



Agricultural Extension and Advisory Services in Bosnia, Montenegro and Serbia: An Overview

SNEZANA JANKOVIC

Institute for Science Application in Agriculture, Belgrade, Serbia

ALEKSANDRA DESPOTOVIC

University of Podgorica, Podgorica, Montenegro

SINISA BERJAN*

University of East Sarajevo, East Sarajevo, Bosnia and Herzegovina

E-mail: sinisaberjan@yahoo.com

HAMID EL BILALI

Mediterranean Agronomic Institute of Bari (CIHEAM-IAMB), Valenzano, Bari, Italy

NOUREDDIN DRIOUECH

Mediterranean Agronomic Institute of Bari (CIHEAM-IAMB), Valenzano, Bari, Italy

VEDRAN TOMIC

Institute for Science Application in Agriculture, Belgrade, Serbia

Received 13 February 2015 Accepted 7 October 2015 (*Corresponding Author)

Abstract Agriculture is still important for socio-economic development in rural areas of Bosnia, Montenegro, and Serbia (BMS), especially in terms of employment and income generation. Good extension is recognized as a key to agricultural development. The paper aims to provide an overview on public agricultural extension and advisory services (AEAS) in BMS. It is based on an extended secondary data review and primary data collected by questionnaires with rural people, as well as semi-structured interviews and focus group discussions with agricultural advisors and extension specialists carried out in the years 2012-2013. Current agricultural extension structures has mainly been developed in the last two decades with international donors' help. Public extension structures exist besides other advisory services providers. Advisors use many groups and individual extension methods. Advisory services face many financial, management, and technical problems. Extension agents spend most of their working hours doing administrative tasks and lack systematic professional in-service training offers. Agriculture multifunctionality and the increasing rural economy diversification represent a real challenge for agricultural extension services. Public extension is largely focused on crop and animal production while rural development is only partially served. Rural advisory work is restricted to the activities of individual extension agents, as well as NGOs, donor projects, and private advisors. The involvement of other actors in rural extension work is crucial if the system is to meet rural people's needs. AEAS have been trying to address the emerging challenges through modernization of their extension approaches and communication media, as well as diversification and decentralization of their services. Nevertheless, there are still some weaknesses that should be overcome. Developing a pluralistic, participatory, decentralized, farmer-led, and market-driven advisory system is a milestone in the process of promoting rural innovation and diversification, and harmonization with the European Union's *acquis*.

Keywords agriculture, extension, advisory services, Bosnia, Montenegro, Serbia

INTRODUCTION

Despite the increasing diversification of the rural economy in the three countries of the Western Balkans (WB) - Bosnia, Montenegro, and Serbia (BMS) - agriculture still plays an important socio-economic role. The share of agriculture sector in gross domestic product amounts to 8.2% in Bosnia (EC, 2014a), 8.8% in Montenegro (EC, 2014b), and 11.4% in Serbia (EC, 2014c). The primary sector employs 18.9% of the total labor force in Bosnia (EC, 2014a), around 4.5% in Montenegro (EC, 2014b), and 21.3% in Serbia (EC, 2014c). Agricultural sectors in BMS are characterized by the prevalence of small family farms. Rural areas lag behind in terms of socio-economic development and still face many problems. The share of rural population is around 61% in Bosnia, 36% in Montenegro, and about 45% in Serbia (World Bank, 2014).

Easy and timely access to reliable and updated information is crucial for agricultural and rural development (ARD). Good extension is recognized as a key to agricultural development (USAID, 2012) and can contribute to improving the welfare of farmers and other people living in rural areas (International Initiative for Impact Evaluation, 2010). One can simply say that “*extension is getting knowledge to farmers so they will make a positive change*” (USAID, 2012). Advisory service is commonly used as an alternate term for extension services. Apart from their conventional function of providing knowledge and technology to improve agricultural productivity, agricultural advisory services are also expected to link farmers to markets, promote sustainable production techniques, etc. (Swanson, 2008; Swanson and Rajalahti, 2010). Agriculture multifunctionality and rural economy diversification are changing dramatically the classical crop production-centred mission of agricultural extension and advisory services (AEAS). They need to provide a wider range of services to a more diverse clientele to improve their capacity to access, adapt, and use knowledge, inputs and services (World Bank, 2008). For extension to be successful, it needs to include credible content, effective delivery, and be relevant to, and applicable by clients (USAID, 2012). In the WB, current agricultural extension structures have been developed mainly within the last two decades with the help of international donors. Public extension structures exist besides other providers such as NGOs and commercial extension agents (FAO, 2011).

The paper aims at providing an overview on public AEAS in Bosnia and Herzegovina (BiH), Montenegro, and Serbia with a particular focus on governance, financing, and extension approaches.

METHODOLOGY

The paper is based on an extended cross-checked secondary data review (*e.g.* FAO, USAID, European Commission (EC), Ministries of Agriculture in BMS, World Bank, etc.) and primary data collected by questionnaires with 108 rural households in BiH (winter 2012), 106 in Montenegro (autumn 2013), and 104 in Serbia (spring 2013). Questionnaires dealt, among others, with access of rural people to services provided by AEAS. A special attention was devoted to services regarding the off-farm sector and rural development. Moreover, semi-structured interviews and focus group discussions with agricultural advisors and extension specialists were carried out in the years 2012-2013. The prepared checklist for interviews dealt with many issues regarding AEAS in BMS such as (i) governance and organization structure; (ii) financing; (iii) human resources; (iv) role in building social capacity; (v) decentralization; (vi) gender; (vii) and advisory approaches, methods, and media. All secondary data were critically analyzed by key informants from the AEAS. Some recommendations were made to improve the AEAS performance in BMS.

RESULTS AND DISCUSSION

Agricultural Extension and Advisory Services in Bosnia and Herzegovina

AEAS, as known in practice world-wide, started to exist in *Bosnia* in 2002. They are organized on entity level: Agricultural Advisory Service of the Republic of Srpska (AAS-RS), cantonal agricultural extension services in the Federation of BiH (FBiH), and the Department of Extension Services in Brcko District. In May 2002, the Agricultural Extension Service of RS (AES-RS) was established within the Ministry of Agriculture, Forestry and Water Management of RS (MAFWR-RS). Two years later, the Government of RS established the Agency for Providing Services in Agriculture (APSA), as a separate organization with a wide range of activities including agricultural extension. In January 2013, APSA and the Agency for Animal Breeding and Selection were integrated in the AAS-RS, which was one of the five departments within the MAFWM-RS. The AAS-RS is headquartered in Banja Luka and there are seven regional offices *i.e.* Banja Luka, Gradiska, Prijedor, Doboj, Bijeljina, Sokolac, and Trebinje; where 36 advisors and 24 administrative staff (36.7% female) work for 221,000 rural households in the RS. The extension system includes 77 municipal based advisers - within the Department for Economic and Social Affairs - in most areas (MAFWM-RS, 2010). In the FBiH, the extension system was established at Canton level but the commitment of most Cantons was minimal and no central services were established to support the system. Field advisors were part of the municipal administration (FAO, 2011).

The AAS-RS is financed by the MAFWM-RS budget. All services provided by Bosnian public advisory systems are free; advisors' work is paid for with state, entity or municipality money (FAO, 2011). Besides public extension services, many institutions provide advisory services such as cooperatives, agricultural and veterinary institutes and stations, as well as private actors.

Advisors use many group extension and communication methods (*e.g.* lectures, seminars, demonstrations, field days, events, etc.) and individual methods (*e.g.* farm visits, contacts in extension offices, phone calls). The main media used are the internet, leaflets, posters, brochures, and mass media. Advisors provide services dealing mainly with agriculture production, processing and marketing (*i.e.* vegetables and fruit growing, animal husbandry, processing and quality of agro-food products, agro-economy). In the RS, out of the 36 extension agents, 33 are agriculture engineers that have general educational orientation while the number of specialists is modest. The fact that the majority of the field staff is agricultural experts, it induces a strong focus on production techniques and a relative preference given to large farms (FAO, 2011).

Advisory services face many finance, management, and technical support problems. According to the vice-minister in charge of AASRS (January 2015), the main problems faced by the public agricultural extension system are (Pasalic B., pers. commun.): different levels of extension service development between Bosnian entities, uncompleted/weak legislative (at the entity and state level), insufficient coordination between RS and FBiH extension services, low number of extension agents, limited funding, weak participation in international projects, undeveloped system of extension agents' training, low interest of farmers for training, and weak collaboration with the research institutions. According to FAO (2011), advisors spend most of their working hours doing administrative tasks related to incentive measures. Bosnian extension agents lack systematic offers of professional training as there is no systematically planned and performed in-service training program. However, there are donor projects that provide training on a broad range of agriculture and rural development issues.

Extension and Advisory Services in Serbia

In *Serbia*, agricultural extension service started its initial development during the 50's of the last century (Zivkovic et al., 2009). Nowadays, the network of professional extension services in Serbia is

coordinated by the Institute for Application of Science in Agriculture (IASA), which is under the auspices of the Ministry of Science. About 251 field advisors and administration staff (40.3% female) are employed in 34 regional offices by the Serbian public extension. AEAS in Serbia is composed by public extension and private advisory services. Donor projects (*i.e.* World Bank project) provided extension agents with a sound base of technical (and partially methodological) knowledge and skills, before being left on their own (FAO, 2011).

Support for public services in agriculture (*e.g.* extension service, veterinary and phytosanitary services, etc.) is provided but the share of dedicated agricultural budgetary funds is small. Within the general services sector, the greatest proportion of funds is directed to extension services or to financing agricultural expert service (34-56 %) (Bogdanov and Bozić, 2010).

The majority of the field staff within the system is agricultural experts from the former system. In fact, the majority of advisors are age over 40 years. This strengthens two biases: the strong focus that is still directed towards production techniques and the relative preference given to large farms with respect to small and medium holdings (FAO, 2011). Serbian public agricultural extension is mainly addressed to commercial family farms and lesser attention is paid to small producers. Usually, small producers must go by themselves to ask for advice (Petrović et al., 2009). Approach to farm families is based mainly on individual contacts (sample farmer). Direct display methods include demonstration plots, field visits, field days and workshops. Extension workers also organise public lectures. Different media are used in information dissemination such as leaflets, brochures, Radio, TV and the internet.

The ISAA went a step ahead regarding provision of trainings to advisors in the few last years, as during the period 2010-2014 more than 40 practical training courses were organized for extension agents related to farm management, modern technologies in agricultural production, skill development, EU integration, and environment protection and sustainable development.

Public extension has an intensive cooperation with applied research institutions. Moreover, extension stations apply research by themselves. There is a regular cooperation with universities especially in Vojvodina autonomous province, where a university department developed and implements an extension monitoring system.

Extension agents provide information and advice on national subsidy programs. Nevertheless, according to FAO (2011), the Serbian public extension provides farmers and rural dwellers only partially with information and support on rural and agriculture tourism. However, Serbian extension services have recently started providing information on national and international rural development programs by the initiation of Rural Development Offices (RDOs). RDOs and individual municipal advisors provide also support for the initiation of associations.

Monitoring of advisory work is fairly advanced in Serbia, having a considerable database on advisors' activities, farmers' needs and the results of on-farm research. However, monitoring is more about examining the activities of advisors than documenting the impacts of advisory work. There are many best practices that can be shared with neighbouring countries (FAO, 2011). Nevertheless, Serbian extension services face many problems in dealing with producers, as well as finance and management problems, overload with non-extension activities, low number of extension agents, etc. (Petrović et al., 2009).

Extension Services in Montenegro

Montenegro has a relatively simple agricultural education, extension, research, and information system institutional set up. The main institution is the Biotechnical Institute that is the main partner of the Ministry of Agriculture and Rural Development (MARD) (EC, 2011). The Biotechnical Institute is legally a part of the University of Montenegro and is financed from its budget, but the Livestock Selection Service (LSS) and Plant Production Extension Service (PPES) are financed by the MARD (EC, 2011; MARD, 2012).

LSS was initiated in 2000 and has performed four main groups of activities: animal breeding and herd improvement program, advisory services, realization of support measures to farmers, and carrying out AMIS program - Agrarian Market Information System (MARD, 2012; Markovic and Bovic, 2010). The first activity, animal breeding and herd improvement program, takes a major part of working time (Markovic and Bovic, 2010). PPES, established in 2003, aims at improving crops yield and products quality. It performs three main activities: advisory services, implementation of support measures, and carrying out of AMIS program (EC, 2011; MARD, 2012). At present it has 19 staff (academics or technicians) who work in seven regional centres (Bar, Bijelo Polje, Berane, Cetinje, Herceg Novi, Niksic, and Podgorica).

PPES uses different methods in everyday work. It gives expert advice and recommendations to farmers in the field, and organizes educative trainings, round tables, workshops, and seminars on different topics in plant production (MARD, 2012). It also provides general information on its website and publishes flyers and brochures (FAO, 2011). Radio and TV programs are also used to inform farmers. Up-to-date market information is provided to the national radio station to be broadcast in a weekly program (Stanisic Vukota-Director of PPES, pers. commun.).

Common challenges for both LSS and PPES is the implementation of indicators of performance and monitoring and the improvement of the extension staff's abilities and expertise through regular trainings (Markovic and Bovic, 2010). Moreover, the advisory services have sporadic cooperation with NGOs, private extension providers and farmers' associations but good cooperation with research centres, input suppliers, and processors (FAO, 2011).

There is in every Montenegrin municipality a kind of advisory service for agriculture which engages one or more employees (Stanisic V., pers. commun.). However, this service inherited from the previous system many burdens and its function is more focused on office work than to giving advices directly to farmers (Markovic and Bovic, 2010).

Montenegrin advisory services provide a limited support for the diversification of rural livelihoods and income generating activities. Moreover, they also support social capital building and strengthening activities. This is exemplified by the support for the initiation of processing and marketing associations (Stanisic V., pers. commun.).

Agricultural Extension and Advisory Services: User Needs and Challenges Ahead

According to the field survey, the need for agricultural advisory services is very high among the surveyed rural households in Bosnia (50.0%), Montenegro (60.4%), and Serbia (31.7%). Despite quite a high need, very few respondents (12.0%) in Bosnia use services provided by extension while in Montenegro (41.5%) and Serbia (37.5%); the share of households that in reality use services is higher. In all the three countries, needed help is mainly related to advices about market and its players, veterinarian service, cooperatives membership benefits, marketing, plant protection, fruit pruning, products' processing, legal-economic advices, animal husbandry, tillage operations, and manure use, etc. The majority of those who need help are agricultural households while mixed ones need less help and non-agricultural households do not need any help.

Public extension services in the WB in general and in BMS in particular are strongly focused on production techniques, while farm management, markets and marketing, regional rural development and the promotion of producer organizations are only partially served. Extension agents are only able to thinly cover the areas of farm economy and farm development planning. Rural development is not systematically supported by the public AEAS due to an overload of work, and to the general lack of knowledge (on projects and programs) and skills (on group facilitation and group management) (FAO, 2011). In fact, advice on rural development is generally restricted to the activities of some motivated advisors in the public service, as well as to NGOs, private service providers, and donor projects dealing with rural development.

AEAS must be flexible, user-driven, and focused on local problems. Both public and private extension resources should be fully used; accountability to clients increased and more responsibilities transferred to the private sector. Linkages between AEAS and public stakeholders, as well as research and education institutions dealing with ARD should be strengthened. Agricultural education, training and research systems should be strengthened as well. It is essential that the research system engages universities, private sector research, and civil societies and stimulate the scaling-up of innovations (World Bank, 2008). Research needs to be more integrated into the agricultural sector transformation by moving from agricultural research and development to Agricultural Research for Development (AR4D). The agricultural education and training system needs to adapt and to meet the new dynamics of agricultural innovation. Education institutes have to offer more relevant subject matters for agricultural and rural innovation (Daane, 2010).

CONCLUSION

AEAS are back on the agenda and widely recognized as critical to rural development. Rural areas diversity in BMS, as well as the increasing diversification of the rural economy represents a challenge for agricultural advisory services. Advisors use many group and individual extension methods and media. Moreover, advisory services face many financial, management and technical problems. AEAS is largely focused on crop and animal production, while rural development is only partially served. In fact, public extension agents provide only partial information for rural development and rural livelihoods diversification.

Higher attention should be paid to supporting extension and advisory services in BMS to allow them to fully assume their role in the promotion of rural innovation, diversification, multi functionality and sustainability. It is necessary to develop a pluralistic, participatory, bottom-up, decentralized, farmer-led, and market-driven advisory system. The involvement of other actors in the rural extension work is crucial if the system is to keep up with rural people's expectations and to meet their needs. The programme for continuous training of field advisors should be strengthened and upgraded, especially in Bosnia and Montenegro.

The need for supporting agricultural advisory services is significant in BMS. It is truly essential in the time of institutional weakness of the sector that the technical and technological unpreparedness of farmers and rural people should meet complex requirements associated with the policy reform as it is needed to align the ARD policy and practice in BMS with the European *acquis*. Moreover, well-performing AEAS is a *conditio sine qua no* for achieving sustainable agricultural and rural development.

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