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**BANGLADESH AGRICULTURAL RESEARCH PROJECT PHASE-II**

**DEVELOPING LIBRARY SERVICE FOR  
THE INSTITUTE OF POST GRADUATE STUDIES IN AGRICULTURE**

**Melvin R. George**



**BANGLADESH AGRICULTURAL RESEARCH COUNCIL  
WINROCK INTERNATIONAL INSTITUTE FOR AGRICULTURAL DEVELOPMENT  
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DEVELOPING LIBRARY SERVICES  
FOR THE  
INSTITUTE OF POST-GRADUATE STUDIES IN AGRICULTURE

A REPORT PREPARED

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MELVIN R. GEORGE

Developing Library Service for the  
Institute of Post-Graduate Studies in Agriculture.

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Developing Library Services  
for the  
Institute of Post-graduate Studies in Agriculture

INTRODUCTION

The Institute for Post-graduate Studies in Agriculture (IPSA) is an ambitious undertaking and one which has substantial implications for the future of agricultural education in Bangladesh. The Institute will occupy a unique position in higher education for agriculture in Bangladesh offering, as it will, instruction only at the graduate level. It will, thus, be looked to as a standard for agricultural education in a country whose agricultural colleges do not yet command the same prestige as those outside the country, particularly those in the United States and Japan. Moreover, IPSA is unique in the organizations and institutions which are cooperating to produce and support it. The development of IPSA is being supported by international cooperation among the governments of Japan through the Japan International Cooperation Agency (JICA), the United States through U.S. AID Mission to Bangladesh, and Bangladesh through the Bangladesh Agricultural Research Council (BARC). Several agencies coordinated by BARC are cooperating to assure the success of IPSA. IPSA is being developed under the auspices of the Bangladesh Agricultural Research Institute (BARI) in cooperation with Bangladesh Agricultural University (BAU) and will draw cooperating faculty support from other research institutes in the Joydebpur area including the Bangladesh Rice Research Institute (BRRI) and the Central Extension, Research and Development Institute (CERDI). Thus, the IPSA program must reflect the high standards and aspirations of each of these organizations.

Developing library services to serve IPSA will require dedication to these

same high standards and aspirations, a task which is complicated by the cost and technical difficulty of establishing library programs to support instruction and research at the Master's and Ph.D. level. While the IPSA library will not stand alone in supporting instructional programs in the Joydebpur area, or in Bangladesh, it must provide the bulk of materials which students and faculty will need to support instructional programs which must set a new standard of excellence in the national system of education in agriculture. Agriculture has become an applied science dependent upon a body of knowledge provided by a wide range of disciplines in the natural sciences. Thus a collection in agricultural sciences must provide both a wide range of material in the life sciences and the physical sciences as well as material related to their application in agricultural activities. Most researchers in agricultural colleges receive their basic training in sciences such as chemistry, physiology, entomology, and botany and later apply their knowledge to agricultural problems, not infrequently through basic research. Thus a library which serves agriculture students and faculty must be strong in the many basic and applied sciences which provide support for the wide range of activities which are directly or indirectly involved with the production and distribution of food for the use of mankind.

The only mitigating factor (and it reduces the burden only in a relative way) is that IPSA will not attempt a comprehensive curriculum in agriculture. IPSA will concentrate its program upon the following areas: Agricultural Extension, Agronomy, Crop Botany, Entomology, Genetics and Plant Breeding, Horticulture, Plant Pathology, Statistics and their use in Agriculture, and Soil Science. The discussion which follows, and the recommendations contained therein, is designed to form the basis upon which a strong library program can be based to support such curricular interests.

### Collections

Building collections of journals and monographs which carefully reflect the curriculum is of great significance for two reasons. The first is, of course, to serve as a basis for instruction. In a very real sense building a collection and making it available for use is actually a form of instruction. The library collection, and what it contains, is both an adjunct and alternative to classroom lecture, field research or laboratory experiment. No teacher, no matter how erudite or well informed, can keep in mind or maintain currency in the range and depth of topics with which curious students will wish to deal. Nearly every study will require students to deal with subject matter which is peripheral to his instructor's interests and academic preparation. The only way in which any educational institutions can provide pedagogical support in the broad spectrum of human inquiry is through collections of materials in which that knowledge and inquiry is recorded. In scientific areas, journals form the most significant medium in which recent developments can be recorded and transmitted so that research is not needlessly repeated. But books too serve their purpose in allowing trends and research to be reviewed, evaluated and put in perspective.

Thus, the second purpose of library collections is to allow the faculty to maintain currency in their own subject fields and to glean what they need from other related disciplines. This is especially important in a country like Bangladesh which is, to a considerable degree, isolated from the centers of scientific experimentation and development elsewhere in the world. A substantial effort has been devoted toward sending promising young Bangladeshi scientists to first rate educational and research institutions throughout the world and they generally do very well. Yet, once they return to Bangladesh, many of them have told me they begin to stagnate. Access to other scientists and to their work is severely

restricted by distance, high travel costs, inadequate communication facilities and woefully inadequate libraries. Present policies which curtail travel by senior scientists makes the problem even more severe. Bangladesh, with its low standard of living and agricultural development inadequate to feed its growing population, cannot afford to be so cut off from the latest agricultural research. The only hope for improved food production requires an increased investment in agricultural research and education. An important component in that investment should be in the development of strong libraries so that Bangladeshi agricultural researchers and faculty members have access to the information and techniques which elsewhere are spawning agricultural advancement and food surpluses.

#### Selection

The materials listed in the bibliographies appended to this report are designed to provide a starting point for the development of a strong instructional library at IPSA. The materials chosen are all recent and still in print. They emphasize the applied nature of agriculture, although certain basic texts, guide-books and bibliographies have been chosen to represent the scientific disciplines upon which agriculture rests. The materials are only a beginning. The faculty, the administration and the librarian chosen for IPSA should make the expansion of the collection one of their highest priorities in the early stages of their development. In addition to the materials listed here, there are many materials no longer in print which must be secured from dealers who specialize in older materials. Extensive backfiles in some journals should be secured and a whole range of material which is only available in reports, documents, journal reprints and other hard-to-get formats must be identified and purchased.

The lists which I have attached are of several kinds. Attachment #1 includes a list of the most significant journals in the field of agriculture. They are

chosen from the Agricultural and Biological Index published by the H.W. Wilson Company. The Index is updated monthly and cumulated on a quarterly and annual basis and forms an easy-to-use access point to agricultural journal literature. The Index and the journals to which it provides access is the single most used resource for most agriculture students in the United States. I have chosen 105 journals from the Index which I consider most closely related to the curriculum of IPSA. All of these journals and the Index itself should be available for the current year and for at least the previous five years. Some of these backsets are available at other libraries in the Joydebpur area and they do not need to be duplicated provided that the backsets elsewhere are complete and that access is easy for IPSA students and faculty. All of these journals, their backsets, and the Index itself must be available in the Joydebpur area regardless of holdings elsewhere in Dhaka or Mymensingh because of their importance to the instructional program. The cost of the Index and the recommended journals is likely to be approximately \$13,000. Backfiles for five years of all items listed would cost approximately \$65,000, although not all are needed since some backfiles exist in the BARI and BRRI libraries in the Joydebpur area.

It should not be assumed that Attachment #1 contains a complete list of journals required by IPSA. The faculty have submitted a list (attachment #5) of their requirements for approximately sixty more journals, together with backfiles which they believe are desirable. Many of the items on the list duplicate those in attachment #1 and some of the backfiles are available elsewhere in the country. I have not had the time to check this list as required to identify unneeded duplication and overlap in backfiles, but current subscriptions to the unique titles marked on this list would probably cost another \$6,000 annually. All are standard titles and well justified by the IPSA curriculum.

In addition Mr. Miyashima provided me with the lists which constitute attachments #6 and #7. They represent Japanese materials with which I am not familiar. The Japanese have an important and extensive literature of the agricultural sciences which should be represented in the IPSA library. I will ask the representatives of Kyushu University to compile and mail a list to Mr. Miyashima when I visit in Japan.

My attachment #2 represents a list of the most significant abstracting journals in agriculture. All are published by the Commonwealth Agricultural Bureaux in England. These abstracting journals provide access to recent scientific developments in specific subject areas. Through them the student or faculty member can identify reports, journal articles, books, proceedings of scientific meetings and other matter which can be secured from other libraries, book sellers or such service organizations as the British Lending Library. They are especially useful to support research projects and theses and dissertations.

The material in Attachment #3 is taken largely from the Guide to Sources for Agricultural and Biological Research, by far the most comprehensive guide to the literature of the agricultural sciences. I will leave a copy with the staff at IPSA for their use. Included in the attachment are several items which deserve special attention. No academic library could function without Agrindex. It indexes the world's literature in agriculture and is, I understand, available free to IPSA through the National Agricultural Library and Documentation Centre (NALDOC) at BARC because NALDOC participates in its development by indexing and making available Bangladeshi Agricultural Publications. Another important tool is the Bibliography of Agriculture produced by the National Agricultural Library of the U.S. It appears monthly and is the most extensive list of agricultural literature in the World. A subscription will cost approximately \$800 per year, but it will be a good investment. Finally, attachment #3 includes several items indispensable to a library's operation.

Ulrich's International Periodical Directory provides information about journal availability and costs; Books In Print and Subject Guide to Books In Print list available monographs, their publishers and prices; and the Dewey Decimal Classification schedules, the Library of Congress Subject Headings and the Anglo-American Cataloging Rules provide the working librarian's support for cataloging classification and subject description. I brought with me copies of Books In Print and Subject Guide to Books In Print which I will leave in the IPSA library. Attachment #4 contains a list of books dealing with specific crops and techniques which will be of concern in the IPSA curriculum. All of the materials are currently available and only the most significant titles which survey recent research in cultivation technique's, particularly in the tropics, related to these crops have been listed. The approximate cost for purchasing all of the materials listed in attachment #4 is \$ 5,000.00.

#### Acquisition

The acquisition process can present considerable difficulty. There are really two distinct processes, one for the purchase of journals and other continuing publications which librarians call "serials", and one for books or "monographs". Both should be purchased through a vendor or "jobber" who is acquainted with publishers and with library needs and practices. I have had some discussions with the staff at IPSA and with the librarians at BRRRI and BAU about the use of a local jobber. They indicate that if U.S. AID regulations allow such use considerable savings can be realized. I am not familiar with local jobbers or their services, but I did bring a letter of introduction from a jobber in Portland Oregon. We at Oregon State University use Academic Book Center, Inc. and have found them a reliable and helpful vendor. As the letter indicates, Academic has experience in Asia. They are currently involved in a project in Hong Kong in which they supply books for a developing

polytechnic library. Academic provides a full service program for the purchase of monographs. They can ship materials fully cataloged and ready for use, a service which I will discuss below under the heading, "Getting Started Without Staff" and they can support continuing acquisition of monographs through a notification program. In such a program, the library is sent slips, indicating the publication of new materials within the subject scope of the library's collection and the institution's curriculum. These slips can be reviewed by library staff and members of the faculty and the slips can be used later to order the books for further examination and review or purchase. Using an Oregon firm would have obvious advantages if the IPSA library and that at OSU develop a continuing relationship. I could keep a watch at the U.S. end of ordering and shipping to see that orders are properly filled and services are appropriately rendered. I append the letter from Daniel P. Halloran, President of Academic Book Center, Inc. as attachment #8. Discounts on monographs are variable depending upon the size of the annual budget and would have to be negotiated with any jobber.

Serials may be purchased directly from the publisher or from a vendor. There are considerable advantages in using a vendor. Only one purchase order needs to be prepared, and only one invoice must be processed annually. The vendor also becomes responsible for "claiming" issues which disappear in transit or which the publisher may have failed to ship. Since many journals are published monthly or more often, the claiming process can be a considerable task if the library's relationship is with individual publishers. A monthly publication presents a potential for twelve "claims" in a single subscription year. At Oregon State we use Faxon, Inc. Although I did not bring a letter of introduction from that firm, I have spoken with them by phone and know that they provide services to an international clientele some of which are located in Asia. Discounts for serial items are generally small or non-existent. However, the jobber does take responsibility for claiming and for generating purchase orders to each publisher from the library's Master order. The serial

jobber also maintains an up-to-date address file for publishers. Since many scholarly journals are published by learned societies, the publishers address tends to change as new officers are chosen. This can be a very annoying problem for a library which is attempting to maintain continuing files of important journals.

I am told that the disappearance of journals and books in the mails is a serious problem for Bangladeshi libraries. The local jobber is able to avert some of the problem by receiving foreign materials centrally and making special arrangements for direct shipment to the libraries. Some such arrangement should be an important component for a contractual relationship for any vendor. The vendor should be in a position to guarantee arrival of all materials to the IPSA library and to arrange replacements for any materials missing in the mails without cost to the IPSA library.

Within the library, complete records must be kept for all materials on order. For monographs this is done by completing a 3 x 5 inch "order" card which contains full information about the item and order information including author, title, publisher date, and cost, the vendor with which the order is placed the date, and the originator of the request (faculty member, librarian, student). These cards are filed in alphabetical order by author and constitute a list of materials on order. When the book arrives, the book is checked against the order card and returned if it doesn't match. If the order and the book match, the date of arrival and the actual price are recorded on the order card and the invoice is cleared for payment.

For periodicals, the process is somewhat different. The usual process is to use a special "Kardex" file. The cards in the file are larger containing the same information as for monographs but, in addition, the card contains space for the "check in" of each individual issue of the journal. When an issue fails to arrive by the expected time, the Kardex record reveals its absence and the librarian

notifies the vendor for claiming using a specially designed form provided by the vendor. The method and practice for maintaining such files can best be conveyed to the librarian in the training program to be described below in the section under "Staff". I recommend that backfiles of journals be purchased, wherever possible, on microfiche. Microfiche can be reproduced easily. Items stored in this medium are not as likely to be stolen, and the cost is usually less than for print. Many backfiles will be available only in microformat. There is some debate about the advantages of microfilm over microfiche and vice versa. Both are adequate storage media. The chief advantage of microfilm is that its reels require less refiling. However, in the IPSA situation, I believe, this is overshadowed by the greater cost of microfilm reading equipment and of that equipment's more frequent need for repair. By far the largest collection of microfiche backfiles is available from University Microfilms, 300 Zeeb Road, Ann Arbor, Michigan, 48106 and free catalogs are available from that address.

#### Organization of Collections

The book collection should be cataloged using the Dewey Decimal Classification system which has been adopted by most Bangladeshi agricultural libraries. The subject access most often used is that of the Library of Congress. I have suggested the books which contain both schedules for purchase in attachment #3. The Bangladesh National Agricultural Library and Documentation Centre (NALDOC) has adopted subject access based upon the Agrindex which works well with their other responsibilities, but I do not recommend it for IPSA. The other libraries in the Joydebpur area already use LC subject headings and the small collection now at IPSA has been cataloged using that approach. BAU also uses LC subject headings and there ought to be a strong relationship between BAU and IPSA. Finally, LC

subject headings have already been adopted as a standard for automated systems. Eventually IPSA's library, like those all around the world, will be served by an automated catalog. IPSA will, no doubt, use a commercially available system when it does adopt automation, and the less variation in IPSA's library management from international standard the easier and cheaper will be the transition from manual to automated systems. I do not recommend that IPSA look seriously at automated systems at this point. Adequate support and maintenance is not available locally for hardware and software. Systems are still under development even in developed countries and the future will see many changes and a drastic reduction in cost, and labor is relatively inexpensive in Bangladesh reducing the attractiveness of automation as a cost saving measure. Journals should be stored in alphabetical order by title. No cataloging is necessary.

#### Resource Sharing

No library can provide all of the materials to which its users desire access. Libraries throughout the world have responded to this recognition of their individual inadequacies by joining together in networks to share in the cost of acquiring materials and in the exchange of materials once acquired. All of these networks are based upon a common recognition, however, that they cannot be substitutes for the development of strong collections at the local level. The library at IPSA as a fledgling institution has special need to enter into networking agreements with other libraries serving agriculture in Bangladesh. There are three levels of such agreements which would benefit not only IPSA but all agricultural libraries in Bangladesh, and I discuss them as they might serve the needs of IPSA students and faculty in turn.

The first opportunity for cooperation and networking is among the libraries in the Joydebpur area. IPSA's library, as it grows, will surely be the largest

and most comprehensive library in the Joydebpur area owing to its instructional programs. Nevertheless distances are short and transportation among IPSA, BARI and BRRRI are relatively easy. IPSA has no need to duplicate backfiles of journals already held in the area. However, access could be improved if library services among the libraries in Joydebpur were more fully coordinated. For instance, none of the Joydebpur libraries has complete backfiles of any of its journal holdings. A user must travel from library to library to use the complete file of even a single journal. This could be alleviated if the libraries in the area would swap collections to create a complete file in a single location. Thus, a user could consult a complete file in a single location. In addition, there should be no need for libraries in the Joydebpur area to duplicate any but a few subscriptions. The librarians should seek agreement among themselves which of the libraries might most appropriately hold the current subscription. Other libraries in the area could use their money to subscribe to some other title thus enriching access to journal literature for the entire area. The libraries could provide a current awareness service to the others interested in a particular title using a simple process which proved successful for me in the Chicago area. The library holding a unique subscription photocopied the table of contents page. We, in turn, interfiled the contents page in a binder with our other current journals together with a note to users indicating where the journal was available and that the holding library would send photocopies of single articles when needed.

Cooperation in the acquisition of monographs is somewhat more difficult, but one effective mechanism which works in the States is for the librarians who select material to meet once a month to review acquisitions plans and to look particularly at the proposed purchase of any very expensive item. In the Joydebpur area all items costing more than \$100 might, for instance, be reviewed to assure that there is no unnecessary duplication.

Such cooperation in the Joydebpur area is possible if a Librarians Council is created and empowered to make decisions in behalf of the libraries of the area. The development of such a council is somewhat complicated by the differing units to which the various libraries report. The libraries at IPSA and BARI are under the general supervision of the Director-General of BARI, the library at BRRRI reports to the Director-General of that Institute, and the library at CERDI reports to its D.G. Thus real coordination will require an understanding among those independent units. I recommend that the D.G.s involved charge their libraries to develop a memorandum of agreement which spells out in some detail the cooperative agreements and the authority of the Library Council in developing coordinated plans, setting priorities and resolving disagreements and conflicts among library users within the region. This will require that the D.G.s place a new level of trust in those whom they charge to administer their libraries, but only in that fashion can a strong library system evolve in the Joydebpur area which serves the interests of students, faculty and scientific researchers.

The second level of cooperative networking involves the libraries serving agriculture located at a greater distance from Joydebpur. Because the IPSA academic program will be offered under the authority of BAU there ought to be an especially strong relationship between the libraries at IPSA and BAU. The BAU library is an older library which contains valuable backfiles in journals and many specialized monographs. IPSA's curriculum, for instance, does not deal with animal science, veterinary medicine, forestry and many other areas, but IPSA students will inevitably have questions that require library materials in those areas. Cooperative relationships ought to be developed which reduce the necessity to duplicate collections in these areas. Substantial distances, erratic mail services, no regular delivery services between the two institutions, and a tradition which is not supportive of inter library loan make networking difficult, but not impossible if those

in leadership positions work to create a changing environment. I have spoken with the BAU librarian, Mr. Nur, and he has indicated a strong interest in creating such an environment. We spoke, for instance, of sending students who are beginning their thesis or dissertation research from IPSA to BAU for several days to do library research and Mr. Nur is willing to work out such arrangements. He is also willing to explore ways in which photocopies might be exchanged and eventually, in which inter library loan agreements can be established. As customs and communication avenues improve a relationship between the libraries of IPSA and BAU could promise a means by which instruction in agriculture and support for research can be substantially improved.

NALDOC has begun the process of developing further network possibilities among the agriculture libraries at Joydebpur and elsewhere in Bangladesh. This work needs to be supported and encouraged. A national current awareness program similar to the one described above for Joydebpur libraries is certainly a possibility; a national program for inter library loan needs to be established, and more frequent congresses of agriculture librarians are a must to establish trust and working relationships.

A third level of cooperation might be developed between IPSA and cooperating libraries in Japan and the United States. Since Kyushu University and Oregon State University are already involved in the project, their libraries might be enlisted to provide support and assistance in the form of training, exchange of photocopies and microfiche, and consultation on the development of collections, services and space. In the section under Staff Training I have suggested a way in which both the libraries at Kyushu University and Oregon State University could be involved in the initial training of staff at IPSA.

#### Continuing Support for Collections:

One final issue is of such importance that I have singled it out to give it

special attention. Building a library is a continuing process. As research continues to expand knowledge, libraries must be supported to acquire the published materials which document those advances. In all of the libraries I visited I saw evidence of short term funding for library materials which brought the stimulation of newly published materials for a short term. But many efforts have been short lived. Collections everywhere are spotty. There is no library with complete collections of even the most important journals. Crop Science, for instance is the primary journal in the field. Overlapping collections have been bought in eight different agriculture libraries. BAU has the most extensive file, but its holdings end with 1983. Those involved with agricultural development in Bangladesh must resolve to give long-term and continuing support to library development and the Bangladeshi government and policy makers must place a higher priority upon supporting libraries when foreign support dries up. Only through sustained effort can agriculture in Bangladesh receive the stimulus and support of the best and latest in agricultural research and practice.

#### Staff

No library can be effective without a well trained, well organized staff whose duties are clearly defined. The staff projections which follow assume an enrollment of approximately 200 students at IPISA in programs leading to the Master's and Ph.D. degrees. The projections also assume that the library will be open at least six days per week (preferably seven) from 7:30 a.m. until 9:00 p.m. or a minimum of 81 hours per week. I have not projected a salary and benefits budget for staff since I am not familiar with local wage scales and benefits packages.

#### Duties

Some duties of library staff members are obvious. New materials must be

selected, orders prepared, shipments received and invoices authorized for payment. Records must be kept for materials on order and for those which fail to arrive. Once materials are acquired they must be classified and cataloged, prepared for the shelf and finally, shelved. Cards must be filed in the catalog, Library staff must serve as custodians for the collection on a continuing basis. Materials must be kept in order on the shelves and in storage cabinets, materials must be kept in good repair and some materials should be sent to a binder or temporarily bound in the library. If materials are loaned to students and faculty, circulation records must be maintained, books must be recalled, fines levied, and lost materials must be reordered.

Other library responsibilities of library staff members are less obvious. The primary responsibility of professional staff members is to assure that appropriate materials are acquired and that they are used. Selecting library materials in academic libraries is usually a collaborative process between library staff members and members of the teaching faculty. However, librarians, with their direct knowledge of which materials actually are used, of the needs for information which students and faculty bring to them, and of the collection's strengths and weaknesses in general, should have the final determination concerning what materials should be ordered and in what quantities.

Assuring that library materials are used also requires a collaboration between librarians and teaching faculty. They should work together to develop reading lists to accompany lectures and formal courses and librarians must assure that materials are available in proper numbers to satisfy those needs. Teaching faculty must hold students responsible for reading assignments by requiring written papers and by including concepts from reading assignments in tests and examinations.

However, only librarians can do certain other work to assure that library materials are used. These fall in three general areas: Documentation Services,

## Reference Services and User Instruction Programs.

### DOCUMENTATION SERVICES:

Here the librarian prepares specialized bibliographies to support student and faculty research. This includes both the development of general bibliographies to serve general interests for classes or other "hot topics" and the preparation of more specialized aids to support individual faculty members and students. In addition the librarian may index and abstract certain publications for which there are no commercially available guides or for which those guides are not adequate. The librarian will follow through on requests for aid by searching the collection, requesting materials from other libraries on inter library loan and even consulting with other researchers and librarians throughout the world to identify and secure needed information. One of the most fruitful services which librarians can offer is to schedule a series of meetings with students as they are identifying their thesis and dissertation topics to identify the information available. During these meetings the librarian can identify materials which should be ordered, determine what may be needed in the form of inter library loans, recommend other libraries which the student should visit, and develop a record of the student's topic, information needs and the librarian's prescribed program of support for that student. These files should be maintained until the student has been graduated and should form the basis for the librarian's services to the student's education. Similar files may be kept for members of the faculty as well. This method of providing library support to graduate students has been adopted by many American universities and is of special importance in Bangladesh where there is not a strong tradition of library usage and where students may even protest the extensive and rigorous use of libraries in their study and research.

**REFERENCE SERVICES:**

The professional librarians should provide reference services during regularly scheduled hours. A desk should be established in a public area of the library away from the circulation desk where they will be available to provide reading guidance, answer questions about library organization and holdings, help library users to identify materials and even help them to interpret materials. For this reason it is important that librarians have a background both in librarianship and agriculture. Without a thorough grounding in each, the librarian cannot provide the proper support to students and faculty which will assure that library materials are used.

**USER INSTRUCTION PROGRAMS:**

Potential users of libraries, both students and faculty, need instruction in the use of libraries if they are to get the most out of their visits. The librarians should prepare a program of instruction to be required of all students soon after they enroll at IPSA. The program should include a review of the library's collection and facilities, an introduction to the library's catalog and indexes, and a summary of library rules and regulations. This may be taught in conjunction with a writing workshop in which students are taught research methods, documentation practices and term paper development. Many U.S. libraries use specially prepared self-guided instructional programs using work books in addition to lectures for this purpose. The library staff should also prepare an introductory program for new faculty reviewing library services, holdings and practices. In addition, the librarians should provide quarterly seminars for instructional staff to introduce new materials and to acquaint staff of new policies, procedures, etc.

**Staff Size and Organization:**

To provide the services indicated above the library should have three

professional librarians and enough skilled library assistants to be present in the library all of the hours the library is open, probably three individuals. Their responsibilities can be summarized as follows:

PROFESSIONAL LIBRARIANS:

Library Director:

The library director should be responsible for the overall oversight of the IPSA library. He or she must hire all staff, evaluate their work, recommend financial or other rewards such as promotion in rank and, upon occasion, fire unsatisfactory personnel. Much will depend upon the director's adherence to high standards of work performance and of library service. In addition the director must represent the library's interests to BARI and IPSA administration, prepare, defend and oversee the expenditure of the library's budget, work as a colleague with members of the IPSA faculty and represent the IPSA library in contacts with other libraries in Bangladesh and elsewhere. Finally, the library director should also engage himself in providing some reference, documentation and instructional services.

User Services Librarian:

This librarian should be the chief provider of documentation, reference and user instructional programs. He should work under the director's supervision to select materials and establish programs of service as outlined above.

Technical Operations Librarian:

This librarian will work under the director's supervision to handle all technical operations of the library including the acquisition of materials, accounting for the expenditure of materials funds, expediting relationships with IPSA and BARI administrative services staff and with book and periodical dealers, national customs and

postal officials and with the inter library loan departments of other libraries. This individual will catalog and classify all incoming materials, maintain the card catalog, supervise circulation activities and supervise typing staff. In addition this person should be responsible for all equipment including typewriters, photocopy machines and microfiche readers.

#### SUPPORT STAFF:

The three individuals who provide support must have schedules so that at least one is available in the library at all times the library is open. These individuals will handle circulation routines, see to the security of library materials and equipment, return library materials to the shelves, provide typing and secretarial support to the professional staff, provide simple maintenance for library equipment and provide other services as requested by the professional staff.

#### Qualifications and Training:

None of the work identified above will be accomplished unless staff members are properly qualified for their duties by education and training. I recommend that the Library Director and the Users Services Librarian have a Masters Degree in library science from Dhaka University or an equivalent program and specialized training in agriculture, if possible at the graduate level. The Technical Operations Librarian should have a Masters Degree in library science from Dhaka University or an equivalent program with a baccalaureate degree in the sciences. To acquaint the library staff with modern library practices and to confirm relationships between the IPSA library and others, I recommend that the library director engage in a further six-month training program. First, the librarian should work for one month at the BAU library to learn their procedures and practices for book acquisition and library operation and to become acquainted with the BAU collection. Then, I suggest the IPSA

librarian be sent to the library of Oregon State University for four months where he will be engaged in a carefully designed program of orientation and instruction. He will study under staff members at the OSU library and the program will cover the following issues:

- Library Financial Management
- Selection and Acquisition Procedures
- Agricultural Materials and Bibliography
- Reference and Documentation Services
- Automated Data Base Searching
- Inter Library Loan Procedures
- Bibliographic Instruction
- Binding and Mending Procedures
- Cataloging

The method of instruction will include reading, personal tutoring and practical, hands-on experience. After leaving Oregon State, the director should travel to Kyushu University for three weeks where he will receive a brief orientation to Japanese library operation and Japanese agricultural materials.

If this program proves successful and beneficial, it will probably be desirable to provide a similar educational experience at a later date for the person chosen as User Services Librarian.

The support staff also must be literate and have the typing and other skills necessary to fulfill the duties described above. I recommend that they be graduates of the equivalent of an American secondary school.

Finally, one important qualification does not relate to education or training but to motivation. I have noted a great variation in the quality of library services in libraries I have visited, which extends even to physical comfort, which appears to be directly dependent upon the energy and enthusiasm of the library director. Great care, therefore, must be exercised in the selection of the IPSA library director and the remainder of the professional staff. The individuals chosen must not only possess the require-

educational background but must also give evidence of high enthusiasm for library services, a willingness and ability to try new things, the self-assurance to fight battles with important officials on behalf of the library, and the ability to influence and attract the allegiance of the staff and those with whom they will work on the IPSA staff.

Status and Position of the Library Staff:

One other component must be present if the library staff is to fulfill the responsibilities described above. The library staff must receive support and recognition from the rest of the IPSA and BARI community to allow it to participate as an equal partner in the educational enterprise. As I understand it, librarians in the BARI system are paid at the very lowest level among professional staff. To advance they must leave their position in the library to seek promotional opportunity elsewhere. The system must provide incentive for librarians to stay in their libraries and the potential to advance to the same level as senior faculty and research personnel. The Director of the Library must be given status equivalent to department heads who report directly to the D.G. of IPSA, and he should participate in the same councils which work with the D.G. of IPSA to formulate educational policy and plans. The Director of the Library should be given an annual operating budget and should be allowed to determine the disposition of expenditures within it without superfluous and time consuming review. While a library committee should continue to operate, it should serve, as it does in American universities, in an advisory capacity to the Library Director. It should not be empowered to make decisions about which materials should be purchased or the quantities in which they should be purchased. At both IPSA and BAU I saw scarce funds partially wasted because the enthusiasm of some faculty members for particular books resulted in far more duplicate copies than were actually used. For the most part the interests of

IPSA faculty and library alike are better served by buying single copies of all but the most heavily used materials. Photocopies can respond to the need for duplicates of assigned chapters and articles. Obviously this does not apply to books bought as texts to be rented to students as they do at BAU's library.

If the Library Director is given the authority which I have suggested, he must be held accountable for it. He should undergo a rigorous performance review each year and if his work is unsatisfactory he should be fired. Weak performance in this important position should not be tolerated nor should it be used as an excuse to circumscribe the authority a good library director will need to do the job properly.

#### Getting Started without a Staff:

The list I have prepared should be reviewed by the IPSA library committee. After they have been reviewed, Attachments #2 and #5 can be sent as they appear directly to a Periodical Jobber such as Faxon, Inc. to secure a quotation on the cost of current subscriptions for the titles indicated (on attachment #5 only those items indicated with a + should be ordered, the others are duplicates of items in attachment #1). The abstracting journals in attachment #2 are all available from the same English publisher and could be ordered directly using the list to secure a price quotation. However, it may be advisable to place this order also with a periodical jobber to realize the greater assurance of shipment and avoid the loss which often results in the mails.

Order slips of the sort I've described above should be typed for the books listed in attachments #3 and #4. I recommend that they be purchased through Academic Book Center in Portland Oregon, and that furthermore, the books be ordered preprocessed. Since the IPSA staff is not yet in place, ordering the books in such fashion will assure that they arrive ready for use. The cost of such processing

Will likely be about \$3.00 each and since there are only about 500 titles the cost should not exceed \$1,500. I would be happy, personally, to supervise this process from Oregon State and to negotiate the contract with Academic. Whether IPSA would wish to continue this relationship with Academic can be determined later based upon this first experience and U.S. AID policy requirements. Once the full library staff is on hand at IPSA cataloging procedures can probably be handled at less cost locally, although the processing cost charged by Academic is far less than we could manage the same procedure at Oregon States library.

### Equipment and Facilities

Since the entire program at IPSA is new, the entire library program is in its rudimentary stages. Except for some shelves on which its 1,500 volumes are stored and tables and chairs for users, the library has none of the equipment it needs to operate. The rooms in which the library is located are pleasant and airy and well ventilated but they will not suffice for long. Below I will outline some of the library's equipment needs and make some preliminary recommendations about the library's space needs.

#### Equipment

The following equipment list includes the library's most pressing needs. I have arranged it in priority order.

1. Card catalog cabinet -60 drawers with pull-out consultation leaves. Since the typical cataloged book has four catalog cards, and since each drawer holds 1,000 cards, this unit will provide for approximately 15,000 volumes. Journals will not be cataloged in the IPSA collection, so this unit should provide adequate space for anticipated library growth for nearly 10 years. The Catalog may be transferred to an on line automated system within that decade so I do not recommend a larger catalog unit at this time.

2. Kardex file to hold records for 350 journal and serial items. The present recommendation projects a journal collection of approximately 260 titles. The Kardex file is used to maintain records on the receipt of all issues.
3. Book truck - 4. Necessary for shelving book, temporary storage of new materials, transport of boxes and other equipment about the library and possibly to classroom lecture sites.
4. Electronic memory typewriter, with card platen. This machine will be used to type original catalog cards and to duplicate them for use in the card catalog. Since each card must be duplicated on an average of five times, a typewriter with a memory will simplify duplication and avoid errors which result when cards are typed individually. The machine should have at least a one-page memory system.
5. Microfiche readers - 3. I have recommended that backfiles be bought, where possible, in microfiche format. Many good and mechanically simple readers are available.
6. Microfiche Cabinet-9 drawer prepared for 4x6 microfiche cards. This cabinet will hold approximately 20,000 microfiche cards and should be adequate for the foreseeable future.
7. Shelving-20 double faced sections 90"-base unit and six shelves per section on each side. This is standard library shelving in the United States and is superior to what IPSA has in many ways. Its primary points of superiority is that it will shelve more books in a smaller space than the present shelving. It is sturdier and the shelves are more easily adjustable to accommodate over-sized materials

such as large journals and reference items. The shelves in the present IPSA library are nearly filled. The shelving recommended here would store approximately 5,000 volumes and should be adequate for approximately five years if growth is at the rate projected in this proposal.

8. Binding Equipment. One of the serious problems experienced by IPSA and other Bangladesh libraries is the disappearance of single issues of journals before they can be bound. There are several binding systems which are simple to use that create a suitable temporary binding for journals. We, at Oregon State, bind some of our journals permanently with a system which binds journals together with plastic pins. Using such a system might discourage theft and would allow staff to handle the task without removing journals from the library for considerable periods of time while they are bound. Journals which are temporarily bound can be bound permanently later without difficulty.
9. Photocopy machine. The advantages of providing a photocopy machine in the library are obvious. Students can take journal articles with them; the machine can be used to facilitate interlibrary exchange of materials, and the library staff could use it to duplicate reading lists, duplicates for reserve use and even a library newsletter. The machine chosen should be a plain paper copier which allows easy copying of books and bound journals.

Supplies:

Obviously the library must have an annual budget satisfactory for the purchase of supplies to allow the use of the equipment above and to support the general activity of the library. Such supplies would include typewriter ribbons, book cards and pockets, blank catalog cards, book ends, copy paper and copier supplies, binding supplies, paper, pencils, tape, block stamps, etc.

Building and Space Requirements:

The present library space at IPSA will not be adequate for the library for long. It also has some severe limitations. The books in libraries are unusually heavy. In order to support loaded book stacks, library buildings must be engineered to support 150 pounds of live weight per square foot. I asked Mr. Miyashita to check with the engineers who designed the present IPSA building. Only the small stack and storage room was designed to support loaded shelves. The large open room where most of the volumes are currently stored was designed to support only 82 pounds of live weight per square foot. While there is no immediate danger of the floor collapsing, it is clear that not many more volumes should be placed in that room. The danger will be reduced considerably if ranges of shelving are kept short (no more than 3 sections), if they are spaced on wider than ordinary aisles, and if they are kept close to outside bearing walls. However, this considerably restricts the flexibility with which the present IPSA library space can be arranged.

Yet, I believe, the present conception of the library at IPSA is the best one for present and future needs. Books and journals should be stored on open shelves near tables for reading. No catalog can reflect the richness of any library's holdings. Browsing constitutes a significant means of access to library material. Restricting books to a closed stack area will reduce that access and, not incidentally, reduce the overall use of library collections. Such reduction in use will

actually increase the marginal cost of each book use and reduce the rate of return on the library investment.

Attachment #9 provides a preliminary space summary for a new IPSA library building. It assumes an eventual collection of 50,000 volumes, seating for 60 users at one time and a staff of six with some redundancy of staff space to accommodate staff members at different work assignments (a circulation desk attendant may also type but not at the same location). The unit area allowances are those I have used in overseeing the design of two new library buildings in the Chicago area and they are not overgenerous. In fact the estimates for shelving space require more density than I have seen anywhere in Bangladesh. The estimates assume the use of the shelving described above placed at 4.5' centers which leaves a 30" aisle between stock ranges and transverse aisles at approximately 22 foot intervals.

A few general comments about the proposed building might be appropriate.

1. It should be air-conditioned and humidity controlled to about 50% + or - 5% year around to preserve library materials.
2. Provisions should be made for electrical or air-conditioning failure. A gas powered generator should be available for electrical failure, but the building should be designed to allow good ventilation if air-conditioning is not available through locking, but openable, windows.
3. The building should guard valuable materials from sun damage. South and West window exposures are especially dangerous for books and expensive in the heat they produce which must be mitigated by air conditioning.
4. It should provide open stack access to materials interspersed with reading areas.

5. It should be designed to provide a quiet and pleasant study atmosphere. Hard surfaces of walls, floors and ceilings should be buffered with sound absorbent materials such as carpeting, strategically located sound absorbent panels, etc.
6. The building should be designed to be as flexible as possible. Stack and reading areas should be open to allow the relocation and exchange of space. This means that lighting patterns, floor-bearing capacity and cooling ducts should be uniform throughout.
7. Supporting columns, if the building is to be more than one floor, should be designed to make stack placement efficient. A 22½ foot bay has been called the "universal library bay" because it allows the placement of 7 sections of shelving between columns if columns are kept to 18" diameter or less, with 5 ranges in the other dimension. Other bay sizes have been used successfully in library buildings.
8. The building should have only one public entrance and exit to reduce the number of check points to preserve library security.
9. The building should be specially designed to meet library needs and a library building consultant should be retained. I have furnished, as a part of attachment #9, an outline for the written document which should be completed before an architect begins work.

Cost Projections Summary & Priorities

Materials:

<u>Journals</u>	<u>Annual Cost</u>
Attachment #1 journals	\$14,000
Attachment #2 journals	6,000
Attachment #5 journals	<u>6,000</u>
Total	\$26,000

<u>Books</u>	<u>Cost</u>
Attachment #3 books	\$25,000
Attachment #4 books	5,000
Processing Costs for above	<u>1,500</u>
Total	\$31,500

First Year Priority for Materials

1. Current subscriptions to journals in attachment #1	\$ 14,000
2. Current subscriptions to abstracting journals, attachment #2	6,000
3. Current subscriptions to journals, attachment #5	6,000
4. Books, attachments #3 and 4	31,500
5. Backfiles for attachment #1 journals - 2 years	28,000
6. Backfiles for attachment #5 journals - 1 year	6,000
7. Backfiles for attachment #2 journals - 1 year	<u>6,000</u>
Total First Year	\$ 97,500

Second Year Priority for Materials

1. Current subscriptions for attachment #1	\$ 15,400
2. Current subscriptions for attachment #2	6,600
3. Current subscriptions for attachment #5	6,600
4. New Books	15,000
5. Backfiles #1 - 2 years	28,000
6. Backfiles #2 - 2 years	12,000
7. Backfiles #5 - 3 years	18,000
8. New Books	<u>15,000</u>
Total Second Year	\$116,600

Each Year Thereafter - Materials

Periodical costs continue to escalate at a rate much faster than the rate of general inflation. Thus, annual budgets must make provision for a 10% + increase in actual costs each year. The highest priority each year should be the maintenance of annual journal subscriptions. New titles should be added with caution since they constitute a continuing commitment to escalating costs. Special development funds should be available to the IPSA library for at least five years.

After that backfiles should have been built and the materials can be somewhat reduced to purchase only current subscriptions and new and retrospective monographic items. The IPSA library should attempt to maintain a balance of 60% for continuing publications - journals, year books, etc., and 40% for the purchase of monographs.

Note: I have not figured a discount rate for either books or journals. The discount rate for journals is usually small or non-existent. Scientific books are usually sold at "short discount", and it would likely be less than 10% probably closer to 5%. Whatever it is may be balanced by the cost of shipping which I have no way to estimate. My cost estimates do not include the Japanese materials in attachments #6 and 7 because I do not have access to cost information.

#### Director Training Costs

<u>Purpose</u>	<u>Estimated Cost</u>
1. One month at the BAU library	?
2. Travel costs to Oregon State and Kyushu	\$ 2,500
3. Per diem @ \$80	3,360
4. OSU costs for instruction, materials, etc.	3,000
5. Kyushu University costs	?

#### Equipment Start Up Costs

1. Card catalog	\$ 1,200
2. Kardex file	750
3. Book trucks - 4	400
4. Electronic memory typewriter	1,500
5. Microfiche readers - 3	1,500
6. 9 - drawer microfiche cabinet	650
7. 20 sections shelving	4,000
8. Binding equipment	4,000
9. Photocopy machine	<u>5,000</u>
Total	\$19,000

Supplies

Miscellaneous supplies

\$ 2,000

Toward the Future

I would be pleased, personally, to provide continuing review and oversight of the IPSA project. The next eighteen months will be critical. A librarian will be chosen and trained and materials will be chosen and purchased. If American vendors are chosen, I can develop agreements with them and supervise their activities from the United States. I estimate that will require approximately one full work week. I have already outlined my proposal for the training of the library director. Approximately six to eight months after the librarian returns from that training process, I suggest that I, or an appropriate member of the OSU library staff, return for approximately three weeks to determine how things are going, recommend changed procedures, and help establish the library program. If a new library building is to be designed. I could work as a building consultant to write a building program and to work with the architect on the design phase. This would probably require two trips, one in the preliminary stage to write the program of 3 weeks and another later to consult with the architect although that might be accomplished through the mails. During these consultations I would expect to be reimbursed under an agreement similar to the one now arranged with Winrock.

The highest priority purchase should be the Biological and Agricultural Index and a large percentage of the journals it indexes. This will give timely and easy access to a wide range of agricultural information.

Biological and Agricultural Index.

H.H. Witson Co. Price varies by number of indexed periodicals subscribed to approx. \$750 per year.

recommend 5 years backfile

Advances in Agronomy  
Academic Press, Inc. Price varies

Advances in Applied Micro-biology  
Academic Press, Price varies

Advances in Botanical Research  
Academic Press \$65 price varies

Advances in Ecological Research  
Academic Press \$65 price varies

Advances in Food Research  
Academic Press. \$65. price varies

Advances in Genetics  
Academic Press Price varies

Agricultural and Biological Chemistry  
Japan Publications Trading Co.  
P.O. Box 5030, Tokyo International  
Tokyo, Japan. \$150

Agricultural Economics Research  
Superintendent of Documents, U.S. Government  
Printing Office, Washington, DC. \$11.

Agricultural Engineering  
American Society of Agricultural Engineering. \$25

Agricultural Water Management  
Elsevier North Holland, Inc. \$150

- Agriculture, Ecosystems & Environment  
Elsevier Science Publications. \$141.50
- Agro-Ecosystems  
Int. Assn. for Ecology. Elsevier North Holland, Inc. \$68
- Agronomy Journal  
Am. Society of Agronomy. \$65
- American Horticulturalist  
American Horticulturalist, Mount Vernon Va. \$20
- American Journal of Agricultural Economics  
Sydney C. Jarnes, Secy-Treas., American Agricultural  
Economics Assn. Dept. of Economics. Iowo State Univ. \$50
- American Journal of Botany  
American Journal of Botany, Columbus Ohio. \$45
- American Zoologist  
American Society of Zoologists, Calif. Lutheran College. \$60
- Annual of Applied Biology  
Executive Officer, AAB Office, NVRS, Wellesbourne,  
Warwick CU35  
9EF, England. \$150
- Annual of Botany  
Academic Press. \$246
- Annual Review of Biochemistry  
Annual Reviews. Palo Alto Calif. \$29
- Annual Review of Ecology and Systematics  
Annual Reviews, Palo Alto Calif. \$27
- Annual Review of Entomology  
Annual Reviews. \$27
- Annual Review of Genetics  
Annual Reviews, \$27
- Annual Review of Phytopathology  
Annual Reviews. \$27
- Annual Review of Plant Physiology  
Annual Reviews, \$27
- Applied and Environmental Microbiology  
American Society for Microbiology. \$157

- Australian Journal of Biological Sciences  
Commonwealth Scientific and Industrial Research  
Organization Aust. \$80
- Australian Journal of Botany  
Commonwealth Scientific & Industrial Research,  
Aust. \$80
- Biochemical Genetics  
Plenum Publishing. N.Y. \$325
- Biochemistry (American Chemical Society)  
American Chemical Society. \$303
- Biological Bulletin  
Biological Bulletin, Marine Biological Lab.  
Woods Hole. \$82
- Biological Conservation  
Elsevier Applied Science Publishers. \$250
- Biological Reviews of the Cambridge Philosophical Society  
Cambridge University Press, \$88
- Biometrics  
Biometrics Business Office, Wash. D.C. \$55
- Biometrika  
University College London. \$40
- Bio-Science  
Bio-Science, Arlington, Va. \$52
- Botanical Gazette  
U of Chicago Press. \$70
- Bulletin of Entomological Research  
Commonwealth Agricultural Bureaus, England. \$80
- Canadian Journal of Biochemistry & Cell Biology  
National Research Council of Canada. \$105
- Canadian Journal of Genetics and Cytology  
National Research Council of Canada. \$85
- Canadian Journal of Microbiology  
Natl Research Council of Canada. \$122
- Canadian Journal of Plant Science  
Agricultural Institute of Canada. \$51

- Canadian Journal of Soil Science  
Agricultural Institute of Canada. \$51
- Cereal Chemistry  
Am. Assn of Cereal Chemists. \$88
- Crop Research  
Scottish Academic Press. \$30
- Crop Science  
Crop Science Society of American. \$65
- Ecological Entomology  
Blackwell Scientific Publications. \$113
- Ecology  
Ecological Society of America. \$85
- Environmental Entomology  
Entomological Society of America, \$60
- Evolution  
Society for the Study of Evolution \$60
- Experimental Agriculture  
Cambridge Univ. Press, \$115
- Experimental Cell Research  
Academic Press. \$747
- FAO Monthly Bulletin of Statistics  
UN, PUB. \$15
- FAO Plant Protection Bulletin  
UN, PUB. \$8
- Food Policy  
IPC Business Press, \$158
- Foreign Agriculture  
Supt. of Documents, U.S. Govt. Printing Office, \$16
- Garden  
The garden Society, N.G. Botanical Gardens, \$12
- The Garden (London, England)  
Royay Horticultural Society, \$87.50
- Genetics  
Baltimore, Maryland, \$180

- Gleanings in Bee Culture  
A.T. Root Publishers, \$10.75
- Growth  
Southern Bio-Research Institute, \$28.50
- Hilgardia  
U of California Agricultural &  
Natural Research Pub. \$7.50
- Horticulture  
Boulder, Colorado, \$18
- Hort Science  
Am. Society for Horticultural Science, \$55
- International Pest Control  
Middlesex, England. £20
- Journal of Agricultural and Food Chemistry  
Am. Chemical Society, \$116
- Journal of Agricultural Engineering Research  
Academic Press, \$115.50
- Journal of Agricultural Science  
Cambridge Univ. Press. \$135
- Journal of Applied Bacteriology  
Blackwell Scientific Pub., \$197
- Journal of Applied Ecology  
Blackwell Scientific, \$155
- Journal of Bacteriology  
A.M. Soc. for Micro-Biology, \$197
- Journal of Ecology  
Blackwell Scientific, \$155
- Journal of Economic Entomology - Available at BRRI, 1971-  
Entomological Society of Am. \$60
- Journal of Experimental Biology  
The Biochemical Society, London, \$315
- Journal of Experimental Botany  
Oxford U. Press, \$230

- Journal of Food Protection  
Intl. Assn. of Milk, Food & Enviromental Sanitarians, \$80
- Journal of Horticultural Science  
Invicta Press. \$98
- Journal of Insect Physiology  
Pergamon Press. \$390
- Journal of Nematology  
Society of Nematologist, Iowa State U. \$30
- Journal of Parasitology  
Am. Society of Parasitology, \$90
- Journal of Soil and Water Conservation  
Soil Conservation Society of Am. \$22
- Journal of Soil Science  
Blackwell \$87
- Journal of the Am. Society for Horticultural Science  
Am. Society for Horticultural Science, Alexanderia Va. \$75
- New Zealand Journal of Agricultural Research  
Dept. of Scientific & Industrial Research NZ. \$40
- Pesticide Bio-chemistry & Physiology  
Academic Press, \$158
- Pesticide Science  
Blackwell Scientific, \$150
- Physiologia Plantarum  
Munksgaard Int. Publishers, Denmark, \$227
- Phytochemistry  
Pergamon Press, \$430
- Phytopathology  
Am. Phytopathological Society, \$150
- Plant and Soil - available at BRRI, 1971  
Kluwer Academic Publishers Group. Netherlands, \$546
- Plant Disease  
Am. Phytopathological Society, \$100
- Plant Pathology  
Blackwell Scientific, \$115

Plant Physiology Available of BRRI, 1971  
Am. Society of Plant Physiologist, \$110

Quarterly Review of Biology  
State University New York, \$40

Soil and Water Conservation News  
Supt of Documents, US Govt. Printing Office, \$18

Soil Biology and Biochemistry  
Pergamon Press, \$ 195

Soil Science  
Williams & Wilkens, \$75

Soil Science Society of America Journal - available at BRRI, 1976  
Madison, Wisconsin, \$65

Systematic Botany  
Am. Society of Plant Taxonomists, \$60

Taxon  
Intl. Bureau for Plant Taxonomy and Nomenclature, \$86

Transactions of the ASAE  
Am. Society of Agricultural Engineerings, \$59

Tropical Agriculture Available at BRRI, 1974  
Sussex, England, \$120

Virology  
Academic Press, \$79

Weed Research  
Blackwell Scientific, \$135

Weed Science  
Weed Science Society, Champaign. Il. \$35

World Crops - Available of BRRI, 1974  
World Crops Pubs. England, \$33.75

\$13,000 + per year.

Back sets for 5 years \$65,000

Major Abstracting Journals

The following should be available in any institution offering post graduate study in agriculture. These are all available from Commonwealth Agricultural Bureaux, Farnham House, Farnham Royal, Slough SL23BN UK.

Crop Science and Production

Cotton and Tropical Fibers Abstracts	\$ 90
Crop Physiology Abstracts	230
Field Crop Abstracts	420
Herbage Abstracts	240
Horticultural Abstracts	455
Irrigation and Drainage Abstracts	100
Maize Abstracts	200
Plant Breeding Abstracts - Available of IARC, BARI, BAU	495
Plant Growth Regulator Abstracts	140
Potato Abstracts	120
Rice Abstracts	140
Seed Abstracts	140
Soil and Fertilizers Abstracts	435
Sorghum and Millets Abstracts	90
Soyabean Abstracts	110
Tropical Oil Seeds Abstracts	90
Wheat, Barley Tritical Abstracts	250

Crop Protection

Bio control News and Information	90
Bulletin of Entomological Research	145
Distribution Maps of Pests	50
Distribution Maps of Plant Diseases	40
Helminthological Abstracts Series B Plant Nematology	120
Review of Applied Entomology Series A Agriculture	290
Review of Plant Pathology. Available at BARC,1983	290
Weed Abstracts	205

Economics, Development & Sociology

Rural Development Abstracts	100
Rural Extension, Education & Training Abstracts	100
World Agricultural Economics & Rural Sociology Abstracts available at BARC,1976	325

Machinery and Buildings

Agricultural Engineering Abstracts	210
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Taxonony

Bulletin of Systematic Mycology	25
Description of Pathogenic Fungi and Bacteria	40
Description of Plant Viruses	14
Index of Fungi	40

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\$5,854

X5=\$29,270

Sources for Agricultural ResearchGeneral Bibliographical Guides

Blanchar, J. Richard and Lois Farrell. Guide to Sources for Agricultural and Biological Research. U. of California Press, 1981. about \$48.50

Books in Print 1985-86. 6 Vol. Bowker, 1985. \$199.95

Subject Guide to Books in Print 1985-86. 4vol. Bowker, 1985. \$142.95

Lilley. G.P. ed. Information Sources in Agriculture and Food Science. Butterworth, 1981, \$75.00

Abstracts and Indexes

Agrindex - V1-1975 Rome: Food and Agricultural Organization of UN  
Bibliography of Agriculture. V1-(1942) Wash. DC. US. Dept of  
Agriculture Library, and National Agricultural Library,  
Indispesable. Various Publishers - order through vendor such as  
Academic Press.

Science Citation Index (1961) Philadelphia: Institute for  
Scientific Information, 1963 very important very expensive  
\$2,500 per year. Order through book jobber.

Ulrich's International Periodicals Directory, 1984, 2 vols.  
25th ed. Bowker, 1986. \$150 set.

Asian Abstracts and IndexesAustralia

Australian Science Index (1957) East Melborne Australia:  
Commonwealth Scientific and Industrial Research Organization.

China

Current Bibliography of Agriculture in China 1979 Wagvenger,  
The Netherlands: Centre for Agricultural Publishing and  
Docuementation 1979.

India

Indian Agricultural Index 1964 - Partnagor, Namital, India:  
G.B. Pant University of Agriculture & Technology.

Japan

Nippon Nogaku Banken Biji Sakuin (Japanese Agricultural Sciences Index) Tokyo, JAALD Photocopies provided from the holdings of more than 100 member libraries.

Korea

Current Index to Journals in Science and Technology: Biology, Agriculture, Pharmacy. Seoul: Korea Scientific 2nd Technological Information Centre 1962.

Pakistan

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Philippines

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Society for Economic Botany  
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Pathology, Univ. Georgia  
Athens, GA 30602, USA

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Botanical Gazette



November 26, 1985

Dr. Melvin George, Librarian  
Oregon State University  
Library  
Corvallis, Oregon 97330

Dear Dr. George:

Last week our sales representative for Oregon State, Melissa Coe, found out from Marge Reeves that Oregon State will be helping to establish a new university in Bangladesh. I understand you will be leaving next week to help establish the library. Since we have not had a chance to present the international services of Academic Book Center to you, I was not sure if you knew of our extensive background in serving international libraries. If I could take a little of your time now, it would be appreciated.

- 1) Academic Book Center has been providing acquisitions services and technical services to libraries since 1978. We have been selling to libraries in Europe, the Middle East, the Far East, and the South Pacific. The level of support offered has ranged from a simple acquisition of books to full book processing with machine readable cataloging and advice on computer systems. Currently, our most ambitious project is helping to create a new polytechnic library in Hong Kong. We are providing information on new books before they are published, acquiring the books selected by the library, providing complete processing for the books, and providing a MARC record on tape.
- 2) Academic Book Center can provide bibliographic information from various sources. You can request information on titles that fit specific collection needs of the library. This can be provided in several different formats. In addition, we can supply information about titles. Finally, we can provide information about new serial titles that may be of interest.
- 3) Academic Book Center can supply any material needed by the library including titles from England and Europe. Although we specialize in North American material, it is often important for foreign libraries to have one source of supply. Academic Book Center can fulfill that requirement.

AS

November 26, 1985

Dr. Melvin George  
page -2-

- 4) Academic Book Center can process the books which we supply. When the books are received by the library, they are "shelf ready." This includes spine labels and pockets affixed as well as cataloging.
- 5) Finally, Academic Book Center will visit the library periodically to ensure that the services being offered are satisfactory.

I have been brief in this letter because I know you are busy getting ready for the trip. Please keep us in mind if there is any way we can be of assistance. I plan on being in the Middle East in January or February and would be pleased to arrange a visit to the library if that would be helpful. I can also put you in touch with librarians in third world countries who have done this type of project.

Please contact me if I can help you in any way.

Sincerely,

ACADEMIC BOOK CENTER, INC.



Daniel P. Halloran  
President

DPH:cb

gb

Type of facility	Unit	No. of Units	ASF per Unit	Total ASF
<b>STACKS (Unit = single-face section)</b>				
Books.....50,000	Section = 125 Volumes	400	X 8.7 =	3,480
Documents & Pamphlets, Incl. Archives	Section = 1,000 Items	5	X 8.7 =	44
Microfilm (Boxed).....	Section = 400 Reels		X 8.7 =	
Microprint (Boxed).....	Section = 10,000 Cards		X 8.7 =	
Newspapers: Unbound-Display*...7	Section = 7 Titles	1	X 8.7 =	9
Back Files*.....	Section = 9 Volumes		X 8.7 =	
Periodicals: Unbound-Display...400	Section = 15 Titles	27	X 15.0 =	405
Boxed.....	Section = 30 Titles	1	X 8.7 =	
Recordings.....	Section = 500 Records		X 8.7 =	
Reference.....500	Section = 75 Volumes	7	X 15.0 =	105
<b>ALTERNATES TO STACKS</b>				
Maps.....	Case = 1,000 Maps		X 42 =	
Microfilm (Reels).....	Case = 400 Reels		X 11 =	
Pamphlets.....	Case = 1,000 Pamphlets		X 11 =	
Slides: Bound.....	Case = 5,000 slides		X 17 =	
Unbound.....	Case = 10,000 slides		X 17 =	
	CASE = 20,000 Sheets	2		34
<b>MICROFILM STUDY AREAS</b>				
Undergraduate (Tables or Open Carrels).....60	Study Station.....	60	X 25 =	1,500
Graduate: Tables or Open Carrels....	Study Station.....		X 28 =	
Enclosed Carrels.....	Study Station.....		X 45 =	
Faculty (Enclosed Carrels).....	Study Station.....	10	X 75 =	750
Microfilm Reading or Typing (Student)	Study Station.....	5	X 25 =	125
<b>STAFF WORK AREAS</b>				
Acquisitions**.....	Work Station.....	1	X 100 =	100
Administration.....	Work Station.....	1	X 120 =	120
Bindery Preparation.....	Work Station.....		X 250 =	
Catalog**.....	Work Station.....	1	X 110 =	110
Circulation.....	Work Station.....	2	X 120 =	240
Conference Room.....	Work Station.....	10	X 20 =	200
Data Processing (incl. equipment)....	Work Station.....		X 120 =	
Documents.....	Work Station.....		X 120 =	
Gifts.....	Work Station.....		X 100 =	
Inter-Library Loan.....	Work Station.....		X 100 =	
Marking and Mending.....	Work Station.....		X 100 =	
Periodical.....	Work Station.....		X 120 =	
Photocopy.....	Work Station.....	1	X 100 =	100
Receiving and Mail.....	Work Station.....		X 300 =	
Reference.....	Work Station.....	1	X 120 =	120
Reserve Book.....	Work Station.....		X 100 =	
Serials.....	Work Station.....	1	X 120 =	120
Special Collections.....	Work Station.....		X 120 =	
Special Records.....	Work Station.....		X 120 =	
Staff Room.....	Station.....		X 25 =	
Typing Pool.....	Work Station.....	1	X 75 =	75
SUBTOTAL.....				7,637
<b>OTHER ASSIGNABLE FLOOR AREA (5% of subtotal)</b>				
Lobby, Public Card Catalog, Patron Waiting, Display, Storage, etc.				382
<b>TOTAL ASSIGNABLE SQUARE FEET.....</b>				<b>8,019</b>

\*Unit amounts represent one half the required double-face section.  
 \*\*Including allowance for volumes actively in process. Gross Sq.Ft. at 65% efficiency - 12,340

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## Standards

Space	Furniture	No. of Persons	Net Sq. Ft. per Person
Standard Classroom	Tablet armchairs	10- 40	15
	Tablet armchairs	41- 75	12
	Tablet armchairs	76-100	11
Conference-Seminar Case Study (tiered)	Tables and chairs	10- 20	20
	Swivel chairs-continuous counter top	50-125	18
Lecture Room (tiered)	Fixed seating	50-100	12
		101-300	10
			8
Auditorium (tiered)	Traditional Seating		8
Auditorium (tiered)	Continental Seating		9½
Library	Reading Rooms		25
Library	Stacks (1 sq. ft./15 vols.)		
Dining Hall	Chairs and tables		15
Accounting and Book- keeping	Chairs and tables		28
Business Machines Room	Chairs and tables		28
Typing Room	Typing tables and chairs		28
Shorthand-Office Practice Room	Secretarial desks		40
Clothing Lab	Special furniture and equipment		60
Food Lab	Special furniture and equipment		58
Sculpture and Ceramics Lab	Special furniture and equipment		50
Art Painting Lab	Special furniture and equipment		50
Chemistry Lab	Lab furniture		58
Photographic Lab	Special furniture and equipment		40
Data Processing Room	Special furniture and equipment		75
Science Lab	Lab furniture		50
Suggested Office Sizes			Square Feet
For one person who occupies it part of a day			100
For one person, part of a day, with extra furniture, such as a drafting table			125
For a department head or someone who occupies it a full eight hours a day			150
For two persons, part-time			150
For an assistant dean or assistant director			175
For a dean or director			200
For a vice-president			250
For a president			150
One secretary, with space for visitors			150
Two secretaries, with space for visitors			200

**Soil Tests.** In areas where the substratum is uncertain or unpredictable, soil tests are recommended. Occasionally the subsurface is such that one part of the building foundation rests on rock or gravel while other parts rest on sand or clay. Unless the architect and his structural engineer are aware of this condition, uneven deflection is almost sure to occur. It might not be so bad if the entire building settled at the same rate, but when one part settles and another does not, or when one part of the building settles at a faster rate than other parts, then walls crack, floors become uneven, doors drag, and structural failures occur.

When foundation conditions are not uniform, soil tests should be made by properly equipped and experienced soils engineers. These tests consist of drilling holes at the building site at depths and locations agreed upon by the architect, his structural engineer, and the soils engineer. These test holes could vary in depth from 25 to 125 feet, depending on the size and weight

Other Space Standards

<u>Item</u>	<u>Approx. dimension (inches)</u>	<u>Sq. ft. required</u>
Desk	60 x 30	55
Table	60 x 30	55
Chair (arm of side)	16 x 28	12
File cabinet (legal or letter)		12
Storage cabinet	18 x 24	18
Coatrack	48 x 24	20
Classroom seating (tablet arm chair)		12-15
Book truck		6
Card catalog (5 drawer across)		27
Listening station (oversize carrel)		55
Microfilm viewing station		55
Lounge chair		30
Individual carrel (enclosed)		40
Individual A-V viewing station		55
Reference and browsing shelving (4 foot aisles)		12

Counters

<u>no. of work stations</u>	<u>counter dimension</u>	<u>counter sq. ft. and access behind</u>	<u>reception area size</u>	<u>total counter area</u>
1	6' x 30"	666	186	252
2	12' x 30"	999	279	378
3	18' x 30"	132	372	504
4	24' x 30"	165	465	630
5	30' x 30"	198	558	756
6	36' x 30"	231	651	882

## PREPARATION OF A BUILDING PROGRAM FOR A COLLEGE LIBRARY

by Francis G. Poole, August 24, 1965

### A. Background for a Building Program

The following outline constitutes a check-list of the essential items to be covered in any library building program. No two programs are precisely the same because there is no standard pattern for these documents. The organization, the material covered, and the degree of detail will vary with the author of the statement. Not infrequently, the length and the depth of coverage will depend upon the time schedule.

Where planning begins well in advance of selection of an architect there is usually time for the librarian to devote a considerable amount of time to the thinking and discussion that should precede a written statement. Adequate time for planning also allows opportunity for discussion with the library staff, for visits to other libraries, for correspondence with colleagues on points that pose particular problems, and, finally, for the careful writing of a program that will cover clearly and fully all those aspects of the new library that the architect will need to know in order to design a successful building.

The librarian charged with responsibility for a new building can make no greater mistake than to assume that the architect is clairvoyant and will instinctively know not only the problems of a given library but also the answers to those problems.

Despite the emphasis upon written building programs during the last few years, libraries are still designed without such assistance. Almost inevitably, these buildings fail to achieve their purpose. A good architect will attempt to compensate for the lack of a written statement of program by holding frequent discussions with the librarian, but such conferences are poor substitutes for a program. Inconsistencies arise because of the lack of opportunity for careful thought about the problem, important details are omitted, estimates of need are given without checking details, and other difficulties arise that could be solved if the program were first prepared in written form.

Occasionally an architect, particularly one who has had no previous experience in designing a library, will assure the college administration and the librarian that no written program is required. Most architects, however, and nearly always those with experience, will ask for and appreciate a written statement of the needs and problems of the building they are about to design. It is not unknown, in fact, for the architect to include in his fee the cost of preparing a written program. In such cases a program prepared by the librarian may result in a fee reduction of as much as 1/2 per cent.

In many cases, the librarian may begin work on the program in advance of hiring a consultant. Usually such time is well spent, especially if this results in bringing the library staff into the planning and if it stimulates a full discussion of the past policies of the library as these affect planning for the new building.

Once a consultant is retained, the pace of planning usually increases. The consultant will wish to review the first draft of the program, if it has

reached this stage, may want to meet with the library staff, and will usually want to meet with members of the library building committee. If other librarians are to be visited, this should be arranged as soon after the consultant is employed as possible. Following visits to other libraries and whatever planning meetings with other campus groups are considered desirable, the program can be put into final form.

In the usual situation, the librarian should assume full responsibility for drafting the program, for whatever revisions are necessary, and for preparation and publication of the final document. The consultant is always available for discussion, to review the program and make comments and suggestions, and to raise questions whenever he thinks these will stimulate productive thinking. The consultant should not, in most cases, be expected to write the program or to formulate the policies upon which the program is based. At times the consultant may assume a larger role in the development of the program but this is desirable only when the librarian is, for one reason or another, unable to exercise his full responsibility.

The written program may include as much detail as the librarian can provide, but it should not include less than the major topics listed below. In most instances, diagrams of traffic flow, functional relationships of various segments of the library, and other illustrative materials will be helpful to the architect. Some excellent programs may be as lengthy as 100 pages. On the other hand, successful buildings have resulted from programs of as little as 15 or 20 pages. Obviously, of course, the larger and more complex the building, the greater the number of details that must be included in the building program.

It should always be remembered that the architect depends upon the written program to explain to him and his staff the building and its functions. Every detail that will give more insight into the library and the needs of the building is worthy of including in the program.

## B. Suggested Outline for a Building Program

### INTRODUCTION OR PREFACE

The introduction may discuss one or all of the following topics or it could be omitted. Usually, however, it is useful to include such a brief introductory statement.

1. Purpose of the program
2. Special comments about the planning schedule
3. Earlier programs, revisions, etc.
4. Identification of those responsible for the program
5. Role of the library committee
6. Acknowledgement of special help and assistance  
(e.g., support of the president, role of the library staff, etc.)

### INSTITUTIONAL BACKGROUND

This section may be titled in any of several ways but should always consist of a comprehensive statement about the institution the library serves. This is the place to discuss the background and educational philosophy of the

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college, and the present and projected enrollment. If a chart of the expected growth of the institution is available it should be included here. Mention should be made of any unique or special features about the institution that affect the library or that distinguish it from other similar institutions. Expansion of the curriculum, the addition of a graduate program, service to users outside the college, and other factors that may affect the future of library service should be included here.

#### LIBRARY BACKGROUND

This section should discuss the important background aspects of library service. Usually included here are such elements as the following:

1. Brief statement covering history of the library - only if this is pertinent in later discussion of future plans.
2. Present library situation - present building, location of parts of the collection, unusual or undesirable conditions that require solution.
3. Administrative policy as regards centralization or decentralization of library services.
4. Library policies - present and future as these are expected to affect library administration and services.
5. Present size of the collection and future growth based upon present and projected budgets.
6. Staff size and projected growth of staff.
7. Special collections - rare books, etc.
8. Departmentalization of collections or departmental libraries.

#### BASIC CONCEPTS OF LIBRARY SERVICE

Whereas the last section was primarily devoted to past and present features of library service with projections of certain essential factors such as book collection and staff, this section should be a discussion of the librarian's concept of library services in the new building.

There is no established pattern for organizing this material, although one useful way is to organize it around the major elements of library service, for example:

- 1) the subject reading areas
- 2) the service center (lobby, circulation desk, reference desk, card catalog, bibliographic materials, newspaper and current periodical display, exit controls, etc.)
- 3) special collections and services (audio-visual, maps, documents, micro-text facilities, copying services, archives, curriculum laboratory)
- 4) staff work areas (administrative offices, acquisitions, and cataloging)

The above list does not include all possible topics, but is indicative. Thus, in a small library, the reserved book collection may be handled by circulation desk attendants and discussed under the heading of "service center". It might, if larger and not part of the service center, be discussed under a separate heading.

This is the place to indicate the kind of service to be extended to readers (open stack vs. closed stack), the general arrangement of readers vis-a-vis

the book collections, the concept of reference service, and shelving arrangements for reference materials and periodicals.

If the library is to be organized according to a divisional plan then this should form the basis for organizing this material.

#### ARCHITECTURAL CONSIDERATIONS

Usually the library committee and the librarian have arrived at some conclusions about specific architectural matters. They may wish to emphasize the need for flexibility, to point out the need for later expansion, to discuss some particular requirements such as entrances from two directions, the special problems caused by a proposed site, the problem of remodeling vs. a new building, etc. Such matters should be fully covered here.

In addition, the librarian may want to discuss the need for temperature and humidity control, the general problem of fenestration, the possibility of a building solution in two floors or three floors, the desirability of a basement, the need for acoustic control, the possibility of carpeting, general lighting requirements, the use of color, special electrical problems (a.g., the need for underfloor ducts in the technical services areas), etc.

Siting of the library sometimes poses a difficult problem. Certainly it is one of the most important problems to be solved in planning a new building. Probably the librarian, the faculty library committee, and possibly the consultant, will have given this extended consideration before the architect is engaged. In any case, no final solution is likely to be possible unless a master plan for the campus has been developed. If no such plan is available, the architect may insist that it be developed preparatory to making a final decision on the site for the library. An extended discussion of this matter is not necessary for the program, but a paragraph indicating the extent of the problem and the status of a solution will be helpful to the architect and to others who read the program.

#### DETAILED CONSIDERATION

Following the general considerations outlined in the five preceding sections, the program should cover in all necessary detail, the following elements of the building. This discussion may be organized as outlined below, or it may follow the pattern established in the section entitled: "Basic Concepts of Library Service".

1. Service center
  - a. Foyer or vestibule
  - b. Lobby
    - 1) Exit control
    - 2) Exhibit facilities - wall cases, movable cases, etc.
    - 3) Bulletin boards - built in, movable, etc.
    - 4) Directory of library offices
    - 5) Hours of service
    - 6) Telephone
  - c. Circulation services
    - 1) Service counter - special requirements, number of staff to be accommodated.
    - 2) Reserved books - if included in circulation services
    - 3) Work space for discharging books - special requirements for present and future charging systems

DETAILED CONSIDERATION (continued)

- c. Circulation services (continued)
  - 4) Telephone requirements
  - 5) Book lift requirements, or need for proximity to service elevator
  - 6) Central lighting control
  - 7) Office space for circulation head
  - 8) Book truck storage space
  - 9) Staging area (or proximity to adjacent shelving) for organizing books to be shelved
  - 10) Locker or coat rack facilities for staff
  - 11) Time clock location if required for student assistants
  - 12) Book drops--service counter drops, after hours return facilities, special requirements
- d. Reference facilities
  - 1) Type of counter or desk, possibility of combining with circulation desk
  - 2) Shelving for special references collection
  - 3) Telephone requirements
  - 4) Office space--location and amount
  - 5) Special requirements
- e. Periodicals and periodical records
  - 1) Periodical indexes--location
  - 2) Central serials record--where located, how serviced
  - 3) Visible record files for public use
  - 4) Location and display of:
    - a) Unbound general periodicals
    - b) Unbound periodicals in subject fields--shelved by broad subject groups in stacks, displayed in single large periodical section or room, etc.
    - c) Bound general periodicals
    - d) Bound periodicals in subject fields--classified, filed with monographic materials, filed in single large periodical section
  - 5) New book display
  - 6) Paperback book display
  - 7) Newspaper display and reading
- f. Card catalog
  - 1) Number of units required
  - 2) Size of units required (60 vs. 72 tray)
  - 3) Catalog reference tables
  - 4) Type of catalog--dictionary or divided
  - 5) Space required for catalog expansion
  - 6) Lighting requirements of card catalog area
  - 7) Location of card catalog as related to use by technical services and reference staff
  - 8) Traffic flow around card catalog

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DETAILED CONSIDERATION (continued)

2. Subject reading areas (Books and Readers)
  - a. Book stacks--type, arrangement, special units
  - b. Reading facilities--types of equipment, general arrangement
    - 1) Individual study tables
    - 2) Individual study carrels
    - 3) Multi-place tables
    - 4) Multi-place electronic carrels
    - 5) Enclosed carrels
  - c. Lighting
  - d. Acoustic control
  - e. Lounge or informal reading areas
  - f. Browsing room--if any
  - g. Group studies
  - h. Seminar room
  - i. Faculty studies
  - j. Smoking rooms
3. Special Collections and Services
  - a. Microtext reading facilities
  - b. Audio-visual facilities
  - c. Rare books
  - d. Archives
  - e. Maps
  - f. Government documents
  - g. Copying and reproduction service
  - h. Typing rooms
4. Staff work areas
  - a. Administration
    - 1) Librarian's office
    - 2) Secretary's office
    - 3) Other administrative offices
    - 4) Conference room
    - 5) Office supplies storage
    - 6) Staff restrooms
  - b. Loading dock and receiving room--general location and arrangement, relationship to technical services
    - 1) Stock room
    - 2) Book storage facilities
  - c. Technical services
    - 1) Acquisitions and cataloging departments--arrangement and workflow, location of trade bibliographies, relationship to bibliographic materials, relationship to card catalog, storage for books in-process, design of work stations, special files and equipment
    - 2) Book processing area--facilities
    - 3) Serials and government documents processing-- if separate
    - 4) Mending and binding
    - 5) Storage for books awaiting processing
  - d. Other work areas not covered above or in other sections

DETAILED CONSIDERATION (continued)

5. Alphabetical check-list. This is the place for a number of items that have not been discussed elsewhere. A partial list of such items is given below, but each library will have a somewhat different list.

- Acoustics
- Air-conditioning
- Auditoria
- Bells
- Book return chutes
- Bulletin boards
- Coat room space
- Clocks
- Doors
- Drinking fountains
- Electrical outlets
- Elevators
- Emergency exits
- Fire detection and control systems
- Janitor's storage
- Keys and locks
- Lighting
- Pencil sharpeners
- Signs
- Telephones
- Toilets and quiet rooms

SPACE SUMMARY

It is usually desirable to indicate the number of square feet required for each facility as it is discussed in the course of the program. Thus, for example, a discussion of an audio-visual service area might conclude with a statement of the space required as follows:

Audio-Visual Space Requirements:	Net Sq. Feet
a) Group-listening room for 20 at 15 sq. feet per station	300
b) Earphones-listening facilities for 30 at 25 sq. feet per station	750
c) Storage and service areas	500
d) Film and preview facilities for 4 at 90 sq. feet each	<u>360</u>
Total net square feet	1,910

At the conclusion of the program it is useful to include a recapitulation of the figures for the individual areas.

It should be remembered that these estimates of space required are normally given as "net" or "assignable" square feet. That is to say, these figures represent the amount of square footage required for or assigned to library purposes. The difference between the assignable square feet and the total or "gross" square feet in the building includes space for stairways, toilets, elevators, mechanical rooms, janitor's closets, major aisles, etc.

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Usually, the total building will have about 65 per cent of the total space available for library purposes. The remaining 35 per cent is required for non-library purposes. Such a building is said to be 65 per cent efficient. Occasionally an architect may be able to arrange space so well that he require only 25 or 30 per cent for non-library purposes, but in general it is better to estimate on the basis of 65 per cent.

Somewhere in the course of the program, the librarian should make clear that he is not trying to do the architect's work for him but is only attempting to set up the problems the architect must solve. The librarian's basic task in writing the program is to outline the requirements of each element of the building and to set forth the necessary relationships of the several elements in order that the architect may arrive at an understanding of the problem. In all college library buildings there are common fundamental interrelationships. Other relationships must be worked out individually for each library and institution.