

Strengthening advisory services for small farmers in the fruit and vegetable sector

Comparative study on extension and transfer of knowledge in pre-accession countries and new member states (TRANSFER)

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Sustainable and competitive agricultural supply chains in European Union pre-accession countries and new member states (EU Access)

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- Abstract** : An analysis is made of previous extension projects and experiences on transfer of knowledge in the pre-accession countries and new member states, together with a description of the present situation with regards to extension and the co-operation between researchers, extension service and end-users of knowledge in the participating countries. Recommendations for improvement of the present situation will be formulated.

1. Transfer project

TRANSFER is one of the projects that are being implemented under programme 400 – VI; Sustainable and competitive agricultural supply chains in pre-and post- European Union accession countries. The other projects are PRODUCER, QUALIMAN, ORGANICS and R&D.

Farmers in pre and post-accession countries and in particular the numerous small farms in these countries, need information and knowledge to adjust their farm practices to the European market and to European agricultural policies and regulations. Their lack of information and knowledge in comparison with the present member states of the EU will have a dramatic influence on competition at the domestic market and on the export markets: competitive products will annihilate local production because of better quality, lower price, better marketing. This may cause social problems.

Lack of access to knowledge also causes the use of less environmental friendly production methods to raise yields. Improving farmers' access to knowledge and information will therefore also have a strong environmental component.

Particular problems include:

- In many post-accession (PA) countries there is a discrepancy between knowledge supply and knowledge demand.
- Results of research do not, or too late, reach the farmer.
- Research projects are often not aimed at solving problems of farmers; developed knowledge cannot be directly used in practice.
- Knowledge is accumulated at the national and international research centres, and is hardly available for farmers.
- Farmers often do not know where to apply for information to solve their problems.
- In-effective extension services.

Due to the fast devaluation of scientific knowledge only fast transfer of knowledge can make it efficient and profitable. Up-to-date and efficient farming methods consist of the latest technology and knowledge. Hence efficient methods for transfer of knowledge and extension are needed.

These issues need to be understood against the background of rapidly changing extension approaches and the organization of extension services the world over. This has included a move to more interactive learning orientated approaches with high levels of participation and interaction between farmers, researchers and extension staff. The privatisation of extension services and increasing role of the private sector has also led a more complex network configuration of agricultural knowledge development and transfer.

TRANSFER contributes at establishing a sound model for the foundation of effective extension systems and services that enable farmers, in particular small farmers to get access to the information and knowledge needed to solve their problems.

The TRANSFER purpose is to establish and test a framework of alternative models for improving extension effectiveness in pre- and post- European Union accession countries.

In order to reach this, the following **short-term objectives** need to be accomplished:

- Analysis of previous extension projects and experiences on transfer of knowledge in the participating countries.
- Study of past country / case experiences.
- Analysis of the present situation with regards to extension and the co-operation between researchers, extension service and end-users in the participating countries.
- Formulation of recommendations on the improvement of the present situation with respect to efficient transfer of knowledge and effective extension services.
- Pilot experiments in which recommendations are tested.

2. Project methodology and activities 2004-2006

The project methodology consisted of the following steps.

1. *Establishing a network of key knowledge users, extension agents, researchers and policy makers.* By the end of 2006 a loose network of researchers, policy makers, managers of advisory systems and organisations, NGOs, farmers associations and agricultural chambers from Poland, Czech Republic, Slovak Republic, Romania, Turkey, Hungary and Bulgaria, was created.
2. *Developing a synthesis of existing studies, literature, policies and case studies of successful change and producing a policy orientated publication in hard copy and available on a website.*

In November 2004, a first workshop was organised in Poland in Krakow, where a part of the Transfer network met for the first time. The objectives of the workshop were:

- To make an analysis of problems that farmers experience in obtaining information on EU and national rules and regulations that affect their farming practices

- To exchange experiences on extension concepts, policies, institutional issues and extension approaches
- To learn from innovative extension policies and projects and to identify conducive and constraining extension and knowledge transfer policies.
- To identify pilot projects for collaboration for 2005 and 2006.

Besides this workshop, a desk study was conducted on agricultural extension systems in Central and Eastern Europe. This step in the project resulted in the drafting of a synthesis document¹. The synthesis document describes the current advisory systems and the main activities that EU new member states and pre-accession countries are currently implementing in line with EU regulations.

3. *Conducting an extension strategy workshop to develop policy guidelines.*

A study tour to the Netherlands was organised to share information with the participants from three Central and Eastern European (CEE) Countries (Czech Republic, Hungary and Poland) on the existing advisory system in the Netherlands. The results of the study tour were shared during a workshop in Budapest in December 2005.²

The 2004 TRANSFER workshop reveals that there is an increasing need to explore participatory and multi-stakeholder approaches for knowledge generation, where farmers, researchers, advisors, policy makers, and others work together for agricultural innovation. Those approaches and new concepts have been explored in a workshop held in Budapest, Hungary, from December 4-7, 2005. The workshop was hosted by the FAO Sub-regional Office for Central and Eastern Europe (FAO SEUR) and co-moderated by IAC and FAO. Participants represented research and information institutes, advisory services, policy makers, private entrepreneurs, farmer and consumer organisations working in the conventional and the organic agricultural sector. The approximately 35 participants were coming from 12 different countries and their travel costs and accommodation were financed by the FAO Regional Programme on Farmer Field Schools, UNDP/GEF, the Dutch EU accession programme, ORGANICS and TRANSFER, except for self paying participants.

4. *In collaboration with the other Programme 400-VI projects establishing a number of pilot projects.*

A pilot project has been implemented together with the ORGANICS project in Slovak Republic and with the Slovak Association for Rural Development. The collaboration with SASA started in September 2004, when both ORGANICS and TRANSFER assisted at the EKOMIT conference on Organic Farming and Rural Development. This first contact consisted of a presentation of knowledge generation and transfer for organic farming in the Netherlands, followed by a discussion in two subgroups on raising consumer awareness for organic consumption and improvement of the agricultural knowledge system for organic farming in Slovak Republic. At the same

¹ Dieuwke Klaver, (IAC) Knowledge circulation and generation for small farmers in EU countries, Synthesis document, November 2005.

² Judit Komáromi, Katarzyna Banasik-Solgala, Jiří Husa, Report on Study Tour of TRANSFER project : Comparative study on extension and transfer of knowledge in pre- and post-accession countries, 30 October – 2 November 2005, the Netherlands, Szent István University, Plant Protection Department, National Training Coordinator of IPM-WCR project (Hungary), AMBAR, Private Consulting Company, (Poland), Czech University of Agriculture Prague, Institute of Education and Communication (Czech Republic).

time the mission to Slovak Republic was used to get a clearer view on the general advisory system in Slovak Republic.

A real pilot project with SASA and ORGANICS was implemented in 2006 to implement some of the recommendations of the Budapest workshop³. Main activities in this project were : making an inventory of the knowledge transfer system in the area of organic vegetable and fruit production; identifying possibilities for improved advisory services; establishing more effective cooperation and dialogue amongst stakeholders in organic farming and providing farmers with information on organic farming.

A final pilot activity took place in Transilvania in Romania in December 2006. This workshop provided an opportunity for the Transfer project to make an inventory of participatory approaches of knowledge transfer amongst farmers or amongst actors in the supply chain and to discuss what needs to be done to improve advisory services - consulting for farmers. The workshop was organised by one of the Transfer network members, the Count Károlyi Sándor Foundation in Hungary, who has a project with Hungarian Farmer Associations in Romania.

³ Dieuwke Klaver (Wageningen International), Zuzana Lehocka (SASA), Knowledge generation and transfer for organic farming in Slovak Republic – Some lessons learned for improved advisory services, November 2006.

3. Findings

3.1 Current situation with regard to advisory systems

Farm structure structure and livelihood strategies of rural households

The following attempt is being made to classify farms and to draw consequences for the advisory system. All those farm categories are present in all countries, but to a different degree.

- Semi-subsistence farm households. More than 57 % of the Polish family farms own less than 5 hectares and only 50 % of all farms have a market orientation. Romania is facing the same situation, where the average farm size is estimated at 2.7 hectare. Those farms produce for their own consumption needs or for local street markets. In number they are very important in all countries, but in some countries they are not registered and do not benefit from EU subsidies. Advisory services should address rural development and off-farm employment opportunities for this category of households.
- Small household farms, producing for wholesale markets if the quality is accepted. Those farms do not have specialised staff and they will face difficulties to communicate immediately with researchers who are specialists. They need advisors who provide solutions to farm problems and who know where to get the appropriate information. For market competitiveness, those farms should preferably collaborate with other farms in order to decrease transaction costs for marketing and information services. Collaboration in formal producer organisations or in informal study clubs seems to be a promising strategy.
- Individual and corporate farms, who are already highly competitive and who can market agricultural produce on an individual basis. Some of them may already produce for EU markets and may need special advice on food safety regulations and EUREPGAP. They are able to hire private and even international advisors who give high quality solutions. The corporate farms already avail of highly qualified employees who provide part of the high quality solutions or who know where to get the information.

The TRANSFER project aims at addressing the information and knowledge needs of the second categories of farmers in particular.

Advisory policies in line with EU regulations as of 2007

National policies and advisory systems are being adjusted in order to comply with EU regulations. The most important European Regulation is the 1782 regulation that has been issued in 2003. The 1782/2003 Regulation states that it is necessary – compulsory that Member States establish a comprehensive system offering advice to commercial farms as of 2007. This farm advisory system aims at helping commercial farms to meet the standards of modern high-quality agriculture, including land and farm management, food safety and environmental standards. Each member state has the obligation to:

- Set in place a farm advisory system that enables farmers to get at least free of charge information on statutory management requirements and legal arrangements set by CAP.
- Target especially those farmers who receive more than 15.000 Euro in direct payments per year

- Set up an EU-conform registration and accreditation system of advisors and their organisations.
- Ensure privacy and protection of farm management data by advisory organisations.

Support can be given to farmers to cover higher costs for advisory services needed for the implementation of EU norms related to environment, public health, animals and plants, and animal husbandry. The total sum of support for agriculture advisory services is limited to a maximum of 80% of all advisory costs. Each farmer can claim a maximum amount of 1500 euro.

Major consequences at this moment are that all ministries of agriculture are reviewing their advisory policies.

Countries who opted for a public advisory model, like Poland, Bulgaria, Romania are reviewing the advisory law, enabling independent private advisors to be officially registered and certified as an advisor. Both public and private advisors do have to follow compulsory training programmes. Farmers, who make use of certified advisors, can benefit from subsidies for advisory services. At the same time, those three countries are confronted with enormous public advisory costs because they have to reach all farmers and assist them in filling in registration forms. In consequence they are currently starting to differentiate between advisory services that will be charged for and advisory costs that will be free of charge to the farmer. In Poland this means that the legal status of the regional advisory services has changed and that they can earn and avail of their own incomes.

Countries that opted for a private advisory model, like Czech Republic and Slovak Republic are identifying strategies to inform farmers about new legislation by dissemination of information on websites, by regional representatives of the Ministry of Agriculture, by agricultural chambers and by private advisory organisations that have been certified and registered after having followed compulsory training programmes. For instance, Czech Republic developed an advisory model that makes a clear distinction between information to be disseminated in the public interest for all farmers and agro-technological advice. The first type of information is disseminated free of charge, by both governmental organisations as private organisations that are subcontracted by the Ministry. Technical and technological advice provided by research results that aim to increase the competitive position of individual farmers in the market is to be co-financed by the Ministry of Agriculture and farmers.

Although the fundamental philosophy of the Hungarian Ministry of Agriculture is that it is not for governments to provide the consultancy services, it was confronted with the emergence of many small holders who started farming with hardly any vocational skills and knowledge. In reaction Hungary increased its national budget for in-service training for groups of farmers as of 1993. Nowadays 800 civil servants are working in advisory service delivery at the county level.

Important issues related to the introduction of new advisory policies

- The position of agricultural chambers in providing advisory services. In some countries the position and role of agricultural chambers in the new advisory system is being discussed. Although they are supposed to defend farmers interests and become a lobby organisation, in some countries the idea is to orient them towards information service delivery structure for EU rules and regulations. This is for example the case in

Hungary and in Romania (and maybe in Czech and Slovak Republic). The question is about the feasibility of combining both advocacy and advisory functions.

- A second issue is related to who can be registered and certified as an advisor or advisory organisation. Officially registration is open for anyone who wants to be certified. But for some organisations or advisors registration and training costs may be too high. This means for instance that highly qualified advisors who are trusted by farmers can not register because they can not afford the costs of training and certification (the case of Slovak Republic). In some regions, many farmer associations do want to be certified as an advisory organisation for their members, but their degree of representativeness is at stake.
- A third issue is about the quality and the relevance of the compulsory training programme. What should be the appropriate content of those courses? Should they include specific topics such as organic agriculture and advisory skills? Or should they only focus on the transfer of EU regulations on GAP? Do those courses provide added value for farmers who are the ultimate beneficiaries of such programmes? And are certified advisors able to establish relations with farmers on the basis of trust, skills and knowledge? Or will farmers still turn to non certified, but good qualified advisors whom they can trust?
- A fourth issue is what to do with the many small semi-subsistence farmers who can not or are not willing to contribute to financing advisory services? Are they be to neglected by the advisory services, or should they be targeted in order to prevent the creation of social problems in the country side? Most probably those small farmers will be targeted in the Rural Development Plans.

In the next year, 2007, those issues will become clearer in most countries, as policies and laws on the advisory system will be operationalised.

Other reforms in the advisory systems

Besides the preparation of advisory services in line with European regulations, other institutional reforms have been introduced to make advisory services more demand-driven and effective.

Those include both market reforms that include the privatisation of advisory services and non-market reforms⁴.

Market reforms encompass four major reform strategies: revision of public sector extension systems, pluralism, cost recovery, and total privatisation. Non market reforms comprise two main reform strategies: decentralisation and

		MARKET REFORMS	
		FUNDING	
		Public	Private
DELIVERY	Public	Revision of public sector extension via downsizing & some cost recovery (Canada, Israel, USA)	Cost recovery (fee-based) systems (OECD countries, previously in Mexico)
	Private	Pluralism, partnerships, power sharing (Chile, Estonia, Hungary, Venezuela, S. Korea, Taiwan)	Privatization (total) Commercialization (The Netherlands, New Zealand, England & Wales)
		NON-MARKET REFORMS	
Political Fiscal Administrative Issues		Decentralization to lower tiers of government (Colombia, Indonesia, Mexico, The Philippines, Uganda & others)	Transfer (delegation) of responsibility to other entities (Bolivia, to farmer organizations; Ecuador, mixed with farmer-led NGO programmes; Peru, extension devolved to NGOs)

⁴ William M. Rivera, Agricultural and Rural Extension Worldwide: Options for Institutional Reform in the Developing countries, FAO, 2001.

subsidiarity.

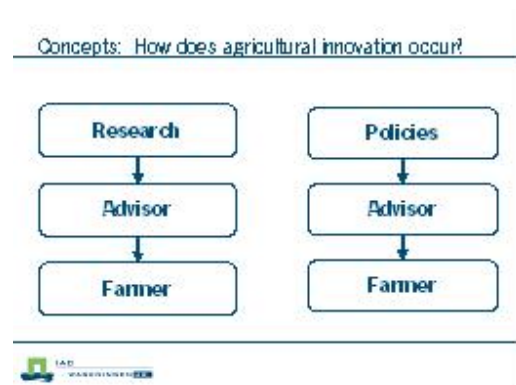
With regard to the market reforms it is important to make a distinction between the organisation in charge of *funding* of advisory services and the one in charge of advisory services *delivery*. Governments are able to provide publicly funded advice by means of Public Advisory Centres or by means of privatised advisory centres that sign contracts with the Government for particular advisory products. Taking into account the small individual farmers and their need for appropriate advice, another issue to elaborate is the cost-sharing principle, where both farmers and government do participate in the funding of advisory services.

Only two non-market reforms are being mentioned by Rivera. Other non-market mechanisms, such as the existence of multi-stakeholder platforms need more attention, because they enable all stakeholders involved to participate in decision-making on advisory policies, their implementation and their funding principles.

Examples of non-market reforms are the decentralization of advisory services in Poland, the establishment of multi stakeholder platforms level in charge of advisory policy formulation or monitoring their effectiveness (Poland, Hungary, Czech Republic). Examples of market reforms are the introduction of the user-pay principle for some advisory products (Poland) and cost-sharing principles, such as in the advisory circle project in Czech Republic. Most often however, efforts are concentrating on training of advisors and setting up advisory accreditation and registration systems that give advisors access to public funds for advisory activities. Little learning takes place on the effects of the introduced reforms in terms of increased responsiveness to small farmers.

Transfer of information model is prevailing

In all countries, the transfer of technology model is prevailing. It is especially used to inform farmers about research findings and about new policies, regulations and opportunities for direct payment measures. In Romania, Bulgaria and Poland, the public extension service is in charge to inform farmers about agricultural production technologies and about EU regulations. In Poland, extension workers are spending a lot of time in filling in application forms for subsidies. Extension workers are trained in agricultural subject matters at universities and research stations and are transferring this information to farmers.



Only some projects have been identified where small farmers were organised in advisory circles or in study clubs (Czech Republic, Hungary and in Romania). In Czech Republic the advisory circles were initiated by the government, in Hungary they were initiated by the University of Gödöllő, and in Romania the advisory circles have been initiated by farmer associations. The extent to which these advisory circles are really based upon learning by exchanging experiences and by visiting each others farm remains to be studied further. In some countries the name “advisory circle” is also used to organise farmers of one region in meetings where information on EU legislation is being transferred. The Hungarian pilot project on study clubs is based upon the same

principles as the Dutch study clubs where farmers are learners, trainers, researchers, local programme organizers, policy advisors.

At the same time, FAO is running a Farmer Field School (FFS) programme in Hungary, Slovak Republic, Romania and Bulgaria. The 51 FFS in these countries regroup 15-25 farmers that

- meet regularly during the growing season,
 - have their own study fields
 - learn about ecology and field management
 - Use non-formal adult education approaches (learning by doing, experiential learning).
- The FFS approach was launched in Central and Eastern Europe for the first time in 2003, when these regions started to suffer from the Western Corn Root Borer- a new pest in Europe since 1992.

3.2 Matching farmers' information needs with advisory services.

Farmers should be able to clearly articulate their needs

The historical context changed the roles and responsibilities of farmers. In some countries farmers for a long time were employees who did not have any responsibility for farm outcomes. A farmer in the EU context is expected to behave as an entrepreneur and should be able to manage his farm also from the economic point of view. Most small farmers have difficulties in adapting to the new context and they are not able to articulate their specific demands in terms of their requirements from advisory services or needs for research.

Farmers information needs

Farmers need the following information:

- Technical information on agricultural inputs, practice, and eventually on packaging and processing
- Administrative information, in order to comply with EU regulations and to get subsidies
- Information on EU and national rules and regulations
- Information coming from the market, available in market information systems
- Entrepreneurship skills, that help them to find new market niches and to improve farm management
- Information on prevailing and compulsory quality systems, such as food safety and quality system, environmentally sound production methodologies and eventually organic certification procedures.

Although the Transfer project has not collected exhaustive information on the availability of these types of information, the following information seems to be relevant.

Obtaining information on EU administrative issues, rules and regulations

All countries should set up a farm advisory system that enables farmers to get at least free of charge information on statutory management requirements and legal arrangements set by CAP.

1. In most countries, an internet side is published where farmers can find all kind of information.

However, many farmers are computer illiterate or do not have access to a computer.

The FAO, together with Slovak Republic, Hungary, Czech Republic and Poland is running an E-farmer project. Farmers with internet access can access all relevant information at the AGROWEB e-Farmer side for CEE in the national language or by the national representatives of e-Farmer, such as UVTIP, the Scientific and Technical Information Institute for Agriculture (Slovak Republic) and the Institute of Agriculture and Food Information (Czech Republic).

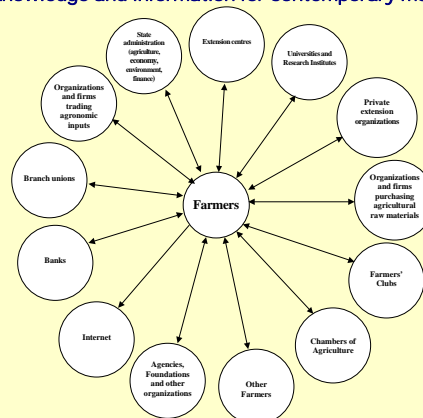
Only 20 % of the farmers in Slovakia have a computer. Other farmers need to work in telecottages or visitors centres that have online services. Sometimes internet facilities are also available to fill in application forms for subsidies. In the pre-accession phase not all regulations and norms are available in the national language. Official EU documents only become available in national language as a country becomes a new member state (Romania).

2. Farmers can also obtain information on EU rules and regulations at sub national offices of the Ministry of Agriculture, as is the case in Slovak and Czech Republic. In Poland, extension workers are even working at municipality level to assist farmers. The intention of the Romanian authorities is to inform each settlement on EU rules and regulations. This implies that advisors should become operational at district level.
3. Agricultural chambers and Privatised Educational and Advisory Services in Slovak Republic and Czech Republic are also informing farmers on those regulations, and they are being paid by the government to deliver this kind of services.
4. Information is also presented in leaflets and in farm magazines.
5. In Slovak Republic and in Czech Republic, farmers are invited to meetings and seminars organised by training institutes such as agroinstitut to be informed on EU legislation directly by policy makers, lecturers or researchers. In those countries especially the big farm companies, who employ their own subject matter specialists, are able to directly communicate with researchers, lecturers and policy makers.

Obtaining information on agricultural technologies and practices

Most important opportunities for Slovak Farmers to get information on Agricultural Technologies are conferences or meetings that are organised by Research Institutes and the Agro Institute. Farmers attending those seminars have to pay a contribution for the organisation of the seminars, but this is not based upon the cost-recovery principle. During those meetings, researchers present research findings as lecturers. The contents of those introductions are accessible for farmers (or their employees) who graduated at university and who are thus able to communicate directly with researchers.

Sources of knowledge and information for contemporary modern farmers



Source: Jozef Kania, Agricultural University of Krakow, Department of Agricultural Extension, 2003

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Also in Czech Republic, farmers can consult the 8 Public Research Institute free of charge. It is not known whether those Institutes also organise conferences and meeting with producers like in Slovak Republic.

In all countries public or private advisors can provide information and knowledge on agricultural practices and technologies, on agro tourism and income generating activities, food processing, farm management, business planning, financial management, EU legislation and opportunities for subsidies. Those advisors ensure the communication with research institutes, universities and policy makers.

The role of input suppliers, traders and other actors in the market chain in knowledge generation is not clearly identified, but based upon other assignments in Turkey we assume that the supply chain is a very important information provider for farmers in the field of food safety and food quality issues, IPM and other GAP that are being introduced with EU accession.

Farmers who are producing for the national and international market are obtaining their information from a wide range of information sources. They are actively looking for information on the basis of questions that are emerging when their country is becoming an EU-member.

Obtaining information on organic agriculture

In most countries, organic farmers face problems in getting relevant and good advice for organic farming. In most countries formal education programmes (BSc and MSc) on organic farming are missing, as well as advisors who are knowledgeable on organic farming. At the same time they have to comply with all kind of regulations in order to get a certificate as an organic farmer. But the fundamental principles that underpin organic farming are not being told or transferred.

The following findings are based upon the pilot project in Slovak Republic. There, farmers do rely upon foreign information sources or upon their own farm visits abroad. Most often information comes from the Czech Republic, because Slovak and Czech Republic do not have a language barrier.

Another important source is learning by doing. Farmers are experimenting on their own farm and by making mistakes they learn. They admit that this method is a very good one, but very expensive and time consuming.

Fruit and vegetable growers do need information on seeds, weed control, on the management of pests and diseases, on fertilization and new growing technologies. They also need information on the legislation about accreditation of bio preparations and statistical data such as organic area, number of organic farms, economics and marketing indicators.

There is a general feeling that information on organic farming is missing in Slovak Republic both for farmers who have already practical experiences in the organic sector and conventional farmers who want to change to organic farming. Those two categories of organic farmers do need a different advisory approach. The first group needs practical information on specific problems they have at their farms, whereas the other group has to start with more general information on the principles and technologies of organic farming.

Courses for organic and also conventional farmers are organized but they focus on legislative problems whilst issues affecting farmers' practices are not discussed in detail. Moreover the quality of courses for organic farming is not sufficient and the Slovak Republic does not have advisors who are qualified on organic farming principles and technologies. There is a lack of

experts who are able to give professional and skilled information in the area of organic vegetable and fruit production.

Therefore advisors do need extended education and training courses from foreign experts who are knowledgeable on organic vegetable and fruit growing.

3.3 Performance of formal public advisory system

The following factors have been identified as influencing on the transfer of information.

Strengths

- Highly knowledgeable and experienced resource persons. Within the agricultural and rural knowledge and information system, all actors at policy level, universities, research institutes and institutes in charge of dissemination of agricultural information are very knowledgeable and very experienced in particular knowledge fields and subject matters.
- Knowledge sources available. Especially in Slovak Republic and in Czech Republic, information is getting available through website portals. This information is about research findings, and about EU legislation. Also the other countries do have websites where all possible information on policies and research can be found.
- Representing farmers' interests. Some organisations in the pre-accession countries do have both a strong influence on policy formulation as well as direct linkages with farmers. This means that those organisations are very well aware of farmers' information needs. In Hungary, Slovak Republic and Czech Republic the chambers of agriculture are such organisations. Other organisations, such as farmer organisations are also very well aware of the information needs of their farm members. Each organisation though regroups a particular category of farmers with particular interests, which makes it difficult for authorities to invite the most representative organisations to discuss policies.
- In initiative of the Czech Government to subsidize advisory circles for 80 % proved to be a successful formula for transferring information. Farmers financed part of the advisory services and the quality of advisors improved because they had to attend compulsory training. Being member of the Advisory Circle (AC), farmers could receive state subsidy on advisory services provided by private advisors. The AC administered the flow of funds from the MoA to private advisors. Due to lack of money and weak monitoring of the programme by the government this project was stopped.

Weaknesses

Methods of transfer

- The method used to transfer information. Very often information is literally translated in the national language, without being reformulated in simple messages comprehensible for farmers with low education levels. Those texts are prepared for lawyers and policy makers and not adapted to local circumstances (Romania and Slovak Republic). The consequence is that although the messages are being transferred, farmers do not oversee the consequences of those rules and regulations, nor the advantages.
- Another lesson learned is on the organisation of conferences and meetings. The two-day EKOMIT meeting combined many parallel sessions and many scientific topics without many discussion opportunities. The organisers concluded that this is not the most appropriate way to inform farmers. Farmers mentioned that they are interested in

meetings on one particular issue at a time and that they need time to discuss consequences for their own farms.

Payment for services

- All countries have to set up a free of charge advisory service in order to inform farmers about EU rules and regulations. Not always this type of information is available free of charge for every farmer, but only for those who have good connections with national and foreign authorities who are knowledgeable on those subjects. Statements from Romania make it clear that farmers who do not have the right connections pay for the so-called free of charge information on EU rules and regulations. This lack of transparency in the governmental decisions has also been mentioned in the case of Hungarian accession.
- Within the framework of the EU, it is foreseen that farmers can apply for subsidies for hiring advice. These measures under council regulation 1782 & 1783/2003 can be applied until 2006. Only a very limited number of countries have taken this opportunity. One limitation with regard to application for subsidies on EU or national level might be the limited capacity of small farmers to deal with the requested administrative procedures.
- Farmers are not willing to pay for technical advice because they are not used to it. This has specific consequences for the advisory system in Slovak and Czech Republic, who have a completely privatised system. This makes it at this moment very difficult to provide farmers with good independent advice. They will be inclined to take "free of charge" advice from input suppliers. During the Budapest workshop it was made clear that biased advice is available for free through private companies. Also GMOs and pesticides are being disseminated and thus hampering the implementation of the EU GAP and the Rural Development policies.

Weak relation between farmer and independent advisor or public extension worker

- Farmers do not come to the advisors of the regional office of advisory services. This is an observation of the director of the regional advisory service centre in Romania. The participants of the Krakow and Budapest workshops also revealed that the relation between public extension workers and farmers is difficult in more countries.

Weak performance of advisors

- This is about the quality of the advice delivered, the qualification of advisors and to unadjusted incentives for delivering good performance.⁵ Not always advisors do have the qualification needed (MSc). It is difficult for farmers to make a distinction between good quality and bad quality advice. Due to wrong advice, farmers can face enormous financial problems. The performance of advisors is currently being addressed by the new certification and registration systems. An advisor in most countries has a lower status than a person working in research institutes. The motivation of advisors working in national advisory systems is depending on factors as the relation with supervisors, career development opportunities and human resource development.
- The information provided by the public advisory services does not meet the information needs of farmers. Therefore the information needs assessment should be done by the farmer associations and not by the government. (Romania).

Poor linkages research – extension – farmers and agro-food business.

⁵ Dr. Keith J. Brent and Dr. Geoffrey R. B. Adams, 1999.

- Research agendas are hardly being influenced by farmers' problems or problems in the supply chain. Research agendas are influenced by policy makers. Until to date no cases are known where farmers do influence research agendas in Central and Eastern Europe.
- The process of privatisation of advisory services, like in the Netherlands, also is hampering communication between researchers and farmers or supply chains. The link between research and farms was relatively straightforward when both were owned by the state⁶."

Poor coordination between actors in the supply chain and in the research-extension-education system.

- The case study in the Slovak Republic clearly reveals the challenges to create a dialogue between all actors in the organic sector. But this case is not only illustrative for the organic sector. It is also representatif for the conventional fruit and vegetable sector.

3.4 Final observations on formal advisory systems

National policies and advisory systems are currently being adjusted in order to comply with EU regulations. They do not consider the needs of diversified information and knowledge that result from the diversity of farm structure and livelihood strategies in different regions. They aim at assisting farmers to get access to EU subsidies and do not have an answer to technological and marketing problems. Two parallel advisory systems exist with very weak mutual linkages. The first one is the "informal" system used by small farmers, the second one is the 'formal' system put in place by governments and EU.

Concrete figures are coming from Poland, where the formal system lost contact with the small farmers because it is too busy with EU rules and regulations. In this system an advisor is assisting an average of 200-2000 farmers, whereas an advisor who is visiting farmers in the field can have a maximum of 50 clients (Cyprus, Netherlands).

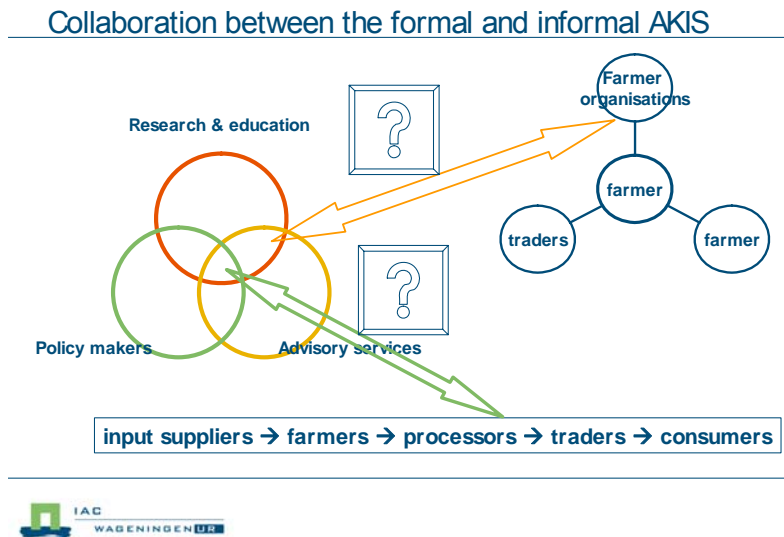
In this situation it is not possible to implement environmental measures and to promote environmentally complex agro-ecosystems that require highly specialized advice related to the local conditions of the individual farm. Meanwhile very often biased advice is available for free through private companies dealing with agriculture industry, possibly also leading to e.g. GMOs and pesticides are being disseminated by input suppliers in an autonomous way. This situation is hampering the implementation of the EU GAP and the Rural Development policies.

At the same time, small farmers probably will have developed their own "parallel" knowledge and information systems, that are more relevant for them, but that do not give them enough information to operate in a European context. This can be clearly observed for instance in Romania, where many farmer associations have been created of the last years, but where the authorities state that they have difficulties in identifying those associations that are really representing farmers.

The following table illustrates the hypothesis. On the left side, Research and education organisations, policy makers and formal advisors (public and certified private) are working together to improve their Agricultural Knowledge and Information System. On

⁶ Dr. Keith J. Brent, Dr. Geoffrey R. B. Adams, 1999

the right side, farmers are working together with each other and in the supply chain. But the relations between farmers and the formal AKIS system and the between the supply chain and the formal AKIS system is presented as a question mark. We suppose that these linkages are very weak.



Trust amongst farmers in many previous communist countries is missing as well as trust between farmers and advisors or researchers. As a result of the historical context, farmers are working in an isolated way and are not used to participate and work together. Underlying norms and values are based upon the belief that having knowledge is a source of power creating a distinct advantage versus `competitors`, resulting in the fact that knowledge is rarely shared. Another factor is related to the respect of hierarchies, that hampers collaboration on a equal basis as well as language problems and technological barriers

Wrong incentives also explain the limited collaboration and joint learning amongst different stakeholders. In the first place, farmers are not enough convinced of the need to exchange information in order to improve farm practice. In the second place, the social status of advisors is considered to be lower than those working in research institutes, in universities and those working as a policy maker. Advisors who previously worked within those organisations will have few incentives and motivation to provide good quality advice⁷. Those who are working within research and at management level do have higher social status than those who are trying to make a difference at farm level. In the third place, the most important incentive for researchers consists of producing publications in international journals. This is to the detriment of their responsiveness to farmers' needs.

⁷ Dr. Keith J. Brent and Dr. Geoffrey R. B. Adams, 1999.

4. Recommendations for the establishment of a sound model for the foundation of effective extension systems and services that enable farmers, in particular small farmers to get access to the information and knowledge needed to solve their problems

4.1 Changing paradigms

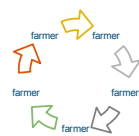
According to the Transfer of Technology model (ToT), agricultural innovation starts in universities and research centres, and is then being transferred to farmers by extension workers and advisors. Farmers adopt new technologies and new policy regulations in their farm practice. The communication flow starts within ministries and research stations, who have found the solution to a problem they formulated.

World wide evidence shows that the TOT model cannot respond to the demands of highly differentiated target groups of farmers operating under highly variable agro-ecological and market conditions. Research in the Dutch context reveals that only 20 percent of all agricultural innovations are derived directly from formal agricultural research, following the Transfer of Technology model⁸. The remaining 80 percent is derived from suppliers, agricultural newspapers, internet and most important, farmers themselves.

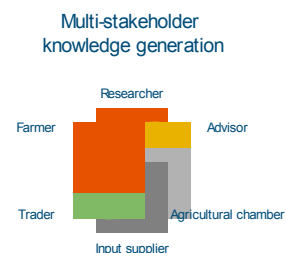
Therefore advisory services should be based upon new paradigms, that are more demand driven and that are focussen upon joint learning or knowledge generation.

- The advisory model puts the farmer at the centre of the agricultural knowledge and information system. Innovation at farm level is the result of decisions made by farmers who are capable of analysing and making decisions on the basis of a multitude of information they are gathering. This model is based on problem solving processes at farm level. In this model, both farmer and advisor jointly analyse the situation, and use farm experiences and knowledge in order to come to a practical solution to the problem. If necessary, the advisor provides information on new policies and research findings. The advisory model also opens opportunities to look at farm management in a larger and multi disciplinary perspective and is not limiting advice to technological packages.
- Another model puts joint learning and generation of knowledge at the centre of agricultural innovation. Within this knowledge generation model, we will distinguish two strategies. The first is knowledge generation amongst farmers; the second is knowledge generation between different stakeholders or societal learning⁹. A concrete example of the first strategy is the Dutch and Hungarian farmer study

Where can we make a difference?



Knowledge generation amongst farmers



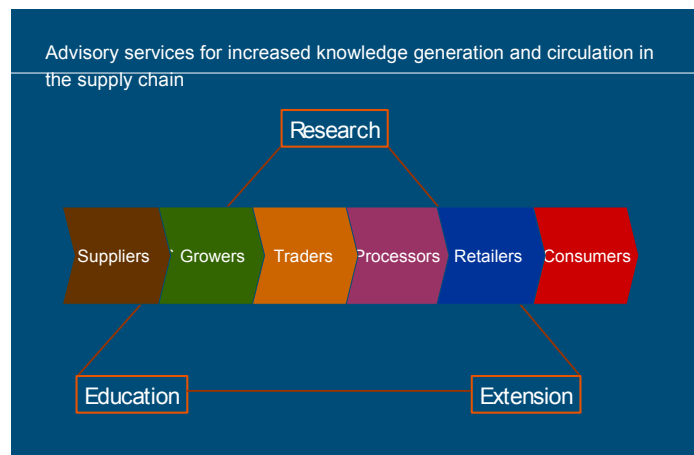
⁸ Doorman, 1999 in Margreet H. van den Berg.

⁹ Societal learning for agricultural innovation actively engages different groups in society in a communicative process of understanding problems and jointly solving them. This also implies that not only government and experts in research stations are made responsible for solving problems that hamper agricultural innovation, nor market forces.

clubs. A concrete example for the second one is the Dutch example PMOV platform, an initiative by farmers, researchers, extensionists, input suppliers and others to develop innovative solutions in the dairy supply chain.

- A slightly different model that is proposed for the category of farmers that are the most important subject of this Transfer project is the improvement of knowledge generation and circulation in the supply chain. In this model the advisors do play a very important role in improving the performance of the horticultural supply chain. They do this by improving the communication and mutual understanding amongst all actors in the sector. In line with EU rules and regulations it is important that all actors in the supply chain do know their role in ensuring food safety and quality norms, as well as environmental measures that are part of the EU GAP. The main clients of the advisors are therefore not only the farmers but all actors.

Changing the agricultural innovation paradigm from the Transfer of Technology model into the Advisory model or into multi-stakeholder joint learning models has important consequences for the role of advisors and researchers and their relations in the agricultural knowledge and information system. Extension workers in the TOT model are expected to come with clear messages and tell farmers what to do. Advisors are expected to assist farmers in defining their problems and then assisting farmers to make a choice out of different solutions provided. Interactive approaches with more stakeholders do need facilitators.



4.2 Practical recommendations

The following recommendations have been formulated as the results of the Krakow workshop, the Budapest workshop and the pilot project in Slovak Republic.

Start with the creation of relations built upon trust amongst farmers, researchers, advisors and policy makers.

The following ideas have been identified

- Identify natural farm leaders or champions per sector or per crop. Jointly define common problems and ask assistance from advisory and research to address the key problems. As a leading group you have to ensure legitimacy towards the state level and make sure that you represent the farmers. On the basis of success you can build trust.
- In order to attract farmers one can start with sharing information on technical aspects- rather than financial and economic aspects. Use specific problems as an entry point to start collaboration that have potential in providing solutions and benefits.

- External facilitators can introduce topics, invite participants who have interesting topics to discuss, propose experts on important topics. The meeting place should be on neutral ground, for instance a study or demonstration plot.
- Facilitators should make sure that they address the questions proposed by participants. They should avoid quick fit answers and solutions. It is recommended to do field discovery studies, joint testing of solutions and joint formulation of group conclusions on the solutions found.
- Farmer leaders should compose their own farmer groups and work with research on developing new technologies; new technologies and knowledge available are to be introduced through open days and workshops with farmers and advisors.
- Create teams with researchers and advisors who work with farmers. Use case studies to promote the application of research results.
- Create a good image of research and advisory organization in order to build trust. Present good examples and take a raw model role.
- On the process side; it takes time to develop trust, you need transparency, respect, honesty, you need to meet expectations, create mutual learning and you can grow into other activities when there is trust.

Make advisory services and research more responsive to the needs of small commercial farmers.

In the privately financed advisory systems, small farmers can not afford to pay for good quality advice. In the publicly financed system they risk to get advice that is not tailor-made. It is important is to acknowledge that actors which money decide upon research agendas and upon advisory services to be provided. Small farmers could obtain more decision-making power in the following ways:

- First of all they should start to organise themselves and start fundraising to contribute to the funding of research programmes.
- The state should earmark funds for research topics to be defined by farmer associations. Farmer associations or temporary working groups can be established that decide upon research agendas or assess research and advisory proposals issued by tender procedures.
- Farmer associations should also be involved in the design of advisory policies and implementation of advisory activities. Those platforms that are already in place (Hungary, Poland, and Czech Republic) can play a major role in making the current advisory systems more responsive to small farmers needs. Their actual performance can be analysed, as well as there capacity to defend the interest of small farmers.
- With regard to all financial arrangements, procedures have to be put in place that bans corruption as much as possible.
- Specific funds should be earmarked for research in the organic sector. At this moment, research funds do not make a distinction between organic and conventional research in the Slovak Republic.
- Participatory and interactive evaluation methodologies such as social audits are needed to assess the accessibility of advisory services, both in financial and in quality terms.

Making use of the diversity of farmer organisations contributes to the effective implementation of subsidised advisory projects, because they know the farm structure and livelihoods of their members.

Training is needed for farmers, researchers and advisors

Apart from training advisors on agro-technological issues, the accreditation programmes should focus in particular on facilitation skills, participatory approaches and advisory skills. These skills-trainings should also be included in the university programmes for students and in secondary schools.

Training for researchers, advisors and farmers on participatory approaches should promote direct interaction in the field as well as the organisation of field visits. Broader eco-systems analysis is needed.

Farmers need special courses on entrepreneurial and management skills and on articulation and formulation of their expectations and needs towards the advisory services and research institutes.

Advisory services and research for organic farming

Although there is a conceptual and philosophical difference between conventional and organic agriculture, at this moment, both face the problem of non-responsive research organizations. More participatory approaches are needed that aim at working together with farmers, researchers and advisors and that do recognise the fact that organic farming requires comprehensive, integrated and holistic advisory and research concepts and approaches.

Experiment with participatory models for agricultural innovation.

- Ongoing experiments with advisors who are facilitating farmer-to-farmer learning in groups, such as farmer study clubs and advisory circles should be encouraged in all countries. An opportunity is also provided by the new law on producer organisations that enables farmers to themselves on the basis of one particular crop or product group and to benefit from economies of scale for marketing and packaging activities.
- Other initiatives should focus on facilitating multi-stakeholder learning around starter problems that require joint analysis and problem resolution. Practical initiatives could focus on improving small farmers' market position on wholesale markets markets or on issues that require interactive research methodologies and networking. The pilot project in Slovak Republic was a first tentative to organise organic farmers in the organic horticultural supply chain. A similar recommendation was the outcome of the workshop in Romania, where small farmers need to find ways to deliver their agricultural produce according to EUREPGAP standards to the supermarket.

Experiment with cost-sharing approaches.

The major challenge in the new and future EU member states is to find the right match between free of charge services, risking inappropriate advices on the one hand and full cost recovery services that exclude small farmers on the other hand. Cost-sharing approaches do increase small farmers' stake in knowledge generation and circulation policies and activities financed by small farmers will increase both advisors', researchers' and policymakers' capacity to take into account their specific needs. Cost-sharing is also the best solution to the funding problems that public advisory systems in Romania, Bulgaria and Poland will face if they aim at providing good quality advice to the many small farmers in their countries.