
Collection Development, Selection, and Acquisition of Agricultural Materials

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ABSTRACT

THIS ARTICLE DEALS WITH collection development, selection, and acquisition of agricultural information materials for libraries. Collection planning and evaluation issues are first discussed. Included are collection development policies, the subject areas of agriculture, the RLG Conspectus, cooperative collection development, resource sharing, and preservation. These are followed by a discussion of selection and acquisition of agricultural materials, with numerous sources mentioned. A list of general suppliers and approval vendors is appended. This article is intended as a useful reference for librarians involved in collection development, selection and acquisition of the literature of agriculture.

INTRODUCTION

Libraries that acquire and maintain carefully selected collections of agricultural information materials perform a vital role. Delivery of agricultural information to a diverse clientele ranging from researchers to producers contributes directly to the production of food and fiber throughout the world. As with other pure and applied science subjects, however, the worldwide quantity and scope of available agricultural information materials is vast. Blanchard and Farrell (1981) estimated that there are more than 200,000 items published annually relating to biology and agriculture (p. 4). Given the exponential growth experienced for the scientific literature, this figure would be much larger today. Since it is uncommon for libraries to have unlimited means to acquire any and all materials, the ability to select and acquire relevant, focused collections serving a specific clientele or mission is crucial.

Standard selection and acquisitions techniques applicable to other subject areas may be used for mainstream agricultural materials. However, because of the unique features of certain types of materials and sources, many challenges exist for librarians and agricultural specialists who select and acquire the collections including:

- the cross-disciplinary nature and breadth of the subject of agricultural information. Information relevant to agriculture cuts across many pure and applied subjects in the sciences and social sciences.
- levels of treatment of the subject. As with other applied science fields, information in agriculture must be supplied for the producer with little technical knowledge and the sophisticated scholar who is involved in the creation of new basic and applied research information. This factor is accompanied by the increasing complexity of research, product development, and specialization (Olsen, 1984, p. 141).
- diversity of source. Worldwide production of agricultural information outside commercial, university, and governmental channels contributes to the difficulty of identifying and acquiring relevant materials. Financial, political, and social factors contribute to problems of acquiring materials outside infrastructure sources.
- a rapidly changing information infrastructure. Changes in organizations and distribution methodologies require that attention be paid to access structures and policies. Olsen (1984) suggests that one is dealing with dynamic systems that are constantly changing information access and control structures. Year to year, “influence or control in one (federal) area may have transferred to another organization or group . . .” (p. 140). In recent years, as another example, the increasing privatization of U.S. governmental information contributes to the difficulty and cost of acquiring some materials.
- lack of current/unified assessments of the core materials in the field. Many good guides to the literature exist, but comprehensive work is needed to guide selection where agricultural information specialists are unavailable.
- suitability of materials for the existing technical and cultural environment. Building a collection on mechanized agriculture in a developing country may be unsuitable to the level of knowledge and mechanization.
- increasing difficulties in maintaining effort in many disciplines because of inadequate financial resources. Resources must be sufficient to maintain continuity of journal runs in a research environment or strategic decisions must be made.
- contribution of information technology and computing to the development of new formats and access techniques. Particularly, the CD-ROM technologies have expanded the total amount of information available and enhanced ease of access.

This article provides a general review of collection development,

selection, and acquisitions techniques that apply to agricultural libraries. Necessarily, many of the approaches are common to all subjects and libraries of all types. Whenever possible, however, specific sources and techniques applicable exclusively to agricultural library collection development are presented.

Using a general framework of collection development, selection, and acquisitions, the article encompasses a comprehensive set of topics, including establishing a library mission, subject coverage of agriculture, collection development policies, evaluation and the conspectus, cooperative collection development, preservation, selection of current and retrospective materials, access to the unconventional literature and nonprint formats, acquisition of mainstream materials in all formats, acquisition of special problem materials, state publications, foreign sources, and gift/exchange materials. This article is intended to serve as a guide to librarians and technical personnel responsible for developing agricultural library collections.

COLLECTION DEVELOPMENT

Collection development, as defined here, is the systematic intellectual exercise of defining what library materials will be acquired by a library with reference to a well-defined mission or strategic programs. Collection development generally manifests itself in policies and written guidelines that direct the actual selection and acquisition of materials. Consequently, selection and acquisitions are treated here as procedural parts of the total collection building process.

Collection development in an agricultural library is largely a special application of general collection development principles and procedures. An important first step is to identify the mission or strategic thrusts of the institution or library. Concomitant definition of the subject matter of agriculture is important, as well. Subsequently, preparation of collection development policies and evaluation of collections should follow. Cooperative agreements relating to collection development and preservation are ancillary issues.

Collection development activities are pursued in all types of agricultural libraries, from the largest national libraries, such as Agriculture Canada or the National Agricultural Library (NAL), through land-grant university and other college and university libraries, to small specialized commercial, societal, or governmental establishments. Less formalized approaches will be utilized by individual horticulturalists, producers, hobbyists, and other private collectors of agricultural information.

Emphasis on components of collection development varies depending on the type of library. For example, precise selection and deselection are probably more important in the highly-specialized, small library while, in general, collection development policies and systematic collection evaluations are emphasized in the university setting. Cooperative agreements may be useful in libraries ranging from

the small specialized library that cannot collect comprehensively to the largest national libraries where duplication with other national libraries is undesirable.

Missions and Strategic Planning

The understanding and statement of a library's particular mission is an important precursor to formalized collection development policy preparation and collection analysis. Further, since resources are never adequate to fully provide the information materials needed to support a library's mission, strategic planning is recommended.

Mission statements are simply articulations of a library's role and responsibilities to a parent organization and to the clientele of the library. "Provide agricultural information materials in required formats, encompassing plant pathology, animal science, horticulture, . . . in support of institutional undergraduate, MS and PhD programs" is an example of a way to begin. Detailed information about subject, format, and levels of acquisition may be included. Clearly, without an articulation of mission, it will be difficult to proceed with systematic collection development policies and procedures.

Many forms of incremental planning may be used by libraries. Goal/objective/strategy approaches are useful. However, since no library collects everything, and acquisitions funds are limited for most libraries, strategic planning is a responsible strategy for most libraries. Strategic planning utilizes many of the systematic characteristics of other planning techniques such as analyzing capabilities, assessing the environment, setting goals and objectives, and examining and implementing alternate strategies (Association of Research Libraries [ARL], 1984). However, strategic planning makes an attempt to concentrate resources in areas which make the most difference to the library's programs, rather than supplying proportional, inadequate funding to all programs. Strategic planning is a strategy and a way of thinking rather than a formula resource allocation technique. Strategic planning requires choices and may require the elimination or change of level of support for some subject areas. However, it strengthens the critical acquisitions efforts of the library if it is correctly applied. The Association of Research Libraries (ARL, 1984) provides examples of some university and academic library strategic plans. Moran (1985) provides a good introduction to strategic planning in higher education and in libraries.

Development of missions and strategic plans for libraries for purposes of collection development should take place in the context of the parent institution's mission and planning efforts. A library may develop an internal strategic plan without concurrent strategic planning by the institution, but a clear sense of the institution's role and scope must be articulated for strategic planning to be meaningful.

The Subjects of Agriculture

The range of agricultural subject matter has broadened continuously since the nineteenth century. In the early years, agriculture was equated with farming (Luchsinger, 1987, p. 1). As scientific methods and modern business practices were incorporated into agriculture, it became an increasingly interdisciplinary field within the applied sciences. Subject areas of interest to contemporary agriculturists have been described in several recent publications. Luchsinger (1987), from *Selection of Library Materials in Applied and Interdisciplinary Fields*, included "plant pathology, animal science, horticulture, engineering, food science and technology, agricultural economics, marketing, commodities, and general business, as well as the pure sciences of chemistry and biology" (p. 1). Lendvay (1980) links agriculture to "the fundamental principles of the physical sciences," and lists "botany, zoology, chemistry, mathematics, physics,...[and] also...geology, meteorology, economics, statistics and engineering" as source fields for agricultural activities and information (p. 1).

The RLG Conspectus (Research Libraries Group [RLG], 1989), discussed later, limits the agriculture subject division to the Library of Congress (LC) agriculture "S" class, but the supplemental guidelines for its preparation recognize that "agricultural research is largely a composite of many disciplines and subdisciplines of the social, biological and biochemical sciences" (RLG, 1989, Supplemental Guidelines, p. 1). Consequently, to comprehend the full range of subjects attributable to agriculture, one must consider the range of subject areas included in the National Agricultural Library's (1988) collection development policy where a more complete picture of the full scope of contemporary interests is provided (pp. 3-4).

As the U.S. library bearing national and international responsibilities for agricultural information, the National Agricultural Library collects comprehensively in many subject areas including general agriculture, agricultural societies and other organizations, animal and plant sciences, agricultural chemistry, economics, statistics, engineering, soils and soil conservation, forestry, food and nutrition, and rural sociology. Related materials are collected at the research level in such subject areas as biology, chemistry, physics, natural history, meteorology, ecology, and business management. Other subject areas collected are spread over the entire range of the LC classification system and include such diverse subjects as historical treatments of agriculture, botany, food, textiles, physical geography, water and hydrology, customs and folklore related to agriculture, food plants and animals, and rural education.

Materials are collected at NAL regardless of format when they meet subject criteria, although some types, such as doctoral dissertations available from University Microfilms and juvenile materials, are strictly limited. Expectedly, NAL houses its share of rare books and special

collections. These include pre-1870 imprints and smaller collections of manuscript materials. Special collections include the James M. Gwin Poultry Collection, acquired in 1971, which contains over 1,000 volumes, as well as catalogs and files covering the field of poultry husbandry (Fusonie 1977, pp. 67-69).

The Mann Library at Cornell University has announced an important project to identify the core literature of the agricultural sciences for distribution to Third World nations in optical disc format ("Project at Cornell," 1989). For the project, agriculture has been divided into eight areas, including agricultural economics and rural sociology, agricultural engineering, basic plant sciences, applied plant sciences, animal science, economic entomology, forestry and silviculture, and soil sciences. Core publications of optimal value to Third World clients will be selected by experts, with completion by 1993. Once core literature is identified, full-text distribution can be considered. The Cornell project will be of value to agricultural libraries of all types for collection development and evaluation.

Collection Development Policies

No agricultural library can exhaustively collect the full range of agriculturally-related topics. Thus each library must establish collection needs and priorities based upon mission and strategic subjects. A written collection development policy provides a systematic description of needs, both for librarians and users. Generally, the need for a detailed collection development policy increases with the size of collections. We find, therefore, that most university libraries and large libraries such as the National Agricultural Library have written comprehensive policies. Since these policies serve multiple purposes, including being a foundation for cooperative agreements, many are based on the American Library Association's (ALA) "Guidelines for the Formulation of Collection Development Policies," which promotes comparability (Perkins, 1979).

The *Collection Development Policy of the National Agricultural Library* may serve as a model for agricultural libraries or collections (NAL, 1988). National libraries such as NAL bear the greatest responsibility to collect the entire range of agricultural information. As the NAL policy states: "The focus of collection development at NAL is on acquiring information important for the advance of agriculture regardless of its source, language, medium or form" in order to make it available to the entire agricultural community (Preface). Subsequent sections of the policy describe the mission of the library, purposes of the policy, and the coverage of the collection. Detailed statement of scope and collecting levels make up the major portion of the work (pp. 9-11). Because the NAL policy is based on the standardized format and terminology of the ALA guidelines, other libraries may use it as a reference when preparing policies for agricultural collections.

Currently many collection development policies are being revised to reflect widespread use of the RLG Conspectus as a collection evaluation tool. Librarians using the conspectus prepare detailed analyses of the levels of existing collections and a statement of current collecting levels by Library of Congress call number sequence. This information may then be incorporated into collection development policies to present a more detailed description of a subject area. Also, especially when budgetary constraints exist, libraries may add a desired collecting level to the description. This serves to guide the allocation of resources among disciplines, to support requests for additional funding, and to aid in allocation of available supplementary funding. The *Arizona State University Libraries Collection Development Policy Statement* (1987), illustrates some of these new features which are recommended in the second edition of the *ALA Guide for Written Collection Policy Statements* (American Library Association, 1989).

COLLECTION EVALUATION—THE RLG CONSPECTUS AND OTHER ISSUES

As previously noted, the RLG conspectus is becoming widely used for collection evaluation. By definition, a conspectus is a topical summary that provides an overall view or perspective. As applied by RLG to collection assessment, the conspectus provides a framework for analyzing collecting levels by LC call number sequence. This tool for analysis was adopted by the Association of Research Libraries to implement the North American Collections Inventory Project (NCIP). Consequently, by June 1988, about 80 percent of ARL libraries had completed at least part of the conspectus and had entered their data into the RLG Conspectus On-Line, a part of the Research Libraries Information Network (RLIN). This database provides an inventory of research collections held in the United States and Canada. NCIP purposes were defined in the *NCIP Manual* (Reed-Scott, 1988) primarily in regional and national cooperative terms, including: description and monitoring of collection strengths and weaknesses in North American libraries; the basis for cooperative collection development programs and for division of responsibilities for collecting, cataloging, and preserving materials and for interlibrary lending; and as a base for possible fund-raising activities (pp. 2-3). The manual also discusses local implementation issues. Possible local use of a library's conspectus results are: serving as a tool to assist in selection, preservation, and fund allocation; as a part of collection development policies; and as an aid for developing interlibrary cooperation projects (p. 49).

The National Agricultural Library acted as coordinator for the development of the agriculture division of the RLG conspectus. Librarians at NAL, Indiana University, and the University of California, Davis, completed the compilation of the agriculture division of the conspectus in 1985. By June 1989, the *Conspectus of Agriculture* incor-

porated the collections of about thirty-five libraries (RLG, 1989). They include all three U.S. national libraries and the British Library, as well as a good representation of northeastern and west coast libraries. Major land-grant university library collections, including Cornell, Purdue, Pennsylvania State University, and the University of Minnesota enrich the database. NAL also arranged for the agricultural collections of the non-ARL library at Kansas State University to be included in the conspectus data available online on RLIN. Clearly, some significant agricultural collections are held outside the ARL library sphere. As more land-grant and other libraries with strong agricultural collections complete the conspectus and submit results to the database, it will improve as an instrument for cooperation.

As part of NCIP, conspectus-based verification studies also have been prepared. They provide a standardized method for libraries to test the accuracy of local assessment as they include comparative data from other libraries. Verification studies for agricultural economics and genetics are available from the Association of Research Libraries, NCIP. A new version of the verification study for agricultural economics is under development at Mann Library, Cornell University, and is scheduled for completion in 1989. It is an outgrowth of the Mann Library core literature project ("Project at Cornell," 1989).

Evaluation of an agricultural collection need not utilize the conspectus, of course. Other methods of collection evaluation are described in the library literature and any of these could be chosen, depending upon the purpose to be served by the assessment. For example, Kaniki (1987) discusses the evaluation of the international agricultural collection of Pennsylvania State University Libraries. Evaluation techniques and their applicability to the project are discussed (p. 219).

Deselection should be mentioned as a part of evaluation and collection policy development. A decision to withdraw agricultural items or send them to a storage facility can be specified by policy. Decision criteria that describe what to withdraw under what conditions may be included in such policies.

COOPERATIVE COLLECTION DEVELOPMENT

Cooperative collection development and resource sharing take place at all levels—local, state, regional, national, international—because they provide numerous benefits. Benefits may include access to a wider range of materials, more efficient and effective use of limited resources, reduced duplication, increased specialization and expertise at each cooperating institution, better client services, and improvement in relations among cooperating bodies (Evans, 1987, p. 5).

At the local level, libraries of different types may decide to share freely collections and services. For example, in Manhattan, Kansas, the Kansas State University (KSU) Library serves as a central research library for agriculture. However, libraries at the American Institute of

Baking, the Food and Feed Grain Institute of the U.S. Department of Agriculture, DPRA (Development, Planning, and Research Associates), and the KSU Post-Harvest Documentation Service all work together with the KSU Library to avoid duplication of collections of agricultural materials. This group of libraries represents university, commercial, governmental, and societal organizations. Numerous examples of such sharing at state and regional levels can be cited as well.

A long-standing national cooperative effort of special interest is that between NAL and the land-grant university libraries regarding the collection of state experiment station and cooperative extension service publications. In 1973, NAL and the land-grant libraries agreed to "collect, store and provide ready access to complete files of the major serial publications of state agricultural experiment stations, extension services and colleges of agriculture" (Garrett and Luchsinger, 1980, p. 111). The agreement led to the subsequent microfilming of many of these documents. In 1984, NAL initiated the NAL/Land Grant University State Agricultural Publications Program. The program expanded earlier agreements and recommended that university libraries supply NAL with full-level cataloging of serials, including analytics, through OCLC or RLIN, for inclusion in the AGRICOLA and AGRIS databases. Through vigorous selection and acquisition efforts, libraries' holdings and access to state agricultural publications have increased at both state and national levels.

The National Agricultural Library and the National Library of Medicine (NLM), working with the Library of Congress as appropriate, established several cooperative agreements defining the general division of collection responsibilities for veterinary medicine, human nutrition, and, most recently, biotechnology. Goals include the collection, retention, and preservation of all significant literature in these fields while reducing unnecessary redundancy at the national level. Through these agreements, at least one of the three libraries accepts national collection responsibility, usually at the comprehensive level, for each subcategory within the field. National responsibility is defined as an agreement "to maintain their collections at the stated collection level, provide services nationwide for other research libraries, and preserve the material dealing with the subject indefinitely" (Kulp, 1987). These agreements are further defined in separate publications from the libraries.

NAL collects in most areas of veterinary medicine, avoiding the areas to which NLM restricts its scope—i.e., comparative veterinary medicine, experimental surgery, the human/animal bond, and primatology. Both libraries collect in areas of laboratory animal medicine and technology, the veterinary profession, radiobiology, and veterinary public health (Kulp, 1985).

The NAL/NLM agreement covering human nutrition and related subjects was reached in 1987. It established twenty-six subcategories and collecting levels using conspectus terminology, with national responsi-

bility carefully noted. To support respective user groups, both libraries collect more widely in human nutrition than in veterinary medicine. However, with careful detailing provided by the subdivisions, the libraries could identify specific areas in which one or the other could assume major responsibility (Kulp, 1987).

The biotechnology agreement involving NLM, NAL, and LC was completed in 1989. A draft ("Joint Collection Development Policy Statement," 1989) indicates that NLM will assume national collection responsibilities for most subcategories in biotechnology, which NLM designates as a core subject. NAL will collect at the research level with national responsibilities in plant genetics, cell culture, applications of biotechnology affecting plant and animal breeding and aquaculture, pest control of soil organisms and in food, and certain products of biotechnology directly concerned with agriculture and food science. LC also will collect extensively in the field—at the research level for most categories—although that library will minimize collecting in the areas of clinical medicine and technical agriculture (p. 2). The final agreements are to be published in NAL and NLM newsletters.

PRESERVATION

Preservation, an ancillary but important topic of formalized collection development activity, deserves mention because of the fragile nature of many agricultural publications. Thus, agricultural libraries may wish to include preservation with formalized collection development policies. The decision to preserve or discard a publication currently owned may be as important as the decision to purchase a new item.

The subject of preservation has received much attention in libraries of all types over the past few years and is an area of expanding interest and expertise. Preservation as a general topic cannot be adequately treated here. See Kovacs (1987) for an overview of preservation in science and technology libraries. Consequently, the focus here will be only on those preservation issues which most affect agricultural collections.

As with other scientific and technical disciplines, a significant portion of agricultural collections is composed of journals, leaflets, and other unbound materials. Preservation demands, generally, that such materials be promptly bound together. Otherwise, shelving and other physical stresses will, over time, result in destruction. Binding is particularly important in limiting exposure of acid process paper to environmental conditions that may result in deterioration. Collection development policies may thus include directions for binding of materials by format and condition. As an alternative to binding, microform backfiles may be purchased and current paper issues may be discarded as the microform edition is received. However, if backfiles are retained in microformat rather than paper, binding costs may be offset by the cost of

the additional microform subscriptions. Microformat and other non-book materials have their own special preservation requirements which are sometimes more rigorous than those for paper.

Some paper publications present special problems as well. As noted by Kulp (1988), chief of Collection Development at NAL: "A very high proportion of agricultural publications are published by poor societies and poor governments with the intent of free distribution" (p. 3). To reduce costs, these publications are frequently issued on cheap, highly acidic paper which quickly becomes brittle. Items often vary widely in size and format within series and may be revised frequently. These characteristics make commercial binding difficult and expensive and may rule it out altogether. Agricultural librarians will immediately think of the essential but frustrating agricultural experiment station, extension service, and governmental agencies' publications which fit this description. Alternative storage techniques for loose issues include the use of princeton files or boxes. However, misfiling, loss, sagging, and folding may quickly become major problems for stacks management and preservation staff. Adequate pamphlet binders and enclosures can be produced for selected materials with minimal equipment and supplies by in-house book repair or preservation units. This solution is increasing in popularity, although costs must be monitored. Other alternatives include placing materials in vertical files or segregating them in special collections where maintenance standards can be enforced.

The National Agricultural Library is currently attacking the preservation problem in all of its many manifestations. In the article previously mentioned, Kulp (1988) describes NAL preservation planning as a "consultant-assisted self-study of the current preservation status of the Library and the development of plans for implementing preservation activities at NAL" (p. 1). The major problems faced by NAL are recorded in a draft of the *Preservation Plan for the National Agricultural Library* (NAL, 1989). NAL's condition survey indicates that more than 50 percent of the collection is disintegrating including about 27 percent which is already brittle. Special funding is recommended for the program. It also recommends that additional attention be immediately paid to serial binding and a disaster plan. A five-year plan for phasing in other preservation activities is outlined in detail. This outline includes recommendations concerning: the assessment of the physical condition of the materials, the prioritization of materials for preservation treatment, the implementation of preservation procedures, the improvement of environmental conditions, and staff education. Cooperative preservation activities with other libraries also are discussed. While agricultural libraries of all types may look to NAL for leadership in the preservation initiative, and especially as a source of last resort, individual libraries must initiate preservation programs that address local unique problems.

SELECTION

Sources for Selection and Collection Evaluation

An excellent starting point for collection development and selection sources in agriculture (or a particular subject field within agriculture) is a guide to the literature. The guides to the literature and, more broadly, guides to information sources, can quickly give the novice a broad overview of the discipline, indicate what types of information are used, and list and describe the most important indexes, reference books, serials, and other publications. Such guides also can serve as useful collection evaluation tools for someone who is already familiar with the literature. Two major guides are Blanchard and Farrell's, *Guide to Sources for Agricultural and Biological Research*, and Lilley's, *Information Sources in Agriculture and Food Science*. There are some guides that cover narrower disciplines within agriculture, such as Isaacson's, *Gardening: A Guide to the Literature*; Morgan's, *Keyguide to Information Sources in Agricultural Engineering*; Szilard's, *Food and Nutrition Information Guide*; and Vallentine and Sims's, *Range Science: A Guide to Information Sources*. In addition, there are several information guides to the life sciences and, more broadly, science and technology, that cover agriculture and related materials. Finally, there are the multidisciplinary guides such as Sheehy's *Guide to Reference Books* and Walford's *Guide to Reference Materials* that include basic reference sources for agriculture. For a recent brief overview of selection of all types of agricultural literature in libraries, see Luchsinger's (1987) chapter "Agriculture" in *Selection of Library Materials in Applied and Interdisciplinary Fields*.

For purposes of collection development and selection it may be helpful to consider several of the major producers, organizers, and suppliers of agricultural information: the U.S. Department of Agriculture (USDA), the Food and Agriculture Organization (FAO) of the United Nations, CAB International (formerly Commonwealth Agricultural Bureaux), the Commonwealth Scientific and Industrial Research Organization (CSIRO) of Australia, and Agriculture Canada. Most of these organizations publish a wide variety of agricultural materials including serials, monographs, reports, booklets, and pamphlets. A few of their specific publications are mentioned elsewhere in this article. For further information on these organizations and their publications one can consult directories such as *Agricultural Research Centres*, the guides to the literature by Lilley, and Blanchard and Farrell, and several of the other references listed at the end of this article.

RETROSPECTIVE SELECTION

For retrospective evaluation and selection, the agricultural guides to the literature, several of which have been mentioned, are reliable and detailed sources of information. Selecting items for purchase may be an

easier task than acquiring them as some "classic" works may no longer be in print.

Consulting bibliographies is a standard method of selection in all areas, and agriculture is no exception. The national bibliographies, such as *British National Bibliography*, *Australian National Bibliography*, *Canadiana*, and *Deutsche Bibliographie*, are good sources for non-U.S. publications. Besides the national bibliographies and the bibliographies and/or literature guides appearing as articles in various library journals (and occasionally in science and agricultural journals), there are bibliographies on various topics in agriculture, both narrow and broad, that have been published as monographs. Tucher's *Agriculture in America, 1622-1860*, although not large, is good for very old books. It is actually a compilation of the holdings of several institutions. *Pure and Applied Science Books, 1876-1982* is a six-volume set arranged by more than 56,000 Library of Congress subject headings and includes many works dealing with agriculture and related areas. *Books for College Libraries* (3rd ed., 1988) covers a core collection of 50,000 titles in all subject areas for undergraduate libraries and includes a section on agriculture. Prior editions of this work were published in 1967 and 1975. Another possibility is the creation of an individualized bibliography on a specific topic using an online database such as AGRICOLA, AGRIS, BIOSIS, and Chemical Abstracts and restricting the search to a particular document (publication) type or types, such as monograph, conference proceeding, or report. A search using Library of Congress subject headings is possible in the RLIN database. The results of the online search, of course, will be determined in large part by the degree to which the database permits refinement of searching by document type, and also the quantity, quality, and availability of items retrieved. One advantage of this approach is the capability of hand-tailoring a bibliography in which the searcher defines the subject, document type, dates of coverage, languages and other characteristics.

In addition to bibliographies, library catalogs can be used as selection tools. The *Dictionary Catalog of the National Agricultural Library 1862-1965* is an important source; it was continued by the *National Agricultural Library Catalog*. *The National Union Catalog* of the Library of Congress in its various forms is also of value.

Gifts can be an important source of retrospective materials to add to an agricultural collection. Selectors should remain alert to private holdings as a means of acquiring older materials. Often gift collections will include older, out-of-print items that are not readily available elsewhere. The acquisition of gift materials is discussed further later.

SELECTION OF CURRENT MATERIALS

There is no clear-cut division between retrospective and current selection sources. However, current sources listed later will be, for the most part, tools not previously mentioned. Current selection sources

can be divided into two general categories—serials and monographs. However, there also will be necessary overlap between these two formats.

As in most of the sciences, serials, especially journals, are of relatively greater importance to users of agricultural literature than monographs. Sources for selection of serials include reviews and/or listings appearing in library science publications such as *IAALD Quarterly Bulletin*, *Agricultural Libraries Information Notes*, *Serials Review*, and others. Reviews, listings, and advertisements also appear in agriculture and other science journals. *Nature*, for example, has an annual new journals issue. Another readily available source for selection is the general category of publishers' catalogs, brochures, and announcements; it is not difficult to get on the mailing lists for such items. In addition, there are catalogs and other services available from subscription agents. Lists of core serials in agriculture can be obtained from indexes such as *Biological and Agricultural Index* and *Science Citation Index*. *CAB International Serials Checklist* is an extensive alphabetical list of agricultural serials and includes separate sections for annual reports and conference proceedings. There are also the standard serials reference publications such as *Ulrich's International Periodicals Directory*, *The Serials Directory*, and *The Standard Periodical Directory*, all of which provide subject access, pricing, and publishers' names and addresses. *Agricultural and Animal Sciences Journals and Serials: An Analytical Guide* by Jensen et al. is a recent annotated collection of major serial titles.

Serials holdings lists of other libraries, both published and unpublished, may be available. *Serials Currently Received by the National Agricultural Library, 1975: A Keyword Index* in print and the later NAL serials lists (title and keyword) on microfiche may be of some use, although there is no breakdown by disciplines within the broad field of agriculture. *AGLINET Union List of Serials* from the FAO provides yet another alphabetical list of titles in agriculture. Likewise, the Library of Congress' *Union List of Serials* and *New Serial Titles* arrange items alphabetically and not by subject.

Bibliometric methods can be employed as a selection aid. One good example is *Journal Citation Reports (JCR)*, produced by the Institute for Scientific Information, and appearing annually as a part of *Science Citation Index*. *JCR* provides statistical data for serial titles: impact factor, immediacy index, and half-life. The journal rankings section of *JCR* groups agricultural serials as follows: agriculture; agriculture, dairy and animal science; agriculture, soil science; agricultural economics and policy; and agricultural experiment station reports. It then ranks the agricultural serial titles within each of these groups by their impact factor. Impact factor is a calculation of the frequency with which articles appearing in a particular serial are cited. *JCR* can be used (cautiously) as a selection aid, keeping in mind the needs of the institution.

A ready source for selection of monographs (and serials) is the wide array of publishers' catalogs and mailers. Commercial publishers of agricultural topics include Academic Press, CRC Press, Wiley, Elsevier, Oryx Press, Timber Press, Rodale Press, and others. In addition to the commercial presses, society presses such as the American Society of Agricultural Engineers (ASAE), American Association of Cereal Chemists, American Society of Agronomy, American Chemical Society, American Phytopathological Society, plus many others, are of great importance. Several university presses publish books of interest to agricultural libraries—e.g., Iowa State University Press and Texas A&M University Press. Catalogs and lists from booksellers represent another source, and they may offer out-of-print items. An example is *agAccess Agricultural Book Source* published by agAccess, a Davis, California company specializing in agricultural and horticultural books including out-of-print items. A second example is *Catalog of Professional Horticulture Books & Video Tapes & Audio Cassettes*, produced by American Nurseryman, Chicago, Illinois. Another catalog is the *UNI-PUB Bulletin of New Publications*. UNIPUB, Lanham, Maryland, is the U.S. distributor for General Agreement on Tariffs and Trades (GATT), Food and Agriculture Organization of the United Nations, Center for Agricultural Publishing and Documentation (PUDOC), United Nations Educational, Scientific, and Cultural Organization (Unesco), and other organizations.

The *American Book Publishing Record (ABPR)* and *Weekly Record* are an effective way of keeping up with materials currently published in this country. The *ABPR* is especially useful because it provides ready subject access through its Dewey Decimal Number arrangement. The various "books in print" works can be used for both current and retrospective collection: *Books in Print*, *Paperbound Books in Print*, *Sci-Tech Books and Serials in Print*, *Canadian Books in Print*, and *International Books in Print* are a few examples.

Review publications, including indexes to reviews, while providing access to critical or descriptive reviews of books, have the disadvantage of not being seen until months or years after the book is published. There are the standard well-known titles that cover all disciplines such as *Choice*, *Booklist*, *Book Review Digest*, *Book Review Index*, and *American Reference Books Annual*. Then there are others that cover the sciences and technology and include agricultural and agriculturally-related books—e.g., *Science Books & Films*, *Aslib Book List*, *Technical Book Review Index*, and *Science and Technology Annual Reference Review* are examples.

Separate sections of some indexes and abstracts are allocated for books or book reviews. The H. W. Wilson Co. indexes cite reviews of books; *Biological and Agricultural Index* is the most relevant, but others, such as *General Science Index* and *Applied Science and Technology Index*, will also contain items of interest. The list of citations to

the reviews appears at the back of each issue and is cumulated annually. No summary of the review is provided. Books, reports, and conferences are grouped separately in each issue of the various CAB abstract journals; an abstract is provided for each item. *Biological Abstracts/RRM* also groups books separately, provides abstracts, and lists individual chapters for edited works.

An excellent source for informed, critical, and sometimes lengthy reviews is the agricultural or science journal. *American Journal of Agricultural Economics*, *American Journal of Alternative Agriculture*, *Aquaculture* (Elsevier), *Economic Botany*, *Food Technology*, *Hort-Science*, *Journal of Range Management*, *Plant Pathology*, and *Tropical Pest Management* are a few examples. The more broadly focused journals such as *Science*, *Nature*, *American Scientist*, *New Scientist*, *BioScience*, and *Quarterly Review of Biology* regularly review books of interest to agricultural libraries.

New acquisitions lists of libraries are another possibility. The New York Public Library's *New Technical Books* is a selected list of new titles received, annotated, and arranged by Dewey Decimal Number. Some libraries may prepare in-house acquisitions lists that they would be willing to share or trade with other libraries.

A long-available service from the Library of Congress is the provision of LC cards to libraries. Included are items not yet published as well as those recently published. Government documents, including USDA publications as well as commercial and society press books, are also included.

The best places to look for theses and dissertations available for purchase are *Dissertation Abstracts International* and *Masters Abstracts International*, both produced by University Microfilms International (UMI), Ann Arbor, Michigan. The dissertations are neatly arranged by subject categories such as: agriculture, agronomy; agriculture, plant pathology; chemistry, agricultural; entomology; and engineering, agricultural. UMI order numbers are included with the abstracts for most items. It would not be difficult to generate a list of dissertations for selection purposes using CD-ROM or an online database.

For selection of government publications (serials as well as monographs) the following indexes are important: *Monthly Catalog of United States Government Publications* (the USDA is a large producer of documents, many of which are also accessible through *Bibliography of Agriculture* and the AGRICOLA database), *Monthly Checklist of State Publications*, and *FAO Documentation: Current Bibliography* (for an explanation of the publications of the Food and Agriculture Organization of the United Nations and their acquisition, see David Lubin Memorial Library, FAO [1986]; Moody [1986]; Phillips [1973]; Sinkule and Moody [1987]; and Van De Voorde [1987]).

Other options available to agricultural librarians are the various approval plans and form plans offered by several domestic and foreign

vendors. An approval plan is based upon an agreement between a library and vendor. The vendor acquires books from many publishers and distributes them to a library according to a preestablished profile where parameters such as subject, price, country of origin, and language are included. The library may accept or return any book depending on an assessment of its appropriateness for the collection. A form plan utilizes approval plan and profile concepts except that forms are sent instead of books. A library selects from information contained on the form and submits an order. Upon receipt of the order, the vendor supplies the book. The advantages and disadvantages of approval plans have been debated for years (DeVilbiss, 1975; Kautz, 1985), but many libraries combine an approval or form plan in some way with manual selection to ensure thorough coverage of the literature. Further explanations of approval and form plans are given later.

Finally, the selection process can include word-of-mouth information and requests from fellow librarians, faculty, students, staff, or other library patrons. Librarian visits to bookshops, newsstands, and other libraries may occasionally turn up desirable items not otherwise identified.

Nonconventional Literature

For "grey" or "fugitive" literature, direct contact with the publisher, if known, may be the most effective way to obtain the desired material. Fugitive or grey literature is defined as "literature which is not issued through conventional commercial publishing channels. Typical of this type of literature are reports, theses, conference proceedings and translations not published commercially, official documents issued in limited numbers, technical recommendations or rules, etc." (Chillag, 1982, p. 3). If the publisher is an agricultural society, association, or other organization, directories such as the *Encyclopedia of Associations*, *Gale Directory of Publications* (formerly *Ayer*), and *Agricultural Research Centres*, or a guide to agricultural literature/information sources can be of great help. For a broad overview of the grey literature of agriculture, see Chillag (1982).

The agricultural experiment station and state extension publications are often considered fugitive literature because, until recently, there has been no coordinated effort on a national scale to collect and index these documents. Many are irregular series; monographs also are published. For acquiring specific publications, the most direct method is to check with the publications office of the agricultural experiment station or extension service to determine if the item is still in stock and order directly; there is often no charge. It may be possible to establish an exchange agreement with the publications office for specific series titles. The *Directory of Professional Workers in State Agricultural Experiment Stations and Other Cooperating State Institutions* is a U.S. government document that is updated periodically and includes tele-

phone numbers and names for many of the publications departments (USDA, 1987). The state experiment stations also are covered in *Agricultural Research Centres*. Another helpful guide is a list of current holdings of major agricultural experiment station series of the NAL entitled *Selected State Publications Held by the National Agricultural Library*. For retrospective collection development, many land-grant universities now have large portions of their agricultural experiment station publications on microfilm and they are available for purchase by any library. This has come about as a result of the NAL Cooperative Agreement for microfilming which was initiated in 1974. Spaulding Company, Stoughton, Massachusetts, is presently offering land-grant agricultural publications for approximately forty states on microfilm, and a few other companies also are selling the microfilmed documents. For further reading on the state agricultural publications, including history, access, the microfilming project, and recent developments, consult Bailey (1988), Garrett and Luchsinger (1980), Mathews (1987, 1988), and Thomas (1988).

Published conference proceedings can range from well-known and well-indexed to fugitive literature in the extreme. It may be difficult to determine whether or not any papers presented at a conference were actually published, or whether only selected papers were published, or if all papers were published. In some cases, only abstracts of the papers are published. Some commonly-used indexes that help track down proceeding literature are: *Directory of Published Proceedings* (InterDok), *Index to Scientific and Technical Proceedings* (Institute for Scientific Information), and *Index of Conference Proceedings Received* (The British Library).

Some government documents may be considered fugitive literature: publications of USDA regional offices, state agricultural department publications (many should appear in the *Monthly Checklist of State Publications*), documents produced by foreign governments, especially below the national level, and publications of various agriculture departments within universities that are not distributed as experiment station or extension publications. See Curren's (1980) article for information on Agriculture Canada publications, including establishing exchange agreements.

Reports prepared by corporations, nonprofit organizations, and other groups may not be widely distributed. Some are accessible through CAB, AGRICOLA, AGRIS, CAS, and other databases or indexes. If the research is government sponsored, the NTIS online database or the printed *Government Reports Announcements and Index* should be consulted. The previously mentioned *CAB International Serials Checklist* includes a separate section for published reports related to agriculture.

Translations are another category of fugitive literature; it may be very difficult to determine if a monograph, report, or article was ever

translated. Online databases mentioned in the previous paragraph can be checked, as well as the translation indexes. In addition, the National Translations Center at the Library of Congress provides services that may help.

Finally, there are small miscellaneous items, such as newspaper clippings, special newsstand issues, informative brochures, promotional materials and catalogs, and so forth. Some of these types of materials can be selected from H. W. Wilson Company's *Vertical File Index*, often at no charge or for a modest price. Other items may be picked up at conferences, conventions, and fairs. Most of these materials are not suitable for integrating into the main collection but could be kept in a vertical file or perhaps could become part of a special collection.

Selecting Nonprint Formats

Some categories of nonprint formats for agricultural materials are microforms, audiovisual, and computer software. Microforms can be selected using publishers' catalogs, *Guide to Microforms in Print*, and *Microform Review* (a bimonthly journal). *Guide to Microforms in Print* is arranged by broad subject categories and includes numerous agricultural items such as those of the USDA, some foreign agricultural documents, and hundreds of state agricultural experiment station series, listed under the names of the states. The ASAE *Technical Papers* of the summer and winter meetings is an example of a society publication available in microform. Most FAO publications can be purchased on an annual basis as a microfiche set at a reasonable cost.

The traditional sources can be checked for appropriate audiovisual materials: *AV Marketplace* (a directory of companies), *Media Review Digest*, *Video Source Book*, the various NICEM (National Information Center for Educational Media, now AV Online) indexes, and others. Some review publications such as *Science Books and Films* also cover films and video.

A relatively new area for collection development is that of computer software. Information and reviews appear in library, computer, and agricultural and science journals. *The Software Catalog*, published by Elsevier in several editions, provides subject access to programs. Demas et al. (1985) provide an interesting account of the development of a microcomputer software collection in an agricultural library. At the time the article was written, the library had a collection of approximately seventy titles, not restricted to agricultural subjects, with generic software also selected if determined to meet the special needs of the library's users.

The availability of many databases in CD-ROM as well as online and print versions requires selectors to make hard decisions. Several agricultural databases (or databases of interest to agricultural libraries) have been on the market for some time in CD-ROM format, and others

will surely follow. Some of special interest are: AGRICOLA, CRIS, Agribusiness USA, Biological and Agricultural Index, Life Sciences Collection, Aquatic Sciences and Fisheries Abstracts, Science Citation Index, and MEDLINE. In addition to the bibliographic databases, there are some full-text CD-ROM projects being conducted by the National Agricultural Library, the Consultative Group on International Agricultural Research (CGIAR), and others. It appears that CD-ROM is definitely here to stay; one obvious weakness is lack of timeliness compared to online services. However, some systems allow the CD-ROM searcher to save the strategy and log on and execute that strategy in the online database to get the most recent records.

ACQUISITIONS

While the acquisition of mainstream agricultural materials is largely routine and can be achieved without special efforts or procedures, some materials can be very elusive and difficult to obtain. Such materials present special challenges to the acquisitions staff and a library's suppliers.

Current Mainstream Publications

Although the merits of approval plans are still debated, many libraries find them to be a satisfactory method of acquiring current materials. Approval vendors routinely cover the trade and university presses; some handle more small and societal publishers than others, which can be a factor in selecting an approval vendor. A brief survey conducted at Kansas State University (unpublished) of Blackwell North America's (BNA) approval program coverage and cost studies for 1983/84 through 1987/88 reveals an average of 328 new agricultural and related books treated per year.

Any single library's profile probably would eliminate some or many of these, of course, depending upon the level of comprehensiveness, but a properly adjusted profile should yield materials that are in scope with a minimum amount of effort on the part of librarians and acquisitions staff. Approval plans, however, are only a single phase of the acquisition effort; they are not a substitute for careful selection by librarians and/or other selectors.

Establishing one or more form plans with vendors, either in conjunction with an approval plan or independently, is another easy means of acquiring materials. These plans, which operate via profiles that can

SUMMARY OF BLACKWELL NORTH AMERICA APPROVAL COVERAGE

<i>Primary Subject</i>	<i>1983-84</i>	<i>1984-85</i>	<i>1985-86</i>	<i>1986-87</i>	<i>1987-88</i>
Agriculture	204	225	248	272	259
Forestry	31	21	32	30	18
Animal Husbandry	67	48	47	86	54
Total	302	294	327	388	331

range from simple to complex, provide a notification of available materials matching the library's interests. Whereas most libraries generally have a limited number of approval plans, form plans can be less restricted since they require no financial commitment to the vendor. These plans can be particularly useful in obtaining notification of foreign materials. Combining one or more form plans with approval plan coverage and careful review of publishers' catalogs and brochures can provide basic access to current trade and societal monographs.

Serials may be acquired directly from their publishers or through a vendor, such as EBSCO Subscription Services, the Faxon Company, or Blackwell North America. Subscriptions and standing orders are continuing expenses and budgets must account for annual payments plus any price increases imposed by the publisher or agent. Much has been written lately about journal price increases, the proliferation of new titles, and the consolidation of publishing into the domain of large commercial publishers. The 1989/90 *Bowker Annual of Library and Book Trade Information* indicates the average 1988 price of U.S. agricultural periodicals is \$33.56 which is well below prices in subjects such as chemistry and medicine. This price, however, represents a 29 percent increase over 1985 prices, and a 190 percent increase over 1977 prices. Since agricultural collections rely heavily upon periodicals for essential coverage, these price increases must be factored into the overall budget. It is the librarians, often with other selectors' or patrons' input, who must make the difficult decision of which titles to buy and which to disregard (or cancel).

As particular serial titles or publishing agencies are identified as being important sources of materials, standing or blanket orders can be initiated to obtain the titles or agency's publications on a continuing basis. Standing orders, established on a title-by-title basis either directly or through a vendor, can be monitored relatively easily if numbers within the series are issued sequentially; erratic series, on the other hand, present more of a challenge in making certain all items are being received. Blanket orders for all or a subset of a publisher's output are more difficult to monitor for completeness since the library does not generally know in advance what monographic titles will be received; serial titles are more predictable as long as they continue to be covered by the blanket order agency.

Because of its special importance as a source of agricultural materials, the Food and Agriculture Organization of the United Nations deserves special mention. FAO sale publications are distributed in the United States and Canada exclusively by UNIPUB and are available on standing order either on a comprehensive or selective basis. Periodical, microfilm, and free publications are available directly from FAO in Rome. An alternative means of distributing FAO sale publications to U.S. land-grant institutions' libraries through the U.S. Department of Agriculture's Office of International Cooperation and Development

was described in Van De Voorde's (1987) article. This distribution system, however, has recently been discontinued and will be replaced by direct distribution from FAO Rome via the U.S. FAO Liaison Office, Washington, D.C. This new distribution system will be limited, at least in the initial stages, to the libraries of the land-grant and 1890 universities established by the Morrill Acts of 1862 and 1870 (D. Brydges, personal communication, June 1989).

Special Problem Materials

In his summary of the suppliers of U.S. agricultural and technical information, Olsen (1984) estimates that the commercial sector is responsible for 50 percent of the total informational output, with universities and the educational community responsible for about 30 percent of the total, and governmental agencies issuing the remaining 20 percent (p. 139). Olsen's definition of "commercial sector" includes not only commercial publishers, but also corporations, commodity exchanges, financial and economic marketers, and other commercial firms that work with farmers directly or indirectly. Some of these latter commercial types, as well as certain university and governmental publications, provide a special challenge in acquiring agricultural materials (p. 138).

Fugitive or grey literature presents two difficult problems: first, becoming aware of its existence (previously discussed) and, second, how to acquire it; estimates on the worldwide output of this type of material can be as high as 200,000 items per year, and a high percentage of agricultural materials produced in developing countries falls into this category. Unless the item is included in an agricultural supplier's catalog or is available from a clearinghouse such as NTIS, even the most dogged efforts by the library staff or its vendor can end in frustration; sources are difficult to locate and, if located, the response to an order frequently is "no longer available." Success in obtaining material often involves prepayment or establishing deposit accounts which can be a problem in some institutions.

In addition to grey literature, there are special nonbook materials such as audiovisuals and photographs that are important in the area of agriculture and its related fields. More often than not, these items are produced by small agencies or academic departments and are not available through usual trade channels. Ordering them can result in the same frustrations encountered with grey literature: difficulty in locating the source, availability, or advance payment. Often these sources are not accustomed to library business practices, and thus invoicing and payment can also present special problems. There are some vendors that will handle these special nonbook orders, generally for a fee. It must be the library's decision whether the convenience justifies the added expense.

As mentioned earlier, many conference proceedings fall into the

category of grey literature; they are not published commercially and thus can be very elusive. In an effort to improve access to these materials, the National Agricultural Library is currently developing a database which will include information on future conferences; utilizing the information, staff will track the availability of the proceedings (C. Early, personal communication, June 1989). This solution on the part of NAL is a creative—albeit labor intensive—effort to obtain difficult materials.

Compared to the noncommercially published proceedings, those published commercially are much more readily obtainable through vendors or the publishers. Print runs for these materials, however, are often very small, sometimes being as few as 750 copies according to Catherine Flanagan (1985), representative of Elsevier Science Publishing Company, at the 1985 ALA Preconference on "The Business of Acquisitions." The practical implication of this is that these materials go out of print very rapidly. Obtaining them can be slow, costly, or impossible through the out-of-print market.

Another important but particularly difficult category of agricultural material is state publications, particularly the output of state departments of agriculture and land-grant institutions' colleges of agriculture, agricultural experiment stations, and cooperative extension services. As mentioned previously in this article, NAL's cooperative agreements with land-grant university libraries to obtain university and state agricultural materials have greatly enhanced the accessibility of these materials. These items are accessible via the AGRICOLA database and available commercially in microform from the Spaulding Company in Stoughton, Massachusetts.

The most direct means of acquiring publications from the land-grant universities is contacting the agencies or offices individually to get on their mailing list or to establish an exchange. One source for current names and addresses is the *Supplement to Directory of Professional Workers in State Agricultural Experiment Stations and Other Cooperating State Institutions* (USDA, 1988), which is available from the U.S. Government Printing Office.

Out of Print

One problem in working with retrospective core lists for any subject discipline is that many of the titles listed may be out of print. Unfortunately, however, this problem is often encountered when trying to obtain newer materials as well.

Since the U.S. Supreme Court's Thor Power Tool decision in 1979, which increased the tax liability on commercial companies' inventories, librarians and book dealers have watched in dismay as publishers declare titles out of print and sell off their backlist inventories. At the same time, print runs for scholarly materials are generally modest due to the relatively small market (Flanagan, 1985). Although a recent study by

Selth (1989) refutes the common perception that books are going out-of-print more quickly now than previously, it is undeniable that this continues to be a problem in acquiring all but the newest materials.

Foreign Materials

Obtaining materials from Canada and Western Europe, with their well-developed publishing industries and book trade, presents no special problems for acquisitions staff. Other areas of the world, however, have different characteristics which make acquisitions more difficult.

Generally, mainstream journals and serials from the Soviet Union can be purchased by subscription or standing order without too much difficulty; although titles are frequently behind in publication, the billing is prompt so that receipt often lags far behind the payment. Monographs are out of print almost as soon as they are published which virtually requires that orders be placed prior to publication; a prompt order, however, does not mean prompt delivery; the title may not come for years or may never be published at all. The periodical *Novye Knigi SSSR*, published in Moscow by the Soviet Gosudarstvennyi Komitet Po Pechati, provides prepublication announcements for Soviet titles. Exchange agreements with Soviet governmental agencies can be particularly frustrating since they tend to be very sensitive to inequalities and alternately wish to match value for value, issue for issue, or even page for page.

In her paper entitled "Latin American Acquisitions: A Continuing Challenge," Repp (1989) describes the publishing industry and book trade in Latin America as generally underdeveloped, with export and foreign monetary exchange regulations that can be highly restrictive; governmental upheaval tends to destabilize the situation even further. Many book dealers are small operations which tend to distrust strangers, thus practically requiring a library to establish contacts in each desired country or to deal through an agent. One important source of information about Latin American suppliers is the *Directory of Vendors of Latin American Library Materials* (Block & Karno, 1988).

With a few notable exceptions—such as Japan, Singapore and Hong Kong—Africa and Asia are also largely characterized by an underdeveloped publishing industry and book trade. Here, too, political conditions can often complicate transactions. Unless a library can find an acceptable supplier who deals with a particular country, acquisitions efforts are often handicapped by language, currency conversion, advance payment, and the gap of distance and culture.

The Library of Congress Overseas Operations Office has a special acquisitions program which covers sixty third world southern tier countries. This program is open to any library that wishes to participate. Participants establish a profile of their subject and geographic scope and deposit money into a special deposit account. Library of Congress staff in six regional offices (located in Jakarta, New Delhi,

Karachi, Cairo, Nairobi, and Rio de Janeiro) select and purchase materials in those and neighboring countries. Each regional office also produces a monthly or bimonthly accessions list which is available to participants.

Exchange

Another important means of acquiring vital agricultural materials is the process of exchange. By supplying copies of its own agency's serial publication(s) to other agencies, a library can obtain the other agencies' publication(s) in return. Often the materials received in this manner would be more difficult to obtain through other means, and there are some publications (e.g., house journals, unpriced items) that may be available only through exchange. These arrangements need not always be reciprocal, however. Many government and university agencies, such as agricultural experiment stations at land-grant universities, will distribute their publications upon request. Exchange agreements are generally informal, usually requiring only a letter to initiate. They can be difficult to maintain over extended periods as staff and procedures change, unless closely monitored and carefully documented. Another pertinent aspect of exchanges is that the library may incur costs for subscribing to multiple copies of its own publication(s), in addition to mailing, staff, and other costs, and thus these agreements should be reviewed periodically to make certain the cost/benefit ratio remains advantageous. A more complete treatment of exchanges and gifts can be found in Magrill and Hickey (1984).

Gifts

Gifts, although often a mixed blessing, can be similar to exchanges in terms of the type of material received: corporate annual reports, research reports, and other esoteric items that come unsolicited in the mail. Additionally, used books and periodicals generally arrive by the boxload from agency departments, faculty, students, and members of the community at large. Although much gift material can be of limited usefulness, some of it is highly pertinent. Staff involved with gifts can spend much time sorting through unwanted material to identify those items that the library wishes to return. Fortunately, not all gifts are in this category; libraries are at times recipients of special items or collections that are of remarkable value. Donors of these items may approach a library directly, either due to the donor's affiliation or the library's reputation. However, in many cases library staff must take the initiative to locate and solicit these materials. This solicitation requires individuals who are externally involved and alert to opportunities as well as possessed of the negotiating skills necessary to land the prize.

CONCLUSIONS AND TRENDS

Collection development, selection, and acquisition of agricultural materials for agricultural collections can be a daunting task due to

unique features and unusual challenges posed by the nature and sources of the materials. However, if agricultural librarians and other selectors approach the task systematically, with increased attention to policies governing selection, improved sources for guiding selection, and use of organized acquisitions techniques appropriate to the type and source of material, good results are obtained. Future trends expected for collection development and acquisition of agricultural materials are summarized here.

Collection development, or the intellectual exercise of defining institutional mission, evaluating collections, and specifying what will be acquired at what level, has been discussed. Clearly, with acquisitions funds increasingly in short supply, a library must develop careful policies that govern the acquisition of materials. As suggested, the library must first determine its mission or how it serves its primary clientele. It follows that "strategic planning" for collection development must be implemented as a way of making choices favoring mission related priorities. Such strategies unequivocally mean that less important subjects will receive a reduced priority. These techniques, coupled with evaluation of the current state of collections, consideration of cooperative availability of materials, and budgetary capability should all be combined into a "collection development policy" that meets the needs of the library.

Contemporary subjects included in agricultural collections are discussed at length; it is expected that the subject scope of agriculture will continue to evolve as pure and applied science and technology take on increasing importance in agriculture. As biotechnology and other hybrid fields evolve, new subjects will increasingly need to be acquired for agricultural collections. As information in all subjects increases in volume, diversity of source, and complexity, "core literature" projects, such as that currently being conducted at Cornell, will take on greater importance.

Collection analysis, particularly by use of the RLG conspectus, will become more important for large libraries. As the scope and complexity of agricultural literature increases, libraries will find it necessary to incorporate evaluation into collection development policies.

Cooperative collection development, as practiced by NAL, NLM, and LC for some fields of agriculture, will serve as an example to libraries of all types. Increasingly, with acquisitions funding diminishing, libraries will find it necessary to enter into cooperative collection development agreements on local and regional bases.

Preservation, while seeming to be an ancillary topic, is of concern to all libraries and enters into collection development decision-making. The decision to preserve or withdraw an item rivals the decision to acquire a new item. Since institutions are increasingly reluctant to undertake expensive library construction projects, the issues of space, preservation, and acquisition are all interrelated and must be treated by

systematic collection development policies. While many administrators hope for the magic electronic revolution that will replace print collections, the print format will continue to dominate. Nonetheless, a revolution in electronic and optical formats can be expected to influence agricultural library collection development.

While this article gives extensive treatment to selection sources, agricultural bibliographers would be aided by the continued development of guides to the many subject areas. As collections become increasingly converted to electronic formats, creation of customized subject guides to specific collections becomes more feasible. Comparisons of local holding lists to holdings of other major agricultural collections could result in the availability of desiderata files guiding the enhancement of collections.

In conclusion, it can be said that agricultural libraries of all types and missions will find it necessary to undertake formalized collection development. As materials become more expensive, local decisions to acquire will become more critical and responsibility for coverage will increasingly be shared via cooperative agreements. Concomitantly, libraries will adopt automated union lists of books and serials, and make extensive use of bibliographic citation databases, table of contents databases, and full-text electronic formats. Innovative delivery systems will provide material not otherwise available. Overall, conditions of cost, technology, and quantity of information combine to define an era of systematic and cooperative collection development for agricultural libraries.

APPENDIX

Resources

As mentioned previously, suppliers' catalogs or lists can be a rich source for obtaining agricultural materials that are not available through the traditional book trade, such as grey literature or out-of-print titles. Not only are these catalogs valuable selection aids for staff, but they provide important contacts for acquisitions librarians. A resource file of these specialized agencies and/or book dealers can be useful not only in acquiring materials more efficiently, but also in providing sources of information about availability of publications. The following is a selected list of sources:

GENERAL SUPPLIERS

Academic Book Center
5600 NE Hassalo
Portland, OR 97213
(Currently market testing as a supplier of audiovisual materials.)

AgriBookstore
1611 N. Kent St.
Arlington, VA 22209
(Supplies items listed in its catalog only; requires advance payment.)

agAccess
P.O. Box 2008
Davis, CA 95617
(Supplies current agricultural and horticultural books. Also has an out-of-print service.)

Agriculture Canada
Sir John Carling Bldg.
930 Carling Avenue
Ottawa, ON K1A 0CS
Canada

CAB International
Farnham House
Farnham Royal
Slough, SL2 3BN,
England

Centro Internacional de Agricultura Tropical (CIAT)
Apartado Aereo 6713
Cali, Columbia

FAO Documentation Centre
Food and Agriculture Organization
of the United Nations
Via delle Terme di Caracalla
00100 Rome, Italy

InterDok
173 Halstead Avenue
Harrison, NY 10528
(Publishers of the *Directory of Pub-*

lished Proceedings, they supply proceedings included in the directory as well as others.)

FAO Liaison Office
1001 22nd St. N.W.
Washington, D.C. 20437

International Rice Research Institute (IRRI)
P.O. Box 933
Manila, Phillippines

Spaulding Company
Graphic Microfilm Division
80 Hawes Way
Stoughton, MA 02072
(Supplies land-grant agricultural publications on microfilm.)

UNIPUB
4611-F Assembly Drive
Lanham, MD 20706-4391
(U.S. and Canadian distributor of FAO sale publications.)

SUPPLIERS BY COUNTRY OR REGION

India

Asia Books & Periodicals
Prints House
11/3 Darya Ganj
Ansari Road
New Delhi-110002, INDIA

D. K. Agencies
Regional Office, 12 Bali Nagar
New Delhi-110015, INDIA

New Zealand

New Zealand Export Books
P.O. Box 14054
Hamilton, New Zealand

APPENDIX (Cont.)

Australia

James Bennett Library Services
4 Collaroy St.
Collaroy, NSW 2097, AUSTRALIA

Scholarly Book Center
451 Greenwich Street
New York, NY 10013
(coverage: North America)

Soviet Union

Otto Harrassowitz
Taunusstrasse 5
6200 Wiesbaden, GERMANY

Baker & Taylor
Midwestern Division
501 S. Gladiolus Street
Momence, IL 60954
(coverage: North America)

Latin America

Libros Latinos
P.O. Box 1103
Redlands, CA 92373

Blackwell North America, Inc.
1001 Fries Mill Rd.
Blackwood, NJ 08012
(coverage: North America)

Victor Kamkin
12224 Parklawn Dr.
Rockville, MD 20852

Otto Harrassowitz
Taunusstrasse 5
6200 Wiesbaden, GERMANY
(coverage: Europe; other areas by
negotiation)

Scripta
720 Cayuga St.
Lewiston, NY 14092

Puvill Mexico Division
Entressa 109
Col. Mixcoac
Mexico DF 03910, MEXICO
(coverage: Mexico)

Spain

Puvill
Boters, 10 y Paja, 29
08002 Barcelona, SPAIN

Yankee Book Peddler
Maple Street
Contoocook, NH 03229
(coverage: North America)

APPROVAL VENDORS

African Imprint Library Services
Box 563
75 King Street
Falmouth, MA 02541
(coverage: Africa)

B. H. Blackwell LTD
Borad Street
Oxford OS1 3BQ
ENGLAND
(coverage: United Kingdom)

Coutts Library Services, Inc.
736 Cayuga Street
Lewiston, NY 14092
(coverage: North America)

Puvil Libros, S.A.
Boters, 10 y Paja, 29
08002 Barcelona
SPAIN
(coverage: Spain)

REFERENCES

- Agricultural research centres: A world directory of organizations and programmes* (9th ed.). (1988). Burnt Mill, Harlow, Essex, UK: Longman.
- American Library Association, Collection Development Committee. (1989). *Guide for written collection policy statements* (2nd ed.). Chicago: ALA.
- American Library Association. (1988). *Books for college libraries* (3rd ed.). Chicago: ALA.
- Arizona State University Libraries. (1987). *Arizona State University libraries collection development policy statement* (Preliminary ed.). Tempe, AZ: SUL, Collection Development Committee.
- Association of Research Libraries. (1984). *Strategic planning in ARL libraries*. (SPEC Kit, No. 108).
- Bailey, M. J. (1988). Microfilming state agriculture and forestry documents: Program of the National Agriculture Library. *Microform Review*, 17(May), 72-75.
- Blackwell North America, Inc. (1984-88). *Approval program cost coverage study*. Blackwood, NJ: Blackwell North America.
- Blanchard, J. R., & Farrell, L. (Eds.). (1984). *Guide to sources for agricultural and biological research*. Berkeley, CA: University of California Press.
- Block, D. (1988). *A directory of vendors of Latin American library materials* (3rd ed.). Madison, WI: Secretariat, Seminar on the Acquisition of Latin American Library Materials, Memorial Library, University of Wisconsin.
- CAB International serials checklist*. (1988). Wallingford, UK: CAB International.
- Chillag, J. (1982). Non-conventional literature in agriculture—An overview. *IAALD Quarterly Bulletin*, 27(1), 2-7.
- Curren, J. (1980). Agriculture Canada publications: Accessibility and use. In *Access to federal government documents* (pp. 53-60). Ottawa, Ontario, Canada: Canadian Library Association.
- David Lubin Memorial Library, FAO, Rome. (1986). Document supply in the field of agriculture: An international perspective. *Interlending and Document Supply*, 14(October), 97-101.
- Demas, S.; Chiang, K. S.; Ochs, M. A.; & Curtis, H. (1985). Developing and organizing collections of computer-readable information in an agriculture library. *IAALD Quarterly Bulletin*, 30(3), 66-70.
- DeVilbiss, M. L. (1975). The approval-built collection in the medium-sized academic library. *College and Research Libraries*, 36(6), 487-492.
- Evans, G. E. (1987). *Developing library and information center collections* (2nd ed.). Littleton, CO: Libraries Unlimited.
- Flanagan, C. (1985). *The business of acquisitions*. Presentation on a publisher panel representing scientific/technical publishing. Preconference to the ALA Annual Conference, Chicago, IL.
- Fusonie, A. (1977). Special collections within the U.S. Department of Agriculture: A selective view. *IAALD Quarterly Bulletin*, 22(3/4), 67-70.
- Garrett, S. A., & Luchsinger, A. E. (1980). The national program to microfilm land-grant agricultural documents. *College and Research Libraries*, 41(November), 510-513.
- Isaacson, R. T. (1985). *Gardening: A guide to the literature*. New York: Garland.
- Jensen, R. D.; Lamb, C.; & Smith, N. M. (1986). *Agricultural and animal sciences journals and serials: An analytical guide*. Westport, CT: Greenwood.
- Joint collection development policy statement of the National Library of Medicine and the National Agricultural Library: Biotechnology*. (1989). Unpublished manuscript.
- Kaniki, A. M. (1987). The international agricultural collection of the Pennsylvania State University libraries: A collection evaluation. *IAALD Quarterly Bulletin*, 32(4), 217-224.
- Kautz, B. A. (1985). Approval plans: A time saver for agriculture bibliographers. *IAALD Quarterly Bulletin*, 30(1), 1-6.
- Kovacs, B. (1987). Preservation of materials in science and technology libraries. *Science & Technology Libraries*, 7(Spring), 3-13.
- Kulp, L. A. (1985). NAL/NLM coverage of veterinary science literature. *Agricultural Libraries Information Notes*, 11(2), 1-4.
- Kulp, L. A. (1987). Human nutrition and related subjects: Collection responsibilities of the National Library of Medicine (NLM) and the National Agricultural Library (NAL). *Agricultural Libraries Information Notes*, 13(3), 1-5.

- Kulp, L. A. (1988). The preservation planning project at NAL. *Agricultural Libraries Information Notes*, 14(8), 1-5.
- Lendvay, O. (1980). *Primer for agricultural libraries* (2nd ed.). Wageningen, Netherlands: Centre for Agricultural Publishing and Documentation.
- Lilley, G. P. (Ed.). (1981). *Information sources in agriculture and food science*. London: Butterworths.
- Luchsinger, A. E. (1987). Agriculture. In B. J. Shapiro & J. Whaley (Eds.), *Selection of library materials in applied and interdisciplinary fields* (pp. 1-9). Chicago: American Library Association.
- Magrill, R. M., & Hickey, D. J. (1984). *Acquisitions management and collection development in libraries*. Chicago: American Library Association.
- Mathews, E. (1987). Bibliographic access to state agricultural experiment station publications. *IAALD Quarterly Bulletin*, 32(4), 193-199.
- Mathews, E. (1988). NAL/Land-grant university state agricultural publications program report and recommendations. *Agricultural Libraries Information Notes*, 14(9), 1-4.
- Meyer, L. (Comp.). (1985). *AGLINET union list of serials* (2nd ed.). Rome: U.N. Food and Agriculture Organization.
- Moody, M. (1986). FAO publications. *Collection Building*, 7(4), 39-42.
- Moran, B. B. (1985). Strategic planning in higher education. *College and Research Libraries News*, 46(June), 288-290.
- Morgan, B. (1985). *Keyguide to information sources in agricultural engineering*. London: Mansell.
- National Agricultural Library. (1976). *Serials currently received by the National Agricultural Library, 1975: A keyword index*. Washington, DC: USGPO.
- National Agricultural Library. (1988a). *Collection development policy of the National Agricultural Library*. Washington, DC: USGPO.
- National Agricultural Library. (1988b). *Selected state publications held by the National Agricultural Library*. Beltsville, MD: Author.
- National Agricultural Library. (1989). *Preservation plan for the National Agricultural Library*. Unpublished manuscript.
- Olsen, W. C. (1984). Infrastructure of scientific and agricultural information in the United States. *Revista AIBDA*, 5(2), 137-142.
- Perkins, D. L. (Ed.). (1979). *Guidelines for collection development*. Chicago: American Library Association.
- Phillips, R. W. (1973). FAO publications and documents and their acquisition by libraries in the United States. *Government Publications Review*, 1(1), 71-80.
- Project at Cornell to identify the core literature of the agricultural sciences for distribution to the Third World. (1989). *IAALD Quarterly Bulletin*, 34(1), 32-33.
- Pure and applied science books, 1876-1982*. (1982). New York: Bowker.
- Reed-Scott, J. (1988). *Manual for the North American inventory of research library collections* (rev. ed.). Washington, DC: Association of Research Libraries, Office of Management Services.
- Repp, J. (1989). Latin American acquisitions: A continuing challenge. In J. C. Fennell (Ed.), *Building on the first century: Proceedings of the fifth national conference of the Association of College and Research Libraries* (pp. 250-52). Chicago: American Library Association.
- Research Libraries Group. (1989). *Conspectus for Agriculture* [Computer printout]. Stanford, CA: Author.
- Selth, J. P. (1989). My say: OP books; a popular delusion. *Publishers Weekly*, 235(January 6), 78.
- Sheehy, E. P. (Ed.). (1986). *Guide to reference books* (10th ed.). Chicago: American Library Association.
- Simora, F.; Spier, M.; & Grey, D. P. (Eds.). (1988). *The Bowker Annual of Library and Book Trade Information*. New York: Bowker.
- Sinkule, K. L., & Moody, M. K. (1987). Food and Agriculture Organization documents on microfiche. *Microform Review*, 16(Fall), 296-299.
- Strategic planning in ARL libraries. (1984). *SPEC Flyer*, 108.
- Szilard, P. (1987). *Food and nutrition information guide*. Littleton, CO: Libraries Unlimited.
- Thomas, S. E. (1988). A coordinated program for state agricultural publications. *College and Research Libraries News*, 49(July/August), 425-430.

- Thor Power Tool Company v. The Commissioner of Internal Revenue, 439 U.S. 522 (1979).
- Tucher, A. J. (1984). *Agriculture in America, 1622-1860*. New York: Garland.
- U.S. Department of Agriculture. Cooperative State Research Service. (1987). Directory of professional workers in state agricultural experiment stations and other cooperating state institutions. *Agriculture Handbook*, 305.
- Vallentine, J. F., & Sims, P. L. (1980). *Range science: A guide to information sources*. Detroit, MI: Gale.
- Van De Voorde, P. (1987). The distribution of Food and Agriculture Organization publications to United States land grant institution libraries: A research note. *Government Publications Review*, 14(3), 347-349.
- Walford, A. J. (Ed.). (1980). *Walford's guide to reference material* (4th ed.) (vol. 1, *Science and technology*). London: The Library Association.