The Agriculture Network Information Collaborative (AgNIC): Building on the Past, Looking to the Future

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Abstract

The Agriculture Network Information Collaborative (AgNIC) began in 1995 as the Agriculture Network Information Center, a group of four academic libraries and the National Agricultural Library (NAL), with the goal of improving access to reliable agricultural information. One aspect of involvement during the early years was to develop unique subject sites that contained or linked to reliable, curated information on a particular agricultural topic. As the world of online information grew, the focus of AgNIC shifted. In 2013 AgNIC changed the "C" from Center to Collaborative, highlighting a substantive change for the group that had grown to fifty-three members. It moved the partner-members' vision of AgNIC from a series of subject silos, each staffed by librarians who built and maintained them, into a group with a much wider range of goals and interests. This reimagined collaborative explores and acts on agriculture information trends of mutual interest and international importance, including discovery, access, and preservation. Current activities include digitizing and preserving historical agricultural literature as part of Project Ceres, promoting NAL's PubAg portal, and enhancing HathiTrust by systematically requesting the release of state agricultural documents. Moving forward, this long-term partnership provides an avenue for collaboration between the libraries and NAL and opportunities for professional development.

Introduction

The Agriculture Network Information Collaborative (AgNIC) is a network of agriculture libraries and related organizations, including many of the libraries at U.S. land-grant universities. AgNIC began its life with five in-

stitutions in the early days of the internet, and celebrated its twentieth anniversary in 2015 with over fifty participating groups.

The project began as a pilot project to facilitate cooperation among agricultural libraries across the United States, including the National Agricultural Library (NAL). As it has grown, AgNIC has taken advantage of new technologies as they have been developed (Hutchinson & Ruyle, 2000). After studying the possibilities and putting a plan in place, one of the early AgNIC projects was a cooperative reference service. A long-term core activity that has involved many of the partners is the curation of internet resources in specific subjects; they began as static web pages and evolved into a content management system. Another project that continues to be popular is a calendar of upcoming agriculture-related conferences. AgNIC has worked with other partnerships, such as the Rangelands Partnership (formerly Rangelands West), and has sponsored professional-development opportunities, mainly via webinar. More recent activities include providing NAL with feedback about new products like PubAg, training staff at partner libraries to become *Wikipedia* editors, and encouraging partners to take the steps to make their respective state's documents freely available in HathiTrust.

EARLY HISTORY

From the early to mid-1990s, NAL reviewed its "capacity to manage, store, and provide access to electronic, agriculture-related information" and concluded that only through partnering with other "institutions with common interests" would it be possible to connect users and information in both a timely and sustainable way (Gardner, Thompson, & Feidt, 1999, p. 2). Thus according to McCue et al. (2002), the idea of a collaborative project using new technologies to help users more easily find high-quality agricultural information was conceived by three of the original AgNIC partners: Nancy Eaton (Dean of Libraries, Iowa State University [ISU]), George Strawn (director of the Computational Center, ISU), and Pam Andre (director of NAL) in 1993. Paul Evan Peters, the founding executive director of the Coalition for Networked Information, "was . . . an early supporter of the . . . concept and later delivered a keynote address at a December 1994 meeting of the newly-formed AgNIC Steering Committee" (Gardner et al., 1999, p. 5). In addition there was a cooperative agreement in 1993 between ISU and NAL to study the AgNIC concept, resulting in a report that proposed a model for an information system in which NAL and other institutions could work together to improve dissemination and access to agricultural information (Thompson, 1996).

According to Thompson (1996, p. 1), as a result of the study by ISU and NAL, the initial goals of AgNIC were to

- identify major collections of agriculture-related information, subject-area experts, and other resources;

- facilitate access to and retrieval from these resources;
- encourage organizations to collaborate in creating and using AgNIC while retaining ownership and responsibility for their own agriculture-related information contributed to AgNIC;
- leverage the distributed character of the internet to ensure that workload and responsibility are distributed across participating member sites and to use the expertise available;
- provide a test bed for learning, experimenting, and gaining experience in Network Information Center (NIC) operations; and
- facilitate collaboration between people within the broad agricultural community.

In 1995 NAL received a one-year grant from the U.S. General Services Administration to establish an AgNIC prototype. On December 5, 1995, a pilot Agricultural Network Information Center website went live. The five original participants, along with their respective areas of subject specialty, were

- Cornell University (agricultural statistics);
- Iowa State University (animal science);
- National Agricultural Library (food and nutrition, rural information);
- University of Arizona (rangeland management); and
- University of Nebraska–Lincoln (plant sciences).

Planning and Governance

Those who first conceived of a national or international effort to provide high-quality agricultural information to a broad range of people, from agriculture research professionals to small farmers and business owners, took careful steps to develop a thorough plan before moving ahead. One can imagine that as they witnessed the early days of the internet, they saw its potential and wanted to set off on the best path from the beginning.

Part of the inspiration for AgNIC was InterNIC (Internet Network Information Center), which was developed in 1993 at the National Science Foundation. In December 1994 a three-day planning meeting was held to move AgNIC forward. Participants came from five U.S. agricultural libraries, all at land-grant institutions; from the United States Department of Agriculture's (USDA) Cooperative State Research, Education, and Extension Service, the Economic Research Service, and the National Agricultural Statistics Service; two scientific societies; and one Canadian agricultural library (Thompson, 1996). The following work groups met: AgNIC Organization, Technology, Directory/Database Services; and Help Desk/ Reference Desk/Education and Training. By the end of the meeting each group had articulated several recommendations, as well as two to four "next steps," with a person identified as responsible for seeing that each step was accomplished (Redman et al., 1997, p. 327).

Although discussed at earlier meetings, the details of the governance structure for AgNIC were not finalized until 1998. This included a Coordinating Committee having a representative from each of the participating institutions, and a five-member Executive Board elected by the committee (Moberly & Gardner, 2000, p. 35). AgNIC has a comprehensive bylaws document, and its strategic plan is updated every three years. Funding for AgNIC projects has always come from a diversity of sources. After the initial launch, NAL supplied staff time, but very little actual funding for AgNIC beyond cooperative agreements. Partner institutions sought financial support from their own institutions, as well as from outside funders (Gardner et al., 1999, pp. 5–6). As AgNIC grew and changed over time, attention and planning were devoted to various topics, including metadata and standards, and this work was often conducted through short-term task forces.

The First AgNIC Systems

In addition to the concept of collaboration, AgNIC was committed to offering value-added services from the beginning (Thompson, 1996). For example, planning for the pilot included a directory of databases containing agricultural information as one of three added-value services, AgDB; the other two were AgCal, a calendar of upcoming agricultural conferences; and an online reference service (Gardner et al., 1999, pp. 6–8). The database was considered a value-added service because it was intended to include both primary and secondary agriculture information sources (Thompson, 1996). Together, these services aimed to give AgNIC's target users a way to find information autonomously. These users, envisioned as running the educational and professional gamut from academic researchers to members of the general public interested in horticulture or starting a small business, needed both quick answers and a platform where they could request help with more in-depth, complicated questions as well as physically connecting them with the agriculture sciences community.

AgDB

AgDB was a carefully curated list of resources selected by NAL's staff. Criteria for selection included relevance, maturity, accuracy, focus, and perspective. Databases were identified in a variety of ways, and each AgNIC partner institution was encouraged to contribute suggestions. Given the lack of sophisticated search engines in the mid-1990s, one fruitful route for identifying these databases was to monitor subject-oriented mailing lists and newsgroups. AgDB contained hundreds of entries, each with a description and subject codes assigned by library staff (Gardner et al., 1999, pp. 6–7).

AgCal

AgCal, the agricultural conferences, meetings, and seminars calendar, was compiled by NAL staff, whose goal was "to include major agricultural meetings of apparent scientific importance." If the conference did not have a webpage, which many did not at the time, the staff would create a rudimentary one containing registration and contact information. In addition to the master list, conferences were grouped by more narrow subjects (Gardner et al., 1999, pp. 7–8).

The Online Reference Service

The online reference service was an innovative program that exemplified AgNIC's approach to the cooperative, distributed library service. Each institution chose a subject area and then worked to meet information needs related to that subject for internet users. At that time, developing a well-organized, subject-specific webpage was an important strategy for meeting the information needs of AgNIC's target audience. Common elements of these pages, although not always explicitly labeled, were "frequently asked questions" (FAQs), "frequently used resources" (FURs), and "ask the experts" (Moberly & Gardner, 2000). Pages had links to carefully selected resources so that those looking for information could find answers for themselves. Another feature of the service was to have an easy-to-use form so that anyone could submit a question to an expert. Library staff members at the institutions would monitor the incoming questions and direct people to the appropriate resources or, in some cases, to extension faculty or staff at their institutions.

Several AgNIC partner institutions documented their experience with the online reference service (Lektziana & Pereza, 2006; Moberly & Gardner, 2000; Pfander, 2002). These studies show that the websites and services that AgNIC partners created changed over time to take into account changes in technology and vision, but that there was a healthy variety in approach and scope from the start that allowed each partner to play to its own strengths while providing high-quality service. Not surprisingly, as AgNIC expanded, so also did its online reference services. Initially consisting in 1997 of five "centers of excellence" focusing on six subject areas (Gardner et al., 1999, p. 9), by 2000 AgNIC had ten partners providing online reference in seventeen subjects. In addition, partners introduced innovations like integrated search engines (Moberly & Gardner, 2000) so that users could find information on their own; reference services also included detailed bibliographies, contact information for extension agents, and in-depth follow-up (Pfander, 2002, p. 36).

As it changed to meet user needs, the online reference service influenced the direction of AgNIC in a number of ways. Having always planned to make the websites searchable and ultimately part of a national digi-

tal library, Dublin Core metadata was introduced in one of the earliest post pilot sites, Pennsylvania State University's Turfgrass site (Moberly & Gardner, 2000, p. 36). Dublin Core later became standard for new partner websites. At several institutions, the online reference service led to a closer relationship between librarians and extension staff, as they consulted about incoming reference questions. Over the years a number of extension staff members have been active in AgNIC; they have attended annual meetings, worked on committees, led the effort on subject resources, and served as chair of the Executive Board. In addition, the precedent of libraries working with other groups beyond extension staff at their universities was set very early in AgNIC's existence. For example, librarians at the University of Arizona, working on the topic of rangelands management, also collaborated with the university's Arid Lands Information Center and the School of Renewable Natural Resources' Rangeland Resources program (Pfander, 2002).

Subject Websites: Iterations of Technology

The subject-based websites were designed to support AgNIC's online reference service and soon became the focus of each partner's support of its subject area or areas. As new technologies became available, individual resources from the subject pages were gathered in a database that could easily be searched, for one-stop shopping, and the subject pages were able to move from static to database-generated if institutions chose to do that. Additionally, some partner institutions chose to use proprietary solutions, such as content management systems (CMSs) or LibGuides, to manage and maintain website content.

Static Websites

The sites were essentially electronic collection-development projects, with librarians selecting and annotating resources and developing webpages to showcase those items they had chosen. The exact method for selection and the design of the webpages were not dictated by AgNIC. Each institution was free to structure its page or pages to fit the needs of its particular users and collaborators.

During the 1990s when these pages were first produced, curated subject-based resources, sometimes referred to as *gateways* or *portals*, were common and quite popular. Yahoo was the premier list for general information, and HealthWeb was an example of a similar cooperative project undertaken by academic librarians (Redman et al., 1997). Search engines, so common now, were in their infancy during AgNIC's early years, and it was not clear that they would soon play such a central role in usage of the internet. In discussing the importance of the AgNIC subject pages, the authors of the AgNIC chapter in *The Amazing Internet Challenge: How*

Leading Projects Use Library Skills to Organize the Web stated: "Search engine problems are well known and frequently discussed . . . even improved, however, they will likely remain tools of the information elite" (Gardner et al., 1999, p. 15).

While static HTML (hypertext markup language) websites improved access to agricultural information, AgNIC partners, like many others, found them difficult to maintain. They required both basic programming skills and graphic-design knowledge to create and maintain a visually appealing website. In addition, each time an updated link was added to a site, each webpage containing that link required editing.

Database-driven Websites

One developing solution for these issues was a database-driven website. Examples of such are AgNIC Beef Cattle (http://agnicbeef.org) and Kansas Wildflowers and Grasses (http:// www.kswildflower.org). While this type of site requires editing of individual pieces of content, once set up, it minimizes the amount of edits to individual webpages within a site. Although a database-driven website offered improvements, it still was not a perfect solution according to some AgNIC website authors/maintainers.

Content Management Systems

Another solution to static websites was the content management system (CMS), such as WordPress, Drupal, or Joomla. A CMS also uses databases, but the web manager/author does not have to set up the database or code individual pages within the site. Sites using a CMS include many of those of the Rangelands Partnership. The partnership maintains a site (http://globalrangelands.org/ rangelandswest), but some of the individual state-rangelands sites also live on the partnership's Drupal CMS. Two examples of such state sites are those of Arizona (https://globalrangelands.org/state/ari zona) and Alaska (https://globalrangelands.org/state/alaska).

LibGuides

While there are many content management systems in the marketplace, those specifically for educational institutions have also proliferated. Currently popular is Springshare, the vendor of LibGuides, which is a CMS specifically for libraries that helps librarians to maintain class and subject guides on academic library websites. LibGuides are exceptionally easy to use and do not require knowledge of HTML, cascading style sheets, and so on, which makes them an excellent solution for AgNIC partners with access to the LibGuides' CMS. It was not long after the significant uptake of LibGuides by the library community that some AgNIC partners began moving their respective subject sites to it. Examples of AgNIC sites built in LibGuides are those of Colorado State University's Wildlife Dam-

age Management (http://nwrc.libguides.com/agnicwildlifedamage) and Michigan State University's Strawberries (http://libguides.lib.msu.edu/Ag NICstrawberries).

Associated Partnerships

Over the years new organizations were welcomed into AgNIC, and different levels of membership were developed to address the needs and resources of both the collaborative and the organizations themselves. These levels of membership allowed the organizations to become partners whether they developed a website, created a digital collection, answered reference questions, or some combination of these activities.

One characteristic of a collaborative bringing many libraries together is that partners often discover additional areas of shared interest beyond the collaborative's main purpose, which has been especially true for AgNIC. Partner institutions, and individuals at those institutions, have traditionally had a wide range of connections to other groups, which prove beneficial to all involved. These connections have allowed for the creation of new groups and collaboration with existing initiatives, so that new projects can be better supported and news and information disseminated within a larger professional community over time.

The Rangelands Partnership

The most successful partnership of libraries involved in AgNIC is the Rangelands Partnership. It began as single state with an AgNIC website—Arizona Rangelands—and grew into a coalition of Western states (Jones, Ruyle, & Hutchinson, 2003). This partnership is now comprised of librarians and rangelands professors from the American West. States from North Dakota south to Texas and all states west of this line are involved, including Alaska and Hawaii. Each state maintains a website about its respective rangelands. In some states the librarians are more involved, in others the range professors are more involved, and in still others the involvement is equal. Many of the librarians participating in this partnership also remain deeply involved in AgNIC. While this group was founded and led by U.S. universities, international partners from Australia, Mexico, and South Africa are now participating. These countries also have significant portions of their geographic area in rangelands.

Cooperative Extension and Distance Education

AgNIC's ongoing commitment to building strong relationships that better connect and serve users who are physically separated though connected in terms of institutional mission is exemplified in its work with both cooperative extension and the American Distance Education Consortium (ADEC).

Libraries at land-grant universities and the corresponding cooperative

extension groups at their institutions have a number of overlapping goals, including providing information to constituents throughout their state. AgNIC was "conceived as an initiative that would build on the long-term relationship among land-grant universities and U.S. Department of Agriculture (USDA) agencies," such as NAL (Hutchinson, Pfander, & Ruyle, 2008, p. 180), and an outgrowth of that effort has been to include extension professionals in AgNIC efforts. AgNIC has sought to extend the linkage between land-grant institutions and cooperative extension. Indeed, Heatley and Gardner (2003) point out that in the information environment, extension and libraries are natural partners, and that "through partnerships a distributed, scalable, and efficient system that better meets today's users' needs" was a goal worth pursuing (p. 37). Collaborative projects included the digitizing of plant sciences literature to contribute to lesson plans for K-12 teachers, scanning gray literature in soil science, and digitizing images of various plant diseases. Over the years a number of partner institutions have had extension professionals who were active in AgNIC, and in some cases they served as the official representative to the AgNIC Coordinating Committee. Individual extension specialists have participated actively in AgNIC, lending their expertise to maintaining and creating websites and other digitization projects.

AgNIC found another natural fit with ADEC, a consortium of land-grant universities. Many ADEC member institutions are also AgNIC partner institutions. In 2006 AgNIC and ADEC signed a cooperative agreement to provide Spanish translations for selected English terms in the National Agricultural Library Thesaurus as part of a content-building grant. The Spanish thesaurus now lives on NAL's website (http://agclass.nal.usda .gov/agt_es.shtml). The recession of the late 2000s and the resulting government budget cuts meant that AgNIC-funded cooperative agreements were not as readily available for ADEC and cooperative extension as the years went by, but individuals continued to be involved with other AgNIC efforts.

International Partners
Its emphasis on serving geographically diverse institutions meant that AgNIC expanded globally to include institutions like the Inter-American Institute for Cooperation on Agriculture (IICA) and Universidad de Buenos Aires, Biblioteca Central, and more than one Canadian institution. In addition to language expertise, the Latin American partners have contributed rich experiences from their long tradition of open-access publishing.

ADDITIONAL PROJECTS
Much of AgNIC's work is project based; therefore, NAL provided irregular funding for cooperative agreements in which partners received small amounts of one-shot funding to complete small projects. In addition, oc-

casionally AgNIC partners have been able to participate in professional-development opportunities organized by AgNIC's Executive Board.

Cooperative Agreements
Beginning in 2004 NAL offered new cooperative agreements to AgNIC partners to create content and subject websites. These agreements involved NAL/USDA funding for an AgNIC partner to digitize historical agricultural documents or create a new subject website. The cooperative agreements often supported the subject expertise that the institution brought to AgNIC. Examples of these cooperative agreements include

- digitizing *Transactions of the Royal Hawaiian Agricultural Society* (1850–1856) and *Planters' Monthly* (1882–1894)/*Hawaiian Planters' Monthly* (1895–1909);
- a project to establish an AgNIC maple syrup site;
- a prototype model for digitizing small agricultural economics journals;
- digitizing the U.S. farm-commodity legislation and collaboratively building access to its content;
- digitizing Texas agricultural agency publications in support of the development of the National Digital Library for Agriculture; and
- digitizing and preserving rare images of pathological disorders of corn (*Zea mays*) and the potato (*Solanum tuberosum*).

These projects led to the preservation of documents in a digital format, but more importantly also facilitated access to these documents from anywhere. Frequently, digitized documents were incorporated into an AgNIC partner's subject website or institutional repository. Federal budget cutbacks ended these agreements in 2009.

Webinars and Professional Development
In 2009 AgNIC's Executive Board proposed that the organization offer professional-development opportunities via webinar. These webinars were hosted by Michigan State University. The first concerned the bookmarking service Delicious and RSS feeds for keeping current; two more webinars were held that same year: on metadata, and AgNIC website metadata. These webinars proved so popular that the partners agreed that sharing other types of information would be useful. In 2010 five webinars were given, although two were all-AgNIC meetings regarding the year's strategic plan and committee reports; the other three offered training on Mendeley (a free reference manager), AgNIC metadata, and the VIVO project. In total, between 2009 and 2012, AgNIC sponsored twenty-one webinars for its partners, which are archived for members on a Google website (http://sites.google.com/site/agnicwebinars/courses); many of these were for professional-development purposes. AgNIC partners discovered that the

webinar format also worked well for large meetings; moreover, they used the technology to communicate official AgNIC news.

AGNIC: MOVING FORWARD

Changing the "C" in AgNIC from Center to Collaborative reflected a shift in the role of the organization and its relationship with member institutions. Although the name change was made in 2013, its modification of activities was well underway before that time. In addition to the continuing work of identifying resources in various subject areas, AgNIC partners had commenced taking on other collaborative projects. With the secretariat based at NAL, AgNIC functions as the de facto network of the agricultural libraries in U.S. land-grant universities.

A move forward came as a result of a committee tasked with defining the role of AgNIC in relation to the United States Agricultural Information Network (USAIN), a professional organization for agricultural librarians. The potential goals of AgNIC were outlined in documents produced by the joint AgNIC/USAIN committee. These goals included defining a clear focus, supporting digitization projects through cooperative agreements, sustaining subject sites for unique or niche subjects, and cessation of other "silo" subject websites (Kruger & Olsen, 2015). Perhaps the most challenging of these goals will be developing a clear focus for AgNIC as it moves away from institution-based subject websites in a quickly changing information technology environment.

While continuing to seek a clear focus, AgNIC has been working on collaborative, project-based endeavors that serve its institutions and the world of agricultural information. Some, such as Project Ceres and those seeking new institutional collaborators, are ongoing, while other projects are selected at AgNIC's annual meeting and may be no longer than a year.

Crowdsourcing

To enhance the AgNIC database, a small group of librarians from several partner institutions carried out a crowdsourcing project to identify documents with agricultural content, such as journal articles; extension and experiment-station documents and reports; and dissertations and theses in institutional repositories. Over a two-week period, thirteen volunteers checked 328 repositories and found 146 with relevant items (Britton, Level, & Gardner, 2013, pp. 1–5). This led to a steep increase in the number of entries in AgNIC's database and included content from outside the United States.

Digitizing Historical Agricultural Publications: Project Ceres

Project Ceres, a joint effort of the Center for Research Libraries, AgNIC, and USAIN, has funded numerous digitization projects since 2012 (Wood,

2015). The goals of the project are to "sustain consensus-based, cooperative archiving of primary serial collections in the field of agriculture, defined broadly; and expand electronic access to digital and print resources from all world regions to support agricultural research" (Center for Research Libraries, n.d.). Project Ceres funding has assisted numerous AgNIC partners in digitizing and making available the core historical literature of agriculture. Interest in digitization continues to grow among partner institutions, and whether it is by Project Ceres or other funding opportunities, this is an area of continuing focus for AgNIC.

Working with NAL: Promoting PubAg
Because AgNIC provides an avenue for NAL to communicate with many of the land-grant universities, representatives from the latter occasionally work through AgNIC to solicit input and comments about their products and services. An example is PubAg, NAL's index of agricultural research, which features the full texts of articles published by USDA researchers. Members of AgNIC's Coordinating Committee were asked to test the interface before it was launched and provide feedback. This is just one example of communication between NAL and AgNIC and its partners. An NAL representative makes a presentation at AgNIC's annual meeting in order to increase awareness about new or ongoing NAL products and services.

Data Issues
As libraries become more active in the discovery of, access to, and preservation of data, it is beneficial to work collaboratively across institutions, and AgNIC is perfectly situated in that regard. As NAL works with others in the USDA on national efforts to develop data repositories and data registries, AgNIC and its partners are poised to participate if the opportunity arises. In preparation, staff members at AgNIC institutions have been planning professional-development activities regarding data, such as a workshop about data management at the 2016 annual meeting.

"Freeing" Publications in HathiTrust
HathiTrust includes many state documents, such as extension and experiment-station publications, but these are not automatically made freely available in the way that U.S. federal documents are. Permissions must be granted by the institutions involved, and librarians can facilitate this process by inventorying the documents and coordinating with the extension and/or experiment-station administrators at their local institutions to process the required paperwork. AgNIC partners have been working together to learn about the process, share procedures, and otherwise encourage other groups to participate. This collaboration will ultimately result in these publications becoming freely available on the internet.

Editing "Wikipedia"

In an effort to enhance agriculture-related *Wikipedia* entries, AgNIC sponsored a *Wikipedia* "edit-a-thon." Librarians from partner institutions participated in training sessions before the event itself, which was conducted virtually. The goal was to enhance existing records that were incomplete. The project was inspired by Global Open Data for Agriculture and Nutrition (GODAN), which held similar events focusing on adding freely available agricultural data to *Wikipedia* records.

Additional Potential Collaborators

When AgNIC began, partner institutions had to commit resources to creating and maintaining local webpages on particular subjects, but not all U.S. land-grant libraries were able to take that step. As the focus has moved away from these pages to cooperative projects, some of which have the possibility of funding, AgNIC has begun reaching out to institutions that previously chose not to participate. Building a broader coalition within AgNIC will help circulate new ideas and address the concerns and issues of new audiences for agricultural information, in addition to creating the possibility of new partnerships for AgNIC institutions.

Conclusion

AgNIC, which celebrated its twentieth anniversary in 2015, serves as an important link between NAL and both the libraries at U.S. land-grant universities and a growing number of international institutions. One of its strengths has been the interface with other organizations with similar goals, such as the Cooperative Extension Service. AgNIC began as a project to harness and utilize a current technology—in those days the newly developed World Wide Web—and add value for the benefit of agricultural researchers, practitioners, and students. That theme has carried through as technology has morphed and advanced, with examples being the development of a database of curated resources; the newer emphasis on digitizing and free access to materials of both historical and current significance; and the initiative to enhance *Wikipedia* entries on agricultural topics. The focus of AgNIC has shifted over time as needs and opportunities have arisen, and the organization continues to regularly assess the technological landscape to look for new ways to locate, organize, and archive agricultural information. As new projects are added to its portfolio, the group will seek out more partners as a way to benefit both the individual member organizations, NAL, and AgNIC as a whole.

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