



## A National Preservation Program for Agricultural Literature

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**A National Preservation Program  
for Agricultural Literature**

Nancy E. Gwinn

**ABSTRACT.** Much of what defines the national character of Americans, as well as the nation's social structure, landscape, environment, and economy, is rooted in our agricultural past. This remark-

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The Advisory Panel on Preservation, U.S. Agricultural Information Network, assisted Nancy E. Gwinn with this article. Members of the Advisory Panel are: Brice G. Hobrock, Kansas State University, Chair; Elizabeth Adkins, Kraft General Foods; Pamela Q. J. Andre, National Agricultural Library; Wesley Boomgaarden, Ohio State University; Clinton Howard, University of California at Davis; Barbara Williams Jenkins, South Carolina State University; Peggy Johnson, University of Minnesota-St. Paul; Erich Kesse, University of Florida; Jan Kennedy Olsen, Albert Mann Library, Cornell University; Julia Peterson, Cargill Information Center; Keith Russell, National Agricultural Library; Katherine L. Walter, University of Nebraska-Lincoln.

able story of the American experience is captured in a broad band of documentary resources that include the memoirs and transactions of early agricultural societies and almanacs, extension service publications, archives, photographs, oral histories and periodicals for farm families and the agricultural "trade." However, older materials, especially those printed on poor-quality paper, are often severely deteriorated, brittle and fragile. To lose these materials would be to lose an invaluable record of American values and the nation's scientific and business enterprise.

The United States Agricultural Information Network (USAIN) proposes a national program to preserve in the original or in an archivally sound format—and make readily accessible to scholars, researchers, students, and scientists—the most important pre-1950 published literature and the primary unpublished resources that together document the history of the agricultural sciences in the United States. Participants will be land-grant institutions, the National Agricultural Library, and other libraries, societies, and archives with important historical collections. A USAIN-appointed national steering committee will govern and develop funding for the program and recruit a Coordinator to work with participating institutions to develop suitable preservation projects. The first priority is the preservation of scholarly monographs and journals identified as the core historical literature of the agricultural sciences. Projects will employ a hybrid mix of technologies (e.g., preservation microfilming, conservation of originals, and digital scanning), which reflect requirements for both archival soundness and improved access. The program will also assure that records for preserved items are included in national databases and that storage conditions for archival copies meet national standards. The plan envisions formation of a "National Agriculture Literature Archive" at the National Agricultural Library.

**KEYWORDS.** Archives, U.S. Agricultural Information Network, Planning documents

### INTRODUCTION

In October 1991, the U.S. Agricultural Information Network (USAIN) sponsored a program that explored the feasibility of developing a national preservation program for agricultural sciences literature. Organized by Samuel Demas, Head of Collection Development and Preservation, Albert Mann Library, Cornell University, the two-day event drew a group of

thirty librarians, preservation experts and representatives of funding organizations. Following an extensive review of the status of the literature and of preservation technologies, the group enthusiastically endorsed the idea of a nationally coordinated preservation program to ensure both preservation of, and access to, the historical literature of the agricultural sciences. The attendees outlined recommendations and a planning process and urged USAIN, together with the National Agricultural Library, to prepare a more detailed national preservation plan. Subsequently, the USAIN membership unanimously endorsed the recommendations.

USAIN appointed Brice G. Hobrock, Dean, Kansas State University Libraries, as chair of an Advisory Panel on Preservation and solicited the services of Nancy E. Gwinn, Assistant Director, Collections Management, Smithsonian Institution Libraries, to facilitate the planning process and prepare the national preservation plan. To assist the group, Dorothy Wright, Preservation Librarian at Cornell's Mann Library, conducted a survey of land-grant and other institutions to gauge the level of interest in participating in a national preservation program and to identify, in a preliminary way, local priorities for preservation.<sup>1</sup> This document takes into account the survey results and represents the combined thinking of the consultant and the Advisory Panel.

The Council on Library Resources, Inc., The Cargill Corporation, and the United States Agricultural Information Network provided financial support for the Advisory Panel. A U.S. Department of Agriculture Cooperative Agreement with Kansas State University also supported the planning process.<sup>2</sup>

### **IMPORTANCE OF AGRICULTURAL LITERATURE**

Every animate being must eat to survive. This is such a basic human need, and so taken for granted, that only in times of stress do we give much thought to the historical, social, cultural, and scientific forces that have determined the range and components of the food we consume daily. Unlike many other sciences, most Americans can understand the direct relationship we have to agriculture, from the varieties of tomato plants we grow on our balconies or in our backyards, to the growing number of local farm markets, to the small-scale organic farmer supplying herbs to local restaurants, to the higher echelons of agribusiness.<sup>3</sup> The disparate locales that supply local grocery stores with produce demonstrate the complexity of our food distribution system: according to one scholar, an average forkful of food has travelled 1,300 miles to reach the American dinner table.

Much of what defines the national character of Americans, our cultural values and mores, is rooted in our agricultural past. Farming was the predominant social and economic structure in the United States until nearly the turn of the last century. In 1870, 90 percent of the American population of 40 million were engaged in agriculture and lived in rural communities. The family-sized farm was the basic unit of American society. As the nation pushed westward and technology improved, agricultural supply outpaced demand. Economic pressure on farmers translated into political movements (e.g., the Granger and Greenback movements of the 1860s and 1870s, and the Populist party of the 1890s). The history of agriculture is the shift from a focus on feeding one's family to feeding an expanding urban-industrial society. Today about 15 percent of the American population is employed in the global agricultural and food system (less than 3 percent in production agriculture) that not only feeds over 240 million Americans but supplies an export trade amounting to over \$35.3 billion annually.<sup>4</sup> "The story of this dramatic change in the character and methods of U.S. agriculture, of its impact on the American people, and on the nation's social structure, landscape, environment, and economy, is one of the most remarkable stories of the American experience."<sup>5</sup>

Unusual among the applied sciences, agricultural sciences benefited by "the significant linkage of agriculture, science, and the government. . . . By the late 1880s, agricultural leaders had demanded and won a vast infrastructure" of state-based colleges, agricultural experiment stations and "a central agency with a staff of specialists in Washington, D.C." This network set the stage for the scientific breakthroughs of the 1890s, which, coupled with massive funding, has made American agriculture a success story and the American diet science-dependent.<sup>6</sup>

The story of American agriculture is captured in a broad band of documentary resources ranging from the memoirs and transactions of early agricultural societies (in 1858, there were 912 societies in the U.S.) and almanacs to newspapers, corporate archives, photographs, and county extension service pamphlets. The changes are chronicled in the agricultural periodical press, the numerous local, regional and national farm journals that exhorted, informed, and shaped the views and tastes of early farm families. Journals such as *Country Gentleman*, *Capper's Farmer*, and *Cincinnati* (the latter "devoted to scientific agriculture, horticulture, education, and improvement of rural taste") tell historians much about the values, daily activities, concerns and practices of the time.<sup>7</sup> As rural life changed, so did the content of the periodicals aimed at the farm family. Now these periodicals form the premier scholarly resource to document the pressures affecting rural culture and how it has shifted and changed in

order to survive. Supplementing the press are the diaries, letters, and other unpublished materials that help scholars to assess the personal responses of rural inhabitants to the pressures of daily life.

The establishment of the U.S. Department of Agriculture in 1862 and the passage of the Morrill Acts of 1862 and 1890, which founded the present-day system of land-grant universities, brought the federal government into agriculture. Legislation that established state-level agricultural experiment stations and extension services followed. The growth of these organizations boosted agricultural research with constant regard for its practical application. Emphasis on higher education stimulated the production of scholarly treatises and journals that joined a panoply of federal, state, and county documents, through which one can mark the shifts in government policy and attitude toward the agricultural enterprise.

The social and cultural insight afforded to historians by agricultural literature is only one of its important dimensions. Nineteenth- and early twentieth-century books and journals are suddenly in great demand from scientists who are looking for information about the interplay between agriculture and the environment, not all of it healthy. Increasing concern about the use of pesticides and chemical fertilizers send researchers to comb the literature looking for inspiration from earlier, natural methods of combatting disease and pests. Natural methods have at times included introduction of insects, for example, as biological control agents, and historical literature can provide clues to their efficacy and environmental impact.

In the search for a sustainable agriculture capable of feeding the earth's growing population, the methods of the chemical-free past are coming under close scrutiny. Investigators search foreign agricultural literature for clues to traditional farming systems that have allowed continuous, productive cultivation of lands over periods of thousands of years. The new emphasis on biological diversity has sent researchers looking for historical information on the popularity and development of animal breeds and plant strains and whether they still exist. Agricultural and biological scientists, anthropologists, and geographers are increasingly turning to the older literature for information, inspiration, ideas, and benchmarks that will help them assess the reasons for success and failure of agricultural methods.

#### ***THE NEED FOR PRESERVATION***

The Morrill Acts allowed states to sell public lands and use the proceeds to endow at least one college that would offer courses in agriculture, engineering, and home economics, as well as regular academic programs. It is not surprising that the libraries of these "land-grant" colleges and

universities hold some of the strongest collections of agricultural literature. Collection and dissemination of information became part of the land-grant mandate, and the closeness of ties between the land-grant institutions and agricultural experiment stations and extension services ensured the collection of their publications as well. Together with the National Agricultural Library, this group of institutions collectively own the major portion of the national collection of agricultural literature and are likely to be the key participants in the national preservation program. Surrounding and enriching this collection are the unique holdings of archival repositories, state historical societies, and historical societies in agriculture and forestry, as well as other major research libraries with strong collections in subjects such as forestry.

Unfortunately, the problem of deteriorating and brittle paper affects the historical agricultural literature as severely as it affects all publications of a certain age (generally post-1850) and composition. Instead of using expensive rags, paper manufacturers used chemical additives and bleaches to produce less expensive paper from wood pulp to meet the demands of publishers, who were trying to satisfy a growing and more literate populace. Because of their high acid content, these mass-produced papers over time turn yellow and brittle and eventually crumble. Poor environmental conditions in older library buildings often hastened the decay. Although library conditions are now much improved, the damage has already been done.

For the last ten years, those most affected—academic and research libraries, historical societies, archives, and other repositories with historical collections—have joined in a nationwide effort to preserve brittle collections. Funds to support the movement have flowed principally through the National Endowment for the Humanities, but also through other agencies, such as the U.S. Department of Education, the National Historical Publications and Records Commission, and the New York State government. Private foundations have also contributed. Only a small part of this funding has sponsored preservation of history of science and technology collections, however. There has been no systematic approach to preserving the important historical literature of the agricultural sciences.

This plan envisages a nationally coordinated, systematic program of preservation directed toward the literature of the agricultural sciences. It seeks participation from a broad band of institutions—local, state, and national—that house important collections of agricultural literature. It employs two considerations that set it apart from other recent cooperative preservation projects and make it a new model for the future. First, as one of the principal techniques for establishing preservation priorities, the plan

incorporates and encourages use of a methodology developed by the Albert Mann Library at Cornell University for identifying the core literature of a subject area, irrespective of specific library ownership. Second, the plan recommends a hybrid mix of preservation-related technologies, including digital scanning, to lay the groundwork for improved electronic access to the preserved, historical literature.

### **GOAL OF A NATIONAL PRESERVATION PROGRAM**

The goal of the National Preservation Program for Agricultural Literature is to preserve in the original or in an archivally sound format—and make readily accessible to scholars, researchers, students, and scientists—the most important literature published before 1950 and the primary unpublished resources that together document the history of the agricultural sciences. Defined broadly, agricultural literature includes the basic disciplines of the science: agricultural economics and rural sociology, agricultural engineering, soil science, food science and human nutrition, animal science, forestry, crop improvement and protection, and human ecology. To this must be added the allied areas of the biological, physical, social, and environmental sciences. Primary sources include archival and manuscript material and collections of ephemera, as well as photographs and other non-print media.

The National Preservation Program is based on the following assumptions:

- The goal will be accomplished through a series of systematically organized and coordinated projects combined with local initiatives.
- The program will be launched under the direction of the U.S. Agricultural Information Network and housed at the National Agricultural Library.
- The plan focuses primarily on U.S. publications. However, the U.S. agricultural information community recognizes that important foreign imprints may be integral to certain collections and some may be included in U.S. preservation efforts. USAIN encourages other nations to develop a similar preservation program directed toward their own agricultural literature.
- All projects supported through the National Preservation Program will employ all relevant archival preservation standards and guidelines, accompanied by a commitment to make preserved materials easily accessible on-demand at low or no cost to users.
- Bibliographic records for all items preserved will be entered into OCLC or RLIN.



- The preservation technologies employed will ensure the continued availability of acceptable archival copies of preserved materials and will not require purchase of uncommonly held or proprietary equipment or, in the case of electronic media, use of non-standard or other file formats not commonly accepted.

All repositories of historical agricultural literature have an obligation to apply the best physical care and maintenance of collections that local resources allow. The National Preservation Program will encourage institutions to enhance local efforts but will focus its energies primarily on projects amenable to cooperative endeavor.

### ***PROGRAM STRUCTURE***

#### ***A Preservation Program at the National Agricultural Library (NAL)***

USAIN believes it is essential for the National Agricultural Library to undertake a leadership role in organizing the preservation of the historical literature of the agricultural sciences. USAIN confirms the duty of NAL, described in the U.S. Code of Federal Regulations, to "assure the acquisition, preservation, and accessibility of all information concerning food and agriculture by providing leadership to and coordination of (programs and activities)."<sup>8</sup>

NAL has exceptionally strong collections in many fields. As the result of negotiated agreements with the Library of Congress, the National Library of Medicine, and the Research Libraries Group, NAL has primary collecting responsibilities in seven subject areas: animal husbandry, aquaculture, biotechnology, nutrition, plant and seed trade catalogs, textile and fiber plants, and veterinary science. It is the major repository for federal publications related to agriculture.

NAL has undertaken several important preservation initiatives in the past, including a preservation self-study to assess its situation and determine its needs.<sup>9</sup> Moreover, NAL recently brought to a successful conclusion an experimental project employing digital scanning of library materials, which may provide valuable experience for the National Preservation Program. But lack of resources has prevented the Library from implementing the recommendations contained in its preservation plan. NAL has not developed the organizational infrastructure needed to establish an effective in-house preservation program that responds to the preservation needs of its own collections nor recruited or trained staff with the appropriate background and experience to manage such a program. Consequently,

there is no structure in place at NAL upon which either to build the function of coordinating the national program or to organize the NAL contribution to it.

USAIN does not expect NAL to carry the entire burden of preservation of agricultural literature for the nation. Rather, USAIN members are eager to join with NAL in a combined effort, with NAL both supplying a portion of the preservation effort and eventually coordinating the national program. But in order to do so, NAL must develop the preservation infrastructure that will allow it to contribute its share of the preservation effort. NAL must establish a Preservation Office and recruit and hire, through a national search, a Preservation Officer (minimum GS-13) with the necessary experience and skills to implement a preservation program for the NAL collections.

#### ***National Preservation Program Steering Committee***

USAIN will appoint a permanent National Preservation Program Steering Committee. The Steering Committee will launch a fund-raising effort among the land-grant universities and private foundations to raise \$250,000 to fund the position of USAIN National Preservation Program Coordinator for a three-year period (the funds would cover salary, benefits, travel and other program expenses). Steering Committee members will play an active role in establishing the National Preservation Program by:

- developing funding sources in the private sector and also through organizations such as the National Association of State Universities and Land-Grant Colleges;
- lobbying for additional funding for NAL to support preservation activity in-house and nationally;
- exploring the possibilities of new legislation or capitalizing on existing legislation, such as the National Agricultural Research Initiative, that might also support preservation efforts;
- engaging in coalition building/liaison with other national groups to promote the cause of preservation.

The National Preservation Program Steering Committee will be composed of five to seven USAIN members, including the President of USAIN and the NAL Director, the latter to be nonvoting.

#### ***USAIN National Preservation Program Coordinator***

The position of Coordinator will be established in one of the following ways, pending further discussion:

1. The Steering Committee will recruit and hire for the position of Coordinator, will articulate the performance objectives for the Coordinator and will evaluate progress at the end of each of the three years.
2. One of the USAIN member organizations will recruit and hire the Coordinator using the institution's personnel system. The director of the hiring institution will sit on the Steering Committee and develop performance objectives and evaluations with input and advice from the Committee.
3. A staff member from a USAIN institution will be "loaned" to USAIN/NAL through an Interagency Personnel Agreement. The staff member would retain benefits and seniority at the home institution, which would be reimbursed for the salary.

The Coordinator will be physically housed at the National Agricultural Library, which will provide secretarial and other normal staff support. At the conclusion of the three-year period, this position will be merged with the Preservation Office at NAL, which will assume the coordination and direction of the National Program.

The USAIN Coordinator will direct the National Preservation Program through such activities as:

- developing proposals within the land-grant community for cooperative preservation projects suitable for national funding and based on the priorities identified in this plan;
- assisting institutions individually or collectively to develop proposals consonant with the plan's priorities that are suitable for state or local funding;
- identifying and communicating with potential funding sources;
- assisting NAL in relating its internal preservation needs to national preservation planning;
- identifying and soliciting participation in the national program from institutions outside of the land-grant community with significant collections in the agricultural sciences;
- reporting to the Steering Committee and the agricultural community and coordinating the committee's agenda;
- serving on the Technical Advisory Group.

#### *Technical Advisory Group*

To ensure that the hybrid system of technologies outlined in this plan will satisfy the twin goals of access to and preservation of agricultural

information, a Technical Advisory Group will be established that will include experts in the field, not necessarily all from USAIN libraries. Cornell's Mann Library will form and support the Group, whose initial function will be to advise the Core Historical Literature Project on how to successfully combine microfilm production with digital scanning. The group will assist with technical aspects of the work, monitor events in the field, establish links with other efforts to develop standards, articulate guidelines for the historical literature project and provide advice as needed for other components of the National Preservation Program. The Coordinator and representatives from NAL will also serve on the Group.

### ***BUILDING ON PAST EFFORTS***

#### ***At the National Agricultural Library***

There is a foundation of past preservation activity upon which to base future efforts. The National Agricultural Library has engaged in several microfilming projects. For example, from 1974 to 1987, NAL led a cooperative project with the state land-grant university libraries to microfilm the agricultural, forestry, and extension publications of these libraries; several million pages were captured on microfilm.<sup>10</sup> NAL has also worked with non-profit and commercial micropublishers to microfilm federal documents, nursery and seed trade catalogs, and historical or rare agricultural and botanical works. More information about all of these projects is needed to ensure that institutions do not duplicate the preservation work that has already been accomplished and, if necessary, to ensure the continuing usefulness of microfilm master negatives and user copies.

USAIN urges the National Agricultural Library to undertake three projects that will help provide important building blocks for the National Preservation Program:

1. Commission a study of the NAL-land-grant universities' cooperative microfilming project that will identify the extent of microfilming for each state, determine any major gaps in coverage, locate the microfilm master negatives and user copies, assess the level of bibliographic control, and make recommendations as to what is required to ensure the long-term preservation and accessibility of these materials.
2. Review and assess the quality of NAL's microform holdings, identify and ensure proper storage of master negatives, produce printing

masters from all master negatives if it is likely that they will be in demand, and take steps, if needed, to make records for them available on OCLC.

3. Make records available on OCLC for all titles digitized since completion of the recent pilot text digitizing project.

#### *At Other Institutions*

One of the most active preservation programs focused on agricultural literature operates at the Mann Library, Cornell University. With external funds, the Mann Library is microfilming entomology books and journals and significant New York State agricultural publications (in cooperation with the New York State Library). But they are not alone. Other institutions, in addition to the project described earlier involving state agricultural extension service documents, have preserved a variety of materials, including farm family and forestry archives, historical photographs, and collections relating to farm machinery, viticulture, and pigeons. These efforts have been local and ad hoc, but they reveal considerable interest and expertise available to serve the goal of the National Preservation Program.

The Coordinator will conduct a more in-depth inventory of past preservation efforts and, if necessary, initiate a project to assess the quality of pre-1975 microfilm and its storage and to ensure that bibliographic records for materials already preserved are available in OCLC or RLIN.

### **PRESERVATION PRIORITIES**

The methodology designed by Cornell's Mann Library to identify and rank the core literature in the agricultural sciences makes it possible to base the National Preservation Program on an approach different from most other cooperative preservation projects. In those projects, preservation priority has usually been based on the size and strength of collections held by individual institutions, with two or three occasionally joining forces to address a particular subject. The core literature approach provides a means of identifying the important literature—based both on a citation analysis to determine level of use of the literature over time and on current scholarly assessments of potential future use—absent of any library's individual holdings.<sup>11</sup> For the published literature, this provides a way of ensuring that preservation dollars will go first to the most important materials. This methodology can be applied to certain other categories

of literature in the agricultural sciences, but not all. There are unique collections which, because of their breadth of subject coverage or format might be considered nationally significant in their entirety. While scholarly assessment of such collections is critical, citation analysis may not be pertinent.

A preservation plan for the agricultural sciences lends itself to a categorical approach, with certain assignments of responsibility for initiative and leadership (see page 14 for a schematic of this approach). The first priority of the national preservation plan is the scholarly monographs and journals selected as part of the core historical literature, which will receive considerable early attention. The following section discusses this and the other major categories identified by the Advisory Panel. The other categories are not necessarily in ranked order. The plan expects that several projects may proceed simultaneously, depending on funding and local initiatives.

***Scholarly Monographs/Journals—Albert Mann Library,  
Cornell University***

For several years, the Albert Mann Library at Cornell University has been working on a project that will serve as a principal component of the National Preservation Program. The project began with the goal of identifying the primary core literature of the agricultural sciences in order to assist academic libraries in assessing the strengths and weaknesses of their collections, to develop rankings for historic preservation, and to identify the literature of paramount importance for research and education in the Third World, which could then be distributed to those countries on compact disks. The lists, along with much valuable contextual material concerning trends and developments in each subject, are being published in a series, *Literature of the Agricultural Sciences*, by Cornell University Press. As of this writing, two volumes have appeared.<sup>12</sup>

The original intent was to identify the most significant current literature, published since 1950. Later the methodology was applied to historical literature, principally to assist in developing preservation priorities. The core historical literature covers scholarly monographs and journals and popular and trade journals published between the dates 1850-1950 (with some variation depending on discipline) in the English language. The focus is on works of importance to United States agriculture; consequently, most titles bear U.S. or Canadian imprints, although numerous British titles, and some from other European countries, Australia, New Zealand, and elsewhere have been included. An exceptionally thorough methodology was employed in the selection, based on citation analysis

(for scholarly works) and review and ranking by scholars. Although foreign language materials were not included in the core, lists of unreviewed or ranked titles that surfaced through citation analysis are included in the volumes; since these are titles cited by American scholars, they can be considered as important for preservation purposes.

The number of monographs in each subject ranges from 400-900 titles; scholarly journal titles from 40-70; popular and trade journals 250-1,500. Preliminary analysis indicates that a high proportion of the scholarly journals identified may already be available in microform.

The Mann Library has already developed funding proposals to begin the work of preserving the core historical literature. Working with the USAIN Steering Committee, the library has offered to provide leadership for this component of the National Preservation Program by identifying and soliciting funding to preserve the core literature and make it available to libraries at a reasonable price. Since the Mann Library plans to incorporate both microfilming (for archival preservation) and digital scanning (for access) in its program, the library will establish the Technical Advisory Group mentioned earlier to assist with the technical aspects of the work and ensure that it meets acceptable archival and access standards and guidelines.

USAIN applauds and supports the Mann Library effort. The Core Historical Literature Project will be the first initiative of the National Preservation Program. Since the Mann Library does not own all of the literature identified as part of the core, it will call on other libraries to assist by supplying needed titles or working on specific subject areas. The USAIN Steering Committee will encourage the cooperation of USAIN members and will assist in Cornell's fund-raising efforts. The USAIN Coordinator will also assist in developing the institutional cooperation needed to support the Cornell initiative.

#### *Federal Documents—National Agricultural Library*

NAL is the major repository for the documents produced by the U.S. Department of Agriculture and the library has taken many steps in the past to preserve portions of this literature. NAL will assume responsibility for ensuring preservation of and access to USDA publications, the agriculture-related documents of other federal agencies (such as the Department of the Interior and the U.S. Geological Survey), and important foreign government documents in its collections.

### ***State and County Documents—State Responsibility, Coordinated Nationally***

The USAIN Coordinator will work with state and regional groups to develop a centrally coordinated program to preserve the most important documents in each state/county/region, most likely through a combination of national and state funding. The U.S. Newspaper Project, administered by the National Endowment for the Humanities, provides a useful model for the structure of this project. In this program, NEH and the Library of Congress developed standards and guidelines for a state-by-state initiative to catalog and preserve the most important U.S. newspapers published since 1690.

As an example of this approach, with funding from New York State, Cornell and the New York State Library are filming 1,800 volumes on the history of New York state agriculture and rural life. The Mann Library has proposed another project focused on the natural history and natural resources of the northeastern bio-region. These projects employ the core literature methodology and demonstrate its utility as a model for projects at the state/regional level.

### ***Popular and Trade Journals—University-Based Initiatives***

The volumes containing the lists of the core historical literature will also contain ranked lists of the most important popular and trade journals. These general-distribution journals have become invaluable documents not only for their record of American agricultural methods but for their revelations about social and political history. They existed by the hundreds toward the close of the nineteenth century. Many were short-lived. The strongest collections of this literature are in major university libraries and require identification and assessment of holdings. Because of their local or regional character, the preservation of popular and trade journals is best addressed by individual institutions or regional groups. The USAIN Coordinator will assist institutions in developing local strategies for preservation of these materials and look for opportunities for a coordinated approach.

### ***Pre-1862 Monographs and Serials—National Agricultural Library***

Agricultural publications that predate the Civil War are not numerous, although they represent a highly important part of our agricultural heritage. Because of their rarity and value, all should be preserved, in the



original, insofar as that is possible. Much of this material may already reside in special collections departments or be in relatively good condition, since they were produced before the introduction of wood pulp and chemicals to paper-making. The literature has been well-documented by such publications as Mortimer L. Naftalin's *Historic Books and Manuscripts* (Washington, D.C.: National Agricultural Library, 1967) and Alan M. Fusonie's *Heritage of American Agriculture* (Washington, D.C.: National Agricultural Library, 1975).

The strength of NAL's collection makes it a natural choice to exercise the leadership in preservation of this body of material, working with the few other institutions that also have significant holdings. USAIN urges NAL to establish a project for locating this rare and valuable material, ensuring bibliographic records for them are available in the national data bases, identifying materials not included in existing bibliographies, determining preservation need, and recommending action for long-term preservation and care. The project should also include an assessment of availability of these materials in microform or other format and consider options for increasing their accessibility.

#### *Unique Collections—Local Initiatives*

Strong, specialized collections exist in every research library; they provide some of the most significant research resources by virtue of their scope or breadth of coverage or internal coherence as a collection. Some may be subject or geographically based, for example, a specialized collection on poultry, bee-keeping, women in farm economics, or agriculture in Latin America; or of a certain type, for example, historical almanacs, pamphlets, textbooks, or trade or seed catalogs. The identification and justification for preservation of these kinds of collections is the responsibility of the individual institution. The Coordinator will survey the agricultural community to identify specialized collections and seek opportunities to group certain of these in cooperative strategies that might be amenable to coordinated funding.

#### *Archives and Manuscript Materials—Local Initiatives*

Archives and manuscript materials also qualify as unique collections, but deserve separate consideration because of the differences in how they are assessed and organized, and in the preservation problems they present. Manuscripts provide clues to living conditions, social values and mores of farm families and corporate leaders. Corporate records document business

and economic conditions and the relationships between parts of the agricultural system. Archival sources contain valuable first-hand information on the history of the technology of farm machinery, chemical processes, and other aspects of agricultural science. There are few models for a coordinated approach to archives preservation, however.

Whenever possible, the USAIN Coordinator will encourage and assist any repository that houses archives and manuscripts related to agriculture to develop local strategies for preservation of these materials and will look for opportunities for a coordinated approach.

#### *Non-Print Collections and Audiovisual Materials—Local Initiatives*

Audiovisual and non-print collections, including photographs, videotapes, slides, audio recordings, oral history tapes, broadsides, and posters, provide important historical evidence of the agricultural landscape, land use, farm life, agribusiness and other aspects of the agricultural record. As just one example, one has only to think of the Farm Security Administration photographs of southern sharecroppers and migratory agricultural workers of the 1930s or the extensive aerial photographs taken over many years by the Agriculture Stabilization and Conservation Service. However, the difficulties of assessing and organizing these materials are similar to those affecting archival and manuscript materials. Because of the variety of formats and technologies employed, these materials have unique preservation requirements based on differing standards and require specialized treatments.

The National Preservation Program will focus initially on print materials, although the USAIN Coordinator will be alert to opportunities to develop preservation projects involving non-print and audiovisual collections, depending on local initiatives. USAIN members will be encouraged to provide safe storage environments and careful handling for these materials in their collections, as the basic means of ensuring their longevity.

#### *Newspapers—U.S. Newspaper Project*

For some years the National Endowment for the Humanities' U.S. Newspaper Project has been supporting the systematic state-by-state preservation of newspapers. Many specialized titles, for example Native American or other ethnic newspapers, have been included if they are community-based. Important agricultural titles have also been included in this project. Since there are strong commitments within most states to

preserving state-based newspapers, local institutions with collections that need treatment will be encouraged to seek assistance through the appropriate state agencies; consequently, newspapers will not be a priority in the National Preservation Program.

### *Survey Results*

As mentioned in the introduction, a brief and informal survey, primarily of land-grant institutions, was conducted to give the Advisory Panel a sense of community interest and local priorities for preservation of agricultural literature. The survey told respondents to assume that preservation of significant scholarly, scientific monographs and journals of national interest would be a top priority in the National Preservation Plan and asked for a ranking of importance of other categories of material for preservation. Table 1 shows the categories at the top of the list and the percentage of respondents who ranked them either one or two. Individual institutions listed a number of specific collections, many of them primary research materials, that are in need of preservation.\*

TABLE 1

MATERIALS RANKED #1 OR #2 FOR PRESERVATION	%
Local agricultural history	88
Photographs	81
Archives/Manuscripts	80
Diaries/Letters	79
State level publications	77
Agricultural society transactions	71

\*The balance of the list, in descending order of importance, was: theses, government publications, maps, newspapers, reference tools, catalogs (seed, etc.), textbooks, popular literature, almanacs, pamphlets.

### PRESERVATION TECHNOLOGIES

The National Preservation Program will employ a hybrid approach to the use of available preservation technologies, which reflects both a requirement for archival soundness and the potential for improved access offered by experimental programs in electronic formats. The character and condition of the material to be preserved in any given project will inform the choice, as will estimates of projected use and cost.

USAIN recognizes the growing demand for information in electronic form that can be distributed over the Internet or other networks and received at a scholar's workstation. Digitizing programs are far from routine, however: standards do not exist for many aspects of the digitizing process; there are constraints with equipment used for scanning and receiving; there are no routinely operating library programs for handling electronic image data over time to ensure its continued accessibility. Fortunately, the number of experimental projects that may help answer these concerns is growing. Cornell's University Library and the libraries of Yale and Pennsylvania State University are actively engaged in projects involving digital scanning of text materials and five other institutions are on the verge of mounting digital applications, supported by the Commission on Preservation and Access.

The Mann Library's Core Historical Literature Project proposes to microfilm titles that have not yet been filmed and to digitize the entire collection for enhanced distribution to scholars. NAL also plans to employ digital scanning in its preservation program. NAL staff and the USAIN Coordinator will both serve on the Technical Advisory Group to be assembled for the Mann Library project to monitor developments closely and assist in determining project standards; they will also seek involvement in other national groups working on establishing standards in the digital area.

Coupled to the excitement generated by the potential of electronic access to literature afforded by digital scanning is concern over long-term preservation needs. Rapid obsolescence of hardware, incompatibility of software, lack of recognized or well-understood standards for monitoring data deterioration are some of the reservations expressed. Typical of writers who know both digital and microform technologies well is Don Willis of University Microfilms, Inc., who states that "Filming first, and creating digital images by selectively scanning the film seems to be the least risky current preservation option provided that appropriate attention is paid to indexing the filmed collection."<sup>13</sup> Yale University and NAL are both experimenting with scanning from microfilm, while Cornell has worked on writing to microfilm from a digital file. The character of the materials

to be preserved are one determinant of the technology to be employed, for none can be applied uniformly and successfully to all.

The National Preservation Program will play a leadership role in the use of technology to ensure the longevity of materials preserved under the Program, while providing enhanced access to all material processed. The Program will be governed by the following principles:

- Participants will follow generally accepted searching guidelines to determine if items proposed for preservation have already been preserved in microform or reprint; this work will not be duplicated, although projects may consider further conversion of materials to electronic form to enhance access.
- Preservation microfilming is, at this time, the medium of choice for all brittle and deteriorated material that has not otherwise been preserved. Using this technology provides a "safety net" to ensure minimum loss of endangered materials. All microfilming will be performed according to current ANSI, AIIM, and RLG standards covering technical and bibliographic aspects of the filming process, so as not to preclude eventual migration to another format.<sup>14</sup>
- Digital scanning of material may be considered for all materials. However, until such time as there is assurance that digital data meet the criteria for permanent archival storage, a preservation copy will be retained. A "preservation copy" is defined as a preservation microfilm, a preservation photocopy, or a non-circulating original, all stored under optimum environmental conditions. Depending on the state of the art, it may be possible to consider creating an acceptable microform from a digitized file. Digitally scanned materials cannot be regarded as having been preserved until digital storage media are governed by nationally accepted standards for life expectancy.
- All physical conservation treatments will be performed according to current conservation standards and ethics. New paper copies of titles must use acid-free paper and employ durable bindings.<sup>15</sup>

#### *ACCESS TO PRESERVED LITERATURE*

Access to the preserved literature is equally important to its preservation—the dollars spent on preserving an item have no value to the scholarly community unless library users know about it and can obtain a copy. Access means the availability of bibliographic records for preserved items in the national data bases and provision for loan or copy of the items through normal channels. Increasingly, it may mean provision of textual

information, including images, over electronic networks. Furthermore, to guard against expensive and wasteful duplication, information about the titles to be preserved by an institution must be shared as soon as possible after a decision is reached. The common mechanisms for doing this are: (1) in RLIN, using the "queuing" function (flagging a record for the original and entering a decision date to alert searchers that a decision has been made to microfilm an item), or (2) in RLIN or OCLC, entering a minimal cataloging record with notice of an intent to preserve the title; (3) in RLIN or OCLC, cataloging a microfilm prospectively (entering a record for the microfilm version before the item is actually filmed); (4) in OCLC, entering data of intent to preserve a title using the OCLC Union List.

The National Preservation Program will ensure access to literature preserved under its auspices by using the following principles:

- All participants will contribute records for preserved titles to OCLC or RLIN and will use the appropriate mechanism for "early alert" of the preservation community.
- The USAIN Coordinator will make certain that funding proposals include the costs of contributing records for preserved items to OCLC or RLIN.
- The USAIN Coordinator will investigate the extension of "early alert" capabilities in RLIN and OCLC to the creation of digitized texts.
- The USAIN Coordinator will encourage the Association of Research Libraries to develop minimum standards for cataloging of digitized texts produced as part of preservation programs, as it has done for preservation microforms.

#### ***STORAGE AND DISTRIBUTION OF ARCHIVAL COPY***

The National Preservation Program envisages the development of a "National Agricultural Literature Archive" that combines centralized storage of archival copies with shared commitment for servicing. NAL will be the owner/manager of the archive. Initially, the concentration will be on storage of microfilm master negatives and later perhaps texts that have also been digitized. At that point, the microform copy in the archive may be the only copy in that form, with all institutions sharing and using electronic copies of historical materials.

- Because of NAL's experimentation with digital scanning of materials, USAIN urges NAL to engage in an evaluative process that will

determine if and when this technology can confidently be used as an archival format. In particular, NAL should develop a model program for monitoring and refreshing digital data that will answer concerns about its longevity.

- Program participants will donate to NAL all microfilm master negatives, retaining the printing master locally. NAL will construct or lease storage that meets archival standards and maintain the preservation masters in perpetuity, including periodic inspection as needed.<sup>16</sup> NAL will store its own microfilm master negatives in the same space.
- Participants will store the printing masters according to archival standards locally and supply copies of items to requestors on-demand following standard library practices.
- Copies from preservation microforms will be produced at cost and distributed according to fair-use guidelines.
- If NAL is able to accommodate a larger program, land-grant universities will be encouraged to donate other microfilm master negatives of agricultural literature to the archive (for example, the camera negatives for the agricultural experiment station publications).

It will be important, as the program moves to incorporate digital scanning of texts, to consider fully the copyright issues involved for materials that are not in the public domain. The USAIN Steering Committee will monitor copyright issues as they are debated and seek appropriate legal advice as the program takes shape. The National Preservation Program will operate in consonance with the prevailing interpretations of the U.S. copyright laws.

### ***CREATING A SHARED COMMITMENT FOR PRESERVATION***

#### ***Care and Maintenance of Local Collections***

The National Preservation Program for Agricultural Literature is a shared effort of the USAIN community. Libraries that are part of the land-grant community or that belong to USAIN have an obligation for the local care and maintenance of their collections. Many of these libraries have sophisticated preservation programs that employ a wide range of preservation treatments and technologies, from binding and in-house repair to production of preservation microfilm and preservation photocopies. For those who do not have a program, USAIN will encourage a self-examination of the preservation needs of the local collections and may

provide assistance in the form of conference programs or workshops, if there appears to be a need. Eventually, a logical resource for the land-grant community would be the staff of the new Preservation Office-to-be of the National Agricultural Library.

Libraries that house archives, manuscripts, or audiovisual and non-print collections may seek further guidance from the Society of American Archivists, which offers preservation workshops and publications. The Society's Preservation Section constitutes a network of archives preservation specialists.<sup>17</sup>

### *Encouraging Better Quality of Publications*

The National Preservation Program is directed retrospectively to the historical literature of the agricultural sciences, where the need for preservation is great. However, in the last decade, there has been considerable effort to convince publishers of the need to use acid-free papers for any publications intended to be of lasting value, especially scholarly books and journals. Concern over the environment and resulting legislation have encouraged many paper manufacturers to switch from acidic to alkaline processes, so that acid-free papers are now readily available at costs comparable to acidic styles. There is now a standard for the production of alkaline papers; publishers may advertise the fact and use the "infinity symbol" in books that meet the standard. Book review journals are including the information in their reviews. A 1992 revision of this standard extends its coverage to papers used in unpublished documents as well as that in printed books and includes provisions for both coated and uncoated papers.<sup>18</sup>

There is evidence that not all producers of agricultural literature are committed to the use of alkaline paper. USAIN will undertake an assessment of this situation and will take steps to educate and encourage publishers to commit to this way of reducing the preservation problems of the future.

### NOTES

1. The survey was sent to 111 individuals in 85 institutions, with 53 institutions responding.

2. The Council on Library Resources grant is #907; the U.S. Department of Agriculture Cooperative Agreement is #58-0540-1-163.

3. As part of his responsibilities for the collections of Cornell's Albert Mann Library, Samuel Demas has devoted considerable effort to analyzing agricultural



literature and articulating its importance as part of our national intellectual and cultural heritage. He has been generous with his work and I am indebted to him for many of the ideas contained in this plan.

4. Bernard F. Stanton, "Trends and Development of Agricultural Economics and Rural Sociology in the United States," in *Agricultural Economics and Rural Sociology: The Contemporary Core Literature*, by Wallace C. Olsen (Ithaca, N.Y.: Cornell University Press, 1991), p. 1; Donald M. Edwards, "Agricultural Engineering Education Programs," in *The Literature of Agricultural Engineering*, ed. by Carl W. Hall and Wallace C. Olsen (Ithaca, N.Y.: Cornell University Press, 1992), p. 25.

5. Samuel Demas, "National Preservation Planning for Agriculture," *Agricultural Libraries Information Notes* 17(Nov.-Dec. 1991), p. 4-5.

6. Margaret W. Rossiter, "The Organization of the Agricultural Sciences," in *The Organization of Knowledge in Modern America, 1860-1920*, ed. by Alexandra Oleson and John Voss (Baltimore: Johns Hopkins University Press, 1979), p. 212-13.

7. Peggy Johnson, "Agricultural Literature: Planning the Preservation of a National Resource," *Technicalities* 11(Dec. 1991), p. 2.

8. Title VII, CFR 2.39(1981), quoted in *A Preservation Plan for the National Agricultural Library* (Beltsville, Md.: National Agricultural Library, 1991), p. 11.

9. See note 8.

10. Published accounts of the results of this project vary, from an estimate of 2 million pages (Olsen, *Agricultural Economics*, p. 270) to 4 million pages (*A Preservation Plan*, p. 18).

11. Citation analysis is a technique by which the influence or research value of a published work is measured by counting the number of times it is cited by other authors over a given period of time.

12. Wallace C. Olsen, *Agricultural Economics and Rural Sociology: the Contemporary Core Literature* (Ithaca, N.Y.: Cornell University Press, 1991); Carl W. Hall and Wallace C. Olsen, eds., *The Literature of Agricultural Engineering* (Ithaca, N.Y.: Cornell University Press, 1992). The other five volumes planned for the series are on soil science, animal science, food science and human nutrition, forestry, crop improvement and protection. The first volume (listed first above) does not include the core historical literature lists, but they are available at the Mann Library.

13. Don Willis. *A Hybrid Systems Approach to Preservation of Printed Materials* (Washington, D.C.: Commission on Preservation and Access, 1992), p. 16.

14. ANSI, the American National Standards Institute, and AIIM, the Association for Image and Information Management, are the main U.S. standards-producing organizations. The Research Libraries Group has also produced preservation microfilming guidelines for its members that are used by many organizations and required by granting agencies.

15. "Acid-free paper" must meet the standard defined in *American National Standard for Information Sciences: Permanence of Paper for Printed Library Materials* (ANSI/NISO Z39.48-1992). New York: American National Standards

Institute, 1992. Durable bindings are those that meet the specifications in *Standard for Library Binding*, 8th ed. Rochester, N.Y.: Library Binding Institute, 1986.

16. Periodic inspection procedures are described in *Standard for Information and Image Management: Recommended Practice for the Inspection of Stored Silver-Gelatin Microforms for Evidence of Deterioration*. (ANSI/AIIM MS45-1990) Silver Spring, Md.: Association for Information and Image Management, 1990.

17. For further information, contact Evelyn Frangakis, Preservation Program Director, The Society of American Archivists, 600 South Federal, Suite 504, Chicago, IL 60605.

18. "ANSI Announces Revision to Standards," *Committee on Preservation and Access Newsletter*, No. 54(March 1993), p. 3.