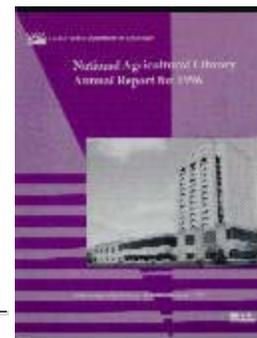


# National Agricultural Library Annual Report for 1996

United States Department of Agriculture  
National Agricultural Library  
Beltsville, Maryland, 1997

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U.S. Department of Agriculture, National Agricultural Library. 1997.  
National Agricultural Library Annual Report for 1996. Beltsville, MD.

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## National Agricultural Library Cataloging Record:

*Title:* National Agricultural Library. Annual report.  
*LC card number:* 76-648056/r88  
*ISSN:* 0364-7730  
*NAL call number:* aZ733.N3A56  
*April 1997*

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### **Director's Message**

Each year it's a pleasure for me to review the draft of NAL's annual report and be reminded of all that the library is able to do in just 12 months:

- Developing more and more electronic information resources.
- Publishing a variety of useful guides and reference directories.
- Welcoming and providing developmental opportunities to hundreds of foreign and domestic visitors.
- Partnering with national and international organizations to improve the flow of agricultural and scientific information.
- And always, always, working to keep our technological capabilities up to date and compatible with the most current systems available so that the United States, and the world, have access to the priceless NAL collection.

It's the library's dedicated staff that deserves the credit for accomplishing these things and the many more that NAL does each year. The staff works tirelessly and with continued good humor to give the finest service possible to our wide-ranging user community.

I'm very proud of NAL and the work we do. It is a pleasure to be associated with such a vital and vibrant group as those who work for the National Agricultural Library. Their accomplishments during 1996, many of which are highlighted on the following pages, are a testament to their dedication and commitment to serving the agricultural community and the American public. It has been like this for the 134 years that NAL has been in existence. I'm confident that NAL will continue such service well into the next century and beyond.

Pamela Q.J. Andre

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### **NAL OVERVIEW**

The National Agricultural Library (NAL), the largest agricultural library in the world, has been serving agriculture since 1862. Congress established NAL as the primary agricultural information resource of the United States of America.

Its mission, stated simply, is "to ensure and enhance access to agricultural information for a better quality of life." In recent years Congress has broadened NAL's responsibilities to include providing leadership in developing and operating a comprehensive agricultural library and information network. NAL is the only library in the United States with the mandate to carry out these national and international responsibilities for the agricultural community.

A priceless national resource, NAL, through its services, programs and information products, serves anyone

who needs agricultural information, from policy makers and farmers to scientists and students. Whether as a resource for a schoolteacher eager to introduce a nutrition education program into the curriculum, a farmer thinking of converting from chemically intensive crop production to alternative modes of insect and weed control, or a company searching for suppliers of hatchery equipment for a new business venture, NAL offers a wealth of materials and services to the thousands of users who access NAL on any given day.

## **Comprehensive Agricultural Information**

The National Agricultural Library is a national resource for all users of agricultural information. NAL's efforts in collecting, preserving, and providing agricultural information are fundamental to the continued well being and growth of U.S. agriculture and its development of food supplies for the nation and the world.

The NAL collection numbers more than 2.2 million volumes and covers all aspects of agriculture and related sciences. The depth and richness of the collection make it a unique and irreplaceable resource, with such materials as rare foreign literature and special one-of-a-kind items not available anywhere else in the world. It forms the base of knowledge on agriculture.

Few other collections come close to serving this function. At NAL, over 48 miles of shelves are filled with books, journals, computer software, audiovisuals, and materials in many other formats. International in scope, the collection includes materials in 75 different languages.

## **National Information Access and Delivery**

NAL provides world leadership in developing and applying information technologies that ensure that agricultural knowledge and information are available to those who need it. AGRICOLA (AGRICultural OnLine Access), NAL's ever-growing bibliographic database of more than 3 million records, provides onsite and remote users with information they need quickly and easily.

Advanced communications technologies have helped to fuel the exponential growth in information. The information infrastructure grows faster and reaches further every day, and the National Agricultural Library has moved to take advantage of this new technology. The library has a strong presence on the Internet and, working with land-grant universities, is broadening the use of this network to improve access to the burgeoning wealth of electronic agricultural information. Partnerships are vital to providing access to global information resources and leveraging investments in library collections and technology for greater benefit to all citizens. The library's URL is <http://www.nal.usda.gov>.

In addition to specialized information services available over the Internet, NAL provides traditional library services and products to its customers, including programs that teach patrons how to identify, locate, and obtain needed information.

## **Service to Agriculture**

The National Agricultural Library provides service through improved access, storage, and exchange of information.

NAL supports the development of new knowledge and technology and disseminates information that is essential to solving critical agricultural problems facing the nation and the world. The information and database services of the National Agricultural Library are vital to the nation's ability to sustain a viable

agricultural economy, maintain a healthy environment, and ensure safe, abundant, affordable, and high-quality agricultural products for consumers. Scientific research supported by NAL information is a potent weapon against pests, diseases, and other threats to the safety and supply of U.S. food and fiber.

## **GENERAL**

### **NAL Joins Latin American Project**

In 1996, NAL joined more than 30 other research libraries in the United States and Canada in a project to make scholarly resources from Latin American countries more accessible worldwide. By participating in the "Latin Americanist Research Resources Pilot Project" of the Association of Research Libraries (ARL) and the Association of American Universities (AAU), NAL provides access to selected Latin American serials on agriculture and related subjects. This is done by acquiring and cataloging the serials into the NAL collection and providing access to the serials through NAL's document delivery service.

The participating libraries share information on the literature through an electronic database, which provides increased access to the literature at a reduced cost. Currently the database provides the tables of contents of over 300 academic and research periodicals published in Argentina and Mexico since 1995. The database can be accessed on the World Wide Web at <http://lanic.utexas.edu/la/region/arl>.

### **Collection Continues To Grow**

In FY 1996, NAL added 30,235 volumes to the collection through purchase, gift, and exchange. This brought the number of print volumes in the collection to 2,235,329. Through aggressive efforts to identify and catalog electronic resources, including local and remote databases, Internet resources, and digital publications, NAL increased the number of electronic titles in its catalog by 100 percent to 638. Also, the USDA history collection was transferred to NAL in 1996. The collection includes published and unpublished material, vertical files, photographs, and manuscripts. The contents of this collection will be indicated in NAL's collection growth statistics when processing and enhanced bibliographic access are completed.

### **NAL Hosts 300th Anniversary Celebration**

On January 25, 1996, NAL hosted a reception that commemorated 300 years of agricultural accomplishment in Prince George's County, Maryland. The Prince George's County Tricentennial Celebration Committee and the Associates of the National Agricultural Library, a private "friends of the library" group, held the reception as part of the Prince George's County year-long celebration of its tricentennial. More than 250 county, state, and Federal dignitaries attended.

Mike Miller, president of the Maryland State Senate, gave the keynote address at the reception, speaking on the agricultural history of the county. Other speakers included U.S. Senator Paul Sarbanes, USDA Deputy Secretary Richard Rominger, and Maryland Comptroller of the Treasury Louis L. Goldstein.

### **NAL Paintings Featured in Maryland History Exhibit**

Historic watercolor paintings of native Maryland fruits, part of NAL's pomology collection, were among artworks featured in a public exhibition entitled "Where the Wild Things Are: The Nature of Maryland." The exhibition included 19th and 20th century paintings, drawings and photographs of Maryland plants and

wildlife and was exhibited in the fall of 1996 at the Maryland Historical Society offices in Baltimore. NAL provided original watercolors of Maryland apples, strawberries, walnuts, raspberries, cherries, and other fruits. The NAL paintings were created by artists hired by the U.S. Department of Agriculture at the turn of the century and were originally used for documentation. Wax models of apples, pears, and other fruits from the NAL collection were also displayed, as well as an NAL computer program showing digitized images of the NAL pomological watercolors.

## **Public Exhibits Highlight Special Collections**

During 1996, NAL's Special Collection Section prepared exhibits highlighting a variety of agricultural topics. One exhibit focused on the work of Beverly T. Galloway and the development of the Bureau of Plant Industry, which later joined the Bureau of Animal Industry to become USDA's Agricultural Research Service. The basis of the exhibit was an album of photographs donated to NAL by Robert Galloway, grandson of B.T. Galloway. The album documented early scientific research conducted for USDA while Galloway was the bureau administrator in the 1880's and 1890's and highlighted important developments in plant pathology and plant exploration and introduction.

Two exhibits focused on the contributions of immigrant communities to U.S. agriculture. *Contributions of German Immigrants to American Agriculture, including Forestry, Horticulture, Viticulture, and Agribusiness*, was displayed at the German Embassy, and *Belgian Emigration to the United States* was displayed at the Belgian Embassy.

## **Animal Welfare Anniversaries Celebrated**

On September 12, 1996, NAL's Animal Welfare Information Center (AWIC) and the Animal Care Unit of USDA's Animal and Plant Health Inspection Service sponsored a symposium to celebrate the 30th anniversary of the Animal Welfare Act and the 10th anniversary of AWIC. The symposium provided a retrospective look at the development and effects of animal welfare regulations in the United States since the passage of the Laboratory Animal Welfare Act in 1966. Leaders from government, industry, and animal protection groups offered unique viewpoints on the effects of the regulations and insights on the future of animal welfare for animals used in research, testing, and education and in exhibits. Approximately 200 people attended the symposium. In conjunction with the event, an exhibit in the NAL lobby documented the history of 30 years of animal protection.

## **Egyptian National Library Opens**

After 6 years of assistance from NAL, the Egyptian National Agricultural Library (ENAL) opened in Cairo, Egypt, in 1996. Since 1990, NAL had assisted the Government of Egypt in planning and establishing ENAL. Over the years, ENAL staff have trained at NAL in everything from cataloging to CD-ROM production. NAL also helped the Egyptians in selecting much of the electronic equipment for ENAL, including microcomputers, CD-ROM equipment, and an integrated library system. NAL Director Pamela Andre was a guest of honor at the ceremonies in Cairo that officially opened ENAL, and she presented a gift on behalf of NAL.

NAL and ENAL will continue to work closely on projects of mutual interest.

## **Disabilities Guide Produced**

NAL's Technology Transfer Information Center (TTIC) produced *Assistive Technologies: A Guide to Resources, Organizations, and Research*, which was distributed to visitors to the 1996 International Congress for Paralympics and at the Abilities Expo in Atlanta, Georgia. The publication references articles, books, directories, and lists of Internet resources that provide information on new technologies designed to enable persons with disabilities to be more mobile, communicate better, and lead more active lives. The guide is available in paper and on the TTIC home page.

## **Water Quality Emphasized**

The Web site of NAL's Water Quality Information Center (WQIC) was listed on the "Best Environmental Directories" Web page managed by the Centre for Economic and Social Studies for the Environment (CESSE) at the Universite Libre de Bruxelles in Brussels, Belgium. The site offers a listing of upcoming conferences and calls for papers related to water issues and satellite teleconferences covering water-related topics. Also on the site are bibliographies and guides for water-related databases, as well as water-resources discussion lists.

Also in 1996, the ENVIRO-NEWS Internet mailing list was established by WQIC to disseminate environmental news to NAL and ARS personnel. Others with an interest in environmental issues may also subscribe to the list. The list has several hundred subscribers, including many outside the United States.

## **Soros Fellow Completes Internship**

In 1996, an official from the Central Food Library in Prague, Czech Republic, completed an 8-week internship at NAL as part of the Soros Foundation-Library of Congress Librarian Intern Program. Ten librarians from Central and Eastern Europe and the former Soviet Union took part in the Soros Foundation 1996 program. This was the fourth group of Central and Eastern European librarians and information specialists brought to the United States by the Soros Foundation since 1992.

The Soros program was designed to support democratic change and development in Central and Eastern Europe and gives participants the opportunity to observe and assist librarians working in technologically advanced environments. The intern hosted by NAL was able to further her experiences in acquisitions activities, including international exchange of publications and cataloging.

# **ELECTRONIC RESOURCES**

## **Patents Information Listed**

Making the public aware of patenting activities and licensing opportunities with USDA's Agricultural Research Service (ARS) and other USDA laboratories is the objective of a project of NAL's Technology Transfer Information Center (TTIC) and ARS. Monthly listings of patents granted and patents applied for are enhanced with hypertext markup language (HTML) to improve access and readability on the World Wide Web. The full texts of patents are provided where available, along with links to the ARS labs performing the research.

The TTIC home page includes summaries of USDA-ARS patents granted and applied for and the *ARS Quarterly Report*. The TTIC home page also features new technology descriptions from the ARS Eastern Regional Research Center. Making patent and research information and technology descriptions available

electronically assists ARS marketing and licensing endeavors.

## **CALS Goes Online**

The Current Awareness Literature Service (CALs), which provides ongoing literature searches to USDA researchers, made its products available electronically during the year. Of the 12 databases offered by CALs, all but NAL's AGRICOLA were outsourced to DIALOG (Knight-Ridder Information). This allows electronic delivery of search results as well as enhancements to search strategy development. New search software was developed for processing AGRICOLA so that the database could be searched inhouse. The new AGRICOLA system is available electronically and features searching enhancements. Almost a third of the nearly 1,000 USDA researchers who have CALs profiles receive their literature searches electronically.

## **Water Contaminate Web Page Created**

*Cryptosporidium*, a recently recognized water-borne pathogen that can contaminate drinking water, is the focus of a new Web page at NAL. Because the protozoan can infect, and be transmitted from, calves, it is a concern to agriculture. In addition to providing links to sites with information on *Cryptosporidium*, the full text of a number of *Cryptosporidium* fact sheets are also available on the new site. This work was done by NAL's Water Quality Information Center and can be found at < <http://www.nal.usda.gov/wqic>>.

## **Rural Resources Available on Web**

A World Wide Web site that provides a means to locate and view materials on rural resources has been established by NAL's Rural Information Center (RIC). The site emphasizes community economic development and rural health resources. Searchable by keyword, the site includes calendars of conferences on rural issues and rural health, frequently asked questions, full-text case studies, directories, bibliographies, and links to over 260 Web sites on more than 20 rural subjects and USDA programs. Working with the Department of Health and Human Services' Office of Rural Health Policy, NAL's Rural Information Center Health Service included rural health information and links to important Web health sites, including those focusing on Hispanic health. The URL is < <http://www.nal.usda.gov/ric>>.

RIC entered into other cooperative efforts and loaded case studies prepared by the USDA Forest Service and the Federal Housing Finance Board (FHFB). RIC prepared and maintains the FHFB home page of information on funding programs for housing and community development.

## **TEKTRAN Database Available on Internet**

The TEKTRAN database of the Agricultural Research Service is being loaded on the Internet by NAL. TEKTRAN contains interpretive summaries of research-related articles recently submitted for publication and is a resource for librarians, researchers, and companies looking for recent, unpublished results of agricultural research.

NAL's Technology Transfer Information Center (TTIC) demonstrated "TEKTRAN Live" on the Internet on April 25, 1996, at NAL's Technology Demonstration Day on Capitol Hill in Washington, DC. TTIC continues to improve TEKTRAN's search capability. TEKTRAN's URL is < <http://www.ars.usda.gov/services/TekTran.htm>>.

# IMPROVING SERVICES

## Congress Funds Preservation Program

NAL received \$450,000 in FY 1996 funds to create a Preservation Office and initiate an NAL Preservation Program. Implementation of this program will ensure preservation of significant resources, many of which are held only at NAL, and provide for long-term and wider access to these materials in the future. NAL has already initiated a number of important preservation projects and activities to preserve and conserve the collection. These include--

*Archival Microfilm Study.* A detailed analysis of the results of prior cooperative archival microfilming activities at NAL was performed during the summer of 1996. This study determined the quality of the current archival and nonarchival microfilm held in the collection and the cataloging status of this microfilm and identified gaps in the collection. The information is being built into a nonproprietary database for use in future cooperative preservation efforts and for use in improving the maintenance and further development of the archival microfilm collection.

*Digital Preservation.* Preservation activities in 1996 also included NAL's first venture into archiving the collection digitally. NAL's Electronic Preservation Committee took the lead in this project and met frequently throughout the year. First, the committee identified materials from the collection for imaging. Next, it established standards for archival scanning and determined costs and total volumes to be scanned based on available resources and current technologies. The committee resolved technical issues regarding archival storage, development of accompanying metadata, linking to MARC records, and appropriate file structures and naming schemes for long-term access. NAL selected USDA titles to become the first publications in the library's digital archive collection. Future efforts by the library will focus on providing Internet access to these images.

## Digital Archive Initiative Established

As part of NAL's preservation program, the library signed a 3-year cooperative agreement with the Albert R. Mann Library of Cornell University to begin working toward a digital agricultural information archive.

A first step in this effort will be organization of a committee from the landgrant and USDA community to discuss issues related to preservation of and access to current USDA digital materials. With the rapid increase of USDA information on the Internet, the effort will focus on conceptualizing a digital archive to preserve this information.

This cooperative agreement will also lead to the development of proposals to expand work within the United States Agricultural Information Network (USAIN) on the state and local literature component of the National Preservation Program for Agricultural Sciences. The first phase of this land-grant library project, "Preserving the History of United States Agriculture and Rural Life: State and Local Literature, 1820-1945," was funded by the National Endowment for the Humanities in 1996.

## ISIS Expands

ISIS, NAL's online catalog, became available worldwide in 1996 via the Internet. In addition, NAL expanded the hours of operation for the ISIS Online Public Access Catalog (OPAC) to Monday through Saturday from 6:00 a.m. to 9:00 p.m., Eastern Standard Time. The OPAC telnet address is < opac.nal.usda.gov >. The ISIS

home page on the World Wide Web provides a description of ISIS, links to ISIS search commands, and a link for telnet sessions. NAL will make complete Web access to ISIS available in 1997.

NAL added over 100,000 bibliographic citation records to ISIS in 1996. The NAL Online Catalog increased by nearly 50,000 records and now contains 640,000 cataloging records. Over 51,000 indexing records were added to the ISIS journal article citation database, bringing that total to over 528,000 records. ISIS includes machine-readable citations from NAL, the U.S. National Arboretum, and regional research center libraries of the Agricultural Research Service.

## **Network Engineering Continues**

NAL continues to expand its networking capabilities. The library has completed the backbone and desktop cabling of its system and will soon begin upgrading the backbone networking equipment to enable users to access network resources more quickly. NAL installed a new system for backup of network servers consisting of a network-accessible tape drive and a tape library with network backup software. NAL set up a prototype server to provide network access to several databases and purchased a production server to give network and World Wide Web access to additional databases. In stage 2, network equipment located throughout the NAL building will be upgraded.

Also in 1996, the library completed the first step in connecting to the wide area network of the Agricultural Research Service (ARS). In 1997, NAL plans to connect to the backbone of the Beltsville Agricultural Research Center (BARC) system. BARC is part of ARS.

## **Regional Document Delivery Improved**

In October 1996, NAL's Document Delivery Services Branch began providing document delivery service directly to USDA employees at all USDA field locations in the United States and Puerto Rico. As part of NAL's Electronic Information Initiative, the new procedure will improve efficiency and customer service. USDA employees now can send requests to NAL via fax or electronic mail and receive materials by fax or over the Internet via Ariel. These methods are efficient, more cost-effective for the library, and fast-- p 85 percent of requests filled are delivered within 2 working days. As a result of these changes, NAL provides better service to USDA employees regardless of location.

NAL's commitment to electronic document delivery has resulted in significant increases in the number of requests received and materials delivered. During 1996, 24 percent of all document delivery requests were received electronically and 16 percent of document delivery requests filled by NAL were delivered electronically. The number of requests received electronically (via fax, e-mail and Ariel) grew 46 percent while the number of documents delivered electronically (via fax and Ariel) rose 40 percent. The use of electronic delivery methods enables NAL to provide faster and more efficient document delivery service and respond more effectively to customer concerns. Electronic document delivery requests may be submitted to NAL via electronic mail ([www.nal.usda.gov/mail/access.html](http://www.nal.usda.gov/mail/access.html)), telefacsimile (301-5045675), or ARIEL (IP address: ariel.nal.usda.gov).

## **Records Converted Into Machine-Readable Form**

NAL continued work on the 5-year retrospective conversion project begun in 1995. An additional 46,000 catalog records for monographs in the NAL collection were converted into machine-readable form under a contract with Library Systems and Services, Inc. (LSSI). This brought the total conversion to 70,700. LSSI is

searching databases for cataloging copy, adding the NAL-specific data when copy is found, and transcribing complete records from NAL's original shelf-list card when no copy is found. Authority control is provided for access points on the converted records and added to ISIS, NAL's online public catalog, and is distributed in the AGRICOLA database.

## **New Sources for Cataloging Records Identified**

Despite staff reductions in the NAL Cataloging Branch during the year, the annual cataloging production was down by less than 1 percent from 1995. This is due in part to new initiatives that augment NAL's in-house cataloging resources. NAL's Technical Services Division implemented OCLC's PromptCat service for monographs acquired through Blackwell North America. Under this service the cataloging records in the OCLC database for books shipped from the vendor to NAL are made available for immediate loading into ISIS, NAL's online catalog. Use of PromptCat will reduce the time between receipt of a monograph and the availability of a catalog record in ISIS.

Catalog access for U.S. Government documents acquired through the Federal Library Depository Program was enhanced at NAL through the addition of cataloging records prepared by the Government Printing Office (GPO). NAL derives machine-readable GPO cataloging records from the MARCIVE tape distribution and loads them into ISIS. In addition, NAL procured cataloging services for 500 Japanese-language monographs through a contract awarded to Telesec Library Services. Titles cataloged under this contract include an extensive and unique bonsai collection housed at the National Arboretum.

## **News Releases Distributed Electronically**

NAL began distributing its news releases electronically in 1996 on listserv <news-release>, available through the NAL Internet link. Anyone with Internet access is able to subscribe to the listserv and receive the latest news releases on NAL activities as soon as they are made public.

To subscribe to the news release listserv, a person must send an Internet e-mail message to <[majordomo@nal.usda.gov](mailto:majordomo@nal.usda.gov)> and type "subscribe news release" in the body of the message. The subject line of the message should be left blank. The listserv also archives NAL news releases so that users can gain access to past releases.

## **Special Collections Emphasized**

A major program emphasis in 1996 was the enhancement of access to NAL's invaluable special collections. Improvements were made in the security, physical environment, and access points to the collection.

NAL completed an inventory of all manuscript collections, which will allow researchers access to more materials. Staff and volunteers began organizing and processing several collections and created finding aids, which led to the identification of nearly 1,000 items from unprocessed materials and the general collection that were added to NAL's special collections. An inventory of the library's rare book collection was initiated. The library also identified many new materials appropriate for NAL and sought and acquired some collections. Among these are the Horace J. McFarland Collection, Enzler Collection, Radio Scripts of the War Food Administration, and material on the history of the Bureau of Animal Industry.

## **Collection Management Section Established**

The year saw NAL's Document Delivery Services Branch accomplish a longstanding goal of establishing a collection management section. The section is responsible for the organization, maintenance, and storage of NAL's vast collection of materials. The section head will work with NAL's preservation officer and the head of NAL's special collections section to ensure that collections are housed properly and that policies are established to ensure the availability and usability of the collection now and in the future. While much is to be done, the section has taken steps to alleviate crowding in certain stacks areas, inventoried the library's microfilm collection, and begun culling the collection based on recommendations from the library's collection development committee.

NAL developed plans during the year to establish an electronic media center. With a view to improving service to both internal and external customers, NAL purchased OCLC's SiteSearch software. SiteSearch consists of software components that allow NAL to use client-server technology to provide seamless access to NAL information products, databases, and full-text resources. This utility will help the library to analyze who uses the NAL resources and which resources are the most valuable. The electronic media center coordinator will be responsible for maintaining the networked resources, which will be easily accessible through the SiteSearch gateway.

## **NAL Continues Focus On Customer Service**

NAL made significant changes and additions to its collection of CD-ROM database titles available for public access in 1996. NAL's collection of CDROM titles now includes over 30 resources. Additional end-user workstations with multidisk CD-ROM towers were installed. Also, networked access to NAL's bibliographic database AGRICOLA was provided for all end-user workstations in the library's main reading room. NAL also implemented Windows access to databases, allowing faster searching for NAL users. At the NAL branch at USDA headquarters in Washington, DC, a new public computer workstation with Internet connectivity was added and another workstation was upgraded to provide customers with the ability to search CD-ROM's faster. In addition, NAL expanded searching on the Dun & Bradstreet database to provide more options to NAL customers.

NAL continued customer service activities by analyzing customer comments from surveys done in 1995 and making improvements in response to these comments. The library conducted a semiannual survey to track its success in meeting response time standards. Statistics show that NAL responds to 98 percent of customer requests in a timely manner. On May 2, 1996, NAL recognized its staff for the high level of customer service by providing refreshments, entertainment, and congratulatory speeches from NAL senior leaders.

## **TECHNOLOGY**

### **AgNIC Goes on the Web**

NAL established a World Wide Web site for the library's Agricultural Network Information Center (AgNIC) pilot project in 1996. The URL is < <http://www.agnic.org>>. AgNIC provides a focal point for Internet access to agriculture-related information, subject area experts, and other resources.

To achieve its goal of facilitating access to these resources, AgNIC provides value-added services uniquely related to agriculture. The library developed a prototype database, called AgDB, of more than 500 descriptions of primary agriculture-related databases, datasets, and information systems that can be viewed alphabetically or searched by keyword. The prototype directory also includes links to free resources.

Also, a directory of human resources, or experts, in agriculture-related subjects is available on AgNIC. AgNIC is linking into 29 of the directories on the Internet through its *Directories of Experts in Agriculture* component. AgNIC also contains an *Agricultural Conferences, Meetings, and Seminars Calendar*, which provides information on agricultural conferences, both national and international, with an emphasis on those of scientific significance.

The *On-Line Reference Assistance* pilot project of AgNIC includes five "centers of excellence" that provide on-line reference assistance for specific areas of agriculture. NAL will continue this pilot program into 1997 to determine the feasibility of providing this level of reference assistance on a continuing basis and with expanded subject areas. Participating in the pilot program are Cornell University (providing reference assistance in the area of USDA economic statistics), Iowa State University (animal sciences), Nebraska State University (plant sciences), University of Arizona (rangeland management), and NAL (food and nutrition and rural information).

## **NATDP Records Another Busy Year**

During the year, NAL's National Agricultural Text Digitizing Program (NATDP) produced several new CD-ROM's containing segments of the NAL collection. The Nicoll's Birds of Egypt CD-ROM, produced in cooperation with the Egyptian National Agricultural Library (ENAL), was sent to the land-grant university libraries and ENAL late in 1995. NAL also released its Food Irradiation 2 disc early in 1996. With funds from the American Society of Agronomy, NAL produced the third *Agronomy Journal* (volumes 23-28) CD-ROM in 1996. This will be distributed to the landgrant universities also. NAL completed scanning and review of the database for the first *American Journal of Agricultural Economics* CD-ROM. Also, NATDP staff participated in planning for NAL's preservation scanning effort.

NATDP plans for 1997 include continuing the *Agronomy Journal* and the *American Journal of Agricultural Economics* CD-ROM series, scanning a collection of USDA Forest Service photographs for dissemination on the World Wide Web, and publishing a collection of botanical and plant pest prints on CD-ROM.

## **NAL Supports Bean Improvement Initiative**

In January 1996, NAL's Plant Genome Data and Information Center (PGDIC) began a project to digitize materials of the Bean Improvement Cooperative (BIC). The digital information, including all graphs and photographs, will be available in a searchable format from the PGDIC home page at <http://www.nal.usda.gov/pgdic>. The project involves digitizing approximately 5,000 pages of BIC, comprising 39 annual reports and 4 conference proceedings (1957 to the present).

In support of this project, PGDIC created BeanTalk, a listserv that allows the agricultural community to comment on this resource and participate in its development. The project team is also exploring ways to allow impromptu translation of the text for Spanish-speaking users.

## **Bulletin Board System Closed**

With the Internet and the World Wide Web becoming the primary vehicles for access to NAL's computer-based collection and delivery of NAL materials, NAL discontinued the ALF (Agricultural Library Forum) bulletin board system. Although ALF provided excellent service since its beginning in 1987, most data services offered by ALF became available on NAL's Internet-accessible information servers. NAL will eventually add all such services to its Internet link. AISO7 NAL is continually adding new services through

its home page at <<http://www.nal.usda.gov>>.

## **NAL Gives Training in HTML**

In 1996, NAL finished establishing its HTML (Hypertext Markup Language) and imaging labs, which contain the necessary resources to allow staff to compose Web pages. During the year, the labs conducted training classes in basic HTML and Web authoring for over 70 NAL and ARS staff.

## **RESPONDING TO AGRICULTURAL CONCERNS**

### **Agricultural Risk Assessment Completed**

NAL assembled a five-volume compilation of information related to *Risk Assessment in Agriculture*, working with USDA's Office of Risk Assessment and Cost-Benefit Analysis. The volumes address the areas of (1) methodology, organization, communication, and education; (2) food safety and health assessment; (3) environment and rural issues; (4) organisms, plants, and germplasm importation and movement; and (5) trade/import and export issues. Each volume contains articles, reports, bibliographies, lists of electronic information sites and organizations, and current USDA research programs and research results on risk assessment. The volumes can be updated as needed.

### **Animal Welfare CD Developed**

A CD-ROM on animal care was developed by NAL's Animal Welfare Information Center. The CD, called CARE (Compendium of Animal Resources), is designed to provide quick and easy access to reference documents. Prepared primarily for the biomedical research community, veterinarians, animal care regulators, and Institutional Animal Care and Use Committee members, CARE contains 160 documents totaling over 6,000 pages. Materials include Federal legislation and regulations, policies and guidelines of professional scientific societies, bibliographies, and full-text monographs. The CD is keyword searchable and operates under DOS, Macintosh, Windows 3.x, and Windows 95. Funding for the disc was provided by the National Institutes of Health and USDA's Animal and Plant Health Inspection Service. Copies are available from the Government Printing Office for \$35.

### **NAL Works With NIH on Nutriton**

The National Institutes of Health and NAL's Food and Nutrition Information Center (FNIC) have agreed to work together to develop a searchable bibliographic database of international scientific literature on the World Wide Web that will provide the nutrition community with improved access to scientific research on dietary supplements. NAL will employ its expertise in the use of new information management technology to make the International Bibliographic Information on Dietary Supplements database an important resource for the scientific and education community.

### **U.S.-African Trade Directory Published**

Addressing a need for information on agricultural trade with African countries, the *Agricultural Marketing Directory for U.S.-Africa Trade* has been produced by NAL's Agricultural Trade and Marketing Information Center working with the U.S. Agency for International Development (USAID). The directory includes a list of publications, a section on technology applications, and a list of contacts. Information for sub-Saharan

African countries, with an economic overview and best prospects for U.S. investment and export, is also included. The publication is available from USAID.

## **USDA Sustainable Agriculture Program Assisted**

In a "Memorandum on Sustainable Development" signed on September 13, 1996, Secretary of Agriculture Dan Glickman committed USDA to work toward sustainable agriculture throughout the world. As a result, NAL's Alternative Farming Systems Information Center (AFSIC) joined the USDA's Sustainable Agriculture Working Group (SAWG), formed by Secretary Glickman to identify barriers to the widespread adoption of sustainable agriculture.

AFSIC activities included publication of *Sustainable Agriculture in Print: Current Books* (SRB 96-04) and *Organic Production: Recent Publications and Current Information Sources* (SRB 96-07). SRB 96-04 is the fifth in a series documenting the latest information about sustainable agriculture. SRB 96-07 provides information in support of the national organic program of USDA's Agricultural Marketing Service, a program to develop Federal standards on the production, processing, and marketing of organically produced foods. These and other AFSIC publications are available electronically at < <http://www.nal.usda.gov/afsic>>.

## **Farm Risks Reports Drafted**

Two draft reports to the agricultural equipment industry on the use of sensors to reduce farm injuries were issued by NAL's Technology Transfer Information Center (TTIC). The reports are *Using Sensors To Detect Potentially Hazardous Atmospheres in Production Agriculture* and *Using Sensors on Agricultural Equipment To Reduce Human Risks*.

The hazardous atmospheres report, produced by the University of Illinois, discusses the existence of several sensors that identify toxic and combustible gases. These sensors had not been tested in agricultural situations. As a result of the report, the U.S. Department of Health and Human Services provided funds for the university to conduct laboratory and field tests on sensors in livestock confinement facilities. TTIC tracked the results of these tests and also identified a company that had successfully tested a NASA sensor on farm implements in 1995 and 1996.

## **Biofuels Research Put on Web**

The biofuels home page, which is being produced by the Agricultural Research Service (ARS) with assistance from NAL, will highlight ARS research in the area of biofuels. New technology descriptions, current research, research location profiles, technology contacts, and links to other Federal and non-Federal biofuels research sites will be featured. The page is being designed to make companies, researchers, and the general public aware of ARS biofuels research. NAL's Technology Transfer Information Center (TTIC) is providing technical assistance in designing the page.

## **Global Change Database Development Continues**

An NAL-managed database on global change was nominated for the Computer World/Smithsonian Award for Innovative Technology in 1996. The Global Change-Assisted Search for Knowledge (GC-ASK) database is a project of the United States Global Change Research Program (USGCRP) to observe, understand, and predict global change and to make findings available to policymakers, researchers, and others with an interest in the subject.

The project began in 1992 when Federal agencies involved in global change research agreed to work together, and with academia and the international community, to improve access to global change data. Commercial software vendors collaborated to build the GC-ASK prototype using off-the-shelf software. The prototype, available on the Internet, links eight existing Federal data and information services related to global change. It includes electronically published dictionaries and thesauri that allow users to query the system without knowing the language of individual systems. GC-ASK will be evaluated by the Federal agencies participating by organizations worldwide, early in 1997.

## TABLES

**Table 1. Growth of NAL Collection**

Collection item	1995	1996
Monographs	15,555	16,214
Serial volumes	15,280	14,085
Withdrawn volumes	(1,733)	(14)
Net volumes added	29,102	30,285
Total print volumes	2,205,044	2,235,329
Microforms	1,026,673	1,048,992
Audio	91	412
Graphic	779	1,065
Film and video	1,320	2,645
Electronic information*	310	638
Maps	989	1,283
Total nonprint items	1,030,162	1,055,035
Total collection	3,235,206	3,290,364
Manuscripts (linear feet)	17,534	18,264

\*Does not include remote databases and Internet resources.

**Table 2. Technical Services Activities**

Activity	Number of items
Titles cataloged by NAL	16,514
Articles added to AGRICOLA	
Indexed by --	
NAL	56,033
Other	4,000
Total	60,033
Abstracts	20,496
Cataloged by --	
NAL	16,514
Other	1,014
Total	17,528
Other cataloging activity	

NACO* headings	1,172
CONSER** records	456
Acquisition funds expended	
Serials, including series	\$2,169,640
Monographs	\$290,863
Total	\$2,460,503
Titles sent to cataloging	
Monographs	9,349
Serial	775
Total	10,124
Serial volumes added	14,116
*National Coordinated Cataloging Operations	
**Cooperative On-Line Serials Program	

### Table 3. Public Services Activities

Activity	Number
Document Delivery Request	
Received by NAL	134,538
Received by Regional Document Delivery Service	59,081
Filled by NAL	97,886
Filled by Regional Document Delivery Service	42,964
Filled by borrowing	14,711
Source of Requests	
USDA	51%
Non-USDA	49%
Reference transactions (total)	42,411
Requests received electronically	5,163
Responses delivered electronically	5,810
Publications distributed	186,744
Outreach and Training	
Number of Activities	728
Persons Reached	35,771
Technology Demonstrations	
Number of Demonstrations	63
Persons Reached	1,116

### Table 4. Information Systems Activities

Activity	; Number of Items
AGRICOLA	
Total records	67,860
Records to AGRIS	36,604
Current Awareness Literature Service	1,166

Users	11,760
Number of profiles	206,345
Times used	

## **NAL Electronic Addresses**

<b>Agricultural Network Information Center (being developed by NAL)</b>	<a href="mailto:agnic@agnic.org">agnic@agnic.org</a>
<b>Alternative farming systems</b>	<a href="mailto:nalafsic@nal.usda.gov">nalafsic@nal.usda.gov</a>
<b>Animal welfare information</b>	<a href="mailto:awic@nal.usda.gov">awic@nal.usda.gov</a>
<b>Availability of specific titles and NAL lending policy</b>	<a href="mailto:circinfo@nal.usda.gov">circinfo@nal.usda.gov</a>
<b>Education Programs Unit, which handles tours and demonstrations of NAL systems</b>	<a href="mailto:epu@nal.usda.gov">epu@nal.usda.gov</a>
<b>Food and nutrition information</b>	<a href="mailto:fnic@nal.usda.gov">fnic@nal.usda.gov</a>
<b>Gift and exchange information</b>	<a href="mailto:giftexch@nal.usda.gov">giftexch@nal.usda.gov</a>
<b>Interlibrary loan or document delivery requests</b>	<a href="http://www.nal.usda.gov/mail/access.html">www.nal.usda.gov/mail /access.html</a>
<b>NAL's branch at USDA headquarters in Washington, DC</b>	<a href="mailto:dcrc@nal.usda.gov">dcrc@nal.usda.gov</a>
<b>News media inquiries on NAL</b>	<a href="mailto:paffs@nal.usda.gov">paffs@nal.usda.gov</a>
<b>Reference services</b>	<a href="mailto:agref@nal.usda.gov">agref@nal.usda.gov</a>
<b>Rural development and rural health information</b>	<a href="mailto:ric@nal.usda.gov">ric@nal.usda.gov</a>
<b>Special Collections Section, which handles rare books and collections of research materials of noted agriculturalists</b>	<a href="mailto:speccoll@nal.usda.gov">speccoll@nal.usda.gov</a>
<b>Transfer of new agricultural technology from the Federal Government to private enterprise</b>	<a href="mailto:ttic@nal.usda.gov">ttic@nal.usda.gov</a>
<b>Water quality information</b>	<a href="mailto:wqic@nal.usda.gov">wqic@nal.usda.gov</a>

