Overview of AgroWeb networking in the countries of Central and Eastern Europe

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Abstract

The paper examines some steps in the process of agricultural information networking in the countries of Central and Eastern Europe (CEE), and in some eastern and south-eastern contiguous regions, with special emphasis on AgroWeb (AW) network. It looks at circumstances that brought about the idea the need for a specialised network. AW was launched by organisations, groups and individual agricultural specialists, with special representation of library and information centres in order. These groups desired to develop an information exchange platform based on common principles in the region that had historically shared many common socio-economic characteristics. This paper explores the role of international partners, such as IAALD and FAO. The AW is comprised of national sub-portals, thematic knowledge networks, and sub-regional portals AW SEE (South East Europe), and AW CAC (Central Asia and Caucasus). A webometric analysis of web citations of the AW international links is presented. Links are assessed through link-checking or site-exploring with the help of Web-based tools. The CEE region, along with the neighbouring countries in the east is a very large territory with significant agricultural potentials but also serious social and economic challenges. Efficient WWW-based networking and constant information support is needed for better management of resources.

Keywords: Agricultural information, Web portals, Webometrics, Web citation, Data mining, International networking, Regional cooperation, Central and Eastern Europe, Libraries, Information centres, Documentation, Data collection

Introduction

The AgroWeb network was initiated by different groups and associations which had been engaged in agricultural and rural collaboration in the area of Central and Eastern Europe (CEE), or geographical frame of the former socialist central and eastern part of Europe (with Germany and Austria as initial observers). This area of Europe had been characterised by multi-national states, such as the Soviet Union, Yugoslavia, and Czechoslovakia, which disintegrated in the early 90s. The hitherto well established and traditional agricultural information, education and research networks, and some good collaborative practices in the region had all but ceased to exist.

An important idea associated with the creation of the AgroWeb was thus to establish common Web portals in order to identify, collect and organise the scattering and diverging agricultural information in the region in the incipient years of the Internet. The network has been since its beginning, characterised by strong activities of library and information centres in
the region which embraced quite enthusiastically the idea of information exchange based on common principles. From the very beginning the AgroWeb (AW) has been assisted by the International Association of Agricultural Information Specialists (IAALD) and especially the FAO and its representatives and offices in Central Europe, FAO SEUR (Sub-regional Office for Central and Eastern Europe) and FAO REU (Regional Office for Europe and Central Asia).

Background and History

The first workshop was held in Nitra, Slovakia, in 1998, and was organised by FAO SEUR in Budapest, NitraNet and the Central and Eastern European Chapter of IAALD (International, 1998). It was attended by 20 participants from 15 different CEE countries and was called a webmaster training course on Developing practical skills on internet and CD-ROM technology. This project continued in 1999 with the Agro Web Central and Eastern Europe Workshop held at the University of Agriculture in Godollo, Hungary (Gödöllő’99, 1999). It was organised by FAO, IAALD and Godolloi Agrarkozpont/Godollo Agricultural Centre (GAK). It was the first time that the name AgroWeb appeared in a more "endorsed" manner. Next workshop was organised as a satellite workshop (The Role, 2000) in the frame of the First COAIM in Rome, Italy, in 2000. This workshop tackled some organisational questions rather than training.

By this point the AW network had already begun to expand. In became necessary to continue activities in a more limited, regional manner. The next hands-on workshop, AgroWeb CEE Partnership in the V4 Countries - the FAO National Committees on Internet, was organised later in 2000 in Prague, Czech Republic (AgroWeb, 2000). It was attended by a limited group of AW authors from the so called V4 countries and a few other guests. Another regional workshop was held in 2000 in Tbilisi, Georgia (Role, 2000). The next V4 AW training was held in Warsaw in 2001. There were two other 2001 meetings, in Prague, Czech republic, dedicated to FAO related information on the internet, and the Agroweb CEE Workshop in Zagreb, Croatia (AgroWeb, 2001). There was also a sub-regional workshop in November of 2001 in Tirana, Albania, with a limited number of participants.

In 2002 the AW CEE branch conducted a workshop for authors from Russia, Ukraine and Belarus in Kiev, Ukraine. At this workshop, and also later (Manukyan, 2005), importance was placed on the Russian language as a common language of communication in some regions. Another 2002 workshop with regional participation was organised by NitraNet in Slovakia.

In 2003, an international workshop was organised within the frame of the International Conference on Food Safety and Quality at the Slovak Agricultural University in Nitra. In the scope of the conference a separate meeting of the 9th CEE Roundtable of International Association of Agricultural Information Specialists (IAALD CEE Chapter) took place (Ninth, 2003). The Roundtable was a continuation of a series of US/CEE Agricultural Library Roundtables which began in 1991 under the auspices of the National Agricultural Library (NAL) and on the initiative of Mr. Joseph Howard (Demes, 1997), the then president of the IAALD and the Director of NAL. These activities continued under the NAL director Ms. Pam Andre. These roundtables played an important role in bringing together information professionals from the NAL and the countries of the CEE region (Ustav, 1995; Wright, 1997; Bartol, 2000). Many earlier Roundtable participants became active AW authors and Roundtables served as a catalyst for later AW development, which has been strongly guided by the President of the IAALD CEE Chapter, Mr. Michal Demes of the FAO SEUR.

In September of 2003 FAO SEUR organised a workshop (FAO, 2003) in Budapest, Hungary (FAO WAICENT and EIMS Workshop). A regional AW meeting was held in 2004, in Tbilisi, Georgia. An important meeting of AW national coordinators was then held in Budapest.
in November, 2004. It addressed also the promotion of FAO I-MARK module and promotion of information literacy and access to scientific literature in the frame of the AGORA (Access to Global Online Research in Agriculture). An initiative was also launched to boost thematic networking within the AW (Report, 2004).

The 2004 meeting was complemented by a 2005 workshop in Godollo, Hungary. (AgroWeb, 2005). The workshop was followed in 2006 by Expert Consultation in Budapest. The activities of selected thematic networks were presented (Expert, 2006). The activities of thematic networks were also presented on separate occasions, such as at the Workshop on the Further Development of The Farm Animal Welfare (FAW) WebNetwork in 2007 in Slovakia (Further, 2007). In 2008 the AW portal managers and coordinators met at a Budapest workshop to explore possibilities for further development in the area of Content Management Systems (CMS). Some experimental Web pages were created by using CMS Typo3. Some existing national CMS applications were presented (Bartol et al. 2008). The initiative of e-Agriculture was also addressed (Rudgard, 2008).

Structure of the AW network

The AgroWeb network currently consists of national portals, sub-regional portals and thematic knowledge networks. It also links with several other partners in the frame of agricultural and environmental activities. Home page is available at http://www.agrowebcee.net/ (Fig. 1).

Fig. 1. Homepage of the AgroWeb CEE.

National portals

There exists a preferred structure of the national portals (Table 1). The national portals are set up in two languages. The basic entry point includes several top categories. The national language pages may, to some extent, differ from the English pages. They may include local documents that are written only in a local language and have less relevance to the general audience (Fig. 2.). The national sites are managed by local information professionals at the host organisations which provide space on their servers. These sites assume responsibility for the particular local contents on their pages.
Within the AgroWeb there exists a country scheme or country groups. This scheme, however, has become obsolete with the gradual process towards the membership in the European Union of an increasing number of the AW countries.

The national AW pages are maintained by local experts - a.k.a. AgroWeb authors. The input policy of AgroWeb authors is most often governed individually on a voluntary basis. Some AgroWeb authors are not only coordinators but they also produce their own Web documents or publications, such as glossaries or thesauri. The position of host institutions or host countries towards the AW may vary. In some cases the national portals are hosted by agricultural ministries, in some other cases the pages exist within a frame of an agricultural educational or research institution. There are also other, more temporary arrangements. In general, the national input costs are covered by participating national portals or countries. The AW CEE network as a whole is technically supported also by the IT Working Group.

### Table 1. The categories and countries of the national AgroWeb portals.

<table>
<thead>
<tr>
<th>Country Profile</th>
<th>Research Centres</th>
<th>EU Integration</th>
<th>Animal Welfare</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government Institutions</td>
<td>Education</td>
<td>Food and Nutrition</td>
<td>FarmNet</td>
</tr>
<tr>
<td>FAO NC</td>
<td>NGOs</td>
<td>Veterinary Medicine</td>
<td>Forestry</td>
</tr>
<tr>
<td>Information Centres</td>
<td>Agromarketing</td>
<td>Animal Genetics</td>
<td>Fishery</td>
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</table>

**Central Europe:** Austria, Czech Republic, Hungary, Poland, Slovak Republic, Slovenia  
**South East Europe:** Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Macedonia (FYR), Romania, Serbia, Montenegro  
**New Independents States:** Belarus, Moldova, Russian Federation, Ukraine  
**Baltic States:** Latvia, Lithuania, Estonia  
**Central Asia and Caucasus Region:** Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Uzbekistan

Fig. 2. Examples of national pages of AW Georgia and AW Slovenia.

By the end of this year, AgroWeb Slovenia is to be made available as a portal for Slovenia and the surrounding region, with the aim of providing a comprehensive agricultural information service. The project is supported by the Slovenian Ministry of Agriculture, which is responsible for the development and maintenance of the portal.

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crucial central support is provided by the FAO staff in Budapest. On certain coordinating occasions, such as expert meetings, additional invaluable support is provided by the FAO staff from Rome.

**Sub-regional portals**

Activities of the totality of the AW group soon prompted the establishment of two separate sub-regional portals, AW Central Asia and Caucasus (CAC) and AW South Eastern Europe (SEE), in order to facilitate sub-regional information exchange. These two sub-regional portals exhibit different levels of activities. The SEE group was quite active in the beginning but the ongoing turbulences in the south-eastern part of the former Yugoslavia have impeded a more stable development of this sub-network. Some national networks are updated on more consistent principles, some other national networks show activity only within certain categories, such as that of Food and Nutrition, at the AW Serbia. The AW CAC also exhibits various levels of activity with the Caucasus part, especially the Armenian and Georgian pages, being very active. The Central Asian part is at the moment not updated on a current basis.

**Thematic Knowledge Networks**

Thematic networks (Table 2) began to develop in order to complement the existing national or sub-regional portals. Some thematic networks are active in their own right and organise international meetings. These networks, which also serve as specialised regional focal points, are coordinated by representatives of the national AW portals.

<table>
<thead>
<tr>
<th>Library and Information Centres</th>
<th>FarmNet</th>
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<tbody>
<tr>
<td>Veterinary Medicine</td>
<td>Education</td>
</tr>
<tr>
<td>Food and Nutrition</td>
<td>Animal Genetic Resources</td>
</tr>
<tr>
<td>Forestry</td>
<td>Fisheries and Aquaculture</td>
</tr>
<tr>
<td>NGOs and CSOs</td>
<td>Animal Welfare</td>
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</table>

These networks cover the relevant issues in the entire broader region and may link to even global associations, as is the case with the Animal Welfare (Further, 2007).

**Other Partners**

AgroWeb is constantly looking into possibilities of linking and exchanging information with other networks which are active in the area of agricultural and environmental sciences, especially under the auspices of the FAO. AW information professionals have established good contacts with some other associations, most notably the ESCORENA (European System of Cooperative Research Networks in Agriculture). Within the frame of Escorena activities, two specialised networks are especially active in their links with the AW: the RAMIRAN (Research Network on Recycling of Agricultural and Industrial Residues in Agriculture) and CENTAUR (Veterinary Biotechnology, Epidemiology and Food Safety Network). Links are maintained also with the NACEE (Network of Aquaculture Centres in Central-Eastern Europe). Some other activities and links can be accessed from the AW CEE home page.
**Web citation analysis**

We analysed WWW links to AW pages with the help of two utilities, the Yahoo Site Explorer, and the Link Popularity Check (LPC) of the Axandra GmbH. With Yahoo, we present the results of links by all domains (including the analysed domain) as well as the number of links where the internal links from the analysed site (domain, subdomain) have been excluded (Table 3 the first three numeric columns). With the LPC we show all the links (AllTheWeb application). We can see that both webometric utilities exhibit similar results. The more relevant results are those where the links from the analysed (sub)domain have been excluded.

<table>
<thead>
<tr>
<th>Table 3. Counts of WWW links to different AgroWeb pages.</th>
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<tbody>
<tr>
<td><strong>Yahoo</strong></td>
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<td></td>
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<tr>
<td>AW CAC <a href="http://arm.agrowebcac.org/">http://arm.agrowebcac.org/</a></td>
</tr>
<tr>
<td>AW CEE <a href="http://www.agrowebcee.net/">http://www.agrowebcee.net/</a></td>
</tr>
<tr>
<td>Armenia <a href="http://www.agrowebcac.org/awindex.php">http://www.agrowebcac.org/awindex.php</a></td>
</tr>
<tr>
<td>Georgia <a href="http://www.agrowebcac.org/farm/awgeo/">http://www.agrowebcac.org/farm/awgeo/</a></td>
</tr>
<tr>
<td>Hungary <a href="http://www.gak.hu/aw/">http://www.gak.hu/aw/</a></td>
</tr>
<tr>
<td>Lithuania <a href="http://www.zum.lt/agroweb/">http://www.zum.lt/agroweb/</a></td>
</tr>
<tr>
<td>Poland <a href="http://www.cbr.edu.pl/agroweb/">http://www.cbr.edu.pl/agroweb/</a></td>
</tr>
<tr>
<td>Russia <a href="http://www.cnshb.ru/aw/">http://www.cnshb.ru/aw/</a></td>
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<tr>
<td>Slovakia <a href="http://www.uvtip.sk/english/awsk/">http://www.uvtip.sk/english/awsk/</a></td>
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<tr>
<td>Slovenia <a href="http://www.agroweb.bf.uni-lj.si/">http://www.agroweb.bf.uni-lj.si/</a></td>
</tr>
<tr>
<td>Ukraine <a href="http://www.awu.kiev.ua/">http://www.awu.kiev.ua/</a></td>
</tr>
</tbody>
</table>

The table is based only on a selection of representative AW pages from each AW region. The counts are based only on the links to the default English-language AW pages. There are yet additional web pages which link directly to the parallel national-language AW pages which have not been selected for this webometric presentation. The link counts in the All Domains column may sometimes be very high as they represent all the links from the internal sub-domains of the analysed site. On the example of the AW Georgia we may observe 115 links. One hundred of these links, however, go on the account of the *Animal Genetic Resources Photo Contest 2006* where each animal photo received an individual subdomain within the contest site and each of those hundred pages linked to the parent site of the AW Georgia.

**Discussion**

AgroWeb CEE began as a network of former socialist Central and Eastern European Countries. It was subsequently joined by partners in the contiguous regions of the SEE (South Eastern Europe) and CAC (Central Asia and Caucasus). It soon became necessary to organise distinct regional networks what brought about the creation of AW SEE and AW CAC. These sub-portals became active in their own right. It is especially the coordinators of the AW CAC who participate with important input regarding the overall AW activities (Manukyan, 2005).

AW is a voluntary association of information professionals and some national portals may not receive enough support at certain moments so different national pages show different levels
of activity. But the AW is an ever changing regional and international endeavour which aims to create synergy in the area of web-based agricultural information. It also promotes information competencies and information literacy, thus enhancing national agricultural research.

Many countries in the region share common socio-economic problems on account of sharing a similar recent history. The level of progress, however, is quite different and some countries have by now achieved full integration in the EU. In some other AW regions the once well developed research and education network still seems to be disintegrating and the economic situation has not yet stabilised. A systematic collection of agricultural information in the wider region of CEE, SEE, and CAC deserves all support it can get, especially as the library and information professionals frequently seem to be left on their own. The wider global community must at this point not forget that this part of the world possesses some incredible agricultural potentials which are no longer tapped to a sufficient extent. AgroWeb wishes to contribute to its best capacity in the given circumstances.

References


