

## ROLE OF AGRICULTURE EXTENSION IN THE AGRICULTURAL KNOWLEDGE SYSTEM - STATE-OF-THE-ART

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*Abstract: The paper highlights the importance and the status of the present agricultural knowledge's system, analyzing the changes occurred in the Agricultural Knowledge and Innovation System and its impact to advisory system. The research makes a presentation of agricultural extension system, the services provided by the agriculture advisers and the regional connections of the AKIS, proposing a solution for transferring new knowledges towards farmers from international applied research.*

**Key words:** agriculture, advisor, extension, information, innovation, AKIS

### INTRODUCTION

The European Union use in the agricultural sector new tools, new forms of support to promote knowledge and innovation [9]. Advisory organizations perform new tasks and roles in order to improve agricultural sustainability. These various organizations have recognized the importance of collaboration nowadays. The research was mainly focused on Hungary, being thus examined the organizations that provide information and new knowledge towards farmers, increasing in this way their innovative activity. Thus, were examined the Services provided by the Hungarian Chamber of Agriculture and universities, research institutes, private advisory companies, non-governmental organizations and companies providing commercial consulting (distribution of input materials).

### MATERIALS AND METHODS

For this article, initially we have processed the major national and international literatures and scientific publications [7] and we studied how the CAP guidelines are enforced. We have investigated the opinions and experience of targeted participants by qualitative method (unstructured individual interviews), the research being conducted during almost 3 months.

The target group of farmers has a heterogeneous composition based on gender, age, education, field of activity and economic size. On one hand, more than 70 farmers participated in the research. The target group average age was 51 years, common feature, each of them having or previously had professional connection with the investigated organizations until the end of 2019, when were interviewed.

On the other hand, the 32 advisors participating to the research were heterogeneous according to their professional experience, all having MSc degree and being professional advisor, practicing for at least 10 years this activity, with different levels of language skills. The average age of advisors group was 48 years.

The interviews topic's choice was justified by the fact that we wanted to find out the importance of the advisor's role participating in the research performing information transfer, knowledge sharing and practical application of detained knowledges, for results interpretation being chosen the Content analysis method and coding methodology.

Due to the specific nature of the sector, there is a high risk for introducing innovations, so it is really important that advisor provide to the farmers in due time and accurate information to support innovation processes.

### RESEARCH RESULTS

All countries in the European Union have a Farm Advisory System (FAS). The information provided by FAS helps farmers to better understand the guidelines for the common agricultural policy [4, 8]. In Hungary, FAS related tasks supplier is **The Hungarian Chamber of Agriculture (HCA)**. Thus, HCA covers the whole domestic food chain, the agricultural production activity and the field of rural development through its members. As a flexible and professionally qualified public body, HCA has been working since its foundation to give a new impetus to the Hungarian agri-food economy. HCA was established in 2013 as a public body uniformly organized at national level with mandatory membership. The tasks of the HCA are practice-oriented services for members by the Village Farmer Network (VFN), covering the entire country in the form of a network.

VFN, with 1000 customer reception locations easily accessible to all farmers, has a total of 650 village farmers working in the system [15].

Among their tasks, the most important from the point of view of AKIS are:

- provides information and assistance on certain reporting obligations of farmers;
- offers information on each agricultural support option;
- offers technical assistance in the electronic administration of agricultural subsidies;
- provides information on agricultural policy decisions affecting agriculture.

HCA is a member of two European advisory organizations: one is European Forum For Agricultural And Rural Advisory Services (EUFRAS) and the other is South Eastern Europe Advisory Service Network (SEASN).

EUFRAS is an EU-level organization, time in which SEASN focuses on the countries of South East Europe. HCA's application/tender activity concluded with taking part in several Horizon 2020 projects. The projects aim to pave the way for the new digital achievements and to develop consultancy/advisory skills to encourage innovation.

For the AKIS aspect, the following activity are performed:

- cooperation with research and educational institutes;
- cooperation with home and international non-governmental organizations;
- organize the training of advisors [5].

Based on the opinions of the advisors participating interviewed, it can be said that HCA provides the base services with appropriate quality. Advisors opinions are similar, they are satisfied about the training programa, which really help them developing their skills [3]. The information received from the weekly newsletters are up-to-date and provides complete information on the sectorial situation [6]. Also, professional events are always interactive. HCA has a good professional contact with research institutions and universities, this being concretised by participating together in several international projects [2]. Generally, the national professional events are organized inside universities, willing in this way to bring farmers and advisers closer to academic education and research.

In the rural development tasks, the **Hungarian National Rural Network** helps to disseminate information. The aim of HNRN is to organize the cooperation network and to coordinate the activity that governmental, self-governing, non-governmental organizations, professional organizations or contractors which are involved in rural development. HNRN services are available only with previous registration [12], any private person or organization being entitled to this registration. Activity of HNRN mainly offer satisfaction for advisors and research institutes, the farmers not being in tight connection with it.

The areas of activity for **Private advising companies** are determined by the needs of the farmer. The service must provide demonstrable additional income to the farmer [8]. The average farm size (clients of the advisors involved in the research) is over 50 ha. Successful businesses have recognized the collaboration potential, so they regularly visit and maintain good relationships with universities, research institutes and HAC. Private advisory companies are welcome to take part in all applied research programs. During the interviews, we revealed that they would need faster access to research results and know the latest foreign literature. Their communication methods in consulting/advising are constantly being developed and improved [10].

**Commercial advisory companies** are providing advisory services based on products or on supply of raw materials and equipment. Product-based advisors perform integrator tasks. According to the farmers, the advisors are very professionally and methodologically prepared. Product development is in the interest of input material manufacturers, they are happy to ask for help from research institutes or universities and to present their researches results [1]. Every agricultural university has species experiment for commercial advisory company. They use lot of methods fro knowledge transfer and information sharing, being constantly interested to develop the competence of their consultants/advisors.

The role of the **Non-governmental organizations** in providing information to farmers cannot be significantly demonstrated. Their events primarily have a community development role, which helps farmers to formal sense and communicate social expectations. There are more than 100 such organizations, and farmers are happy to attend to events appropriate to their activities. NGOs are based on voluntary work and do not employ advisors [13].

It was performed also an evaluation of the **Organic Agriculture Research Institute** (OARI), which was established in 2011 by a group of advisors and organic farmers. Hungary's only research institute specialized in organic farming has professional relations with several European organizations such as:

- European Association of Organic Farmers (IFOAM Organics Europe) [14].
- Swiss Research Institute for Organic Farming (FiBL).

OARI has an independent team of advisors, which regularly organizes knowledge transfer conferences. They set up an On-farm network, which aims to collaborate, offer knowledge transfer and exchange professional experience [8].

Their partners can participate in various international programs such as gene conservation, soil protection, plant protection, diversification, grassland management, having as fundamental principle the participatory research, which also involves farmers as well as private consultancy/advisory companies in order to accelerate innovation processes. Farmers set a high value on their personalized advisory work and effective methods of knowledge transfer. OARI participates in joint research with universities, HCA and NGOs. Also, OARI participates in the development of the network of consultants in order to develop the competencies of consultants/advisors in accordance with the changing needs, using innovative methods to achieve the desired knowledge sharing.

Nowadays, the Hungarian agricultural training is being transformed, the aim of this integration being to create a modern and sustainable training system that meets the market needs [11, 15]. The new **Szent István University** was established on August 1, 2020 from the following institutions:

- Kaposvár University, Kaposvár;
- Eszterházy Károly University, campus of Károly Róbert Gyöngyös;
- Pannon University, Faculty of Georgikon Keszthely;
- National Agricultural Research and Innovation Center (NARIC);

- 12 research institutes related to the agricultural and food economy.

Even before the integration process, SZIE university played an important role in the development of the network of advisors, and since 2016 it has been organizing the mandatory training of advisors for the Farm Advisory System [14].

Based on the feedback of the advisors, the methodological trainings are high quality trainings, aiming the skills development and following the related trends to the transfer of information in their content [12]. Still, arise a need for higher, closer and stronger collaboration in applied research programs. Advisors would be happier to receive regular information about national and international research results. Farmers have similar opinions about short training programs organized by the university, but they do not receive direct information about the university's programs.

### CONCLUSIONS

The farmers included in the investigation are active members of AKIS because they are associated with several advisory organizations. There is a tendency for cooperation between the various consultancy organizations, but this need to be improved. Based on the feedback, advisors need more information from international applied research to be able to pass it on to farmers. From our opinion, such advisory trainings should be undertaken especially by research institutes and universities, in order to offer appropriate knowledge transfer and sharing, the base pillar for innovation dissemination and implementation. In the close future, we will communicate our research results to the appropriate policy makers and decision factors, hoping in this way for the AKIS substantial improvement.

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