AKIS and advisory services in Hungary

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

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Executive summary

The main aim of the report is to provide a comprehensive description of the Agricultural Knowledge and Information System (AKIS) in Hungary, with a particular focus on agricultural advisory services. The description includes history, policy, funding, advisory methods and a section on how the Farm Advisory System (FAS) was implemented.

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 that were produced in 2013 by project partners and subcontractors for compiling an inventory of Agricultural Knowledge and Information Systems. AKIS describes the exchange of knowledge and supporting services between many diverse actors from the first, second or third sector in rural areas. AKIS provide farmers with relevant knowledge and networks around innovations in agriculture. Findings from the 27 country reports were presented at three regional workshops across Europe in February (in Copenhagen and Paris) and March 2014 (in Krakow), discussed with stakeholders and experts, and feedback integrated in the reports.

Agriculture is an important sector of the Hungarian economy. Hungary benefits from many natural features which provide favourable conditions for agriculture: fertile plains, an advantageous climate, availability of water - the quantity of flowing water per inhabitant is said to be the largest in the world. About 70% of the land area of the country is suitable for agricultural production. Cereals occupy about 70% of the arable land. The major cereals are wheat and maize. Other important crops are: potatoes, oilseeds, fruits, vegetables and wine grape. The share of animal production is 40% of the total agricultural produce. Of the livestock, 70% of the cattle and cows, 63% of pigs and 50% of poultry are bred on corporate (cooperative farms and companies) farms; however, 86% of sheep are kept on individual farms. The agricultural trade balance was always positive in Hungary.

In Hungary the national institutional system of AKIS is partly organised and the role of the government is strong in it. The harmonisation of the information processes is performed at national level by the ministries and by their background institutions, at regional level by the regional development agencies financed partly by the government and partly by own business services.

Advice and consultancy in Hungary are currently offered via a very fragmented system. There are four main types of actors/institutions: (a) free advisory services at the national level, funded by the EU and domestic resources; (b) the Hungarian application of the Farm Advisory System, (c) commercial consultancy; and (d) free consultancy by input providers. Farm Advisory System regulated and controlled by the Ministry of Rural Development and mainly funded by the EAFRD; 643 registered active advisors; seven Regional Advisory Centres and 51 active Territorial Advisory Centres selected by tender. Currently the whole system employs 1436 advisors. The main methods that are used are mainly individual and group techniques. The main sources of funding for the advisory services is mixed funding, but it depends on the service provider, i.e. Sub-regional Advisory Centres have a yearly quota for a certain number of individual contracts with producers.

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List of Acronyms

FVM	Ministry of Agriculture and Rural Development
NAKVI	the Rural Development, Training and Consultancy Institute
NÉBIH	Hungarian National Foodchain Safety Authority
MAGOSZ	National Association of Hungarian Farmers Societes and Co-operatives
MOSZ	The National Federation of Workers' Councils
TAC	territorial (sub-regional) advisory centres
MTA	the Hungarian Academy of Science
MNVH	the Hungarian National Rural Network
KSH	Hungarian Central Statistical Office
HUF	Hungarian forint

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1.3. GDP per capita: 9.800
1.4. Agriculture's contribution to GDP: 3.53 %
1.5. Number and distribution of agricultural holdings (hectares, ESU)

Key farm variables (2010)

Country	Number of holdings	UAA	LSU	Labour Force	Standard output
	(1000)	(1000 ha)	(1000 LSU)	(1000 AWU)	(million €)
HUNGARY	576,8	4686,3	2483,8	423,5	5241,0

Number of holdings by size of the holding (UAA), 2010

Country	Total	0-0.9 ha	1-2 ha	2-4.9 ha	5-9.9 ha	10-19.9 ha	20-29.9 ha	30-49.9 ha	50-99.9 ha	>100 ha
HUNGARY	576 810	42 790	412 740	46 060	26 540	19 430	7 950	7 440	6 410	7 450

Number of holdings by standard output size classes, 2010 (1 000 holdings)

Country	Total	0 €	< 2000 €	2000-3999 €	4000-4999 €	8000-14999 €	15000-24999 €	25000-49999 €	50000-99999 €	100000-249999 €	250000-499999 €	> 500000 €
HUNGARY	576,8	19,9	358,7	91,0	46,5	25,4	13,0	10,5	5,9	3,6	1,1	1,3

1.6. Number of agricultural holdings receiving direct payments

Number of agricultural holdings receiving direct payments (2009)

Country	amount [€]	recipients
HUNGARY	1 339 432 026	189 305

1.7. Number of FADN holdings

Economic size of holding in European size units (ESU) (2009) – *number of holdings in the FADN field of observation*

Country	Number of holdings					
	Total	< 8 ESU	8-16 ESU	16-40 ESU	40-100 ESU	> 100 ESU
HUNGARY	83 726	54 468	13 573	7 543	5 960	2 183

[1] Datasbased on EUROSTAT: Agriculture, fishery and forestry statistics 2010-2011, http://www.reseau-biodiversite-abeilles.com/wp-content/uploads/2012/06/Biala.pdf

1.8. Number and structure of age of agricultural holders

Number of holdings by age of manager, 2010

Country	Total	Less than 35 years	From 35 to 44 years	From 45 to 54 years	From 55 to 64 years	65 years or over
HUNGARY	576 810	40 760	84 030	122 010	160 820	169 190

1.9. Land used

Utilised agriculture area (UAA) by size of the holding (UAA) (ha), 2010

Country	Total	0-0.9 ha	1-2 ha	2-4,9 ha	5-9.9 ha	10-19.9 ha	20-29.9 ha	30-49.9 ha	50-99.9 ha	>100 ha
HUNGARY	4 686 340	-	138 000	142 670	183 910	268 840	190 290	282 690	445 860	3 034 080

Agricultural land use, 2010

Country	Area Total	UAA	Arable Land	Land under permanent crop	Land under permanent grassland
	1000 ha	%	%	%	%
HUNGARY	9 303	57,4	46,3	1,9	8,2

1.10. Average UAA per holding

Country	Number of holdings	Utilised agriculture area (UAA) [ha]	Average UAA per holding [ha]
HUNGARY	576 810	4 686 340	8,12

1.11. Farm labour force

Farm labour force, 2010

Country	Family labour force	Regular non family labour force	Family labour force	Regular non family labour force	Non family non regular labour force	Labour force directly employed by the holding
	1000 pers.	1000 pers.	1000 AWU	1000 AWU	1000 AWU	1000 AWU
HUNGARY	1 052,8	90,7	325,1	77,9	20,5	423,5

1.12. Agricultural labour input, 2000-2011

Country	2000	2005	2011	2011/2010
	1000 AWU	1000 AWU	1000 AWU	%
HUNGARY	676	522	437	100,1

Agricultural output and gross value added

Output value at producer prices of the agricultural industry, 2000-2011

Country	2000	2005	2011	2000	2011
	mln €	mln €	mln €	% of EU-27	% of EU-27
HUNGARY	4 851	5 702	7 665	1,6	2,0

1.13. Production of crops

Harvested production of some of the main crops, 2011 (1 000 tonnes)

Country	Cereals total (incl. rice)	Fields peas	Sugar beet	Rape	Sunflower	Common wheat	Barley	Grain maize	Rye and maslin	Rice
HUNGARY	13814,5	22,1	770,5	527,2	1367,8	4 080	989	8 089	77	9

1.14. Production of vegetables

Harvested production of some fruits, vegetables (1000 tonnes) and vineyard (1000 ha), 2011

Country	Tomatoes	Carrots	Onions	Apples	Peaches	Oranges	Vineyard total
HUNGARY	165	62	50	235	43	0	74

1.15. Number of livestock and livestock density

Livestock units by type of livestock, 2010 (1 000 LSU)

Country	Total livestock	Cattle	Sheep	Goats	Pigs	Poultry	Other LSU
HUNGARY	2483,8	525,4	120,4	9,2	793,2	976,1	59,4

1.16. Animal production (milk, dairy products, cattle meat, pig meat, sheep meat)

Animal slaughtering by species, 2011 (1 000 tonnes)

Country	Cattle	Sheep	Goats	Pigs	Poultry	Cow's milk production on farms
HUNGARY	26,0	387,3	0,2	548,0	383,5	1685

1.17. Number of organic holdings

Share of holdings and area with organic farming, 2010

Country	Holdings doing organic farming	Area with certified organic farming	Organic producers	Organic area	
	% of total	% of total	(1000)	(1000 ha)	% of total UAA
HUNGARY	0,16	0,78	128,6	127,6	2,4

1.18. Number of producer groups

Country	number	members
HUNGARY	246	20 500

1.19. Used of chemicals (fertilizers, pesticides): Fertilizer: 80.04 kg/ hectare, Pesticide: 1.2kg/hectare

1.20. Percentage of rural areas in surveyed country: 63.88 %

1.21. Ammonia (NH3) emissions (EEA)

Country	Ammonia emissions from agriculture		
	1990	2010	change 1990-2010
	kilotonnes	kilotonnes	%
HUNGARY	121	64	-47,2

1.22. Area under management practices potentially supporting biodiversity (EEA)

Country	2005	2010
HUNGARY	2.2	2.4

1.23. Gross Nitrogen Balance 2000-2008 (kg N per ha agricultural land) Eurostat Data

Country	2001	2004	2008
HUNGARY	89	94	94

2. Characteristics of Agricultural Knowledge and Information System (AKIS)

2.1 AKIS description

The major participants of AKIS in Hungary, as described by Florianczyk, Székely, and Fieldsen [2014] are the following:

From the field of research:

Ministry of Rural Development (VM)

- **Nine participating institutes** with the profile of Agricultural economics; Animal breeding and nutrition; Small animal breeding and nutrition; Forests; Fisheries; Food; Biotechnology; Agricultural Engineering; Geodesy, Cartography and Remote Sensing

Hungarian Academy of Sciences

- **Six participating institutes** relevant to agricultural producers with the profile of: Agriculture; Pest management; Soils and agrochemicals; Veterinary; Biological Research; Agricultural economics
- **Nine participating institutes** with the profile of: Meat market; Peppers; Vegetables; Milk economy; Fruit and ornamental plants; Grain

Other state owned institutions

Ministry of National Resources

- **21 institutes** operating in agricultural higher education

Private sector

- **A range of different institutes**

Field of extension:

Farm Advisory System

- Founded in 2007; directed and controlled by the VM and the NAKVI and mostly financed by the EAFRD; 643 registered active advisors in 2011; seven Regional Advisory Centres and 51 active Territorial Advisory Centres selected by tender which deliver upon-payment advice to farmers

Farm Information Service

- Founded in 2007; works under the auspices of Hungarian Chamber of Agriculture; 71% of its budget is funded by the EAFRD; provides free information to farmers about the CAP and direct payments; involves 205 consultants

Network of village agronomists

- The Central Agricultural Office, which is managed by the NÉBIH (Hungarian National Foodchain Safety Authority), has a traditional network of village

agronomists (588 in 2009) who perform public administration tasks and also advise farmers free of charge

Commercial services

- Professional advisers such as input suppliers, project proposal writers provide these services; existing since before 2007

Field of education:

Ministry of National Resources

- **Universities:** mainly agricultural, horticultural and veterinary teaching centres in Debrecen; Szeged; Gödöllő; Budapest (Corvinus University); Kaposvár; Kesz-thely (University of Veszprém); Mosonmagyaróvár (University of West-Hungary)
- **Higher education colleges:** main centres of agriculture and horticulture in Gyöngyös (Károly Róbert); Szarvas (Tessedik Sámuel); Kecskemét; Nyíregyháza and Mezőtúr (Szolnok)

Ministry of Rural Development

- **Vocational schools:** 19 institutes managed by the VM in the fields of agriculture, horticulture, food and other related topics

From the field of support system:

Producers' associations

- Hungarian Chamber of Agriculture with 11,000 members; MOSZ and MAGOSZ

Product boards

- From the fields of: Poultry; Fruit and vegetables; Meat; Grain and feed etc.

Agricultural Administration Office

- Under the auspices of the VM, the Hungarian National Food chain Safety Authority (NÉBIH), through its local offices exercises its regulatory, monitoring and accreditation services

Agricultural and Rural Development Agency

- Operates under the supervision of VM, the exclusive paying agency of EAGF and EAFRD funding and national funding

Hungarian National Rural Network

- In affiliation with the Rural Development, Training and Consultancy Institute (NAKVI) of the VM

In Hungary the national institutional system of AKIS is well organised and the role of the government in it is strong. The harmonisation of the information processes is performed at

national level by the ministries and by their background institutions, at regional level by the regional development agencies financed partly by the government and partly by own business services.

The coordination of the AKIS is performed by the Ministry of Rural Development. The R+D institutional background is provided by research institutions financed by the government and operating as partnerships, by research teams of universities. For applying the results of the R+D in practice and for ensuring knowledge transfer

- the agricultural extension service,
- in addition the training institutions,
- local system of farm advisory, and
- the Farmers' Information System that mainly provide information on the application for tenders also participate.

2.2 AKIS diagram

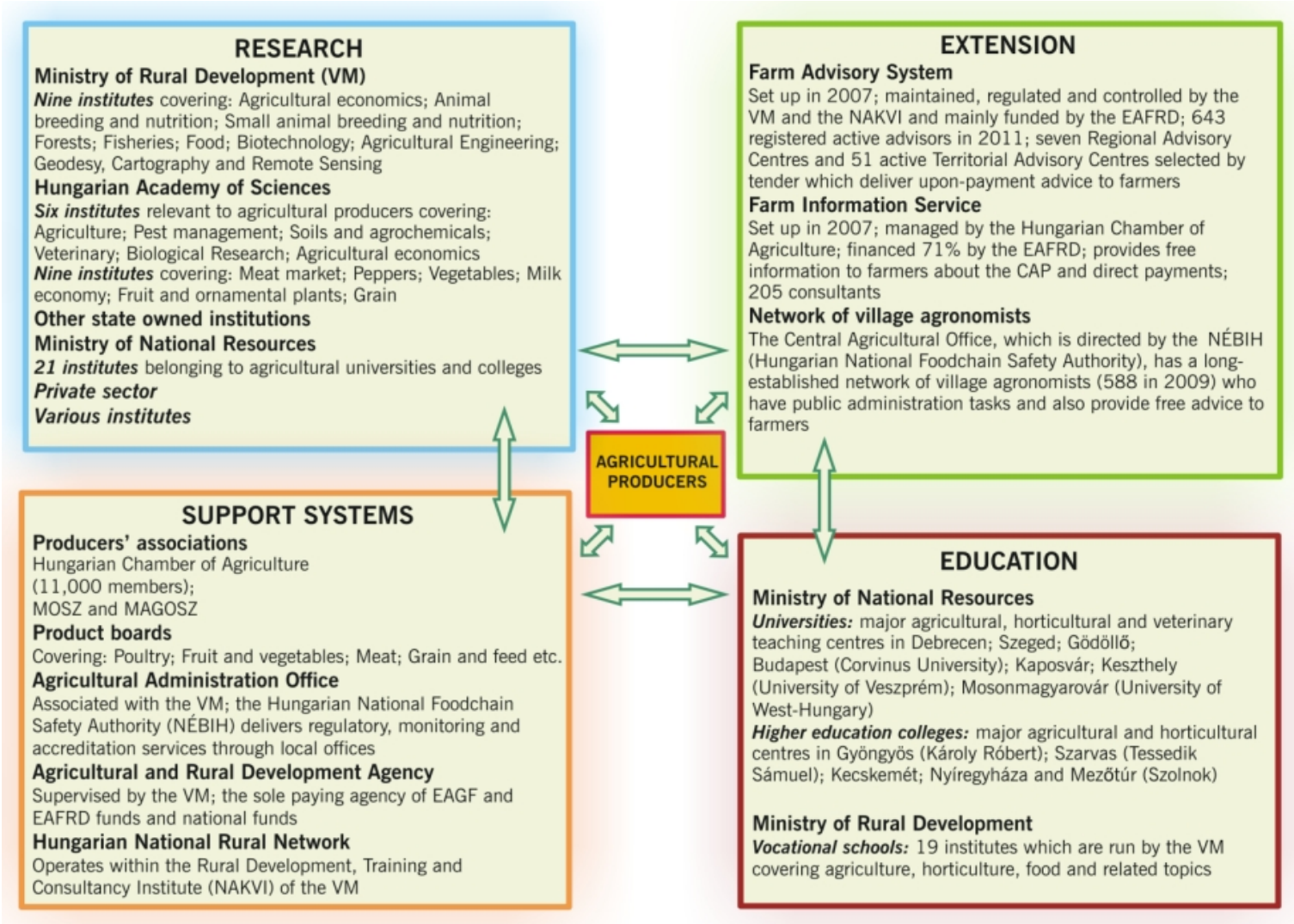

Figure 1. Diagram of AKIS in Hungary
Based on Rivera, W.M. and Zijp, W. [2002] and Florianczyk, Székely, and Fieldsend [2014]

Table 1. Overview of organisations creating the AKIS

Provision of service				Source of financing								
Status of the organisation	Type of organisation	Number of organisations	Number of advisors	Public funds			Farmers			Private	NGO	Other (specify)
				EU funds	National funds	Regional funds	Farmers' levies	Farmers' contribution	Billing services	Other products (inputs, outputs)	foundation	
Public sector	Advisory department of the Ministry of agriculture	1	687	x	x			x				
	Local/regional agencies											
	Other (specify)											
Research and Education	University	7		x								
	Research Institute	16		x	x							
	Other education bodies (specify)											
Private sector	Upstream industries											
	Downstream industries											
	Independent consultant											
	Private agricultural advice company	97	500	x				x				
	Farmers' owned advice company											
	Other (specify)											
Farmer based organisations	Farmers' cooperative											
	Chambers of agriculture	1	202		x			x				
	Farmers' circles/groups											
	Other											
NGO												

3. History of the advisory system

Until the accession into the EU

Before the change of the regime large-scale farming in co-operatives and state farms was associated with a presence of experts with adequate qualifications who performed the agricultural advisory services as well. In this mode of production various systems (IKR, KITE) played a vital role.

After the change of regime, through the privatisation process, sole and joint ventures have been set up, and these included consulting among their activities as well. Up to 1999 it was the ministry responsible for agriculture who kept a register of the enterprises offering advisory services, which, in these years were associated with firms (roughly about 200). Farmers contracted these services from the firms in question, although did not always pay for them, or indeed, implement them, depending on the acceptance or rejection of the advice. Subsequently, on paying for the advisory services, the farmer was entitled to apply for state subsidy in proportion with his annual income.

The registration of advisors was changed by the 95/1999 (XI.5) ministerial regulation. This regulation defined what requirements (e.g. professional, ethical) need to be satisfied by those advisors whose services can be subsidised by the state. At this point an individual registration of advisors was introduced.

After the accession into EU

So far the competent bodies of the EU have not disagreed with the Hungarian regulation and subsidising principles (including the EU subsidies), so they seem to contribute to the accomplishing of the goals of the CAP reform. Therefore, the 100-step programme of the Hungarian Government can progress further.

The agricultural advisory system was fundamentally influenced by the launching of the new EU regulation in the autumn of 2003, with the minimum requirement of “cross-compliance” in the system of the CAP reform, which created a new agrarian political means.

According to the EU regulations 1782/2003/EK and 1783/2003/EK the agricultural advisory service can be subsidised. Furthermore, the 13th article of 1782/2003/EK prescribes the operation of a “Farm advisory system” to each member state from 1st January 2007, but the farmers’ participation in this system is still voluntary.

The 100-step programme of the Government has also contained significant changes in the advisory system. It featured new, designated territorial (sub-regional) advisory centres (TAC) with a strongly defined legal status. These advisory centres can be either vocational schools and other organisations employing advisors, or certain firms. The territorial centres were set up through inviting applications, regarding the number of the farmers working in the given area (county). The advisors are affiliated to the territorial advisory centres and can provide advisory services for the farmers in the framework of some labour relations. Previously, up to the end of 2006, financing was arranged through direct payments to the organisations involved from the state as well as normative subsidies paid to farmers seeking advisory services. This changed in 2007 when the costs of advisory services have been financed from EU support to the farmer as

the beneficiary, covering up to 80 percent of the sum involved (max. 1500 €/ service), provided the contract has been made between the farmer and the advisory organisation having the proper authority registration and functioning in the advisory system.

A decreasing amount of national subsidies is envisaged for the financing of this multi-level organisational structure. The expenditure of the services should be covered increasingly from the revenues of the advisor parallel to the gradual increase of the farmers' solvency.

4. The Agricultural Advisory Service(s)

4.1 Overview of all service suppliers

According to Nemes and High [2013], the current Hungarian advisory and consultancy system is not integrated, but rather fragmented. Four types of institutions/actors offer these services, namely: (a) national level free advisory services, financed by the EU and domestic resources; (b) the Farm Advisory System (FAS), as applied by the Hungarian Government, supported under the CAP up to 80 percent of its costs; (c) commercial consultancy; and (d) free consultancy offered by input providers.

Free consultancy

There are two types of actors offering free advice. The most widespread is the 'village extension service', which was set up in the 1990s. There are 600 advisors employed as public servants, allocated to serve 1-20 villages each, (depending on village size, production type, local specificities etc.), giving free advice to farmers. Their function is ambiguous to a certain extent, because, on the one hand, they give advice, on the other hand, they are a means of state control over the producers, and as such, according to EU regulations, they shouldn't be giving advice. Their main task has recently been to help producers to fill out electronic payment requests on the Internet. However, they cannot be held responsible for the advice they give because they are not in a contractual relationship with their clients.

A so called complex advisory service' is also available, free of charge, by the same 200 advisors of the Hungarian Chamber of Agriculture. This service is partly financed by the technical assistance (TA) budget under the CAP (EUR 57 million for seven years). On their main agenda the issue of giving advice to all producers is included (not only members of the Chamber) concerning cross-compliance, direct payments, rural development measures, obligations, deadlines etc. Furthermore, they are also supposed to fill in electronic applications and payment requests. However, until recently they had no access to the databases of official producers and land areas (such as which areas are entitled to receive agro-environmental subsidies, NATURA 2000 territories, etc.).

Subsidised consultancy - Farm Advisory System

Under the CAP obligation, Hungary also maintains a Farm Advisory System (FAS), which is funded by TA budget and has several institutional levels. It is NAVKI who coordinates these levels in Hungary, for example, it selects, trains and monitors both the advisors and the participating centres. It also provides the informatics background alongside with the necessary training material and any other information. On the regional level seven Regional Centres perform a similar function to NAVKI. Below them there are about 82 Sub-regional Advisory Centres which were selected originally, (e.g. research institutes, consultancies) but less than half of them operate actively now. These centres have a local coordinating role insofar as they make contracts with the advisors and the producers.

Commercial consultancy

In Hungary this form of consultancy is not very widespread [Székely and Halász, 2010], as free or subsidised options are currently available, and also due to traditional, cultural reasons. Mainly

large, specialised farms use such services, because they might need the special expertise and know-how of these commercial consultancies. (e.g. Villány DOC company employing Italian consultants, or importing Dutch technology in strawberry production resulting in earlier harvest and comparative advantage on the market). Some of these consultants work here due to their previous FAS contracts or as part of Hungarian-foreign joint venture farms. These consultancies are on the rise and compete with the local consultants.

Another type of commercial consultancy is hired in the case of application for investment in agriculture and rural development. This is very popular as the market is considerable and there are many firms participating in these applications. The administration of these claims is rather complex and needs specific knowledge. The price of project writing is included among the eligible costs, even up to 12% of an investment. Thus consultancy companies see this as a huge market opportunity, although sometimes it is not so much the writing fee but the percentage of the potential contract value which is a more substantial income for the consultancy.

Input providers, private sector actors

Due to a significant concentration process, this sector is leading the applied innovation market. These big firms specialise their advisory activities in three areas: 1. Herbicide/fertiliser production, 2. Seed production, 3. Agricultural machinery manufacturing and trade. Due to their complex networks they are very much ahead of traditional AKIS suppliers, as they have very advanced outreach activities. On their popular free-of-charge product shows they provide information to farmers and introduce their packages of technology (machinery, seeds and plant protection agents). As they have many resources at their disposal, public services cannot match these activities.

Regional representatives of providers also visit large producers to whom they offer free consultancy of certain technologies. They specifically target large farms whose mode of production is “traditional industrial agriculture”. Usually, sustainable agricultural practices are not a priority for these consultancies.

The structure of the Hungarian Extension System

The present structure of the Hungarian Extension System is governed by the FVM (Ministry of Agriculture and Rural Development) regulation of 73/2007 (VII. 27.). Figure 2 shows the structure of the system.

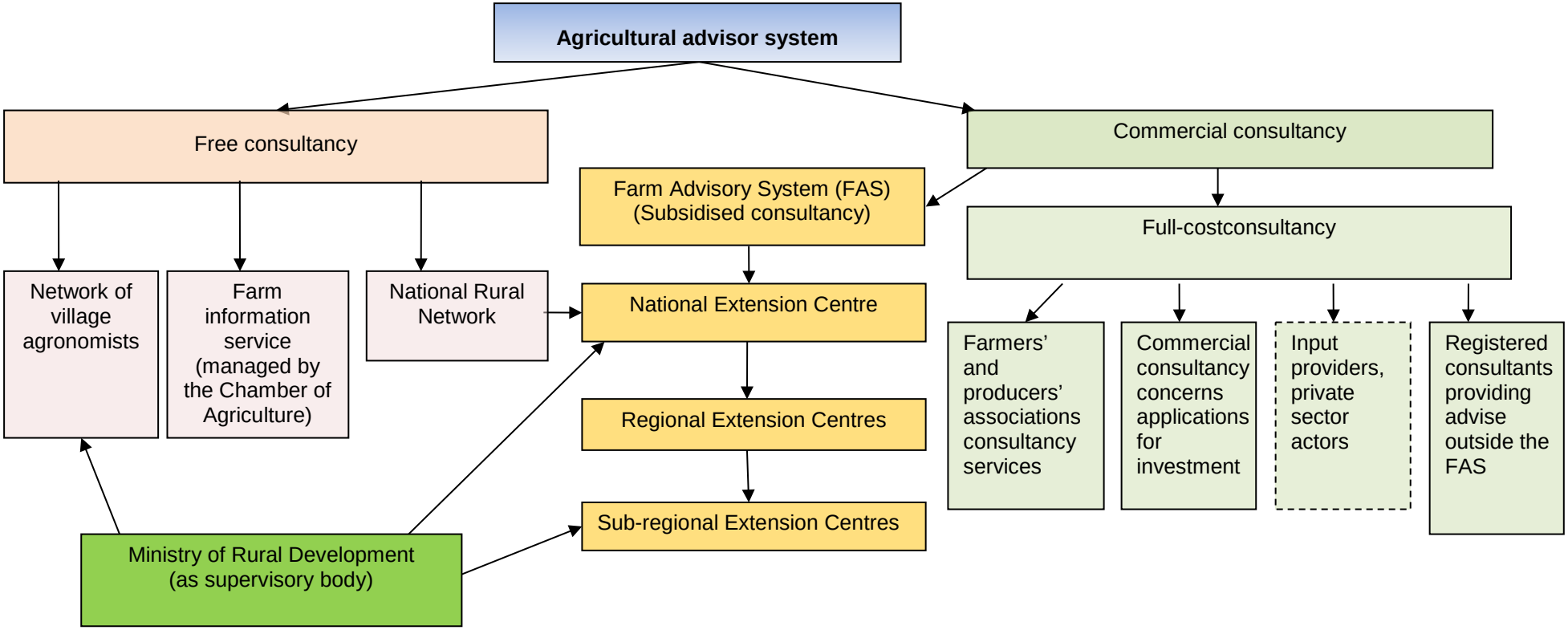

Figure 2. Structure of the Hungarian Extension

Source: Székely and Halász [2010]

4.2 Public policy, funding schemes, financing mechanisms

Sub-regional Advisory Centres are limited by a yearly quota in the number of individual contracts they can make with producers. The red tape involved in the process has invoked a lot of criticisms. First, the producers select a registered consultant, agree and sign a contract, pay for the service, and only then they are allowed to ask for reimbursement of the 80% of their contract value. It may take as long as 1.5 years to receive the sum. Furthermore, there is a limit to the sum a person can claim, namely, a maximum of EUR 1,500 in 7 years. One farmer is eligible to use the service only three times in the seven year period. This system has also been criticised for late payments, the low quality of advice provided and the limited amount of financial support to be claimed.

Total budget in Euro for 2004: **8.13 million** and for 2012: EUR **2.9 million.**

Table 2. Percentage of funding received from each source:

No.	Sources	2004 [%]	2012 [%]
1.	Government budget		
1.1	National government budget		22
1.2	Provincial government budget		
1.3	County government budget		
1.4	District government budget		
2.	Self-government budget		
2.1	Provincial self-government budget		
2.2	County self-government budget		
2.3	District self-government budget		
3.	Own revenues		
3.1	EU CAP projects and funds		58
3.2	National/Government projects		
3.3	Fee for service financing (cost recovery from farmers)	100	20
3.4	Donor financing		
3.5	Other (please specify):		
Total source(s) of funding for the extension organisation		100%	100%

Source: NAKVI

4.3 Methods and Human resources

In order to become a registered agricultural advisor, the experts have to apply and register themselves to a maximum of 3 areas out of the 24 specialisations depending on their qualifications and experience, as the appendix of the cited regulation prescribes. The Register of Agricultural Advisors contains the personal and professional data of the agri-cultural advisors who possess the necessary – higher education – qualifications, experience and a police clearance

certificate. Another important requirement is that they should not be involved in agro commercial and/or agricultural agent activities.

The main requirements to be advisor are:

- University (MSc) or college (BSc) degree in agricultural sciences
- 3 years of practice
- Exempt from commercial interest
- Basic exam and annual participation at further training

Table 3. Number of professional and technical extension personnel for selected years:

Year	Total number of employees	Of which						Administrative / technical / other staff	
		Management Staff (Positions)*		Subject Matter Specialists		Field Extension Staff			
		total	female	total	female	total	female	Total	female
2004	557					547	433	10	4
2012	687					679	419	8	6

* directors, deputy directors, heads of departments or county/districts offices

Table 4. Number and level of education of professional staff in main extension and advisory organisation in Hungary (in 2012)

Total number of staff	Level of education						Total number of extension staff
	Secondary / vocational school	Bachelor degree	Engineer degree	Master degree	Ph. D. degree	Other	
Management Staff		3	2		2		7
Subject Matter Specialists (SMS)							
Field Extension Staff	8	300	98	48	26		680
Total number of extension staff	8	303	100	48	28		687

Table 5. Length of professional experience of advisors

Professional experience	Number of advisors			
	0-5 years	6-15 years	16-25 years	More than 25 years
In agri-production	65	250	350	25
In extension services	20	350	250	60
In administration	250	350	65	20
In food-processing	15	150	20	10

Preparing advisors for extension services

Students trained to be engineers in agricultural higher education can study advisory services as an optional subject for two years (4 terms). After gaining their bachelor or master degree, graduates may continue to broaden their scope of knowledge in the framework of specialised engineer training.

Continuous education

Regulations on the further training and performance assessment of agricultural advisors are disclosed in an annual announcement issued by the ministerial department in charge of managing agricultural advisory activities.

Obligatory further training is realised in the form of a basic examination – to be taken within 1 year ensuing the commencement of agricultural advisory activities—followed by annual further trainings. The obligatory further training – including its course material – is free of charge for agricultural advisors.

Basic training and examination

Compulsory within 1 year after receiving advisory licence (except for those completing a university course on extension).

Subjects:

- Agricultural public administration
- ICT
- Methodology for advisors

Compulsory yearly further training and examination

Subjects

- Cross compliance
- Agricultural subsidies

Optional training

- Not regularly
- Subjects are like electronic submission of area payment applications
- No organized training on professional issues

Conditions of being enrolled and staying in the Registry of Advisors

Enrolment in the Registration of the advisors follows after application. The registry includes the main data of advisors who have had the required degree in higher education as well as the practice and have not been involved in agricultural broking at all.

Last year the National Extension Committee elaborated a recommendation about the modification of the yearly compulsory training for the registered advisors. This compulsory training happens in a credit system.

Table 6. Credit points, 2013

Type of the event		Credits
Conferences	national	6
	regional	4
technical and technological demonstrations	national	6
	regional	4
variety shows		4
forums		3
introduction of innovations		5
trainings related to actual tasks (e.g. filling in GN, e-application, SZTIR,)		5
software shows		4
vocational and special engineer training		10
agricultural journal subscription		3/pcs
special exhibitions and fairs	national	6
	regional	3
Farmer days	national	6
	regional	3

Source: NAKVI

4.4 Clients and topics / contents

Producers paid attention to the changes in yield expenditure and their business plans and requested the help of their consultants to a greater extent. Table 6 demonstrates this trend.

Table 7. The typical areas of activities carried out by contracted consultants for producers

Activity	%
Making applications	11.85
Plant protection	11.25
Crop production	10.30
Animal breeding	8.76
Enterprise improving consultations	8.76
Technological consultations	7.21
Making business plans	5.67
Horticulture	5.67
Supporting market information	5.15
Financial consultation	4.63
Taxation consultation	4.12
Organising training	3.60
Strategic planning	3.60
Public accountancy consultation	3.09
Forestry	2.57
Animal hygiene consultations	2.14
Aid in Material Supply	1.63

It can also be seen in the table that the most demanded topics in order of popularity were: Enterprise improving consultations, Making business plans, Supporting market information, Financial consultations, Taxation consultations, Strategic planning, and Public accountancy consultations.

4.5 Linkages with other AKIS actors / knowledge flows

Nemes and High [2013] characterises the situation of state funded agricultural research as one with long tradition and fragmented structure. The six most important research institutes, belonging to the Ministry of Rural Development (VM) and to the Hungarian Academy of Science (MTA), deal with particular topics of food science and agriculture, but mostly focus on theoretical issues and basic research. On the other hand, smaller research institutes (independent or affiliated to universities) work in mostly specialised areas. Commercial companies, mainly large integrators, suppliers and machinery manufacturers, on the other hand, conduct mostly applied research, primarily focussed on their area of business.

The most important organisation from the point of view of advisory facilities is the main statutory body for education in agriculture, namely, the National Rural Development Training and Advisory Institute (NAKVI), an agency, which is founded and maintained by the VM. NAKVI acts as the main governmental body providing training and advice, and is also responsible for the implementation of the Hungarian National Rural Network (MNVH). It has a role of co-ordinating the 124 agricultural secondary schools in Hungary, setting requirements, organising training courses for teachers and providing general professional supervision. NAKVI also oversees adult education and lifelong learning within agriculture and rural development,

In addition to the above mentioned facilities, there are many courses, organised by NGOs as well. These mainly focus on sustainable agriculture, biological production, and renewable resources etc., offered to small producers, financed from public money and often involve some sort of funding to participants.

4.6 Programming and Planning of advisory work

Table 8. Frequency of type of required advice according to Territorial Advisory Centres, %.

Type of advice	2008	2009	2010
Administration and information	73.0	76.7	73.4
Electronical data service	1.3	3.2	5
Contribution in management of parcel-register	25.9	49.8	56.9
Preparing of direct payments' applications	9.6	7.2	4.3
Regulation issues	15.0	8.2	3.5
Good Agricultural Practices	11.7	4.0	2.0
Application Monitoring	9.5	4.3	1.7
Planning	14.5	16.7	18.9
Planning of plant-protection plan	4.9	4.3	8.3
Planning of nutrient management plan	4.4	11	10.6

Business planning	2.0	0.0	0.0
Preparing of application	2.1	1.4	0.0
Cash-flow planning	1.1	0.0	0.0
Related to production	7.9	2.8	3.7
Financial advice	4.3	2.8	3.7
Cultivation technology	3.6	0.0	0.0
Other	4.4	3.8	4.0
In all	100.0	100.0	100.0

Source: Fieldsend A. and Székely E. [2013].

Advisors serving small-scale farms apply several methods of information transfer in their work. Registered advisors, in the course of their compulsory annual on-going training, get acquainted with the methods of knowledge transfer and apply these methods accordingly.

Table 9. Dominated methods used by extension staff for particular groups of clients (percentages)

No.	Method used to provide advice	% of time
1.	Individual extension:	60
1.1	one to one on the farm	45
1.2	one to one outside the farm	6
1.3	telephone helpdesk	9
2.	Group extension:	25
2.1	small group advice on the farm	7
2.2	small group advice outside the farm	18
3.	Mass media extension:	15
3.1	advice by way of internet	8
3.2	advice via website tools	5
3.3	publications, radio, television	2
Total:		100%

5. Characteristics of Farm Advisory System (EC Reg)

5.1 Organisations forming FAS

The Hungarian implementation of the Farm Advisory System was set up by two main regulations of the Ministry of Agriculture and Rural Development (MARD), no. 52 and 73 in 2007. Regulation No.73/2007 outlines the structure of FAS (see below), including the main participatory organisations, roles, responsibilities and relations between the main stakeholders. Regulation No.52/ 2007 outlines most of the aspects regarding subsidised advisory services. The main structure of the subsidised advisory system is the following, as prescribed by this regulation:

Only farmers registered at the Rural Paying Agency may apply for subsidy, if they have reached a certain minimum economic size (agriculture 2 ESU, horticulture 1 ESU). Farmers need to make advisory contract with a Technical Advisory Centre. In Hungary they are called "Territorial" Advisory Centres in spite of the fact that they may work nationwide. TACs have a number of private advisors working for them either as employees or being subcontracted. Private advisors are free to join and TACs they prefer as long as they are registered with and licensed by MARD.

The contract between the farmer and the Technical Advisory Centre must contain the signature of the advisor and the detailed profile of the farmer, including the list of the name and amount of each farm commodity that is produced in the given year.

There are three categories, according to which the given advisory work must be specified (Cross compliance, Work Safety, Others). In each group there are several possible service items, thus the whole list consists of more than 100 items. Cross compliance service items must be selected based on the sector (agriculture, horticulture) and the commodity codes (according to EU FADN system). In the 'Others' category there are various service activity types that can suit diverse agricultural needs.

Both the compulsory and the optional service items need to be described in terms of service hours, the proportion of which is not specified, so it can provide a flexible solution to the needs of farmers. The cost of the service is expressed on a HUF/hour basis for any type of advice offered all throughout the contract. The total number of service hours must be summed up in the contract, for the 80% of which the subsidy can be claimed, up to 700 euro per contract. It is also prescribed that the total value of the contract must be over 140 euro (40 000 HUF), and with the information above it can be calculated that the maximum value of a contract is approximately 875 euro.

The prescribed template text of the contract and the list of advisory service codes are contained in the annex of the regulation. The contract also specifies the financial responsibility of the service provider for any damages the farmer may have sustained due to the fault of the service provider.

Contracts are administered and managed through an electronic online contract management system that is operated by the background institute of MARD called NAKVI. Apart from TACs, who keep a record of the details of the contracts, advisors have also access to the system and

they have their own account in it. Both the actual details of the farmer, the con-tract specifics with service activity items and the advisor's data must be entered, or partly selected from a scroll-down menu.

Contracts can only be finalized and printed for signature if the TAC has enough quota left from the annual budget. This budget is allocated by MARD and the related quota is distributed by NAKVI between TACs. There is a possibility to apply for additional quota if a TAC's quota is exhausted. Before 2013 there used to be a 2 step process after signing the contract first, to submit a claim for eligibility to get granted, and after delivering service, performing the contract and being paid by the farmer, second, to submit a claim for payment. In 2013 the system changed: the 2 steps were amalgamated and also made part of the e-Claim Submission system of the paying agency, which means that the claim must be submitted via an online interface with the governmental client authentication gateway.

The same online contract management system of NAKVI must be used for record keeping of provided advisory services as well. All the details of each transaction (date and time, place, participants, description, reference to attachment, etc., and the method of giving advice (one-to one on the farm, handing over written advice, in the office, by telephone, email, group ad-vice etc) must be recorded with separate pages printed for each event and signed by both the farmer and advisor. All the printed pages will constitute the advisory logbook, the main evidence of that the advisor has carried out his services according to the contract and that the farmer has approved its delivery. This document may be checked by the Paying Agency when visiting the farm and checking the farmer. At the end of the process, all the signed log-book is sent by the advisor to TAC that issues the invoice, which is sent to the farmer for payment.

After the payment all financial details (including invoice number, payment justification voucher number) must be recorded in the contract management system. A 1-advisory page logbook summary is also printed out and signed. Up to 2013 the claim for payment had to be printed out and submitted in this way, but after 2013 the data from the contract management system is taken over by the Paying Agency, and imported into the e-Claim Submission system, providing easier handling of previously transferred data for the user when handing in the e-Claim.

After payment is made to TAC, the TAC will transfer the advisor's fee as well, minus the total service fee (in Hungary, an administrative fee of 10-15% is deducted from the value of the invoice paid by the farmer). This fee is the only source of income for the TACs.

5.2 Evaluation of implementation of FAS

Financing FAS

Financing service providing

- Public funds 80%, up to 700 €/contract
- Private funds (farmers' own contribution) 20%
- TACs determine their own advisory fee (HUF/hour), and it is their only source to finance their advisory activity

The available original budget for 2007-2013: 59 573 572 euro (270 HUF/euro => 16, 084 HUF)

Budget cut: 10 billion HUF, left 6,084 billion HUF

2012: 5091 contracts, 919 546 341 HUF

Used budget until 31 December 2012: 3 566 745 257 HUF

Table 10. Number of contracts and average size of farmers requesting FAS services in Hungary

Year	Number of contracts (max one contract / farmer / year)	Average farm size EUME
2007	8535	80
2008	3550	53
2009	4286	68
2010	3114	75
2011	3409	90
2012	4936	106
2013	4073	78
	31903	78
Total number of (distinct) farmers reached		>18 000

Some of the budget-related problems in the operation of FAS in Hungary between 2007-2012 have been solved by the regulations described above. However, several problems remained, such as the incoherent, artificially created cross-check mechanisms of the Paying Agency, whereby they cross-check data according to an unmatchable set of criteria and a data set related to different time periods.

The problems are worsened by the slow speed at which the Paying Agency processes the claims. Even though it has improved, it is still too slow. Their special software creates and sends to the farmers difficult to understand documents. They are given unrealistically short deadlines to respond (8 days, irrespective of holidays), which might result in farmers losing the subsidy.

There is the further administrative burden in the regulation, namely, that farmers and advisors must specify exactly the activity items and hours in the planned services at the beginning of the year. This strict planning does not allow for the necessary changes caused by certain topical issues and events. This often results in keeping double records, one for the real events and services and another for the official, original record.

The TACs have been facing many difficulties, such as not having real means of quality control over the provided services (neither has the Paying Agency, for that matter), once the advisor and the farmer have signed the logbook. Furthermore, because the advisors tend to join the TAC which charges the lowest administrative fee, these institutions try to limit their fees to be able to attract more advisors. This, on the other hand reduces the income of these institutes, and ultimately, their ability to develop their background services.

The most pressing problem and question the Hungarian FAS was facing in 2013 what the following year would bring. On the one hand, there was uncertainty about how the Common

Agricultural Policy will be implemented. On the other hand, there were signs that the new Chamber of Agriculture would like to take over the “state advisory system”. This aspiration is based on false assumptions, since there is no state advisory system in Hungary as such. If, however, they should mean the FAS by this initiative, it should be pointed out that the actors (both the advisors and the TACs) are non-governmental organisations, NGOs, non-profit organisations or businesses, and as such, they cannot be taken over by the Chamber. Still, the tendency is clear that the Chamber and probably the Hungarian Government aims to radically change the current FAS implementation and the national advisory system in Hungary.

The implementation of FAS in Hungary could be more successful if the TACs could pre-finance the advisory services and activities and they could claim the fee instead of the farmer, thus taking the administrative burden off the famers of having to deal with the Paying Agency. The number and the sum of the contracts per year should also be made more flexible. Furthermore, FAS advisors should be included in the national campaigns more, as their involvement would benefit both farmers and FAS network stakeholders.

6. Summary and conclusions

6.1 Summary and conclusions on section 1–3

According to recent experience in Hungary, several FAS-related issues should be dealt with [Fieldsend A. and Székely E. 2013]. These are the following:

1. There is a limited need and market potential for purely commercial advisory services in Hungary, partly because big farmers have their own advisors, while small farm enterprises do not think it is worth their while to pay for technical advice. FAS mainly services farms between (approximately) 30 and 200 ha in size. Therefore specialist advisors are under-employed at present. Commercial advisors, on the other hand, if working for, for example, input suppliers, can give biased advice.
2. Administrative procedures of subsidising must be speeded up. It may take as long as 2 months to approve applications for funding, and another 18 months for the farmers to actually receive the subsidy. It is a positive development that the EU limitation on the number of times a farmer can use the FAS has now been removed, so this constraint on take-up has been eliminated, but the upper limit of EUR 1500 of advice per farmer per year remains.
3. The trust between farmers and advisors regarding the quality of the advice needs to be restored. Currently the lack of such trust is caused by the difficulty of finding the right person to get the advice from, (especially on specific technical subjects such as soil management) and that the best advisors dislike the bureaucratic public sector services.

There are six recommendations concerning the knowledge flows in the functioning of AKIS as described by Fieldsend A. F. and Székely E. [2013] are the following:

(a) a comprehensive review of the AKIS in Hungary should be conducted;

(b) the present system of incentives for knowledge flow through the AKIS should be urgently reviewed;

(c) future planning should be based on a state-of-the-art understanding of AKIS as multi-actor networks rather than simply as a unidirectional linear flow;

(d) new models should be developed and tested on the basis of experience from other EU Member States;

(e) monitoring of the performance of the AKIS in Hungary should be improved; and

(f) an annual report on the performance of the AKIS should be prepared by the Hungarian government and submitted to Parliament.

6.2 Summary and conclusions on section 4+5

On the introduction of FAS in 2007 a Ministerial Decree defined what ‘agricultural advising’ entails in Hungary. It was declared that only services conducted under the Farm Advisory System (i.e. FAS) may be considered as agricultural consulting. The main aim of the regulation was to provide a legal foundation for subsidised farm consulting. However, the compulsory

establishment of the scope of activities rendered by the advisors proved to be counterproductive. A more flexible approach, namely, if farmers could decide for themselves what advice they require would result in more demand for advisory services.

Hungary differs from several EU member states in the way its different parts of advisory services and AKIS relate to each other. It is worrying that the various actors co-operate only formally or their co-operation is lacking entirely. The EU-funded Farm Information Service (FIS) of the Chamber of Agriculture and the long-established Network of Village-agronomists were supposed to be responsible for raising awareness, but tend to only publicise their own services. Producers primarily maintain contacts with the Network of Village-agronomists; apart from them, they most frequently consult with the input producers and distributors. There is no correct information amongst the public as to who is eligible for free advice and sometimes farmers are not able to utilise the available funds. Interviewees named a lack of knowledge, trust, time and financial resources as to why they have a lack of contacts with these advisors.

This lack of trust is a repeated motive. Many farmers in Hungary feel that the system is not sensitive to their needs. Several 'top-down' possibilities have been suggested, instead of 'bottom up' approaches of consulting with users (farmers) on their precise needs, which would be a very important component of achieving an efficient and effective AKIS.

The top-down approaches for stimulating the take-up of advice suggested were the requirement for compulsory qualification levels for acquiring landed property or for starting farming activities, and prioritising those using advising services during evaluating support applications; However, this can be contra-selective. For example, young farmers applying for EU funds would score an additional five points if they have an advisor. Thus it appears that some engage an advisor just for that reason. The FAS should be more responsive to the actual demands of farmers rather than forcing formal requirements on them.

All of this evidence suggests that the present system does not adequately reflect the needs of potential users, especially as these needs evolve over time. More attention should be paid to accommodate the real needs of the users.

There is no systematic check on the activities of AKIS in Hungary, concerning the impacts of information and knowledge flow between agricultural producers and extension, research, education and support systems, apart from budget figures of FAS.

A brief list of available data sources about demand, use, value-added impact of the farm advisory services is below [Fieldsend A. and Székely E. 2013]:

- **Demand indicators.** The Hungarian Central Statistical Office (KSH) can provide data on indicators such as: the number and proportion of individual farmers with agricultural training at various levels, according to age, type and size of farm etc., on an annual basis.
- **Use indicators.** VM-NAKVI collects data every year on the EU co-funded consultancy support contracts between farmers and advisors including: number of applications submitted; sum of aid requested (HUF); number of contracts approved; and the amount of funding granted (HUF). VM-NAKVI also has access to data on the consultancy services required each year by type (the main headings are:

Administrative and informational; Planning; Data directly related to production; Other) but apparently does not formally collate this data. There is no information on the level of activity in the non-subsidised farm advisory services.

- **Value-added indicators.** Evaluation by users, including the assessment of the usefulness of advising, of the advisory services subject to fee is completely missing, and it is also partly missing in the field of client support services (subsidised services). The client support advising evaluation methods measure rather the activity of the advisers and not the benefits provided by the service. The quality of the advisors' work is not assessed.
- **Impact indicators.** So far, no initiatives have taken place to assess the impact of farm advisory services/AKIS on the performance of the agricultural sector but the Ministry of Rural Development would be ready to use any feasible and reliable method).

The Hungarian government is not obliged to report to Parliament on the activities of the AKIS. Every year the Ministry of Rural Development produces a 150-page report called the 'State of Hungarian Agriculture' for the Hungarian parliament. It includes scant references to AKIS related budgetary issues, such as the number of research institutes and their budgets, and the budget for the FAS.

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8. Appendices

8.1 The list of institutions and organisations creating AKIS in Hungary (in 2012)

Name of institution/ organisation (English version)	Address	Website (English version)	Status (public, private, NGO)
A. Universities			
Szent István Egyetem	2100 Gödöllő, Páter Károly u.1.	www.szie.hu	public
Corvinus Egyetem	1093 Budapest , Fővám tér 8.	www.uni-corvinus.hu	public
Debreceni Egyetem	4032 Debrecen, Egyetem tér 1.	www.unideb.hu	public
Pannon Egyetem	8200 Veszprém Egyetem u. 10.	www.uni-pannon.hu	public
Kaposvári Egyetem	7400 Kaposvár, Guba Sándor utca 40.	www.u-kaposvar.hu	public
Nyugat-Magyarországi Egyetem	9400 Sopron, Bajcsy-Zsilinszky utca 4.	www.nyme.hu	public
Szegedi Egyetem	6720 Szeged, Dugonics tér 13.	www.u-szeged.hu	public
B. Scientific and research institutes			
Állattenyésztési és Takarmányozási Kutatóintézet	2053 Herceghalom, Gesztenyés út 1.	www.atk.hu	public
Kisállattenyésztési Kutatóintézet és Génmegőrzési Koordinációs Központ	2100 Gödöllő, Isaszeg út 200.	www.katki.hu	public
Tokaji Borvidék Szőlészeti és Borászati Kutatóintézet	3915 Tarcal, Könyves Kálmán utca 54.	tarcalkutato.hu	public
Központi Élelmiszer-tudományi Kutatóintézet	H-1022, Budapest, Herman Ottó út 15	www.keki.hu	public
Halászati és Öntözési Kutatóintézet	5540 Szarvas, Anna Liget 8.	www.haki.hu	public
Erdészeti Tudományos Intézet	9600 Sárvár, Várkerület 30/A.	www.erti.hu	public

VM Mezőgazdasági Gépesítési Intézet	2100 Gödöllő, Tessedik Sámuel u. 4.	www.fvmmi.hu	public
Mezőgazdasági Biotechnológiai Kutatóközpont	2100 Gödöllő, Szent-Györgyi Albert u. 4.	www.abc.hu	public
Agrárgazdasági Kutató Intézet	1093 Budapest, IX. Zsil utca 3-5.	www.akii.hu	public
Növényi Diverzitás Központ	2766, Tápiószele, Külsőmező 15.	www.rcat.hu	public
BCE Szőlészeti és Borászati Intézet Kecskeméti Kutató Állomás	6000 Kecskemét (Katonatelep), Katona Zsigmond u. 5.	www.uni-corvinus.hu/?id=30539	public
KRF Szőlészeti és Borászati Kutatóintézet		www.szbki-eger.hu	public
PE AC Szőlészeti és Borászati Kutatóintézet	H-8261 Badacsonytomaj, Római út 181.	www.szbki-badacsony.hu	public
PTE Szőlészeti és Borászati Kutatóintézet	7634 Pécs, Pázmány Péter utca 4.	app.pte.hu/tk/egyseg.php?id=1282	public
Kaposvári Egyetem Takarmánytermesztési Kutatóintézet	7095 Iregszemcse Napraforgó u. 1.	www.ke.hu/menu/370/369	public
KRF Fleischmann Rudolf Mezőgazdasági Kutatóintézete		www.karolyrobert.hu/cms/ netalon.xml?data_id=410	public
DE AMTC Karcagi Kutatóintézete	H-5300 Karcag, Kisújszállási út 166.	www.dateki.hu	public
DE AMTC Nyíregyházi Kutatóközpont	H-4400 Nyíregyháza, Westsik Vilmos utca 4-6.	www.nyirkutato.hu	public
DE Debreceni Tangazdaság és Tájkutató Intézet	Debrecen, Böszörményi út 138.	www.unideb.hu/portal/hu /etk?id=24001...	public
Gabonakutató Nonprofit Közhasznú Kft.	6726 Szeged, Alsó kikötő sor 9.	www.gk-szeged.hu	NGO
Ceglédi Gyümölcstermesztési Kutató-Fejlesztő Intézet Nonprofit Közhasznú Kft.	2700 Cegléd, Szolnoki út 52.	www.cefrucht.hu	NGO
Fertődi Gyümölcstermesztési Kutató-Fejlesztő Intézet Nonprofit Közhasznú Kft.	9435 Sarród, Kossuth L. utca 57.	www.gykut.hu	NGO
Újfehértói Gyümölcstermesztési Kutató és Szaktanácsadó Nonprofit Közhasznú Kft.	4244 Újfehértó, Vadas-tag 2.	www.ujfehertokutato.hu	NGO

Állami Gyümölcs- és Dísznövénytermesztési Kutató-Fejlesztő Közhasznú Nonprofit Kft.	1223 Budapest Park utca 2.	www.resinfru.hu	NGO
Fűszerpaprika Kutató-Fejlesztő Nonprofit Közhasznú Kft.	6300 Kalocsa, Obermayer tér 9.	fuszerpaprikakutato.hu	NGO
Zöldségtermesztési Kutató Intézet Zrt.	6000 Kecskemét, Mészöly Gyula u. 6.	www.zki.hu	NGO
Magyar Tejgazdasági Kísérleti Intézet	H-1093 Budapest, Bakáts u. 8.	www.mtki.hu	public
Országos Húsipari Kutatóintézet Közhasznú Nonprofit Kft.	1097 Budapest, Gubacsi út 6/b.	www.ohki.hu	NGO
Állatorvos-tudományi Intézet	1143 Budapest, Hungária krt. 21.	www.vmri.hu	public
Mezőgazdasági Intézet	2462 Martonvásár, Brunszvik u. 2.	www.mgki.hu	public
Növényvédelmi Intézet	1022 Budapest, Herman Ottó út 15.	www.nki.hu	public
Talajtani és Agrokémiai Intézet	1022 Budapest, Herman Ottó út 15.	www.mta-taki.hu	public
Gyógynövénykutató Intézet Kft.	2011 Budakalász Luppaszigeti út 4.	gynki.hu	NGO
Cukoripari Kutatóintézet	1084 Budapest, Tolnai Lajos utca 25.	www.cukorkutato.hu	public
C. Extension and advisory organisations			
State Extension Centre			
NAKVI	1223 Budapest Park u. 2.	www.nakvi.hu	public
7 Regional Centres			
Central Hungary	Saint Stephen University, Faculty of Economy and Social Sciences, Gödöllő	www.szie.hu	public
Central Transdanubia	University of Veszprém, Faculty of Georgikon Agricultural Sciences, Keszthely	www.uni-pannon.hu	public
Western Transdanubia	West-Hungarian University, Faculty of Agriculture and Food Sciences, Mosonmagyaróvár	www.nyme.hu	public
Southern Transdanubia	University of Kaposvár, Faculty of Animal sciences, Kaposvár	www.u-kaposvár.hu	public

Northern Hungary	Károly Róbert College, Gyöngyös	www.karolyrobert.hu	public
Northern Great Plain	University of Debrecen, Centre of Agricultural Sciences, Debrecen	www.de.hu	public
Southern Great Plain	University of Sciences in Szeged, Faculty of Agricultural College in Hódmezővásárhely	www.u-szeged.hu	*public*
80 Territorial Advisory Centres (Farm Advisory System) (the most important 20 see below)			
GAK Nonprofit Közhasznú Kft	2103 Gödöllő, Páter Károly út 1.	http://www.gak.hu/	private
Magyar Település- és Területfejlesztõk Szövetsége	H-1535 Budapest, Pf. 811, Budapest V. Kálmán I. u. 20.NGO	http://mttsz.lapunk.hu/	NGO
Kecskeméti Fõiskola	6000 Kecskemét, Izsáki út 10.	www.kefo.hu	public
Mikroöntözési Kutató Szolgáltató Kft	5540 Szarvas,Deák Ferenc u. 64/1	mikrotszk.hu	private
Közép-Pannon Agrokonzult Gazdasági Szolgáltató Kft.	Közép-Pannon Agrokonzult Gazdasági Szolgáltató Kft.	www.agrokonzult.hu	private
D. Main private advisory organisations			
Ö&B Mezõgazdasági Szaktanácsadó és Szolgáltató Szövetkezet	4100 Berettyóújfalu, Szabó Pál u.14.	www.ob.hu	private
Rural Nord Kft.	4032 Debrecen, Böszörményi u. 49.	www.ruralnord.hu	private
Demo Trade Kereskedelmi és Szolgáltató Bt.	4400 Nyíregyháza, Lengyel u. 15. sz.	www.mgtanacsadas.hu	private
MANUS -ALFA Szervezõ, Oktató és Szolgáltató Betéti Társaság	4400 Nyíregyháza, Derkovics utca 3.	www.manus-alfa.hu	private
Dunántúli Mezõgazdasági Szaktanácsadók Szövetsége	8360 Keszthely Deák F. u.16.	www.dmszsz.hu	private
UNIVER-PENTA Bt.	9200 Mosonmagyaróvár, Kossuth L. u. 99..	www.univer-penta.hu	private
E. Other organisations giving extension and advisory services			
Chamber of Agriculture (Farm Information Service)	1119 Budapest Fehérvári út 89-95.	www.agrarkamara.hu	NGO

8.2 List of questionnaire addressees

Name	Address	Website/ email contact:
Ministry of Rural Development, Department of Agronomy, Imre Wayda, cancellar	1055 Budapest, Kossuth tér 11.	www.fvm.hu
National Extension Centre, Dr. Szabolcs Bartos, director of the centre	1223 Budapest, Park u. 2.	www.nakvi .hu
Szent István University, Central Hungarian Regional Extension Centre, Dr. József Kozári, head of the centre	2100 Gödöllő, Páter K. u. 1.	www.szie.hu
Agricultural Centre of Gödöllő,(as sub-regional extension centre) Dr. LászlóPapócsi	2100 Gödöllő, Páter K. u. 1.	www.gak.hu
Chamber of Agriculture Erika Székely, cancellar	1119 Budapest, Etele út 57.	www.agrarkamara.hu

8.3 List of the most important publications on AKIS with brief abstracts

G. Nemes – C. High [2013]: Old institutions, new challenges: the agricultural knowledge system in Hungary. Studies in Agricultural Economics. p.115 (76-84) ISSN 1418-2106, DOI 10.7896/j.1303

Abstract

This paper explores and analyses the Hungarian institutional system for the creation and the transfer of knowledge in the field of agriculture and rural development. We consider the constitution and operation of the Agricultural Knowledge System (AKS) in Hungary, focussing on the formally organised aspects, and suggest that both the structure and content of the knowledge needed in the sector have significantly changed during the past decades. These changes, especially in relation to the sustainability of agriculture, pose significant challenges to traditional AKS institutions, which often have failed to change in line with the new requirements. Based on a literature review, interviews and a national stakeholder workshop, we offer an analysis of Hungarian AKS institutions, their co-ordination, co-operation and communication with each other and with Hungarian rurality, and of the arising issues and problems concerning the creation and the flow of knowledge needed for sustainable agriculture.

We also briefly explore characteristics of emerging bottom-up structures, called LINSAS (learning and innovation networks for sustainable agriculture), and explore the significance of the findings in this article for the study of AKS in Europe. This article is based on preliminary results of the SOLINSA research project, supported by the European Union's Seventh Framework Programme.

Keywords: sustainable agriculture, LINSA, Hungary, rural development

A. Vér – G. Milics – J. Kozári [2013]: Investigation of the Central European Agricultural Advisory Systems with special regard to the Austrian and Hungarian Systems.

Abstract

Farmers in the European Union require important information that helps them to apply for subsidies, furthermore such information helps them to receive sufficient professional and economical knowledge for the practical application.

It is essential for the farmers to receive reliable information in order to fulfil all requirements expected by the various regulations and criteria systems. This is where a professional advisor can help the farmers.

In general the farmers do not have enough receptivity and capacity for the adaptation of the information. For this reason it has been recognized both is European and national level that knowledge transfer (advices, training) has to be encouraged, furthermore professional advisors are needed in the close location of the farmers [Tóth, 2005].

In Hungary several advisory systems are working parallel. The main aim of these advisory systems is knowledge transfer. Unfortunately maintaining these systems is expensive, unnecessary and their efficiency is questionable. In Austria the long-standing agricultural advisory systems work reliable.

In this article the aim was to investigate how the Hungarian advisory system can be rationalized. A questionnaire-based survey helped to investigate the target groups and came to the conclusions based on the 400 questionnaires.

Based on the institutional structure that already existed a new structure could be developed. In the new structure the parallel advisory systems that already existed could be integrated.

Keywords: Rural development, Farm Advisory System, agricultural advisor, farmer

K. Dajnoki – Gy. Szabados – É. Bácsné Bába [2012]: Analysis of organizational and professional communication in the Hungarian agriculture. 44. Hrvatski i 4. Međunarodni simpozij agronoma

Abstract

In this article we would like to present our research results of communication. We believe that professional communication is the flow of professional information inside the sector, and it also covers the flow between the producer and administrational sectors. We examined the communication influential factors in consultant systems and agricultural extension networks. The reason for that is to evaluate and understand communication processes and problems which affect actors of the sectors. This research enables us to analyse and demonstrate the flow of professional information defined and explained by ourselves.

Key words: communication, producer, consultant system, agricultural extension

A. Fieldsend and E. Székely [2013]: An assessment of the Agricultural Knowledge and Innovation System in Hungary. In: Knowledge as a factor of rural development. Rural areas and development – vol. 10. Warsaw-Poznan. ISBN 978-83-7658-378-5 p. 27-44.

Abstract

Knowledge flow systems are an essential component of Agricultural Knowledge and Innovation Systems (AKIS). A traditional view of a knowledge flow system would include research as a source of knowledge, extension and education as knowledge and information channels, and agricultural entrepreneurs as recipients of knowledge. More recently, this ‘linear’ view has been

widely challenged, and in view of this the European Union is proposing a new approach to encouraging innovation in agriculture in the 2014-2020 programming period. This paper assesses the nature of knowledge flows through the AKIS in Hungary, and looks at the factors that encourage and discourage these. It concludes that to more effectively encourage innovation the functioning of the AKIS in Hungary must be improved and makes six recommendations: (a) a comprehensive review of the AKIS in Hungary should be conducted; (b) the present system of incentives for knowledge flow through the AKIS should be urgently reviewed; (c) future planning should be based on a state-of-the-art understanding of AKIS as multi-actor networks rather than simply as a unidirectional linear flow; (d) new models should be developed and tested on the basis of experience from other EU Member States; (e) monitoring of the performance of the AKIS in Hungary should be improved; and (f) an annual report on the performance of the AKIS should be prepared by the Hungarian government and submitted to Parliament.

Key words: knowledge flows, extension services, monitoring, evaluation

K. Tóth – J. Kozári [2005]: Privatization of Economic Policy Background of Agricultural Extension in Western European Countries. The Role of Education in the Process of Transition: From Consumer Society to Knowledge Society, Czech University of Agriculture Prague, p.80-88, ISBN 80-213-1384-6

Abstract

International experiences show that the working of agricultural extension is provided by many kinds of sources. It is usually the state who undertakes the greatest role, and that, in the majority of the cases, can be as much as 100 percent. In recent years, however, a process has been established in Western-European countries which aim at reducing government participation and the privatisation of extension systems. In the Hungarian extension system, the direction of reform year by year is opposite to this. What extent can we reach by going towards the extension supported by the State? When do those factors emerge in Hungary that is present in the Western European Countries run in the direction of privatisation?

In this paper we examine the sources utilised by extension and the reasons for the privatisation process.

Key words: extension, agricultural extension, privatisation