

Agricultural Information Worldwide

AN INTERNATIONAL JOURNAL FOR INFORMATION SPECIALISTS IN AGRICULTURE, NATURAL RESOURCES, AND THE ENVIRONMENT

ISSN: 1998-0027

Vol. 1, No. 2, 2008



From the Editor's Desk

Welcome to the second issue of *Agricultural Information Worldwide*! It goes without saying that in today's economic climate, information—and access thereto—has become more important than ever. Information gives us the power to understand and potentially change the world around us; it empowers us to shape our own destinies. A lack of information leaves us struggling for our very survival, defenseless in the face of the changes taking place in our world today. As we observe the desperate economic conditions that have befallen some of the world's most powerful countries, it behooves us to remember that the same concerns have been plaguing developing countries for longer than we care to remember. Necessity being the mother of invention, we can only hope that the way forward will yield innovative solutions that will benefit not only the powerful, but also those truly in need.

Much has happened since our last issue, so we have a lot to report. This is a great time to be involved in the agricultural information community. The e-Agriculture movement continues to grow, and the effort to bring more coherence to agricultural information has intensified. And IAALD has a spot at each table!

Earlier this year, in late April, IAALD created quite a splash at the United States Agricultural Information Network (USAIN) Conference. In addition to being the site of the official debut of *Agricultural Information Worldwide*, there was a mini-meeting of board members, a few internationally-themed sessions, and a grassroots movement to form a new International Interest Group within USAIN. The proverbial icing on the cake was having a team from IAALD come up the big winners of the inaugural USAIN Cornhole Tournament. Two pieces based on presentations given at the conference—a paper on Library 2.0 technology applications and a dispatch on information search of farmers in Ohio, USA—are included in this issue. See page 76 for more on IAALD's participation in the USAIN Conference.

In August, it was on to Japan for the XIIIth IAALD World Congress. This much anticipated event, which was held jointly with the 6th Asian Conference of IT in Agriculture (AFITA) and the 6th World Congress on Computers in Agriculture (WCCA), was a tremendous success. Attendance was terrific, and the program did not disappoint. The three dispatches based on conference papers included in this issue are just a teaser; the next issue of the *AgInfo World* will have a full writeup on the conference and will include several conference papers. One of the major highlights of the conference was the launch of the CIARD (Coherence in Information for Agricultural

Research and Development) Initiative—more on that can be found on page 77.

This issue also features an article on the academic rank of authors publishing in open access journals. Open access (OA) is viewed by many as a way forward as we strive to make information available to all. According to Wikipedia, “there are about 20–25,000 peer-reviewed journals across all disciplines, countries and languages. About 10–15% of them are OA journals, as indexed by the Directory of Open Access Journals (DOAJ). Elaine Nowick reports here on her study examining the impact of an author's academic rank on their decision to publish in an OA or traditional journal.

Looking ahead to next year, the Global Forum on Agricultural Research (GFAR) is organizing a special issue of *AgInfo World* that will focus on the efforts and activities of GFAR and its regional partner networks, including the Forum for Agricultural Research in Africa (FARA), Association of Agricultural Research Institutions in the Near East and North Africa (ARINENA), Asia-Pacific Association of Agricultural Research Institutions (APAARI), etc. *AgInfo World* will also report on and present selected papers from various key 2009 events, including the Knowledge “Share Fair” for Agricultural Development and Food Security (January in Italy), the 2nd IAALD Africa Chapter Conference (July in Ghana), and the XVth RIBDA Conference (October in Peru).

We are also looking forward with much anticipation to the XIIIth IAALD World Congress, which will be hosted by Agropolis International in Montpellier, France, April 26–29, 2010. Agropolis is a European gateway to research, training and scientific information open to Mediterranean and tropical countries that was created by the main research and training institutions in Montpellier. To learn more about Agropolis International, be sure and check out Odile Bédu and Chantal Salson's *AgInfo Dispatch*, “Enhancing Access to Scientific and Technical Information at Agropolis International,” in this issue.

I hope you enjoy this issue. As always, please feel free to contact me at the address below if you have any comments, questions, or concerns.

Debbie Currie
IAALD Editor
1701 Su John Road
Raleigh, NC 27607
USA
PH: +1-919-515-7556
Fax: +1-919-513-1108
E-mail: debbie_currie@ncsu.edu

Academic Rank of Authors Publishing in Open Access Journals

Elaine A. Nowick

ABSTRACT: When deciding where to publish their research results, faculty take into consideration factors such as the prestige and readership of journals. The weight a journal article will carry is particularly a concern for pre-tenured faculty members. Previous research has indicated that some faculty members may have some concerns about publishing in Open Access journals because of a perceived lack of rigor and reputation of Open Access titles. In this study, the academic rank of authors publishing in Open Access and commercial scholarly journals was compared. Most authors in both Open Access and for-fee journals were full professors. There was no indication that pre-tenured faculty avoided Open Access titles. In fact, there was a slight but significant trend for pre-tenured faculty to publish in Open Access journals.

RESUMÉ: En décidant où publier leurs résultats de recherche, les membres académiques prennent en considération les facteurs tels que le prestige et le public cible des revues. Le poids qu'un article de revue aura, est notamment très important pour les membres académiques sans chaire. Une étude a indiqué que certains membres académiques semblent avoir quelques inquiétudes pour publier dans les revues d'Open Access car ils pensent que les titres d'Open Access manquent de rigueur et de réputation. Dans cette étude, la classification académique a été comparée entre auteurs publiant dans Open Access et dans les

journaux érudits commerciaux. La plupart des auteurs dans Open Access et les revues payantes étaient des professeurs avec chaire. Rien n'indiquait que les membres de la faculté sans chaire ont évité les titres d'Open Access. En fait, il y avait une tendance légère mais significative des membres de la faculté sans chaire de publier dans les revues d'Open Access.

RESUMEN: Al decidir dónde publicar sus resultados de investigación, los miembros del profesorado consideran factores como el prestigio y la audiencia de las revistas. Una preocupación de dichos miembros que aún no han logrado su nombramiento permanente tiene que ver, particularmente, con el peso que lleva un artículo de revista. Estudios anteriores han indicado que algunos miembros del profesorado pueden tener ciertas preocupaciones acerca de publicar en revistas de acceso abierto o libre debido a una falta percibida de rigor y reputación de dichos títulos. En este estudio, se comparó el perfil académico de los autores que publican en revistas de acceso abierto y en revistas académicas comerciales. La mayoría de los autores de revistas tanto de acceso abierto como comerciales eran profesores de tiempo completo. No había ninguna indicación de que los miembros del profesorado que aún no habían logrado su nombramiento permanente evitaran títulos de acceso abierto; de hecho, en ellos se observó una tendencia leve pero significativa de publicar en revistas de acceso abierto.

Introduction

It has become a cliché to describe the move from paper to electronic journals as a revolution in scholarly communication. The Open Access (OA) movement is an outgrowth of this revolution. The OA movement seeks to provide free, full-text, quality-controlled scientific and scholarly journals (DOAJ). By making journal articles freely available to readers, OA competes with the older for-fee (FF) model in which the cost of publication is borne by readers through subscriptions. The competition over the future of scholarly communication between OA and FF journals is often quite emotional, and sometimes generates more heat than light.

The need for scientists to quickly and easily share research results and data was a key motivator for early developers of the Internet. The World Wide Web provided an even quicker and less expensive way for research results to be shared. Peer-reviewed OA journals soon became freely available as an alternative to the traditional model of paid subscriptions to print journals. Developments in technology have allowed commercial publishers to put their journals online without losing their ability to control access. Concerns of faculty members about

the weight that OA or electronic journals will carry in tenure and promotion decisions is often cited as a barrier to success for OA journals. One clear measure of success for OA journals is their acceptance in the academic and research community. The goal of this research was to compare the tenure status of faculty publishing in OA or FF journals and to determine if tenure status affected the decision of authors of scholarly articles on where to publish. For the purposes of this paper, only electronic, peer-reviewed serials are considered and "Open Access" is defined as any journal that is freely available to the reader.

Literature Review

Open Access is not a totally new concept. In the past, most academic libraries had active gift-and-exchange programs. The journals in this category could be considered to be "open access". However, with the arrival of the Internet and relatively easy and inexpensive electronic publication, freely available publications blossomed exponentially. The number of OA journals listed in Directory of Open Access Journals (DOAJ) has grown from 74 in 1994 (Palmer et al., 2000) to 3293 in 2008 (DOAJ, 2008). However, this is still a relatively small number of

publications compared to the over 70,000 scholarly/academic titles listed in Ulrich Periodicals Directory (2008).

A number of barriers to the acceptance of Open Access journals have been identified. These barriers include: providing a sound financial basis, arranging for reliable archiving, and finding acceptance in the scholarly community (Bjork, 2004). Because so many OA journals were "born digital" there has been a tendency to equate the issues involved with Open Access with the issues involved with electronic publication. Especially in earlier papers exploring changes in scholarly communication, issues of electronic versus paper media; peer-reviewed versus non-peer reviewed publications; and start-up journals versus established journals were not clearly separated.

The primary focus of this study is the acceptance of Open Access, peer-reviewed journals by the academic community. Past research has focused on surveys of faculty attitudes toward OA or electronic journals. In 1994, Schauder (1994) published the results of a survey on faculty attitudes towards electronic journals. At that time, 35% of Schauder's respondents indicated that, assuming peer-review and other quality considerations were the same, their university would give electronic publications the same weight in tenure and promotion decisions. However, 33% of the respondents indicated that they did not know if, in practice, OA articles were actually given the same weight. Schauder did not separate OA from FF e-journals but did note that, at the time the survey was conducted, most e-journals were funded through "subsidy-at-source" aid through donated labor and facilities use. His respondents also indicated that the prestige of the journal and the size of the readership were given almost equal weight in their decision on where to publish (70% to 67%). Because OA journals are online and freely available, readership is an advantage for them. Prestige is a plus for established journals.

Tomney and Burton (1998) surveyed faculty in a broad spectrum of disciplines in the United Kingdom. They also found that faculties were concerned about the perceived quality of electronic journals. In their survey, 61.1% of users of e-journals and 41% of non-users felt that electronic publication was not "real". Those surveyed reported that accessibility was the biggest advantage of e-journals. Respondents emphasized the importance of the peer-review process in ensuring quality of publications. The number of peer-reviewed OA journals had grown to 294 by the time their survey was conducted in 1998.

In 2000, Palmer et al. conducted a survey of faculty attitudes towards electronic journals in business departments. They did not distinguish between OA and FF journals. Again, the responses gave a somewhat mixed message. While only 43% of the respondents who served on promotion and tenure committees felt that an e-journal was of equal or better quality than a paper journal, 76% felt that a top quality journal that had gone elec-

tronic would be of equal or better quality than its print equivalent. The authors interpreted these results to mean that it was the perceived quality of the publication rather than the format that was the most important factor. They also found that those who were most familiar with e-journals had the highest opinion of them.

A survey of administrators and faculty in the Florida State University System was published by Sweeney (2000). Again, this survey did not distinguish between OA and FF electronic journals, but the responses and comments also indicated that the format was less important than the rigor and prestige of the individual journal when weighing the value of an article in promotion and tenure decisions. Some respondents (34%) did express a concern for quality control in electronic journals and a majority agreed that the perceived rigor of the review process was more of a concern for pre-tenured faculty. A major step forward for OA journals has been provided by government mandates such as the one from the U. S. National Institute of Health (2005) requiring public access to results through PubMed Central for research funded by their agency.

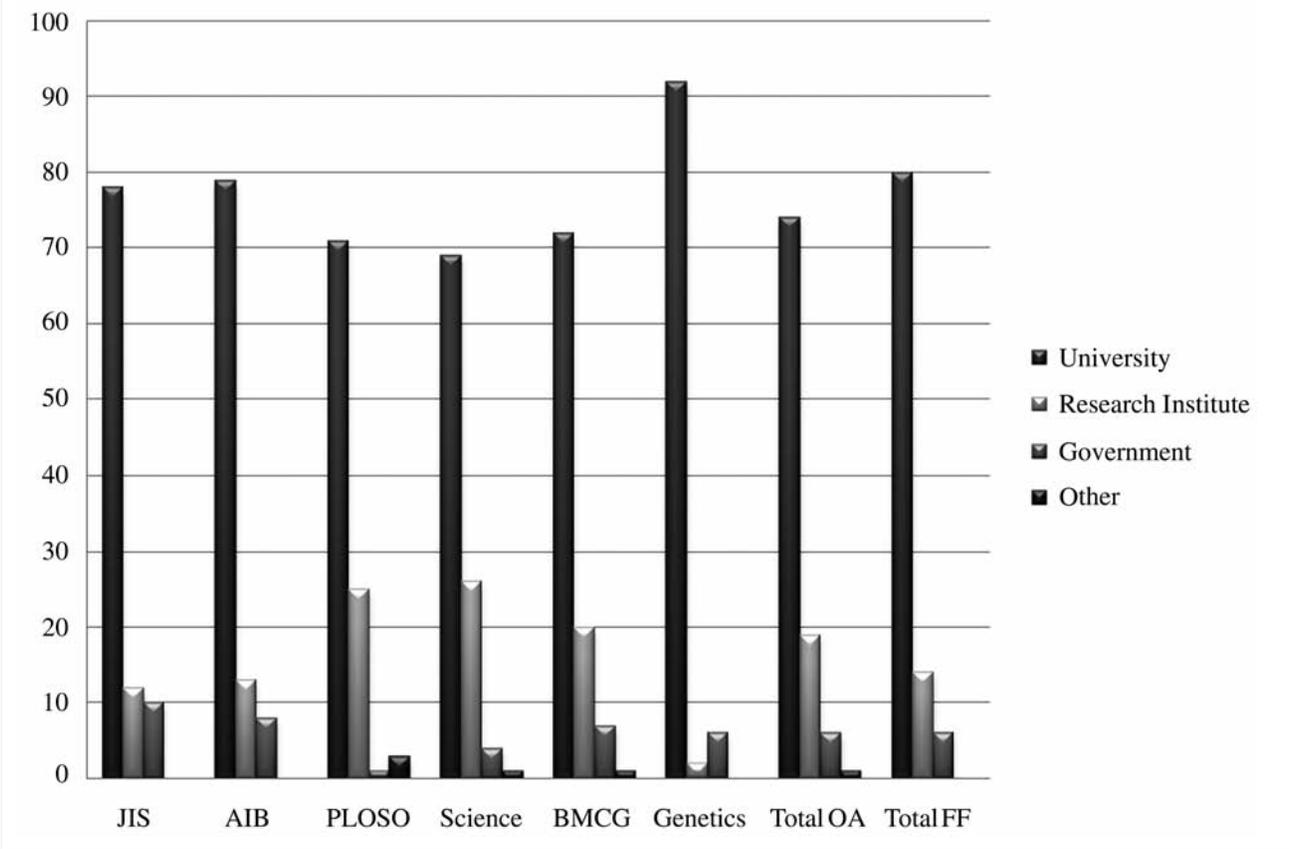
More recently, Hess et al. (2007) published the results of a survey on faculty attitudes towards OA publications. This survey included both peer-reviewed OA journals and non-peer-reviewed publications such as author websites as OA publications. They concluded that there was a low level of use among faculty for OA publications, although a majority of their respondents admitted that they had read OA publications and about one-third had published via an OA outlet. The respondents expressed a concern for the impact of OA publication on tenure and promotion. Nonetheless, a majority expressed high regard for OA publications. All of the earlier studies reflected an ambiguity towards OA journals among researchers. In this study, the focus is on behavior rather than attitudes or perceptions in an attempt to resolve this ambiguity.

The present study was undertaken to investigate the effect of tenure and promotion concerns on authors' decisions to publish in an Open Access journal. This was accomplished by comparing the tenure status of authors in three pairs of OA/non-OA peer-reviewed journals. Academic rank was used as a measure of an author's tenure status. Statistics from the American Association of University Professors (AAUP) indicate that 94% of professors, 82% of associate professors and 7% of assistant professors in the U.S. have tenure (AAUP, 2007).

Methods

The academic ranks of authors in three pairs of OA/FF journals were examined: *Journal of Insect Science* and *Archives of Insect Biochemistry and Physiology*; *PLOS One* and *Science*; and *BMC Genetics* and *Genetics*. These journals were chosen because of their similar subject coverage. *Journal of Insect Science* is a born-digital OA

FIGURE 1 – Institutional affiliations of authors publishing in Open Access (OA) and For-fee (FF) journals: Journal of Insect Science (JIS), Archives of insect biochemistry and physiology (AIB), PLOS One (PLOS), Science, BMC Genetics (BMCG), and Genetics



journal started in 2001 by a former editor of *Archives of Insect Biochemistry and Physiology*, while *Archives of Insect Biochemistry and Physiology* has been published commercially since 1983. *PLOS One* was first published in 2006 by the Public Library of Science and was paired with the prestigious journal *Science*, which has been published since 1883. Both of these journals are published by non-profit professional societies and cover a broad range of topics in science. BioMed Central began publishing *BMC Genetics* in 2000, while *Genetics* has been published since 1916 by the Genetics Society of America.

For the analysis, 100 articles published in 2006 and 2007 were randomly selected for each journal using the GraphPad Software (2002) online random integer generator. The academic rank of the last author listed for each article was determined from online curriculum vitae or job titles listed on an official site for the author's home institution. The last author was selected so that multiple-authored articles would not get undue weight and because this is often the advisor for graduate students who are often listed as the first author for articles published from their thesis research. Although the first author may have been primarily responsible for the research, it is the advisor whose reputation carries the

most weight. The type of institution, location of home institution, and number of authors was also recorded. Chi-Square tests comparing the OA to FF journals were performed.

Results

The vast majority of the authors from all of the journals studied were from universities, with research institutions and government agencies a distant second and third (see Figure 1). There were a few authors employed in private enterprise or non-profit organizations not primarily conducting research. While the percentages of the authors from the different types of home institutions differed somewhat by journal, the percentages did not differ according to whether a journal was OA or FF (Chi-Square = 3.2, $.25 < p < .5$). The author's curriculum vitae (CV) or job titles listed for some of the non-university positions noted whether they were tenured or tenure track, but for the most part there was no indication. For the purposes of this study, only the tenure status of those authors at universities were included in the analysis.

Curriculum vitae or official titles for most researchers in the United States (U.S.) were found on the Internet

FIGURE 2 – Location of home institutions of authors publishing in Open Access (OA) and For-fee (FF) journals: Journal of Insect Science (JIS), Archives of insect biochemistry and physiology (AIB), PLOS One (PLOS), Science, BMC Genetics (BMCG), and Genetics

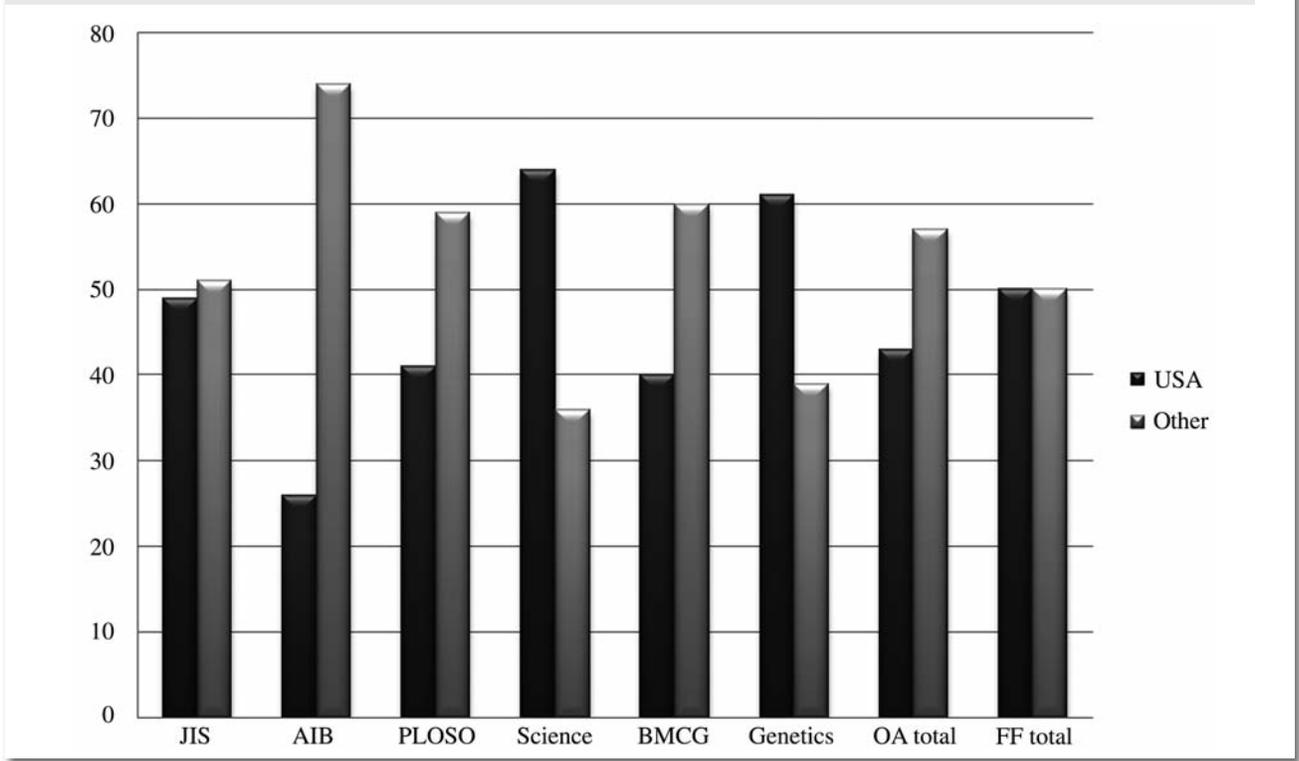


FIGURE 3 – Academic rank of authors located in the USA and publishing in Open Access (OA) or For-fee (FF) journals: Journal of Insect Science (JIS), Archives of insect biochemistry and physiology (AIB), PLOS One (PLOS), Science, BMC Genetics (BMCG), and Genetics. Academic ranks are: non-tenure-track (non-tenure) Assistant Professor (Asst), Associate Professor (Assoc), Full professor (Full).

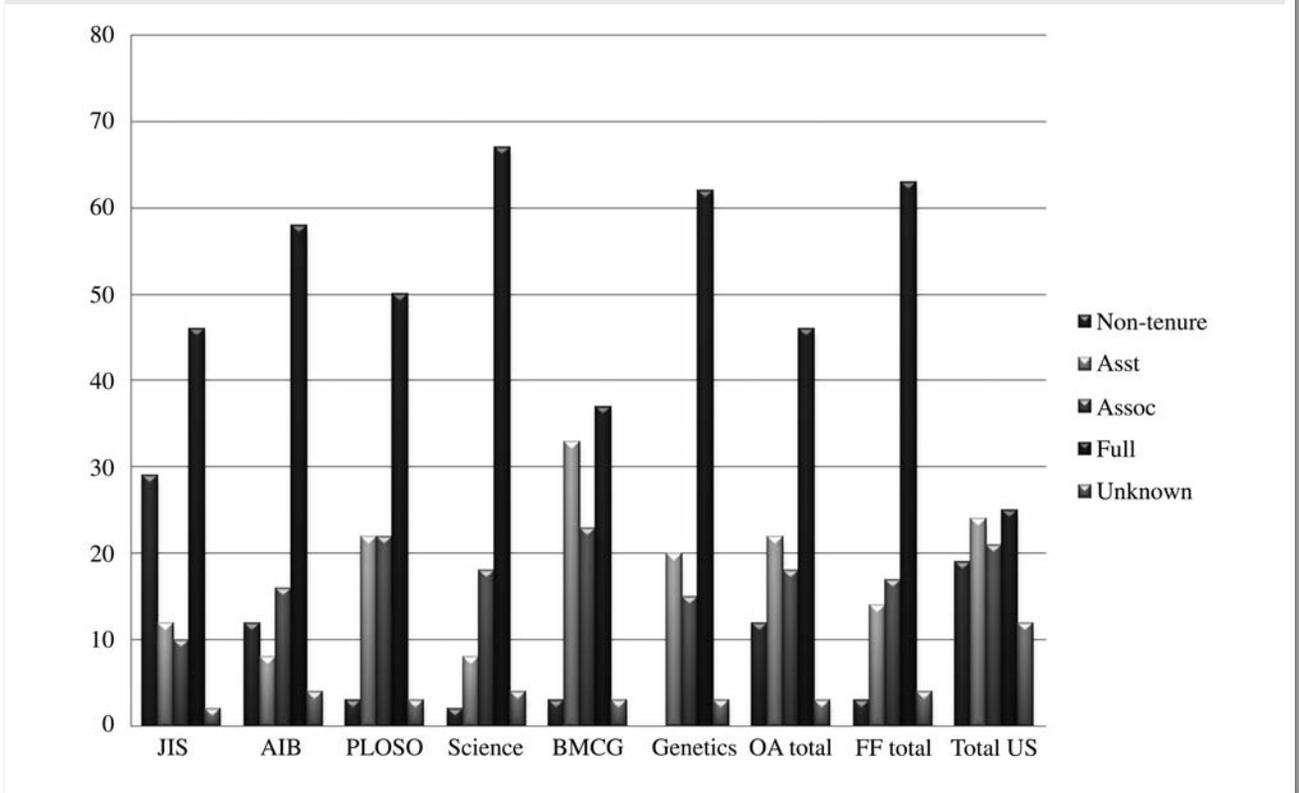
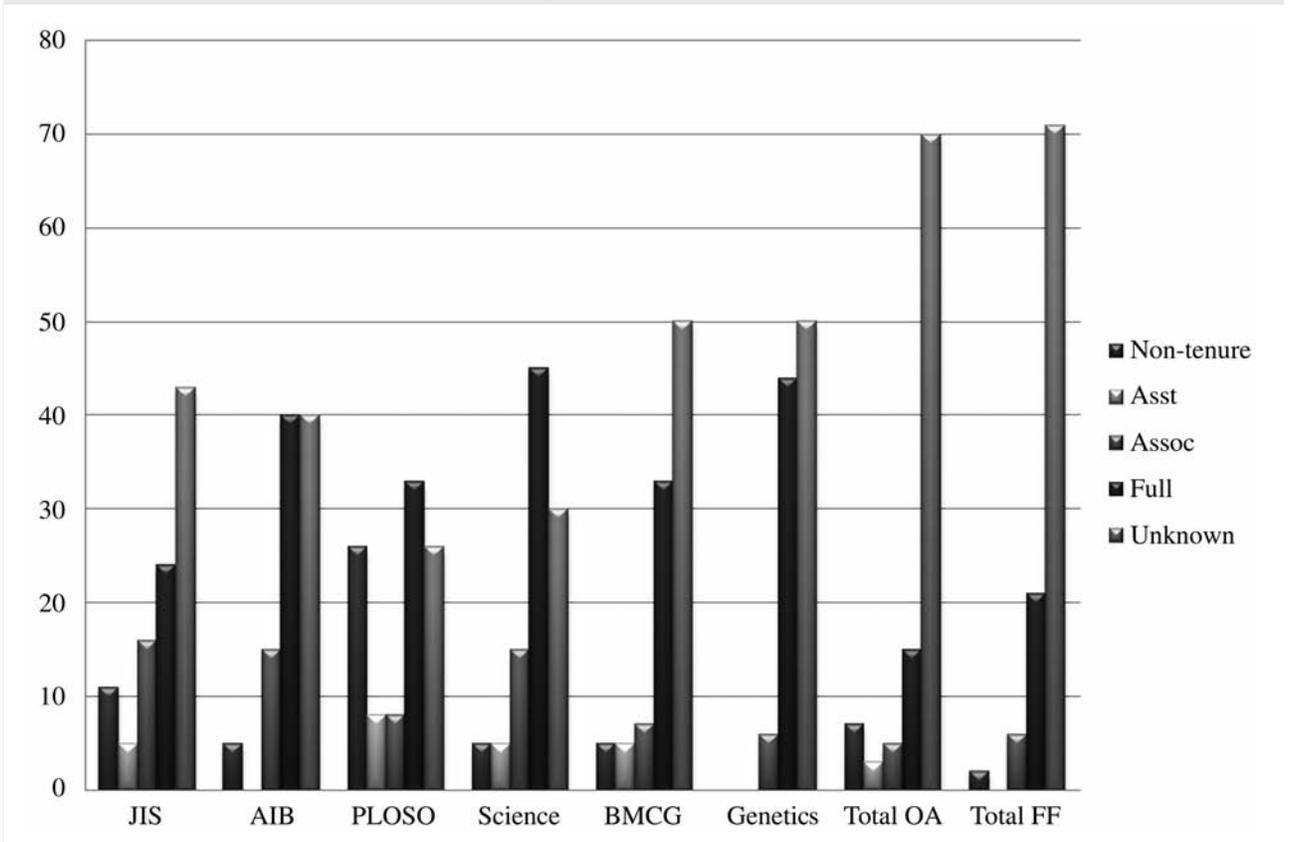


FIGURE 4 – Academic rank of authors located outside of the USA and publishing in Open Access (OA) or For-fee (FF) journals: Journal of Insect Science (JIS), Archives of insect biochemistry and physiology (AIB), PLOS One (PLOS), Science, BMC Genetics (BMCG), and Genetics. Academic ranks are: non-tenure-track (non-tenure) Assistant Professor (Asst), Associate Professor (Assoc), Full professor (Full).



and the tenure status was usually clear from the job title, i.e. Assistant Professor, Associate Professor, and Full Professor or Professor. For those located outside of the U.S., tenure status could not be resolved for a large proportion of the authors. In some cases the tenure status was not obvious from the job title. For others, no CV was found or the CV was in a non-English language. For this reason, the comparisons of tenure status between OA and FF authors from the U.S. and from outside the U.S. were separated and then totaled in the analysis. Results for location of the home institution for authors identified in this study are shown in Figure 2. Although there were differences, with some journals attracting more authors from outside of the U.S., the differences were not consistent with the OA status of a journal. The differences for the total OA journals as compared to the total FF journals were not significant (Chi-Square = 2.8, $.25 < p < .5$).

Tenure status for authors in the U.S. is shown in Figure 3. The largest group of authors for all of the journals were full professors. Although no statistical tests were done, it appears that there may be differences among the disciplines. Relatively more non-tenure-track authors appeared to publish in entomology journals and more assistant professors appeared to publish in genetics jour-

nals. However, when averaged for all OA and FF journals, there were no significant differences for tenure status of authors in the U.S. (Chi-Square = 14.23, $.05 < p < .10$).

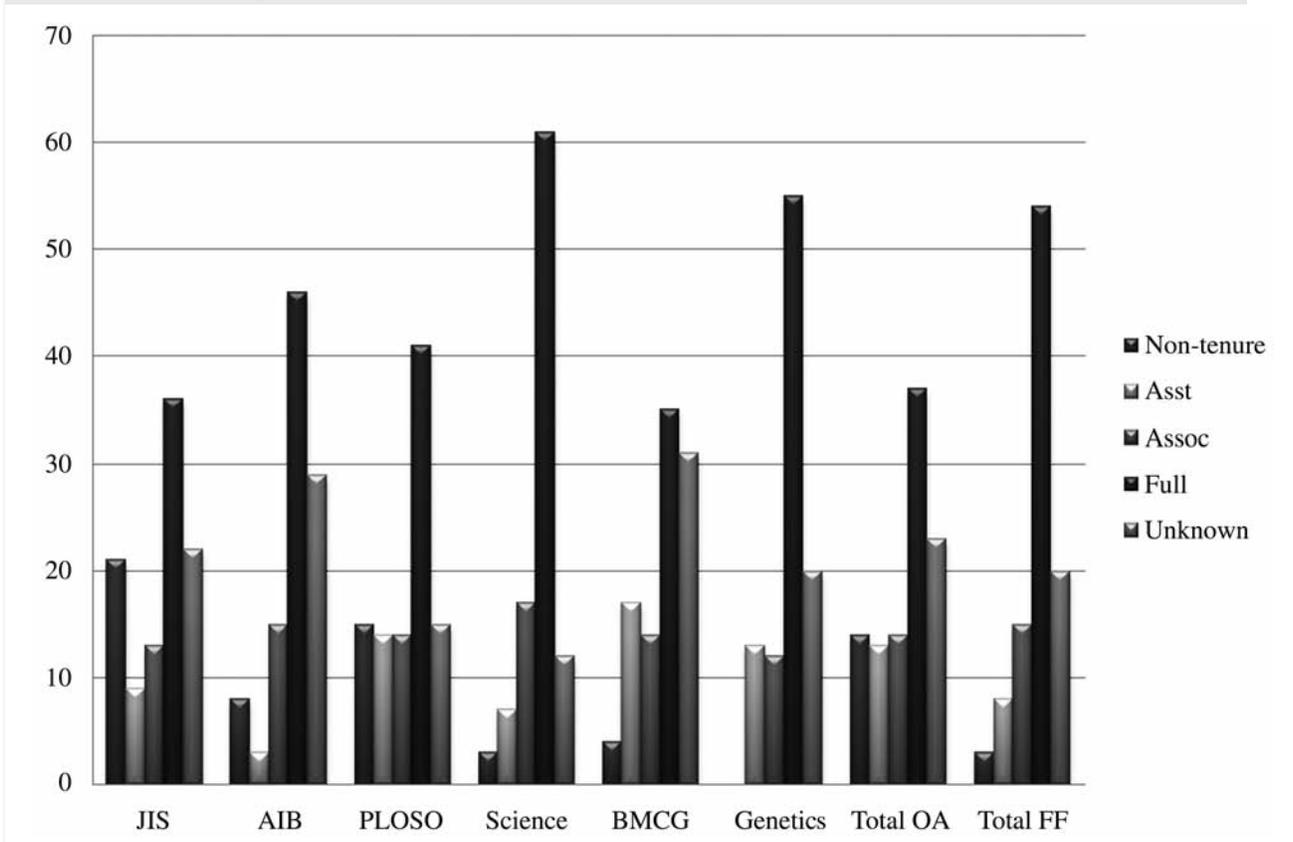
For faculty outside of the U.S., the pattern was similar (see Figure 4). The majority of authors were full professors for both OA and FF journals and there were no significant differences between the OA and FF journals in the distributions of tenure status among authors (Chi-Square = 13.2, $.10 < p < .25$). However, the high percentage of authors with unknown tenure status sheds doubt on the importance of these results for the authors outside of the U.S.

When data from the U.S. and non-U.S. authors were combined, there was a small but significant tendency for assistant professors to publish in OA journals and full professors to publish in FF journals (Chi-Square = 24.94, $p < .05$). Nonetheless, full professors made up the largest group of authors in both OA and FF journals (see Figure 5).

Discussion and Conclusion

A commonly held view within academia is that professors are forced to “publish or perish”. It is also commonly thought that promotion and tenure committees primarily consider the number of articles and the prestige of the

FIGURE 5 – Academic rank of all authors publishing in Open Access (OA) or For-fee (FF) journals: Journal of Insect Science (JIS), Archives of insect biochemistry and physiology (AIB), PLOS One (PLOS), Science, BMC Genetics (BMCG), and Genetics. Academic ranks are: non-tenure-track (non-tenure) Assistant Professor (Asst), Associate Professor (Assoc), Full professor (Full).



journals publishing the articles in determining who gets tenure. However, teaching and service are often considered as well and their weight depends on the goals and emphasis of the institution. In this study, most authors were full professors, whether in OA or FF journals. It appears that promotion or tenure is not their primary motivator. Faculty may receive higher raises based on a productive output of research and publication, but, as Harnad (1992) pointed out, scholars publish to inform their colleagues of their work. If wealth and fame are one's goals, becoming a professor would be a poor career choice. Results from this study are consistent with Lotka's law, which states that a relatively few scholars contribute disproportionately to the body of scientific literature. Full professors make up 25% of the total U.S. faculty (Almanac, 2007). In this study, full professors were found to author 46% of OA journal articles and 63% of FF articles.

Results of surveys from previous studies have indicated that there is a concern among pre-tenured faculty that articles in OA journals will not be given the same weight as those in conventional journals (Hess et al., 2007; Sweeney, 2000). These same studies have shown that most faculty profess to be format blind in weighing the value of articles in tenure deliberations provided that the articles are peer-reviewed. In this study, all of the

journals considered were peer-reviewed. The results of this study indicate the opposite effect from that expected based on the previous surveys. Rather than avoiding OA journals and favoring established, conventionally-published journals out of concern for their weight in tenure and promotion hearings, pre-tenured faculty appear to slightly favor OA journals. From the results of this study there is no way to determine their motivations.

One advantage of electronic only journals such as the OA journals studied here is that they are faster to publish. Speed of publication can be a significant concern for assistant professors with a ticking tenure clock. However, journals that publish both print and electronic editions can lessen the speed advantage of OA journals by issuing the electronic version of an article before the paper edition is published. It should be noted that all of the FF journals included in this report have electronic versions. A second advantage specific to OA journals is that they may be more widely read and cited (Bauer and Bakkalbasi, 2005). However, Anderson et al. (2001) studied a clinical pediatrics journal that published both OA electronic articles and articles in a print edition available only by subscription. They found that the print articles, accessible only by subscription, were cited slightly more often than the online, OA articles. Although tenure committees did

accept online, peer-reviewed journals, the authors of the articles still felt that they were not as strong as print.

Many institutions and promotion and tenure committees expect authors to prove the impact and significance of their publications. Measures such as the number of times a paper is cited or downloaded can provide a measure of the importance of the article. Usage and citation rates are easier to gather with online publications and this may be another reason for pre-tenure faculty to publish in OA journals.

A third possibility is that established professors may choose to publish in a familiar journal. Readers may follow a line of research in a particular journal or the professor may have established working relationships with editors and reviewers. A proposed scenario for the acceptance of OA journals is that senior professors, unconcerned with tenure, will begin to experiment with electronic journals helping these journals to establish their reputations (Koenig and Harrell, 1995). Although senior scholars are innovators, it would appear that some of them may continue to utilize journals with which they are familiar. Judging by the preponderance of full professors publishing in all formats, the tendency for junior faculty to publish in OA journals is a weak one.

The journals studied here appear to have established their credentials in a relatively short time period. As with all new publications, factors such as the publisher, editor, and review board and early authors can all affect the acceptance of the new title. The main conclusion from this study is that although faculty may express some concerns about the weight of OA journals in comparison to FF journals, there is no evidence that it affected their decision on where to publish their research results for the titles included in the study.

Elaine A. Nowick is Agricultural Librarian and Professor at University of Nebraska-Lincoln, Lincoln, Nebraska, USA.

References

AAUP. 2007. "Annual Report on the Economic Status of the Profession: Selected tables." *Academe* (March–April 2007): 46.

Almanac of Higher Education, 2007–8. 2007. "Number of Full-Time Faculty Members by Sex, Rank, and Racial and Ethnic Group, Fall 2005." *Chronicle of Higher Education* 54(1): 24.

Anderson, Kent, John Sack, Lisa Krauss, and Lori O'Keefe. 2001. "Publishing online-only peer-reviewed biomedical literature: Three years of citation, author perception, and usage experience." *JEP: The Journal of Electronic Publishing* 6 (3). [Online] available: <http://quod.lib.umich.edu/cgi/t/text/text-idx?c=jep;cc=jep;q1=Publishing%20online-only%20peer-reviewed%20biomedical%20literature;rgn=main;view=text;idno=3336451.0006.303>

Bauer, Kathleen, and Nisa Bakkalbasi. 2005. "An examination of citation counts in a new scholarly communication environment." *D-Lib Magazine* 11(9). [Online] available: <http://www.dlib.org/dlib/september05/bauer/09bauer.html>

Bjork, Bo-Christer. 2004. "Open access to scientific publications—an analysis of the barriers to change?" *Information Research* 9(2). [Online] available: <http://informationr.net/ir/9-2/paper170.html>

DOAJ—Directory of Open Access Journals. Available: <http://www.doaj.org/>

Graphpad Software. 2002. QuickCalcs online calculators for scientists. Available: <http://www.graphpad.com/quickcalcs/random.N1.cfm>

Harnad, Stevan. 1992. "Abstract: What scholars want and need from electronic journals." Online posting, 19 March 1992, LSTOWN-L Archives. Available: <http://community.emailogy.com/scripts/wa-COMMUNITY.exe?A2=ind9203&L=LSTOWN-L&P=R3328&D=0>

Hess, Thomas, Rolf T. Wigand, Florian Mann, and Benedikt von Walter. 2007. "Open Access & Science Publishing—Results of a Study on Researchers' Acceptance and Use of Open Access Publishing." In *Management Reports of the Institute for Information Systems and New Media*, LMU München, Munich, Nr. 1/07. [Online] available: http://openaccess-study.com/Hess_Wigand_Mann_Walter_2007_Open_Access_Management_Report.pdf

Koenig, Michael, and Toni Harrell. 1995. "Lotka's law, Price's urn, and electronic publishing." *Journal of the American Society for Information Science* 46(5): 386–388.

National Institute of Health. 2005. Policy on Enhancing Public Access to Archived Publications Resulting from NIH-Funded Research. [Online] available: <http://grants.nih.gov/grants/guide/notice-files/NOT-OD-05-022.html>

Palmer, Jonathan, Cheri Speier, Daniel Wren, and Susan Hahn. 2000. "Electronic journals in business schools: Legitimacy, acceptance, and use." *Journal of the Association for Information Science* 1(2): 1–31.

Schauder, Don. 1994. "Electronic publishing of professional articles: Attitudes of academics and implications for the scholarly communication industry." *Journal of the American Society for Information Science* 45(2): 73–100.

Sweeney, Aldrin E. 2000. "Tenure and Promotion: Should you publish in electronic journals?" *Journal of Electronic Publishing* 6(2). [Online] available: <http://quod.lib.umich.edu/cgi/t/text/text-idx?c=jep;cc=jep;q1=Tenure%20and%20Promotion%3A%20Should%20you%20publish%20in%20electronic%20journals;rgn=main;view=text;idno=3336451.0006.201>

Tomney, Hilary, and Paul F. Burton. 1998. Electronic Journals: "A Study of Usage and Attitudes Among Academics." *Journal of Information Science* 24(6): 419–429.

Ulrich's Periodicals Directory. 2008. New Providence, NJ: Bowker.

Contact Information

Elaine A. Nowick
Agriculture Librarian & Professor
Research and Instructional Services
University of Nebraska-Lincoln
Lincoln, Nebraska 68583
USA
PH: 402-472-4408
Fax: 402-472-7005
E-mail: enowick@unlnotes.unl.edu

Innovative Library 2.0 Information Technology Applications in Agriculture Libraries

Claudine Arnold Jenda and Martin Kesselman

EDITOR'S NOTE: This paper is based on a presentation made by the authors at the 11th Biennial Conference of the United States Agricultural Information Network (USAIN), April 27-30, 2008, Wooster, Ohio, USA.

KEYWORDS: Web 2.0, Library 2.0, Social Software, Blogs, Wikis, Podcasts, RSS Feeds, Online Reference, Chat Reference, Instant Messaging, Facebook, MySpace, Flickr, Virtual Library, extensible catalogs, next generation catalogs

ABSTRACT: This paper reports on study into how agriculture libraries are using Web 2.0 technologies. Some selected examples are highlighted. From these examples, we see that Web 2.0 technologies present information in easier and more interesting and accessible ways. Compared to existing static library search systems, Web 2.0 technologies are more dynamic and interactive, with tools for seeking and capturing user feedback.

RESUMÉ: Cet article tente de montrer comment les bibliothèques

agricoles utilisent les technologies Web 2.0. Quelques exemples sélectionnés sont mis en valeur. A travers ces exemples, nous voyons que les technologies Web 2.0 présentent l'information plus facilement, et de manière plus intéressante et accessible. Par rapport aux systèmes de recherche de bibliothèques statiques existants, les technologies Web 2.0 sont plus dynamiques et interactives, avec des outils pour la recherche et la saisie de l'avis des utilisateurs.

RESUMEN: Este documento trata de mostrar cómo las bibliotecas agrícolas están utilizando tecnologías Web 2.0. Se destacan algunos ejemplos seleccionados. Con base en estos ejemplos, podemos ver que las tecnologías Web 2.0 presentan la información de maneras que son más fáciles, más interesantes y más accesibles. En comparación con los sistemas existentes de búsqueda de las bibliotecas, las cuales son estáticas, las tecnologías Web 2.0 son más dinámicas e interactivas con herramientas que buscan y captan la retroinformación de los usuarios.

Introduction

Library 2.0 technologies are the application of Web 2.0 technologies to library services and search systems. Web 2.0 technologies encompass a variety of web-based social and communication technologies such as Facebook, MySpace, blogs, RSS feeds, wikis and more. The Web 2.0 concept is attributed to Tim O'Reilly (2005), who describes Web 2.0 as technologies that are easy-to-use, dynamic, collaborative and user-centered, using interactive multi-media and social communication and networking information systems.

Discussion continues in the library and information field and related areas on the potential usefulness of these technologies (Matuszak, 2007). There are some who think these technologies are passing fads that do not add much substance to the building of collections and provision of library services. Others, meanwhile, argue that regardless of the inherent worth of these technologies, library users have embraced their use and it is incumbent upon libraries to use them to interact with their users (Rogers, 2008).

As the discussion continues, some libraries have started experimenting and implementing Library 2.0 technologies, with varying degrees of success. There is a growing body of literature reporting the experiences of libraries in delivering services and connecting with users using Library 2.0 technologies (Breeding, 2007).

The objectives of this study are to help identify those libraries serving agriculture that are exploring or using

Library 2.0 technologies for the delivery of library services or to interact with users. The study reports the results of an exploratory survey that was conducted on behalf of the United States Agricultural Information Network (USAIN)¹ Technology Trends Interest Group. The survey's primary objective was to document existing, new and emerging information technologies that are being used in agriculture libraries. A secondary objective was to identify individuals who are open to serving as a resource to facilitate collaboration and the exchange of information on particular technologies.

Methods

An open-ended survey was sent to all libraries on the USAIN distribution list. The survey asked libraries to list Library 2.0 technologies that have been implemented at their libraries, and to name the services affected. In addition to the survey, the websites of agriculture libraries at land-grant institutions linked to the National Agricultural Library (NAL)² homepage were studied to find examples of information technologies that have been implemented. In each instance, the use of Library 2.0 technologies was noted, as well as the library services or products that were impacted by their use.

Results

Key technologies that are used at agriculture libraries mirror those that have been reported elsewhere (Li and

Bernoff, 2008). Agriculture libraries are using wikis, podcasts, RSS feeds, blogs, weblogs, screencasts, Flickr, instant messaging, Facebook, MySpace, LinkedIn, coursewares, and a variety of open source plugins and software. In this paper, we will discuss a sampling of these technologies to give some idea of their prevalence, or lack thereof.

Blogs

Weblogs, also termed blogs, are online diaries that allow users to post messages to which others are invited to respond with open comments and opinions. A recently released Technographics survey estimates that there are over 133 million blogs on the Internet, and that an estimated 77% of U.S. Internet users read blogs (Sifry, 2008). Blogs allow links to other websites and are arranged in reverse chronological order. There are several blog vendors, such as WordPress.com. One of the most popular applications for creating blogs is Google's Blogger.com. Most blogs report news, events, or personal experiences and provide the ability to permanently capture feedback, which may or may not be moderated. The potential uses of blogs for gathering opinion polls can be observed in the media. Blogs create a sense of community, where individuals may feel empowered or validated. They are also an excellent tool for promoting, marketing, or branding products or services. On the other hand, privacy concerns are significant when dealing with blogs, as they are with most social communications software.

Of the agriculture libraries surveyed, 38 out of 118 (32%) maintain blogs. In agriculture libraries, blogs are being used to promote events, programs, services, and collections. Some examples include:

- Pennsylvania State University's blog announces recent books while highlighting a Leisure Reading Room of best sellers, popular titles and award titles.
- Colorado State University's blog (<http://lib.colostate.edu/blogs/banr/>) is used to announce new databases, book displays, and information resources in the biological and natural resources areas.
- Auburn University Libraries' blogs are used for internal communication to share conference meeting reports, staff training, staff meeting minutes, and policies and procedures.
- Ohio State University Libraries' blogs (<http://library.osu.edu/blogs/>) serve as newsletters for announcing both general and subject specific resources, events, and guides.

Chat Services

Chat services are among the most widely accepted and used technologies in libraries. They allow instant text network communications between librarians and their users in an online environment and have been widely adopted for providing online reference. Among

the survey respondents, 64 out of 118 (54%) had chat services, while nearly all libraries employed some form of e-mail reference. The greatest trend in agriculture libraries is a move from proprietary software to open source software, allowing chat services to be accessible from any computer and become portable. Some examples include Google Talk, Yahoo Messenger, Meebo, Pidgin, Gizmo, Twitter, Skype, and MSN Chat. In addition to text messaging, most of these services also allow voice and video transmission of messages.

Libraries are posting Ask-a-Librarian chat services in multiple areas such as on the library homepage, in databases, and in library research guides (see Clemson University Libraries, Penn State Life Sciences Library and Ohio State University Libraries).

Photo Sharing

Developed in 2002 and introduced in 2004 by the Canadian company Ludicorp, Flickr.com is a highly successful photo and video management suite of software. Flickr allows anyone to upload, organize and share pictures or videos. There is a clear how-to guide at www.flickr.com. Each picture is tagged with descriptive terms. Further developments of Flickr include mash-ups such as the Zazzle service that allow photos to be printed as stamps, business cards, calendars and other memorabilia. Before posting photographs to Flickr, copyright, licensing, and institutional concerns may need to be considered. Flickr supports the display of Creative Commons licenses (<http://creativecommons.org/about/>) as well as fully copyrighted works.

A handful of agriculture libraries are using Flickr. An example is the Food and Agriculture Organization (FAO) of the United Nations' online display of books and collections at <http://www.flickr.com/photos/24232177@No5/sets/72157604253604694/> (Appendix, Figure 6). FAO also has a virtual exhibit of botanical paintings (Appendix, Figure 7). Flickr allows viewers of the collections to leave reviews of books or comments on each item on exhibit, thereby facilitating the gathering of public intellectual knowledge.

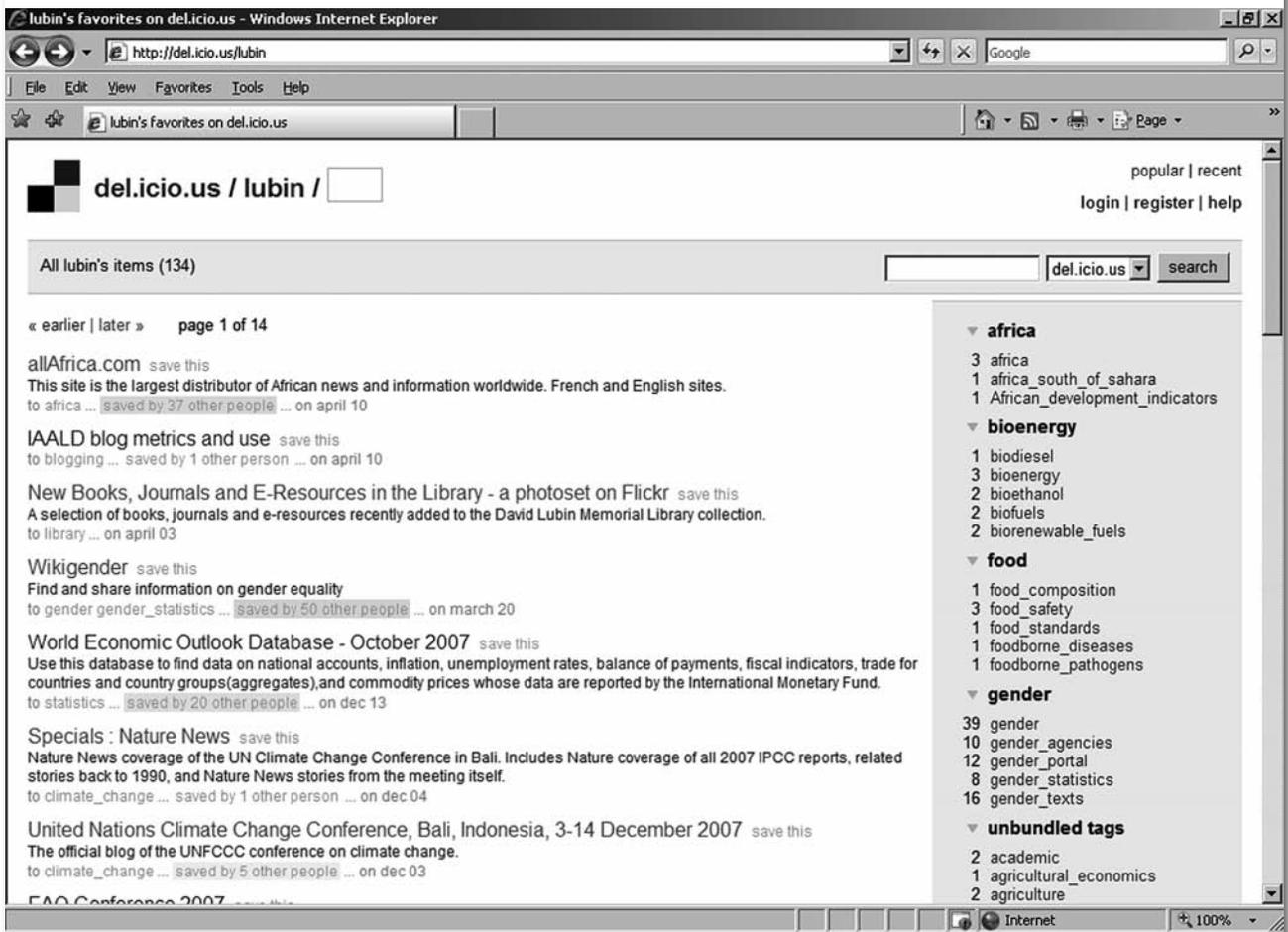
Clemson University Libraries employs a photostream of their Learning Commons that serves as a highly effective library building tour. North Carolina State University Libraries has a similar Learning Commons guide (Appendix, Figure 8). At Auburn University Libraries, Flickr is used to capture and share photographs of an informal freshman orientation to the library that encourages students to explore library services in a fun and non-threatening manner (Figure 1; Appendix, Figure 9).

At Flickr.com, photos are readily available for promotion and for embedding in tutorials. Little Priest Tribal College Library has a virtual physical tour of the library (http://www.flickr.com/photos/little_priest_library/) that highlights various library departments and services (Appendix, Figure 10).

FIGURE 1 – Food, Fun, Music, Games, Information Services: Fun Orientation Program for welcoming freshmen and undergraduates to Auburn University Libraries <http://www.flickr.com/photos/aublibraries/page1/>



FIGURE 2 – FAO Library bookmarks in Delicious at <http://delicious/lubin/>



Bookmarking

Given the proliferation of social communication technologies, a need arises for organizing the websites of all the Web 2.0 applications in one place. Delicious (formerly del.icio.us) is an example of a social bookmarking application. To see examples of bookmarking of websites in an agriculture library, see FAO's Library website at <http://delicious/lubin/> (Figure 2).

Only a handful of libraries use this application. The libraries at Oregon State University and the University of Wisconsin are examples of sites that use Delicious.

Next Generation Catalogs

Given the well-known popularity of the Google interface and the changing expectations of Web 2.0 technology users, libraries are beginning to introduce catalogs that have some features of Web 2.0 technologies. The Library and Information Technology Association (LITA)³ has ongoing discussions of desirable changes to the existing library catalog. In a recent report posted to the LITA Blog, Eric Lease Morgan (2008) summed up the desired features of next generation catalogs as ease of

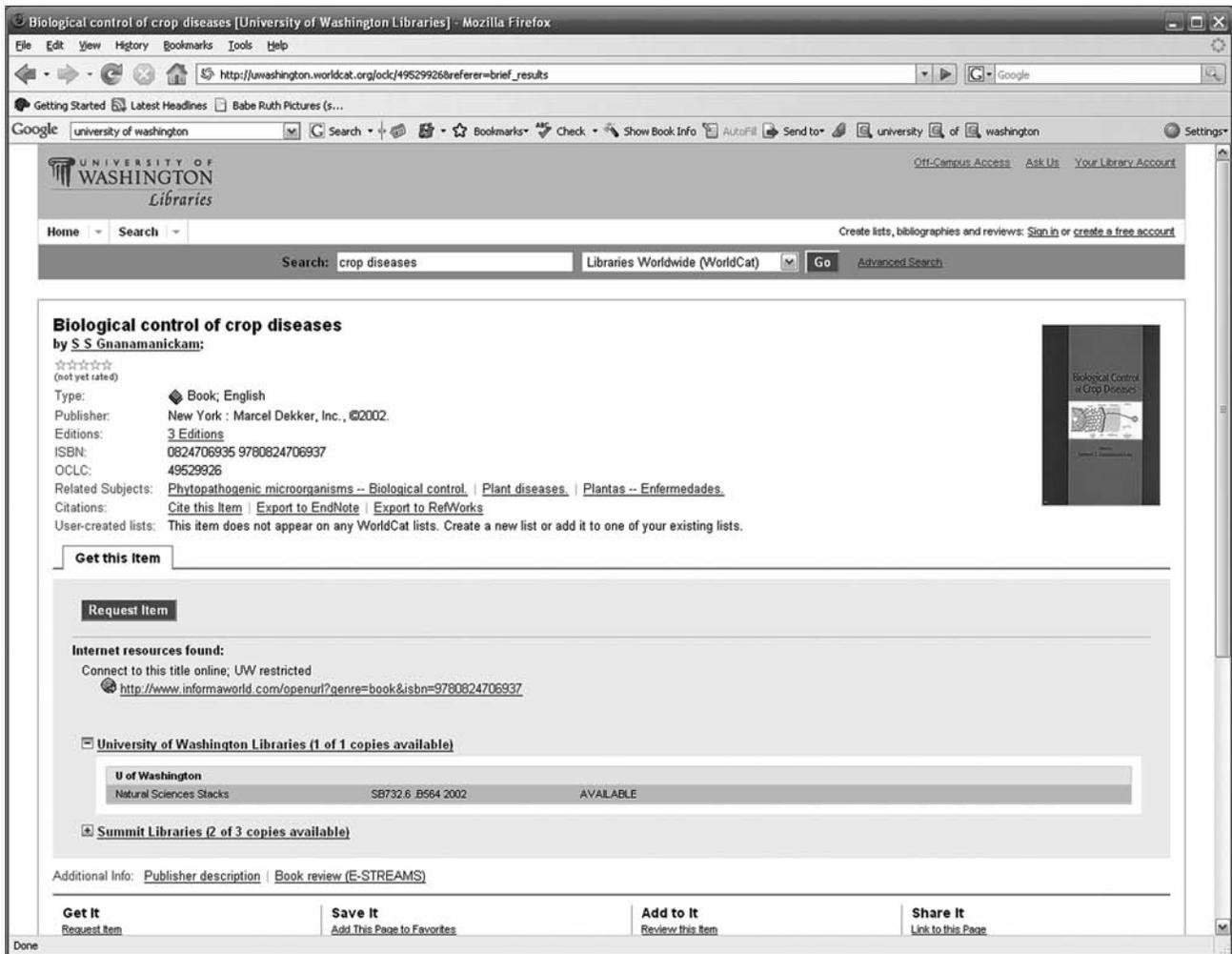
searching, such as faceted browsing, coupled with tools that enable the users to do something useful with retrieved items. Catalogs should enable users to “apply actions against the content, not just the index. Such things are exemplified by action verbs. Tag. Share. Review. Add. Read. Save. Delete. Annotate. Index. Syndicate. Cite.”

Again, only a handful of libraries in general have started to incorporate such features into their catalogs. An interesting example is the implementation of a LibraryThing catalog at Oregon State University Library. LibraryThing (www.librarything.com), the self-described ‘world’s largest book club’, was developed in 2005 as a social cataloging software for cataloging and sharing information on library and personal book collections. LibraryThing members catalog their books by importing data from book vendors such as Amazon.com and from library catalogs. Members share tags and can add book covers and reviews to each item (Appendix, Figure 11). The LibraryThing.com website estimates that some 30 million books are searchable on members’ bookshelves. LibraryThing supplies free book dust jackets to libraries or individuals to add to their collections, provided the details of such arrangements can be worked out.

FIGURE 3 – Oklahoma State University AquaBrowser catalog, Search & Discovery Tools – <http://www.library.okstate.edu/>

The screenshot shows a web browser window displaying the AquaBrowser Library search results for the query "gardening". The interface includes a navigation menu with options like "Ask Us!", "Classic Catalog", "Find Articles", "My Account", and "Library Home". A large "BOSS" logo is prominent. On the left, a faceted search interface shows a central "gardening" node with various related terms like "maddening", "desert", "perennial", "taylor", "fall", "farming", "landscape", "vegetable", "herb", "shade", "greenhouse", "container", "step", "garden", "flower", "encyclopedia", "bed", "basics", "hardening", "illustrate", "arte", and "Chorpenning". Below this, several search results are listed, each with a book icon, title, author, year, subject, and availability information. For example, one result is "Gardening : forcing, conditioning, and drying for flower arrangements / by Arno and Irene Nehring. Drawings by Charlotte E. Bowden and Charles A. Mahoney. Nehring, Arno." with a year of 1958. Another result is "Principles of gardening : the practice of the gardener's art / Hugh Johnson. Johnson, Hugh." with a year of c1996. A third result is "Flower gardening : a practical guide to creating colorful gardens in every yard / Julie Bowden-Davis ; photographs by John M. Rickard. Bowden-Davis, Julie." with a year of c2004. On the right side, there are filters for "Chronological", "Author", "Language", "Location", and "Circ status". The "Chronological" filter shows options like "20th century (393)", "19th century (140)", "17th century (109)", "18th century (57)", and "166 more...". The "Author" filter shows "United States (160)", "Brooklyn Botanic Garden (91)", "Herzshorn Museum and Sculpture Garden (56)", "Time-Life Books (52)", and "10278 more...". The "Language" filter shows "English (9977)", "unknown or invalid language (89)", "German (31)", "Latin (29)", "Spanish (22)", and "12 more...". The "Location" filter shows "Main Library (7624)", "Government Documents, 5th Floor (295)", "Architecture Library (272)", "CML, Juvenile Collection, Willard Hall (119)", "CML, Picture Books Collection, Willard Hall (105)", and "55 more...". The "Circ status" filter shows "Not checked out (8772)", "Renewed (112)", "Checked out (93)", "Overdue (45)", "Lost (42)", and "11 more...". At the bottom, there are navigation links for "First", "Previous", "Next", and "Last", and a note "powered by AquaBrowser Library®".

FIGURE 4 – University of Washington Libraries catalog and beyond, local & remote holdings – <http://www.lib.washington.edu/>



Another example is the AquaBrowser catalog at Oklahoma State University (<http://boss.library.okstate.edu/>). Described as a search and discovery platform, AquaBrowser.com displays related terms, controlled vocabulary, and alternative spellings for each search term (Figure 3). Options for refining a search are displayed on the right side of the screen, and items in the catalog that match the search term are displayed in the middle. The system allows for each record to be enriched with tags, book covers, and reviews.

A third example is the University of Washington Libraries catalog (www.lib.washington.edu/), which incorporates many enhancements to records (Figure 4). The catalog system allows tagging, books reviews, book dust jacket displays and local and remote holdings.

Other desirable features in catalogs include the guided navigation of Endeca catalogs, such as the one at North Carolina State University Libraries (www.lib.ncsu.edu/catalog/), which allows easier narrowing and refining of searches, and also display related terms.

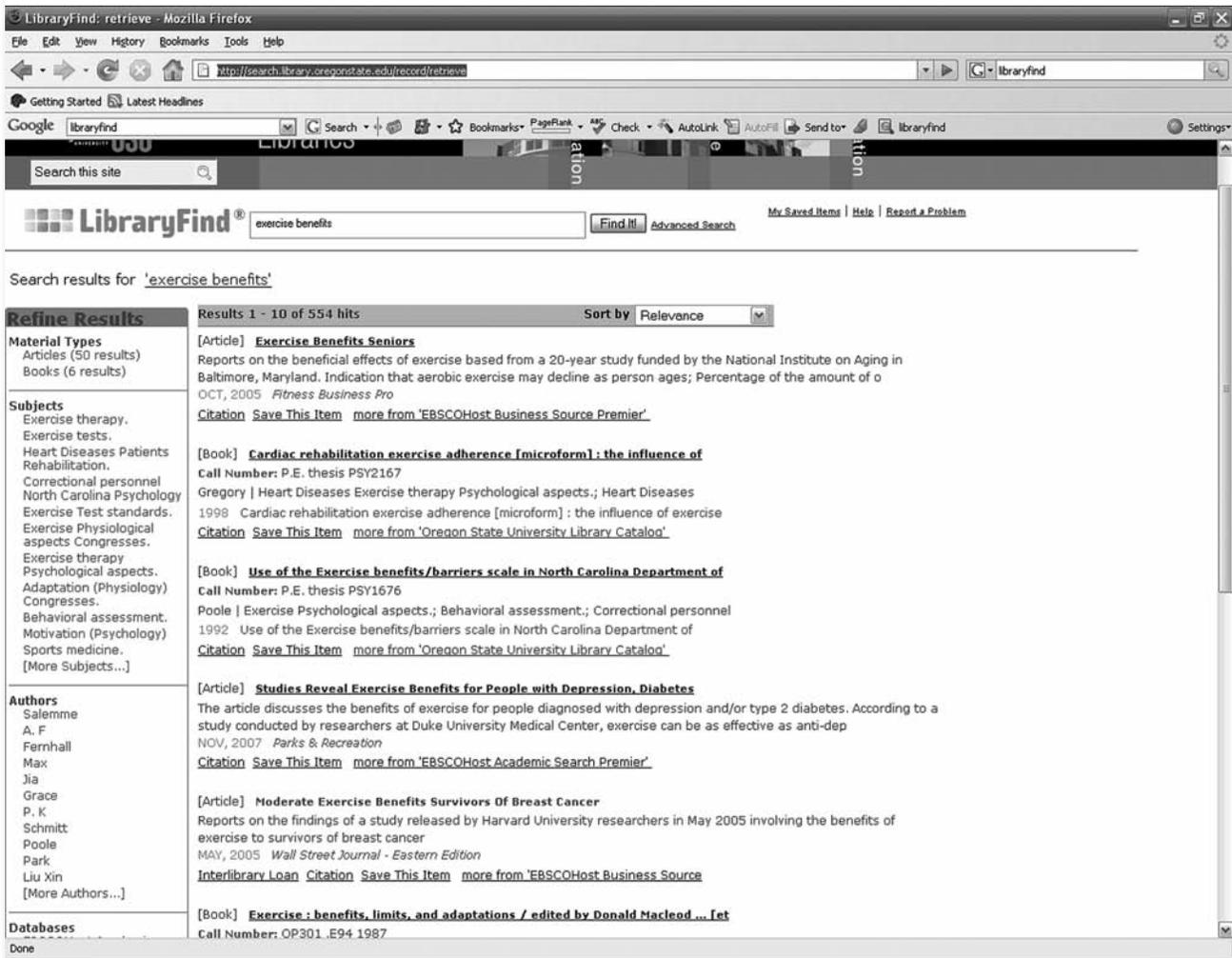
Finally, Oregon State University's LibraryFind ([http://](http://oasis.oregonstate.edu/)

oasis.oregonstate.edu/) offers a glimpse of what future extensible library catalogs will look like (Figure 5). The catalog is a Google-like interface containing books, journals, movies, and other information sources. The contents and interface are much more dynamic than the traditional catalog, allowing users to review and tag the contents of the catalog with user-generated uncontrolled subject headings, which are added to the more standardized librarian generated headings. LibraryFind.org is an open source software accessible at <http://libraryfind.org>, where it is described as a "metasearch application developed by librarians for libraries." The key objective of this software is to simplify catalog searches by allowing all library content, including books, journal articles and images, to be searched simultaneously.

Conclusions and Recommendations

Web 2.0 technologies are allowing libraries to deliver library services in new and interesting ways. Library 2.0 technologies offer tremendous potential to bring libraries and their users into closer proximity, virtually, by remov-

FIGURE 5 – LibraryFind catalog at Oregon State University retrieves books, journals and more – <http://search.library.oregonstate.edu/record/retrieve>



ing the boundaries and easing the limitations presented by physical space and Web 1.0 technologies. Libraries now have the opportunity to interact with their users as they never have before through the use of the various social communication technologies that are a regular—and frequently prominent—part of the lives of students and other library users.

Among agriculture libraries, Library 2.0 technologies are used for library news, educational online exhibits, online new book displays, and highlighting subject collections, literature guides and search tools, and image collections of rare materials.

Agriculture libraries are among those libraries that are experimenting with the new technologies discussed here. Except for instant messaging, the number of agriculture libraries that are using these technologies is relatively small, showing a need for more discussion, experimentation, and collaboration. Most of these technologies are available as downloadable plugins and software in open source environments. USAIN (www.usain.org) is clearly a suitable forum for coordinating efforts that will

facilitate the use of these technologies. The authors' exploratory survey has helped start the process of developing a list of Web 2.0 technology experts in agricultural libraries. The USAIN Technology Trends Interest Group will seek to continue building and coordinating a pool of Library 2.0 expertise, and will periodically report changing usage patterns of the new technologies.

Notes

1. The United States Agricultural Information Network (USAIN – www.usain.org) is an organization for information professionals that provides a forum for discussion of agricultural issues, takes a leadership role in the formation of a national information policy as related to agriculture, makes recommendations to the National Agricultural Library on agricultural information matters, and promotes cooperation and communication among its members.
2. The National Agricultural Library (NAL – www.nal.usda.gov) is one of four national libraries of the United States. It houses one of the world's largest and most accessible agricultural information collections and serves as the nexus for a national network of state land-grant and U.S. Department of Agriculture field libraries.
3. The Library & Information Technology Association (LITA –

www.lita.org) is a division of the American Library Association. It is the leading organization reaching out across types of libraries to provide education and services for a broad membership.

References

Breeding, Marshall. 2007. *Library technology guides: Key resources in the field of automation*. <http://www.librarytechnology.org>

Li, Charlene, and Josh Bernoff. 2008. *Groundswell: winning in a world transformed by social technologies*. Boston, Mass.: Harvard Business Press.

Matuszak, Gary. 2007. *Enterprise 2.0: fad or future?* KPMG International. http://www.kpmg.com/SiteCollectionDocuments/Enterprise_2_Fad_or_Future.pdf

Morgan, Eric Lease. 2008. *Top Tech Trends for ALA (Summer '08)*. LITA (Library and Information Technology Association) Blog post dated June 19, 2008. <http://litablog.org/2008/06/19/top-tech-trends-for-ala-summer-08/>

O'Reilly, Tim. 2005. *What is Web 2.0: Design Patterns and Business Models for the Next Generation of Software*. <http://www.oreillynet.com/pub/a/oreilly/tim/news/2005/09/30/what-is-web-2.0.html>

Rogers, Michael. 2008. "Tech enthusiasm peaks at PLA: Gadgets wow and panelists ponder libraries role in digital future." *Library Journal* 133 (8): 19-20.

Sifry, David. 2008. State of the Blogosphere, 2008. <http://www.technorati.com/blogging/state-of-the-blogosphere/>

CLAUDINE JENDA is an Agriculture Librarian in the Reference and Instruction Services Department, Auburn University Libraries, Auburn, Alabama, USA.

MARTY KESSELMAN is a Life Sciences Librarian at the Stephen & Lucy Chang Science Library, Rutgers University Libraries, New Brunswick, New Jersey, USA.

Contact Information

Claudine Arnold Jenda
Agriculture Librarian
Reference & Instruction Services
Auburn University Libraries
231 Mell Street
Auburn, AL 36849-5606
PH: (334) 844-1658
Fax: (334) 844-4461
E-mail: Jendaca@auburn.edu

Martin Kesselman
Life Sciences Librarian
Stephen & Lucy Chang Science Library
Rutgers University, Cook College
59 Dudley Road
New Brunswick, New Jersey 08901-8520
PH: (732) 932-0305 Ext 163
Fax: (732) 932-0311
E-mail: martyk@rci.rutgers.edu

Appendix

FIGURE 6 – New Books Display at the Food and Agriculture Organization of the United Nations
<http://www.flickr.com/photos/24232177@N05/sets/72157604253604694/>

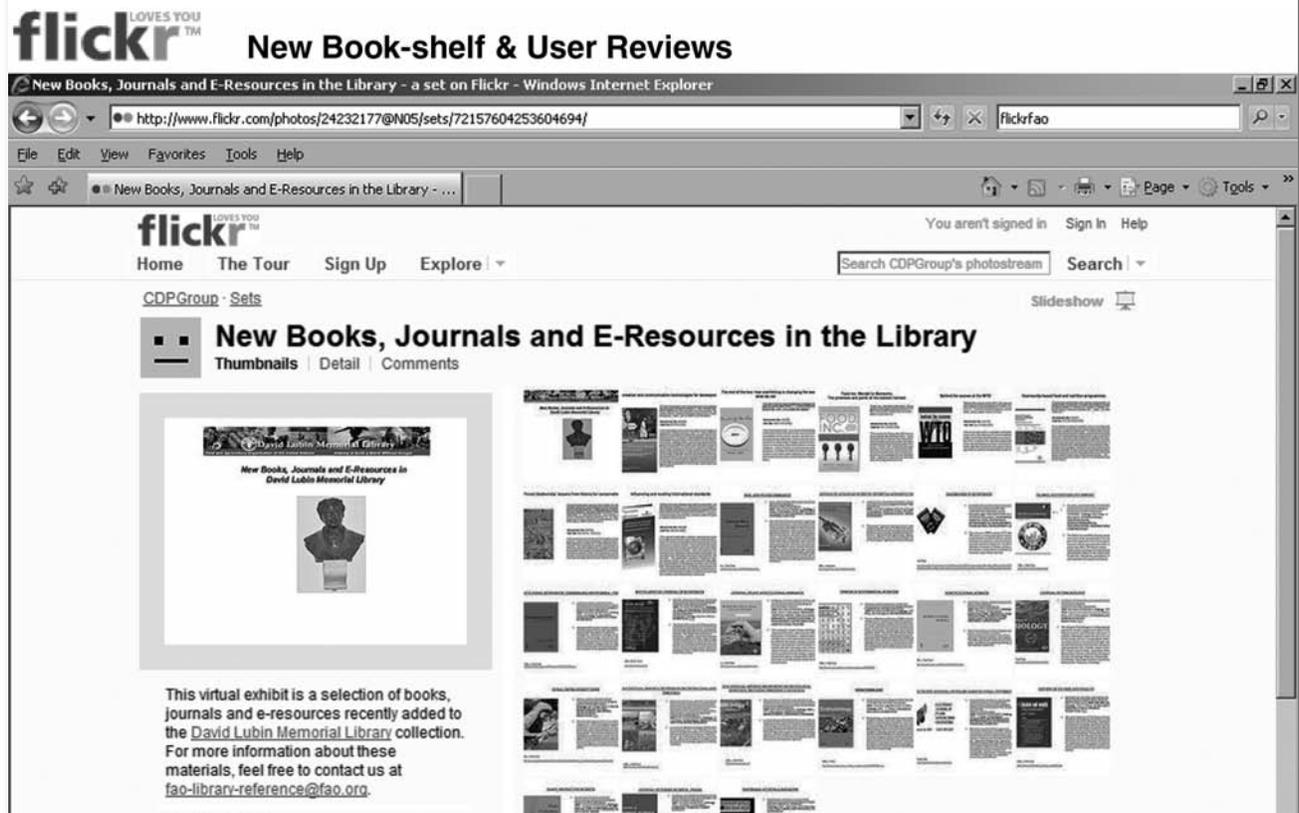


FIGURE 7 – Virtual Library Exhibit at the Food and Agriculture Organization of the United Nations

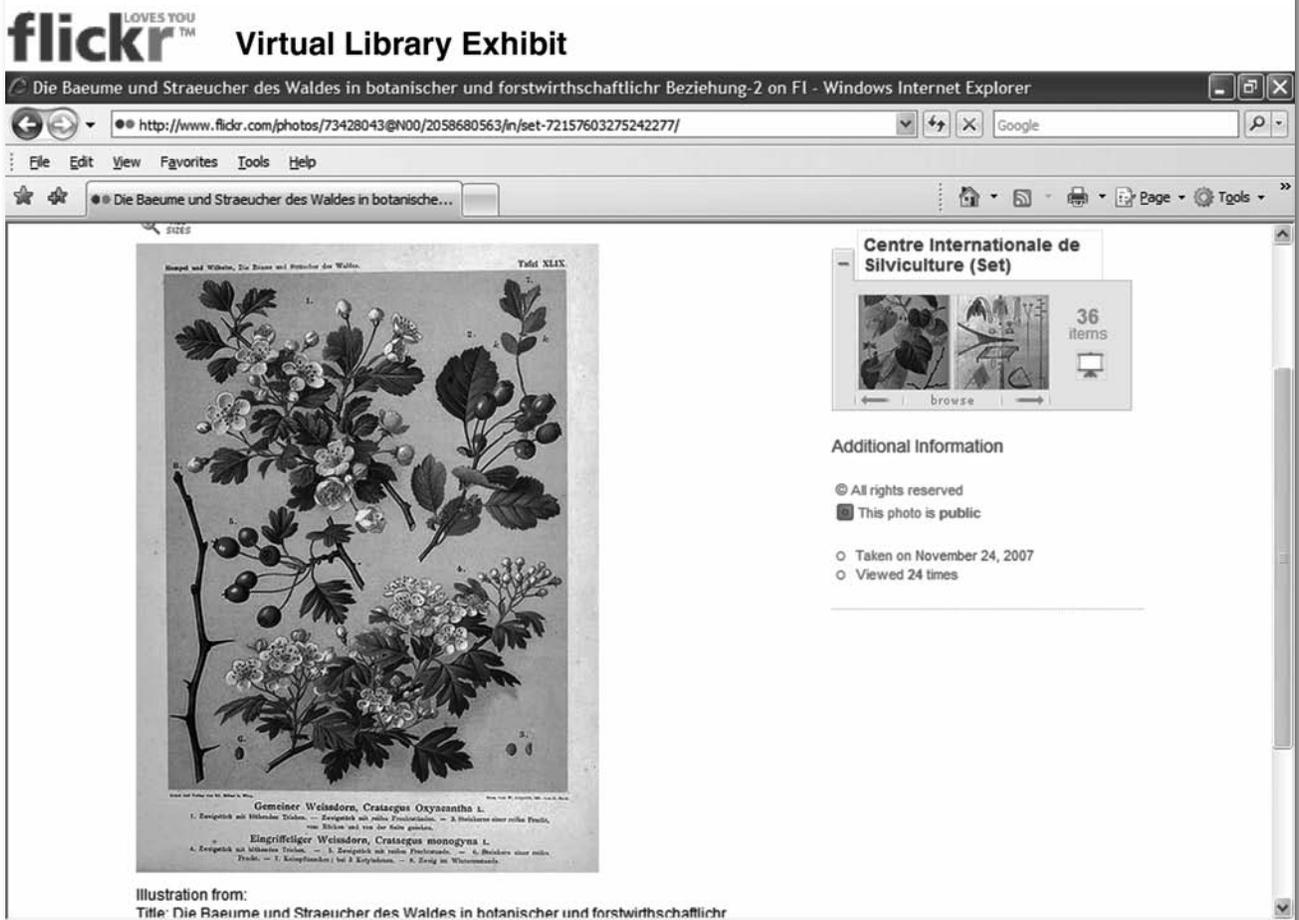


FIGURE 8 – North Carolina State University Libraries Learning Commons – <http://www.lib.ncsu.edu/learningcommons/index.php>

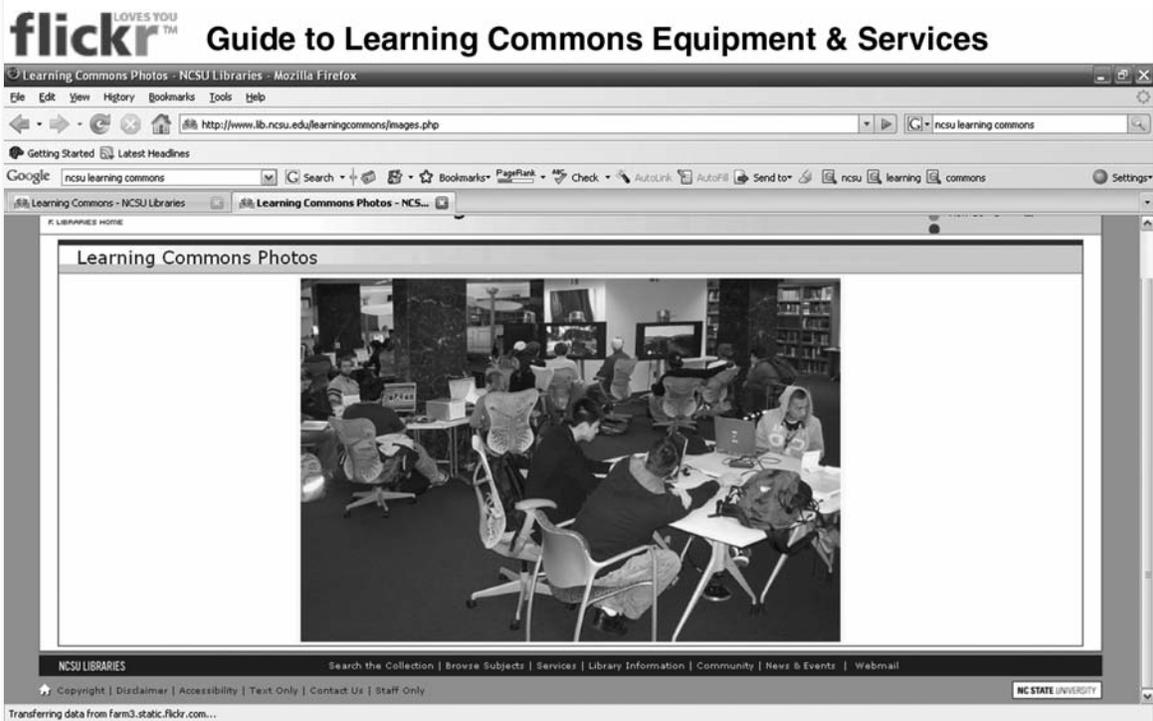


FIGURE 9 – Food, Fun, Music, Games, Information Services: Fun Orientation Program for welcoming Freshmen and Undergraduates to Auburn University Libraries – <http://www.flickr.com/photos/aulibraries/page10/>

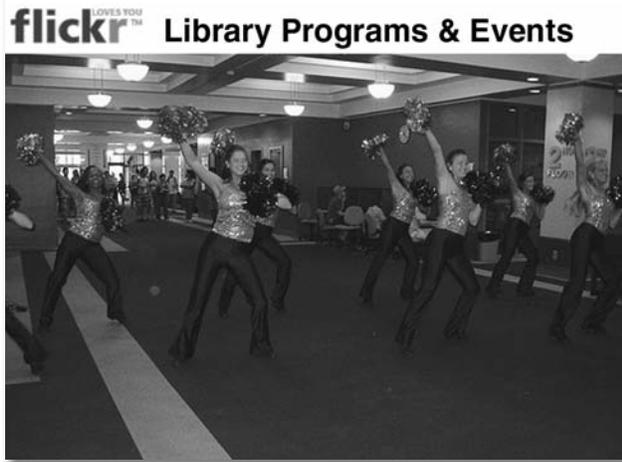


FIGURE 10 – Little Priest Tribal College Library: Photos of Departments and Collections – http://www.flickr.com/photos/little_priest_library/



FIGURE 11 – LibraryThing at Oregon State University at <http://www.librarything.com/catalog/bookawards>

Next Generation Catalogs or Extensible Catalogs

LibraryThing | Catalog your books online - Mozilla Firefox

File Edit View History Bookmarks Tools Help

<http://www.librarything.com/catalog/bookawards> oregon state university libraries

Getting Started Latest Headlines

Google oregon state university libraries Search Bookmarks PageRank Check AutoLink AutoFill Send to oregon state university libraries Settings

Oregon State University Libraries Home LibraryThing | Catalog your book...

LibraryThing BETA What's on your bookshelf? Over twenty-nine million books on members' bookshelves.

Home Search Zeitgeist Talk Groups Local Blog

bookawards > library

List Covers Tags Styles A B C D E Search All fields [1] 2 3 4

1 - 50 of 189 next page [1] 2 3 4

Title	Author	Date	Tags	Rating	Comments	Shared
Alias Grace.	Margaret Atwood	1998	PR9199.3.A8 A79 1996 (1996 Man Booker Prize for Fiction shortlist)	★★★★½	1996 Man Booker Prize for Fiction shortlist	3525/67
Alive Together: New and Selected Poems	Lisel Mueller	1996	PS3563.U35 A79 1996 (1997 Pulitzer Prize-Poetry)	★★★★	1997 Pulitzer Prize- Poetry	69
All Souls' Rising	Madison Smartt Bell	2004	PS3552.E517 A45 1995 (1995 National Book Award Finalist- Fiction)	★★★★	1995 National Book Award Finalist- Fiction	158/5
The Amazing Adventures of Kavalier & Clay	Michael Chabon	2001	PS3553.H15 A82 2000 (2001 Pulitzer Prize- Fiction)	★★★★	2001 Pulitzer Prize- Fiction	6497/116
American Pastoral	Philip Roth	2005	PS3568.0855 A77 1997 (1998 Pulitzer Prize- Fiction)	★★★★	1998 Pulitzer Prize- Fiction	2110/45
Among the Missing (Ballantine Reader's Circle)	Dan Chaon	2002	PS3553.H277 A8 2001 (2001 National Book Award Finalist- Fiction)	★★★★	2001 National Book Award Finalist- Fiction	154/3
Amsterdam	Ian McEwan	2002	PR6063.C4 A47 1999 (1998 Man Booker Prize for Fiction)	★★★★	1998 Man Booker Prize for Fiction	2422/52

Done

AgriFeeds: The Agricultural News and Events Aggregator

Gauri Salokhe, Valeria Pesce, Johannes Keizer, and Stephen Katz

Background

Since 2000, the Food and Agriculture Organization of the United Nations (FAO) has undertaken a number of initiatives to facilitate the creation of standards for agricultural information exchange, especially in the area of document-like information objects¹. In the last couple of years, a strong need has emerged for a standard way to interchange other types of information (on organizations, projects, experts, events, news) between systems residing on different platforms in the agricultural community, one capable of cutting across networks of partners while at the same time overcoming barriers to cooperation and interoperability. The need to (i) facilitate collaboration and (ii) harmonize the decentralized efforts in the development of methodologies for successful agricultural information management was reiterated by the Expert consultation² of October 2005, which stressed the need for an “intervention point on interlinking different information types”. During the consultation, a Content Management Taskforce (CMTF) was established to focus on this specific issue. One of the areas of work on which the CMTF was asked to concentrate was the “exchange of news feeds”, and how the community supporting agricultural information services can benefit from collaboration through the application of freely available Web 2.0 tools. In the long run, more sophisticated systems may be developed that allow, for example, filtering to produce custom-made feeds, such as those for an “early warning system” on topics such as *avian influenza*, *desert locusts* and *climate change*.

Context

As technologies emerged for sharing and interlinking different types of information, there was a real business-case for creating a standard to describe events in such a way that it:

- *remained* simple to create and apply;
- *captured* enough information to share information about events, including dates and location;
- *ensured* that data ownerships would be retained by the publisher; and
- *clearly made* the benefits of establishing such a standard transparent to all users.

There are many aspects to an event, ranging from simple announcement to detailed description with

session breakdowns, so the goal of this standard was to provide just enough information to allow users to ‘know’ about an upcoming event and guide them to the event website, which would provide further detailed information. In collaboration with its partners GFAR (Global Forum on Agricultural Research) and GFIS (Global Forest Information Service, FAO has created and implemented a “minimum” web-feed (RSS and Atom) based standard to share event information. In addition to the basic RSS/Atom fields, such as <title>, <link>, <pubDate> and <description>, the event feed needs to capture the start and end dates of an event and the city and country where it is being held. This information allows aggregators (Service Providers) to: *browse* events by country or region, *insert* event meta-data into Outlook calendars (one-click process), and *filter* events based on date to show upcoming events.

KEY URL: <http://www.agrifeds.org>

This new standard, called the Agricultural Events Application Profile (Ag-Events AP), keeps the information communicated simple and interoperable across domains and organizations, yet rich enough to communicate all relevant information. Examples of services currently using Ag-Events AP are AgriFeeds (www.agrifeds.org) and the Global Forest Information Service (www.gfis.net).

AgriFeeds

AgriFeeds is a freely available online aggregator of agriculture-related news and events. In addition to serving as a container for this type of information, it is a mechanism aimed at the repackaging of information in order to maximize its reach and reuse. The scope of the AgriFeeds aggregator is to facilitate interoperability between information systems by bringing together the right information to the right people at the right time, i.e. disseminating agriculture-related information to users who have a purpose for it—in real time. This is accomplished by exposing users to a comprehensive series of news, literally bringing events to their websites and calendars, from Agriculture to Forestry, Fisheries, Food Security and related domains, e.g. Sustainable Development, Nutrition, etc. AgriFeeds harvests news and events on a daily basis from registered sources and offers an easy way to customize and re-use the aggregated information. This demonstrates the two-fold nature of AgriFeeds:

- AgriFeeds as aggregator of information: As an RSS aggregator, AgriFeeds stores and indexes individual news/event items for re-aggregation on the part of the user. Thanks to the very granular storage of the information (at the level of the individual metadata elements describing each item), you can filter news and events

on AgriFeeds in order to obtain a custom set of items that suits your needs, e.g. only news on a given domain/topic, only news excerpted from selected organizations, or only events taking place in a certain region.

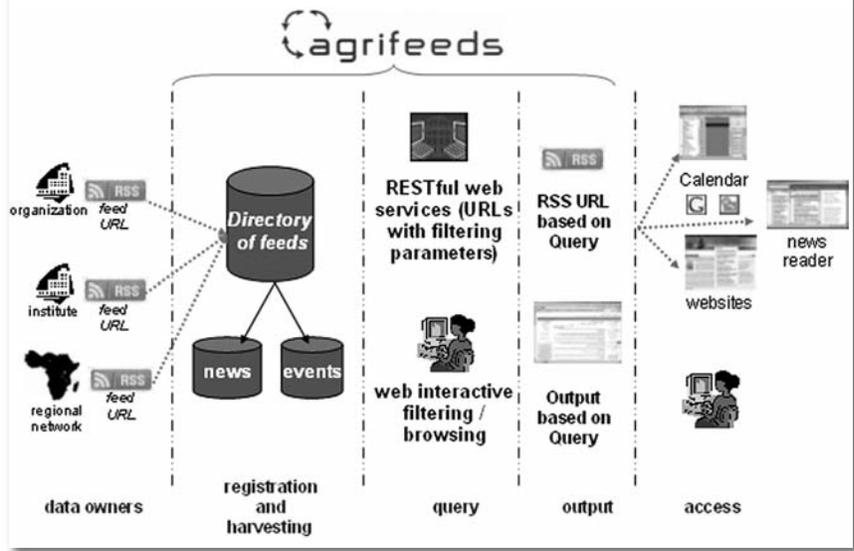
- AgriFeeds as disseminator of information:
 - through an interactive web interface that provides browsing and filtering functionalities with a final display of results on the screen;
 - by exposing the results as feeds: once you are happy with the filters you set, you can copy the URL of the corresponding feed and use it to display those news items on your website or on your own feed reader. The feed is regularly updated and will always contain the latest items that satisfy your filters;
 - by providing custom feeds as RESTful web services³: you can call the base URL and provide specific parameters to get a customized feed.

These last two usages of AgriFeeds allow for fast and powerful dissemination of the information through different and targeted channels: websites, news readers, other aggregators, e-mail alerts, public calendars, and so forth.

Figure 1 depicts the basic flow of information into and out of AgriFeeds.

- Data owners create feeds (news and/or events) com-

FIGURE 1 – The flow of information to and from AgriFeeds



pliant with the RSS (for news) and Ag-Events AP (for events) standards.

- They then register the feeds into the AgriFeeds Directory of feeds. Once the feed has been registered, the individual news and events are harvested on a daily basis.
- Users (and eventually computers through RESTful HTTP requests) can query AgriFeeds for news and event information.
- This information is shown to the users directly on the AgriFeeds website or it can be accessed further, through RSS, in websites, news readers and calendars.

FIGURE 2 – Browsing events by region in AgriFeeds

Browse events by region

Browsing events by region/country, beside just helping you to narrow down your search and find the news that interest you, allows you to create a filtering option for a customised feed. After clicking on a region/country, you will find an "RSS feed" link in the results page: the url of that feed will always expose updated results for that region/country.

Africa	Algeria Angola Benin Botswana Burkina Faso Burundi Côte d'Ivoire Cameroon Cape Verde Central African Republic Chad Comoros Congo Democratic Republic of the Congo Djibouti Egypt Equatorial Guinea Eritrea Ethiopia Gabon Gambia Ghana Guinea Guinea-Bissau Kenya Lesotho Liberia Libyan Arab Jamahiriya Madagascar Malawi Mali Mauritania Mauritius Morocco Mozambique Namibia Niger Nigeria Rwanda Sao Tome and Principe Senegal Seychelles Sierra Leone Somalia South Africa Sudan Swaziland Togo Tunisia Uganda United Republic of Tanzania Zambia Zimbabwe
Asia	Afghanistan Armenia Azerbaijan Bahrain Bangladesh Bhutan Cambodia China Democratic People's Republic of Korea Georgia India Indonesia Iran (Islamic Republic of) Iraq Israel Japan Jordan Kazakhstan Kuwait Kyrgyzstan Lao People's Democratic Republic Lebanon Malaysia Maldives Mongolia Myanmar Nepal Oman Pakistan Philippines Qatar Republic of Korea Russian Federation Saudi Arabia Sri Lanka Syrian Arab Republic Tajikistan Thailand Timor-Leste Turkmenistan United Arab Emirates Uzbekistan Viet Nam Yemen
Caribbean	Antigua and Barbuda Bahamas Barbados Cuba Dominica Dominican Republic Grenada Haiti Hungary Jamaica Saint Kitts and Nevis Saint Lucia Saint Vincent and the Grenadines Trinidad and Tobago
Central America	Belize Costa Rica El Salvador Guatemala Honduras Nicaragua Panama
Europe	Albania Austria Belarus Belgium Bosnia and Herzegovina Bulgaria Croatia Cyprus Czech Republic Denmark Estonia Finland France Germany Greece Iceland Ireland Italy Latvia Lithuania Luxembourg Malta Moldova Monaco Netherlands Norway Poland Portugal Romania San Marino Serbia Slovakia Slovenia Spain Sweden Switzerland The former Yugoslav Republic of Macedonia Turkey Ukraine United Kingdom
North America	Canada Mexico United States of America
Oceania	Australia Cook Islands Fiji Kiribati Marshall Islands Micronesia (Federated States of) Nauru New Zealand Niue Palau Papua New Guinea Samoa Solomon Islands Tonga Tuvalu Vanuatu
South America	Argentina Bolivia Brazil Chile Colombia Ecuador Guyana Paraguay Peru Suriname Uruguay Venezuela (Bolivarian Republic of)

AgriFeeds and Metadata Standards

For news items, AgriFeeds accepts the basic RSS metadata set and provides basic browsing/filtering functionalities based on it.

In terms of Events, the adoption of the Ag-Events AP standard enables AgriFeeds to provide various innovative functionalities. By just adding the location and the start/end dates for an event, users can search for information as follows:

- browse a list of upcoming events (List of events or as part of a Calendar)
- filter events by geographic location (Country or Region) (see Figure 2)
- add events to Outlook Calendar (iCal support)

- browse events by subject (covering Agriculture, Forestry, Fisheries, Sustainable Development, etc.)
- look at past events

This is accomplished by extending RSS with additional schemas. There are four pieces of extra information that are taken from the Agricultural Metadata Element Set (AgMES) namespace⁴:

- startDate
- endDate
- locationCity
- locationCountry

This is expressed as:

```
<ags:dateStart xsi:type="dcterms:W3CDTF">
  2007-11-28</ags:dateStart>

<ags:dateEnd xsi:type="dcterms:W3CDTF">
  2007-12-01</ags:dateEnd>

<ags:location>

<ags:locationCity>Beijing</ags:locationCity>

<ags:locationCountry xsi:type="dcterms:ISO3166">
  CHN</ags:locationCountry>

</ags:location>
```

Current and Planned Functionalities in AgriFeeds

Currently, AgriFeeds comprises the following features:

- aggregation of items from strictly agriculture related feeds: the feeds are published only after approval
- bottom-up process: registration, description, categorization and tagging of the feeds are done by the owners, therefore assuring better quality
- categorization of feeds based on both a controlled taxonomy and free tagging
- subject indexing of single news items if the source feeds provide the necessary RSS or Dublin Core metadata elements
- events are treated as a special type of news and are viewable through a Calendar and can be exported using the iCal format (can be uploaded into one's own Outlook calendar).
- browsing and filtering enabling creation of custom feeds: RSS outputs are available for filtering based on language, subject cover-

GAURI SALOKHE, JOHANNES KEIZER and STEPHEN KATZ are all affiliated with the Food and Agriculture Organization of the United Nations (FAO), Rome, Italy.

VALERIA PESCE is affiliated with the Global Forum on Agricultural Research (GFAR), Rome, Italy.

age, source (plus country, region and dates for events).

- RSS outputs include Dublin Core elements and event specific elements (see our Guidelines and FAQs) to allow for the creation of better value-added services on the part of the final users, especially the owners of information services and webmasters.

Planned functionalities include:

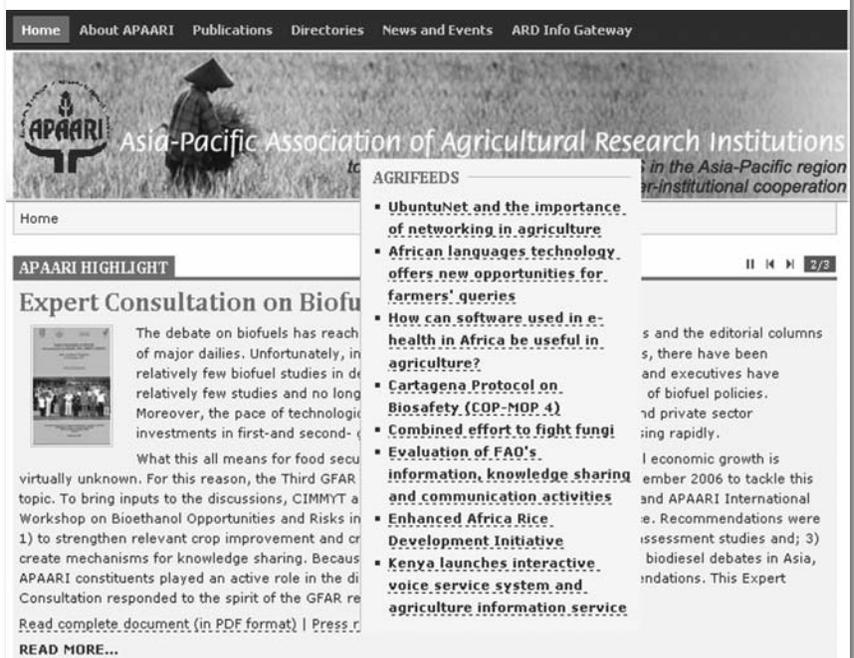
- introduction of automatic indexing for subjects to improve semantic filtering of single news items
- geographic indexing extended to news items using natural language processing and automatic indexing
- the inclusion of job opportunities as a special type of news

Conclusion

AgriFeeds is a mechanism allowing users to register their own news and events feeds for wider visibility and outreach. These news and event items can then be filtered and re-aggregated for use in feed readers or specific websites (see Figure 3).

AgriFeeds is more of an application to serve webmasters and information specialists than a web tool for end users. It amalgamates the otherwise dispersed and

FIGURE 3 – Example of feeds filters being used on a partner website (www.apaari.org)



decentralized pieces of information about news and events scattered on the web. Consequently, it allows users to make a one-stop search and filter on news and events aggregated daily from registered agricultural information sources.

Notes

1. http://www.fao.org/aims/ap_applied.jsp
2. http://www.fao.org/gi/gil/consultations/consult_infosys_en.asp
3. Web services based on the so-called Representational State Transfer; basically, functionalities that can be called through a

normal GET request to a URL with Optional parameters and that return a plain XML response. See http://en.wikipedia.org/wiki/Representational_State_Transfer

4. <http://purl.org/agmes/1.1/>

Contact Information

Gauri Salokhe
Food and Agriculture Organization of the United Nations (FAO)
Viale Delle Terme di Caracalla
00100 Rome
ITALY
E-mail: Gauri.Salokhe@fao.org
Web: <http://www.agrifeeds.org/>

Information Search of Farmers: Findings from a Survey in Ohio, USA

Florian Diekmann and Marvin T. Batte

EDITOR'S NOTE: This paper is based on a presentation made by the authors at the 11th Biennial Conference of the United States Agricultural Information Network (USAIN), April 27–30, 2008, Wooster, Ohio, USA.

Introduction

The information search behavior of farmers has received increased attention over the last few decades. Findings show that farmers routinely gather agricultural information by using a wide range of channels and sources (Ford and Babb, 1989; Gloy, Akridge, and Whipker, 2000; Suvedi, Campo, and Lapinski, 1999; Tucker and Napier, 2002; Patrick and Ullerich, 1996). Accordingly, farmers' information search has been described by their media choices, types of farm enterprises, attitudes toward search, and satisfaction with information acquisition (Jones, Batte, and Schnitkey, 1989; Lichtenberg and Zimmerman, 1999; Gloy and Akridge, 1999). However, the next step, a segmentation of farmers according to the intensity of their information search, has not been attempted. Segmenting the diverse farming population according to their search strategy is especially useful to agricultural information providers. Knowledge of the amount and type of search activity conducted by a particular group of farmers can aid in the development of targeted communication strategies for these segments and thus increase the efficiency of information dissemination. In the research reported here, the authors examine how farmers can be segmented based on their search strategy when acquiring agricultural information. We also investigate the factors that influence farmers' choice of search strategies.

Data

This research is based on a mail survey of 3,000 randomly selected farmers in Ohio conducted in spring 2007. Questionnaire design and administration followed best survey practices (Dillman, 2006). The survey sample was purchased from a private vendor and included farms of all sizes, including very small "lifestyle" farms. The sample was stratified by farm sales to guarantee sufficient representation of larger farms. A weighting procedure was applied in the calculation of all statistics to return the numbers to a representative sample. A total of 1,740 farmers returned surveys for an overall response rate of 58 percent. A subset of 608 responses was used for this study.

Farmers' Search Strategies

K-means cluster analysis of 23 information sources was used to identify groups of farmers with similar information search strategies based on their use of these information sources. A four-cluster solution proved the best solution. Following the terminology of previous research (Klein and Ford, 2003), we used the distances between the mean frequency of source usage to group the four clusters into high-, moderate-, and low-search strategies. The high-search group was the smallest segment with 21% of all farmers, while 33% fell into the low-search group. The moderate-search segment split into a larger group of farmers (27%) that preferred traditional, offline information sources and a smaller segment of farmers (20%) that preferred online media.

Farmers' Interests

Farmers' interests in general and specialized agricultural information were examined using a list of 33 information topics. Factor analysis, using the principal components method and Varimax rotation, grouped the information topics into five main topics, which included 27 items. The five topics were labeled crops, livestock, farm economics, environment, and family. Several general trends emerged from these data. First, the interest in the five topics increased significantly from low- to high-search strategy. Farmers practicing a high-search strategy expressed the highest interest across all topics, while those practicing a low-search strategy tended to have the lowest interest in these topics. Farmers' favorite topics varied by information strategy: the low- and moderate-search group tended to show greater interest in environmental topics, while information related to crops prevailed for farmers in the high-search strategy. Livestock was the least relevant topic for all except the high-search farmers. Notable was the rise of the importance attached to economics topics, from a fourth rank for the low-search to a second rank for the high-search group. This finding indicates economics information as an important motivator for farmers' engagement in intensive information search.

Farmers' Attitudes toward Search

Farmers' attitudes toward search were examined by using the search antecedents items of the Beatty and Smith (1987) scale supplemented with additional statements to capture the characteristics of information search related to agriculture (Heaney and Goldsmith, 1999; Bienstock and Stafford, 2006; Slama and Tashchian, 1985). A total of 28 statements entered the survey instrument. Factor analysis resulted in a final set of 23 statements grouped into six factors labeled market environment, cost, situation, ability, knowledge, and payoff, adopting the nomenclature of Beatty and Smith (1987). The relationships between information strategies and

farmers' attitudes toward information search largely continued the trends indicated for farmers' information interests. First, farmers practicing a high-search strategy reported stronger attitudes toward information search than those practicing a low-search strategy. Regardless of search strategy, farmers' confidence in realizing a payoff when searching for information and generating positive results for their farm business were the two most important motivators for search.

Farmers' Demographic and Socio-Economic Characteristics

The survey instrument included detailed questions on respondents' demographic and socio-economic characteristics, including age, education, marital status, gender, race, household income, farm gross sales, farm size, enterprise type, off-farm work, years in farming, and Internet access. All but gender differed significantly among the information strategies, with the most significant differences emerging for Internet use, years of farming, household income, farm sales, and age. Examining search strategies individually, farmers practicing a high-search strategy were the second oldest, had the second longest tenure in farming, reported the second-highest farm sales and household income, and were second in the use of the Internet. In contrast, farmers who belonged to the low-search group tended to be the youngest farmers with the least farming experience. They also reported the lowest farm sales and second-lowest household income. The segment of farmers in the online-search group tended to have the highest Internet use, farm sales, and household income among the four segments. These farmers were younger and had a shorter tenure in farming. In contrast, the moderate-search group practicing a traditional offline information strategy represented the oldest group of farmers with the most years in farming. Their household income was the lowest and their farm sales second to last. Only one-fifth reported access to the Internet.

Discussion and Conclusion

We found four distinct search strategies based on the frequency of use of 23 information sources including print media, broadcast media, electronic media, and interpersonal sources.

Examining the relationship between information strategy and farmers' interests, we found that a high-search strategy was associated with an increased interest in crops and farm economics at the expense of livestock and family topics. Examining the relationships between information strategy and farmers' attitudes toward information search, we found a high-search strategy associated with higher scores in the six attitudinal dimensions. Overall, farmers ranked their perceived ability to navigate the marketplace highest, while their

FLORIAN DIEKMANN, Ph.D. is Subject Specialist for Food, Agricultural, and Environmental Sciences, The Ohio State University Libraries, Columbus, Ohio, USA.

MARVIN T. BATTE, Ph.D. is Van Buren Professor of Farm Management, Department of Agricultural, Environmental, and Development Economics, The Ohio State University, Columbus, Ohio, USA.

concerns for their farming situation when searching for information ranked second. Farmers' concerns about the market environment and cost of search ranked lowest overall.

Findings from this study have important implications for extension educators, agricultural professionals, and information specialists in designing effective strategies of presenting agricultural information to their clientele.

Acknowledgement

This research was supported by Ohio State University Extension. The authors gratefully acknowledge the financial support.

References

- Beatty, Sharon E., and Scott M. Smith. 1987. "External search effort: An investigation across several product categories." *Journal of Consumer Research* 14 (June):83–95.
- Bienstock, Carol C., and Marla Royne Stafford. 2006. "Measuring involvement with the service: a further investigation of scale validity and dimensionality." *Journal of Marketing Theory and Practice* 14 (3):209–221.
- Dillman, Don A. 2006. *Mail and Internet Surveys: The Tailored Design Method*. Hoboken, N.J.: Wiley.
- Ford, Stephen A., and Emerson M. Babb. 1989. "Farmer Sources and Uses of Information." *Agribusiness* 5 (5):465–476.
- Gloy, Brent A., and Jay T. Akridge. 1999. "Segmenting the commercial producer marketplace for agricultural inputs." *International Food and Agribusiness Management Review* 2 (2):145–163.
- Gloy, Brent A., Jay T. Akridge, and Linda D. Whipker. 2000. "Sources of information for commercial farms: usefulness of media and personal sources." *International Food and Agribusiness Management Review* 3 (2):245–260.
- Heaney, Joo-Gim, and Ronald E. Goldsmith. 1999. "External information search for banking services." *International Journal of Bank Marketing* 17 (6/7):305–324.
- Jones, Eugene, Marvin T. Batte, and Gary D. Schnitkey. 1989. "The impact of economic and socioeconomic factors on the demand for information: A case study of Ohio commercial farmers." *Agribusiness* 5 (6):557–571.
- Klein, Lisa R., and Gary T. Ford. 2003. "Consumer search for information in the digital age: An empirical study of pre-purchase search for automobiles." *Journal of Interactive Marketing* 17 (3):29–49.
- Lichtenberg, Erik, and Rae Zimmerman. 1999. "Information and farmers' attitudes about pesticides, water quality, and

related environmental effects." *Agriculture, Ecosystems & Environment* 73 (3):227-236.

Patrick, George F., and Stanton Ullerich. 1996. "Information sources and risk attitudes of large-scale farmers, farm managers, and agricultural bankers." *Agribusiness* 12 (5):461-471.

Slama, Mark E., and Armen Tashchian. 1985. "Selected socio-economic and demographic characteristics associated with purchasing involvement." *Journal of Marketing* 49 (1):72-82.

Suvedi, Murari, Shelly Campo, and Maria Knight Lapinski. 1999. "Trends in Michigan farmer's information seeking behaviors and perspectives on the delivery of information." *Journal of Applied Communications* 83 (3):33-50.

Tucker, Mark, and Ted L. Napier. 2002. "Preferred sources and channels of soil and water conservation information among farmers in three Midwestern US watersheds." *Agriculture, Ecosystems & Environment* 92 (2-3):297-313.

Contact Information

Florian Diekmann, Ph.D.
Subject Specialist for Food, Agricultural, and Environmental Sciences
University Libraries
The Ohio State University
250 West Woodruff Avenue
Columbus, Ohio 43210
USA
PH: +1-614-688-8413
Fax: +1-614-688-0505
E-mail: diekmann.4@osu.edu

Marvin T. Batte, Ph.D.
Van Buren Professor of Farm Management
Department of Agricultural, Environmental, and Development Economics
The Ohio State University
2120 Fyffe Road
Columbus, Ohio 43210
USA
PH: +1-614-292-6406
Fax: +1-614-292-4749
E-mail: batte.1@osu.edu

Accessing and Sharing Knowledge Resources for Soil Health Research in Africa

Lucy Fisher, Gracian Chimwaza, James Kinyangi, Beth Medvecky, Blessing Chataira, Olivia Vent, and Terry Tucker

EDITOR'S NOTE: This paper is based on a poster presentation made by the authors at the World Conference on Agricultural Information and IT (IAALD/AFITA/WCCA), August 23–27, 2008, Tokyo, Japan.

Summary

Agricultural researchers and practitioners throughout Africa are conducting soil health-related research and applying the results, though many are not accessing or sharing available knowledge resources effectively. During 2007, 73 respondents (primarily researchers and educators with an interest in soil fertility) in 23 African countries were surveyed to identify: 1) where and how they access soil health and other agricultural information; 2) their use of libraries and agricultural networks; and 3) potential improved pathways for African soil health researchers to locate and share knowledge resources. The survey results suggest that building 1) librarians' capacity for outreach and accessing knowledge resources, and 2) network staff capacity for proactive knowledge brokering could be useful avenues to increase access, sharing and use of soil health research in Africa. Further study of networks and network membership will help determine the potential benefits of increasing inter-network links to share information more effectively among soil health researchers and between scientists and both practitioners and policymakers. Increasing support for collaborative efforts including low or no-cost information resources such as The Essential Electronic Agricultural Library (TEEAL) and AGORA (Access to Global Online Research in Agriculture) and promoting information sources on frequently-visited websites and at conferences could also improve access to soil health knowledge resources in Africa.

Introduction

Improving soil health is a vital component for increasing agricultural yields and restoring degraded farmland in Africa. According to Sanchez (2002), soil fertility depletion needs to be addressed before other technologies and policies can become effective in overcoming hunger on the continent. While much agricultural research material is available in print and electronic formats, it can be difficult to find or is guarded by

expensive subscriptions. African research results are often not online at all and can be nearly impossible to find. Libraries in Africa often have small collections that are not up-to-date. And, for many African researchers as well as consumers of research results, the Internet is not an easy answer. Adequate bandwidth, connectivity, computer hardware and software, technical support and funds to pay for all of these are generally in short supply.

For those who do have adequate Internet access, there are several good programs that provide access to expensive agricultural journals online at low or no cost. These include, among others, Africa Journals Online, library agreements through the Programme for the Enhancement of Research Information (PERI), and AGORA and related initiatives such as Online Access to Research in the Environment (OARE) and Health Inter-Network Access to Research Initiative (HINARI). For those with bandwidth problems, TEEAL, while not entirely free to institutions, provides 130 journals on an external hard drive that can run on an institution's local area network (LAN) system or stand alone. Nevertheless, many people are still uncertain about how to navigate through the oceans of disorganized information to match what is available with what they are looking for. (TEEAL, 2008)

Methods

A user survey designed to learn how those involved in soil health research in Africa locate relevant information, what they perceived to be the constraints to acquiring it, and what kind of soil health-related networks and other groups they belong to was distributed between May and August of 2007. The survey was made available via two mechanisms: 1) online through an interactive Survey Monkey site on the Internet; and 2) through e-mail or e-mail attachments forwarded to specific researchers, agricultural organizations, institutions, soils-related networks and interested attendees at the Forum for Agricultural Research in Africa (FARA) meeting in South Africa (June 2007) and the 4th International Conference of the African Soil Science Society (ASSS) in Ghana (January 2007). The data were analyzed using SPSS statistics software that enabled us to generate data summary tables.

Results

Characterization of the Respondents – Among the people who completed the soil health information user survey by electronic means (e-mail or Survey Monkey), there were a total of 73 respondents from 23 countries.

Approximately 78% identified themselves as researchers and/or teachers. The majority of respondents were affiliated with Universities (45%), National Agricultural Research Systems (NARS, 27%) or International Agriculture Research Centers (IRCs, 18%), with a small

number employed by government ministries, non-governmental organizations or other institutions. Because there were so few representatives from the latter categories, our study focused on reporting results for the IRC, NARS and university respondents. Of this group of respondents, 40% were from Eastern and Central Africa, 37% from West Africa and 23% from Southern Africa.

Sources of Information – While over half of the soil health survey respondents in every category cited the Internet as a frequent source of information, they also appear to be getting their information from colleagues, conferences and (except for NARS) newsletters. Nearly 40% of IRC respondents reported getting information from colleagues frequently and nearly a quarter of respondents across institutions reported conferences as a frequent source of useful research information (Figure 1).

Researchers and information managers in IRCs had better Internet and journal access than university faculty or NARS. Except for private groups and IRCs, many researchers in NARS (especially those in more remote areas) and universities noted problems with bandwidth, connectivity, and computer hardware and software, as well as the expenses associated with using the Internet.

Network Membership – As shown in Figure 2, 68% of the 63 respondents who identified themselves specifically as researchers, university faculty/lecturers or program staff belonged to at least one soil health-related network or professional society, with 19% belonging to three or more. Soil health-related networks noted by these respondents included 15 pan-African, regional and national networks/professional societies in Africa and 4 global networks and associations.

Ninety percent of these respondents belonged to one or more agricultural network, with 44% belonging to more than three agricultural networks or associations.

Use of Specific Internet Information Sites and Applications – Of a provided list of 18 possible Internet sources of soil health research information¹, Google Scholar, AGORA and CABI were the only sites that can be considered key sources across institution type ($\geq 35\%$ citing frequent use); over 60% of university respondents cited frequent use of AGORA. IRCs additionally cited frequent use of African Journals Online (46%) and the CG Virtual Library (38%), while NARS showed frequent use (40%) of both FAO and NARS websites. Both NARS and universities cited frequent use of CTA sources ($> 35\%$).

Very few reported belonging to e-mail based listservs or online discussion groups. With regard to the use of more “advanced” interactive Internet sharing techniques, few people had ever actually used any Web 2.0 tools such as wikis, blogs, RSS feeds, or social bookmarking, though VoIP (Skype) was frequently used by $> 20\%$ of survey respondents across institutions; IRCs reported

FIGURE 1 – Most frequent sources of agricultural information (% reporting Internet, colleagues, newsletters, and conferences as a frequent source of agricultural research information)

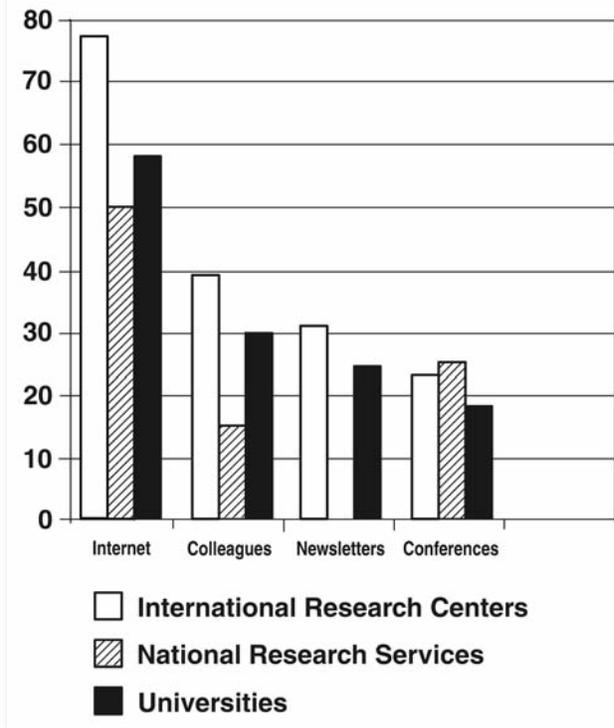
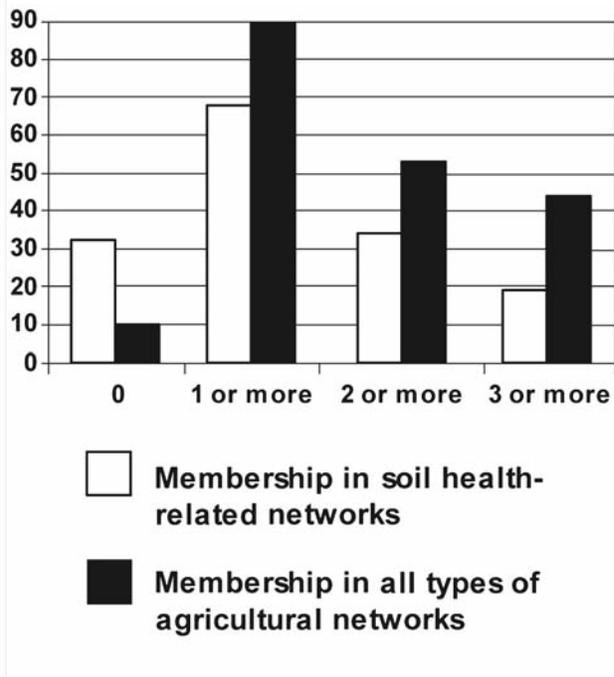


FIGURE 2 – Membership in Soil Health-related and Other Agricultural Networks and Associations (% of respondents who identified themselves as researchers, university faculty/lecturers, program staff – n = 63)



over 60% frequent use of VoIP. Many admitted that they had never even heard of the newer Web 2.0 applications.

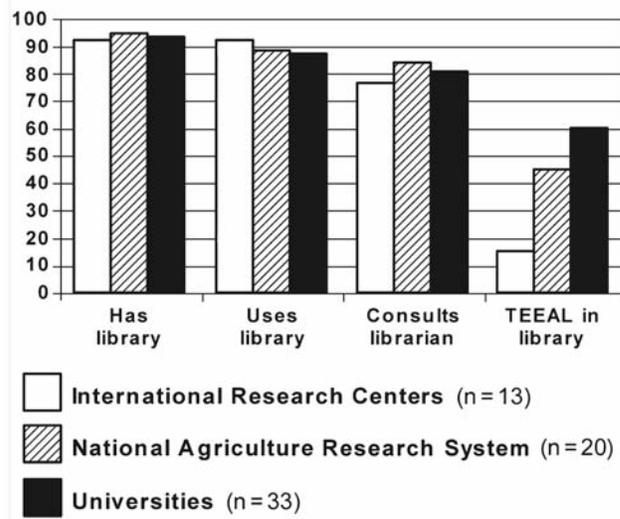
Local Access to Knowledge Resources and Low-cost Information – As shown in Figure 3, over 90% of all respondents had library access at their workplace and over 75% consulted their librarian at least occasionally; over 50% of all respondents consulted their librarian frequently. The reasons most often given for not consulting a librarian were that 1) the librarian was not well-trained, or 2) the library resources were so outdated that the respondent considered them of limited use. Universities had the best access (60%) to TEEAL, an agricultural research information resource that requires a computer but no Internet connection.

Discussion and Next Steps

The survey on accessing and sharing knowledge resources in Africa by those involved either directly or peripherally with soil health research produced a number of interesting insights and suggestions for follow-up. These include the following:

- High rates of membership in soil health networks and other agricultural networks and associations suggest that further development of these entities as proactive knowledge brokers could increase information access and knowledge-sharing. This type of network development may also prove useful in linking those who have greater access to knowledge resources with those who do not. Network membership incentives, especially for students, could extend the benefits of linking with colleagues to a wider support community.
- Further study of networks and network membership needs to be undertaken to determine the potential benefits of increasing inter-network links to facilitate 1) collaborative problem-solving among soil health researchers, and 2) greater knowledge-sharing between scientists, practitioners and policymakers. Strengthening links between networks and libraries may also prove to be a valuable pathway for sharing information sources.
- As the survey indicates, respondents are finding research information from a number of sources. Knowledge-sharing strategies that use a blend of elec-

FIGURE 3 – Library Availability and Use (% by institution)



tronic, print and face-to-face components should continue to be stressed rather than focusing only on Internet access. [Despite Africa’s impressive Internet usage growth of over 1000% between 2000 and 2008, Africa continues to have the lowest percentage of Internet penetration (5.23%) of any continent (Miniwatts Marketing Group, 2008)]. As networks occasionally hold conferences/workshops, communicate with newsletters and/or e-mail, and put people in touch with colleagues, they are well-suited to serve people using the blended approach that matches respondents’ current information access patterns.

- Significant access to libraries and use of librarians shown in the survey results implies that 1) acquiring and using low or no-cost research resources (such as AGORA and TEEAL), and 2) training librarians in outreach as well as locating resources, could be efficient ways to increase awareness and use of soil health knowledge resources.
- The survey has identified a number of Internet-based resources that are frequently used; placing information about new knowledge resources on these and other subject-relevant websites will increase the likelihood they will be found by those who need them.
- AGORA is a frequently cited source of soil health information; development and promotion of a peer-based Current Alerts system drawing on articles readily available to researchers through AGORA could make it easier for African researchers to keep up to date.

Limitations of the study: Those who responded to the survey via e-mail and the online survey form had access to the Internet and/or e-mail and therefore do not necessarily constitute a representative sample of African

LUCY FISHER is Outreach Coordinator, James Kinyangi is a Consultant, Beth Medvecky is Assistant Director, and Terry Tucker is Associate Director of the Cornell International Institute for Food, Agriculture, and Development (CIIFAD), Ithaca, New York, USA.

GRACIAN CHIMWAZA is Executive Director and Blessing Chataira is Assistant Programme Officer of the Information Training and Outreach Centre for Africa (ITOCA), Centurio, South Africa.

OLIVIA VENT is Outreach Coordinator, TEEAL/AGORA, Cornell University, Ithaca, New York, USA.

researchers' access to electronic resources. Also, the network membership data may be skewed as some respondents received the survey through either the African Network for Soil Biology and Fertility (AfNet) or the Information Training and Outreach Centre for Africa (ITOCA) network.

Note

1. African Crop News, Africa Journals Online, AGORA, AGRICOLA, AGRIS, Agritrop, ASARECA/CORAF/(SADC), Bioline International, CABI, CGIAR Virtual Library, CTA Resources, FAO sites, FARA, GFAR, Google Scholar, Highwire, Scirus/Ingenta/ISI, Local NARS websites

References

- Miniwatts Marketing Group. 2008. Internet Usage Stats: The Internet Big Picture. <http://Internetworldstats.com/stats.htm>
- Sanchez, Pedro A. 2002. "Soil Fertility and Hunger in Africa." *Science* 295(5562): 2019–2020. DOI: 10.1126/science.1065256
- TEEAL Project. 2008. "TEEAL-Other Resources." <http://www.teal.org/other-resources.html>

Contact Information

Lucy Fisher
Outreach Coordinator
Cornell International Institute for Food, Agriculture, and
Development (CIIFAD)
Cornell University
Ithaca, NY 14850
USA
E-mail: lhf2@cornell.edu

Enhancing Access to Scientific and Technical Information at Agropolis International

Odile Bédu and Chantal Salson

EDITOR'S NOTE: This paper was presented at the World Conference on Agricultural Information and IT / IAALD AFITA WCCA 2008, Tokyo, Japan, August 24–27, 2008.

Introduction

Founded in 1986, Agropolis International (Agropolis) is a federation of 20 universities, research centers and higher education institutions located in the South of France (Montpellier) and in the Languedoc-Roussillon Region. Its members share a common interest in agriculture, food, biodiversity, the environment, and rural societies, open to the development of the Mediterranean and Tropical regions. Most of these institutions have their own information services or libraries, each focusing on their own set of themes and adapted to the needs of their users. Information scientists (IS) have worked for some 20 years to minimize the constraints of this dispersion and to facilitate information access to end users.

The Agropolis membership consists primarily of French institutions: 5 universities, 7 higher schools and 9 research centers. In some cases, only a part of an institution's activity is dedicated to Agropolis topics. Three foreign laboratories are settled in Montpellier and Agropolis International also operates the general secretariat for several international networks, such as CILBA (Complexe International de Lutte Biologique Agropolis) and GFAR (Global Forum on Agricultural Research), whose academic activities are partly or wholly the same as those of Agropolis.

The scientific community at Agropolis provides a comprehensive and diversified training program. It also engages in a broad range of research themes and appraisal related to these issues. Among the 65,000 students and 5,500 researchers in the region, 10% of the students and about 2,300 of the researchers belong to the Agropolis community.

Agropolis acts in subsidiarity with regard to each of its members. Its essential tasks are to:

- facilitate the policy of its members,
- create scientific events with national and international impact,
- raise and manage funds intended for the research teams,
- internationalize the campuses,
- disseminate information on what the community does and can do, and

- be a provider of collective services.

Membership in the Agropolis network strengthens its members' capacities. The focus of this paper is on scientific and technical information (STI) services, which are an important part of Agropolis's activities. The authors discuss tools that have been developed, or are in development, to help facilitate sharing resources and support user needs.

STI at Agropolis

The STI Commission is the working group within Agropolis that oversees STI activities. It implements services and actions that facilitate the search for information by the regional and international scientific community. It also facilitates research on scientific and technical information within the Agropolis network.

KEY URL:

http://www.agropolis.fr/bomlr_eng/index.html

Thirty-five documentation centers or libraries share in this activity. They are varied in size, from very large organizations to very small centers. Some belong to a single institution (e.g. CIRAD, university libraries), but most belong to several institutions. For some of them, information policy is drawn up elsewhere, at the national or international level. These information centers have the advantage of being able to focus primarily on their users, but it can be difficult to count on them for joint projects if such projects conflict with the policies that have been handed down to them. For example, some centers include international activities as part of their regular services, e.g. dissemination of information, professional teaching and participation in international working groups, while other do not. Some of the smallest centers are highly specialized, enabling them to align well with their users' needs. However, providing access to electronic information is often difficult for them due to high subscription costs.

All Agropolis member institutions are invited to join the STI Commission, but 10 to 15 institutions make up the core and actually participate in the various activities. Some institutions delegate several representatives, while others forego representation. The average institutional representation is one or two information scientists (IS) belonging to the Commission. The Commission meets three or four times a year.

The Commission's most important work is done in working groups that meet as often as needed. One such group is in charge of organizing the next IAALD World Congress (April 2010 in Montpellier). An information specialist is funded by Agropolis for one year as part of its support. An annual report is submitted by the permanent IS to the Agropolis office that approved it and allocated the budget.

The first networking activities developed deal with transversal activities (Figure 1). The STI Commission manages a service portal providing:

- easier user flow, by providing better access to all libraries,
- a catalog of periodicals (print or electronic),
- a catalog of databanks, including where they can be consulted, and
- working sessions and shared experiences; these sessions are open to all professionals in the region.

Major Accomplishments

Common Catalog and Search Interface – For both information specialists and users, the number one need is for a single point of access to

academic resources from the Languedoc Roussillon region. Each library has its own catalog, managed by its own software and adapted to its users. A metasearch software was identified as the tool that would enable simultaneous searching through 31 library catalogs, giving access to 1.5 million bibliographic references and showing the location of 18,000 periodical titles.

Agropolis, the European University Complex and the Inter-University Library of Montpellier have signed a convention to pool their facilities for this project as an example of the inter-institutional functions performed by Agropolis and supported by the local authority Languedoc-Roussillon Region.

The first three steps towards the creation of a single joint facility have been completed:

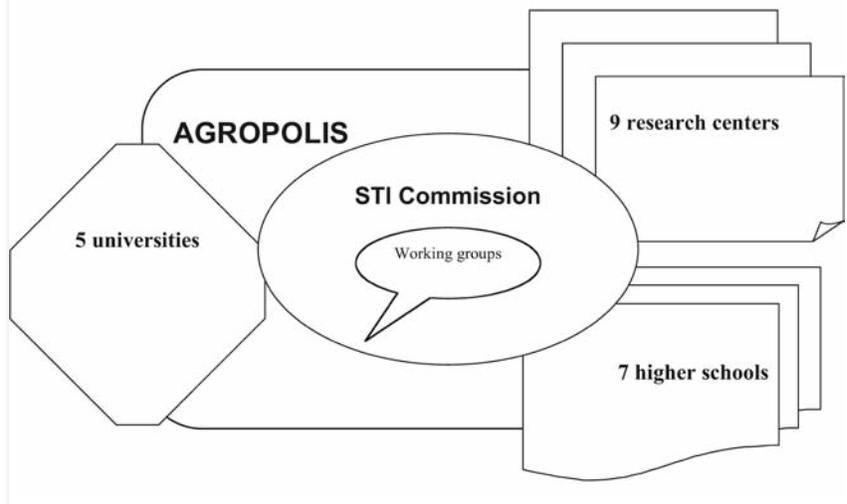
- Analysis of requirements
- A comparative study
- Testing of technical solutions available in 2002

The AskOnce program developed by Xerox Corporation was tested and chosen. This online single query interface was adapted to query heterogeneous library catalogs (whatever their size, thematic coverage, bibliographic format, and software) while leaving them intact on their sites, thus respecting the choices of each institution. The metasearch software supports various search protocols (HTTP, Z3950) and is based on a powerful query language that relies on a rich set of metadata (title, author, keywords, full-text) and advanced operators.

The AskOnce technology boosts the decision process by transforming long lists of search results into organized information. It automatically groups search results into categories that are intelligently created out of the words and phrases displayed (clustering).

The system provides considerable time-savings in bibliographic searches. It allows us to verify that dupli-

FIGURE 1 – STI Commission — a transversal activity in Agropolis



cation of information is not important. Accessible from the outside, it aims to enhance the scientific and technical information potential of training and research institutions in the South of France.

In order to provide access to full-text documents, we plan to also use this technology to include the publication repositories of each establishment in the system (see Ongoing Projects, below).

Regional Portal for Scientific Information – The website dedicated to scientific information was published some 10 years ago. The aim was to share information with information system users as well as information specialists. It was updated in March 2008 with five main headings:

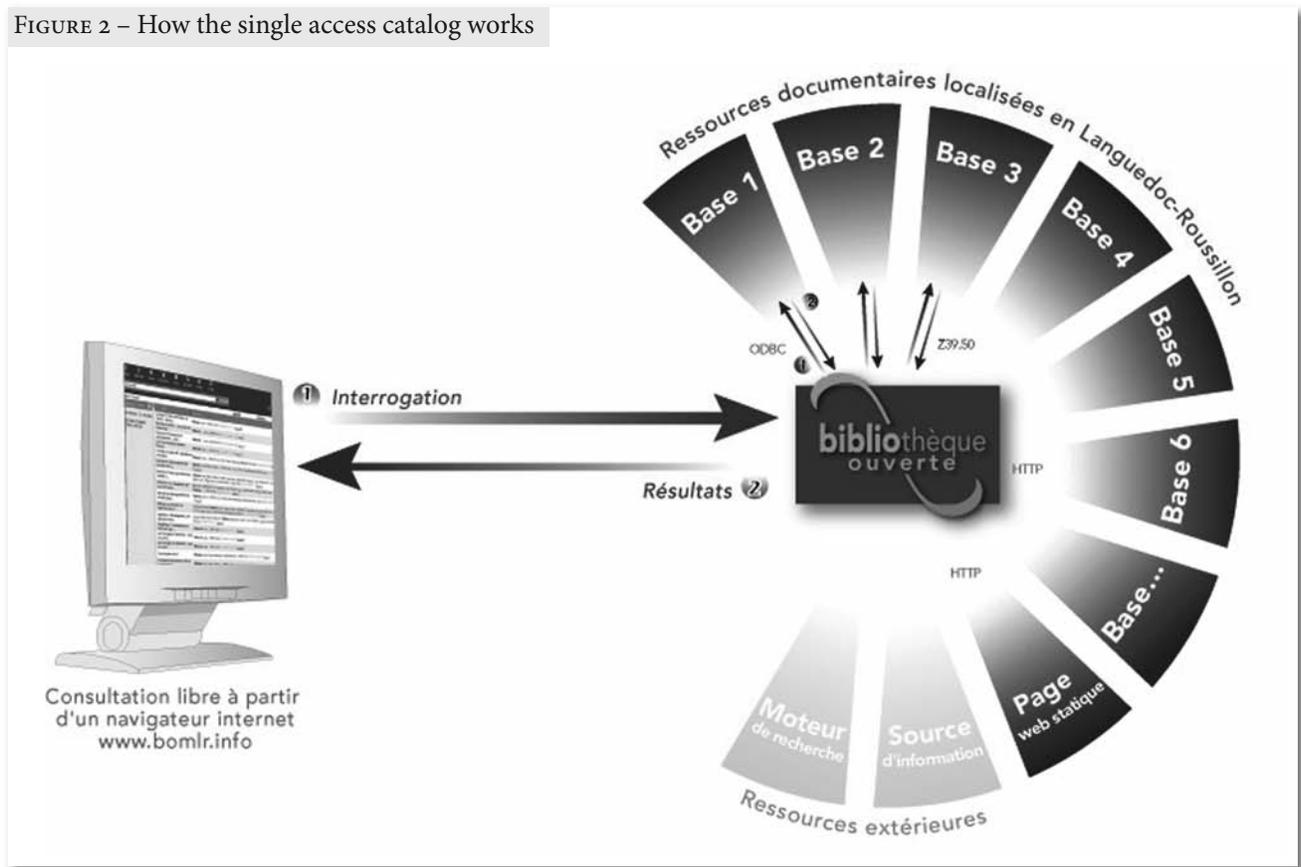
- Information on active projects
- Help for library user education
- Directory of documentation centers, classified by name or subjects
- Directory of resources for 97 various databanks
- A calendar of meetings, educational training, etc.

Ongoing Projects

In 2006, the Agropolis board agreed to a short-term project, involving 8 institutions, that aims to develop inter-institution services:

Enhancing international access and visibility: More than 50,000 full-text publications are registered in the repositories of the 6 research institutes¹ and 2 higher education centers² participating in the project. The aim is to provide a single access mechanism to these repositories. A study group is considering two solutions, either creating an Agropolis view through the French national open archive interface Hyper Article on Line (HAL)³ (only 4% of all institutional repositories), or adapting the capacities of the metasearch software used

FIGURE 2 – How the single access catalog works



by the regional BOMLR⁴ project (Figure 2). In either case, the result will be a specific web-based interface for the repositories that can be queried. At the same time, the group is working on a common list of recent publications to improve the dissemination of research results.

Sharing resources: This is very important for the smallest libraries, which are handicapped by the increasing prices of electronic information. Larger libraries take advantage of their national policies or belong to consortia and are not very interested in this action. As Agropolis cannot give financial support in this area, it is not easy to find solutions that allow equal access to electronic information. So far, the Directory of Resources for Databanks has been created and is available on the STI website.

- User information literacy and education: This is a real success. Its public consists of post doctoral students or researchers, and it is organized together with research schools. Several training sessions are organized regularly, on three topics:
- Information retrieval, in which users acquire a good methodology and experiment via available databanks;
- Managing information with document retrieval software (the choice of freeware is encouraged);

- Publication strategy, which helps young researchers to publish, including choice of periodical; print and/or electronic rules for publishing; how to sign deal with publishing in a multi-institutional context; etc.

Scientometric analysis: Another emerging track to improve awareness of Agropolis activities leans on scientometric contributions. The hypothesis is that inter-institutional research will lead to improved quality and dissemination of scientific articles. Partner institutions are involved in a study in the field of vegetable sciences that will compare their methods and results, giving insights into the comparative analysis of their scientific publications.

Conclusions

The benefits of the STI Commission network are significant. For information specialists, the value added by the network is to help each documentation center or library improve the quality of its work. For users, the Commission facilitates more open and transparent resource sharing. Institutions at the regional level are uncomfortable dealing with national or international institutions and information suppliers. Hence, the STI Commission focuses its activities on three areas: user training, sharing experiences, and enhancing dissemination of research results related to Agropolis themes.

ODILE BÉDU is a librarian in the International Relations Department of the French National Institute for Agricultural Research (Institut National de la Recherche Agronomique/INRA), Montpellier, France. INRA is the second largest French public research organization, the largest European organization for agricultural research, and among the top three worldwide, with a permanent staff of nearly 9,000.

CHANTAL SALSON is the BOMLR (Bibliothèque Ouverte Montpellier Languedoc-Roussillon / Common Access to Bibliographic Resources) Project Coordinator at Agropolis International, Montpellier, France.

Notes

1. CEMAGREF (French Agricultural and Environmental Engineering Research Institute), CIRAD (French Agricultural Research Centre for International Development), IFREMER (French Research Institute for Exploitation of the Sea), INRA (French National Institute for Agricultural Research), and IRD (French Institute of Research for Development)
2. AgroParisTech (Paris Institute of Technology for Life, Food and Environmental Sciences) and CIHEAM (International Center for Advanced Mediterranean Agronomic Studies).
3. HAL, or Hyper Article on Line, is designed for authors to deposit and thus make publicly available scholarly documents from all academic fields. It is a tool for direct scientific communication between academic researchers. See: <http://hal.archives-ouvertes.fr/>
4. BOMLR is the French acronym for Bibliothèque Ouverte Montpellier Languedoc-Roussillon. See: <http://www.bomlr.info>

Further Reading:

Salson, C., H. Hensens, F. Foury, M. Péreuil, and S. Mouret. 2004. La Bibliothèque Ouverte: pour un accès unique aux ressources de la recherche et de l'enseignement supérieur en Languedoc-Roussillon. *Documentaliste - Sciences de l'information* 41(1): 14–25. http://www.adbs.fr/adminsite/objetspartages/liste_fichiergw.jsp?OBJET=DOCUMENT&CODE=DOCART_2091

Contact Information

Odile Bédu
Mission des Relations Internationales
Institut National de la Recherche Agronomique (INRA)
2, place Viala
34061 Montpellier Cedex 2
FRANCE

E-mail: odile.bedu@supagro.inra.fr
Web: <http://www.international.inra.fr/>

Chantal Salson
BOMLR Project Coordinator
Agropolis International
Avenue Agropolis
F-34394 Montpellier Cedex 5
FRANCE
PH : +33 (0)4 67 04 75 49
E-mail: salson@agropolis.fr
Web: http://www.agropolis.fr/bomlr_eng/index.html

IAALD Presence Felt at USAIN Conference

IAALD was well represented at the 11th Biennial Conference of the United States Agricultural Information Network (USAIN), held April 27–30, 2008, in Wooster, Ohio, USA. The theme of the conference was a timely one — “Tradition in Transition: Information Fueling the Future of AgBiosciences.” Of the nearly 150 people in attendance, some 20% were also members of IAALD, including Executive Committee (EC) members Peter Ballantyne, Toni Greider, Debbie Currie, and Barbara Hutchinson.

IAALD has always had close ties with USAIN, as was demonstrated during the 20th Anniversary and Awards Banquet. Barbara Hutchinson was honored with the USAIN Service to the Profession Award, which is designated for USAIN members who have demonstrated leadership in advancing the field of agricultural information and who have established new directions or visions for the field. Previous recipients of this significant honor include Toni Greider (2005) and former IAALD President Pamela Andre (its first recipient in 2001). In addition, IAALD members have played a significant role in the leadership of USAIN during its 20-year history. Of the 17 individuals who have served as its President, over one-half are current or former members of IAALD, including Luti Salisbury, Jodee Kawasaki, Dana Boden, Amy Paster, Diana Farmer, Barbara Hutchinson, Rita Fisher, Toni Greider, and John Beecher.

Although it is a national network — and a very strong one at that — the interests of the USAIN membership clearly extend to international matters as well. On two occasions (1997 and 2005), USAIN collaborated with IAALD to hold joint events, and sessions organized

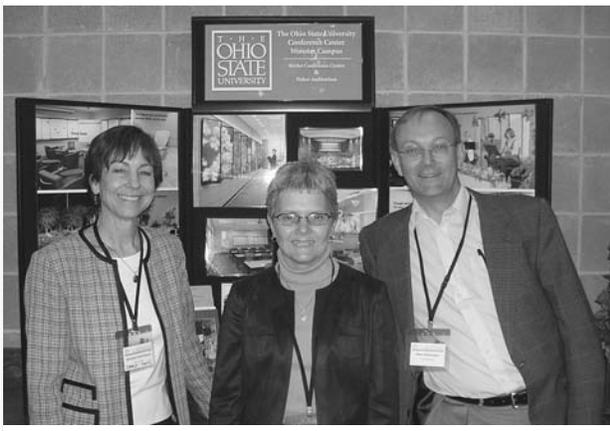
around international topics have become a staple of the biennial USAIN conferences. In recognition of this potential niche within the network, more than 25 USAIN members signed a petition requesting that an International Interest Group be established within USAIN.

IAALD members were active participants and put an international spin on some of the conference sessions, such as:

- “Transition with Tradition: Demonstrating Creative Approaches to Apply Information, Knowledge Sharing and ICTs in the Agbiosciences Worldwide,” which offered a view of potential future directions in the development of agricultural information and communications systems to serve the worldwide community (panel session: Barbara Hutchinson, Mary Ochs, and Peter Ballantyne).
- “FAO as a Knowledge Organization: Leveraging on Partnerships to Promote Knowledge Exchange in the Agricultural Domain” (paper by Steven Katz, FAO).

Finally, we would be remiss to not mention one additional honor garnered by IAALD during the conference. In the inaugural USAIN Cornhole Tournament (see Wikipedia for more about Cornhole), a team from IAALD prevailed over a team from CABI to claim the top prize, i.e. bragging rights for the next two years. The IAALD team, comprising Barb Hutchinson and Peter Ballantyne, won several tough matches against Oregon State and Ohio State universities to get to the final. Barb Hutchinson proved herself particularly adept, repeatedly scoring ‘Corn Bag In-The-Hole.’ IAALD hopes to defend its title at the 2010 USAIN conference to be held at Purdue University in West Lafayette, Indiana, USA.

USAIN Conference Presenters (l-r) Barbara Hutchinson, Mary Ochs, and Peter Ballantyne



IAALD’s Cornhole Champions: Barbara Hutchinson and Peter Ballantyne



Professor Mei Fangquan, Ajit Maru, Peter Ballantyne and Stephen Rudgard celebrate the launch of the CIARD Initiative.



CIARD Initiative Launched at Japan World Congress

The Japan World Congress saw the official launch of the CIARD (Coherence in Information for Agricultural Research and Development) Initiative, which has grown out of continuing frustrations with the lack of access to research results and outputs, particularly in developing countries. By working together around a common set of principles, partners in the initiative aim to make public domain agricultural research information and knowledge truly accessible to all.

The Initiative starts from the recognition that public science and research have long been based on principles of openness and the free exchange of ideas, information and knowledge; and that public access to data, information and knowledge provides greater returns from global investments in agricultural research for development.

It recognizes, however, that these principles are held back by inequities that directly restrict access to data, information and knowledge for many of the world's people. These barriers are compounded by under-investment and the lack of coherent and coordinated approaches to information systems serving agricultural research.

The CIARD 'Manifesto' is designed as a set of principles that organizations can subscribe to and use to make their knowledge and information more available, accessible, and applicable. The principles seek to:

- Advocate Effective Investments
- Build Coherent Information Systems and Services
- Communicate Content
- Develop and Reinforce Appropriate Capacities

To give practical shape to the principles, the CIARD partners, including IAALD and FAO, among many others, are working on a checklist of actions to increase

the availability, accessibility, and applicability of agricultural research outputs.

The basic idea is that public domain research outputs — in the form of information, data and knowledge — form part of a global 'knowledge commons' for agriculture, in which each output should be assembled, created, handled and disseminated in certain ways to become a public good.

Each output — and each research information system — therefore needs to be optimized to reach certain availability, accessibility and applicability objectives. The Manifesto provides a checklist of steps and actions that can be taken to help make information more accessible. The checklist is intended to guide organizations that want to be more coherent and effective.

For more information, or to view the working draft of the Manifesto that was released August 20, 2008, visit the CIARD website: <http://www.ciard.net>

■ submitted by Peter Ballantyne

Second IAALD Africa Chapter Conference to be Held in July 2009

The Second IAALD Africa Chapter Conference will be held July 13–17, 2009, in Accra, Ghana, with the theme "Towards Opening Access to Information and Knowledge in the Agricultural Sciences and Technology in Africa." Although the Open Access Initiative and Open Archives Initiative have great potential to open up and enhance the visibility of the outputs of research from Africa, this has not happened for a number of reasons, among which is the lack of a clear understanding of the concepts and principles of open access/archives. The general concern based on the history of exploitation of indigenous knowledge from Africa by the West and in some cases the absence of a culture of information and knowledge sharing within research and academic institutions on the continent, have to a large extent contributed to the inability of academic and research communities, governments and other stakeholders, to enthusiastically embrace open access and open archives initiatives on the continent. This conference aims to initiate meaningful discussions and debate among the participants and exact commitment to action around open access to information and knowledge in agricultural sciences and technology generated in public research institutes and academic institutions in Africa. Sub-themes that will be covered by the conference include:

- Access and dissemination of knowledge in agricultural sciences and technology in Africa — mapping the landscape
- Open Access to publicly funded research — views from research scientists, policy makers, development partners/funders of research and information professionals (Panel Discussion)
- Intellectual Property Rights/Copyright and Open Access to knowledge in agricultural sciences and technology

- Open Access initiatives to knowledge in agricultural sciences and technology in Africa and from around the world: institutional repositories, Open Access Archives, Open Access Journals, electronic theses and dissertations, networks for information and knowledge exchange in agricultural sciences and technology, lessons learned, etc.
- Advocating for Open Access to knowledge in agricultural sciences and technology in Africa — the way forward (Panel Discussion).

Detailed information on the conference programme, pre-conference workshops and seminars, registration information and fees, conference venue, hotel accommodations, travel, and excursions will be posted on the conference website as it becomes available. For more information, go to: http://www.iaald-africa.org/chapter_conference2009_en.html

2010 IAALD World Congress Plans Well Underway

The XIIIth IAALD World Congress will be held April 26–29, 2010, in Montpellier, France, with the theme “Scientific and Technical Information and Rural Development.” With renewed worldwide interest in agriculture and questions dealing with food crises, the need for quality information for actors in rural development is greater than ever. Bringing their knowledge and know-how to the fore, scientific and technical information specialists can contribute to providing needed quality information. Less than a year and a half away, the 2010 World Congress will soon bring us back together for fruitful exchanges between information specialists and actors in rural development facing the key challenges in agriculture.

The 2010 World Congress is being organized by Agropolis International (www.agropolis.fr), a European gateway to research, training and scientific information open to Mediterranean and tropical countries. Agropolis is an association created by the main research and training institutions in Montpellier. It assembles the world’s greatest concentration of skills and expertise in fields related to agriculture, food, environment and rural societies: about 2,000 scientists, 7,000 students, 8 campuses with high-performance facilities, 43 libraries, and so forth. Agropolis supports common projects between its member institutions and particularly CIST (Commission Information Scientifique et Technique), which will be directly involved in organizing the World Congress.

To learn more about Agropolis International, be sure and check out Odile Bédu and Chantal Salson’s *AgInfo Dispatch*, “Enhancing Access to Scientific and Technical Information at Agropolis International,” beginning on page 72.

The official website of the 2010 World Congress (<http://iaald2010.agropolis.fr>) has been already been launched, and will be populated with event details as they become available.

IAALD Africa Chapter e-Agriculture Seminar in Zambia

The IAALD Africa Chapter held a one-day seminar on “Meeting Information and Knowledge Needs of Farmers in Africa through e-Agriculture” on July 14, 2008, in Lusaka, Zambia. The main goal of the seminar was to examine the emerging field of e-agriculture and review specific cases of e-agriculture initiatives in Africa and their impact on sharing, managing and delivery of agricultural information and knowledge services to rural-based farmers and communities to help them improve the quantity and quality of their agricultural production. The seminar was sponsored by the Information Training and Outreach Centre for Africa (ITOCA), a not-for-profit organization based in Centurion, South Africa.

The seminar was attended by 28 participants from Botswana, Ghana, Lesotho, South Africa, Swaziland, United Kingdom, United States, Zambia and Zimbabwe. The attendees included agricultural research scientists, extension officers, library and information professionals, lecturers, managers and information and communication technology officers. Altogether, eight presentations were made by representatives from the FAO Regional Office for Africa, Ghana; ITOCA; Celtel Zambia Plc; SADC Plant Genetic Resource Centre, Zambia; and the University of the Free State, South Africa. A presentation was also made on behalf of the Family Alliance for Development and Co-operation (FADECO), Tanzania.

A number of issues were raised with regard to meeting the information and knowledge needs of farmers in Africa. These ranged from policy issues to challenges in dissemination of agricultural information and knowledge using modern information and communication technologies (ICT). The lack of synergies between the agriculture and ICT sectors to work together in most African countries was noted as a major hindrance to meeting the information and knowledge needs of farmers using modern tools.

For more information on this event, see the full report on the IAALD Africa Chapter website: http://www.iaald-africa.org/conferences/e-agriculture_july2008_report.pdf

WorldAgInfo Project Issues Final Report

In 2007, Cornell University (Ithaca, New York, USA) and partners put together a ‘WorldAgInfo’ Design Team to test the premise that “new collaborative information technologies offer an exciting opportunity to transform agricultural education and information systems in Asia and Africa.”

The Team, led by IAALD member Mary Ochs, was charged by the Bill and Melinda Gates Foundation to explore the landscape of agricultural education and information systems in Asia and Africa, and to come up with “a set of recommendations for areas of investment that have the potential to improve the lives of small-holders through better access to agricultural education, training and information.”

Two workshops were held in conjunction with this project:

- Workshop I: Knowledge Systems (September 30–October 3, 2007, Ithaca, New York, USA) was designed to identify near-term and medium-term opportunities for strengthening the content of agricultural education/curriculum and information *systems* to meet the needs of smallholder farmers in areas of the developing world where agriculture lags behind needs. IAALD Executive Committee member Barbara Hutchinson delivered a presentation on “Selected International Agriculture Information ICT Initiatives,” and completed a literature review on “Major Agriculture Information Initiatives: with Emphasis on Developing Country Services.”
- Workshop II: Delivery Systems (November 11–16, 2007, Livingstone, Zambia) was designed to identify possible transformative approaches, both technological and non-technological, to the creation and distribution of agricultural information identified by the first session. IAALD officers Peter Ballantyne, Stephen Rudgard, and Dorothy Mukhebi were among this workshop’s 40 participants.

The 300+ page final project report — entitled “Building Pathways out of Rural Poverty through Investments in Agricultural Information Systems” — is now available online. It provides a summary of the activities undertaken and recommendations for areas of investment.

As the report authors point out, the “scope of this project was vast, covering two continents, multiple stakeholders all along the agricultural information chain, and all aspects of agricultural information from soil fertility to marketing mangoes.”

They conclude that “while many factors affect the productivity and overall success of smallholder farmers, it is clear that lack of access to agricultural information presents one of the important barriers. It is also clear that there are many creative and innovative initiatives already underway, so there is ample opportunity to have impact by building on ongoing success stories as well as experimenting with new approaches.”

The wide ranging process — literature reviews, surveys,

WorldAgInfo working group at Zambia Workshop, including IAALD officers Stephen Rudgard (far left) and Peter Ballantyne (far right)



site visits, workshops — generated 12 main proposals. These have some common themes and principles:

- The content, value, and quality of information and knowledge are not improved just because information is offered in multimedia or over the Internet. The importance of quality control is almost more critical the more accessible and ubiquitous information becomes.
- Building in extensive feedback mechanisms at all levels from all sources is critical. This can help address the issue of quality control and strengthen the smallholder voice.
- It is important to enable smallholder access to a wide range of support systems so that as many men and women farmers as possible are reached.
- Many of the proposals cite programs that are already making a difference, and could offer a model or potential partner for future collaboration. Investments should capitalize on existing successful programs and innovative organizations, rather than reinventing the wheel.

It is not known whether the Gates Foundation will invest in these areas. Nevertheless the report brings together an immense amount of experience and information, and it highlights and examines many of the areas where ICTs can — and are — making a difference to smallholder agriculture, for example, market information systems, working with community knowledge workers, multimedia instruction, collaborative content generation, access to literature, mobile phones, and community radio.

For more information and to view the full report, go to: <http://www.worldaginfo.org/>

■ adapted from an AgInfo News blog post dated April 11, 2008

IAALD Report and Accounts for Years Ended December 31, 2007 and 2006

November 6, 2008

Antoinette Greider
International Association of Agricultural Information Specialists
P.O. Box 63
Lexington, KY 40588-0063

I have compiled the accompanying statement of financial position of International Association of Agricultural Information Specialists (a not for profit organization) as of December 31, 2007 and 2006, and the related statements of activities and cash flows for the year then ended, and the accompanying supplementary information, which is presented for supplementary analysis purposes, in accordance with Statements on Standards for Accounting and Review Services issued by the American Institute of Certified Public Accountants.

A compilation is limited to presenting in the form of financial statements information that is the representation of management. We have not audited or reviewed the accompanying financial statements and supplementary information and, accordingly do not express an opinion or any other form of assurance on them.

Management has elected to omit substantially all of the disclosures required by generally accepted accounting principles. If the omitted disclosures were included in the financial statements, they might influence the user's conclusions about the Organization's financial position, results of operations, and cash flows. Accordingly, these financial statements are not designed for those who are not informed about such matters

Sincerely,



Daniel W. Nevitt Certified Public Accountant

See Accountant's Compilation Report

STATEMENT OF FINANCIAL POSITION — December 31, 2007 and 2006

	2007	2006
ASSETS		
CURRENT ASSETS		
Cash in Checking	\$ 2,860.74	\$ 2,359.81
Cash in Savings	30,377.24	39,937.34
Total Cash	33,237.98	42,297.15
TOTAL CURRENT ASSETS	33,237.98	42,297.15
TOTAL ASSETS	\$ 33,237.98	\$ 42,297.15
LIABILITIES		
CURRENT LIABILITIES		
Credit Cards Payable - Chase Business	\$ 208.81	\$ 411.10
TOTAL CURRENT LIABILITIES	208.81	411.10
LONG-TERM LIABILITIES		
	-	-
TOTAL LIABILITIES	208.81	411.10
NET ASSETS		
Unrestricted Net Assets	33,029.17	41,886.05
TOTAL LIABILITIES AND OWNER'S EQUITY	\$ 33,237.98	\$ 42,297.15

STATEMENT OF ACTIVITIES — For Year Ending Dec. 31, 2007 and 2006

	2007	2006
UNRESTRICTED NET ASSETS		
Support		
Conferences	\$ 2,955.00	\$ 7,271.50
Currency Conversion	114.56	237.56
Donations	161.84	210.38
Educational Programs	7,709.87	-
Grants	9,141.23	49,456.95
Interest Income	841.58	1,369.12
Membership Dues	13,363.37	17,396.03
Miscellaneous Income	597.63	3,134.79
Sales	1,173.66	193.09
Subscriptions	2,816.00	6,774.13
Subtotal Support	38,874.74	86,043.55
Less: Rebates and Discounts	(608.21)	(656.18)
Net Assets Released From Donor Restrictions	-	-
Total Support	38,266.53	85,387.37
Service Expenses		
Administrative Expenses	8,851.81	4,589.85
Conference Expenses	-	2,765.36
Executive Committee Meetings	-	128.68
Grant Expenditures	-	59,393.00
Journal Expenses	29,486.16	20,408.84
Membership Expenses	1,672.57	4,685.24
Organizational Memberships Expenses	677.32	-
Travel Expenses	6,435.55	10,846.38
Total Services Expenses	47,123.41	102,817.35
Total Expenses	47,123.41	102,817.35
Increase (Decrease) In Unrestricted Net Assets	(8,856.88)	(17,429.98)
TEMPORARILY RESTRICTED NET ASSETS		
Net Assets Released From Donor Restrictions	-	-
Decreases In Temporarily Restricted Net Assets	-	-
TOTAL INCREASE (DECREASE) IN NET ASSETS	(8,856.88)	(17,429.98)
NET ASSETS, beginning of period	41,886.05	59,316.03
NET ASSETS, end of period	\$ 33,029.17	\$ 41,886.05

STATEMENT OF CASH FLOWS — For Year Ending Dec. 31, 2007 and 2006

	2007	2006
CASH FLOW FROM OPERATING ACTIVITIES		
Increase (Decrease) In Net Assets	\$ (8,856.88)	\$ (17,429.98)
Adjustments To Reconcile Increase In Net Assets		
To Net Cash Provided (Used) By Operating Activities		
Depreciation and Amortization	-	-
Book Value Of Assets Sold	-	-
(Increase) Decrease In Inventory	-	-
Increase (Decrease) In Credit Card Payables	(202.29)	(315.21)
NET CASH PROVIDED (USED) BY OPERATING ACTIVITIES	(9,059.17)	(17,745.19)
CASH FLOW FROM INVESTING ACTIVITIES		
Acquisitions Of Property And Equipment	-	-
Disposition Of Property And Equipment	-	-
Purchase of Certificates Of Deposit	-	-
NET CASH PROVIDED (USED) BY INVESTING ACTIVITIES	-	-
CASH FLOW FROM FINANCING ACTIVITIES		
Proceeds From Additional Long-Term Debt	-	-
Proceeds From Additional Long-Term Debt	-	-
NET CASH PROVIDED (USED) BY FINANCING ACTIVITIES	-	-
INCREASE (DECREASE) IN CASH	(9,059.17)	(17,745.19)
CASH, beginning of period	42,297.15	60,042.34
CASH, end of period	\$ 33,237.98	\$ 42,297.15

SUPPLEMENTAL SCHEDULE - EXPENSES — For Year Ending Dec. 31, 2007 and 2006

	2007	2006
Administrative Expenses		
Accounting Fees	\$ 6,511.80	\$ 590.00
Bank Fees	449.82	283.00
Credit Card Fees	225.49	286.17
Legal Fees	600.00	-
Miscellaneous	113.55	842.72
Postage	465.49	1,300.05
Printing	219.72	780.11
Supplies	239.75	497.46
Taxes	26.19	10.34
Total Administrative Expenses	\$ 8,851.81	\$ 4,589.85
Journal Expenses		
Claims	\$ 169.46	\$ 278.89
Distribution	340.53	287.61
Editing	406.85	1,216.86
Postage	1,945.84	2,019.57
Printing	7,365.28	5,783.76
QuickBooks Miscellaneous	1,379.76	-
Translation	65.00	415.00
Typesetting	17,813.44	10,407.15
Total Journal Expenses	\$ 29,486.16	\$ 20,408.84
Membership Expenses		
Recruitment	\$ 968.14	\$ 162.66
Renewals	261.14	4,354.44
Website	443.29	168.14
Total Membership Expenses	\$ 1,672.57	\$ 4,685.24
Travel Expenses		
Editor	\$ 1,902.39	\$ 2,809.01
President	1,752.23	4,525.54
Secretary & Treasurer	2,111.89	3,511.83
Other	669.04	-
Total Travel Expenses	\$ 6,435.55	\$ 10,846.38

Abstracts from Partner Publications

Revista AIBDA, Vol. 29, No. 1–2 (2008)

TITLE: Aplicaciones y perspectivas de los Estudios Métricos de la Información (EMI) en la gestión de información y el conocimiento en las organizaciones

AUTHOR: Orlando Gregorio Chaviano

RESUMEN: Los Estudios Métricos de la Información (EMI) constituyen hoy día herramientas de vital importancia para gestionar la información y el conocimiento, debido en gran medida, al acelerado avance de la Sociedad de la Información que ha impuesto nuevas formas de gestión en las organizaciones, a la vez que aparecen diferentes vías de acceso, procesamiento y disseminación de la información. En el trabajo se presentan los principales conceptos relacionados con las disciplinas métricas, así como su evolución histórica, tendencias y perspectivas de desarrollo. Así mismo se examinarán las principales aplicaciones y procesos de los Estudios Métricos de la Información como disciplina emergente de las Ciencias Bibliotecológica y de la Información y como herramienta de trabajo para gestionar la información y el conocimiento en las organizaciones actuales.

ABSTRACT: Metric studies of information have become vital tools for managing information and knowledge, due in large part to the rapid progress of the Information Society. This progress has imposed new forms of management on organizations, resulting in different mechanisms for accessing, processing and disseminating information. The main concepts related to the field of metrics are presented, as well as its historical development, trends and prospects for development. The paper also examines key applications and processes of this emerging discipline of Library and Information Science, as a working tool for managing information and knowledge in organizations today.

TITLE: Biblioiberá: diseño preliminar de un entorno virtual referencial de la bibliografía comentada del Macrosistema Iberá. Provincia de Corrientes, Argentina

AUTHORS: Sonia I. Mariño y Lucrecia V. Felquer

RESUMEN: Se expone un proyecto de investigación y desarrollo en el área de las Ciencias de la Información abordado por un grupo interdisciplinario conformado por personal docente, investigadores, bibliotecarios contratados y de planta, alumnos universitarios y alumnos de institutos superiores no universitarios. En este trabajo se sintetiza el prototipo de sistema de gestión de información diseñado para concentrar las referencias bibliográficas del Macrosistema Iberá situado en la provincia de Corrientes (Argentina). Asimismo, se incorporan registros periodísticos digitalizados, mayoritariamente disponibles en el Archivo General de la Provincia de Corrientes.

ABSTRACT: This paper reports on a project undertaken by an interdisciplinary group of teachers, investigators, librarians, and high and tertiary level students that has been developed in the information sciences area. A prototype knowledge management system to compile bibliographic references of the Iberá ecosystem, Corrientes, Argentina, is described. The digitized documents from the General History Archive are included as well.

TITLE: Construyendo una red de redes en el sector agropecuario colombiano: hacia una iniciativa abierta para la innovación y la investigación

AUTHORS: Maritza Rodríguez y Edna Espinosa

RESUMEN: Presenta los beneficios y logros de la red de información agrícola: AGRONET.

ABSTRACT: Presents the benefits and achievements of the agricultural information network: AGRONET.

TITLE: El crecimiento de la literatura sobre plantas medicinales del Perú

AUTHORS: Rubén Urbizagástegui Alvarado y Shelley Lane-Urbizagástegui

RESUMEN: Analiza el crecimiento exponencial de la literatura sobre plantas medicinales del Perú producida entre 1913 y 2003. Se encontró que esta literatura crece a una tasa media de 6.3% al año y con una tasa de duplicación a cada 11.3 años.

ABSTRACT: This paper analyzes the growth in literature on Peruvian medicinal plants published between 1913 and 2003. The findings reveal that it has grown exponentially, at an average rate of 6.3% per year and a duplication rate of 11.3 years.

TITLE: La biblioteca digital en Colombia: avances y posibles vías hacia el futuro

AUTHOR: Janeth Ardila y Arley Soto

RESUMEN: En este artículo se analizan las principales iniciativas de biblioteca digital en Colombia, con base en un modelo de evaluación mediante el cual se indaga respecto a características de las bibliotecas digitales relacionadas con su naturaleza, software implementado, contenidos, metadatos, colecciones, servicios, gestión, integración y proyección. De otra parte, se proponen fases de desarrollo de la biblioteca digital, se ubican los elementos sobre los cuales hay avances y oportunidades en el país. Finalmente, se plantean algunas conclusiones y recomendaciones derivadas de los resultados obtenidos.

ABSTRACT: This article analyzes the main Colombian digital library initiatives using an evaluation model. It examines the characteristics of digital libraries, including their nature, software, content, metadata, collections, services, management, integration and expectations. In addition, it proposes phases of digital library development, and reviews advances and opportunities in Colombia. Finally, it proposes several conclusions and suggestions based on the results.

TITLE: Visibilidad nacional e internacional de las revistas científicas: Proyecto SciELO

AUTHOR: Carlos Agudelo

RESUMEN: Expone los beneficios del Proyecto SciELO en la difusión de revistas científicas.

ABSTRACT: Outlines the benefits of the SciELO project in the dissemination of scientific journals.
