

B. Agriculture, rural development, land, drought, desertification

B1 AGRICULTURE

Government focal point:

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1. General information

At the time being, there are about 63'500 farms in Switzerland cultivating an area of some 10'300 km² which covers around a quarter of the total country area. The average farm size is 16.7 ha. 3% of the total population work in the agriculture sector. The annual production of Swiss agriculture makes up less than 60% of all foodstuff consumed in Switzerland. More than 40% of consumed food is based on imports. The production of milk, meat, eggs and other animal products accounts for over two thirds of the agricultural turnover. Milk is the foremost agricultural product in Switzerland accounting for 35% of the total value of production. 80% is processed into cheese and other milk products. About 50% of Swiss cheese production is exported.

2. Concrete actions taken and specific progress made in implementation

2.1 Multifunctionality of Swiss Agriculture

The legal basis of the Swiss agriculture policy since 1996 is article Nr.104 of the Swiss Federal Constitution which says that agriculture shall contribute substantially through a sustainable and market-oriented production:

- a. to the secure provision of food to the population;
- b. to the conservation of natural resources and the upkeep of rural landscapes;
- c. to the decentralized settlement of the country.

The Confederation shall develop its policies in such a way that agriculture can fulfil its **multiple functions**.

2.2 Swiss agriculture policies

During World War II farmers played an important role in providing the country with food. The Agricultural Act of 1951 ensured that the Confederation supported product prices and guarantee their sales in order to maintain a strong agricultural population. Since 1999, after the introduction of the new Agricultural Act, a new agricultural policy has been implemented. The level of support has been reduced and the subsidies bound to products have been decoupled. Today the farmers receive direct payments as retribution of their contributions to the society and the ecology. Since 1999, Swiss Agriculture is granted funding by parliament on a 4 -year-basis.

In autumn 2007, a set of proposals to amend the Agricultural Act (Agricultural Policy 2011) and the budget for the period 2008-2011 have been approved by Parliament. The core issues are the reduction of custom duties on imported feedstuffs and the transfer of further funds from market support to direct payments. It is recognized that farmers carry out valuable tasks every day for the benefit of the population, such as helping to ensure food supplies or maintaining the natural heritage.

2.3 Increasing competitiveness

Between 1965 and 2005 the number of farms fell by more than 60% (160'000 to 63'500). This evolution is due mainly to technical progress as well as increasing competition. Today Swiss products are still more expensive than products from other European countries. This can be explained by the lower labour and capital productivity of Swiss agriculture, as a result of the small structures and the difficult production conditions (most of the utilized agricultural area is in the mountain regions or in a area with dense population in the plain). The goal of the recent agricultural policy reforms is therefore to increase the sector's competitiveness and bring producer prices more in line with EU prices.

2.4 Market

Agricultural products constitute around 6% of all imports and 2.7% of all exports. The EU is Switzerland's foremost trade partner accounting for more than two thirds of all imports and exports. Import restrictions and tariffs still protect the Swiss agriculture against foreign competitors but such measures have been reduced in the framework of the WTO Agreement on Agriculture and various bilateral trade agreements. For example since June 2007 the cheese trade with the EU is liberalized.

2.5 Ecological aspects of Swiss Agriculture

Switzerland is one of the pioneers in the field of environmental-friendly production methods in agriculture. To be eligible for any direct payments, Swiss farmers must comply with a set of cross compliance constraints so called "proof of ecological performance" (PEP). For example, they have to set aside 7% of the land as ecological compensation areas certified by a control organization authorized by the canton, apply specific soil protection measures, appropriately use plant treatment agents, etc.

The integrated production (IP) has been the program served to define the PEP. It steers a middle course between conventional and organic farming. Since the Agricultural Act of 1999, PEP is the standard production method in agriculture. In addition to this program, almost 11% of farmland is used for organic farming. In total, today 96% of the utilized agricultural area is cultivated according to the ecological standards PEP or Organic. The evolution is successful as the Agricultural Report 2006 reveals, compared to the year 1990, farmers are using less fertilizers and fewer plant protection products. Furthermore, farmers are maintaining considerably more ecological compensation areas and keeping more animals under particularly animal-friendly conditions. In the case of animal welfare, Switzerland is pioneer by creating specific programs to keep animals (e.g. “*Regularly Keeping Animals Outdoors*” and “*Particularly Animal Friendly Stabling Systems*”).

3. Lessons learned

3.1 Monitoring of agricultural sustainability

To follow the effects of the implementation of article Nr.104 of the Swiss Federal Constitution, sustainability of Swiss agriculture is evaluated every four years with eleven indicators based on the National sustainable development strategy (NSDS) of the Swiss Confederation¹.

The following table gives an overview of the indicators used:

Aspects	Economic	Social	Environment
Resources	Renewal of capital	Education	Biodiversity Impacts of agriculture on biodiversity
	Soil (quantity)		Soil (quality) : - phosphorus - erosion
Efficiency	Labour productivity		Potential nitrogen emission
			Energy efficiency
Equity		Comparison of income with other groups of the population	
		Comparison of quality of life with other groups of the population	

¹ The concept of evaluation was presented in the Agricultural Report 2001. First results were published in 2005. (See also the Agricultural Report 2006: <http://www.blw.admin.ch/dokumentation/00018/00103/index.html?lang=de>)

The following table summarizes the evolution of the indicators since 1990 (where data is available):

Aspects	Indicator	Evolution	Evaluation
Economic	Renewal of capital	⇒	+
	Soil (quantity)	⇓	-
	Efficiency of labour	⇑	+
Environmental	Biodiversity	⇑	+
	Pesticide	⇓	+
	Phosphorus	⇓	+
	Efficiency of nitrogen	⇑	+
	Energy	⇒	-
Social	Education ²	none	
	Income	⇓	-
	Quality of life	⇓	-

Assessment 1990-2004

Economic:

- *Renewal of capital*: the situation remained stable (ratio assets/gross investments).
- *Soil*: during the last 15 years, agriculture lost 2.1% of the suitable land for arable production. (This results from increased demand for land mainly to build infrastructure (roads, housing), a development which cannot be controlled with agricultural policy instruments).
- *Labour productivity*: Labour productivity rose by 21% between 1990 and 2004 (1.4% each year).

Environment³:

- *Biodiversity*: between 1993 and 2004 ecological compensation areas increased to 11% of the total utilized agricultural area .
- *Pesticides*: between 1990 and 2004, the amount of pesticides used in agriculture fell by 38%.
- *Phosphorus*: between 1999 and 2002, 70% less use of mineral fertilizer. (The fertilizers used are three time more efficient today than in 1990).
- *Nitrogen*: Between 1990 and 2002, efficiency rose from 23% to 27% (the maximal efficiency, input divided by output, of nitrogen in Swiss agriculture is 30 to 40%).
- *Energy*: energy efficiency is the consumed energy for production divided by the food energy produced. This indicator was stable since 1990. No substitution of fossil energy with renewable energy did take place, which is negative from a sustainability perspective.

² First recorded in 2003. No comparison can be done so far.

³ See also for more details: <http://www.blw.admin.ch/dokumentation/00018/00103/index.html?lang=en>

Social:

- Education: for the first time recorded in 2003, 2/3 of the Swiss farmers have a first education level or a higher education level.
- Quality of life: in 2005, Swiss farmers were interviewed about 12 aspects of their lives. The results are worse than for the other sectors of the Swiss economy.
- Income: the farmers' income is less than in the other economic sectors. Compared with the situation 15 years ago secondary incomes rose while income from farming sank.

3.2 Achievement of the constitutional tasks

The achievement of the constitutional tasks of Swiss agriculture since 1990 is also assessed:

1. Secure food supply

Since 1990, the production of food remained stable but the consumption increased due to the growing population. This effected slightly the overall self-sufficiency which dropped by 5% to 59%.

2. Conservation of natural resources and upkeep of rural landscapes

Due to the development of the industrial sector and the construction of new infrastructures, there is a constant loss of arable land in the amount of 1m² each second. Between 1979/85 and 1992/97, the loss of agricultural land per year was around 3%. Agricultural land used for grazing diminished faster by 3.2%. The reduction could be observed mainly in the mountains, where such land was abandoned for economic reasons. Once abandoned, it quickly converts into forest or copses. On the other hand the policy incentives increases the ecological set-aside areas as a result of targeted agriculture policy measures.

3. Decentralized settlement

The decrease of labour force due to technical progress and structural change is weakening agriculture's contribution to a decentralized settlement. However, agriculture is still playing an important role for a decentralized settlement in some remote area for example in the mountainous region, where it is the main economic viable sector.

4. Recent trends and emerging issues

4.1 Improving competitiveness

The Swiss agriculture market will become more open after the possible end of the Doha round, the conclusion of a free-trade agreement in agriculture with the EU, and the conclusion of free-trade agreements with other countries. The implementation of the WTO commitments would lead to an important tariff cut. This will inevitably affect the domestic prices. To achieve lower food prices not only agriculture, but the whole supply chain will have to increase its competitiveness.

A higher productivity can be achieved with new technologies and innovation as well as structural change. A special form of structural change which has still a lot of potential in Switzerland is the grouping of infrastructure (like stables or expensive machineries). As productivity will continue to increase while the level of production should remain more or less stable in volume, the labour force will have to continue to decrease.

In this context it will be a tough challenge to maintain a socially sustainable structural change. General direct payments and especially ecological direct payments (e.g. extensive meadow-land, reed-beds, natural fields margins etc....) to finance the society goods produce by the farmers should continue to be available. In parallel, the role played by the state in relation to the market is changing to focus on tools which distorts less to the market. For example self-help measures taken by inter-branch bodies and producers, organization or measures to promote sales are supported, labeling traditional products from specific areas is encouraged. Other supports are investment loans which are available for construction work or start-up assistance in the form of interest-free loans enables young farmers to take over farms.

Further in order to enhance the competitiveness of the regions an efficient coordination between agricultural policy and other spatial development policies⁴ is needed. The new Federal Regional Development Act (6 October 2006)⁵ will come into force on January 2008. Art. 1 of this Act describes the objectives of the new regional development policy:

- to increase the added value and create new job opportunities
- to support the decentralized settlement of the country
- to reduce the inequality between the regions.

These objectives shall be achieved by supporting innovation, enterprise spirit and the creation of value-added systems.

4.2 Environment

Agricultural policy reforms and the ecological direct payments system applied since the beginning of the 1990s is a success story regarding the many positive impacts they have on the environment. But there is still need for some improvements: e.g. the ecological direct payments system has to be better targeted on the effective ecological services achieved, the efficiency of resources use should be increased and some emissions (specially of ammonia, but also of pesticides, phosphorous and nitrogen) still need to be reduced. Further improvements are needed to maintain biodiversity, soil fertility and to reduce conversion of farmland to mainly urban use and the abandonment of farmland in marginal areas. A speeding up is necessary in the process of substituting fossil energy with renewable energies.

⁴ See also the «Spatial Development Report 2005 of the Federal Office for Spatial Development (ARE), <http://www.are.admin.ch/themen/raumplanung/00228/00275/index.html?lang=en>

⁵ See also the information of the State Secretariat for Economic Affairs SECO about the new regional development policy: <http://www.seco.admin.ch/themen/00476/00496/index.html?lang=fr>

5. Major constraints and challenges

5.1 Overview of the challenges until 2009

The following table gives an overview of the measures which will be taken until 2009:

1. Strengthen the competitiveness of the production and the processing process
- reduction of milk market support
- reduction of border protection for feedstuffs
- reduction of market support for other crops (potatoes, oilseeds, sugar beet)
- phasing-out of all export subsidies
2. Maintain the contribution to the community and the environment
- increase of better targeted ecological direct payments
- introduction of a program to increase the efficiency of resource-use at farm level
3. Promoting added value and sustainable development of the rural area
- extension of designation systems for products, strengthen geographical indications/ designation of origin
- promotion of innovative projects
- support for the production of bioenergy with biomass
- increase the support for regional development projects
4. Support structural development and attenuate social impacts
- increase the amount of money available for family allowances
- increase the support to farmers who would like to get a new profession
- ease a number of land law regulations
5. Simplification of the administration processes and coordination of the controls
- simplification of the data management system for direct payments
- simplification of the control system on the field

5.2 Specific challenges

Sustainable agriculture products

The continual reforms of the agriculture sector have increased pressure on farmers to become more competitive. The role played by the state in relation to the market has changed over the past 15 years. The production-based subsidies were substantially reduced since 1992. Today many tools which have less effect on the market and promote the positioning of the agriculture products with high added value are enforced. For example self-help measures taken by inter-branch bodies and producers organization or measures to promote sales are supported, labeling of geographical indication products (GI) is encouraged.

According to article 14 of the Agricultural Act, the Federal Council has to **ensure the credibility of product designations** and to **promote market access for the producers**. Article 14 allows the Federal Council to pass the necessary legislation for the designation of products:

- a. which are made with a specific production method
- b. which have specific characteristics
- c. which are from mountain regions
- d. which have a specific geographical origin.

The Swiss government has enacted four ordinances for public product designation in this order:

1. For organic products (1997)
2. For designations of origin AOC (1997)
3. For poultry (2006)
4. For mountains and alp products (2007).

The goals of these legislations is to enhance the added-value of those specific products and their commercialisation, ensure the credibility of the products towards the requirements of the consumers, promote the rural development and the environment.

Switzerland also implements the Johannesburg Declaration concerning the promotion of sustainable consumption and production patterns (Marrakech-Process) within the context of an **integrated product policy (IPP)⁶**. The IPP aims to minimize the negative effects a product can cause during its life cycle by incorporating all phases of a product and including all players, and by implementing measures in areas where they are most effective. Public and private demand for products with high social, economic and ecological standards should be encouraged.

Moreover, while quality assurance schemes for food and agriculture (private and public) are constantly growing in number, the overall volume of agricultural production covered by schemes remains small. Further the high number and the great variety of existing schemes imply a lower level of transparency and the possibility of confusion for the consumers, with a possible loss of faith in the system itself.

In this context of liberalization of markets, according to the Agricultural Policy 2011 and the integrated product policy (IPP), the Swiss government is initiating a national process in 2008 in order to identify a potential framework for the development of quality assurance and certification schemes for **sustainable agriculture products** managed within an integrated supply chain. This approach aims to ensure a better transparency in the variety of existing schemes and to support farmers producing to higher standards retain a fair share of the added value. The first results of this initiative will be presented at a national conference in March 2008 in Switzerland.

⁶ see also: <http://www.bafu.admin.ch/produkte/01967/index.html?lang=en>

Sustainable Bioenergy

The projection shows that the world population is growing until the year 2050 to 9.1 billions of persons. Accordingly the demand for food and energy will increase dramatically. Due to the fact that the fossil energy sources are decreasing and the costs for their exploration are increasing, renewable energy sources are more and more in the focus. Besides energy sources such as waterpower, wind-energy, solar-energy, etc. many institutions focus on the cultivation of agricultural biomass for energy production (production of biogas, biofuels etc.).

Agricultural products are therefore no longer used just to produce food but also to produce bioenergy. As a consequence agricultural product prices on the commodity markets are highly correlated with the oil-price, as we have seen during the last few months. In some cases it is, therefore, more attractive to produce biomass for energy than for food. This increased demand for agricultural products leads to an intensive competition for agricultural area.

In order to address the question in which manner the biomass-cultivation for energy production affects Swiss Agriculture, the Federal Office for Agriculture FOAG has launched a project with the title „**Impacts of the production of oil-substitutes based on biomass on the agricultural sector in Switzerland**“, in German „Wirkungen der Produktion von Erdölsubstituten aus Biomasse auf den Agrarsektor in der Schweiz“. The results of the study will be published in spring 2008.

Switzerland is not self-sufficient in food production. Each hectare of arable land use to bioenergy is directly in competition to food production and reduce the level of self-sufficiency. However, by world standards, Switzerland is a minor producer and consumer of liquid biofuels. Biofuels produced from crops grown in Switzerland are generally too expensive and the production potential is very limited. Switzerland's policies affecting biofuels are changing, however. In May 2006, the Government issued draft legislation to amend the **Mineral Oil Tax Law**. This legislation was discussed in Parliament later in the year, and in March 2007 it was finalized. The major change is that in the future reductions in the mineral oil tax on biofuels will be set according to the contribution that the biofuels can make to reducing greenhouse gas (GHG) emissions, and will take into account the market price for petroleum-based transport fuels. Analytical tools such as Life-Cycle Analysis (LCA) can help identify the best environmental alternatives, however, social parameters have not yet been integrated in this tool.

The contribution to environmental protection to the mineral oil tax is principally based on a study carried out by the Swiss Materials Testing Institute based on life cycle assessment (http://www.bfe.admin.ch/themen/00490/00496/index.html?lang=de&dossier_id=01273).

The details of how the Mineral Oil Tax Law is to be implemented remain to be worked out. The new regime is expected to come into force in July 2008.

In order to take into account not only the potential of GHG reductions by biofuels but also impacts on biodiversity, water resources and working conditions, the Swiss Federal Institute of Technology in Lausanne (EPFL), with support of the Swiss Federal Office of Energy and the World Economic Forum, launched the **Roundtable on Sustainable Biofuels**. It aims to bring together farmers, companies, non-governmental organizations, experts, governments, and inter-governmental agencies concerned with ensuring the sustainability of biofuels production and processing. Through June 2008, the Roundtable will host a series of meetings, teleconferences and online discussions with the aim of achieving global, multistakeholder consensus around the principles and criteria of sustainable biofuels production (<http://cgse.epfl.ch/biofuels>).

In order to assess the potential of biofuels in the context of official development assistance, the Swiss Agency for Development and Cooperation organized in 2006 a workshop entitled “**Growing Fuel in Developing Countries**” ([http://www.repic.ch/main/Show\\$id=1216.html](http://www.repic.ch/main/Show$id=1216.html)) and published an issue paper “Biofuels, Opportunity or Threat to the Poor”

http://162.23.39.120/dezaweb/ressources/resource_en_159527.pdf.

Moreover, the government support for biofuels in Switzerland was assessed in a report by the International Institute for Sustainable Development IISD

www.globalsubsidies.org/IMG/pdf/Swiss_Support_to_Biofuels2.pdf).

Sustainable agriculture in the mountain regions

In mountain areas farmers have to deal with difficult topography and harsh climatic conditions, factors which are taken into account in Swiss agricultural policy. In the case of direct payments, special payments are made for farms on steep land, and payments per head of cattle are also higher. Cattle farming in the mountain plays an important role in relation to nature. Alpine farming is supported through transhumance supplements. Alpine cheese is highly popular. Direct sales channels where tourism and regional development also play a role have increased in importance.

In June 2002, in close collaboration with the Food and Agriculture Organization (FAO), Switzerland organized an international conference on “Sustainable Agriculture and Rural Development in Mountain Areas” (SARD-M). Around 200 participants from 57 countries approved the Declaration of Adelboden, which defines specific problems encountered by mountain farmers and the particular developmental potential of such areas.

The **Adelboden Group** was established in response to a call by this international conference on SARD-M with the objective to be a **multi-stakeholder platform** (involving civil society, governments, and international organisation from all regions of the world) to discuss policies and instruments, exchange experiences, and prepare initiatives. The activity of the Adelboden Group since 2002 focused on the FAO SARD-M project. The Adelboden Group gives advices on the substantial content of the Project SARD-M.

The Adelboden Group at the Third meeting in Rom in October 2007 stresses the importance of specific policies, appropriate institutions and processes to improve sustainable livelihoods and maximize the contribution of the mountains to society. Mountains are a significant source of **positive externalities** (freshwater, storehouses of genetic diversity, high quality products) which have to be better recognised and valorised through policies and market. The recommendations of the Adelboden Group according to these issues are listed in the **Statement of the Adelboden Group on Sustainable Agriculture and Rural Development in Mountain Regions (SARD-M)**, dated from the 3th October 2007.

6. Swiss development Cooperation in the AGRICULTURE sector

Food self-sufficiency is one of the objectives of the Swiss federal law on development cooperation. However, given the current new context of globalisation and market liberalisation – and in particular the determining influence of purchasing power – the agricultural policy of the Swiss Agency for Development and Cooperation (SDC) emphasises food security.

As was agreed at the World Food Summit, a favourable political and economic environment is the most important element for improving food security. The poor classes in the rural population, i.e. 70% of the world's poor, most of whom live on agriculture or livestock production, have very little political power. Inhabitants of rural areas are dispersed, not well informed and lack infrastructure; they have difficulties defending their interests in political processes. As no-one defends their interests, they remain on the margins of development, which takes place in urban areas and in a few prosperous economic sectors. Although small-scale farming occupies an important part of the population, it is ignored by political elites, who often only see it as a sector of concern to social aid. However, there is strong evidence that the contribution of poor agro-pastoral populations to food production and conservation of natural resources is not negligible; it helps, for example, to maintain biodiversity and water resources.

This is why the SDC has committed to helping establish appropriate policies in its priority countries and supporting representative actors of small-scale farming such as producers' organisations and their national and sub-regional networks. As a result of the remarkable progress achieved worldwide in the second half of the 20th century in the food production sector, interest in the issue of food security and investments in the agricultural sector decreased, even in poor and mainly rural countries. Moreover, in numerous countries in the South, structural adjustment programmes worked against agriculture by considerably weakening public services designed to support farmers.

It took the debates and commitments of the Plan of Action in Rome to generate awareness that hunger is still too important a phenomenon and that combating hunger requires proper support for agriculture, i.e. making the necessary investments and providing enough space in development policies. The SDC is of the opinion that agricultural production ensured by a large number of small-scale family farms can help eliminate poverty by generating jobs and income as well as providing foodstuffs at low prices. This is why a major part of the SDC's investment goes to public and private institutions such as national and international research and training centres capable of responding to farmers' needs.

By increasing its support for agriculture, the SDC is engaged in combating the two main causes of hunger – poverty and lack of available food – at the same time. Thus, Swiss development cooperation continues to pursue the objective of increased food production in least developed countries with a food crop deficit. In view of the importance of staple foods for poor countries and long-standing and fruitful partnerships to date, the SDC continues to prioritise food crops, without, however, excluding non-food crops such as coffee and cotton, which are part of a strategy adopted by small-scale producers who believe that they can bring good revenue.

Moreover, food crops such as fruit and vegetables destined for urban and even export markets are also supported by the SDC, if they are part of a production chain that helps improve income and alleviate poverty. This is actually in accordance with the importance of the role of trade and functioning markets, which constitute a fundamental element of food security, i.e. distribution. Moreover, women play an essential role in agricultural production; to a large extent, they are the ones who meet their families' food requirements. However, they are often excluded from land tenure and access to credit. In addition, they rarely receive the attention they deserve from agricultural extension and research. In its support for increasing the purchasing power of poor farmers, the SDC makes sure that the position of women is strengthened through technical competence, the possibility of making choices, their activities and the salaries they are paid. Such help is often channelled through support for women's organisations.

The SDC has chosen to focus on a certain number of priority areas: politics, society, natural resources, economy, science and technology. Within these fields a whole series of issues, types of approaches, tools and methodologies are considered or privileged. Thus, capacity strengthening is a key component of all agricultural programmes. Research, as well as agricultural extension systems and training, are given special attention in the SDC's investment decisions.

Conservation of agro-biodiversity and sustainable soil and water management are at the heart of sustainable agriculture as promoted by the SDC, both in the livestock production and plant production sub-sectors. Information is a central factor for farmers. The SDC helps make information accessible for and usable by poor farmers.

To efficiently combat scourges such as pests and plant diseases that menace food production and ruin resources as well as farmers' efforts, the SDC gives special attention to integrated pest management, promotion of post-harvest technologies and valorisation of the potentials of biotechnology.

Finally, as agriculture needs to be considered within the larger context of rural development, the SDC has adopted a global perspective that includes decentralisation, empowerment, fiscal systems, infrastructure and agricultural development. Access to resources (knowledge and genetic resources), inputs and credit, as well as development of trade are important levers for which the SDC offers support based on longstanding experience.

In 2006, the SDC invested over US\$ 170 million in favour of rural development and agricultural development.