

THE ORGANIC SECTOR IN THE NORDIC-BALTIC REGION – WHAT IS ACHIEVED, AND WHAT IS CHALLENGING FURTHER GROWTH?

Anne-Kristin LØES¹, Ólafur R. DÝRMUNDSSON², Dzidra KREISMANE³, Minna MIKKOLA⁴, Sirlí PEHME⁵, Ilse A. RASMUSSEN⁷, Virgilijus SKULSKIS⁶, Maria WIWSTAD⁸

¹Bioforsk Norwegian Institute for Agricultural and Environmental Research, Organic Food and Farming Gunnars veg 6, 6630 Tingvoll, Norway

²Jórusel 12, 109 Reykjavík, Iceland

³Institute of Agrobiotechnology, Liela street 2, 3001 Jelgava, Latvia

⁴Finnish Organic Research Institute (FORI), University of Helsinki, Lönnrotinkatu 7, 50100 Mikkeli, Finland

⁵Estonian University of Life Sciences, Kreutzwaldi 1, 51014 Tartu, Estonia

⁶Lithuanian Institute of Agrarian Economics, V.Kudirkos 18, 03105 Vilnius, Lithuania

⁷International Centre for Research in Organic Food Systems (ICROFS), Blichers Allé 20, 8830 Tjele, Denmark

⁸Centre for Organic Food and Farming (EPOK), Swedish University of Agricultural Sciences, Uppsala, Sweden
Email: ¹anne-kristin.loes@bioforsk.no

Abstract. *This paper compiles statistics for certified organic farmland and organic consumption in the eight Nordic-Baltic countries, and describes main drivers and obstacles, focussing on policy and strategies including organic research. Significant differences are found between the countries, also between countries with relatively comparable climatic and economic conditions. Explanations are discussed. Successful examples, especially Denmark and Sweden, show that organic agriculture is an option for refreshing agriculture in general, when there is a significant political will to support this farming practice.*

Key words: *consumption, policy, premium price.*

INTRODUCTION

Within the Nordic-Baltic (NB) region, production and consumption of certified organic food are quite different between the eight countries (Table 1). The region includes organic frontrunners, but also latecomers. In most countries, public targets for organic agriculture (Table 2) are rather ambitious compared to status. Countries with comparable levels of economic prosperity are highly different in organic consumption, and countries with comparable agricultural conditions are highly different with respect to the proportion of organic farmland. Organic research, understood as scientific activities to support the growth of organic production and consumption, is an important driver for organic growth. Hence, the development of the organic sector, and the role that organic research has played to support this development, is an interesting case to be highlighted by the Nordic Association of Agricultural Scientists (NJF). This paper compares the public targets and the actual extent of organic production (certified farmland) and consumption in the NB countries, and analyses the differences in light of public and political support, not in terms of funding but of political will, arguments and strategies. The aim is to reveal important bottlenecks hampering further growth of the organic sector, and to learn and be inspired from the more successful cases.

EXTENT OF CONSUMPTION AND PRODUCTION

Since the EU introduced a regulation for certification of organic food in 1991, organic agriculture has grown rapidly in most European countries. The EU supports organic and low-input agriculture to protect the environment, ensure high animal welfare, increase biodiversity, support rural development, and not least because of the steadily increasing public demand for organic products. The first European Action Plan was published in 2004, and the second in 2014. In the NB region, Sweden and Estonia take the lead in certified farmland (Table 1). However, the organic production in these countries is dominated by ruminant animal husbandry, as shown by the large proportion of organic farmland used for grass. This may call for a more “active” organic agriculture, producing more food commodities than milk and meat products. Ruminant animal husbandry is common in all the NB countries, but the proportion of organic arable land, here simplistically understood as the share of organic farmland NOT being used for leys, grazing, green manures or energy crops (Table 1 column 8), is somewhat higher in Denmark. It is remarkably high in Lithuania, where a lot of organic cereals are grown for export.

Table 1

National statistics on population [1], prosperity [2], and the consumption and production of organic food [3] for 2012 (population 2010), listed by % certified organic farmland.

| Country | Population, mill. | Population km ² | GDP capita ⁻¹ kEuro 2012, relative Latvia =100 | Organic consumption, % of retail sales | No. of certified organic producers | Certified organic farmland k ha | Proportion of non-arable land, % | Certified land, % of total relative to consumption |
|-----------|-------------------|----------------------------|---|--|------------------------------------|---------------------------------|----------------------------------|--|
| Sweden | 9.3 | 27 | 35.6 258 | 3.9 | 5601 | 478 | 75 | 15.6 4 |
| Estonia | 1.3 | 36 | 17.9 130 | 1.2 | 1478 | 144 | 74 | 15.3 10 |
| Latvia | 2.2 | 56 | 13.8 100 | 0.2 | 3496 | 197 | 78.5 | 10.8 54 |
| Finland | 5.4 | 19 | 31.9 231 | 1.6 | 4322 | 198 | 67 | 8.7 5 |
| Denmark | 5.5 | 130 | 32.7 237 | 7.6 | 2651 | 195 | 58 | 7.4 1 |
| Lithuania | 3.3 | 72 | 16.6 120 | 0.2 | 2527 | 157 | 27 | 5.4 27 |
| Norway | 4.9 | 18 | 47.2 342 | 1.2 | 2590 | 55 | 77 | 5.1 4 |
| Iceland | 0.3 | 3 | 33.5 243 | 2 | 35 | 8 | 98 | 0.4 4 |

The organic consumption is highest in Denmark, followed by Sweden. It is remarkable that Estonia, with a GDP (gross domestic product) less than half of Norway, has a similar consumption of organic products. It is also remarkable that Denmark has a much lower proportion of certified organic farmland relative to the organic consumption, than any other NB country. Another extraordinary case is Latvia with almost 11% organic farmland, but very low consumption.

POLICY AS DRIVER FOR ORGANIC GROWTH

Public support for organic production and consumption include a range of instruments, ranging from production payments to support for education, training and research and development projects, including market development. The demand side has been especially emphasised in Denmark [15]. In the EU member NB states (all except Norway and Iceland), EU support comes as an additional instrument. In any case, the public support reflects the strategy chosen by leading stakeholders, like industry boards, agricultural ministries and farmers’ unions. Public goals for production, partly also consumption, are found in all NB countries (Table 2).

Sweden specified a target for the proportion of organic farmland already in 1996, supported by public payments. A report from the national board of agriculture [4] comes close to a national action plan and is a basis for governmental decisions. The targets will be revised during 2015. The public support is justified by a public recognition of environmental benefits of organic production [4]. The proportion of organic animal husbandry, milk production and arable land is a measure for the environmental status of each county [5]. There is also a significant support for extension activities towards farmers and advisors. Directed national calls with public funding for organic research has been in place since almost 20 years [6], and a coordinating national research centre, EPOK, has been established which also disseminates results towards agricultural and societal stakeholders.

Estonia entered the organic scene about 10 years later. Similar to other Baltic countries, EU support for organic farming has been driving the growth of organic farmland. However, organic processing has not been supported, and is in a serious imbalance with the production. To support domestic production of organic food products, Estonia recently decided not to focus on the proportion of total consumption being organic [7]. Instead, the monetary value of the organic production relative to total Estonian agricultural production should now increase by 50% from 2014 to 2020, and the monetary value of processed organic products by a factor of 3 from 2013 to 2020. Despite the large proportion of certified land, organic production still needs to be increased. Even if most of the area is grassland, milk and meat products are lacking in the market, and the production of fruit and vegetables does not by far fit to demand. Lack of organic processors and small processing volumes are main reasons for the lack of domestic organic food. Conventional processors consider the production volumes and organic food market too small, and the logistics too expensive, to be interested. Hence, significant amounts of organic produce are processed and sold as conventional. This explains the Estonian strategy to increase the competitiveness of organic producers and increase the consumption of local organic food.

Latvia also has a 10-year long history of public support for organic production. The organic consumption is small, but increasing, partly due to the development of organic processing enterprises which have increased from 86 in 2010 to 192 in 2013. As much as 8% of the consumed milk in 2013 was organic. Other important organic products in Latvia are honey, cereals, potatoes, vegetables, eggs and chicken. Processing enterprises receive public support. An ambitious target of 50% organic by 2020 [8] is set for public food procurement in state education, social care and health promoting institutions. Main strategic targets within 2020 are to increase the volume of organic domestic products by 50% compared with 2014, to establish four regional cooperatives covering all Latvia and to establish a long-term research program in organic farming.

Finland was also an organic latecomer, with the first national target published in 2005. However, in recent years the ambitions have been significantly strengthened. The organic sector, along with local food, is supported by several public bodies justified by a public interest for sustainability. In Finland, the Ministry of Environment publishes the targets of organic farmland [10]. The first target called for 10% organic farmland by 2010. Practical guidelines for public catering [11] recommends that organic, vegetable and seasonal food should be served twice a week by 2015. Current targets for 2020 aim at 20% organic farmland, tripling of the organic retail market from 1.3% in 2012 to 4%, and a 20% share of organic food in publicly catered meals [10]. Main bottlenecks are seen to be consumers' uncertainty about the organic value, slowness and small size of the organic sector, bureaucracy, and lack of communication within organic food supply chains [19]. Recently, FORI developed a national research programme for organic food and farming [20].

Denmark published their first national action plan already in 1995, and since then not less than five such plans have been produced (Table 2). The recent plan has one, simple target: to double the organic area compared with 2007, corresponding to 11% of the agricultural area [12]. General targets for the organic sector as developed in former plans are to increase export and public procurement of organic food, based on a collective effort from all ministries. Noteworthy for the Danish organic success is the unified efforts since the mid 80's to treat the organic sector as an evolving industry, in addition to the aim of protecting nature [14]. This is reflected in the large interest for organic production in the Danish Agriculture & Food Council (Landbrug & Fødevarer, Table 2), which represents all domestic farming and food industries including businesses, trade and farmers' associations, including the organic sector. This reflects the importance of agriculture, including organic, as a large export industry in Denmark. One national, public and free certification scheme, the red "Ø" known by a vast majority of Danish consumers, has likely contributed to the high trust in organic produce in this country. Further, a close cooperation between public and non-governmental organisations, willingness among the organic organisations to streamline their interests, and a high support for demand-side stimulating measures have contributed to the success [14]. It is pointed out that a will amongst politicians to engage in the organic sector has been crucial [14]. The establishment of ICROFS to coordinate research in Denmark as well as internationally, has also been important.

Lithuania was first among the Baltic countries to present a national target for organic production [15]. The EU support for organic farming has been a crucial driver for organic growth and called for many farmers to convert their production. The Ministry of Agriculture has prioritised their support for market development activities such as fairs and events for consumers, and scientific research activities. There is an imbalance between the production of organic cereals and livestock, leading to a lack of organic manure. A big amount of organic cereals is exported. There is a need to develop and test appropriate cereal varieties for organic farmers. Main targets for the next period are to support and increase the extent of mixed organic farming, and further to increase the general competitiveness of organic producers and the consumption of local organic food.

Norway was a frontrunner in time along with Denmark and Sweden, presenting their first national target in 1995. However, the similarity stops at this point. Targets are still ambitious, but the political will to achieve them is low, especially since a conservative government was elected in 2013. The action plan has not been revised since 2009. Similar to Iceland, Norway follows EU regulations for organic production and processing as a part of the European Economic Agreement (EEA) since 1994.

Iceland is a latecomer in the organic world, publishing their first national target in 2011 [17]. Caring about their language, they have invented an inspiring term to mention organic agriculture: *liffrænn landbúnaður*. A direct translation would mean life-run land-clothing. Explaining organic as originating from life is a fruitful perspective. In this country, the main barrier to conversion is lack of acceptable sources of plant nutrients, particularly N. There is a shortage of suitable legumes able to fix N at the generally low temperatures.

Table 2

National policy documents (10) and targets for organic agriculture

| Country | Publishing year(s) for National Action Plan(s) | Target for organic farmland, % by year | Target for organic consumption, % by year PS = public sector | Main drivers, organization(s) and arguments | Coordinating body for organic research, or initiating and disseminating projects |
|------------------|--|--|---|--|--|
| Sweden | 1996, 2001, 2012 | 20 2013 | PS 25 2010 | Organic Sweden KRAV, national cert. body Public environmental goals[5], strong animal welfare policy | EPOK, Swedish University of Agricultural Sciences (SLU) |
| Estonia | 2007, 2014 | 19 2020 | 30 2020 (in childcare institutions) | Estonian Organic Farming Platform Healthy, local and tasty food, environment | Estonian University of Life Sciences, Research Centre of Organic Farming |
| Latvia | 2004, 2007, 2011, 2014 | 15 2020 | PS 50 2020 | Latvia Organic Farming Association | Latvia University of Agriculture, State Priekuli Plant Breeding Inst. and State Stende Cereals Breeding Ins. |
| Finland | 2005, 2009, 2010, 2012 | 20 2020 50 2030 | PS 10 2015 20 2020 Retailing 3x2012 level by 2020 | Ministries (Agr.&For., Envir. and Foreign), Council of the State, Proluomu Association, FORI Clean environment, high quality of domestic food, animal welfare | Finnish Organic Research Institute (FORI) |
| Denmark | 1995, 1999, 2011, 2012, 2015 | 11 2020 | PS 60 2020[13] | Danish Agriculture and Food Council Organic Denmark Supporting exports, protecting environment | International Centre for Research in Organic Food Systems (ICROFS) |
| Lithuania | 2002, 2015 (in preparation) | 5 2006 | No specific target | Gaja – Lithuanian Association of Organic Agriculture; LEUA – Lithuanian Association of Organic Farms, Ekoagros – cert. body | Ministry of Agriculture |
| Norway | 1995, 2000, 2003, 2009 [16] | 15 2020 | 15 2020 | Oikos – Organic Norway Cover demand, create sustainable solutions | Bioforsk Organic Food and Farming |
| Iceland | 2011 | 15 2020 | | VOR-Organic Farming & TÚN-Certification Body | Agricultural University of Iceland |

On Iceland, another challenge is EU regulations poorly adapted to Arctic agricultural areas with short growing seasons and very limited growing of cereals, causing a lack of straw for livestock beddings. Slatted floors in sheep houses are common, but further derogations have not been accepted by the EU,

and demands for livestock space do not take into account the smaller size of native Icelandic breeds of dairy cattle, sheep, goats and horses. Similar to Norway, there is a lack of organic vision in public and academic bodies. Furthermore, the conversion scheme implemented in 2010 lacks public funding. In practice, no priority is given to the organic sector in spite of the fact that market demand is far above supply in all major food commodities. The steadily increasing demand is met by growing imports from overseas. The technical and social barriers counteract the progress achieved by research, teaching, extension, conversion and development. As opposed to Sweden, Finland and Denmark, organic agriculture in Iceland and Norway has not yet been officially accepted as a means to increase the environmental performance or sustainability of agriculture in general. Neither have the positive consumer aspects been fully realized by policy makers.

THE ROLE OF RESEARCH

Organic research is a prerequisite for organic growth, and a significant amount has been conducted within the NB countries, which except for Iceland all participate in the CORE Organic ERA-net. The CORE Organic projects are an important addition to the larger EU projects that have significantly contributed to the generally advanced status of organic food and farming in Europe as compared to elsewhere in the world. Organic research has increased our knowledge about agroecosystems and how to manage them efficiently, while maintaining a fertile soil and a landscape with high biodiversity. Further, we have gradually developed a better understanding of people's reasons to buy organic food and the benefits of converting public catering to organic. Scientists may find it inspiring to operate within the frame conditions set by the organic principles of health, fairness, ecology and care, commonly operationalised by the EU regulations for organic production. Since this framework reduces the inputs of "quick-fix" purchased products significantly, research may concentrate on the importance of knowledge and competence for management of crop rotations, animal husbandry and farming in general. Within the food service sector, the importance of using local food, making food from non-processed raw materials and increasing vegetable based food while reducing meat, are central topics along with the emphasising the human factor, parallel to the emphasising of a conversion not only of the farm itself, but also of the farmer. However, significant research efforts have also been conducted to test the possible role of inputs better adapted to organic farming systems, such as "efficient" microorganisms, "natural" pesticides and fertilisers made from recycled organic materials. The recent vision of TIPI, the Technology Innovation Platform of IFOAM (International Federation of Organic Agriculture Movements) until 2030 is to develop organic farming in the dynamic span between creating healthy lifestyle and solving global problems [18].

CONCLUSION

Countries like Denmark, Sweden and Finland demonstrate that protection of the environment, and contribution to sustainable development, can be important drivers for organic growth when politicians justify their support for organic agriculture by these arguments, and there is a real will to bring this farming system forwards. Along with Estonia, these countries have also established strong centres for research coordination and dissemination. The Baltic countries struggle to balance better the large proportion of organic farmland with the increasing demand, emphasising market development and support to processors to increase the domestic production of organic food. Iceland and Norway lag behind, hampered by a restricted political will to support organic production, in spite of the threat to domestic agricultural production in general that may be posed by the rapidly increasing imports of organic food.

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