

## ANALYSIS OF ON-LINE INFORMATION RESOURCES FOR ORGANIC AGRICULTURE IN ROMANIA

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*This paper present an analisys of the on-line information resources for organic agriculture in Romania, in connection with the portal Bio@gro. This analysis was based on the experts opinions about organic agriculture sector in Romania.*

*According to our survey, the target group included prevalent persons with academic studies (87.8%), wich consider that the Internet can support Organic Agriculture activities.*

*100% of the interviewees use the Internet, more than half (53.33%) have Internet access at their workplace, over one third (36.67%) both at the office and at home, and 18.75% use the Internet only at home.*

*The majority of the experts considers that the information provided by the “traditional” sources is unsatisfactory (“traditional” sources referring to organizations, meetings, press, radio, TV), as 58.62% considers it “Not good”, and 13.79% “Unacceptably poor”.*

*Most interviewees prefer the on-line information services regarding Organic Agriculture to be delivered via Internet, as 56.67% consider it extremely important, 26.67% very important, and 16.67% important.*

*The digital library is considered extremely or very important in 90% of the cases, the directories of Organic Agriculture-related links are extremely or very important to 86.67%, news 98.93%, Organic Agricultural events calendar 66.67%, and SMS/Mobile alerts 58.62%.*

**Keywords:** *organic agriculture, on-line resourses, Internet.*

The global organic agricultural industry is expanding, though the rate of growth is gradual. The regional markets are gaining a lot of popularity. More than 560,000 farms in more than 123 countries are currently certified. Millions of people are involved in the production, processing and distribution, marketing organic food products and drinks. The numbers of people demanding organic foods are steadily increasing. This has lead to enhanced biodiversity and environmental protection along with high income generation for the people who are catering to the increasing demands.

In the recent years, the constant evolution of the Internet, gave organic agriculture actors the opportunity to create a large number of websites, portals and information systems, concerning organic agriculture. These web sites, portals and information systems refer to various target groups, such as farmers, traders, consumer's even children, and offer services which vary according to the target group.

As Romanian organic agriculture is harmonizing its structures with the European and world standards, it is important for the Romanian agriculture and IT industry to collaborate in favor of the local agricultural producers and of an extending market for the Romanian organic agricultural products. This cannot be achieved on the farm, association, etc., but with increasing assistance from the authorities that should create the economic and legislative framework for a functional e-economy in general, and organic e-agriculture in particular. An important solution for the Romanian organic agriculture actors is Bio@gro – web portal (<http://bioagro.aua.gr>, [www.bioagro.ro](http://www.bioagro.ro)).

This portal is the result of the project developed by the Bio@gro Consortium and financed by the E.C. Commission – DG Information Society. The Bioagro project involves four countries: Cyprus, Greece, Germany and Romania and the strategic objective is the development of a system (BIO@GRO) that will provide a single point of access to accurate and multilingual OA information, e-business services and mobile services (m-services) to all key actors involved in the OA value chain; organic farmers, agribusinesses and consumers/citizens.

## MATERIAL AND METHOD

The results of the experts opinions were based on the questionnaires especially on those that were translated into Romanian language.

50 questionnaires were sent, out of which 38 persons have answered the questions, while the rest have declared their impossibility to collaborate within the given interval, by motivating the lack of necessary time.

The participants contacted were experts from academic institutions (teaching staff, researchers, M.Sc and Ph.D students from the Universities of Agricultural Sciences and Veterinary Medicine of Bucharest, Iasi, Cluj-Napoca), research institutes (the National Research & Development Institute for Soil Sciences, Agrochemistry, and environmental Protection), agricultural research coordinating bodies (the National Research and Development Programme AGRAL, the Academy of Agricultural and Forestry Sciences), agricultural consulting institutions (the Regional University Office for Agricultural Consulting OZUCA Bucharest, Mures District Office of Agricultural Consulting), as well as experts from public agencies and services for agriculture (Central Office of Phytosanitary Quarantine), agricultural input trading firms and companies (SC Agrovet Ltd), organic agricultural produce trading companies, veterinarians (teaching staff, researchers, executives in charge of central administration), etc.

Their answers to the Expert questionnaires have been introduced in the data base of the project, and statistically interpreted.

## REZULTS AND DISCUSSIONS

According to the our investigations the education level of the experts was predominant for university graduates (87.88%), compared with only 12.12% high-school graduates (traders from companies operating in organic agriculture produce commercialization). There is also a high share of the postgraduate interviewees, out of which 51.2% hold a Ph.D degree, 18.18% are M.Sc and Ph.D students (fig. 1).

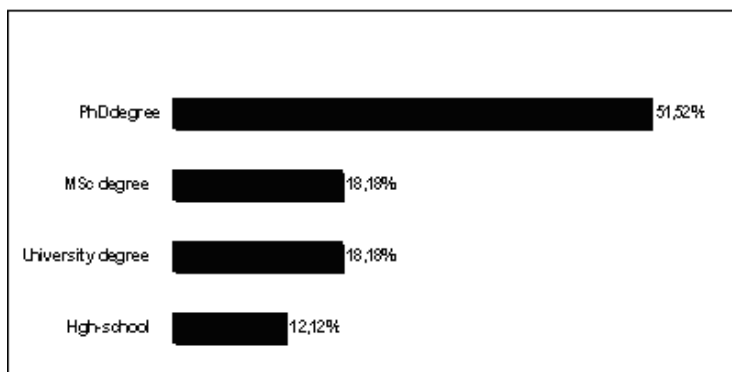


Figure 1. **Education level of the experts**

100% of the interviewees use the Internet, where more than half (53.33%) have Internet access at their workplace, over one third (36.67%) both at the office and at home, and 18.75% use the Internet at home. This result may be explained both by the interviewees' high level of training and the recent significant increase in the Internet users in Romania (fig. 2). It is noteworthy that the Internet has become a daily occupation for 76.67% of the interviewees, whereas other 10% have access to the Internet several times per week

Thus, modern communication technologies are of paramount importance to the promotion of an agricultural sector, and can contribute to its public dissemination. This aspect is highlighted by mostly affirmative answers to the question – 93.33% (fig. 3).

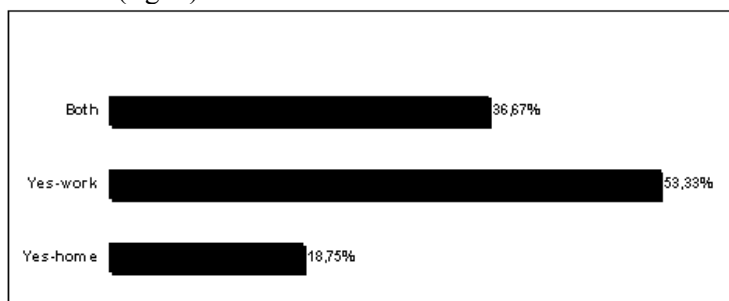


Figure 2. **Internet acces**

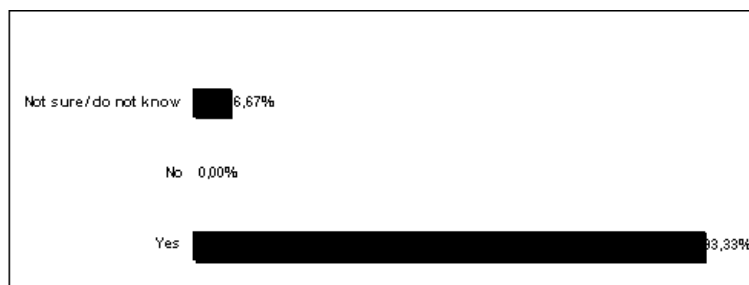


Figure 3. **Internet can suport organic agriculture activities**

There is, nevertheless, an unfavorable opinion of the expert interviewees on the quality of the currently existing Organic Agriculture services. The majority considers that the information provided by the “traditional” sources is unsatisfactory (“traditional” sources referring to organizations, meetings, press, radio, TV), as 58.62% considers it “Not good”, and 13.79% “Unacceptably poor”. Only about a quarter of the interviewees (27.59%) appreciate these services positively (fig. 4).

According to frequency, the expert interviewees mention certain public organizations, institutions or services providing information on Organic Agriculture, as follows: the Ministry of Agriculture, Forests, and Rural Development; the National Federation of Ecological Agriculture; agricultural universities; the National Agency of Agricultural Consulting; the Bioagricultural Association; Agroecologia; Ecorural; the Romanian Association of Sustainable Agriculture; Bioterra Cluj; Biocert Body; Ecocert International; the Romanian Accreditation Association; the Ministry of Health; the Research Institute of Agricultural Economy; mass-media.

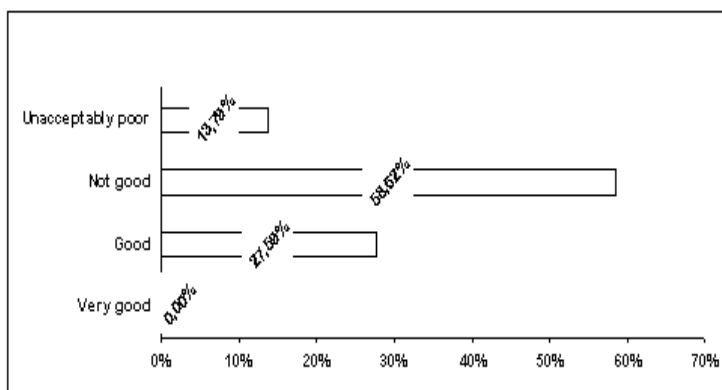


Figure 4. **Level of organic agriculture information (traditional sources)**

The great majority of the interviewees (over 70%) know that there are on-line information services concerning Organic Agriculture on the Internet.

The digital library is considered extremely or very important in 90% of the cases, the directories of Organic Agriculture-related links are extremely or very important to 86.67%, news 98.93%, Organic Agricultural events calendar 66.67%, and SMS/Mobile alerts 58.62%.

The importance of the on-line educational services is variously appreciated by the expert interviewees. The best practices guides rank first among preferences, as they are considered important by all interviewees (extremely important 65.52%, and very important 24.14%), followed by the on-line courses, also considered either extremely important (53.33%) or very important (23.33%). Of particular interest there is also the catalogue of other on-line educational resources (extremely important 13.33%, and very important 53.33%), as well as Frequently Asked Questions (extremely important 26.67%, and 56.67% very important) (fig. 5).

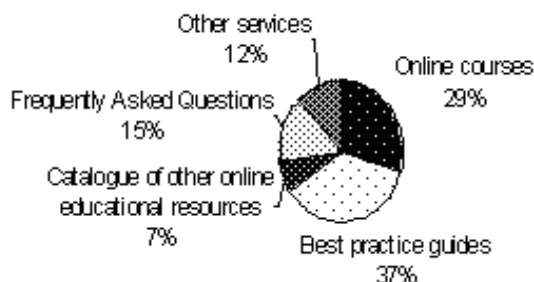


Figure 5. Importance of on-line educational services to organic agriculture actors

Out of the total interviewees, 14.29% are willing to pay for the best practice guides, 10.34% for on-line courses, and 3.45% for the Catalogue of other on-line educational resources (fig. 6).

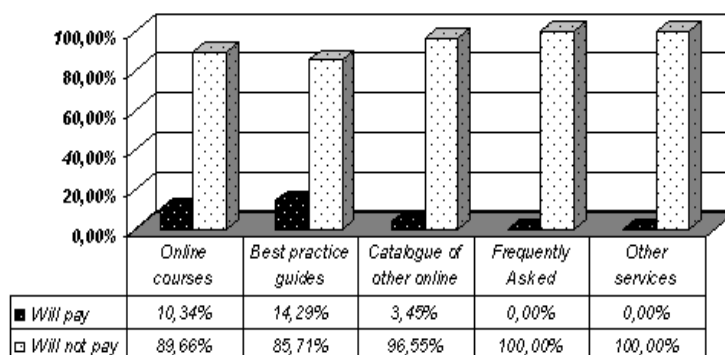


Figure 6. Importance of on-line educational services to organic agriculture actors – Willingness to pay

The organization that provides the service is important and very important for 76.66% of the interviewees, only 13.33% consider it not important, and 10.00% did not answer the question (fig. 7).

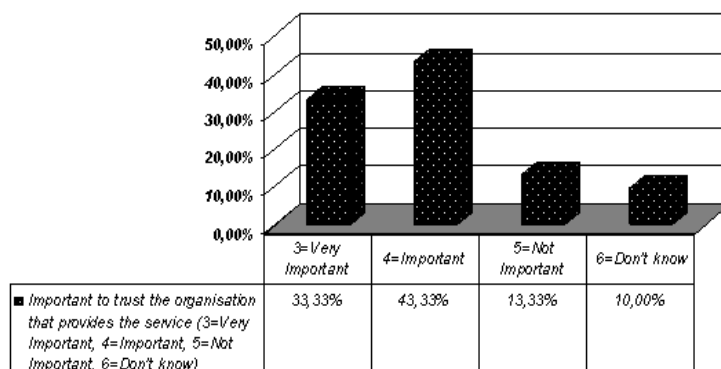


Figure 7. Important to trust the organisation that provides the service

Concerning the portal administrator, 85.71% give priority to non-governmental organizations (NGOs), compared with 58.33-59.26% in favor of administrators from either the commercial or the governmental sector (fig. 8).

Finally, a portal that provides services to the entire EU Organic Agriculture sector is considered very important by over 95% of the expert interviewees (fig. 9).

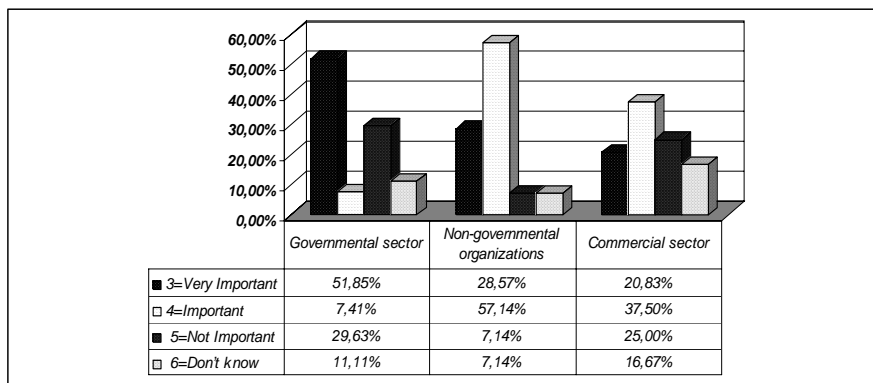


Figure 8. Preferred organisations to be information providers

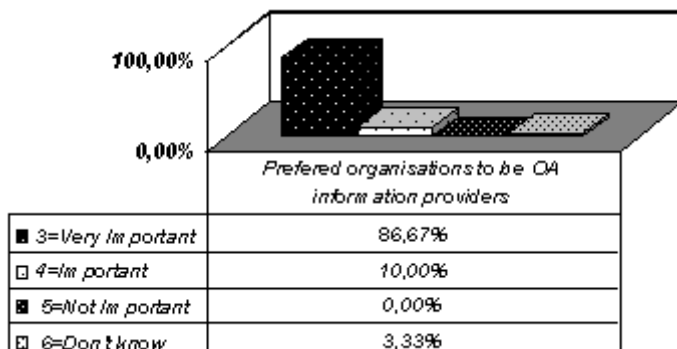


Figure 9. Importance of a web portal that provides services to the whole EU OA sector

## CONCLUSIOS

From the interviewees performed on the experts opinions concerning on-line information service systems currently existing in Romania, resulted the following conclusions:

- the target group was formed from persons prevalent with academic studies (87.8%), out of which 51.2% hold a PhD, and 18.18% MSc or PhD students;
- 100% of the interviewees use the Internet, out of which 76.67% use the Internet daily, and other 10% several times per week;
- all the interviewees consider that the Internet can support Organic Agriculture activities; on their opinion, modern communication technologies are

extremely important for the promotion of Organic Agriculture, and can contribute to its public dissemination;

- there is a general unfavorable opinion on the quality of the currently existing on-line Organic Agriculture services;

- most interviewees prefer the on-line information services regarding Organic Agriculture to be delivered via the Internet; priority have: the Digital library; the Directories of Organic Agriculture-related links; the News; the Organic Agriculture events calendar;

- the on-line educational services are considered important by all the experts, priority having: the Best practices guides; the On-line courses; the Catalogue of other on-line educational resources;

- the organization that provides the services is important for the majority of the interviewees, and for the portal administrator, they give priority to non-governmental organizations;

- the experts consider very important a portal that provides services to the entire EU Organic Agriculture sector.

The combination between these technologies has many advantages which can facilitate the diffusion of information and knowledge regarding OA. The advantages emerging through the use of technology are mainly focused on saving time and money.

Through technology, and especially the Internet, one can have access to every available information on OA, twenty four hours a day, for seven days a week, and from anywhere. On the other hand, the lack of a complete and Multilanguage OA portal creates problems, due to the dissemination of OA information and knowledge.

The use of physical libraries is time and cost consuming, as it demands the researcher's physical attendance. Also, the available books are not always up to date, resulting in the absence of valid information. Another disadvantage is about OA laws whose complexity and differentiation renders their analysis very difficult.

On the other hand, agronomists, advisors, traders and processors are highly dependent on published information. More preferable is information in electronic form, particularly if properly updated and simplified.

The Bio@gro can surely benefit from the available traditional supplies of information to the degree that it will manage to put it together and make it more available.

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