CURRENT STATUS REGARDING THE OPERATION OF ORGANIC AGRICULTURE SECTOR THROUGH THE SUPPORT OF INTERNET TOOLS IN ROMANIA

SITUAȚIA ACTUALĂ A UTILIZĂRII TEHNICILOR DE INTERNET ÎN CADRUL SECTORULUI DE AGRICULTURĂ ECOLOGICĂ DIN ROMANIA

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Abstract *The aim of this paper is to provide a description of the current status regarding the operation of OA sector through the support of internet tools and mechanisms in Romania in connection with the portal Bio@gro (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 bz Internet (BIO@GRO) that 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.*

Rezumat *Scopul acestei lucrări este prezentarea situaţiei actuale a utilizării tehnicilor de Internet în cadrul sectorului de agricultură ecologică din România prin portalul Bio@gro (www.bioagro.ro). Acest portal este rezultatul dezvoltat prin Consorţiul proiectului Bio@gro şi finanţat de Comisia Uniunii Europeane – Direcţia Tehnologia Informaţiei. Proiectul Bioagro include patru ţări: Grecia, Cipru, Germania şi România şi îşi propune să dezvolte un sistem pe Internet (Bio@gro) care are un singur punct de acces spre informaţii multilinguale despre agricultura ecologică în general, servicii de afaceri on-line, servicii de telefonie mobilă (sms) către toţi actorii implicaţi în filiera agriculturii ecologice: fermieri, oameni de afaceri şi consumatori/clienţi.*

Key words: *organic agriculture, Internet, Bio@gro*
Cuvinte cheie*: agricultură ecologică, Internet, Bio@gro*

INTRODUCTION

The access to information technology is vital for the harmonious development of each country in the region, and for the region as a whole. The common element of the approaches to the various areas of development is represented by the new technologies, more exactly by a more active presence of the Internet in the rural area. Information Technology allows widely access to information and knowledge for all citizens. A large use of information technology in all activities of human existence marks a new stage of human civilization, called "Information Society".

Information Society means changes in all domains: in administration (e-government), in business (electronic commerce), in education (long-distance education), in culture (multimedia centres and virtual libraries) and in the manner of working (long-distance work). All these transformations are the product of the large use of the Internet. The Internet influences the way we live, the way we do business, the manner of working, the way we study

and communicate, and even the way we spend our spare time. The technological support of this new society is done by the convergence of three sectors: Information technology, communications and e-content development.

Romania is the first country in Europe that adopted the new acquis regarding electronic communications, which promotes a high degree of auto-regulation of the market. The new comers on the ICT market are asked to only announce their intention to begin activity through a notification sent to the National Regulatory Authority for Communications. Since the beginning of 2001, Romania has implemented all the European Directives for Information Society and Telecommunications.

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 favour 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 (www.bioagro.ro).

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MATERIAL AND METHOD

The survey was aimed at gathering information on the on-line and e-business information service systems currently existing in Romania, and on their use by all those somehow involved in the Organic Agriculture chains. At the same time, information was required on the demands of the potential users to the on-line service systems, with particular reference to Organic Agriculture.

The results of the interviewee's opinions were based on the questionnaires especially on those that were translated into Romanian language. The interview was directed towards the following target groups: farmers – producers from various agricultural areas of Romania; processors; customers/buyers and traders on the traditional markets and supermarkets; customers/buyers and traders from various rural areas; other categories (researchers, teaching staff, etc.).

RESULTS AND DISCUTIONS

General aspects of the Internet use in Romania. Through the adoption of the European Directives concerning ICT, Romania has successfully finalized the legal framework required for completing the process of liberalization of the telecommunications market.

At the end of 2003 (fig. 1), there were approximately 400 Internet Service providers (SPs), mostly private companies. Some 45% of the Internet users use public access points (29% access Internet from home and 26% from work). The main public access points are Internet

cafes (which exist especially in university centres) but also by the 2,800 post offices that offer ICT-based services, out of which 960 allow the transmission of electronic messages and over 600 permit public Internet access. Around 85% of the companies have Internet access, and 47% of the PCs in Romania were used for business (13% were used by the administration and 40% by households). In late 2003, the total number of ".ro" registered domain was 57,500 (8,976 in 1999).

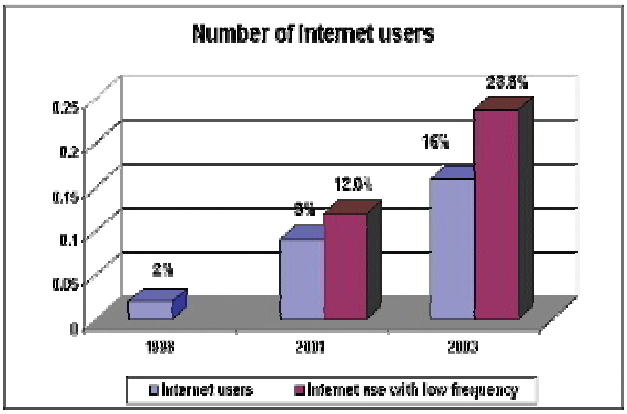

Figure 1. - The number of Internet users.
(Source: The Ministry of Communications and Information Technology)

Current status in the Organic Agricultural Sector in Romania. The main aim of the EU common policy in relation to rural development, as one of the key aspects of the Common Agricultural Policy (CAP), is represented by the promotion of a sustainable rural economy.

Romania has optimal conditions for developing organic agriculture, along with a favourable context, which consists of: fertile and productive soils, stretching over a large area of arable land; use of chemical substances and fertilizers have not yet reached the levels from the EU member states; the traditional Romanian agriculture relies on clean technologies; there is a growing demand for agricultural products, which provides Romania with the opportunity to be an active partner in the European market; the prices of organic products are advantageous and they enable a raise in the farmers' revenues, being also an alternative for the people living in the rural area to participate in the development of this field.

In 2006, the total agricultural lands of the Organic Agricultural Sector were 170,000 ha, out of which: fodder crops and pastures – 51,000 ha, cereals – 26,000 ha and oleaginous and protein plants – 24,000 ha (Fig. 2 and Fig. 3).

In 2006, over 70% of ecological vegetal products and over 88% for animal products were delivered for domestic market (Fig. 4). Romania exports chiefly raw materials that are processed in such countries as Germany, Switzerland and The Netherlands, and subsequently imported as finite products.

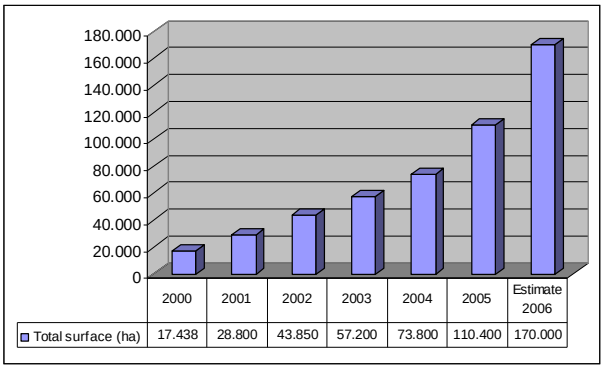

Figure 2. – Organic farming in Romania
(Source: Ministry of Agriculture, Forestry and Rural Development, 2007)

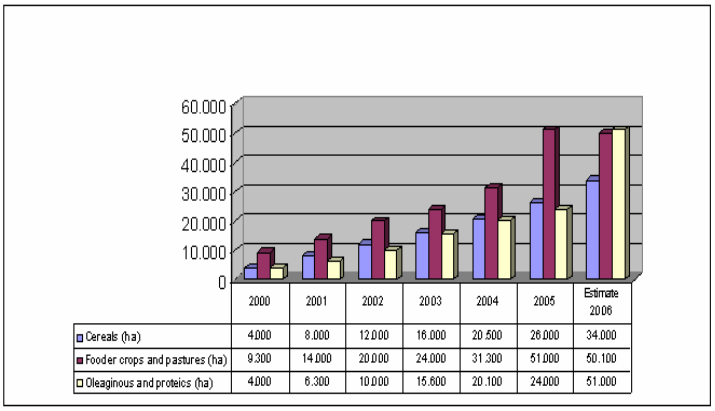

Figure 3. – Organic farming by mains crops
(Source: Ministry of Agriculture, Forestry and Rural Development, 2007)

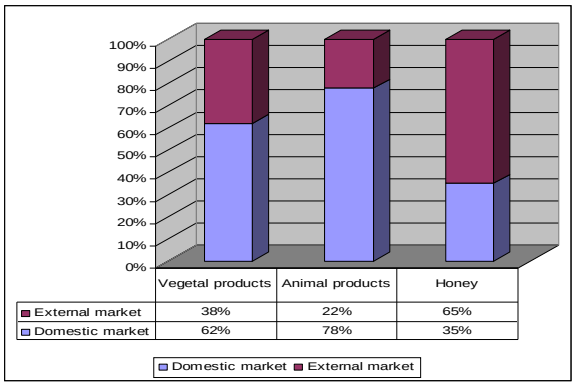

Figure 4. – The market of organic products in Romania

(Source: Ministry of Agriculture, Forestry and Rural Development, 2007)

The results of OA survey in Romania.

From the total of interviewees, 24 (15.38%) are farmers, 5 (3.21%) are processors, 6 (3.85%) are traders and 121 (77.56%) consumers.

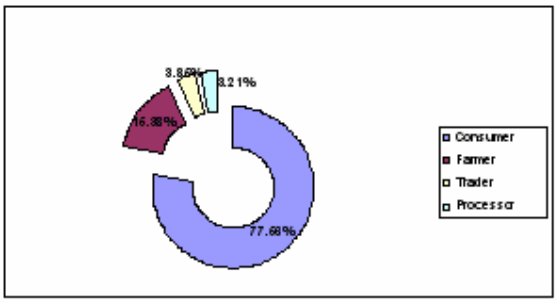

Figure 5. – The category of interviewees

The age structure of the people who answered the questionnaires is the following: 38.31% between 20 and 29 years of age, 31.82% between 30 and 39, 11.69% between 40 and 49, 13.64% between 50 and 59, and 4.55% over 60. It is notable the predominance of young and middle-aged persons, compared with people over 50 years of age. The sex structure is balanced (51.95% females, 48.05% males).

All the interviewees are high-school graduates, and hold a School Leaving Certificate, while 49.7% have graduate studies, out of which: 9.7% college, 11.0% graduate studies, 13.5% postgraduate studies, 15.5% still students.

From 67 interviewees 50.75% don't use Internet because they don't have computers and 14.93% don't have knowledge's of using this system (fig. 6). The Internet access by categories of users is present in Figure 7.

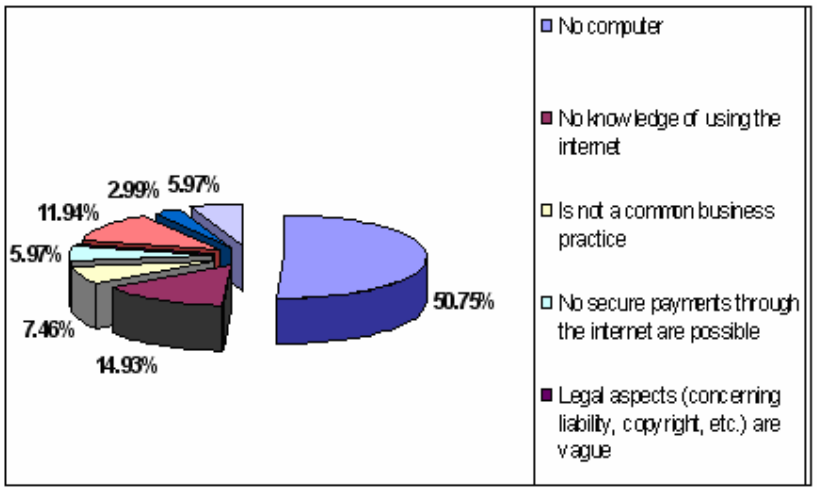

Figure 6. The use of the Internet

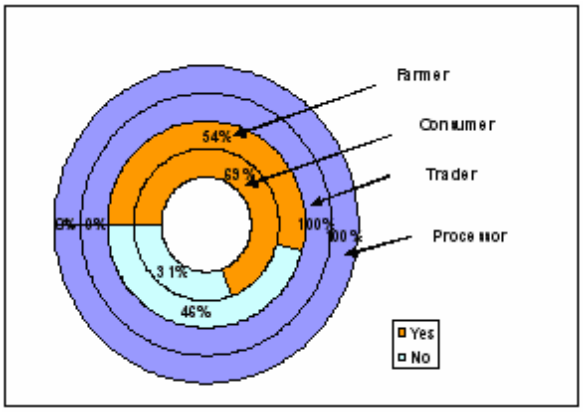

Figure 7. - The Internet access

61.54% which of farmers have daily access to the Internet, once a week 14.29% and once a month 15.38% by comparison with processors (100%) (Figure 8).

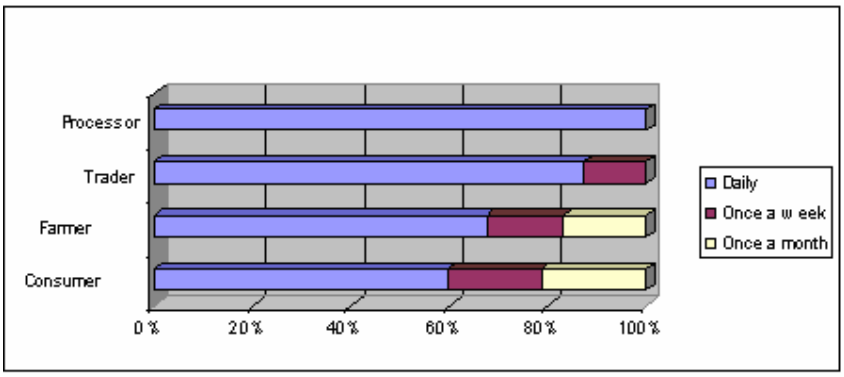

Figure 8. – How often use the Internet

In using Internet services, 70% of farmers are interested in SMSs, 15% in novelty and 15% in e-commerce by comparison with consumers that 24% are interested in novelty, 58% in SMS, and 24% in e-commerce (fig. 9).

92.31% of the interviewees showed interest in such BIO@GRO portal (fig. 10), only 51.92% declared their wish to participate in such a portal, and 39.74% would be willing to pay a subscription for services concerning organic agriculture.

The most users (80%) consider that the certification of website's content must have very high and high priority (fig. 11).

All the participants in the questionnaire expect supporting services from the web portal concerning organic products, as follows: general information on organic products (51.48%), access to certification status/details on each product-traceability (27%), public discussions (7.17%), and consultation (14.35%) (Figure 12).

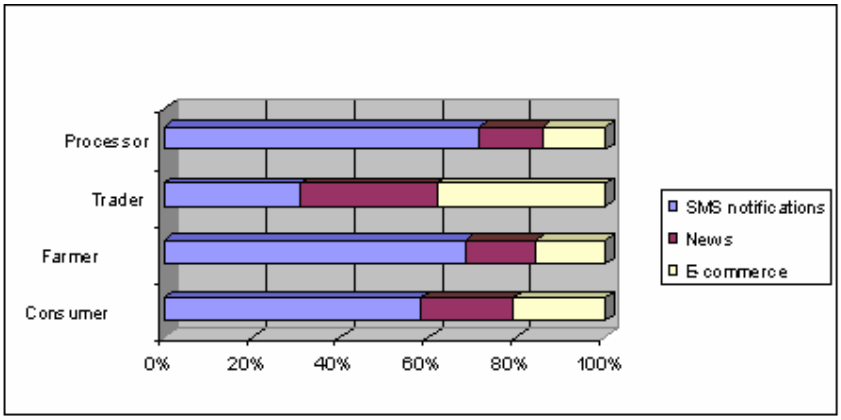

Figure 9. - Using Internet services

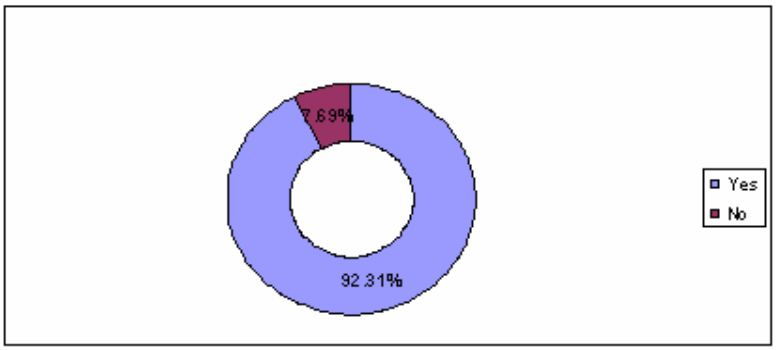

Figure 10. – The interest in web portal concerning OA

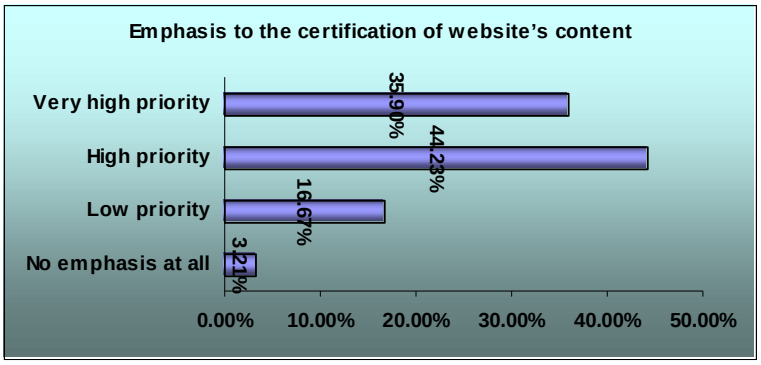

Figure 11. - The importance of the certification of website's content

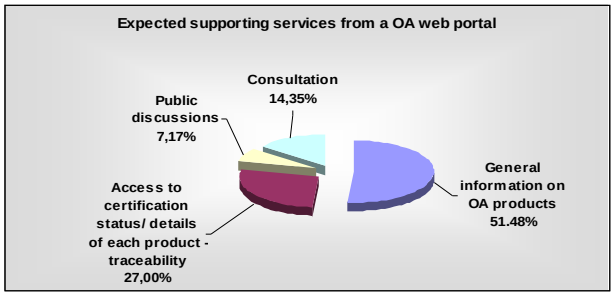

Figure 12. - The services from OA web portal

CONCLUSIONS

1. As Romanian agriculture is harmonizing its structures with the European and world standards, it is important for the Romanian agriculture and IT industry to collaborate in favour of the local agricultural producers and of an extending market for the Romanian agricultural products. The present situation of Romanian economy and agriculture is very favourable for the extension of the Organic Agriculture sector. The Romanian agriculturists are interested to produce marketable agricultural products and food for domestic and external market. The people knows that, in the conditions of Romania's integration in EU, the organic agricultural sector and the organic products will have favourable opportunities of valorisation on the European market.

3. The Bio@gro project is a demonstration of an online Multilingual Biological Agriculture E-Services System for Organic Farmers, Traders, Institutions and Citizens. In other words, it is about a combination of the Internet and its services with the Organic Agriculture and this project can contribute to the integrated development of the OA sector throughout Europe by offering improved conditions and new opportunities both for Organic farmers, agribusinesses as well as the Romanian citizens.

4. Farmers will use internet for information and communication and are more interested in news. They find electronic transactions useful. They are interested in a web portal concerning OA, willing to participate but not paying a subscription for services. Farmers are interested in general information, consultation and access to certification status/details on each product.

5. Traders and processors have internet access and are using it daily for general and market information, communication and shopping for news and e-commerce and they use internet for OA, professional organic farming and organic food. They find electronic transactions useful and are very interested in a web portal concerning OA. Most of them are willing to participate and be advertised in such a web portal. A high percentage of traders and processors are willing to pay a subscription for services. The certification of the site's content is a very high priority for these categories. Finally, traders and processors are more interested in general information about OA products and in access to certification status.

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