



Organic livestock production in Slovenia

D. Kompan, S. Žgur, M. Čepon

University of Ljubljana, Biotechnical Faculty, Department of Animal Science, 1230 Domzale, Groblje 3., Slovenia

ABSTRACT

Organic livestock production in Slovenia has oriented on milk and meat production with ruminants. Almost 90% of all agricultural area included in organic production belongs to livestock production on grassland. Slovenia has officially entered in the organic production close before year 2000. The trend of organic production from 2004 til 2009 is increasing, the most enlargement is on Equidae, Sheep, Pigs and Goat animals: 236, 199, 174 and 161% respectively. The organic surface present in Slovenia 6% of total used agricultural area.

(Keywords: agriculture, livestock, organic farming)

INTRODUCTION

Slovenia with 468,496 hectares of utilised agricultural area contributes 0.20% to the total surface area of the agricultural land of the EU-27 members. Natural conditions in Slovenia are relatively disadvantageous for agriculture. Approximately 60% of the total surface is covered by forest. Over 70% of the farmland is classified as less favoured area; most of it is grassland and the proportion of arable land is relatively low. The macroeconomic importance of agriculture is relatively low, while the agricultural sector accounts for 6% of total employment. The share of the gross domestic product (GDP) from agriculture is less than 4% and is declining. However, the economic importance of agriculture is higher than these data indicate; it is an important developmental, social and political factor.

The share of agriculture in the gross domestic product (GDP) is slightly lower than the European average and totals just fewer than 2%. Despite the small share in GDP, agriculture's significance is greater than seems at first sight. The multipurpose roles of agriculture in the Slovenian rural area are no longer just words on paper; instead, it has become publicly recognised and with its specific results it is making progress. Similarly, agriculture's importance relative to other primary economic branches is not in significant and the same is true of its relationship with the secondary and tertiary sectors.

Meadows and pastures represent us much as 60% of agricultural land while more than 20% of fields are used for the production of feed (maize, root crops, green feed...). This indicates the great importance of animal breeding in Slovenia. Primarily, ruminants are being bred and, of these, the breeding of sheep and goats is very much on the increase although, on average, the number of livestock units (LU) per farm is falling (6.3 LU).

Animal breeding is also the most important agricultural branch in terms of value. The total value of agricultural output is € 959 million, in which animal breeding contributes € 550 million. Otherwise, Slovenia's contribution to the total value of agricultural output of the EU-27 countries is 0.20%, which is exactly the same as its share of its utilised agricultural area.

In Slovenia up to 68% agricultural area are defined as less favoured areas (LFA). These are hilly and mountainous areas, areas with karst features or other factors that

limit possibilities of farming. Only 10% of Slovenian municipalities have no LFA within their boundaries. In these areas, farms are entitled to subsidies which totalled € 40.6 million or 35.5% of the budget expenditures of the rural development policy in 2005.

HISTORY

In the middle of last century agriculture was under the pressure of intensive production, mostly as a consequence of the post-war shortage and famine in Europe. The technologies that were developed were not always environmentally-friendly. In the major part of Slovenia farmers never introduced intensive technologies mostly due to the natural conditions. Therefore, Slovenian agriculture policy became oriented to supporting environmentally-friendly agriculture even before the country joined the EU. The trend towards extensive production that started at the end of the previous century has had an impact on the most of Slovenia's agriculture. The exceptions were low-land farms which in the same period oriented towards intensive production or breeding (MAFFI, 2010). Slovenia's agricultural structure reflects the political and economic conditions of the socialist era. There were larger estates owned and run by the state and small private family farms. The latter owned over 90% of the total agricultural area. Nowadays, an average farm has only 5 hectares, and more than 85% of agricultural land is cultivated by farmers who hold less than 20 hectares.

Agricultural production has decreased in the last years. The most important branch is animal husbandry, especially dairy and beef production. Pig and poultry breeding are also important. Sheep breeding has increased quickly in the last few years. In the late 1980s and early 1990s, garden plot holders started an organic gardening movement, and in 1991, people interested in bio-dynamic farming formed a club. The latter developed into the bio-dynamic association AJDA. Very few farmers were involved in these initiatives; the majority of their members were garden plot holders and people not occupied in farming. Nevertheless, their activities were an important contribution to the development of organic farming in Slovenia.

In 1997, the Slovenian Organic Farmers' Association (S.O.F.A.) was founded. This was the first national association of pioneer organic farmers who were producing for the market, and who were therefore interested in the development of a certification system. The association adopted the standards for organic agriculture in Slovenia that were prepared by the Institute for Sustainable Development (ISD), a non-governmental organisation (NGO), specifically for this purpose. These standards were published by the Slovenian Ministry of Agriculture. They were prepared in accordance with the IFOAM Basic Standards and are similar to the standards of Austrian and German organic farmers' associations (Ernte and Bioland). In year 1998 join 44 farms, in year after 315 farms and in year 2009 is included 2096 farms (*Table 1*). In 1999, a total of 300 farms applied for certification under the new joint programme, and 22 applied for certification under the Demeter programme. Again, some farms were certified under both programmes (*Table 1*).

The area under organic agriculture increased significantly in the last years. In the period 2000–2009 area under organic production increase in the EU27 from 4.25 up to 8.50 mio ha or 7.5% per year. In Slovenia has increasing organic production more than 20% per year. In *Table 2* we can see that in last year most of the organic area represented permanent grassland with more 86%. Arable land represented only 10%, whereas orchard, vineyards and olive groves together less than 4%.

Table 1**Increase in the number of organic farms and organic area in Slovenia**

Year	Number of organic farms	Hectares (estimate)	Percentage of agricultural area
1998	44	400	0.05%
1999	315	3,000	0.38%
2000	600	5,500	1.10%
2005	1,718	26,830	5.20%
2009	2,096	29,500	6.26%

Table 2**Structure of all and organic utilised agricultural area by land use categories in Slovenia in 2009**

Land use categories	All	Organic	Organic UAA=100%
Utilised agricultural area (UAA)	468,496	29,388	100.0
Arable land	175,189	2,922	9.9
Permanent grassland	267,304	25,433	86.5
Orchard plantations	8,783	780	2.7
Vineyards	16,086	204	0.7
Olive groves	910	50	0.2

Source: *SURS*, 2010**LEGISLATION**

In 1996, the Institute for Sustainable Development prepared a proposal for the first Slovenian standards for organic production and processing, in accordance with the IFOAM Basic Standards and the EU Regulation on organic farming (Council Regulation (EEC) No. 2092/91). It was intended to provide the already existing organic farmers with a framework for further development. This effort was supported by the state Farming Advisory Service. The standards were published by this service and the Ministry of Agriculture as "Guidelines for Organic Farming in Slovenia", but as a legally non-binding document. These standards have been adopted by all organic farmers' associations that have emerged since 1997.

Activities to regulate organic farming at the state level started in 1998. The "Slovenian Regulation on Organic Farming" is expected to be adopted by the end of 2000 at the latest. The Ministry of Agriculture made this commitment in the context of EU pre-accession negotiations. The proposal for this regulation was prepared in accordance with Council Regulation (EEC) No. 2092/91. The basic act was established in 2002 and renewed in 2008 (The Agriculture Act (Uradni list RS, št. 54/2000 and Uradni list RS, št. 45/2008), the Council Regulation (EC) 834/2007 on organic production and labelling of organic products and import of organic products was implemented in year 2007, and Council Regulation (EC) 889/2008 was implemented in September 2008. In December 2008 Ministry of Agriculture, Forestry and Food adopt the Action plan of organic development in Slovenia to 2015. In year 2001 establish the Rules of organic

farm production of food in agricultural (Uradni list RS, .t. 31/2001) and rules of condition for controlling organisations in organic production of food in agriculture.

SUBSIDIES

Though the organic farming in Slovenia has started in late 80, the producers have gotten first subsidies in 1999 in form of direct payment per hectare for different crops. In year 2001 Slovenia has accepted Slovenian agricultural-environmental programme, which enable the organic farmers to get direct payments for measurements from this programme. This has further developed so that now the organic farmers can get direct payments for different productions (*Uredba o plačilih ...*, 2010). In *Table 3* direct payments for different productions are presented. They varied from 213.2 €/ha grassland per year to 578.92 €/ha vineyards hop field and nurseries per year. Direct payments are referring to an assurance of higher nutritional and environmental standards in food production.

Table 3

Direct payment for different organic production in Slovenia productions

Production	€/ha per year
Arable land	298.07
Horticulture outside	551.45
Horticulture in covered area	487.90
Orchard plantations with at least 100 trees for nuts and chestnuts and 200 for other orchard and 150 olive groves per ha	554.73
Extensive orchards with 50-200 trees per ha	237.8
Vineyards, hop fields, nurseries	578.92
Grassland	
0.2–0.5 LU/ha	213.20
0.5–1.9 LU/ha	227.55

Source: *Uredba o plačilih ...*, 2010

DEVELOPMENT AND ACTION PLAN UP TO 2015

Through the last decade the number of included animals in organic production has continuously increased. The number and development from 2004 to 2009 is presented in *Table 4*. The number of equidae in organic production has increased the most, for 236%, followed by sheep, pigs, poultry, goats and bovine animals. The number of bees has in the same time slightly decreased. The percentage of animals included in organic production from total number of animals varies significantly in different species. In pigs and poultry less than 1% of animals are included in organic production. In bovine animals it is around 4%, in dairy cows about 1%, whereas in suckler cows it is around 10%. Slightly higher is percentage of included equidae and the highest percentage is in sheep and goats with around one quarter of all animals included in organic production.

In *Table 5* the organic animal production in Slovenia from 2007 to 2008 is presented. Total organic meat production has tremendously decreased due to decreased beef production. On the other side pork, sheep, goat and poultry meat production has in the same time increased. Milk production did not change in the same time. Though the

increase was relatively high, especially in poultry meat, where the production of organic meat has increased for six fold, it is still very low. Organic beef production presented more than one percent, whereas pork and poultry much less than one percent of total production. Organic sheep and goat meat presented similar like the number of included animals in organic production about one quarter of total production. On average organic production represented lower percentage from total animal production than the number of included animals in organic production, which indicate that not all the animals are used for organic animal products.

Table 4

Number of animals of different species included in organic production in Slovenia

	2004	2006	2008	2009	Index 2009/2004
Bovine animals total	13,098	14,461	18,174	18,238	139
Dairy cows	1,004	920	1,086	1,172	117
Suckler cows	-	4,659	5,554	6,618	142*
Pigs	1,235	1,740	2,543	2,149	174
Sheep	17,946	22,920	36,107	35,751	199
Goats	3,465	3,964	6,339	5,569	161
Poultry	14,218	15,107	20,090	21,904	154
Equidae	1,178	1,856	2,486	2,784	236
Bees number of hives	2,072	2,098	1,592	1,912	92

Source: *Eurostat*, 2010

*Index 2009/2006

Table 5

Organic animal production in Slovenia

	2007	2008
Meat total, t	1161	1040
- beef, t	809	676
- pork, t	30	43
- sheep and goat, t	315	294
- poultry, t	4	28
Milk, t	2678	2646

Source: *Eurostat*, 2010

CONCLUSIONS

In Slovenia at the moment the demand on organic products is still greater than supply. Fruits and vegetables are in the greatest demand, though most of the Slovenian organic farmers are oriented in organic animal production, because of natural conditions. A lot of farmers decided for organic production because their former way of production was similar or near organic agricultural production. Most of the farmers market their products directly at home or local markets in bigger cities. On this way from animal

products only eggs, honey and some dairy products are marketed. For other products of animal origin and for farmers with larger production, which is not suitable for marketing on local markets, other market ways have to be further developed.

Organic animal production is not important only from healthy food production; preservation of natural resources, biodiversity and animal welfare point of view, but it helps and contributes also to sustainable development of rural areas. This might be in the future even more important as today and the role of organic agriculture production will further increase.

The most part of Slovenian livestock farming, especially in cattle, sheep and goat production is close to organic production, but not really officially declared for different reason. Lot of organic product is not on the market, because self consumption on farm, especially in small units like hobby farmers, which has more than 50% of agriculture land. The possibilities to marked the organic product is bigger than production, so that Slovenia is oriented to import the products from other countries.

REFERENCES

- MAFF1 (2010). http://www.mkgp.gov.si/fileadmin/mkgp.gov.si/pageuploads/saSSo/Publikacije/Acrobat_Document.pdf
- SURS (2010). Ekološko kmetijstvo, Slovenija, 2009 - končni podatki.
http://www.stat.si/novica_prikazi.aspx?id=3291
- Uredba o plačilih za ukrepe osi 2 iz Programa razvoja podeželja Republike Slovenije za obdobje 2007-2013 v letih 2010-2013. 2010. Uradni list RS, št. 14/2010 p 1591.
- Eurostat (2010). <http://epp.eurostat.ec.europa.eu/portal/page/portal/agriculture/data/database>

Corresponding authors:

Drago Kompan

University of Ljubljana, Biotechnical Faculty, Department of Animal Science
SI-1230 Domžale, Groblje 3., Slovenija
Tel.:+386 01 7217 804; fax:+386 01 7241 005
e-mail. drago.kompan@bf.uni-lj.si