

INTERNET USAGE IN INFORMATION SYSTEMS OF THE AGRICULTURAL SECTOR IN SLOVAKIA

VYUŽITIE INTERNETU V INFORMAČNÝCH SYSTÉMOCH REZORTU POĽNOHOSPODÁRSTVA V SR

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Anotácia

Príspevok sa zaoberá s využitím Internetu pre získavanie informácií v rezorte poľnohospodárstva. Analyzuje súčasný stav v SR a predkladá perspektívy ďalšieho skvalitňovania podnikových informačných systémov komunikujúcich s Internetom. Približuje pracovníkom v poľnohospodárstve SR informačné zdroje z rôznych výrobných a obchodno-finančných oblastí.

Summary

This paper deals with Internet usage for acquiring information in the agricultural sector. The recent situation is analysed and future perspectives of company information systems communicating with Internet are discussed. Information resources are available for farmers, researchers and extension in agriculture about several production and financial areas.

Kľúčové slová:

Internet, informačný systém, poradenstvo, komunikácia

Key words:

Internet, information system, extension, communication

Introduction

Agricultural information is more accessible to more people through technology. Price decrease of personal computers and increase of Internet providers with lower costs allow for farmers to be easily connected to the Internet. The ICT adoption rate is in countries of transition not very high but the speed of adoption is remarkable.

In 2001 the same questions of ICT adoption were applied among farmers in Slovakia as in Gelb's (1) research. The results showed that the main reasons for the slow rate of IT adoption by farmers have been technological and infrastructure impediments, unclear benefits and cost. The major difference between these two researches was in purchasing power parity inequality e.g. the rate between salary and IT cost were higher in the EU countries than in Slovakia, assumed Szovics and Toth (3). Personal impediments came from the lack of experience with IT in general, which also have influenced investment decision making as Látečková and Škorecová stated (2).

Objectives and Methodology

The goal of this paper is to identify collection of information for farmers available on the Internet in Slovakia. The methodology is based on an analysis of 50 web sites connected to agriculture. Primary data have been collected through direct observation of the web sites

structure, features and implementation strategy. Several Internet sites were selected to enhance the access and exchange of information in the agricultural sector.

Results and discussion

1. Recent situation of Internet adoption in Slovakia

The main problem is a small number of farmers connected to Internet. Also the speed of connection is slow. In spite of these facts the adoption rate is increasing due to simple access and userfriendly Internet environment. The recent situation could be characterised as follows:

1.1 Small number of users

There is no statistics about Internet penetration in Slovakia. Most of the institutions (Ministry of Agriculture, research institutes, schools) are connected to internet through leased line. Farmers, agricultural cooperatives use dial-up connection, which is sometimes quite slow.

1.2 Insufficient transmission speed

Internet connection is realized through several providers. Schools are connected by the Slovak Academic Network (SANET). SANET is an independent civil association, members of which agreed with conditions to provide each other with Internet services. It is a non-profit organisation whose members contribute to operation of the network on the basis of the price list approved by the SANET General Assembly. SANET is not the organisation managed by the Ministry of Education of the Slovak Republic. The Ministry of Education contributes to working of SANET by the subsidy for high schools and universities. Other academic, scientific and research organisations pay for the SANET services according to a valid price list as well as other commercial or non-commercial members of the SANET association. The advantage of this network is a reasonable price. The high number of customers makes the connection slower and less effective. Another provider is Telenor Slovakia s.r.o., which provides a broad range of services in the field of satellite communication, transmission of data and voice signals and comprehensive consulting services facilitating the implementation of telecommunication and information technologies. The connection is reliable and comfortable. Agroinstitút, Agrokomplex exhibition organizer and some of the research institutes use this provider. Other institutions are connected to Internet through providers like NEXTRA, Orange, Slovak Telecom, SINET, LINIsystems, DDnet, Gratex International, Via PVT and so on. Most of the farmers select connection based on price and service availability. The speed of the connection is usually slow.

1.3 Lack of information about the frontiers of the Internet

The lack of advantages of the Internet is derived from the low interest of managers, who often do not know about the possibilities of Internet. Managers afraid using ICT and do not employ an expert or do not use outsourcing. Outsourcing could be a very helpful tool of gathering information especially for small farmers.

1.4 Absence of computer skills

Absence of computer skills is mainly in the case of older generation of managers. The Ministry of agriculture does not provide training in this area.

1.5 Low profitability of the agricultural sector

Primary agricultural production due to high uncertainties characterized by low profitability. Some of the farmers struggle and first of all want to survive and do not consider Internet connection as important at the expense of other needs.

1.6 Lack of www pages from the connected user.

Important part in the Internet communication is to provide documents and recent informations about the activity of the connected user. This activity is very limited in agriculture. There are just a few farmers who have their own www homepage with a certain goal. Farmers with www hompages do not always update their pages.

Farmers with connection use Internet in three different levels:

- Passive usage – using information resources from the servers of other users for own needs,
- Active usage – providing information about own products and services from leased server,
- Electronic data interchange - mainly e-mail operation for correspondence or data transmission.

Unfortunately the third group is the biggest in Slovakia. Farmers use Internet mainly for e-mail communication, information gathering and advertisement.

2. Main problems of information systems in agriculture

Some tasks related to the homepages and the data availability through Internet in Slovakia are summarized here:

- Absence of National Information Society Strategy. The law n. 261/1995 is obsolete. Needs amendment.
- Lack of full text documents from the research institutes. Some of the institutions offer the delivery of these documents by post.
- Structural limitations, which do not offer link to other web pages related to agriculture or rural development.
- Lack of coordination of the ICT policy. Better coordination and cooperation among stakeholders would be beneficial.
- Absence of availability to submit on-line applications for subsidies from the MA.

3. Information resources for farmers

3.1 Ministry of Agriculture of the Slovak Republic

The official site for general information about the agriculture in Slovakia is the homepage of the Ministry of Agriculture – www.mpsr.sk. This portal is prepared in a bilingual (Slovak and English) version. Information about administration and organisational structure can be found on this page. Basic documents connected to the negotiation position of the Slovak Republic to the EU, Concept of Agricultural Policy of the SR until 2005, Green Reports, policy papers are downloadable. Organisations connected to the agricultural sector have links from this page. The subsidy policy, legislation, agrotourism, development of the foreign trade, SAPARD programme and advisory services are accessible. The administrator of the server is the Institute for Scientific and Technical Information for Agriculture.

3.2 Slovak Academy of Agricultural Sciences

The homepage of the Slovak Academy of Agricultural Sciences contains just basic information about this institution – www.uvtip.sk/english/saas/index.htm This institution as a national information center for scientific and research potential but unfortunately does not provide information about the research outcomes from the science and technology projects.

3.3 Institute for Scientific and Technical information for Agriculture

One of the best pages connected to agriculture is the site of the Institute for Scientific and Technical information for Agriculture - www.uvtip.sk/english .

3.4 Slovak National AGRIS/CARIS FAO Centre

The site is located at www.uvtip.sk/english/uvtip/ac/index.html The main activities of the center are processing and co-ordination of data on Slovak agricultural books and magazines, research projects and data submitted to the AGRIS Co-ordinating Centre at FAO Headquarters in Rome.

3.5 Slovak Agricultural and Foodstuffs Chamber

Slovak Agricultural and Foodstuffs Chamber is a non-state, public-administrative institution, it's mission is to apply members' rightful interest in creation and realisation of state economic and social policy, to support and protect their economic, social and business interests. This page does not cover many information - www.sppk.sk/ .

3.6 Agroweb Slovak Republic

AgroWeb Slovak Republic - www.uvtip.sk/english/awsk/index.php, a part of the www.fao.org/regional/seur/aw is created in aim to collect and provide information on agricultural institutions and other important agriculture related subjects to help users to find information and contacts in Central and Eastern European countries and former USSR. The technical support is provided by FAO-SEUR Budapest. The sitemap of this network is the same for all the CEE countries. Country profile, governmental institutions, information centers, research centers, educations, NGO's, Agro marketing, EU integration, food and nutrition, veterinary medicine, forestry, fishery and other information are available from this site.

The Agroweb Network is an Internet-based collaborative network for exchange of information on agriculture and food and nutrition related topics. The scope of the network is:

- to serve users of the system by providing relevant information in an easy accessible way
- to promote capacity building and inter-institutional cooperation between the participating countries.

3.7 Agroregister

This database contains information about organisations in agriculture. It is possible to search by name, address, district and branch. The site is available just in Slovak at www.mpsr.sk/slovak/info/agroreg/index.htm. This database is helpful in establishing professional contacts or searching for experts.

3.8 Agrokatalog

Agrokatalog is a centralised catalog of bibliographic literature of 21 scientific institutions of the MA. Available just in Slovak and does not contain full text publications just abstracts. www.agrokatalog.sk.

3.9 Slovak Agricultural University in Nitra

Bilingual site for prospective students and people concerned to agricultural education. www.uniag.sk

3.10 DISY

This site is devoted to business information service – www.disy.sk. Agricultural commodities are exchanged through this company for free of charge. The company provides daily information delivery about supply and demand of agricultural products.

3.11 Agrotourism in Slovakia

Allows to search in a database of accomodation facilities in Slovakia based on the selected criteria – www.mpsr.sk/slovak/info/agrotur/menu1e.htm Available in Slovak, English and German.

3.12 ATIS

Brings to farmers regularly agrarian market information about selected agricultural commodities – www.vuepp.sk/ATIS/ATIS.htm Fortnightly prices of beef, pork, milk, cereals, potatos, chicken, eggs, fruits and vegetables are available in pdf format.

3.13 Agricultural Foreign Trade Statistics

Customs statistics for agricultural commodities is presented on the page www.mpsr.sk/slovak/info/colstat/hlav1.htm

3.14 Agricultural Extension

This is a helpful site for farmers. Gathers information about the weather situation, animal and plant production. Agricultural experts database is available from this site with a detsiled description of competencies. Available in Slovak www.agroporadenstvo.sk.

3.15 Commodity Exchange

Useful guide for checking prices of agricultural commodities. Spot, forward and futures contracts are traded. Statistics is available at www.kbb.sk/kbb.html.

4. Reccomendations for ICT support

Recommendations supporting ICT usage are the following:

- The set-up and implement the Integrated Administrative and Control System (IACS).
- To create a site with a guide to quality agricultural information on the Internet in Slovakia, which will connect agricultural organizations, government agencies, Slovak Agricultural University, research institutes and provides reference services in specific areas. The outcome of this site would be creating a network, which is bringing agricultural and related information on the web.

Sharing this information with national, international institutions would create an opportunity to cooperate and interact.

- Improve data collection techniques.
- Increase the quality and structure of the presented data available.
- Introduce courses on Internet for farmers.

5. Why do farmers need these pages?

Based on the survey conducted among farmers in Slovakia users of Internet declared that the net becomes a part of their daily life and important part of information gathering. Internet is used mainly for **communication purposes** - sending and receiving e-mails; **information source** – access to daily newspapers, weather reports and forecasts, signalization reports, chats, laws listing; **business** – online trading, price comparison, marketing information; **services** – online banking.

Conclusion

Adopting a proactive strategy, and acting to bring the Internet to rural and agricultural communities in Slovakia will help enable farmers to face the unprecedented challenges brought on by the changing global economy, political and social changes, and demographic pressures. Internet is a tool for improving the competitiveness of farms and strengthen the quality of managers in the decision making process.

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