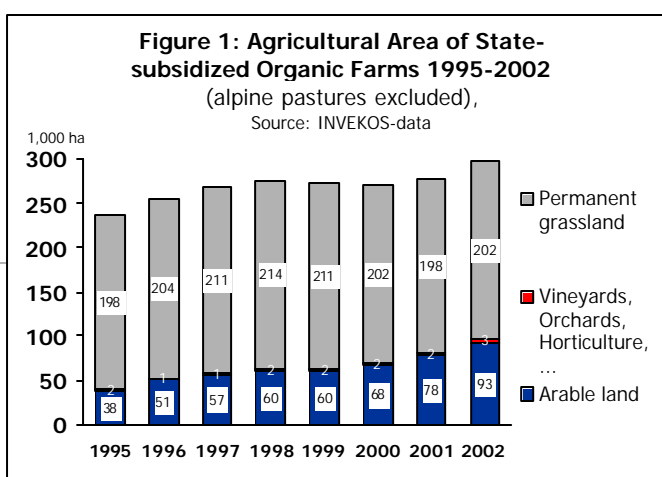
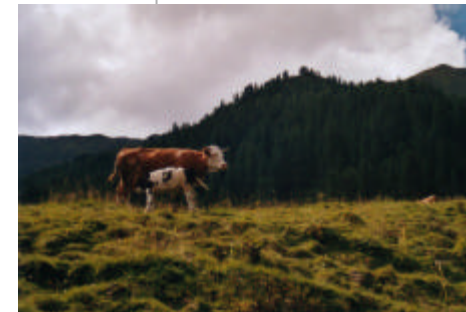


Introduction

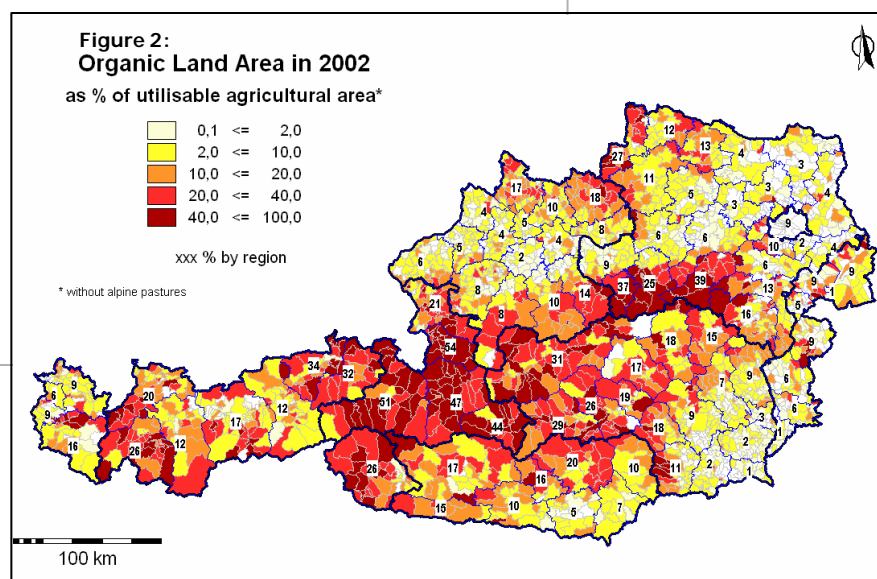
In Austria, about 298,000 ha agricultural acreage (without alpine pastures) were cultivated organically in 2002 (Figure 1), which is about 11% of total agricultural acreage. Two thirds of these areas are permanent grassland, and are situated in the mountainous regions of Austria (Figure 2).

The proportion of organic farms among all farms is increasing with increasing steepness of slopes: In flat areas only 2.7% of all farms are organic, while in zone 4 (extremely steep slopes) the percentage of organic farms is about 30% (Freyer et al. 2001).

However, during the last few years, organic permanent grassland areas have remained constant, while the area of organic arable land has been growing (Figure 1).



This development reflects the fact that arable farms are more profitable than grassland farms because of high demand for cash crops, while marketing of organic milk and beef is reaching its limits.



Organic Livestock in Austria

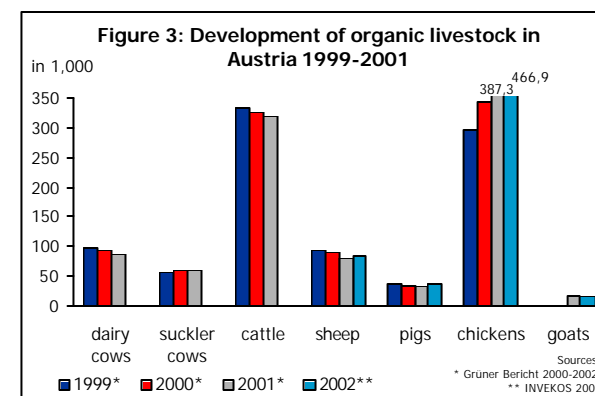
In 2001, about 12.8 % of all Austrian dairy farms were organic and kept 14.6 % of all dairy cows. About a quarter of all suckler cows and sheep (24.2 % and 25.4 %), respectively, are living in organic farms. Compared to conventional farms, herd size of organic dairy cows, suckler cows and sheep is larger, while pig and chicken herds are smaller (Table 1).

During the last few years, organic dairy stock decreased, while sheep and pig stock remained constant and chicken stock increased severely (Figure 3). The development of cattle stock goes hand in hand with the stagnation in the development of organic grassland areas (Figure 1). There is an obvious trend from dairy to suckler cows, probably because of the difficult market situation for organic milk and milk products (in 2000, the degree of self-sufficiency in organic milk was 112 %; Hamm et al. 2002).



Table 1: Organic livestock compared to total Austrian livestock 2001
(Source: Grüner Bericht 2002)

	organic		all		% organic	
	farms	stock	farms	stock	farms	stock
Dairy cows	9,558	87,036	74,410	597,981	12.8	14.6
Suckler cows	9,173	62,455	54,274	257,734	16.9	24.2
Cattle	14,313	319,346	94,284	2.118,454	15.2	15.1
Sheep	2,796	81,454	17,755	320,467	15.7	25.4
Goats	3,162	17,244	12,799	59,452	24.7	29.0
Pigs	6,364	33,250	75,347	3.440,405	8.4	1.0
Chickens	8,227	387,348	84,447	11.905,111	9.7	3.3

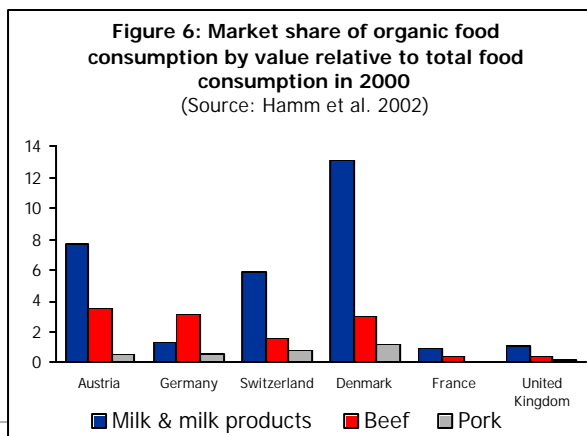
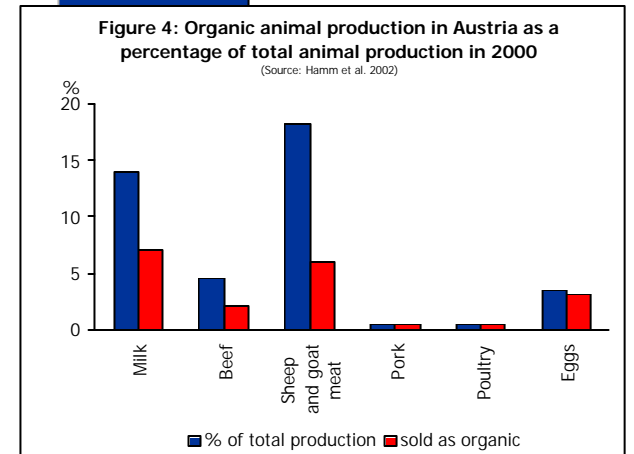


Marketing and Food Consumption of Organic Animal Products

About 14% of total milk production (470,000 tons) and 18.3 % of sheep and goat meat (1,500 tons), respectively, come from organic farms (Figure 4), while EU average is only 1.5% and 0.8%, respectively (Hamm et al. 2002).

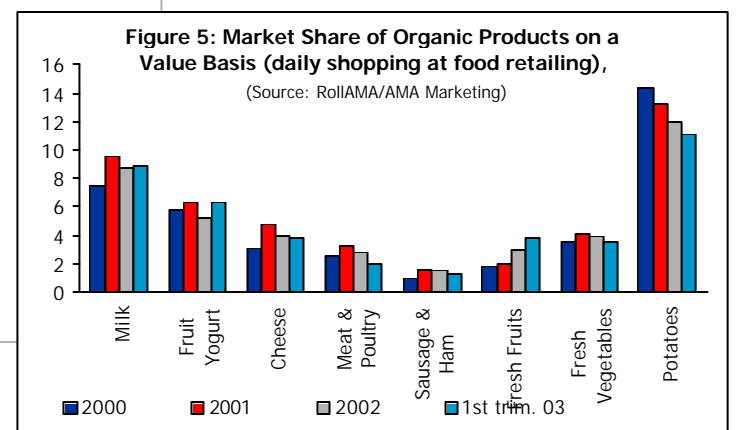
The Austrian market could obviously not cope with these large amounts, therefore not more than 50, 46 and 33% of milk, beef and sheep/goat meat, respectively, could be sold as "organic". By contrast, 80, 89 and 89% of organic pork, poultry and eggs, respectively could be sold as organic (Hamm et al. 2002).

In Austria, a very important marketing channel for organic products is public canteens. For instance, three pilot projects were realized in Lower Austria since 1997. In the meantime, about 80 public canteens (hospitals, schools, barracks,...) are using organic products to provide for 15,000 customers per day. It is demanded by a resolution of the Lower Austrian provincial government that at least 25% of all commodities (volume based) have to be organic. In total, the organic product turnover in public canteens amounts to about 30 million Euros per year in Austria. Main products are milk and dairy products, bread, beef and seasonal fruits and vegetables (Kaiblinger 2003, Raffeiner 2003). Kicker (2003) estimates the share of beef marketed to public canteens to be 27% of the overall beef put on the market. Public canteens prefer fattening cattle and veal calves, while supermarkets mainly purchase baby beef.



About 10% (by value) of consumed milk and potatoes bought from food retailers are of organic origin (Figure 5). Animal products stayed at the same - partially low - level for the last few years.

Austrian organic animal products reach a considerable market share, being second only to Denmark (Figure 6). In comparison to Switzerland with its similar conditions, higher market shares are achieved for all animal product categories except for pork and eggs (Hamm et al. 2002).



Performance and Health of Organic Livestock

Schwarzenbacher (2001) compared 261 organic and 2245 conventional Simmental dairy herds in Lower Austria and found lower milk yields in organic dairy farms (-423 kg), but organic cows with a higher longevity (+0,33 y) than conventional ones (Table 2). Zollitsch et al. (2003) found a similar difference in milk yield of -509 kg between 17 organic and 80 conventional dairy herds in Lower Austria.

Milk protein content is roughly 0.1 % lower in organic as compared to conventional dairy cows (Schwarzenbacher 2001, Zollitsch et al. 2003), probably due to the smaller amounts of concentrates fed to organic cows. Concerning animal health, organic farmers see improvements rather than a deterioration after conversion, with leg disorders being an exception (Figure 7). However, Schwarzenbacher (2001) found no relationship between farmer's satisfaction concerning udder health and somatic cell counts or fertility and insemination index. Organic farmers seem to be aware of, but biased about the expected changes in animal health during conversion.

Omelko and Schneeberger (2003) evaluated 94 and 388 organic and conventional pig farms, respectively, by questionnaires. They found that only 51% and 85% of organic farms keeping growing pigs and sows, respectively, record the performance of their pigs (Table 3). Baumgartner et al. (2002) described endo- and ectoparasites, actinomycosis and diarrhea of piglets as the main health problems in organic pig herds.

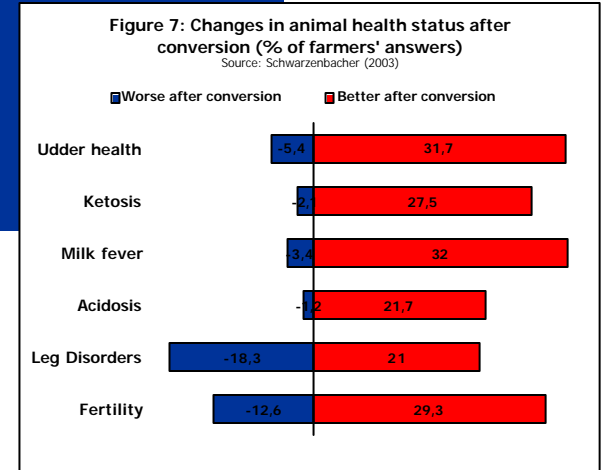


Table 2: Comparison of herd performance of organic as compared to conventional Simmental cows
(Source: Schwarzenbacher 2001)

Trait	Conventional	Organic	Difference
Herd size (cows)	15.7	15.0	-0.7
Milk yield (kg)	6,209	5,786	-423***
Fat content (%)	4.22	4.11	-0.11***
Protein content (%)	3.45	3.34	-0.11***
Cows age (years)	5.05	5.41	+0.37***
Longevity (lactations)	2.89	3.19	+0.30***
Lifetime production (kg)	15,699	16,233	+534***

Table 3: Comparison of herd performance of organic as compared to conventional pigs
(Source: Omelko and Schneeberger 2003)

Trait	Conventional ^a	Organic ^a
Piglets per sow and year	21.0	18.6
Litters per sow and year	2.16	2.05
Suckling period (days)	29.8	-- ^b
Fattening period (days)	119	129
Lean meat (%)	58.7	56.9
Feed efficiency	2.9	3.2

a...no statistical comparison has been made; b...no data available, minimum requirement of 40 days according to EU-Regulation 1804/99 (Council of the European Union 1999)

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