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AGRICULTURAL ADVISORS TRAINING NEEDS - THE CASE OF ALBANIA

Ylli BIÇOKU[1*], Klodiana ZHUBI[2] , Irena GJIKA[3], Veis SELAMI[4], Vullnet GJOLLA[5]

[1]Agricultural University of Tirana, Kodër Kamëz, SH1, Tirana 1000, Albania
[2]Livestock expert, Tirana, Albania
[3]Development Solutions Associates - Tirana, Albania
[4]Director of AREB - Tirana, Albania
[5]Director of AREB - Korçe, Albania

*Corresponding author email: ybicoku@ubt.edu.al

Abstract

This is an exploratory survey, aiming at assessing agricultural advisors training needs and their priorities. Data were collected through a questionnaire mailed to the 66 advisors and the method of data analysis used was the descriptive statistics. All advisors reported they needed more trainings on extension methods & activities, and agricultural practices before they could disseminate the innovations. 67-86% of the advisors stated as important and very important the trainings on extension methods and activities, while 84-90% of them ranked the agricultural practices as important and very important. Less experienced advisors are more interested in the agricultural practices compare with more experienced ones. The majority of respondents (59.1%) indicated that they prefer to receive in- service training during spring. Most of the advisors (63.6%) indicated that the main reason for training is to get acquainted with new technologies to disseminate them to the farmers. The advisors would prefer to receive in-service training on new technologies from the Agricultural Technology transfer Centres (63.6%) and from Agricultural University on plant protection (42.9%).

Key words: *agricultural advisors, Albania, training needs, survey.*

INTRODUCTION

Agriculture is still a significant sector of the economy of Albania, which contributes to about 18% of the country's GDP (World Bank, 2020) and 37.4% of total employment, during 2018 (INSTAT, 2019). This sector is also important in terms of alleviating poverty (where the majority of the lower income population is located in rural areas), improving the standard of living, and one of the main sources of income for rural households (Bicoku & Subashi, 2020).

Albanian agriculture is facing several challenges starting from the small farm size (1.26 ha), and fragmentation of land (about 4 plots per farm)[1]; lack or weakness of farmers' organizations; limited access to agricultural credit; limited access to markets and low standards of products; inefficient farm management practices; and all these weaknesses lead to low level of competitiveness of agriculture (Gjeçi et al., 2018). Several of these weaknesses, such as the low technology level of farmers, or the public and private advisory services not at the level required by farmers, have continued over the last 20 years.

Frashëri (1936) cited by Bicoku and Subashi (2020) pointed out that the beginning of the advisory service in Albania dates back to 1936[2].

During socialist period, with the establishment of agricultural cooperatives and agricultural state farms, this service was covered by the agronomist and the livestock experts of those entities, whose were in charge to train the workers for the daily work and new technologies (Bicoku & Subashi, 2020).

[1]The land reform implemented after August 1991, in which the state agricultural land was equally distributed to the rural population, resulted in small and fragmented farms that hamper the growth and competitiveness of agriculture.

[2]Bicoku, Y. and Subashi, A. (2020): Preliminary Data on Information Source for the Farmers- The Case of Albania. Paper presented in the International Conference "Agriculture for Life- Life for Agriculture", Bucharest, Romania, June 4-6, 2020.

The Albanian advisory service in operation started in 1992, and for a one-decade was supported with technical assistance by donors financed projects. The agriculture advisors were trained with the concepts and principles of extension service and communication. Since March 2018, the extension service organization is organized in four regions (with centres in Tirana, Korça, Lushnja and Shkoder) called the Regional Agencies of Agricultural Extension (RAAE).

Despite improvements in some private and public services, most services are not in support of the time farmers' demands. Skreli et al. (2014), emphasis that the impact of government/public extension service on farm performance is limited, and also the coverage of public extension services is limited, especially towards the contact farms[3], most of which are categorized as medium farms while the private advisory services are the main source of advice for largest farms.

One of the key factors in the advisory process is the education and through it the farmers receive technical knowledge and information, which helps them make decisions about the future of the farm. However, before starting any advisory program it is important to evaluate the knowledge of extension agents toward the innovations that need to be disseminated (Al-Shayaa et al., 2012).

According to Oakley and Garforth (1985), extension is the process through which knowledge is communicated, in various ways, to farmers, through extension agents. But in order to do this job extension agent need to be trained. One aspect of this training is to provide to the extensionists the technical knowledge needed for their job. This is usually done during the professional training of the extensionists; however, this is not enough as the extensionists in addition to technical knowledge must know how to communicate this knowledge and how to use this knowledge for the benefit of farmers.

Erbaugh et al. (2007), Khan et al. (2011), and Man et al. (2016) are emphasizing that training is one of the most important tools to bring out the best of employees, because it fosters their morale, enthusiasm, and interest in their job. As many agricultural extension organizations worldwide face challenges of professional competence among their employees, it is needed the systematic training with the aim to develop knowledge, skills and behaviour, which are the basic requirements for performing a certain job or task. Whereas, the lack of training, after being employed, by the agricultural extension organization, affects negatively the success of the work of the extension workers especially for the planning of the annual work program.

Several authors (Bradfield, 1966; Maunder, 1972; Easter, 1985; Randavay & Vaughn, 1991; Najjingo-Kasujja & McCaslin, 1991) pointed out that extension agents need technical and professional skills and competencies to design, implement, and evaluate educational programs for farmers. The lack of a proper balance between technical and professional competencies in staff has been identified as a problem in the extension services organizations of developing countries. One of the weaknesses in the past, in the training of extension staff, has been the inability to focus on the development of professional competencies. Extension agents, in developing countries, should have professional competence in the areas of program administration, planning and execution, evaluation, communication, teaching and extension methods, and understanding of human behaviour.

It is also argued that co-production knowledge, for example, between farmers and advisers, is a new form of knowledge, combining scientific evidence and training, technical information, experience-based knowledge, information on household goals and interests, the unspoken knowledge of farmers, etc. This shows that agricultural advisory services are characterized by diversity and complexity. It is therefore argued that it is necessary to combine extension methods to increase knowledge transfer and improve learning in agriculture (Labarthe & Laurent, 2013).

While Karbasioun (2007) is emphasizing that raising awareness of good practices and motivating farmers is an important part of extension agents and extension services organizations. Extension can make a significant contribution to the sustainability of agricultural production and rural development, especially

[3]Farmers with whom the advisers have regular contacts.

when the spread of new agricultural technologies to farmers is accompanied by technology education; there is a critical need for a large number of well-trained extensionists in many developing countries (Omoregbee & Ajayi, 2009).

Allo (1983), as well as Yondeowei & Kwarteng (2006), have defined the need for training as the difference between the required level of individual competence and the current level. They added that one of the main factors limiting the effective development of training programs for agricultural advisors and agricultural experts in developing countries is the lack of information on their training needs. Agricultural advisors in developing countries, do much more work than just visiting the farm and telling the farmer about a new technology.

MATERIALS AND METHODS

The purpose of the survey was to identify training needs of agricultural advisors on technical aspects as well on extension methods and communication.

The preparation of the survey has been made possible by the use of primary, secondary sources and literature data related to extension service in the field of agriculture.

The survey was conducted with 66 extensionists (all of who have a computer, about 90% of the staff)) whom are staff of RAAE of Tirana and Korça.

For the purpose of this survey, a questionnaire is designed for interviewing extension agents and collecting the data needed. The questionnaire consists of a series of questions. There are questions about the extensionists personal background, such as age, gender, year of graduation, working experience, education background. Other variables in the dataset relate to training, including questions about most appropriate time of year for you to conduct the trainings; the reasons why the trainings will serve to the extensionists in the future; and how they prepare the work plan and who approves and changes it.

A structured questionnaire was developed to assess extensionists' previous trainings on extension methods and communication, as well as technical issues; and the most important part of questionnaire were the questions about training needs of the extensionists for the future. The questionnaire was subject to review by a panel of two experts, which was conducted via Google Meet[4]. In addition, the questionnaire was pre-tested with a pilot group of the extensionists, which was done also via Google Meet; which in case of inconsistent questions, it was modified accordingly.

The survey was administered in early May 2020, and the questionnaires were filled electronically by the extensionists, as Covid-19 protocols didn't allow the direct interviews. The extensionists were clarified about the purpose of the interview and the survey, as well that the data would be confidential.

The questionnaire contained open-ended and closed-ended questions. Open-ended questions allow for a greater variety of responses from participants, but are difficult to analyse statistically because data has to be coded or reduced in some way. While, closed-ended questions are easy to analyse statistically, but they seriously limit the answers that participants can provide (Jackson, 2009). Also, a Likert-type scale (1932) is used because it is very easy to analyse statistically and it is commonly used in agricultural research (Clason & Dormody, 1994).

The data obtained were entered in Microsoft Excel and transferred into SPSS. The analysis is based on descriptive statistics, namely frequencies.

RESULTS AND DISCUSSIONS

1. General data on the interviewed agricultural advisors

The purpose of this study was to identify the training needs of the experts of the public advisory service of the RAAE of Tirana and Korça.

As can be seen from the data in Table 1, 62% of the interviewees interviewed are male and 38% female (63% and 37% of RAAE Tirana and 61.5% and 38.5% of RAAE Korça).

The extensionists have a long working experience in agriculture (23 years as average; 26.5 years of RAAE Tirana and 20.7 of RAAE Korça), but only 11.3 years in extension (11.7 years in Tirana and 11.0 in Korça); difference

[4]The Covid-19 protocols didn't allow the direct interviews and meetings.

which is explained by the frequent movements made in the direction of the Ministry of Agriculture and the Governments.
In terms of education, 62.1% of extensionists have a degree in agronomy, 22.7% in animal science, 6% in plant protection and by 3% in fruit growing, in agrarian economics, and in agro-environment (Figure 1).

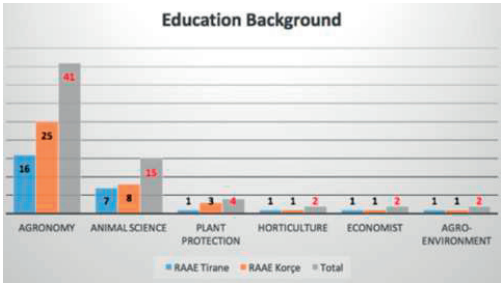

Figure 1. Extensionists education background

All extensionists respond that they prepare extension work plans, most of them monthly, and very few weekly and daily plans (Table 2).
For the preparation of extension work plans the main opinion is of contact farmers, but what impresses is that more opinion is taken from large farms compared to small farms (89.4 versus 40.9%) at a time when in the vision of extension organizations is the support of small and medium farmers (VKM, 2014). Only 8% of extensionists say the extension program is the same as last year, while others say there are changes. In addition, 50% of them report that the supervisor makes changes in the annual plan which is in the level of 14.7% (16.5% in Tirana and 11.7% in Korça). The main changes (reported by 88% of extensionists) are to adapt the objectives to the requirements of the farmers.

2. Topics in which extensionists have been trained in the last three years (2017-2019)

Most extensionists (90.9%) answer that they have participated in trainings during the last three years. For the period 2017-2019, in terms of training conducted on topics related to extension (28 topics related to communication and methods used in extension service), only 0-50% of extensionists have been trained.
What should be emphasized is that for some topics extensionists were not very interested (57-70%) despite the fact that in the last three years very few of them have attended training on topics such as: *"Knowledge of why people come together in groups or associations"; "Knowledge on types of communication"; "Knowledge of data retention"; "Knowledge to present results of surveys"; "Knowledge to conduct surveys"; "Knowledge to identify local leadership"; "Ability to organize study-tours"*.
The extensionists were not trained in data retention, to conduct surveys and to present the results, so it's not clear how they can make accurate annual planning of their activities.
While, in terms of trainings conducted on technical issues related to agricultural production (9 topics) the results are completely different, where the interest of extensions has been 10% higher than in extensions related topics.
As with the technical topics of agricultural production, even in those related to animal production, the participation of extensionists in training was from 26 to 58 percent.
For technical topics related to livestock, fewer extensionists were trained compared to the topics for agricultural production and extension. Perhaps this is explained by the fact that 71.2% of extensionists have agronomy education.
For technical topics of agriculture and livestock 81.8% of extensionists consider them important and very important, compared to 76% who consider extension and communication topics.

3. Topics in which extensionists are interested in future training.

According to extensionists, knowledge related to communication techniques (*"Knowledge of communication types", "Knowledge to motivate farmers", "Ability to organize focus group discussion", "Ability to determine customer needs"*) qualifies as very important and significant to the extent of 67-76%. While knowledge related to extension methods and farm management (*"Knowledge to solve farmers' problems", "Ability to organize demonstrations", "Preparation of Extension Activities Program", "Knowledge on farm management"*) are considered very important and significant to the extent of 80-86% (Figure 2).
Al-Rimawi et al. (2017) and Raad et al. (1994) also report "*Extension Activity Programming*"

as the most important. Whereas, in the study of Al-Zahrani (2017) the extensionists have considered as the most important the "*Ability to motivate farmers*" and "*Knowledge for problem solving*". Omoregbee and Ajayi (2009) reported "*Demonstration planning*" as the most important topic for extensionists.

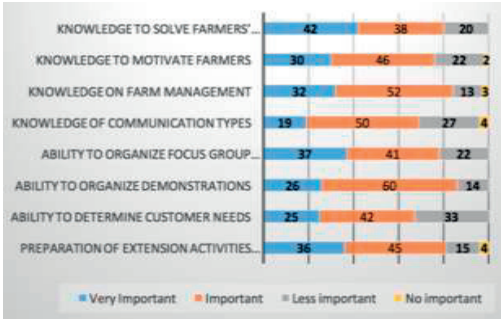

Figure 2. Training topics required for communication and extension methods

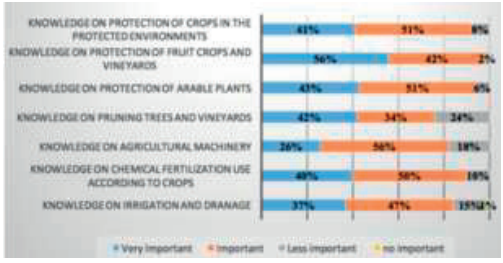

Figure 3. Training topics required on agriculture

According to extensionists, knowledge related to technical topics of agriculture (*"Knowledge on irrigation and drainage", "Knowledge on chemical fertilization use according to crops", "Knowledge on agricultural machinery", "Knowledge on pruning trees and vineyards"*) is considered very important and significant to the extent of 84-90%. While the knowledge related to plant protection (*"Knowledge on protection of arable plants", "Knowledge on protection of fruit crops and vineyards", "Knowledge on protection of crops in the protected environments"*) qualify them as very important and important at the rate of 92-98% (Figure 3). The same result is reported by Chizari et al. (1999); Haleem (2018) and Man et al. (2016), where the interest of extensionists in the first place is for the integrated management of pests, as well as the vegetables' diseases control in protected environments. While Ommani & Chizari (2009) report problems related to irrigation and water use efficiency as the main problems. In the study of Man et al. (2016) an important topic for the training of extensionists is the use of fertilizer in agricultural crops.

As can be seen from Figure 4, the extensionists consider as less important the topics related to livestock in the amount of 11-37%, where the preparation of silage and hay is of less interest ("Knowledge on hay preparation", "Knowledge on silage preparation", "Knowledge on animal feeding and nutrition", and "Knowledge on major animal diseases such as zoonoses, mastitis, parasitic diseases").

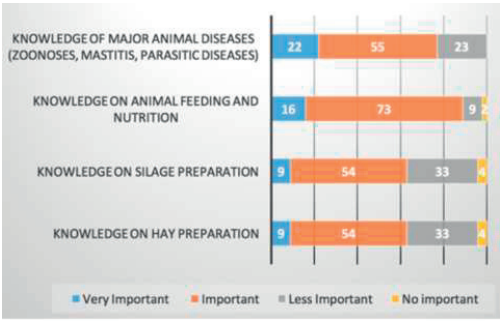

Figure 4. Training topics required for livestock

From all the topics reviewed it turns out that for plant protection are the greatest demands for training and this is explained by the multitude of plant diseases and fruit growing, as well as by the preparations for combating these diseases, which are constantly changing. Even in the study of Man et al. (2016) the most important topic for the training of extensionists, in livestock issues, are the skills for animal diseases followed by and after that animal feeding and nutrition.

3.1 Topics in which extensionists are interested in future training (according to the education background)

As we can see from Figure 5 there are differences between agronomists and zootechnicians in terms of the training they need on topics related to agronomic techniques. These topics are less important for agronomists (7-38%) compared to zootechnicians (7-18%).

Less important topics for agronomists are those related to irrigation-drainage and pruning of fruit trees / vineyards, while for zootechnicians irrigation-drainage and fertilization by crops.
From Figure 6 we notice that there are differences between agronomists and zootechnicians in terms of the training they need on zootechnical issues. All zootechnicians consider them very important and important while agronomists 17-30% say that they are less important. This is explained by the fact that agronomists are mainly engaged in advising farms with crop production and fruit growing.

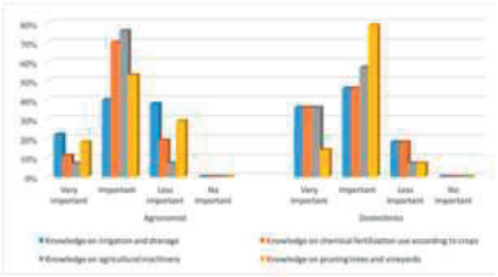

Figure 5. Training topics on agriculture - agronomist vs zootechnicians

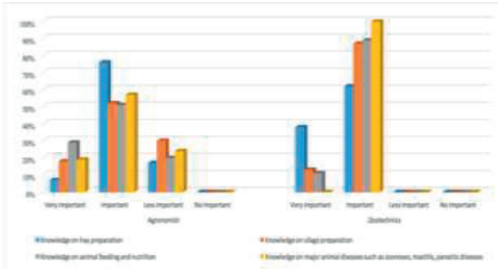

Figure 6. Training topics on livestock - agronomist vs zootechnicians

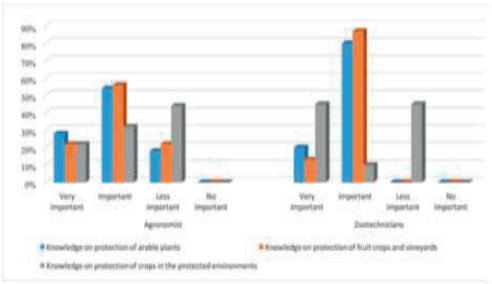

Figure 7. Training topics on plant protection - agronomist vs zootechnicians

The data of Figure 7 shows that zootechnicians are very interested in topics related to the protection of field plants (100% of them compared to 82% of agronomists), as well as the protection of fruit growing and vineyards (100% of them compared to 78% of agronomists), while regarding the topic of plant protection in protected areas in the categories of specialists are less interested, to the extent of 54-55%. The greatest interest of zootechnicians in agronomic topics is explained by the lower knowledge they have about these particular topics.

3.2 Topics in which extensionists are interested in future training (according to working experience in extension)

There are differences between the two groups of extensionists according to the working experience in extension in terms of training they need on zootechnical issues (figure 8). Less experienced extensionists consider less important topics for hay and silage preparation (39 and 45%) compared to more experienced extensionists (33-26%). As can be understood these specialists think that they deal mainly with advising farms with crop production and fruit growing.
Chizari et al. (2006) in their study report the same thing, that the more years in extension the extensionists think that their training needs are not very important.

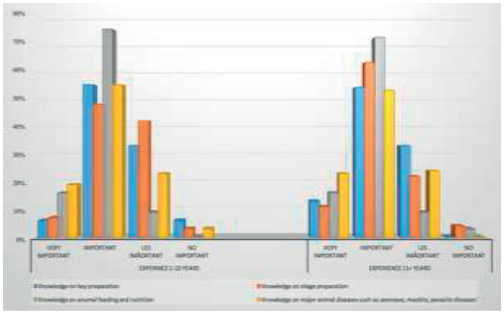

Figure 8. Training topics required for livestock technical problems (extension experience)

According to the experience in extension, in terms of training they need on topics related to agronomic techniques, there are differences between the two groups of extensionists (Figure 9). Thus, in terms of “Knowledge for irrigation and drainage” and “Fertilization according to agricultural crops” are less

important for the group with less experience (20% and 16%) compared to the group with more experience (10% and 4%). As for the "Knowledge of pruning trees and vineyards" 87% of the less experienced extensionists consider it very important compared to 75% of the more experienced extension group, and this explains that the more experienced extension group has performed trainings on this topic.

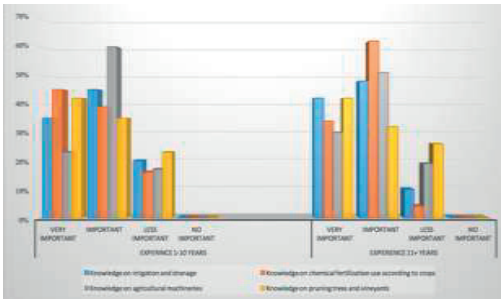

Figure 9. Training topics required for agronomic techniques (extension experience)

All extensionists with less experience (100%) are interested in "Knowledge for the protection of fruit growing and vineyards", this explains that 62% of these extensionists are from AREB-Korça. As for "Knowledge about the protection of field plants and protected areas" there is not much difference between these groups (Figure 10).

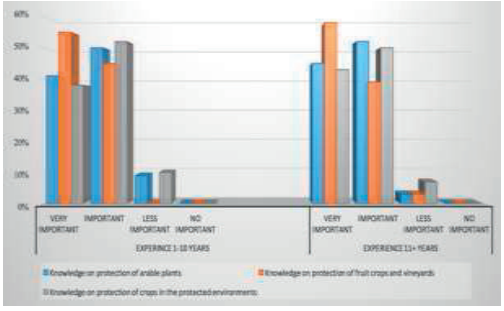

Figure 10. Training topics required on plant protection (extension experience)

So, from the data of the figures above, it appears that for the topics relating to technical problems of agriculture and livestock 80.5% of the group of inexperienced extensionists considers them important and very important, while only 76% of the group of experienced extensionists qualifies them as important.

But what is not expected is that the group of less experienced extensionists considers the topics related to communication and extension important and very important to the extent of 73.4% against 78.1% of the group with more experience (Figure 11).

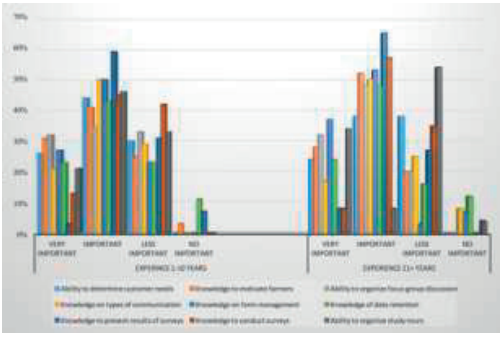

Figure 11. Training topics on extension topics (extension experience)

4 The best period of acquiring new knowledge for extensionists

In terms of the most suitable time for training, most extensionists selected spring, and then autumn, while for winter (7.6%) and summer (9.1%) only 1/6 of them have this preference (Table 3).

Interestingly, the extensionists responses of both RAAE are almost the same. While authors like Chizari et al. (1999), report winter as the most suitable period for training.

5. Three reasons for the purpose of training

Another question addressed to the extensionists was what were the three reasons for the purpose of the training (Table 4). The extensionists of both RAAE have the same answers as it is "To get acquainted with new technologies and to pass them on to the farmer" (41.2% of the total) and "Training on technical issues and updating knowledge" (36.3% of the total), but also have differences for the third reason where the Tirana extensionists mentioned "To be able to convince farmers of economic growth" (7.8%), while in Korça "To communicate as freely as possible with farmers and contact groups" (14.7%).

Table 1. Main sample socio-demographic

RAAE	Extensionists											
	Number of interviews	Gender		Age (years)	Experience (years)		Education					
		M	F		Total	In extension	Agronomy	Zootechnist	Plant protection	Horticulture	Economist	Agro-environment
Tiranë	27	17	10	53.6	26.5	11.7	16	7	1	1	1	1
Korçë	39	24	15	51.7	20.7	11.0	25	8	3	1	1	1
Total	**66**	**41**	**25**	**52.5**	**23.1**	**11.3**	**41**	**15**	**4**	**2**	**2**	**2**

Table 2. Preparation of extension work plans

RAAE	Are extension work plans prepared?					Whose opinion is taken for the preparation of plans?				
	Total	Annually	Monthly	Weekly	Daily	RAAE	Colleagues	Farmers:		
								Contact	Large	Small
Tiranë	27	20	27	2	5	22	13	26	23	10
Korçë	39	39	38	5	6	33	9	39	36	17
Total	66	59	65	7	11	55	22	65	59	27
%	100	89.4	98.5	10.6	16.7	83.3	33.3	98.5	89.4	40.9

Table 3. The most appropriate time to acquire new knowledge for extensionists

RAAE	Trainings most appropriate time							
	Winter		Spring		Summer		Autumn	
	Person	Percent	Person	Percent	Person	Percent	Person	Percent
Tiranë	2	7.4	17	63.0	2	7.4	6	22.2
Korcë	3	7.7	22	56.4	4	10.3	10	25.6
Total/average	5	7.6	39	59.1	6	9.1	16	24.2

Table 4. Three reasons for the purpose of training

RAAE	**Main reasons for the training purpose**		
	To get acquainted with new technologies and to pass them on to the farmer.	Training on technical issues and updating knowledge	To be able to convince farmers of economic growth
Tiranë	**54.1%**	**24.3%**	**21.6**
	To get acquainted with new technologies and to pass them on to the farmer.	Training on technical issues and updating knowledge	To communicate as freely as possible with farmers and contact groups
Korçë	**33.8%**	**43.1%**	**23.1%**

CONCLUSIONS

Our survey shows that we have a gender disproportion in the ranks of extensionists, where 62% are male and 38% female, at a time when female extensionists had to be at least 50%, since most farming work is performed by women.

Extensionists have a long work experience of 23 years but only 11.3 years in extension, which tells us about frequent movements of extension staff, which negatively affects not only the work of the extensionists but also farmers.

Disproportion is also observed in employment by profession where 62.1% of extensionists are agronomists, and only 22.7% zootechnical, when livestock production provides about 52% of total agricultural production

For the preparation of extension activities plans the main opinion is of the contact farmers, but what negatively impresses us is that more opinion is taken from the large farms compared to small farms (89.4 versus 40.9%).

Most of the respondents (90.9%) answered that they have participated in trainings during the last three years, but for the topics related to communication and the methods used in the advisory service very few of them have been trained.

What attracts attention is that for some topics the extensionists are not very interested despite

the fact that in the last three years very few of them have attended trainings for them (Knowledge of why people join groups or associations; Knowledge of forms of communication; Knowledge for data retention; Knowledge to present results; Knowledge to conduct observations; Knowledge to identify local leadership; Ability to organize study tours). This shows that extensionists are not trained in keeping records, conducting observations or presenting results and how they can make accurate annual planning of their activities.

For technical topics the interest of extensionists to be trained is 10% higher than in topics related to extension. The interest of extensionists to be trained in livestock production issues is lower compared to the topics of agricultural production and extension. Perhaps this explains because about 75% of extensionists are agronomists.

For future training, extensionists consider as very important and relevant topics related to extension methods and farm management and then knowledge related to communication techniques. According to extensionists, topics related to knowledge of plant protection are more priority than technical topics of agriculture (such as irrigation and drainage, use of fertilizer by crops, agricultural machinery, pruning of trees and vineyards).

From the interviews it appears that, the extensionists consider as less important the topics related to livestock, where with little interest are the preparation of silage and hay.

So, from all the topics reviewed it turns out that the highest demand is for plant protection training and this is explained by the multitude of plant diseases and fruit growing, as well as by the preparations for combating these diseases, which are constantly changing.

We notice that there are differences between agronomists and zootechnicians in terms of the training they need on zootechnical issues. All zootechnicians consider them very important and important, while 17-30% of agronomists say that they are less important. This is explained by the fact that agronomists deal mainly with advising farms with crop production and fruit growing.

Zootechnicians are very interested in topics related to the protection of arable crops and vineyards. The greatest interest of zootechnicians in agronomic topics is explained by the little knowledge they have about these particular topics.

We notice that there are differences between the two groups of extensionists, according to the experience of working in extension, in terms of training they need on zootechnical and agronomic issues. Less experienced extensionists consider less important topics for irrigation, fertilization, dry grass preparation and silage compared to more experienced extensionists. It can be understood that these specialists think that they deal mainly with advising farms with crop production and fruit growing.

For technical topics of agriculture and livestock, the majority (80.5%) of the group of less experienced extensionists call them important and very important, compared to the group of experienced extensionists, they rate them at 76%.

But what was not expected is that the group of less experienced extensionists considers the topics related to communication and extension important and very important to the extent of 73.4% against 78.1% of the group with more experience.

In terms of the most suitable time for training, most extensionists are responded for spring (59.1%).

Regarding the purpose of the extensionists to participate in the trainings, the three main answers are: (i) “To get acquainted with new technologies and to pass them on to the farmer”; (ii) “Training on technical issues and updating knowledge” and (iii) “To communicate as freely as possible with farmers and contact groups”.

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