Organic Farming in Switzerland

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1 General Information on the Situation of Agriculture in Switzerland

Slightly less than forty per cent of the area of Switzerland is used for agricultural purposes, alpine pastures included. In 1998, the agriculturally utilised surface totalled 1.7078 million hectares. About three quarters of that area were used for fodder production (permanent grassland, grass clover ley and maize silage). Therefore, seventy-five per cent of the gross return of Swiss agriculture is derived from animal production. Various crops are cultivated on the remaining fourth of the area, e.g. cereals (17%), potatoes and sugar beets (3%), wine (1.2%), fruit and berries (1.9%) and vegetables (0.7%).

In 1998 there were 76,000 farms. The average farm size was 14.2 hectares. Seventy per cent of the farms were full-time holdings. However, a fast shift towards part-time farms is projected for the next few years.

Swiss agriculture meets sixty-five per cent of the domestic food demand. Higher domestic supplies of 90 to 100% are only reached by potatoes, pork, veal, cattle and most milk products.

The average productivity of Swiss agriculture is comparable to or higher than that of the EU (see table 1).

	Switzerland	Austria	Germany	France	Italy	EU15
Wheat (tons per ha)	6.22	5.23	7.23	7.12	2.70	5.63
Potatoes (tons per ha)	40.9	29.8	38.3	36.8	24.0	32.9
Milk (kg per cow and year)	5,305	4,525	5,725	5,740	5,075	5,610

Table 1: Productivity of Swiss Agriculture (1997 and 1998 Averages)

In 1997 the average farm income was 3,569 Swiss francs (2,230 Euro) per hectare of utilised area. Farms in the plains earned 4,029 Swiss francs (2,518 Euro) per hectare, while farms in the mountain regions earned 2,813 Swiss francs (1,758 Euro) per hectare.

2 History and Development of Organic Farming in Switzerland

Switzerland was undoubtedly the foremost pioneering country in organic farming before the EU-regulation on organic farming was put into force, and has remained so until today in several areas (table 2).



Table 2: Pioneering	Work of the	Swiss Organic	Movement:
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Bio-dynamic farming	• Research work at the Department of Natural Science of the Goetheanum at Dor- nach (by Ehrenfried Pfeiffer and Lilli Kolisko) in the 1940s and 1950s.
0	• Very active bio–dynamic farmers' and consumers' movement from the 1930s until today. The "Demeter" label was registered in 1954.
	Annual international agricultural conferences in Dornach.
	 Three exclusively bio–dynamic research initiatives: Department of Natural Science of the Goetheanum (Naturwissenschaftliche Sektion am Goetheanum); AGF (Ar- beitsgruppe Forschung - Group on Research for the Bio–dynamic Movement); and FIV (Forschungsinstitut f ür Vitalqualit ät / Research Institute for Image-creating Methods). Outstanding research work has been done on bio–dynamic plant breeding and on holistic quality methods.
Organic farming	• The farmers' movement initiated by Hans Müller became the nucleus of the or- ganic farming movement in 1940. Together with his wife Maria Müller and his friend Hans Peter Rusch, a microbiologist, he became the founder of organic farming in the German-speaking countries. In 1949, he used the term <i>"organisch- biologischer Landbau</i> " ("organic-biological farming") for the first time. Although very impressed by what Sir Albert Howard wrote in "An Agricultural Testament", Müller never met Albert Howard nor Lady Eve Balfour. Until his death in 1988, Möschberg near Bern was the main training centre for organic farmers from Swit- zerland, Austria and Germany.
	• In 1946 Müller founded the AVG Galmiz, the first co-operative to commercialise organic products. He invented a delivery / mail-order service for organic vegetable and fruit boxes.
	• In 1972 Otto Buess, director of the state agricultural school at Sissach, converted the school's training farm into an organic holding.
In general	• There were already 500 to 1,000 organic farms in the 1960s and 1970s.
	• In 1974 the Research Institute of Organic Agriculture / Forschungsinstitut für bi- ologischen Landbau (FiBL) (http://www.fibl.ch) was founded, which has since be- come one of the oldest and biggest organic farming research centres worldwide.
	 In 1976 FiBL organised the 1st IFOAM International Scientific Conference "To- wards Sustainable Agriculture". In 2000 FiBL is organising the 13th IFOAM Inter- national Scientific Conference "The World Grows Organic" (http://www.ifoam2000.ch).
	FiBL hosted the IFOAM General Secretariat from 1977 to 1980.
	 In 1980 Swiss organic farmers' associations founded the umbrella organisation "Vereinigung Schweizer Biologischer Landbau-Organisationen" (VSBLO), now BIO SUISSE (http://www.bio-suisse.ch/). For the first time, national private standards were established and farms and products were labelled with the common "BIO SUISSE Bud" seal. Hartmut ("Hardy") Vogtmann and Otto Schmid, who were in- volved in that work in Switzerland, later influenced the standardisation process within IFOAM.



3 Growth and Distribution of Organic Farms in Switzerland

Until 1990, the rate of conversions to organic farming had remained very steady for forty years, with annual growth rates of less than ten per cent. During the boom years between 1990 and 1999, the number of organic farms increased from 800 to 5,000 (figure 1). Three factors have driven this growth:

- the consumers' concern about healthy food
- the agri–environmental policy of the state, which supports organic farms with annual subsidies, and
- the appearance of organic foods in the two dominant supermarket chains, Coop and Migros.

Figure 1: Certified Organic (incl. Bio-dynamic) Farms in Switzerland, 1983 – 2000

6000 5400 5070 4753 5000 4287 4000 3700 3000 farms 2121 2000 1630 1405 1160 940 1000 803 672 442 485 322 368 286 259 0 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 year

Development of Organic Farms

(Source: FiBL)

number of farms

The growth of organic farming varies greatly from the mountain regions (ten to thirty per cent of the agricultural area) to the plains (approximately five per cent). In the western part of Switzerland, where stockless arable farms and horticulture crops dominate, the share of organically farmed land was very low in 1999 (3.1% in Valais, 1% in Neufchatel, 1.5% in Fribourg, 0.1% in Geneva and 1.9% in Vaud).



Although very well known to the public, bio-dynamic farms compose a very small niche of three per cent within the organic sector (there were 186 bio-dynamic farms altogether in 1999). The number of bio-dynamic farms has remained unchanged during the fast expansion of organic farming.

The production of the organic farms can be found in table 3.

Branch	Total Production	Organic Production (absolute / relative)
Milk	3,867,000 tons	103,500 tons (2.7%)
Beef	110,900 tons	2,811 tons (2.5%)
Pork	231,800 tons	2,342 tons (1.1%)
Poultry	40,824 tons	391 tons (1%)
Eggs	691,400,000 eggs	35,000,000 eggs (5.1%)
Wheat	584,400 tons	6,311 tons (1.1%)
Potatoes	687,000 tons	11,564 tons (1.7%)
Vegetables	385,000 (8,475 ha)	800 ha (9.4%)
Apples	143,819 tons	2,700 tons (1.9%)
Wine	1,045,000 hl (14,991 ha)	178 ha (1.2%)

Table 3: Share of Organic Products in the Different Branches of Production

Source: FiBL, Based on the latest figures from 1997, 1998 or 1999

4 Organic Farming Organisations



All organic farmers belong to the umbrella organisation Bio Suisse (association of Swiss organic farming movements; http://www.bio-suisse.ch). Bio Suisse currently consists of 32 member organisations (http://www.bio-suisse.ch/html/g_wir_2.html) containing 5,500 individual members.

Bio Suisse permanently developed its own standards over the last 20 years. Its seal - the green bud - may be used by certified producers as well as for domestic and imported products which meet the Bio Suisse requirements (domestic products with the name "Bio Suisse", imported products with the name "Bio"). Producers belonging to the bio-dynamic association this seal as well, because certification for the Demeter label includes the Bio Suisse standards.

Important distribution channels for Bio Suisse (http://www.bio-suisse.ch) products are: all branches of the Coop Switzerland supermarket chain, small retailers (e.g. "primo" and "vis-à-vis") and specialised natural food shops. Direct sales at local markets and on the farms play an important role as well.





Another producer organisation with about 200 members is the association for bio-dynamic agriculture ("Demeter Suisse"), a branch of Bio Suisse. Important distribution channels for Demeter Suisse products are: direct marketing at local markets and on the farms, natural food shops and small retailers.

The Migros supermarket chain has introduced its own "Bio" label: (http://www.migros.ch/index2.php3?lang= d&langchange=&position=&sublink_key=68). Migros is not a producer organisation, but a retailer. Products marketed with the Migros "Bio" label are distributed mainly through Migros stores.



For other and more specific labels, please see the internet site: http://www.fibl.ch/bio/bio.html.

5 Standards and State Regulations

The "Swiss Regulation on Organic Farming" was put into force in 1998 following the legislation in the European Union (for links to the state regulation, please see the internet site: http://www.fibl.ch/bio/verord/verord.html). By this time, organic farming had already developed considerably on the basis of purely private certification. As early as 1980, all Swiss organic farming organisations had agreed on common standards for organic farming, on the use of the common "Bio Suisse Bud" seal and on a common certification scheme.

Table 4: Main Differences Between EEC regulation 2092/91, the "Swiss Regulation on Organic Farming" and Bio Suisse Standards

	EEC Regulation 2092/91	"Swiss Regulation on Organic Farming"	Private Bio Suisse Standards
Conversion of the farm	Parts of the farm	Whole farm; excep- tions: vineyards and orchards	Whole farm, no ex- ceptions.
Labelling products in conversion	2 nd year of conversion	1 st year of conversion	
Biodiversity on farms	Not required	7% of agricultural land	7% of land area;
	area with high biodi- versity		5% of the permanent grassland must be extensive
Copper fungicides	Application rate not yet limited	Limited to 4 kg per ha and year	Limited to 1.5 to 4 kg per ha and year (dep. on crop)
Metaldehyde and pyrethroides	Allowed in traps	Forbidden	



	EEC Regulation 2092/91	"Swiss Regulation on Organic Farming"	Private Bio Suisse Standards	
FertilisationLimited to 1.4 live- stock units per haEquilibrium of nutrient balance re livestock units per ha limited dep region and altitude (0.5 to 2.5 live		mited depending on to 2.5 livestock units*)		
		* different calculation of NPK content / LSU		
Conventional bought	Ruminants 15%	Ruminants 20%		
feed stuffs	Non-ruminants 10%	Non-ruminants 10%		
Tethering	Only in existing live- stock buildings and small holdings	Adaptation in preparation		
Veterinary medicine	Double withholding periods, max. three courses of treatment	Adaptation in preparation		
Mutilations		More restrictive than EEC		
Processing	No radiation	No radiation	No radiation, no mi- crowaves, only soft physical processing methods	
Packing	No requirements	No requirements	Restrictions (e.g. for aluminium tin, PVC)	

Source: FiBL

6 Certification Scheme

The "Swiss Regulation on Organic Farming" delegates the inspection of organic farms and processors to private organisations, but requires a certification and inspection scheme in compliance with EN 45011. The *Swiss Accreditation Service* (SAS) is responsible for the accreditation of inspection and certification bodies; see http://www.sas.admin.ch/en/INDEX.html.

In Switzerland the main certifiers for farms are *bio.inspecta* and *BioTest Agro*. For processors, the main certifiers are: *bio.inspecta*, *IMO* (*Institut für Marktökologie*), *SGS* (*Société Générale de Surveillance*) and *SQS* (*Swiss Association for Quality and Management Systems*).

bio inspecta

Bio inspecta (http://www.bio-inspecta.ch) certifies all Swiss organic farms and inspects 5,000 organic farms and 800 processing companies and traders.

Bio Test Agro inspects 700 organic farms. *IMO* (*Institut für Marktökologie*, http://www.imo.ch) inspects and certifies farms and processors in Switzerland and worldwide. *SQS* (*Swiss Association for Quality and Management Systems*, http://www.sqs.ch/d/diensteD.htm) and *SGS* (*Société Générale de Surveillance*, http://www.sgs.ch) mainly inspect and certify processors and traders in Switzerland.



Both Switzerland and the EU mutually recognise each other's certification schemes. Imports from EU countries or countries on the third country list of the Swiss regulation must be accompanied by a certificate from an inspection body from the respective country. An individual import licence is required for imports from other countries. The responsible authority is the *Federal Office of Agriculture*: (http://www.blw.admin.ch).

7 State Support, Policy Initiatives

Swiss law requires all agricultural subsidies to be contingent on minimum ecological standards. This agro-environmental policy is based on a referendum from 1996.

The minimum ecological standards require:

- Crop rotations with at least four crops;
- Measures against soil erosion;
- Equilibrium in the nutritional balance; and
- High biodiversity on seven per cent of the agricultural area.

In addition, Swiss farmers can choose from different special programmes, e.g. for the maintenance of extensive areas such as hedges and fallow land, and programmes for animal welfare.

In 1998, the total amount of government subsidies for Swiss farmers was 688.5 million Swiss francs (430 million Euro). The total agriculturally utilised area was one million hectares. For links to all Swiss regulations described above, please see the internet site: http://www.fibl.ch/bio/verord/verord.html. The amounts paid for organic farming are listed below in table 5.

Subsidies	Swiss francs / Euro per hectare and year	
Minimum ecological requirements for organic and inte- grated farms**	1,200 /750	
Organic horticultural crops*	1,000 / 625	
Organic arable crops*	600 / 375	
Organic grassland*	100 / 62.5	
Subsidies for extensification of production of cereals and rape****	400 / 250	
Animal welfare: free range***	Cattle: 135 / 84 per livestock unit Pigs: 135 / 84 per livestock unit Poultry: 180 / 112 per livestock unit	

Table 5: Agri-Environmental Policy of Switzerland (Programmes for Organic Farms)

Source: FiBL



* only for organic farms,
** for organic and integrated farms,
*** for all farms fulfilling the requirements,
**** for farms fulfilling special requirements to reduce yields (including organic)

The Swiss agri-environmental policy described above has been in effect since 1993, with only minor changes in the different schemes. The policy will not change under the reform of the Swiss Agricultural policy ("Agrarpolitik 2002" – AP 2002; see http://www.blw.admin.ch/themen/ap/ap2002/e/index.htm). Until 1998 falling producer prices had been compensated for by increased subsidies (payments allocated according to land area). A further decrease of prices will reduce farmers' incomes. Therefore, the further growth of organic farming in Switzerland will not be policy driven. However, the following two factors will remain or become crucial:

- a) Growth rate of the organic market: The total organic food market is growing by twenty to thirty per cent annually. Domestic production is growing by less than ten per cent annually. This should motivate Swiss farmers to meet the domestic demand for organic products.
- b) Development of the organic premium: If the producer prices for organic and conventional food decrease in parallel, no additional drive will occur. If organic producer prices fall slower and the organic premium increases (as is common in the EU), conversions will boom.

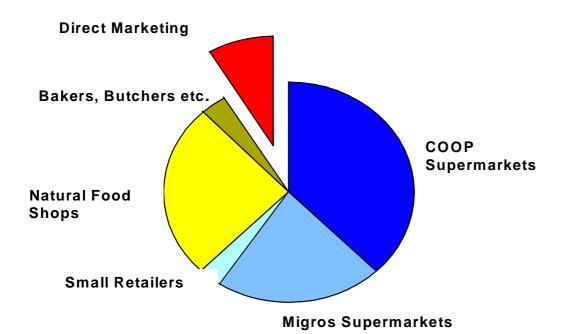
8 Marketing

Currently, the market for organic food is growing by twenty per cent per year. It reached 580 million Swiss francs (360 million Euro) in 1999, which represented almost two per cent of the total food market. The retailer Coop, with a market share of thirty-two per cent of the Swiss food market, is already making four per cent of its food turn-over with organic products. The retailer Migros, with a market share of thirty-six per cent, is making 1.8 per cent of its food turnover in organics.

The supermarkets are very important distribution channels (figure 3). Thanks to the distribution efforts of the two dominant supermarket chains Coop (http://www.coop.ch) and Migros (http://www.migros.ch), Swiss consumers are comprehensively supplied with organic food and the assortment is almost complete.



Figure 3: The Different Channels for the Distribution of Organic Products in Switzerland. (Total turnover of organic food in 1998 was approximately 580 million SFr.)



The most important food categories are:

- Dairy products (milk, yoghurt, cheese etc.): thirty per cent of the total turnover
- Vegetables and fruit: twenty-four per cent
- Cereals (bread, muesli etc.): twenty-three per cent
- Feed stuffs: nine per cent
- Beverages: eight per cent
- Meat: six per cent

Addresses of Swiss processing and trading companies which are Bio Suisse partners can be found under: http://www.bio-suisse.ch/html/g_handel_1.html. Restaurants serving 100 per cent organic menus are listed under: http://www.bio-suisse.ch/html/g_kon-sumenten_2.html.

Small and medium-sized organic enterprises are listed at the internet site: http://www.bionetz.ch. The following link is especially important, as it lists all the organic natural food shops in Switzerland: http://www.bionetz.ch/20_Fachhandel /20_frameset.htm



9 Training

More than thirty agricultural schools offer a wide range of courses. All cantons offer an introductory course on organic agriculture in compliance with the private Bio Suisse standards, which require a minimum of two days of training for the initial certification. In addition to the courses offered by the official advisory services, the private Research Institute of Organic Agriculture (FiBL) and the different regional organic farmers' associations offer many courses and hold meetings. A constantly updated list is available at the internet site: http://www.fibl.ch/ausbild.

To meet the rising demand for apprenticeships in organic farming, FiBL and a group of teachers and trainers have developed a curriculum for the profession of "Organic Farmer". FiBL offers courses to train farmers with apprentices (http://www.fibl.ch/ausbild). Some state schools have offered these courses for several years, and the professional certificate ("organic farmer") is already recognised by the state.

A very innovative four-year apprenticeship programme for bio-dynamic farmers has been in existence for many years. The courses and practical training take place on bio-dynamic farms. For more information and contact addresses, please see: http://www.fibl.ch/ausbild/start.html.

At the Technical University of Zurich (ETH), the Department of Agricultural Science offers a specialised agro-ecology programme for agronomists which comprises organic farming methods (http://www.abtvii.ethz.ch). A similar programme is offered by the Swiss College of Agriculture (SHL) at Zollikofen (http://www.fh-agro.ch).

10 Advisory Services

The state advisory services of each canton offer technical advice for farmers. A list of all organic advisors is available at: admin@fibl.ch. The state advisory services focus on technical support during the conversion period as well as on micro-economics (subsidies etc.). Complementing the state services, FiBL offers a wide range of specialised technical support in areas such as: animal health, horticultural crops, viticulture and wine making, poultry production and free-range cattle fattening (please see: http://www.fibl.ch/aktiv\beratung\berater.html).

The monthly journal *"bio aktuell*" (in German) or *"bio actualités*" (in French) is published by FiBL and Bio Suisse. Many technical leaflets (both black and white and in colour) covering all aspects of organic production are issued regularly by FiBL in German and French. All material is available at the internet site: http://www.fibl.ch/aktiv/ beratung/berater.html. An advisory service for organic gardeners is available from the *bioterra* association. They also offer many courses in gardening and horticulture (http://www.bioterra.ch).



11 Research

Applied agricultural research is carried out by six federal research stations. Some of their research activities involve organic farming, especially the research programme of the Swiss Federal Research Station for Agro-ecology and Agriculture (FAL) in Zurich-Reckenholz. The current state research programme can be found at the internet site: http://www.admin.ch/sar/en/research/index.htm.



Since 1974, the Research Institute of Organic Agriculture (FiBL) at Frick has been the centre of competence in organic farming in Switzerland. FiBL employs a staff of eighty scientists and technicians in the areas of research and advice. For more information on its activities and research programme, see: http://www.fibl.ch. FiBL is also organising the 13th

IFOAM International Scientific Conference, which will take place in Basel in August 2000 (http://www.ifoam2000.org).

The Research Institute for Vital Quality (fiv) / Image Creating Methods of Ursula Balzer Graf is dedicated to developing quality methods of bio-dynamic farming (http://www.fiv.ch).

The foremost bio-dynamic research and training institution is the Scientific Section of the Goetheanum at Dornach (http://www.goetheanum.ch). The *Arbeitsgruppe Forschung (AGF)* co-ordinates all the individual bio-dynamic researchers in Switzerland. The cereal breeder Peter Kunz (http://www.peter-kunz.ch) belongs to both AGF and Sativa (http://www.sativa.org/home.html).

12 Challenges and Outlook

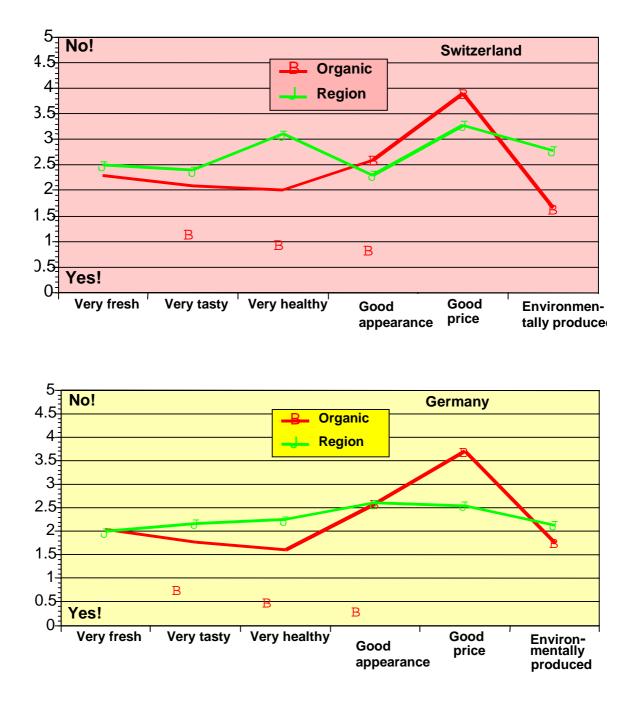
The development of organic farming has been fast but very sustainable in Switzerland. In contrast to Austria, further growth is expected, although the growth rate is slowing down at the moment. Three factors support this optimism:

• Consumer preferences and perceptions are in favour of organic products

A study by FiBL (Switzerland) and the *Institut für umweltgerechte Landbe-wirtschaftung (ifu)* (Germany), comparing consumer preferences and perceptions in the south of Germany, France (Alsace) and northern Switzerland, showed that Swiss consumers have developed a clearer preference for organic products than their counterparts in Germany or France (figures 4,5; Richter et al., 1999). Swiss consumers rate organic foods as significantly healthier and more environmentally produced than locally produced, conventional food. The drawback of higher prices is considered less important.

Figure 4, 5: Consumers' perceptions are significantly more in favour of organic food in Switzerland than in Germany ("Region" = locally produced and labelled food). (Source: Richter et al. 1999)





Consumers have been the driving force of organic agriculture. The domestic organic market has been growing steadily by twenty to thirty per cent annually, and this is expected to continue. Market growth should activate a new conversion boom within the next few years. The gap between domestic supply and demand widened considerably in the 1990s.



• Favourable agri-environmental policy

The current agri-environmental policy with its ecological payments has encouraged farmers to convert (figure 6). The state subsidies have led to minor premiums for organic food (figure 7), which is a very consumer-friendly situation.

Figure 6: Accumulated subsidies (in Euro) for a model farm (twelve hectares, arable crops, seven hectares permanent grassland, one hectare vegetables) in Switzerland, Alsace and Baden. (Source: Richter et al. 1999)

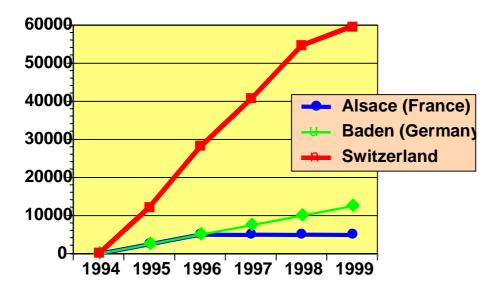
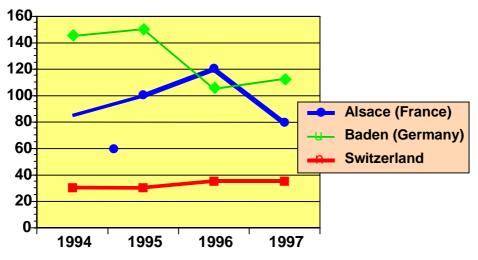


Figure 7: Premiums for producers of organic wheat in per cent of the conventional prices in the three countries. In Switzerland, organic farmers depend less on the organic premium than on state subsidies (Source: Richter et al., 1999)



• Good publicity with one organic label

The wide-spread use of the organic "Bio Suisse Bud" seal in supermarkets, specialised food shops and at local and farmers' markets has strengthened the confidence of consumers in the quality and reliability of organic food.

13 Reference

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