 2018 compared with 3308 in 2017), the pool of agricultural vehicles shows continued growth. This suggests that old tractors are not replaced but are still in operation.

## Utilised agricultural area, 2018



Source: FSO – Farm structure survey

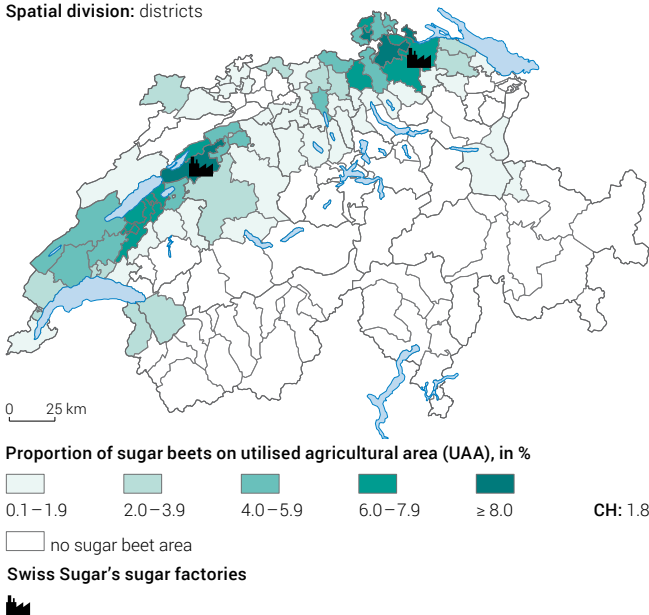
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In 2018, grassland accounted for 70% of the utilised agricultural area. This was followed by cereals (14%), the most important arable crop.

The areas for growing sugar beet are mainly concentrated in regions in the Mittelland. Most are located in the cantons of Vaud, Bern, Zurich and Thurgau. In 2018, the area for sugar beet was around 19 000 hectares, which equates to slightly more than the area of the canton of Appenzell Innerrhoden. Compared with the previous year, the surface decreased by 3%. Both of Swiss Sugar's sugar factories are located in Aarberg and in Frauenfeld. These conclude annual crop contracts with the producers for the production of sugar beet.

## Sugar beets, 2018

Spatial division: districts



Source: FSO – Farm structure survey

© FSO 2019

## 4 Primary production

### Crop production<sup>1</sup>

Thousands of tonnes

	2007	2012	2017 <sup>P</sup>
cereals	1 012	950	975
potatoes	490	447	461
sugar beet	1 573	1 673	1 545
vegetables	313	396	427
fruit and berries	401	316	206

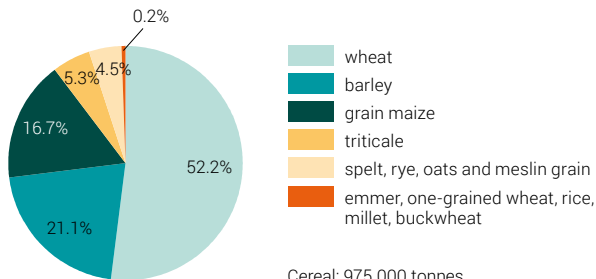
<sup>1</sup> gross production minus losses in the field and on the farm

<sup>P</sup> provisional

Source: SFU – Crop production

© FSO 2019

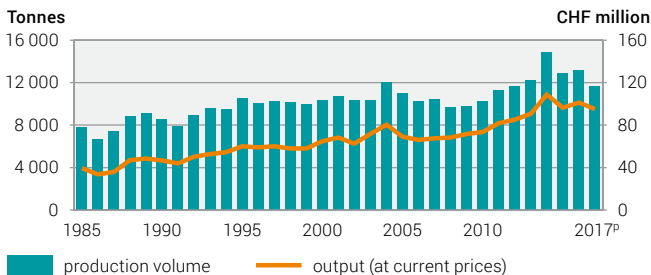
### Cereal production, 2017



Source: SFU – Crop production

© FSO 2019

## Berries production and output



<sup>P</sup> provisional

Source: FSO – Economic accounts for agriculture

© FSO 2019

Several frosty nights in April 2017 caused damage to fruit, vineyards and vegetables. However, this did not have any detrimental impact on either the yield or the quality of the most important arable crops.

Total cereal production in 2017 reached around 975 000 tonnes. Wheat accounted for just more than half of the cereal yield. This was followed by barley and grain maize. Cereal may be used for diverse purposes whether for human consumption in the form of bread, pasta, rice, muesli or as animal food. It may also be used in the production of beer and starch and also as a seed.

The cultivation of berries increased between 1985 and 2017. In 2017, around 7300 tonnes of strawberries and 4300 tonnes of raspberries and other berries were produced, representing a total output value of CHF 95 million.

## Animal production<sup>1</sup>

Thousands of tonnes

	2007	2012	2017 <sup>P</sup>
meat <sup>2</sup>			
cattle	133	144	139
pigs	242	243	239
sheep	5	5	5
poultry	60	76	91
cow's milk	3 912	4 084	3 893
hens' eggs	36	45	54

<sup>1</sup> gross domestic production

<sup>2</sup> usable output, carcass weight

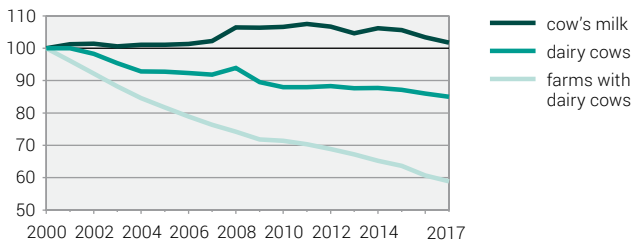
<sup>P</sup> provisional

Source: SFU – Animal production

© FSU 2019

## Production of cow's milk

Index 2000 = 100

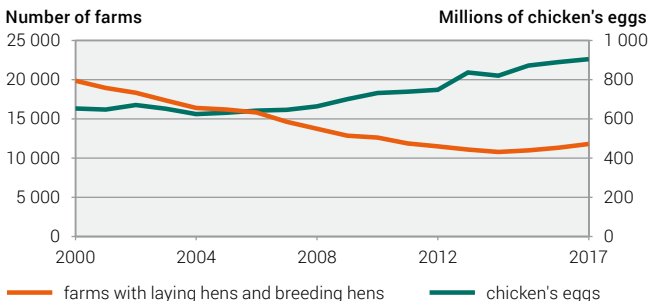


Sources: FSU – Farm structure survey; SFU – Milk statistics

© FSU 2019



## Chicken's eggs



Sources: FSO – Farm structure survey; SFU – Animal production

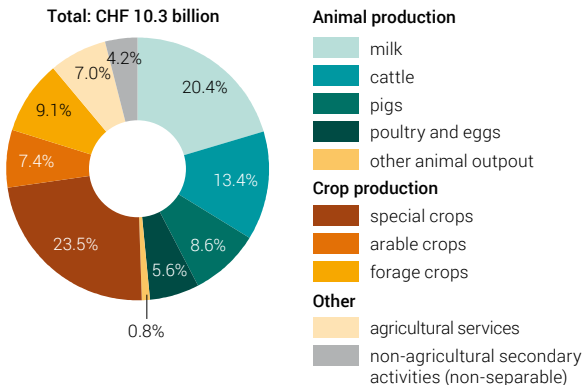
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Meat production rose by 16% between 2000 and 2017. This development was particularly pronounced for poultry which almost doubled in production.

In 2017, almost 4 billion kg of milk was produced. The general decrease in the number of dairy cows and dairy farms also continued in 2017. In 2000, a dairy farm had on average 15 dairy cows. This figure increased to an average of 21 in 2017.

The production of eggs is a growing sector. In 2017, 11 800 farms – 16% of which were organic – had around 3.2 million laying hens and breeding hens. Between 2000 and 2017, the number of eggs produced increased by almost 40%.

## Total output of agriculture, 2017<sup>P</sup>



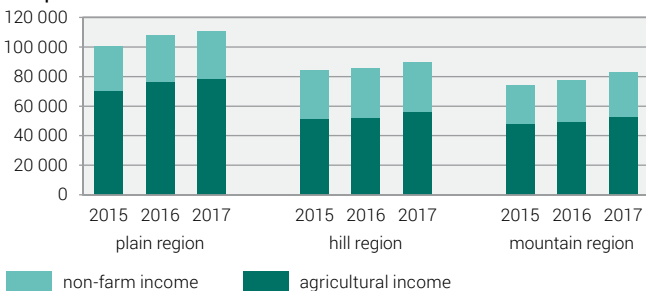
Source: FSO – Economic accounts for agriculture

© FSO 2019

Total output of Swiss agriculture in 2017 was CHF 10.3 billion. Animal products accounted for 49% of agriculture's production value. Milk production made up 20% (CHF 2.1 billion) of the total output. For this reason, milk revenue is one of the main income components of the Swiss agricultural sector. Of the total output value, crop production accounted for 40% while agricultural services and non-agricultural secondary activities amounted to 11%.

## Total income per farm

### CHF per farm



Source: Agroscope – Farm Accountancy Data Network

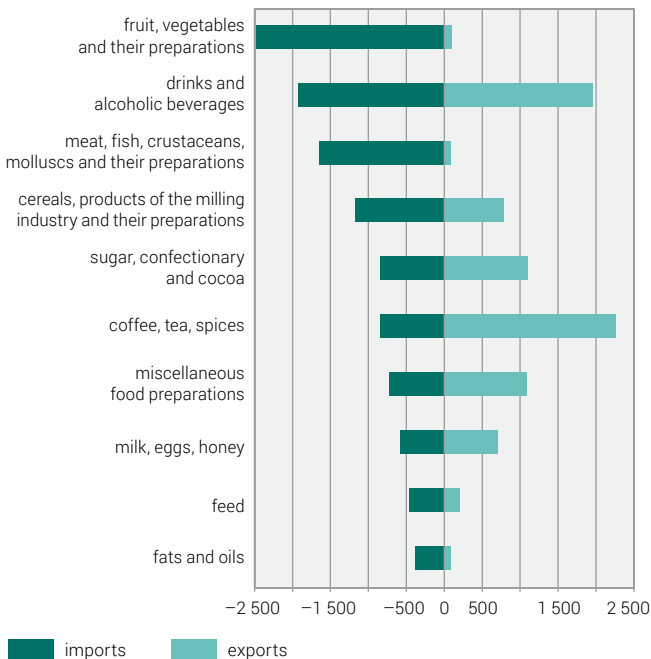
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The agricultural income per farm was an average of CHF 67 800 in 2017 (6% more than in 2016). The average income per self-employed person working on a family farm was CHF 50 000. Non-farm income contributed roughly a third of total income and was therefore very important to farming families. Total income tended to be lower in hill and mountain regions than in lowland farms.

## 5 Food industry, trade, catering

### Imports and exports of the most important foodstuffs, 2017

CHF millions



Source: SCA – Swiss foreign trade statistics

© FSO 2019

## Workplaces in the food industry, trade and catering

Thousands of workplaces



<sup>P</sup> provisional

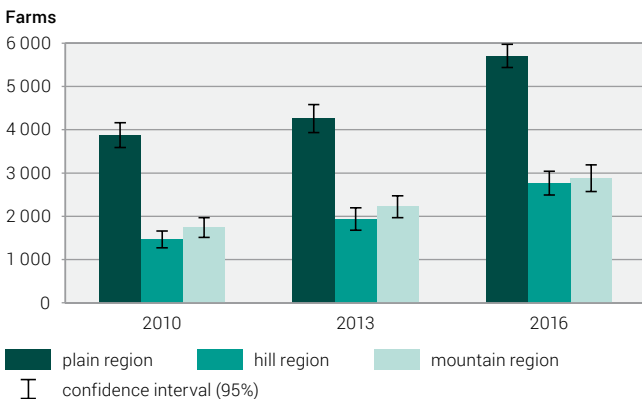
Source: FSO – Structural Business Statistics (STATENT)

© FSO 2019

In 2017, fruit and vegetables were the most commonly imported agricultural products in terms of value. The most common exports were not cheese or chocolate, but beverages containing water, and coffee (e.g. in capsules).

In addition to the approx. 52 000 farms, there were almost 46 000 businesses in the downstream food industry, trade and catering sectors in 2016. Whereas farms declined by 9% between 2011 and 2016, the food industry had 17% more businesses.

## Direct sale of agricultural products to final consumers



Source: FSO – Farm Census, additional survey

© FSO 2019

Agricultural products are increasingly sold by farms directly without an intermediary. Since 2010, the number of farms offering direct sales increased by 60% to 11 360 in 2016. In the lowland region, one in four farms and in hill and mountain regions one in five farms offered their goods for sale (e.g. in a farm shop). Direct sales are an additional revenue opportunity for farms. Other activities associated with farming include forestry, timber transformation, processing of agricultural products, work for other farms, gastronomic offerings, accommodation and leisure activities.

## Normal weekly working hours for people employed full-time, 2018

Hours per week



<sup>1</sup> including self-employed people and employees in their own company  
(joint stock company and limited-liability company)

Source: FSO – Swiss Labour Force Survey

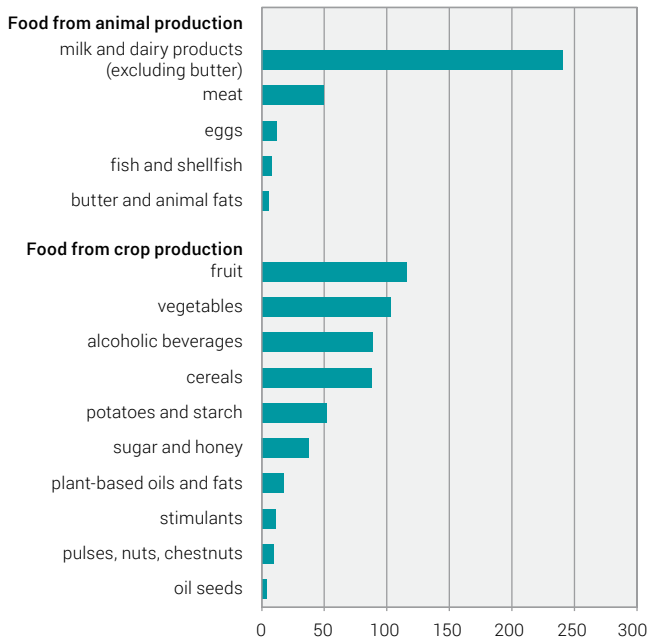
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The normal weekly working hours in the restaurant and hotel industry and in agriculture and forestry are among the highest of all economic sectors.

## 6 Consumption and health

### Food consumption<sup>1</sup>, 2016<sup>P</sup>

Kg of raw product per head per year



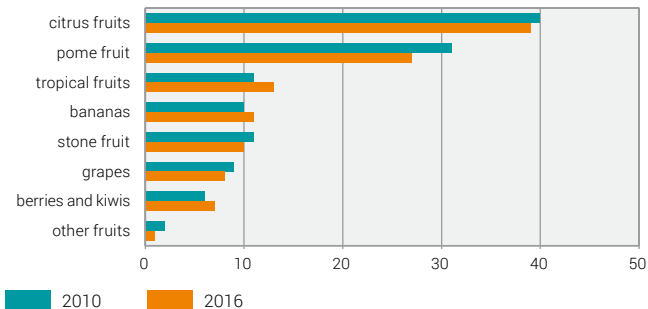
<sup>1</sup> Represents food potentially available. Quantities actually consumed are lower because of losses (e.g. unsold or spoilt food).

<sup>P</sup> provisional



## Fruit and fruit juice consumption

Kg per head per year<sup>1</sup>



<sup>1</sup> fresh, not prepared

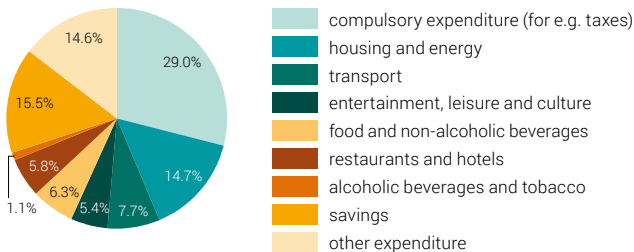
Source: SFU – Food balance sheet

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In Switzerland, dietary energy supply was 12 600 kJ per capita per day in 2016, taking account of waste including losses (e.g. unsold or spoiled food, peelings). The target daily energy supply for an adult is between 7500 kJ – 10 500 kJ. In 2016, approximately 845 kg of food were consumed per person. 530 kg were from crop and 315 kg from animal production. Between 2010 and 2016, the consumption of milk fell by 20% and that of meat by 6%. The consumption of fruit and fruit juice in general remained unchanged between 2010 and 2016. In terms of quantity, citrus fruit (oranges, grapefruit, lemons, etc.) were consumed most often ahead of pome fruit (apples, pears and quinces). During the same period, the popularity of tropical fruit showed an upward trend. In 2016, a household spent on average CHF 61 on fruit per month.

## Household expenditure, 2016

### Proportion of gross household income

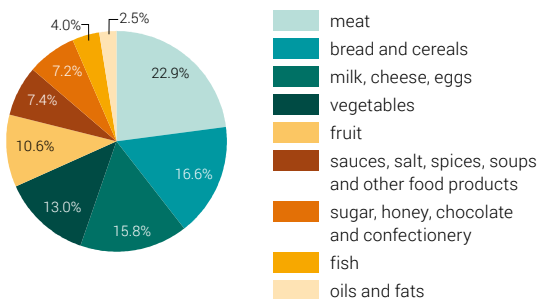


average number of persons per household: 2.2

Source: FSO – Household Budget Survey

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## Household consumption expenditure for food, 2016



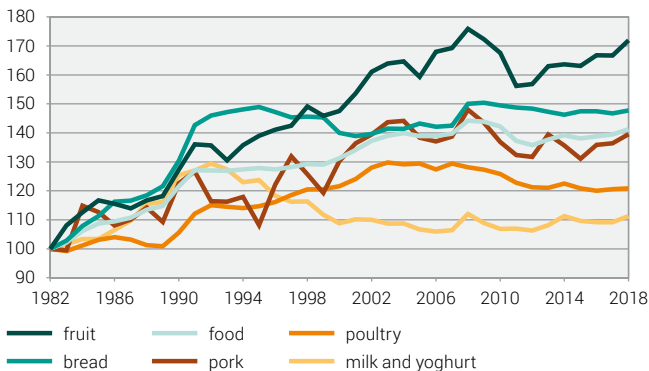
average number of persons per household: 2.2

Source: FSO – Household Budget Survey

© FSO 2019

## Consumer Price Index

Index December 1982 = 100



Source: FSO – Consumer Price Index (CPI)

© FSO 2019

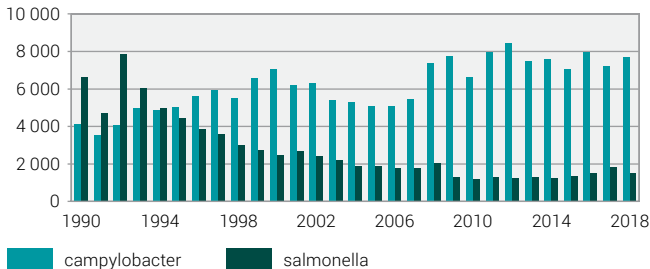
In 2016 households spent roughly 12% of their budget, i.e. on average CHF 1200 per month on food, including meals and drinks in restaurants. At approximately CHF 133 per month, meat was the largest food expenditure item, followed by the group 'bread and cereals'.

Overall food prices rose by almost 41% between 1982 and 2018. Within this product group fruit and bread became disproportionately more expensive, while during the same period prices for milk and yoghurt fell below the overall trend of food prices.

## Food poisoning

The most common zoonoses reported in humans

### Number of cases



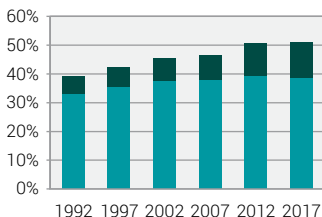
Source: FOPH – Epidemiology

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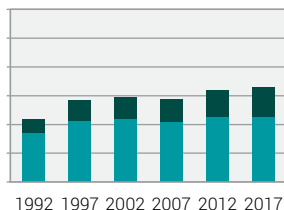
## Overweight and obesity

### Resident population aged 15 or over

#### Men



#### Women



Obese (BMI ≥ 30)      Overweight (25 ≤ BMI < 30)

Source: FSO – Swiss Health Survey

© FSO 2019

## Alcoholic beverages consumption

Litres per head per year



Source: RFA – Alcohol Statistics

© FSO 2019

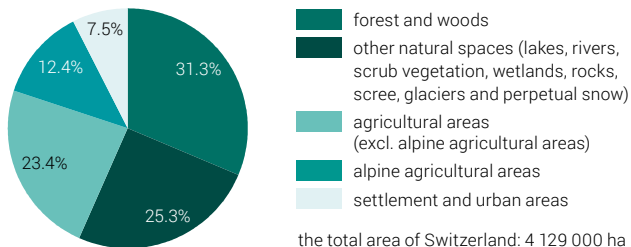
Food poisoning usually occurs when food is not heated properly or if it is spoiled. The diarrhoea pathogen campylobacter has long been the most common zoonosis. The main source of infection is the consumption of raw meat. Salmonella infections are less frequent than in the 1990s, which can largely be attributed to successful control of infected laying hens.

The proportion of overweight or obese people rose between 1992 and 2017. In 2017, some 51% of men and 33% of women were overweight or obese.

In the long-term, a trend towards decreasing alcohol consumption has been observed. For the actual average consumption of alcoholic drinks in 2016, beer came in top place with 55 litres per person, followed by wine with 34 litres.

## 7 Environment

### Land use, 2004/2009<sup>1</sup>



<sup>1</sup> areas surveyed between 2004 and 2009

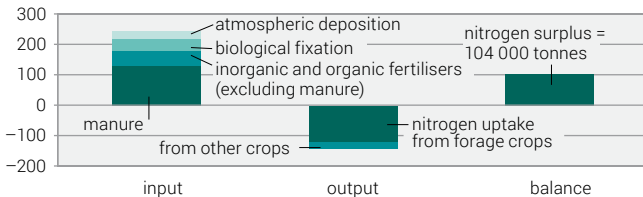
Source: FSO – Swiss Land Use Statistics (NOAS04)

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### Nitrogen balance of agricultural land, 2016<sup>1</sup>

Amounts of nitrogen inputs and uptake from agricultural soil

#### Thousands of tonnes



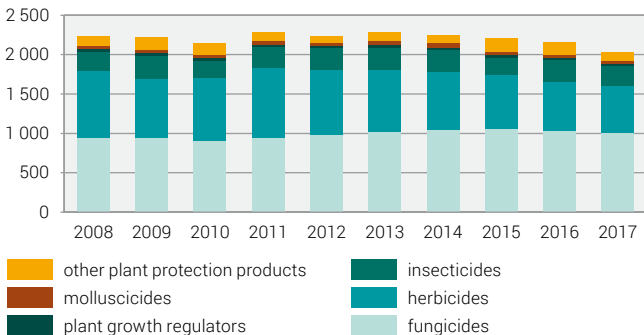
<sup>1</sup> according to the Organisation for Economic Co-operation and Development (OECD) method

Source: FSO – Nitrogen balance

© FSO 2019

## Sale of plant protection products

### Tonnes of active ingredient



Source: FOAG

© FSO 2019

The agricultural and alpine agricultural areas together make up more than one third of the total area of Switzerland. Between 1985 and 2009, 850 km<sup>2</sup> of this area was lost, equivalent to the size of the canton of Jura.

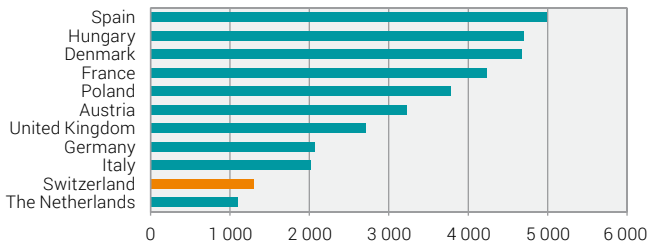
In the long-term, the nitrogen surplus from the agricultural area (including alpine meadows) is on the decline. According to the 2016 nitrogen balance, there was a nitrogen surplus of 68 kg/hectare. In the 1990s this figure was over 80 kg/hectare per year. Nitrogen can become a pollutant in the environment (as ammonia in the air or as nitrate in groundwater).

Since 2013, the total amount of pesticides sold has decreased. In 2017, a total of 2030 tonnes of pesticides were sold: 128 tonnes fewer than the previous year. Sales volumes of herbicides fell between 2008 and 2017, while those of fungicides increased.

## 8 International comparisons

### Utilised agricultural area, 2013

m<sup>2</sup> per inhabitant

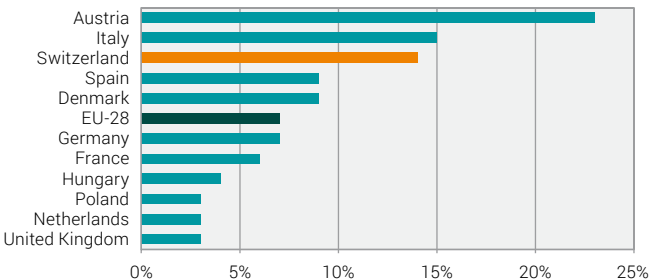


Source: Eurostat – Farm structure survey

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### Organic agriculture, 2017

Share of organically farmed utilised agricultural area



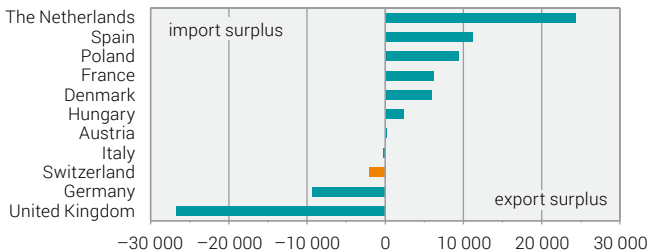
Source: Eurostat – Farm structure survey

© FSO 2019



## International trade of food, beverages and tobacco, 2017

### Balance in EUR millions



Source: Eurostat

© FSO 2019

Switzerland, like the Netherlands, is among the European countries that has a small utilised agricultural area per person. In 2013 this area was 1300 m<sup>2</sup> per person.

In Switzerland, the proportion of organically farmed land is twice as high as the average of European countries. Austria is one of the pioneers of organic farming.

In 2017, the United Kingdom, Germany and Switzerland imported more food than they exported in terms of value.

## 9 Key cantonal figures

### Population and workplaces, 2016

Cantons	Population in thousands	Farms	Cheese dairies <sup>P</sup>	Bakeries <sup>P</sup>	Large super- markets <sup>P</sup> (1 000–2 499 m <sup>2</sup> )	Restau- rants <sup>P</sup>
ZH	1 488	3 493	17	213	57	3 055
BE	1 027	10 684	127	231	49	2 262
LU	403	4 652	42	90	13	739
UR	36	575	9	10	–	121
SZ	156	1 603	10	37	7	453
OW	37	642	12	12	X	89
NW	43	444	10	6	X	83
GL	40	372	X	13	X	127
ZG	124	569	6	22	5	262
FR	312	2 866	110	63	11	659
SO	269	1 364	4	48	8	614
BS	193	13	–	36	6	548
BL	286	911	–	43	11	461
SH	81	576	–	16	X	204
AR	55	715	7	10	–	175
AI	16	469	X	9	X	64
SG	503	4 025	71	122	22	1 337
GR	198	2 365	27	65	11	833
AG	663	3 337	6	104	28	1 173
TG	271	2 610	37	48	15	632
TI	354	1 107	12	66	9	1 314
VD	785	3 618	64	148	34	1 818
VS	339	3 015	37	72	16	1 420
NE	179	828	14	39	5	442
GE	490	389	X	65	23	1 525
JU	73	1 021	7	15	4	188
<b>Switzerland</b>	<b>8 420</b>	<b>52 263</b>	<b>635</b>	<b>1 603</b>	<b>343</b>	<b>20 598</b>

<sup>P</sup> provisional

X: Not available due to data protection (between 1 and 3)

Sources: FSO – Farm structure survey, STATENT, STATPOP

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