



Prospects for Farmers' Support: Advisory Services in European AKIS

AKIS and advisory services in Estonia

Report for the AKIS inventory (WP3) of the PRO AKIS project

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Executive summary

The aim of the report is to provide a description of the Agricultural Knowledge and Information System (AKIS) in Estonia, with a particular focus on agricultural advisory services. The description includes the main structural characteristics of agricultural sector, characteristics of AKIS, an overview of the history, policy and funding of AKIS, and an outline of Farm Advisory System.

This report represents an output of the PRO AKIS project (Prospects for Farmers' Support: Advisory Services in the European Agricultural Knowledge and Information Systems'. It is one of 27 country reports compiling an inventory of AKIS. AKIS describe the exchange of knowledge and supporting services between many diverse actors from the first, second or third sector. AKIS provide farmers with relevant knowledge and networks around innovations in agriculture. Findings from this country report were presented at thee regional workshop in February 2014, discussed with stakeholders and experts, and feedback integrated in the report.

Estonian agriculture is characterised by high degree of concentration of production in relatively small number of commercial farms. There were 19 613 agricultural holdings in Estonia in 2010 and 5% of these holdings accounted for three quarters of the agricultural output. Plant product outputs counts for 49 %, and animal product outputs for 48% of gross value added of agriculture.

In Estonia, the different components of AKIS have been made available to the producers. Agricultural advisory system is decentralised with 15 local advisory centres which since 2010 are coordinated by the Rural Development Foundation. The adviory centres are independent private organisations, mostly NGOs. The relations between them and the Foundation are managed through contracts. The centres are both publicly and privately funded. They provide advisory services and information to agricultural producers, farmers and other interested parties.

There are several farmers' representation organisations: Estonian Farmers Federation (Eestimaa Talupidajate Keskliit), and Central Union of Estonian Farmers (Eesti Põllumeeste Keskliit), actively involved in advisory activities and collaborating with the regional advisory centers.

As of 1 May 2013, there were 109 certified advisers in agriculture, 67 advisers in forestry, and 8 advisers in community development. Independent private companies and consultants from abroad are also visible on advisory market. Research and education actors include the Estonian University of Life Sciences, several research institutes and 10 vocational agricultural schools which offer also advice to farmers. There are about 100 agricultural cooperatives in Estonia providing information and advice to their members.

Although the linkages between the various AKIS actors are quite weak the Ministry of Agriculture as the main governing institution has recently made efforts to stimulate cooperation among various parts of AKIS, especially the links between research, advisory system and active farmers. There is a plan for 2015 to consolidate the currently fragmented advisory system through competitive selecting of a (new) advisory body which would be selected for the government advisory support and would establish a coalition among the currently disconnected local avisory centres and other knowledge and innovation support organisations. The stance is to develop the advisory system as the main intermediary for the transfer of research results to active

farmers and the food industry and, vice versa, to communicate the needs and problems of farmers to research organisations.

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List of acronyms

AKIS	Agricultural knowledge and information systems
ARIB	Estonian Agricultural Registers and Information Board
CAP	European Union Common Agricultural Policy
CC	Cross compliance
ERDP	Estonian Rural Development Plan
ESU	European Size Units
EU	European Union
FADN	Farm Accountancy Data Network
FAS	Farm Advisory System
GDP	Gross domestic product
LAGs	Local action groups
NGO	Non-Governmental Organisation
NRN	National Rural Network
R&D	Research and Development
RDF	Estonian Rural Development Foundation
RDP	Rural Development Plan
RDS	Rural Development Strategy
UAA	Utilized agricultural area

1. Main structural characteristics of agricultural sector of the country

The total population in Estonia was last recorded at 1.3 million people in 2012. Estonia's territory is 45 227 km². Population density is 31 inhabitants per km². Estonia has 14,331 km² of agricultural land and 20,155 km² of forest. 31% of the population lives in rural areas. Agriculture has been an important sphere of activity and a source of income for Estonians all throughout its history. The contribution of agriculture to employment was 4.2 % in 2010. The GDP per capita has been growing significantly. The data for the last three years shows that the level has been improving by more than a thousand EUR per year. In comparison it was 10 700 EUR in 2010 and 12 700 EUR in 2012. The percentage of agriculture's contribution to GDP in 2010 was 3.54 %.

Results of the Agricultural Census (Valdvee, 2012) show Estonian agriculture is concentrating in large agricultural holdings. Also, a significant share of agricultural land is rented. According to the data of Agricultural Census there were 19 613 agricultural holdings in Estonia in 2010 whereas 5% of these holdings accounted for three quarters of the total agricultural output of Estonia. In 2007 there were 23,257 agricultural holdings, thus in three years the number of holdings had decreased by 16%. According to the data of Agricultural Census 2010, 940,930 hectares of agricultural area were in the possession of agricultural holdings in Estonia. In terms of the legal form of ownership of the holdings an increasing number of holdings prefer to operate as legal persons. The number of holdings of legal persons (limited liability companies, public limited companies) has increased twice. In terms of the number and size of agricultural holdings clear regional differences can be observed. The share of small holdings is the largest in South Estonia and on islands. At the same time the share of large holdings is largest in Lääne-Viru, Järva and Viljandi counties. Consequently, the average size of holdings differs by counties. The average area of large holdings is 585 ha. The average area of smaller holdings accounting for three quarters of the holdings in Estonia is only slightly less than 10 ha. The average Utilized agricultural area (UAA) per holding is 47.98 hectares. The share of specialist holdings is very large in Estonia - 65% of holdings are specialist holdings and produce 88% of Total Standard Output. Holdings of field crops type of farming and holdings of grazing livestock type of farming account for the biggest share in the total holdings, 35% and 24% respectively (Agriculture and Rural life 2012).

Direct payments from the EU budget and complementary direct payments from the Estonian state budget are paid to agricultural producers to support their income. The level of direct payments in Estonia is one of the lowest in the EU – 42% of the EU average in 2013. The number of agricultural holdings receiving direct payments in 2009 was 20373 and overall they received 190 677463 EUR. There are 7520 Farm Accountancy Data Network (FADN) holdings in Estonia. More specifically 4602 holdings <8 European Size Unit (ESU), 1057 holdings in the 8-16 ESU group, 857 holdings in the 16-40 ESU group, 414 holdings in the 40-100 ESU group and 320 holdings in the >100 ESU group.

Managers of agricultural holdings are quite old, only a quarter of them are less than 54 years of age and 52% are more than 55 years of age (of which 28% are more than 65 years of age, i.e.

pension-age). At the same time the age of managers is also related to the size of a holding - the larger the holdings, the smaller the number of pension-aged managers and the higher the number of managers within the age group 35-54. In small holdings a third of the managers are at least 65 years old, in large holdings their share is only 8% (Valdvee, 2012). Most of the managers of holdings (65%) do not have any special agricultural education. 23% of the managers have undertaken formal agricultural training, i.e. agricultural higher education (incl. applied higher educational establishments and technical high schools) and 14% of managers have completed basic agricultural training. Since 2001 the number of persons engaged in farm work, as well as their labour input, have decreased proportionally to the decrease in the number of holdings, almost 60%. In 2001 140,600 people were engaged in farm work in agricultural holdings whereas in 2010 the respective number was 57,800. Most of them (39,700) were family labour force, 12,900 were regular employees and 5,200 non-regular employees who were only temporarily involved in seasonal or other temporary work. Thus, family labour force, regular employees and non-regular employees account for 69%, 22% and 9% of the persons engaged in farm work, respectively. As a result of the decrease in the number of holdings family labour force has decreased almost threefold (by 70,000 persons in the last decade). At the same time, the number of regular employees has decreased only by a quarter (by 4,400 persons). Slightly more than a quarter of all persons engaged in agricultural holdings (28%, i.e. 14,700 persons) have a full-time job in the holding. 9,100 persons, i.e. 62% are full-time regular farm workers and the rest is full-time family labour. Other persons engaged in farming work part-time. The share of labour input of regular employees has steadily increased. It can be said the EU agriculture is mostly based on family labour force however it is not the case in Estonia any longer. This can be interpreted as a characteristic of the capitalist mode of production in Estonian agriculture.

According to the preliminary figures from the Ministry of Agriculture (Agriculture and Rural life 2012), the total output of Estonia's agricultural sector went up by 10% y/y to EUR 885.5 million in 2012. Plant product outputs make up 49 %, animal product outputs 48% and agricultural services 3%. Gross value added of the agricultural sector was nearly 346 million EUR, up by 11% compared to other years. 68% of the agricultural area is arable land, almost 32% accounted for permanent grassland, 0.3% permanent crops and 0.2% kitchen gardens. 40% of the permanent grassland, i.e. 12% of the total agricultural area was maintained as permanent grassland not used for production purposes. The most important arable crops were cereals and protein crops (30% of the agricultural area), forage crops on arable land (22%) and industrial crops (11%). Compared to 2001, the area of industrial crops (mainly oilseed rape) has increased 2.5 times. At the same time the area of potatoes in agricultural holdings has decreased from 16,000 hectares to 6,000 hectares. Together with the disappearance of smaller holdings there has also been a decline in the area of kitchen gardens, where vegetables, fruits and berries are grown mainly for own consumption (from 12,600 hectares to 1,700 hectares). In 2011 crop production accounted for 46% of gross agricultural production. Cereal production as the main supplier of livestock production sector contributed to 37% of the total crop production, followed by forage crops with 19%, oilseed (oilseed rape, turnip rape, flax) 19%, vegetables 14%, potatoes 8% and other crops of minor importance. The total cereal production in 2011 was 771.9 thousand tonnes. The highest indicators have been shown in the production of barley (294 000 tonnes) and common wheat (201 000 tonnes). According to Statistics Estonia (www.stat.ee) as at 31 December 2011 238,000 cattle (incl. 96,000 milk cows), 366,000 pigs, 88,000 sheep and goats and 2.033 million poultry were recorded in Estonia. According to Statistics Estonia 695,000 tonnes of milk was produced and the average milk production per cow was 7,136 kg/year. Although the number of herds, along with the number of dairy cows have decreased year by year, total milk production has increased as a result of growth in productivity of dairy cows. In 2011 80,600 tonnes of meat (deadweight) was produced showing an increase of 7% on 2011. Pig meat accounted for 62%, poultry 22%, beef 15% and sheep and goat meat only for 1% of the total meat production. In 2011 185 million eggs were produced in Estonia showing a 2% rise on 2010. Organic farming has developed actively over the past years in Estonia. Since the introduction of the support for organic production, the area of organic farmland has grown, also, the share of organic farmland in total utilized agricultural area has constantly been increasing. In 2011 the area of organic farmland was 134,000 ha contributing to 14% of the total utilized agricultural area. Since 2001 the area of organic farmland has increased almost seven times. The number of organic producers has also increased year by year. According to the Organic Farming Register 1,431 organic producers were registered as of the end of 2011 showing almost a fourfold increase on 2001(Palts, 2012).

According to the World Bank data¹ in 2009 the use of fertilizers in Estonia was 69.46 kilograms per hectare of arable land. Since 1990, the use of pesticides has abruptly decreased. In recent years the use of plant protection products has increased in Estonia to 0.62 kg/ha (active substance) in 2005. In the years from 1990 to 2010 Estonia experienced a drastic change in the ammonia emissions. The change in these years was -60.0%. The area under management practices potentially supporting biodiversity has grown in the last 5 years. In 2005 it was 7.2, but in 2010 it had reached a much higher number -12.8. There has also been a change in the Gross Nitrogen Balance. In 2004 it was 65 kg N per ha agricultural land, but in 2008 it was 78 kg N per ha agricultural land.

¹ http://data.worldbank.org/indicator/AG.CON.FERT.ZS

2. Characteristics of AKIS

The Estonian knowledge and information system is composed of research, extension and educational organizations, structured and governed by the government through a sectoral agricultural policy.

The *Estonian Rural Development Plan 2007–2013*² (hereinafter ERDP) plays a significant role in the promotion of rural life in general and in the dissemination of research information. The ERDP was prepared to support the regionally balanced development of rural areas through the European Union Common Agricultural Policy (CAP) measures. Through the ERDP a set of measures that includes training, information and knowledge dissemination is available to different components of AKIS. An important role in financing the AKIS is the measure called "training and information activities". This measure enables all AKIS components to apply for a subsidy to bring the necessary state and research information to the agricultural producers (farmers), food processors and private forest holders (Estonia – Agricultural knowledge systems, 2011). According to a study of rural entrepreneurs conducted by the Estonian University of Life Sciences, they listed other entrepreneurs as an important source of information just after the media and the Estonian Agricultural Registers and Information Board. In some regions in Estonia, such regular producer meetings are already held.

The Estonian Agricultural Research Development Plan 2007–2013 foresees continued involvement in the following areas by institutions that fall under the tutelage of the Ministry of Agriculture: plant breeding; developing environmentally friendly and effective plant breeding technologies; rural economy and its sustainable development; research on the protection and monitoring of the agricultural environment; food safety and biological diversity.

Concerning the extension service, Estonia has taken important steps to introduce rules of cross compliance. Various methods have been developed to inform agricultural producers in Estonia, e.g. training for advisors and farmers, advisory tools, handbooks, web-pages³, and booklets. Throughout the years the main objectives have been to ensure the development of an effective agricultural science which involves doctoral students, increases the number of agricultural research programmes, and helps to co-finance and integrate more Estonian researchers in international projects. Another priority has been to ensure a well-functioning farm advisory system to meet the needs of target groups and increase the number of clients. A major priority of the Estonian extension services is the improvement of the competitiveness and sustainability of the agricultural and rural economy sectors. This includes the developing co-operation between FAS and the R&D institutions, assurance of the availability of advisory service, and the dissemination of the state and research information. Nevertheless these priorities have not been communicated effectively over the last ten years. A study issued in 2009, Possibilities of the development of the Estonian FAS, in which the system was thoroughly analysed, represented a turn-around. It pointed to possible directions for the development of FAS, advising that the state establishes national priorities and a set of sub-priorities, and clearly outlines the state's interests concerning FAS.

² http://www.agri.ee/rdp

³ http://www.pikk.ee/valdkonnad/nouetele-vastavus

Changes in the above mentioned areas have made the principles of AKIS more solid and apparent. The co-operative approach is acknowledged among stakeholders. Different parties recognise the sharing of information and combining their competencies as a contribution to an outcome that has more added-value and creates additional synergies. Despite that, the effective functioning of AKIS needs the input of different parties and here the contribution or willingness to participate varies among those involved. The readiness to be an active player in the AKIS framework depends on the financial resources, working culture and acquired knowledge (Estonia - Agricultural knowledge systems, 2011). In order to address some of these issues and due to the very low expenditure on research and development activities in the whole sector of Estonian processing industry, in comparison with the EU average, the Estonian Ministry of Agriculture has implemented the measure to foster and improve co-operation in the development of new products and technologies in such sectors of agriculture as food and forestry. The measure may be applied to enterprises which co-operate either with R&D institutions, vocational educational institutions, technology development centres or persons having sufficient qualification for participating in the project as a developer or consultant. In addition, the principle of co-operation is promoted via the clause that some support and investment measures are granted to commercial co-operatives and non-profit organisations which must have a certain number of member organisations. The idea and purpose is to improve the position of co-operative organisations and thus create a culture of co-operation.

2.1 AKIS description

In Estonia, the different components of AKIS have been made available to the producers and other interested parties. The Estonian AKIS is organised as follows:

Governmental and coordination actors

- □ At the government level, <u>the Estonian Ministry of Agriculture⁴</u> is responsible for the AKIS and governs the extension services and R&D institutions, with the exception of the universities⁵. Regarding extension services the roles of the Ministry are as follows: setting legal and financial frames for the advisory system; setting up conditions and selection of the advisory centres; managing measures of the Estonian Rural Development; Plan for advisory support and training activities; working out the framework of advisory services and tools on Cross Compliance and Occupational Safety issues; Carrying out studies on the FAS.
- Estonian Agricultural Registers and Information Board (ARIB) (Põllumajanduse Registrite ja Informatsiooni Amet) was established as a government agency working in the area of administration of the Ministry of Agriculture on the basis of the Agricultural Registers and Information Centre. Establishment of the new agency was necessary in order to prepare and implement the SAPARD programme in Estonia. ARIB's functions are to maintain the register of farm animals as well as the register of agricultural supports and agricultural parcels and to allocate different agricultural supports. The aims of the consultation system are to develop agriculture through competent advice, to distribute

⁴ http://www.agri.ee/home-2

⁵ www.oecd.org/dataoecd/52/17/49150895.pdf

national information and support measures associated with membership of the European Union. The rural development plan also provides an opportunity to support training and reporting activities. The activities supported include training and information days, training itself and training cycles, courses, conferences and study excursions for those operating in the agriculture, food and forestry industries. Aid can be applied to for both organising and participating in activities. The use of supervisors and gaining professional qualifications are also supported. The production, purchasing and updating of information and training materials are also included under the support. The main target group for consultation and training support are producers involved in the production or processing of agricultural products and their workers or companies and individuals involved in forestry. The number of ARIB employees is in 2013 370 people, from whom 269 people are working in the main office in Tartu and the rest in 15 service-offices across all of the Estonian counties⁶.

- Agricultural board of Estonia (Põllumajandusamet) is a governmental authority active in the area of government of the Ministry of Agriculture, which possesses the management function and executes state supervision and applies the enforcement powers of the state in the areas of land improvement, plant protection, plant health, plant variety rights, seed and plant propagating materials, organic farming, fertilizers and horticultural products pursuant to and in the scope prescribed by law. The Board is financed from the state budget⁷.
- Estonian National Rural Network (Eesti maaeluvõrgustiku üksus) aims to facilitate flexible, open-minded and gradual development, with bottom-up initiatives based on needs and developed through cooperative activity among rural actors. The Estonian Rural Network Unit was established by the Rural Economy Research Centre (an authority under the administration of the Ministry of Agriculture) in 2008. The membership is not formal but involves bodies representing programme beneficiaries and organisations and authorities engaged in rural development including RDP implementation – Chamber of Agriculture and Commerce, numerous agricultural bodies and associations, Private Forest Union, council of environmental NGOs, Ecological Engineering Centre, rural village movement Kodukant, Association of rural Municipalities, rural tourism, non-profit organization networks, association of smalland medium enterprises, EUROPEA, Estonian University of Life Sciences, University of Tallinn, Pärnu College (University of Tartu), and associations including agricultural and forest management advisers, environmental protection, cultural heritage protection, social inclusion organizations and Local action groups (LAGs). In the years of Rural Network start-up, LEADER activities make up ca 90% of the action plan activities, now also the extension of the activities directed to farmers, environment and village improvement (axis 1, 2 and 3) are wider involved. Rural network operates in the form of interactive web-environment and organise meetings, seminars and workshops on a regular basis for the participants of a rural network. The duties of the National Rural network include the following: exchange of the relevant expertise, support for the

⁶ http://www.pria.ee/en/about

⁷ http://www.pma.agri.ee/index.php?id=102&sub=174

implementation, monitoring and evaluation of rural development policy, co-ordination of information flow between the local, national and European level: identification and analysis of positive experience gained and innovative approaches applied in the implementation of Rural Development Strategy (RDS) and Rural Development Plan (RDP), exchange of information; organisation of rural network activity and of the exchange of experience and know-how; establishment of a training programme for local action groups; support for internal and trans-national co-operation (incl. the establishment and administration of a relevant website, organisation of seminars and other events, finding co-operation partners, the establishment of the database of experts, advice to local action groups, etc.)⁸.

□ Estonian Rural Development Foundation (RDF)- Coordinating Centre (Maaelu Edendamise Sihtasutus, MES) was founded by The Government of the Republic of Estonia in 1993. The foundation issued guarantees to banks for credits granted to farmers and other entrepreneurs in Estonian rural areas. Today the purpose of the Foundation is to support economic development in Estonian rural areas via specific programmes implemented for promoting business activities in those areas. The Foundation's specific programmes are aimed at expanding the availability of financial resources, supporting balanced development in rural areas, disseminating information on rural life, maintaining cultural traditions, supporting vocational education, and building the image of rural life with a view of improving the business environment and creating better living conditions in rural areas. From the beginning of 2010, the RDF coordinates the system of agricultural and rural advisory services in Estonia. The Farm Advisory System is being coordinated by the Agricultural and Rural Economy Advisory Coordinating Centre, which has been designated to ensure the functioning of the Farm Advisory System, including the dissemination of information on state measures and the availability of quality advice. The Coordinating Centre provides occupation for area coordinators (crop farming, livestock farming, finance and rural development), whose responsibility it is to give local advisory centres information, organize trainings and in-service trainings for advisers etc. The centre prepares action and training plans, analyses advisers' work, applies a simplified advising system, organises the payment of advisers' basic fees, implements a mentoring system and maintains the www.pikk.ee portal. It also develops advisory tools and advertises advisory services, seeks possibilities to cooperate with other organisations, looks for new advisers, etc⁹.

Advisory and extension actors

□ The history of extension services in Estonia dates from 1989 and has been evolving since then. Several changes have been made in extension services (co-ordinating and financing). In Estonia there is a decentralised system with <u>15 local advisory centres</u> which were initially coordinated by the Estonian Chamber of Agriculture and Commerce, but since January 2010 there has been a new coordinator – the Rural Development Foundation. The role of the advisory centres is to provide individual

⁸ http://www.maainfo.ee/index.php?page=3441

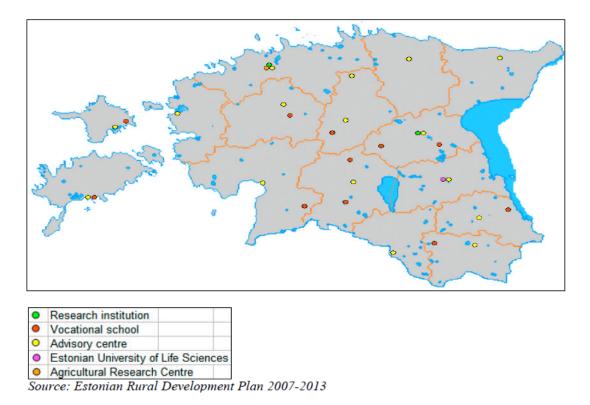
⁹ http://www.mes.ee/en

advisory service and information to local agricultural producers and farmers. As of 1^{st} May 2013, there were 109 advisers with a valid professional certificate in fields related to agriculture, some of whom have been awarded a profession in two or more fields. In the field of forestry there were 67 and in the field of community development 8 advisers with a valid professional certificate. Responsibilities of the advisory services are as follows: guarantee the access to individual advisory; service and information distribution in the area; organise informational events – training days; collect feedback from the producers and forward it through the Coordinating Centre to politicians, ministry, researchers, etc.; teamwork to develop the whole system.

□ Independent private advisors and consultants from Estonia and abroad also offer advisory services for farmers and agricultural producers.

Research and Education actors

- In Estonia, agricultural research is carried out mainly by <u>the Estonian University of Life</u> <u>Sciences</u> (Eesti Maaülikool), <u>Jõgeva Plant Breeding Institute</u> (Jõgeva Sordiaretuse Institituut), <u>the Estonian Research Institute of Agriculture</u> (Eesti Maaviljeluse Instituut), <u>The Rural Economy Research Centre</u> (Maamajanduse Infokeskuse), <u>Agricultural</u> <u>Research Centre</u> (Põllumajandusuuringute Keskus), <u>the University of Tartu</u> (Tartu Ülikool) and <u>Tallinn University of Technology</u> (Tallinna Tehnikaülikool).
- Regarding agricultural education in Estonia, it is possible to study the specialties related to agriculture, handling of food and rural life in <u>10 vocational educational institutions</u> (e.g. Olustvere School of Service and Rural Economics, Järvamaa Vocational Education Centre, Räpina Gardening School, Luua Forestry School, Pärnumaa Vocational Education Centre, Põltsamaa Occupational School, Hiiumaa Vocational Schools, Kehtna Economy and Technology School, Kuressaare Regional Training Centre, The Vocational Education Centre of Tartu) and at <u>the Estonian University of Life Sciences</u> and at <u>the Tallinn University of Technology</u>. All vocational schools have created continuing education and retraining possibilities for adult learners. The Estonian Rural Development Foundation pays a scholarship to students of agricultural study programmes.



Map 1. Research and development institutions, advisory centres and educational institutions

Associations, unions and co-operatives

There are different associations, unions and societies that unite the farmers and producers working within the same field of agriculture (dairy, animal breeding, beekeepers, etc.). Different kinds of co-operation are also promoted through ERDP, e.g. LEADER and producers' cooperatives in general. Organic food producers have their own co-operative network.

- □ <u>*The Estonian Chamber of Agriculture and Commerce*</u> (*Eesti Põllumajandus-Kaubanduskoda*) has united agricultural producers and their unions, processors of agricultural products and their unions and companies providing services to the agricultural sector since 1996. Its activities are aimed at ensuring balanced development within the agricultural production sector, the processing industry and the sector providing services to rural life. In order to achieve this, support is given to cooperation between local producers and processors and to trade in agricultural products in internal and external markets, and members are represented within a range of structures both national and international¹⁰.
- *Estonian Farmers Federation* (*Eestimaa Talupidajate Keskliit*).
- Central Union of Estonian Farmers (Eesti Põllumeeste Keskliit).
- □ Local advisory services have founded a <u>NGO named Estonian Rural Advisory Service</u> (MTÜ Eesti Maaelu Nõuandeteenistus).
- □ There are about <u>100 agricultural co-operatives in Estonia</u> (e.g. <u>Kevili Agricultural co-operative</u> (Põllumeesteühistu KEVILI), <u>Talukartul, Aiavili</u> MTÜ, <u>Eesti Mahe, Epiko</u>

¹⁰ http://www.epkk.ee/index.aw/set_lang_id=2

(*Eesti piimatootjaid koondav tulundusühistu*) – the umbrella co-operative in dairy sector, <u>*E-piim*</u>)

- <u>Associations:</u> <u>Estonian Horticultural Association</u> (MTÜ Eesti Aiandusliit), Estonian Dairy Association (Eesti Piimaliit), <u>Estonian Seed Association</u> (Eesti Seemneliidu), Estonian Pigs Breeding Association (Eesti Tõusigade Aretusühistu), <u>Estonian Beef</u> <u>Breeders Association</u> (Eesti Lihaveisekasvatajate Selts), <u>Viru Meat</u> Association etc.
- <u>Unions</u>: <u>Union of Estonian Young Farmers, Valga County Farmers Union</u> (Valgamaa Põllumeeste Liit Valga), <u>Viru Farmers Union</u> (Virumaa Põllumeeste Liit), <u>Türi Farmers Union</u> (Türi Talunike Liit), <u>Farmers Union of Tartu County</u> (Tartumaa Põllumeeste Liit), <u>Farmers Union of Rapla County</u> (Raplamaa Põllumeeste Liit)

Estonian Organic Farming Foundation (Eesti Mahepõllumajanduse Sihtasutus). etc.

 Regarding forestry there are several important actors in Estonia: <u>The Estonian Private</u> <u>Forest Union</u> (*Eesti Erametsaliit*) – an umbrella organisation for local forest owner associations. Forestry advisors' activities are coordinated and financed by <u>the Foundation</u> <u>Private Forest Centre</u> (Erametsakeskus).

Some other actors should be mentioned regarding Estonian AKIS

- D <u>Estonian Village Movement Kodukant</u> (Eesti Külaliikumine Kodukant)
- D <u>The Estonian Environment Information Centre</u> (Keskkonnaagentuuri),
- D <u>The Estonian Council of Environmental NGOs</u> (Eesti Keskkonnaühenduste Koja)
- D <u>Estonian Association of SMEs</u> (Eesti Väike ja Keskmiste Ettevõtjate Assotsiatsioon)

Provision of service				Provision of service Source of financing								
Status of		Num-	Numb		Public funds			Farmers		Private	NGO	
the organisa- tion	Type of organisation	ber of orga- nisa- tions	er of adviso rs	EU funds	National funds	Regional funds	Farmers' levies	Farmers' contribution	Billing services	Other products (inputs, outputs)	founda- tion	Other (specify)
Public sector	Advisory department of the Ministry of agriculture (The department responsible for farmer education and rural advisory is Research and Development Department of the Ministry of Agriculture)	1	18912	49%	38%				13%			
	Rural Development Foundation	113	14 ¹⁴ + 15		661 36016							889 157 (Net income from financial investment) 123 612 (Income from Baltic Deal Project, income from authorisation agreements)

Table 1: Overview of organisations creating the ESTONIAN AKIS¹¹

¹¹ The source of data presented in the table is Estonian report for PROAKIS if not referenced otherwise. The data from the PRO AKIS survey regarding financing were not usable as the few responses were reported in agglomerated manner which did not let to identify which type of organisation has answered what. In the table's section 'Provision of service' "na" is used when no information is available and it is difficult to make sound estimations; in the section 'Source of financing', "X" is used in cases when it is known that corresponding source of financing is used, but there is no more precise information available about its share or amount (empty box does not obligatory mean that there is no particular source of financing used, but rather that there is no information about it – this is especially for private and farmer organisations and NGOs). All precise financing numbers are given in euros.

¹² This is the Ministry's staff, they are not advisors

¹³ This is the number of local advisory centres under the supervision of Rural Development Foundation

¹⁴ This is the Rural Development Foundation staff

¹⁵ This is the number of advisers with a valid professional certificate in the fields related to agriculture

¹⁶ Source: The Estonian Rural Development Foundation. Annual report for the financial year ended 31 December 2012

	Ectopian Agricultural Degisters	0,1E	270 17		V							
	Estonian Agricultural Registers and Information Board	2+15	37017		Х							
	Agricultural board of Estonia				Х						Х	
	Estonian National Rural Network			Х	Х			Х	Х			Х
	Other (specify)											
Research and Education	 University the Estonian University of Life Sciences the University of Tartu Tallinn University of Technology 	3	na		X				X	Х		X
	Research Institute - Jõgeva Plant Breeding Institute - the Estonian Research Institute of Agriculture - The Rural Economy Research Centre - Agricultural Research Centre	4	28 ¹⁸ + 17 ¹⁹ na na	Х	X				Х	X		Х
	Other education bodies vocational educational institutions	10	na		Х				Х			X
Private	Upstream industries	~10							Х	Х		
sector	Downstream industries	na							Х	Х		
	Independent consultant	~40							Х	Х		
	Private agricultural advice company	na							Х	Х		
	Farmers' owned advice company	~10						Х	Х			

 ¹⁷ This is the Estonian Agricultural Registers and Information Board staff
 ¹⁸ Source: http://www.sordiaretus.ee/?pid=55&leftMenuItem=55&pageHeader=Contact
 ¹⁹ Source: http://www.sordiaretus.ee/?pid=56&leftMenuItem=56&pageHeader=Advice

	Local/regional agencies 15 local advisory centres (some of them are independent organisations, some are departments of local farmers organisations)	15	109 ²⁰		Х		X	X			X
Farmer	Farmers' cooperative	100	na	Х			Х	Х	Х	Х	
based	Chambers of agriculture	1	na	Х	Х		Х				
organisatio	The Estonian Chamber of										
ns	Agriculture and Commerce										
	Farmers' circles/groups	~10	na				Х			Х	
	Estonian Farmers federation										
	Other										
NGO	NGO named Estonian Rural Advisory Service						Х	Х		Х	
	Estonian Village Movement Kodukant		5+	Х	Х		Х	Х	Х		Charity

²⁰ This is the number of advisers with a valid professional certificate in the fields related to agriculture

2.2 AKIS diagram

RESEARCH

Agricultural research is mostly carried out by:

- Jõgeva Plant Breeding Institute (plant breeding)
- Estonian Research Institute of Agriculture (plant production and protection, soil, feed and food quality and safety)
- Estonian University of Life Sciences (EMÜ) (animal husbandry, veterinary, economy, sociology, environment, plant sciences, food sciences)
- University of Tartu (environmental sciences, biology)
- Tallinn University of Technology (biotechnology, food sciences)
- Agricultural Research Centre (state agency)

The instruments of the Estonian R&D funding system are:

- funding of research and development infrastructures
- targeted financing in fundamental research
- baseline funding
- research grant funding for short term study projects and innovative projects
- national research and development programs
- Rural Development Plan 2007-2013 cooperation in the development of new products, processes and technologies in the sectors of agriculture, food and forestry

Ministry of Agriculture finances agricultural applied research through national programmes:

- Applied Research and Development in Agriculture 2009-2014
- National programme for plant breeding 2009-2019
- Conservation and Utilization of Plant Genetic Resources for Food and Agriculture 2007-2013

SUPPORT SYSTEMS

- Estonian Museum of Agriculture
- Estonian Dairy Museum
- The Farm Museum of C. R. Jakobson
- organise activities for families and children to promote the rural life and agriculture
- organise conferences in cooperation with research institutes
- Laboratories, inspectorates, boards, centers and offices within the jurisdiction of Ministry of Agriculture
- Farmers Unions and associations
- Agencies and organizations in the field of agriculture
- Societies and cooperatives
- Commercial agencies and firms (trainings, consultations, etc)

Source: updated version from www.solinsa.org/fileadmin/Files/Int_diss_seminar.../AKIS_Estonia.pdf

EXTENSION SERVICE

Decentralised Farm Advisory System

- 15 local advisory centers
- coordinate centre Rural Development Foundation
- ca. 200 qualified advisors (incl. animal husbandry, crop production, financial advice, forestry, etc.)

The system is financed by:

- the state budget and Rural Development Plan
- the agricultural sector

The history of the extension services:

- goes back to 1989
- is in changing process ever since

RESEARCH

EDUCATION

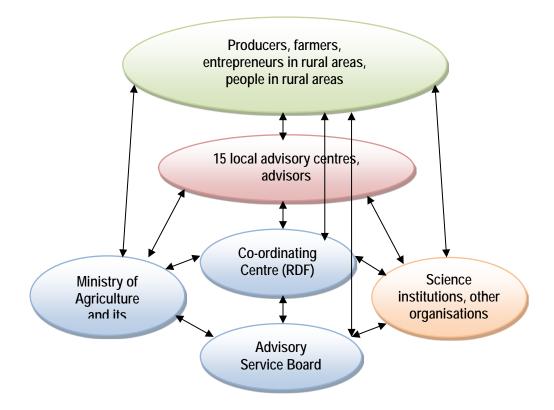
EDUCATION

- Higher Education (agriculture, forestry, food industry, etc.)
- Estonian University of Life Sciences (EMÜ) animal husbandry, veterinary, economy, sociology, environment, plant sciences, food sciences
- University of Tartu environmental sciences, biology
- Tallin University of Technology biotechnology, food sciences
 Vocational Education:
- 10 vocational schools providing education in the fields of agriculture, horticulture, forestry, food industry (30 in total)
- vocational education without the requirement for basic education
- vocational education based on a basic education
- secondary vocational education studies based on basic education, a secondary education is acquired in addition to the vocation
- vocational education based on secondary education
- vocational study in basic schools and upper secondary schools

AGRICULTURAL PRODUCERS

SUPPORT

SYSTEMS



Source: http://www.balticdeal.eu/advisory/estonia-3/

In Estonia the linkages between various AKIS actors are weak and it is necessary to further develop co-operation. Representatives from the Ministry of Agriculture highlight the importance of making the advisory system a link between research and active agriculture, where the research results could be transferred to active farmers and food handlers through the advisers. In addition, the problems of active agriculture could also reach the researchers and training organisers through advisers. The advisory system must ensure both an effective information flow from producers to researchers and feedback from researchers to producers. Interviewed experts admitted that one of the crucial mistakes of the current advisory system is the lack of a comprehensive approach that covers a whole company: the main advisory activities include advice on a single problem or concerning an application for support. The current advisory service cannot provide sufficient advisory services on primary processing of food, diversification of agricultural production, organic farming, joint activity and other necessary specific areas. In order to increase the provision of specialised (technological) advice, professional organisations and associations, agricultural schools and R&D institutions need to be included in the advisory system.

3. History of the advisory system

During the Soviet period, extension activities were based on the activities of agricultural and veterinary research institutes and experimental stations. The extension units called Agricultural Administration, located at regional administrative bodies, served as the main extension agencies, and the people working there used to be more administrators than specialists (Kreen, 2000). Estonia experienced an economic transition and reform of the agricultural sector at the end of the 1980s and in the early 1990s. Restructuring the economy and agricultural sector required new types of services which included advisory services. The history of extension services in Estonia dates from 1989 and has been evolving ever since. It is possible to distinguish several phases in the development of Estonian Advisory system. Kreen and Loolaid (Kreen&Loolaid, 2004) in 2004 the classification of four subsequent stages was proposed: (1) Initiating a New Institutional Set-up for Advisory Services (1989-1992); (2) Building User-oriented Advisory Systems (1992-1995 and later); (3) Initiating a Free Market for Advisory Services (1995-2002); (4) Fluctuating Between Privatization and Public Sector Reform (1999-2003). The mentioned stages underpin the classification described below. From the perspective of 2013 one more phase should be incorporated in the classification -current phase: Building of the Farm Advisory System and making extension services more effective (2005-2013). Each of the phases represents key milestones in the development of Estonian Advisory system.

First phase: Initiating a New Institutional Set-up for advisory services (1989-1992)

After the establishment of new family farms, the most innovative farmers realized the need for associations of their own. The very first Farmers' Federation was established in 1989 and by 1991 the Farmers' Federation organized the first advisory services system in independent Estonia. This system included regional advisory stations of farmers' unions, training centres located at two farmers' unions, and the Jäneda Advisory and Training Centre (Kreen&Loolaid, 2004).

Second phase: Building of User-oriented Advisory Systems and Initiating a Free Market for Advisory Services (1992-2002)

The action taken during the period from 1992 to 1995 reflected a trend to apply different advisory models in Estonia borrowed from different countries (Kreen, 2000). A number of projects financed by different donors were initiated to support the development of extension services. These included the Advisory System of Farmers' Federation (Denmark), Advisory Cooperatives (Germany), the Knowledge and Information Centre of the Estonian Agricultural University (Sweden), the dairy farming improvement project (Netherlands), and others. Projects proved not very sustainable, because most failed to 'implant' the advisory model from the country of origin. The government of Estonia recognised the need for proper agricultural services and allocated some additional budget to the Agricultural Training and Advisory Centre at Jäneda for advising farmers. The government also supported the farmers' unions, but the advisors of farmers' unions were not able to give adequate advice to large-scale agricultural enterprises, and farmers complained about the quality of advice they received. In line with its free market policy, the government of Estonia wished to see the development of a competitive

free market for advisory services, where producers would be free to buy the kind of advice they need at a mutually agreed price. However, considering the situation in agricultural sector, the government realized that, because capacity of farmers to buy advice was very low, there was a need to subsidize the advice. The objective was to encourage farmers to use advisory services in a way that would increase production efficiency. As a result, the government initiated an advisory subsidy scheme and a programme for the certification of advisers (Kreen&Loolaid, 2004). The implementation of an advisory programme and subsidy scheme provided better access to advisory services and information for farmers, initiated a proactive approach of advisers in order to provide information and training for farmers, developed local training and advisory skills, certified 175 advisors (Loolaid, 2002).

Third phase: Fluctuating Between Privatization and Public Sector Reform (1999-2005)

This period is characterized mainly by Estonia joining the EU and the need for the harmonization of Estonian legislation with that of the EU and for establishing new governmental institutions. Easy access to trustworthy information on regulations concerning agricultural production or the environment significantly increases farmers' marketing ability and competitiveness. Therefore, it was in the interest of the government to disseminate information that would facilitate introduction of new legislation and support schemes for farmers. At the same time, many agricultural producers lacked an awareness of existing information sources and, as a result, did not get the information they needed. There was a strong need for development of new infrastructure for information dissemination. There were two major forces behind the advisory services market development: (a) the need for structure sand institutions to improve advisory services market performance and (b) the need for structures and institutions to support new agricultural policy. Changes in priorities and increased interest in information delivery have resulted in competition between various extension and advisory activities and have caused unplanned disturbances in the advisory services market (Kreen&Loolaid, 2004). To improve the flow of information, Estonia needed an integrated information programme that could make needed information available as close as possible to the ultimate consumer in all rural areas. Information must be relevant and up-to-date and this required that in addition to the dissemination of information, there needs to be good monitoring to follow-up on information use and get rapid feedback for programme adjustments. The following activities were undertaken to develop the national AKIS and improve cooperation and infrastructure support: (a) advisory concept group (2000-2001); (b) agricultural and rural information flow coordinating centre (2001-2002); (c) network of information centres at the county level (2002); and (d) network of rural information centres in communities (2001-2002) (Kreen&Loolaid, 2004).

Current phase: Building of the Farm Advisory System and making extension services more effective (2005-2013)

Several changes have been made in extension services (mainly regarding co-ordination and financing aspects), and a number of studies have been undertaken to evaluate those changes. In 2005 the role of the Coordinating Centre of the Farm Advisory System was transferred to the

Estonian Chamber of Agriculture and Commerce²¹. EU Member States had to establish the Farm Advisory System (FAS) before 1stJanuary 2007, but in Estonia the role of the co-ordinating centre of FAS had already been given to the Estonian Chamber of Agriculture and Commerce. However, in 2010 co-ordination of the Estonian FAS was transferred to the Rural Development Foundation with a goal to make the extension services more effective. At the end of 2010, a marketing agency developed a market strategy to make these services more effective than the actions undertaken thus far: distributing informational booklets, updating and spreading the lists of the advisory centres and advisors etc. The aim of this market strategy is to inform certain target groups in particular and the public in general of the advisory service, its activities and potential to assist in various domains²².

According to the information obtained via interviews with representatives of the Ministry of Agriculture the advice agricultural producers use most is the kind that helps them to quickly solve problems on finance issues and plant production; however, there is also a need for more strategic and specific advice, such as developments in the agricultural product market, product quality requirements, environmental requirements, the development of information technology, etc. One of the reasons for the lack of use of advisory services is the lack of specialists in the specific fields and the lack of previous experience in using the service. To improve the situation, more attention should be paid to the distribution of information, the availability of the advisory services in specific fields and the training of the advisors.

Over the years, the activity of advisory centres has demonstrated a chaotic cooperation between the coordinating centre and R&D centres. During the years there was a search for a joint Estoniawide agricultural and rural economy organisation that unites advisers and which could take the central role in developing the advisory system, providing exchange of information, collaborate with stakeholders, provide support services to advisers, would be in charge of organising even workloads. Experts from the Ministry of Agriculture indicate that given the size of Estonia and the private interest advisory centres, the advisory system needs to be optimized by the state. The main task of a joint advisory system is the development of advisory services with additional support services and establishment of effective adviser training systems. The discussions concerning the future of the Estonian AKIS are still going on. The Estonian advisory system will be modified in the foreseeable future.

²¹ http://www.g-fras.org/en/knowledge/world-wide-extension-study/98-world-wide-extension-study/europe/northern-europe/370-estonia

²² www.oecd.org/dataoecd/52/17/49150895.pdf

4. An outline of the agricultural advisory service(s)

This section gives an overview of agricultural advisory services in terms of their governance, funding schemes, financing mechanisms, human resources, working methods, clients and interactions with other AKIS actors. It is mainly based on the information obtained via internet based resources, expert interviews and data provided by Ministry of Agriculture. For the building this part of the report the PRO AKIS Survey data was planned to be used, but a really low response rate and many partially answered questionnaires significantly limited the possibilities to make use of the data in this way.

4.1 An overview of all service suppliers

There is an open advisory service market in Estonia, which has resulted in a fragmented advisory system. Advisers who provide advisory services for farms operate mostly through county advisory centres, and the activities of advisers and advisory centres are assisted by an advisory service coordination centre. Every county has an approved advisory centre and every centre has professionally certified agricultural advisers at least in the fields of plant production, animal husbandry and financial management. Lists of eligible advisers are available in each county office and on the Internet. Advisory services for people and enterprises can be obtained through forestry groups, Kodukant village movement network, county development centres operated by Enterprise Estonia, research institutions and universities, sellers, processors and buyers of inputs for agricultural products and through other advisers.

4.2 The main public policies, funding schemes and financing mechanisms

The Estonian farm advisory system, advisory services and dissemination of knowledge-based information (e.g. specialized advisory service, training and information activities, clarifying the state and research information to rural entrepreneurs, etc.) are financed by the state budget, Estonian Rural Development Plan (ERDP) and farmers. The state budget contribution to the extension services is about EUR 550 000 per year. The state budget is for financing of information activities and publications, information distribution through advisory centres, Coordinating activities (free service for farmers, basic salary for new advisors, support for practice and training, including information-days, study-trips, etc.). The ERDP contribution to support the advisory services is ca. EUR 3.6 million and for training and information activities about EUR 4.2 million in the programme period (2007-2013).

4.3 Methods and Human resources

As of 1st May 2013, there were 109 advisers with a valid professional certificate in fields related to agriculture, some of whom have been awarded a profession in two or more fields. In the field of forestry there were 67 and in the field of community development 8 advisers with a valid professional certificate. Most of the advisers in fields related to agriculture had a profession in the fields of rural entrepreneurship and finance (54). There were 24 advisers in the field of plant production, and 21 in livestock farming and its subfields. The number of advisers in specific fields is low: there are only two advisers in environmental protection and nature conservation,

one adviser in land improvement and no one in the handling of food. The vast majority of advisers work with a part-time load: only 30% of advisers fulfil their professional duties mostly with advising. If all agricultural advisers were employed as full-time advisers, the estimated number of applicants for single area payment per adviser would be approximately 160 (by way of comparison, there are 290 farms per adviser in Poland) but according to the actual working load, the estimated number in Estonia is 450 farms per adviser.

An adviser can be (1) a person who has a professional or agricultural university diploma and at least three years of work experience within the last five years or (2) a person with vocational/secondary professional or agricultural education and five years of work experience within the last seven years. In the case of specific and new subjects, a certificate proving relevant training can be required. Although the advisers of advisory centres participate in training of on average about 70 hours per year, practical and comprehensive training is needed, including at an international level. Training provided for advisers have mostly been one or two-day training programmes, there is a lack of study cycles that last several days that raise a person's qualification.

Various working methods are being used by extension staff to provide an advice for particular groups of clients. Agricultural advisers give advice to single clients, as well as groups, organizations and interest groups. Individual extension (especially one to one on the farm or outside the farm) is the most applied and appreciated form of receiving an advice from the clients. Also telephone helpdesks, small group advice outside the farm are being used quite often. Although there is an increasing tendency nowadays to use internet and web-tools for various purposes more and more, it is still among minor applied working methods in provision of farm advisory services.

4.4 Clients and topics / contents

Advisory support may be applied for by: (a) agricultural producer active in the territory of a village, a town or a small town, owning or using on legal basis at least 0.3 ha of profit yielding land; (b) private forest holder, owning or using on legal basis at least 0.3 ha of profit yielding land on the territory of a village, town or small town. The advisory subsidy is mostly applied by the self-employed persons and the private limited companies.

According to the data provided by Ministry of Agriculture a total of 2281 farmers used advisory support in the period 2008–2012. According to the data of Agricultural Census about total number of agricultural holdings in Estonia (19 613), it means that is about 12% of agricultural holdings or 31% of so called Farm Accountancy Data Network (FADN) holdings which have used advisory support. This indicates that only up to 1/3 of professional farmers are active clients of advisory service. According to the information of Rural Development Foundation (Laur, 2010) in Estonia, the number of agricultural companies, which could potentially be interested in using the advisory system is approximately 6000. However, the survey results show that only 60% of potential clients are familiar with advisory services. The client survey (RDF, 2010) revealed that only 8% of those farmers who replied did not know what the Advisory Centre is, about 66% have used the advisory service at least once. The majority of farmers have used the advisory services 1-2 times in a year, but also a significant number of farmers (29%) have used

advisory services more than 3 times in a year. 61% of the farmers surveyed have had positive experiences with the services. Farmers generally have knowledge about the advisory system. According to the data knowledge of specific services is not very good.

The clients of advisory centres vary to a considerable extent. Out of the range of services offered, the most popular service concerns the types of available subsidies - both, general information and specified advice. The second and third most common inquiries concern production and market, and accounting, taxation and legislation, respectively. Advisory services in the field of crop production and cross compliance are also quite popular. Although farmers use advice that comes from different sources there is a growing need by the farmers for professional and up-to-date advice. On the one hand, this is caused by the diversification of agricultural production, on the other hand, the enlargement of farms that brings about the need for well organized management, marketing, logistics and waste management. Therefore, the task of the advisory system is to promote, in addition to the distribution of know-how and information, also a suitable way of thinking among agricultural entrepreneurs that fits with market trends. Agricultural producers mostly need advice in preparing support applications and business plans connected to them (Raudla, 2010). Estonian University of Life Sciences - the permanent assessor of the ERDP – have concluded that the type of advice that agricultural producers use most is the kind that helps them quickly solve problems concerned with finances and plant production. There is also a need for more strategic and specific advice, such as developments in the agricultural product market, product quality requirements, environmental requirements, the development of information technology, etc. Taking into account that certain knowledge is more necessary to the society than to enterprises for carrying out their direct economic activities, the availability of advisory services for such topics should be fostered.

There are several factors that impede making use of advisory services more widespread and effective. Interviewed experts revealed that one of the reasons for lack of usage of advisory services is the lack of specialists in specific fields and the lack of previous experience in using the service. Studies done by Rural Development Foundation indicate to the poor awareness of the availability of various advisory services. About 20% of agricultural entrepreneurs who had not used the advisory service before admitted that they do not know where and how advice could be obtained. Also the fact that a big obstacle that prevents the wider use of the advisory services are the price of the services. Personal consultation methods are based on the specific needs of customer and are therefore more expensive. One more impeding factor for using the service is the payment procedure mechanism according to which the customer has to pay 100% of the service before receiving support.

4.5 Linkages with other AKIS actors / knowledge flows

Before recognised advisory centres were established, advisers worked either individually or through farm associations or private enterprises in order to provide advisory services. From 2000, the state has contributed to the establishment of advisory services and today advisers providing supported advisory services operate through county advisory centres. In Estonia the linkages between AKIS actors are quite weak. Various advisory organisations operate rather independently from each other and perceive themselves as competitors. The stakeholders admit that over the years, the activity of advisory centres has demonstrated a chaotic cooperation between the coordinating centre and R&D centres. There are certain expectations from various stakeholders regarding necessity of stronger collaboration and networking among different AKIS organisations. Although there are projects, conferences or other events where stakeholders participate and collaborate there is still a need for a system, especially the regarding exchange of information and knowledge.

Analysis of the information chains (Kreen&Loolaid, 2004) found two weak elements in the information chains in the Estonian AKIS. These were (a) the processing of information and putting it into a format which is most understandable for the target group; and (b) the collection of feedback information on target group needs and message quality, and the use of feedback for decision-making and program adjustments. These are challenges many advisory systems deal with constantly and Estonia is not the exception.

4.6 Programming and planning of advisory work

Advisers who provide advisory services for farms operate mostly through county advisory centres, and the activities of advisers and advisory centres are assisted by an advisory service coordination centre. The Coordinating Centre of Rural Development Foundation is the main actor in strategic planning of advisory system. Responsibilities of the Coordinating Centre are: developing the Advisory System and Service; collecting and analysing feedback; communicating with the research institutions; training and in-service training for advisers; disseminating research information; developing of advisory tools (programs, risk analyses etc.); updating the portal www.pikk.ee for agricultural and rural information. The role of the county level advisory centres is to provide individual advisory services and information to the local producers and farmers. They collect feedback from the producers and develop the whole system. They also direct farmers to specialized advisors, according to the needs of the producer and organise informational events and training days. Only those advisory services are subsidized that are provided by qualified advisors.

Planning of advisory work differs among organisations. Mainly advisory organizations operate according to annual plans and defined priorities in relation to ERDP. Some of advisory service providers apply proactive strategies others use more reactive strategies to respond to the market demands more accurate as well as to use the opportunities of various funding schemes.

5. Characteristic of Farm Advisory System (FAS)

5.1 Main organisations forming FAS

Estonia was among one of the first EU countries to establish the Farm Advisory System (FAS). The FAS was integrated into existing services as an overall advisory system integrating a wider range of farm advice and extension services. In 2005 the Ministry of Agriculture certified 15 county advisory centres. Most of these centres are related to producers' and farmers' unions. The basic duty of an advisory centre is to provide advice on cross-compliance and on other agricultural problems, to offer broader information and training, to help find the necessary information and to "read" legal acts, introduce and distribute printed materials and organise information events²³. The role of the advisory centres is to provide individual advisory services and information to local agricultural producers and farmers. Advisory centres direct farmers to specialized advisers, according to farmers' needs. The centres provide farmers with both advice and information in their respective counties. It is mandatory for each centre to have at least five advisers who hold a professional certificate in the areas of crop and livestock farming and finance. Besides, each centre must have at least one adviser who has passed cross compliance training and one advisor who has passed occupational safety training²⁴. Each centre has agricultural advisers who have earned a professional certificate at least in crop and livestock farming and finance. Only the advisory services provided by qualified advisers are subsidized through the Estonian Rural Development Plan.

Agri-environmental support is not free. Farmers have to pay for the agri-environmental advice themselves but they can use subsidy for the advice, and each farmer is entitled to the sum of 1279 euro as an advice subsidy per year. Agri-environmental advice is mainly given by plant advisors who have special certificates on cross-compliance. Farmer can order cross-compliance audits in farm, but they have to pay for them themselves. Every year in winter and spring different authorities together with the advisors organise seminars with the purpose of discussing the environmental rules and control issues with farmers. These seminars give an opportunity for farmers to receive advice on how to correctly work in line with different EU regulations and rules²⁵.

Farm advisory services are coordinated by the Estonian Rural Development Foundation that fulfils the role of the Coordinating Centre of the Estonian Agricultural and Rural Economy Advisory Service. The Coordinating Centre has been designated to ensure the functioning of the agricultural advisory system and to give information about state measures and the availability of advice. The Coordinating Centre prepares action and training plans, analyses the work of advisers, applies the simplified advisory system, organises the payments of basic salaries to new advisers, organises practical training for new advisers, implements the mentoring system and maintains the www.pikk.ee portal. The Coordinating Centre also develops advisory tools and other organisations, looks for new advisers, etc. (Laur, 2011). The Estonian Farm Advisory

²³ http://ec.europa.eu/agriculture/eval/reports/fas/report_des_en.pdf

²⁴ http://www.g-fras.org/en/world-wide-extension-study/98-world-wide-extension-study/europe/northerneurope/370-estonia

²⁵ http://www.balticdeal.eu/advisory/estonia-2/

System is interconnected with other advisory activities and extension services. The system is evolving in close compliance with the joint agricultural advisory and information system.

5.2 Evaluation of the implementation of FAS

The experience shows that the largest demand in farm advisory services in Estonia is for advice that helps farmers to quickly solve problems related to finance and plant production. There is also a need for more strategic and specific advice, such as developments in the agricultural product market, product quality requirements, environmental requirements, the development of information technology, etc. Currently Estonian FAS deal with a challenge on how to make the use of advisory services more available to farmers. It encompasses several issues, such as the lack of specialists in specific fields, the prices of the service, the provision of the service, image of advisory system among the farmers etc. It is clear that in order to increase the provision of specialised (technological) advice, professional organisations and associations, agricultural schools and R&D institutions need to be included in the Estonian FAS. It can be assumed that even a few advisers in very specific fields could cover the needs.

6. Summary and Conclusions

6.1 Summary and conclusions on AKIS

In Estonia, the different components of AKIS have been made available to the producers and other interested parties. The information and knowledge system is composed of research, extension and education organisations, structured and governed by the government through a sectoral agricultural policy. The linkages between various AKIS actors are quite weak and it is necessary to further develop co-operation and collaboration.

Experience with different advisory models has shown that a foreign advisory model cannot be implanted directly into another socioeconomic situation. The development of various extension models has provided experience and a wider understanding of different possibilities for extension setup. This knowledge and practical experience has been the basis for development of Estonia's own extension model (Kreen&Loolaid, 2004).

In Estonia the main overall points of concern are (1) the reinforcement of the cooperation between researchers, agricultural advisers and agricultural producers; (2) the precision, reliability and availability of scientific information and its distribution, (3) the possibilities to integrate research, advice and production.

Concerning the extension service, Estonia has taken important steps to introduce rules of cross compliance. Various methods have been developed to inform agricultural producers in Estonia, e.g. training for advisors and farmers, advisory tools, handbooks, web-pages²⁶, and booklets. Throughout the years the main objectives have been to ensure the development of an effective agricultural science which involves doctoral students, increases the number of agricultural research programmes, and helps to co-finance and integrate more Estonian researchers in international projects. Another priority has been to ensure a well-functioning farm advisory system to meet the needs of target groups and raise the number of clients. This is possible through consistent training of advisors and keeping the information materials (booklets, brochures, web-page www.pikk.ee, etc.) up to date. A major priority of the Estonian extension services is the improvement of the competitiveness and sustainability of the agricultural and rural economy sectors.

Despite the several extension and information schemes underway to support development of viable farms and farmer capacities, there is still a need for urgent measures to strengthen the country's overall advisory capacity (Kreen&Loolaid, 2004).

The discussions concerning the future of AKIS are still going on. The Estonian advisory system will be modified in the foreseeable future.

6.2 Summary and conclusions on advisory services and FAS

The development of Estonian agriculture and rural advisory system has made a long and complicated journey after the Estonian re-independence. The advisory and information system of

²⁶ http://www.pikk.ee/valdkonnad/nouetele-vastavus

a small country like Estonia has been dependent on political directions, as well as the personal view points of different decision-makers.

There is an open advisory service market in Estonia, which has resulted in a fragmented advisory system. Advisers who provide advisory services for farms operate mostly through county advisory centres, and the activities of advisers and advisory centres are assisted by an advisory service coordination centre. In Estonia FAS was integrated into existing services as an overall advisory system integrating a wider range of farm advice and extension services. Every county has an approved advisory centre and every centre has professionally certified agricultural advisers at least in the fields of plant production, animal husbandry and financial management. Lists of eligible advisers are available in each county office and on the Internet. The basic duty of an advisory centre is to advice on cross-compliance and on other agricultural problems, to offer broader information and trainings, to help finding the necessary information and to "read" legal acts, introduce and distribute printed material and organise information events. Advisory services for people and enterprises can be obtained through forestry groups, Kodukant village movement network, county development centres operated by Enterprise Estonia, research institutions and universities, sellers, processors and buyers of inputs for agricultural products and through other advisers.

The Estonian farm advisory system, advisory services and dissemination of knowledge-based information (e.g. specialized advisory service, training and information activities, clarifying the state and research information to rural entrepreneurs, etc.) are financed by the state budget, ERDP and farmers.

Over the years, the activities of advisory centres have demonstrated a chaotic cooperation between the coordinating centre and R&D centres. A joint Estonia-wide agricultural and rural economy organisation that unites advisers should be the central role in developing the advisory system, ensuring the exchange of information and facilitate cooperation between stakeholders.

Given the size of Estonia and the private interest advisory centres, the advisory system needs to be optimised by the state. One of the crucial mistakes of the current advisory system in Estonia is the lack of a comprehensive approach that covers a whole company: the main advisory activities include advice on single problem or concerning application for support. The current advisory service cannot provide sufficient advisory services on the primary processing of food, diversification of agricultural production, organic farming, joint activity and other necessary specific areas. In order to increase the provision of specialised (technological) advice, professional organisations and associations, agricultural schools and R&D institutions need to be included in the advisory system. Given the size of Estonia, even a few advisers in very specific fields can cover the needs.

The mentioned aspects are going to be taken into account in the planed reorganisation of the overall state Advisory system.

7. Acknowledgement of partners and methodological reflections

The report is based on a literature review, analysis of published research, an online questionnaire survey of AKIS workers and expert interviews. Original data was collected in June-July 2013.

A really low response rate and many partially answered questionnaires significantly limited the possibilities for what information could be taken from the survey data to provide a full picture of agricultural advisory services in Estonia. Therefore analysis has been done mostly on the basis of published research, a literature review and information obtained via interviews with experts from the Ministry of Agriculture.

We thank the Ministry of Agriculture, Agricultural Research Centre and Jõgeva Plant Breeding Institute for their participation in the PRO AKIS survey.

We would like to give special thanks to the interviewed experts from the Research and Development Department of Ministry of Agriculture.

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9. Appendices

Name	Website	Address							
Governmental and coordination actors									
Ministry of Agriculture	www.agri.ee	Lai St 39//Lai St 41, Tallinn 15056,							
Estonian Agricultural Registers and Information Board	www.pria.ee	Narva mint 3, 51009 Tartu							
Agricultural board of Estonia	www.pma.agri.ee	Teaduse 2, Saku, 75501 Harju County							
Estonian National Rural Network	http://www.maainfo.ee/index.php?p aqe=3441	Jäneda, Tapa vald 73602, Lääne-Virumaa							
Estonian Rural Development Foundation - Coordinating Centre	http://www.mes.ee/en	R.Tobiase 4 10147 Tallinn							
Advisory and extension actors (15 approv some are depar	ved local advisory centres: some are tments of local farmers organisatior								
NGO Harju Farm Union Advisory Centre	www.hot.ee/htlnk	Aasa 1, Saku 75501							
NGO Hiiumaa Advisory Centre	http://www.hiiuteave.ee/	Mäest. 2, Käina 92101							
NGO Ida-Virumaa Farmers Union, Viru Advisory Centre	http://www.ivtl.ee/	Rakvere 14, Jõhvi 41533							
NGO Jõgeva Producers Union	http://www.jogevatl.ee/	Aiast 2, Jõgeva 48306							
NGO Help for the Farmer	www.janeda.ee/apm	1) Jäneda 73602; 2) Pärnurd 56, II floor, Paide 72712							
NGO Läänemaa Advisory Centre	http://www.hot.ee/hplnouanne	Tehnika 2, Uuemõisa smalltown, Ridala parish, Läänemaa 90401							
NGO Viru County Farmers Union, Lääne-Viru County Agriculture Advisory Centre	http://www.virumaapml.ee/	Vahtra 8, Roodeväljavillage,Sõmerupari sh 44207							
NGO Põlva County Farmers Union	www.hot.ee/polvapl	Jaama 83, Põlva 63308							
Pärnu County Farmers Advisory Centre Plc	http://www.nouanne.ee/	P. Kerese 4, Pärnu 80010							
NGO Rapla Advisors Union	http://www.rny.ee/	Kuusikurd 6, Rapla 79511							
NGO Islands Advisory Centre	http://www.saartenk.weebly.com/	Tallinnard 27, Kuressaare 93811							
NGO Tartu County Farmers Union, Tartu Rural Advisory Centre	http://www.tartufarmer.ee/	Jalaka 48, Tartu 50109							
NGO Valga County Farmers Union, Valga County Advisory Centre	http://www.valgapl.ee/	Aia 17, Valga 68203							
NGO Viljandi Agriculture Advisory Association	http://www.vpnu.ee/	Vabaduse square 4, Viljandi 71020							
NGO Võru County Farmers Union, Võru County Farmers Union Advisory Centre	http://www.taluliit.info/	Liiva 11, Võru 65609							
Re	search and Education actors								
Estonian University of Life Sciences	https://www.emu.ee/en/	Kreutzwaldi 1 Tartu 51014							

Estonian Crop Research Institute	www.etki.ee	J. Aamisepa 1, Jõgeva alevik48309,		
Rural Economy Research Centre	http://www.maainfo.ee	Jäneda, Tapa vald 73602, Lääne-Virumaa		
Agricultural Research Centre	http://www.pmk.agri.ee	Teaduse 4/6, 75501Saku; Harjumaa,		
University of Tartu	http://www.ut.ee/et	Ülikooli 18, 50090 Tartu		
Tallinn University of Technology	http://www.ttu.ee/en	Ehitajate tee 5, 19086 Tallinn		
Järvamaa Vocational Education Centre	http://jkhk.ee/pages/uudised.php	Tallinna 46 72720 Paidelinn		
Räpina Gardening School	http://www.ak.rapina.ee/vana/Rapin a Gardening College.htm	64505 Põlvamaakond, Räpina, Pargi 32		
Luua Forestry School	http://luua.edu.ee/	49203 Luuaküla Palamuse vald Jõgevamaakond		
Pärnumaa Vocational Education Centre	http://www.hariduskeskus.ee/compo nent/content/article/66-english/578- introduction-in-english.html	Niidupargitn 8//12 Pärnu 80047		
Põltsamaa Occupational School	http://www.pkpk.ee/	Väike-Kamariküla, 48030 Põltsamaavald, Jõgevamaakond		
Kehtna Economy and Technology School	http://www.kehtna.edu.ee/	Kooli 1, 79001 KehtnaalevikKehtnavaldRapla maakond		
Kuressaare Regional Training Centre	http://www.ametikool.ee/	Kohtu 22, 93812 KuressaarelinnSaaremaakond		
Associations	, unions and some other AKIS actors	5		
The Estonian Chamber of Agriculture and Commerce	http://www.epkk.ee	J.Vilmsi 53G, 10147 Tallinn		
Estonian Farmers federation	http://www.taluliit.ee/	Teaduse 1, Saku 75501 Harjumaa		
NGO Estonian Rural Advisory Service	www.maanou.ee	Üksnurme tee 8, Saku alevik, Saku vald, 75501		
Central Union of Estonian Farmers	http://www.eptk.ee/	J.Vilmsi 53G, 10147 Tallinn		
Estonian Organic Farming Foundation	www.maheklubi.ee			
The Estonian Private Forest Union and Private Forest Centre	http://www.eramets.ee/eng/	Mustamäe tee 50 (II korrus) 10621 Tallinn		
Estonian Village Movement Kodukant	http://www.kodukant.ee/	Sirge 2, Tallinn 10618		
The Estonian Environment Information Centre	http://www.keskkonnainfo.ee/main/i ndex.php/en	Mustamäe tee 33 10616 Tallinn		