

MART

Information Transfer

End-of-Tour Report

Dr. J. Cordell Hatch
Information Transfer Advisor

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The MART (Management of Agricultural Research and Technology) Project is funded by the United States Agency for International Development (USAID). The MART Project's chief link to the Government of Pakistan is through the Pakistan Agricultural Research Council (PARC). A MART Project Coordination Committee composed of federal, provincial, and university representatives coordinates and guides project activities. Its purpose is to assist the Pakistani agricultural research system to strengthen its research management capabilities, and to improve communications, training, farming systems research, arid zone research, and research in the rural social sciences. Winrock International, through a contract with USAID, has responsibilities to assist with the first four of these tasks. Two international agricultural research centers, the International Maize and Wheat Improvement Center (CIMMYT) and the International Center for Agricultural Research in Dry Areas (ICARDA), are responsible for the other two tasks.

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The three Chairmen of PARC since 1986 have supported the Information Transfer Advisor and his efforts fully. They have been responsive by providing staff, budget, and direction for this new emphasis on information transfer and audio-visual communications.

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The PARC/NARC communications, training, and outreach staffs have been valued friends and colleagues. The Advisor's first counterpart, Anwar Ali Chaudhry, launched the work in a professional manner. Malik Mushtaq, Khan Rana, Khalid Masood, C. A. Ozair, and Ashraf Tanveer contributed in many useful ways. The NARC Library and Documentation staffs, particularly Shaheen Majid, made the nationwide Library Strengthening Program a success.

The Audio-Visual Communications staff and Director Anwar Hassan are close friends and colleagues. From no staff, they have developed into a capable and effective production unit. Staffs in the provinces, especially at the Provincial Agricultural Communications Support Cells, are organized and producing. It has been a good experience to work with all of them.

In short, it has been a pleasure to work with and just be with Pakistanis throughout this country during the past six years. The joys, the challenges, and the problems will not soon be forgotten.

J. Cordell Hatch

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EXECUTIVE SUMMARY

The Information Transfer component of the MART Project helped make scientific knowledge and research results more readily available to scientists, educators, extension staffs, students, farmers, business, industry, government, and the general public.

Information was disseminated through radio, television, video tapes, audio cassettes, filmstrips, 35mm slides, models, charts, specimens, and library materials including books, microfilms, microfiche, CD-ROMs, and computer multi-media programs.

Facilities and equipment, including a new Audio-Visual Communications/Training Institute Building at NARC, were provided for training and local production of mass media and other communications materials. A staff was recruited and trained for making full use of these modern and expensive provisions. A modest inventory of supplies is stockpiled to sustain operations at Audio-Visual Communications and the Training Institute through most of 1992 and perhaps beyond.

Workshops, courses, and conferences were organized and conducted to improve communications production skills of the NARC/PARC staffs and personnel from the agricultural universities, research institutes, and other public and private agencies. Notes, books, manuals, and training materials on videotapes and computer disks were provided to participating individuals and institutions.

Provincial Agricultural Communications Support Cells were organized, established, and equipped at Lahore, Faisalabad, Quetta, Peshawar, and Tandojam. Provincial Information Transfer Committees were established to give direction, set priorities, and support media productions at each location. The PACS Cells documented local research and responded to informational needs of targeted audiences.

The equipment purchased during the early months of the project was modest in cost and sophistication. However, it served well for training new staffs and establishing productions. The equipment now being delivered is modern and of very high quality. It is highband 3/4" U-Matic SP, which is compatible with equipment at PTV, PTN, and ETV (Second Channel). Super-VHS production equipment also is provided. It supports most nonbroadcast requirements and meets field acquisition needs for television.

The new AVC/TI Building at NARC provides excellent and ample space for training and AV productions. The video studio is large and could serve as the national center for the production of agricultural telecasts, documentaries, and informational videos. The building will soon have equipment installed for doing just about any kind of training or AV production.

A state-of-the-art computer training laboratory will be equipped with 386 SX computers, color monitors, dot-matrix and laser printers, scanner, copier, and new releases of the most relevant software packages. Training will be aided by the use of improved projectors and high-resolution image display panels. With this Advanced Computer Training Laboratory and the existing one, NARC has the facilities to meet most computer-training needs of the nation's research system, which now has some 500 computers.

Since the original Computer Training Lab was inaugurated on 2 January 1989, a full schedule of courses has been offered. With ten fully equipped work-stations, one for the instructor and nine for trainees (two trainees at each station), classes of 18 take courses ranging from one to three weeks. Hundreds have been trained in software packages currently used. Video courses are available for independent study of software. The lab is open extended hours and some evenings, for practice and official work.

Training in most important areas of agricultural communications and information transfer has been organized and conducted. Courses cover such topics as Science Writing, Photography, Camcorder Use, Video Editing and Production, Scriptwriting, Computer Graphics, Desktop Publishing, Library Management, etc. Books and reference materials on research topics and communications were provided to major institutions.

Excellent equipment, facilities, and training have been provided. Management and operational support from GOP are the major constraints now. A highly motivated staff under good supervision can do much with presently available resources to serve agriculture, the farmer, and the people of Pakistan.

In media productions, NARC/PARC now produces a weekly radio broadcast aired by the full PBS network. The focus is on science in agriculture. To date, more than 80 programs have been prepared. In video, twelve (12) programs have been produced on various research topics. Five (5) have been aired on PTN. Several other videos are in progress. FSR interventions are being documented on video. Printed "farmer factsheets" on the interventions also are being produced.

The Provincial Agricultural Communications Support Cells, established under MART, have produced many radio and television broadcasts, nonbroadcast videos, and provided video and photographic support to numerous agricultural events and activities.

In all, the NARC AV Unit has produced 104 information transfer/AV modules and programs. The PACS Cells have produced even more than that. The grand total far exceeds the 100-module target set in the MART PC-1. Radio has accounted for the majority of programs produced. It is without question the most cost-effective means for reaching farmers.

Television's importance will increase as more farmers acquire TV receivers. Group and individual viewing of agricultural videos also will make a substantial contribution in the years ahead.

Two of the more successful and possibly important information transfer activities were not considered major ones in the MART PC-1. Early in the project, upon visiting research institutes and agricultural universities, libraries and textbooks were found to be in deplorable condition. The libraries were neither well stocked nor managed. Most were dark, dirty, unused "mortuaries" for old, obsolete books and journals. If available at all, textbooks were mostly out of date and from western countries. To help alleviate both problems, special funds were sought and received from USAID.

The MART Library Strengthening Program received \$1 million in ACE funds to update scientific knowledge at agricultural universities and key research stations. Faculties and staffs at the 17 institutions selected 50 to 150 journals which they did not have or wanted updated. Backfiles, 1985 through 1991, were purchased and delivered as microfilm, microfiche, and CD-ROM. All the equipment to use and manage the knowledge databases also was provided, including CD-ROM drives, computers, and software packages. Extensive training was given to library staffs. During on-site library training, many scientists participated.

The Textbook Publishing Program was launched by establishing a task force and further analyzing the problem and developing the publishing strategy. It was recommended that TIPAN, a university development project, be given responsibility to implement the program. Specific textbook needs were identified and priority given to ten (10) subject areas. Six textbooks are now at different stages of production. The target is to have all ten published by the end of TIPAN in 1994.

MART leaves in place information transfer and training systems which have excellent facilities, state-of-the-art equipment, adequate transport, a stock of supplies, and fairly good staffs at most locations. The needed agricultural knowledge is available; now the scientists, communicators, and administrators must see that it is disseminated. To drift along in a sea of complacency, not doing, not caring, taking but not giving, wanting to be helped but not helping, would be a tragedy. There is not much else that an advisor or donor can do. The tools are in the hands of Pakistanis. Now the "needful" must be done by those who have been employed and prepared for the job. The impact and benefits to the people of Pakistan could be great.

ACCOMPLISHMENTS AND DISCUSSION

The Information Transfer Advisor for the MART Project arrived in Pakistan 17 July 1986. His work began at the National Agricultural Research Centre with Anwar Ali Chaudhry, Director of Scientific Information, as counterpart. Six weeks later, Mr. Chaudhry left for a six-year consultancy in Nepal. Malik Mushtaq Ahmed, Director of Publications, PARC, was appointed Scientific Information Director and Information Transfer counterpart. A year later Dr. Anwar Hassan was hired as Director of Audio-Visual Communications and became a co-counterpart. With good support and assistance from all, a program was launched for developing comprehensive audio-visual communications and information transfer services at NARC and throughout the country. Although not finished in a true sense, the information transfer work sponsored by MART was terminated 30 April 1992 due to lack of funds (Pressler Amendment). Nevertheless, PARC and the research system now have in place a reasonably good infrastructure for accomplishing agricultural research information dissemination.

Need and Potential

Audio-visual communications had great potential in the agricultural research system and in agricultural development overall. Innovative steps were taken to develop the infrastructures for audio-visual use in Pakistan. MART and other USAID projects sponsored a number of AV developments. Other donors also included audio-visual components in their projects.

In 1986 the agricultural research system already had established print media units to publish annual reports, journals, newsletters, and other publications. Audio-visual communications, however, was not well developed or did not exist at all. Except for the limited activities and services of Scientific Information, little in the way of audio-visual communications existed at NARC. The MART Project gave special attention to this need.

An audio-visual production center was to be designed and built on the National Agricultural Research Centre campus. It was to be equipped and staffed. The staff was to be trained and audio-visual modules produced. A management structure was to be organized. The audio-visual production capabilities at NARC were to be linked with other key locations. In short, the foundation for a national system of audio-visual agricultural research communications was to be established. Progress made in achieving these development goals is discussed on the following pages.

Terms of Reference for the Information Transfer Advisor are given in Annex A. These were well conceived, provided clear direction, and if written today would require little change.

The Building Program

The first priority was to design and construct space for the new audio-visual communications program to be launched at NARC. Training also needed additional space. Instead of two buildings, it was decided to design one which would be adequate for both units.

Working with Dr. James Miller, MART Architectural Consultant, design plans for the new Audio-Visual Communications/Training Institute Building were developed. Collaborative efforts resulted in floorplan designs for both AVC and TI facilities. Drawings and details are included as Annex B.

Rough specifications for each room were developed. These showed dimensions, the equipment and furniture to be installed, special lighting and electrical requirements, the staff to be located in each room, and the functions to be performed there. From these specifications, professional engineering plans and construction designs were made. Construction started on the Audio-Visual Communications/Training Institute Building in 1988. The new building was occupied in early 1991.

NARC AVC Directorate Staffing and Management

The MART PC-1 specified thirty (30) professional staff positions for the NARC Directorate of Audio-Visual Communications. To date, twenty (20) posts have been filled.

Except for the Director, BPS-19, all grades were set at the BPS-17 level or lower. At least four (Senior Producer, Senior Scriptwriter, Senior Cameraman, and Senior Engineer) should have been at BPS-18. A media researcher or on-air talent would be a valuable staff member also. Eventually, those employees deserving promotions could move into these slots.

Recommendations with descriptive titles for all AVC positions, plus a staffing schedule with priorities, are given in Annex C. These are still valid today and provide the best guide for staffing the AVC directorate. Assistant and associate directors of the unit are not required. The staff should consist of do'ers, not more administrators. Every person should be actively involved and contributing to the actual production of audio-visual programs and materials.

The staff recruited were reasonably well trained and experienced for their respective jobs. The engineers, cameramen, and producers are good enough to do the job. However, the absence of scriptwriters, artists, and on-air talent have slowed progress. These should be given top priority in PARC's future hiring.

Work performed by the present staff has been of reasonably good quality. The problem is that there has been too little of it. Except for occasional spurts of activity, there has been a general lack of concentrated, sustained effort. Unless the commander is present and pressing, the troops make little progress. This seems to be true for most units at NARC. Direct involvement of the Chairman achieves occasional bursts of energy, but this soon wears off, and little more is accomplished.

PARC/NARC administration needs to put the AVC Director and staff on a firm schedule of productions. The weekly radio program is going fine. Likewise, there should be a weekly TV production, even if it's only five or six minutes long. PTN is sure to use it, even repeat it, and it could be offered to PTV on a free basis. Nothing beats a regular broadcast schedule with firm commitments, a rigid deadline, and expected compliance.

Equipment for Information Transfer

Prior to the MART Project little audio-visual equipment existed. The Scientific Information Unit at NARC and the Agricultural Information Office at Lahore were the best equipped. Most of the other information offices were relying largely on print media. The MART Project gave proper focus and support to the other media, especially audio-visuals and particularly video.

MART called for the development of a national center for the production of audio-visual agricultural materials. Early in the Project, equipment was ordered (cost \$219,000) which could be used for training and productions while awaiting construction of the AVC/VI Building. This was modest and low-priced equipment but adequate for what was to be done at the time.

An assortment of more than 100 items was provided to establish the Provincial Agricultural Communications Support Cells in Faisalabad, Lahore, Peshawar, Quetta, and Tandojam. The list is provided as Annex D. Additional and more sophisticated items are now being delivered, cost \$400,000. This includes Super-VHS highband camcorders and 3/4" U-Matic Highband Superior Performance (SP) editing recorders. The cells in Lahore and Faisalabad also get professional camera and field recorders (3/4" SP). This equipment allows all cells to produce broadcast-quality tapes as well as excellent masters for duplicating VHS copies for wide distribution to targeted audiences in the provinces.

New equipment for the AV Center at NARC is of high quality and compatible with all TV stations and networks in Pakistan. Two 3/4" SP field-recording systems were purchased. Highband 3/4" and Super VHS editing and production equipment is provided along with a number of backup units. Digital special-effects and switching equipment, audio mixing, monitoring, and other sophisticated items are available.

The Audio-Visual Communications Production Center at NARC now has all the equipment and necessary supplies to produce a large number of high-quality AV materials and to do so on a regular basis. Until the studio is air-conditioned, productions can go full speed ahead in the field. That's where most agricultural videos should be shot anyway. The equipment is ready, the staff is there, the opportunities are many, the need is great--time now to get on with the work!

Information Transfer Network

A major commitment was made to establish a functioning information transfer network within the research system. The national Technical Information Transfer Committee (TITC) took the lead on this, especially during the first years of MART. It helped build relationships among communications leaders and promoted development. Its leadership role, however, was not sustained. The TITC should be a forum for deciding and then doing, not just a group exchanging reports. Under strong leadership it still could serve national needs, and it could provide the framework for building the profession of agricultural communications.

Provincial Information Transfer Committees (PITCs) were organized to do at the provincial level what the TITC and PARC were to do nationally; see Annex E. The PITCs gave direction for establishing Provincial Agricultural Communications Support Cells, identified the most serious farm problems, and developed information transfer strategies for solving these problems. MART provided equipment and funds to support the work.

PACS Cells were established in Faisalabad, Lahore, Peshawar, Quetta, and Tandojam. Each received the same complement of MART equipment and training, but accomplishments were dependent almost entirely upon local leadership and staff. Some did a lot; others did little. An example of what could be achieved is illustrated in the report from the PACS Cell at Faisalabad. See Annex F. An interested, energetic, capable director of communications made the difference.

Administrative shifts in Balochistan and Sindh have not helped in providing the direction and support needed. The PACS Cells have struggled and not met information transfer and research documentation needs in these two provinces.

The cells and committees in all provinces should continue, but they work best when higher administration is deeply involved and supportive. The PACS Cells and their staffs will achieve no more than is expected of them, and that should be a lot. And as part of a national network, the producers should share their contacts with others in the system. All communications staffs in the provinces and the federal units need to be contributing members of a nationwide information transfer network.

Computerizing the Research System

Before MART there were a few Apple II computers around but not much else. Fairly early in the project, 50 IBM AT compatible computers were purchased. Distribution was nationwide and met only the most critical needs. Nevertheless, it revolutionized the way much work was done in the research system.

An extensive program of computer training was initiated on 2 January 1989 with the inauguration of the Computer Training Laboratory at NARC. Since then, hundreds have been trained in computer operations as well as beginning, intermediate, and advanced courses in practically all software packages used by the scientists and their staffs.

During the last year of the project, an additional 170 computers were purchased. These have the 386 chip and are more powerful than the earlier models. They too are being distributed throughout the research system. With their installation, the need for computers is pretty well satisfied.

To support communications and information transfer at key locations, ten Computer Graphics/Desktop Publishing Workstations were included in the procurement. These are assigned strategically to provide graphics and publishing support to the largest number of scientists. Each of the Provincial Agricultural Communications Support Cells will receive a CG/DTP workstation, as will PARC Publications, AVC, NARC Advanced Computer Training Lab, BAI in Peshawar, and Agricultural Research in Multan. These will greatly improve the quality of graphics and published materials. Training will be provided at NARC for two or three operators from each location.

With so many computers in operation, 220 from MART alone, repair and maintenance becomes a critical problem. Responsibility for servicing computers, office copiers, and other technical equipment should be added to duties of the NARC Laboratory Equipment Repair and Maintenance Cell. Adequate staff is there; they only need training, some specialized equipment, and the will to do it. In-house servicing could be better and certainly cheaper than dependence upon commercial firms.

Agricultural Textbook Publishing

Visits to agricultural universities and libraries in the early years of MART revealed the poor state of agricultural textbooks and study materials. The textbooks used on campuses were sparse, inadequate, outdated, and not relevant to Pakistan.

It was determined that textbooks should be based on the latest and most comprehensive of agricultural knowledge available. The texts needed to meet the needs of students at all agricultural universities. Narrow, regional perspectives and data which

become obsolete were unacceptable. The focus was to be on general scientific truths, concepts, and procedures of particular relevance to Pakistani students.

In the beginning the MART Project and PARC were to lead in commissioning and producing new textbooks. A number of meetings were held for this purpose. Titles were suggested and preliminary procedures worked out. During this period, however, it became quite clear that if textbooks were to be relevant and useable by university students, the teachers of the agricultural universities had to be very much involved. In fact, it was decided that they should be the principal authors of the books, not the scientists in the research system.

With TIPAN being a major university development project, it was recommended to USAID that perhaps the lead should be taken by the team at the NWFP Agricultural University. The idea was accepted, and the MART Information Transfer Advisor worked closely with TIPAN in setting up a National Agricultural Textbook Task Force and in establishing parameters for publishing the textbooks. The leadership and work since have been handled entirely by the TIPAN team. As the MART advisor has joined the TIPAN Project he will again be involved in the textbook publishing program.

The task force identified ten textbook titles; six were given top priority. Their titles are:

1. Crop Production
2. Animal Production
3. Soil Science
4. Horticulture
5. Plant Breeding and Genetics
6. Extension Methods for Pakistan

Most of the chapters for the six books have been written and are now being edited, illustrated, and prepared for printing.

The Pakistan National Book Foundation will manage printing and distribution and will collect revenue from book sales which will cover costs of future printings and revisions. If sales are strong, the income generated could be adequate to publish the four additional titles and possibly other needed agricultural textbooks.

Library Strengthening Program

Everyone who had seen and tried to use the agricultural research libraries in Pakistan knew they were generally poorly stocked and equipped, had wide gaps in references and scientific literature, and the institutions had little money to correct the situation.

USAID and PARC officers had long been aware of the problem, but no strategy or funds were in place to make improvements. Under the MART Project, a study of the nation's agricultural libraries was conducted in 1987. At about this same time, University Microfilms International contacted MAP, PARC, and USAID officers. Out of meetings in 1987-89 came a plan to strengthen libraries at the 17 most important agricultural research institutions in Pakistan. See Annex G.

Arrangements were made for \$1,000,000 in USAID ACE funds. A PIL was processed in favor of UMI as a sole-source provider of relevant and up-to-date knowledge databases and the necessary equipment and support for properly managing it.

Using interviews and workshops, the scientists and officers at each of the 17 institutions identified and prioritized the research journals which were most important to them. This was the basis for all microfilm and microfiche ordered from UMI. Equipment required to store, manage, and make available the microformed knowledge was purchased. Operating software and bibliographic/reference files on CD-ROM also were purchased.

While awaiting delivery and installation of the knowledge databases and equipment, staffs of the 17 libraries were trained in "Modern Library Technologies and Management". After the equipment and databases were installed, librarians and scientists received on-site training in how to use the computers and search software. Administrators were encouraged to require thorough and up-to-date reviews of literature from all researchers. And the scientists were urged to make maximum use of the new information resources.

Now agricultural libraries are well prepared to support better and more meaningful research in Pakistan. They have new and improved knowledge databases. Extensive backfiles of important journals, selected by the local scientists, date from 1985 through 1991. Full-text articles and abstracts are available on microfiche, microfilm, and CD-ROM. And they are easy to read and copy. Details on the equipment and knowledge data-bases are presented in the PARC Agricultural Microforms Directory.

The knowledge is easily retrieved using computers and special search software packages. Articles and files can be viewed/read on the computer screen, copied to floppy disks, or printed. Microfiche and microfilm images can be viewed and printed also. Multi-standard VHS video players were provided so libraries could offer an audio-visual information service as well.

The 17 agricultural institutions receiving library support under MART are to network with the smaller institutions in their areas. In a sense, there are now 17 well-equipped hub libraries which can provide information outreach services to practically any point or person in Pakistan. The knowledge bases, computers, software, support equipment, and training make this a model information system for the developing world. It will certainly revolutionize the way scientists and others search for and use information. The library has become a new and more useful source of knowledge!

Communications-Training-Outreach (CTO) Operations

Better organization, coordination, and administration of PARC/NARC Communications-Training-Outreach (CTO) staffs and operations are necessary for optimum transfer of agricultural research information and technology. The CTO units are all concerned with information and technology transfer. The units involved are Publications, Scientific Information (Library and Documentation), Audio-Visual Communications, News and Public Relations, Training, and Technology Transfer.

The PARC Chairman and NARC Director General provide some direction for those units, but what they really need is a man who knows or can get to know all the above units, what they are doing or not doing, what their problems and requirements are, and how they can work together to better transfer agricultural research information and technology to all these client groups served by PARC/NARC.

Missions of the CTO units are of such magnitude and importance that perhaps it is time to have a PARC Member for Communications-Training-Outreach (CTO). If not a full member of the Council, certainly a high-level official should be given this oversight responsibility. He should be capable of administering, supervising, staffing, budgeting, and coordinating the six units. And he should be genuinely interested and involved in the performance and welfare of all.

The Member, Consultant, Director, Chief, or Administrator for the CTO Division or Bureau would do those things on a full-time basis which are now shared or not done at all. The recommended organizational structure is presented in Annex H. The administrative and leadership requirements of these six units are no less demanding or important than those of existing PARC Divisions. Furthermore, if Pakistan follows the pattern of other developing countries, it is almost guaranteed that Communications-Training-Outreach are areas of growth and high resource commitment requiring a skilled, dedicated, technically-oriented officer-in-charge.

Training for Information Transfer

MART designed and sponsored a number of workshops, courses, and conferences to help train and develop the research system staffs. The most important contribution was in the field of computers. In 1989 alone, 340 agricultural scientists were trained in computer systems operations and software utilization. Almost half of these were from the provinces. The training continued at a similar level in 1990, but slowed in 1991. With 170 additional computers being delivered, many new people need to be trained. NARC has facilities for the training, and in most cases the personnel qualified to do the teaching.

Considerable training was offered also in communications and information transfer fields, including:

- Scientific and Popular Writing
- Audio-Visual Communications
- Presentation Graphics, Meeting Management
- World TV Color Standards, Video Formats, Pause-Control Editing, Audio Dubbing
- Computer Graphics
- Computer-Based Desktop Publishing
- Basic Photography and Video Production and Editing
- Advanced Photography and Video Production and Editing
- National Agricultural Librarians' Workshop and Conference
- Presentation Graphics Workshop
- Modern Library Methods and Technologies
- Provincial Library Workshops (17 locations)

To support the formal training programs as well as self instruction, dozens of videocassette training tapes were purchased. Descriptions of these are found in the PARC Audio-Visual Media Resources Directory. They are available from the AVC and Training units at NARC.

After the MART Training Advisor left the project in 1988, much of the support required by the NARC training staff was provided by the Information Transfer Advisor. A serious effort was made to have Training and Audio-Visual staffs, sharing the same building, work together and help each other as much as they could. This is an objective which all NARC/PARC units should pursue.

Miscellaneous Activities and Accomplishments

As MART Information Transfer Advisor, many small but important contributions were made to the project, to PARC, and to USAID, such as:

- Designed and produced a MART Project photo exhibit.
- Designed, wrote, and produced the MART Project brochure.
- Helped establish the MART Office at NARC as a model office.
- Contributed many photographs to USAID ARD publications.
- Displayed photo exhibit on "Northern Pakistan Agriculture" at USAID.
- Helped design an Agricultural Exhibition Hall at PARC.
- Developed proforma AV scripts, production outlines, log sheets, and editing guides.
- Prepared copy for PARC AV Media Resources Directory.
- Helped PACS Cells acquire transport through PARC and USAID.
- Served as member of PARC Technology Transfer Committee.
- Charter member of Pakistan Association of Social Scientists.
- Wrote charter constitution for Pakistan Agricultural Communicators Association.
- Provided hundreds of reference materials on audio-visuals, photography, computers, graphics, publishing, darkroom technologies, etc.
- Requested Peace Corps volunteers for PACS Cells (a grand opportunity missed).
- Launched PACS Video Seminars with Allen Hankins' farewell speech on Pakistan.
- With wife, installed new projection-screen material in NARC auditorium.
- Helped decorate new PARC building.
- Prepared "Audio-Visual Communications for Agricultural Development in Pakistan: Opportunities/Challenges" paper.
- Videotaped Walter Roberts' "The World's Changing Climate," PARC seminar.

- Helped write "Welcome to NARC" video script.
- Purchased and used the Kodak "Exploring Photography" video series.
- Attended "International Communications in Agriculture Conference" in Australia.
- Attended PC Expo annually in New York City.
- Attended "Agricultural Communicators in Education" annual meetings.
- Chaired seminars on International Agricultural Communications at the above meetings.
- Presented seminars on "MART Support for Strengthening Information Transfer in Agriculture".
- Arranged for a MART Technical Systems Consultant and Trainer, Shahid Afzal.
- Assisted in preparation of NARC Master Plan.
- Distributed ACE Communications Handbooks to 100 communicators, administrators, and change agents.
- Distributed Technical Writing Manuals to all research institutions.
- Published and distributed books on photography and television production.
- Conducted series of seminars on "Computer Applications for Information Transfer".
- Helped organize Biotechnology Satellite Teleconference.
- Helped produce FSR videos and farmer factsheets.
- Spoke on "Communication Technologies for Agricultural Information Transfer" at Institute of Management Sciences conference in Lahore.

SHORTCOMINGS AND DISAPPOINTMENTS

Participant Training

The original MART PC-1 provided for 36 man-months of training for Information Transfer. This is equivalent to nine Ph.D.s, even more Masters' degrees. What a wonderful opportunity to train manpower so badly needed.

Unfortunately, most of the training slots were already assigned and taken before the MART Technical Assistance Team arrived in July, 1986. Of the 87 total slots, only one person was appointed for information transfer training, and that just for a Master's.

Pakistan already has a wealth of scientists and scientific knowledge, yet little useable information is communicated to the farmer. In the whole country there are few professional agricultural communicators. And the best are old and nearing retirement. Information bureaus and communications units could have benefited greatly if only one of their young staff had been nominated and accepted for post-graduate training.

A grand opportunity missed! The ARP-II Project could rectify this, and should. The decision-makers should not fall into the same trap, that of training more of the same whether they are needed or not. The World Bank, USAID, and other donors should police this carefully. Does Pakistan need more plant breeders? Soil scientists? Maybe an investment in preparing professionals to communicate what is already known would be of greater value to the farmers, the people, and the country.

Audio-Visual Productions

Although the MART Project PLM target of 100 AV modules was surpassed, more could have been done. Most of the AV modules reported were radio programs, 80 in all. With the equipment and staff available since 1989, more television programs and video modules could have been produced. More photography and slide sets could have been done. Exhibits and their use didn't improve greatly either. Even publications, newsletters, and other printed materials tailed off. Why?

A lack of will, desire, effort is probably the best explanation. Few seemed to care very much about doing their jobs, getting things done. This will have to change if agricultural needs in Pakistan are to be served. Financial constraints too may have been partly to blame, but a lot more could have been done with the resources available. With the equipment and supplies provided by MART, little additional expenditures were required.

PARC/NARC administration should appoint a Leader for Communications-Training-Outreach who is a self-starter and driving force

for these programs. Otherwise, top administration will have to get more directly involved with the existing staffs.

Mobile Information Transfer Vans

The PC-1 called for twenty (20) "multi-media display units mounted in vans". These were to be modern versions of the USAID Cinema Vans of the 1960s, which were so popular in that day.

Again, vehicles for the project were purchased prior to the Technical Assistance Team's arrival, and no such vans were included. And none could be ordered later. As a consequence, no mobile information transfer vans were commissioned.

Asian Study Tour

A program was planned whereby key agricultural communications specialists would visit the best media production facilities in Asia, including IRRI and ICRISAT. For a number of reasons, it never came off.

AVC Directorate Staff

Some good people were recruited and are now on the staff. However, this process went slowly and is still not complete. Having no scriptwriters, artists, or on-air talent is serious and needs to be corrected. Also, a higher level of performance from the staff might be expected.

Social Science Research

Pakistan is essentially devoid of social science research in the field of communications and information transfer. Does anyone really know: How farmers get new information? Their information sources? The interaction, dynamics? The role of media?...etc. There is little evidence that social scientists are working on this. It would be interesting research, and it could help considerably to improve the dissemination of information and diffusion of innovations.

Extension Services in Pakistan

There are many agricultural extension services in Pakistan, not one coordinated, well-managed delivery system for getting required knowledge to farmers. Extension must be something other than a dumping ground for agricultural graduates, as some contend. It seems that everybody criticizes extension, but nobody is doing much to improve it. Maybe it's time for some donor to sponsor a National Extension Project.

ISSUES AND RECOMMENDATIONS

1. HVAC System. The heating-ventilation-airconditioning system designed for the Audio-Visual Communications/Training Institute Building, unfortunately, was not included in the construction contract for the building. Contracting HVAC as a separate item and its subsequent redesign and rebidding (three times) has resulted in cost overruns and delays. Installation still has not begun. When installation does begin, it will disrupt AVC/TI operations.

Recommendation: In future, include HVAC and similar systems in the initial building design and construction. Costs will be lower, responsibility will be fixed with a single contractor, installation will not be delayed, and operations can begin as soon as the building is occupied.

2. Repair and Maintenance. Whether a loose brick in a walk, a leaky roof, a fused lamp in a projector, virus in a computer, or a broken lab instrument, the tendency is not to immediately replace or repair the damaged part to make the equipment, building, or grounds whole and operable again. Bare wires and matchsticks continue to be found in electrical outlets. Perhaps this illustrates the general approach toward repair and maintenance.

Recommendation: When it breaks, fix it. Try to return it to its original state. There is no better time for service work than immediately after the malfunction. Diagnosis is easiest then, and usually so is repair. Equipment, buildings, and facilities should not lie out of service for long periods. Count the number of people who are paid to do repair and maintenance work. Look behind the statistics and reports and in the godowns to see how well they are really doing their job.

3. Security vs Utilization. The storekeeper usually doesn't care whether equipment is used or not. His chief concern is that every item can be accounted for during the next inventory. He may not care whether items work or not. And too often he has the only key to the storeroom. When he's sick, out of station, on leave, or absent, no one else may have access to the equipment. A BPS-11 controls the whole operation.

Recommendation: Security and responsibility should be organized and shared so that equipment and facilities are readily available to the whole staff for the widest possible use. One key with one person just doesn't work very well. The unit director should always have access to equipment and space under his control. Security is not the ultimate objective--utilization is. Operate the "store" as if the unit's survival depended on maximum utilization.

4. High Productivity and Performance. The focus among individuals and units doesn't seem to be on doing the most and best they can. Too much time, attention, and energy is directed to peripheral or completely extraneous matters. Is one really on the job the hours required by the position? And when on the job, is one really doing the job? Do personal interests take precedence over job requirements? Are professional capabilities being developed and used to the fullest?

Recommendation: The system should challenge each employee to take a long, hard, honest look at his own performance. Answer questions such as: What am I doing? How am I doing? What should I be doing? Am I really contributing? What are the constraints? Solutions? If pay and benefits were based on the amount and quality of work done, what should each employee actually receive? Should some employees be released? Perhaps PARC/NARC could be run more along entrepreneurial lines of a private profit-driven enterprise, where those not producing are pruned from the payroll. This calls for management and staffing based strictly on organizational need and performance, nothing else. Also, a schedule of regular productions for all media, closely monitored, will produce best results, such as a weekly telecast or monthly newsletter.

5. Centralized Decision-Making. Having worked under three PARC Chairmen and three Acting NARC DG's, issues and decisions, big and small, seem to continue to end up on the Chairman's desk for approval or disapproval. This may be as much a function of the subordinate officers' reluctance to "decide" as the Chairman's traditional decision-making role. Nevertheless, it results in delays, reduced confidence, lower motivation to initiate or act, and excess, unnecessary work for the Chairman.

Recommendation: Delegate decision-making to the lowest practical level. And this should include budget control, staffing authority, and program responsibility. Delineate clearly what must be seen/cleared/approved by the DG and what must be passed on to the Chairman for ultimate sanction/decision. The DG and Chairman should return files to lower officers when the decisions clearly can and should be made there.

6. Supervisory Echelonizing. A strong tendency, perhaps culturally ingrained, is not to do but to direct someone else to do. The problems and inefficiencies of the practice are obvious. The rupees that go into excess personnel are that many rupees lost in operational funds. Also, the longer the chain of command, the more inefficient and likely that directions will not survive their original intent.

Recommendation: Directors should be playing managers, not coaches from the sidelines, pressbox, or--even worse--front office. The directors should be intimately involved in every phase of the operation, knowing what is being done or not done, who is working or not working, evaluating performance and progress, learning with the staff as the unit develops, promoting, directing, encouraging, planning the work and seeing it through, on the field, in the game . . . a hands-on approach to directing and managing. Adding deputy directors and intermediary managers to do the director's work is not recommended. As few resources as possible should go into "managing" and as many as possible into doing, producing a product that will help or benefit someone, whether it be AV modules, radio-TV programs, publications, training, outreach programs, or something else.

7. Coordination and Communications. PARC/NARC has a number of communications-training-outreach (CTO) units: publications, audio-visual communications, scientific information (library, documentation, photography, microphotography), news and public relations, training, and outreach (technology transfer). Their overall function is the transfer of information and knowledge. Presently the CTO units operate independently and with minimum collaboration, cooperation, and communications. Many of their functions could benefit from joint planning and execution, just simply helping each other do a better job.

Recommendation: Organize the existing CTO units as a Division or Bureau of Communications-Training-Outreach. A Chief for the Division could possibly be selected from among the present or returning CTO unit leaders or a specialist from the outside. He (she) would report directly to the Chairman and might sit at PARC. He would help plan and administer programs, budgets, operations, staffing, evaluations, reporting, etc. He would facilitate collaboration, cooperation, communications, planning, and execution of work through regular meetings and conferences. As an additional responsibility, he would serve as director of any CTO unit whose director was absent.

8. Buying Air Time for Broadcasts. PTV insists that PARC, USAID, and other producers pay for air time, even for noncommercial public-interest programs such as AVC productions and "Before It's Too Late". For several months PBS, Radio Pakistan, stopped airing PARC radio programs and demanded payment for air time. Through a MART consultancy arrangement, the programs were restarted. Now they are aired regularly as a public service.

Recommendation: If PARC, USAID, or someone else bears the total costs for producing noncommercial, informational-educational programs, then PTV (who probably ought to be

producing the programs in the first place) should air them free of charge to the producer. This reciprocal partnership has worked well in the U.S. and other countries. Even commercial stations cooperate with universities and government agencies by providing air time and, in some cases, production facilities at no cost. This should be national policy in Pakistan. A law requiring stations and networks to broadcast in the "public interest, convenience, and necessity" may need to be enacted. There is a great deal more air time, much of it unused or poorly used, than programs. Pakistan should promote independent and private-sector broadcast production by requiring that 20-25 per cent of the air time be given free to educational, informational, public-service type programs.

9. Promoting and Providing Services. "If the other fellow struggles and fails, then by comparison maybe I won't look so bad." It appears that this is a personal philosophy of some whose only role is to serve. A Communications-Training-Outreach officer cannot sit at his desk and wait for clients to come to him. He must sell, promote, hustle, as if his existence depended upon the number of clients and services provided. It's a hard job, requiring a lot of drive and energy, but it's the only way to establish and run any CTO operation.

Recommendation: Each CTO director should have weekly unit staff meetings where programs and work are planned and assigned, progress reported and evaluated, and problems discussed and solved. The CTO Chief should have weekly directors' meetings where collaborative programs and work are planned, technical assistance arranged, staff assigned to where they are most needed at the time, equipment and facilities are specified and scheduled, and other joint actions are taken.

10. Indenting, Distribution, Utilization. As a national center, NARC has some difficulty in supporting and servicing provincial and other operations. The system for indenting and distributing commodities once they leave NARC Central Store is a real problem. For example, MART-Winrock purchased blank videocassettes and turned them over to Central Store for release to AVC so master videos could be duplicated and distributed to provinces. It seems that once in AVC inventory, always in AVC inventory. Winrock had to buy another batch of tapes, which this time it only "loaned" to AVC long enough to get the tapes dubbed; then Winrock initiated distribution. The system, the rules, and regulations should encourage service, not hinder it.

Recommendation: Indent rules and inventory control should allow distribution of expendables and supplies such as audio and video tapes. And to copy and distribute a tape to anyone should not require approval higher than the AVC Director. Equipment, too, should be scheduled and provided to as many legitimate users as possible. In fact, equipment use should be promoted, encouraged. Of course, in time some items will malfunction or be broken. This is far better than to have good equipment sit in boxes until it rusts, molds, and becomes obsolete. The ultimate objective is to have every piece of equipment used, used, used. As much importance should be given to utilization as inventory control.

11. Scientific Engagement and Renewal. Once out of post-graduate school, how many scientists really stay on top of their profession or discipline? Is more time spent just chatting and having a cup of tea than keeping up with the literature in one's field? The recent state of libraries and availability of journals, unfortunately, didn't encourage much reading there. Now, however, after USAID's million-dollar investment in journal backfiles, new acquisitions, microfiche, microfilm, CD-ROMS, players, readers, printers, computers, retrieval programs, management software, etc., its a bright new day at 17 major agricultural research libraries. Literature is up to date, 1985-91, in 50 to 150 fields (Journals) chosen by the scientists at the 17 institutions.

Recommendation: With this wealth of scientific knowledge now available in Pakistan, each scientist, BPS-17 and above, should be required to do an exhaustive review of literature in his field of specialization, citing references only from these new databases, Malik Mushtaq Ahmad has the proforma for soliciting and publishing such reviews. Also, no funding for continuation or initiation of research projects, including those funded through BOSTID, should be made without an intensive review of relevant literature, especially a review of the new microforms available. Every scientist should spend a lot of time in the library during the next year . . . 1992-93 could be the year of "professional renewal" for the nation's agricultural scientists.

12. Credit for CTO Contributions. Does the reward system give credit to those scientists who contribute significantly to communications, training , and outreach services? Is it considered a part of job responsibility? Or is it considered an additional responsibility requiring additional compensation? Does administration recognize and express appreciation for CTO work? Is it part of the merit award system? Or is seniority all that counts? Many scientists view CTO as an add-on responsibility.

Recommendation: Administration must establish and articulate clearly that CTO is an integral part of every researcher's job, that doing research without reporting it only part of the task. Recognition must be given to those who do this work and do it well. Scientists' associations could have competitions for best journal article, best magazine or newspaper story, best exhibit, radio program, publication, video, telecast, etc. PARC could give plaques and possibly cash prizes. And CTO contributions must be part of the criteria for promotion, travel, training, and other rewards.

Winrock International

TERMS OF REFERENCE

INFORMATION TRANSFER ADVISOR

PAKISTAN MART PROJECT

The tasks of the Information Transfer (IT) Advisor shall include but not be limited to the following:

- i. In conjunction with the Agricultural Training Advisor, oversee the design and equipping of the Multi-Media Production Studio to ensure that the needs and functions of the Studio are adequately reflected in the design and layout for constructing the facility and the equipment to be procured for the facility.
- ii. Assist in the design, production, and dissemination of at least 100 video documentaries, recordings, media campaigns and other technical information packages.
- iii. Conduct assessments of agricultural research client groups (e.g. researchers, GOP policy-makers, agricultural universities, agro-industries, extension services, farmers and the general public) to determine their respective information needs and to identify the most appropriate media for use in the transfer of agricultural information to each target group.
- iv. Assist provincial researchers and extension agents to develop media campaigns which address farmers' agricultural problems.
- v. Develop multi-media display units mounted in vans to be used to determine the effectiveness of communications modes at the village level.
- vi. Promote and advertise areas of research with practical commercial application (e.g. plant seed, animal breeding and machinery) by undertaking the following: providing agri-businesses with promotional literature; conducting demonstrations; promoting private sector participation in special laboratory or field station tours; promoting private sector participation in research evaluation and review boards; and, using these occasions to obtain ideas on appropriate research for the private sector.
- vii. Design multi-media programs to inform GOP policy-makers and planners of national agricultural research activities.
- viii. Assess and propose organizational mechanisms to institutionalize the processing of information and feedback for each specific client group.

WINROCK INTERNATIONAL INSTITUTE FOR AGRICULTURAL DEVELOPMENT

HEADQUARTERS:
Route 3, Petit Jean Mtn
Morrilton, Arkansas 72110-9537, USA
Tele: (501) 727-5435
Telex: 910-720 6616

WASHINGTON OFFICE:
Rostlyn Plaza, 1611 N. Kent St., Suite 600
Arlington, Virginia 22209, USA
Tele: (703) 525-9430
Telex: 248589 via RCA CABLE IADSERVIS

ix. Assist the FSR Advisor and the RPM Advisor in preparing the administrative sections of the NARC Master Plan, by providing technical information and communication inputs.

x. Identify references, books, newsletters, and other publications needed to upgrade the entire research library system.

xi. Conduct workshops, seminars and short-term training in library services and information technology, using short-term specialists and the resources of the international CGIAR Centers as necessary.

xii. Identify speakers, lecturers, short-term consultants and other professionals in the communications field for in-country training courses for approximately 450 people.

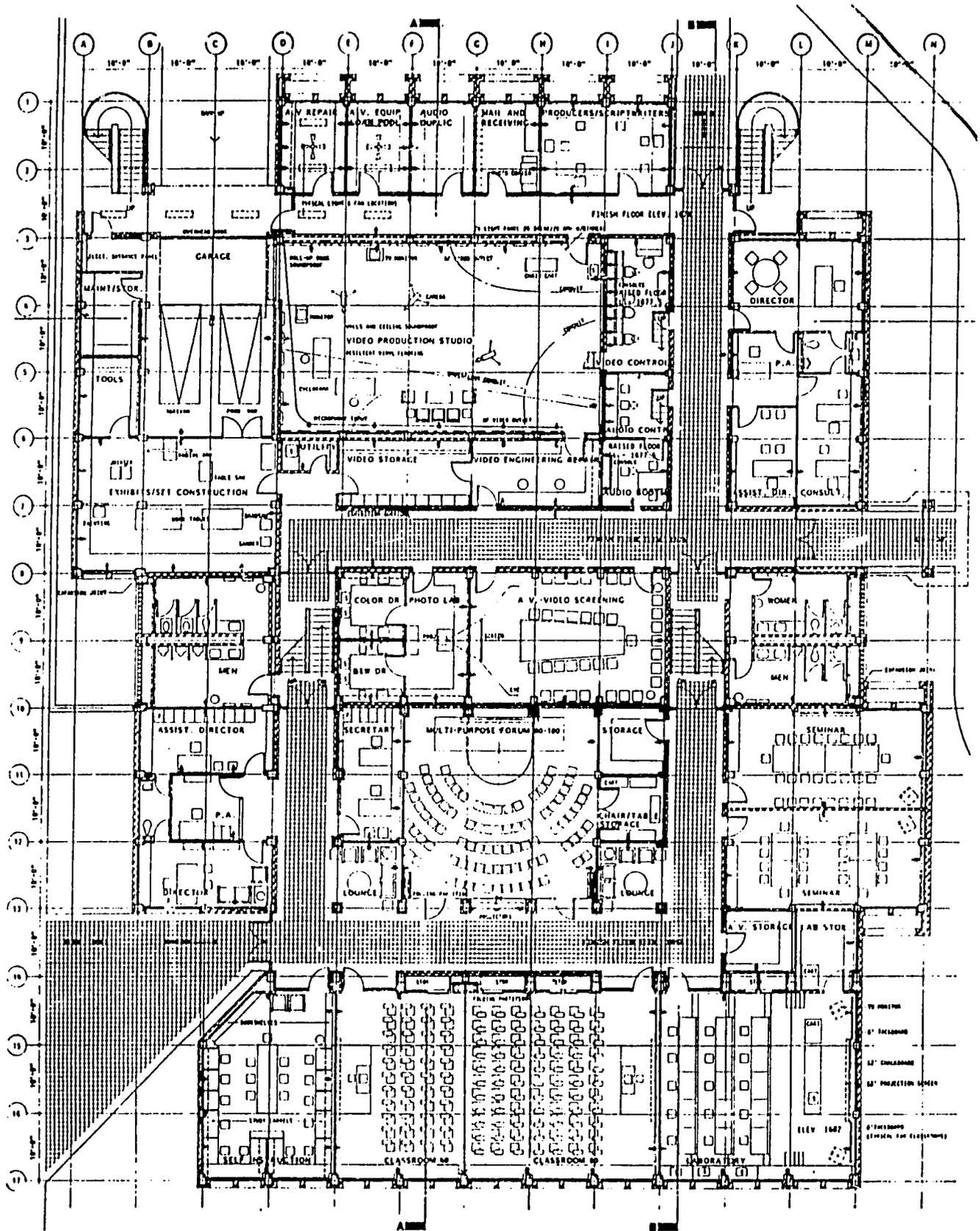
xiii. Assist to establish and institutionalize the Technical Information Transfer Committee.

xiv. In the area of information transfer, draft scopes of work for short-term consultants, submit same through the COP to USAID and PARC for their approval, supervise the performance of the consultants and be responsible for all follow-up activities.

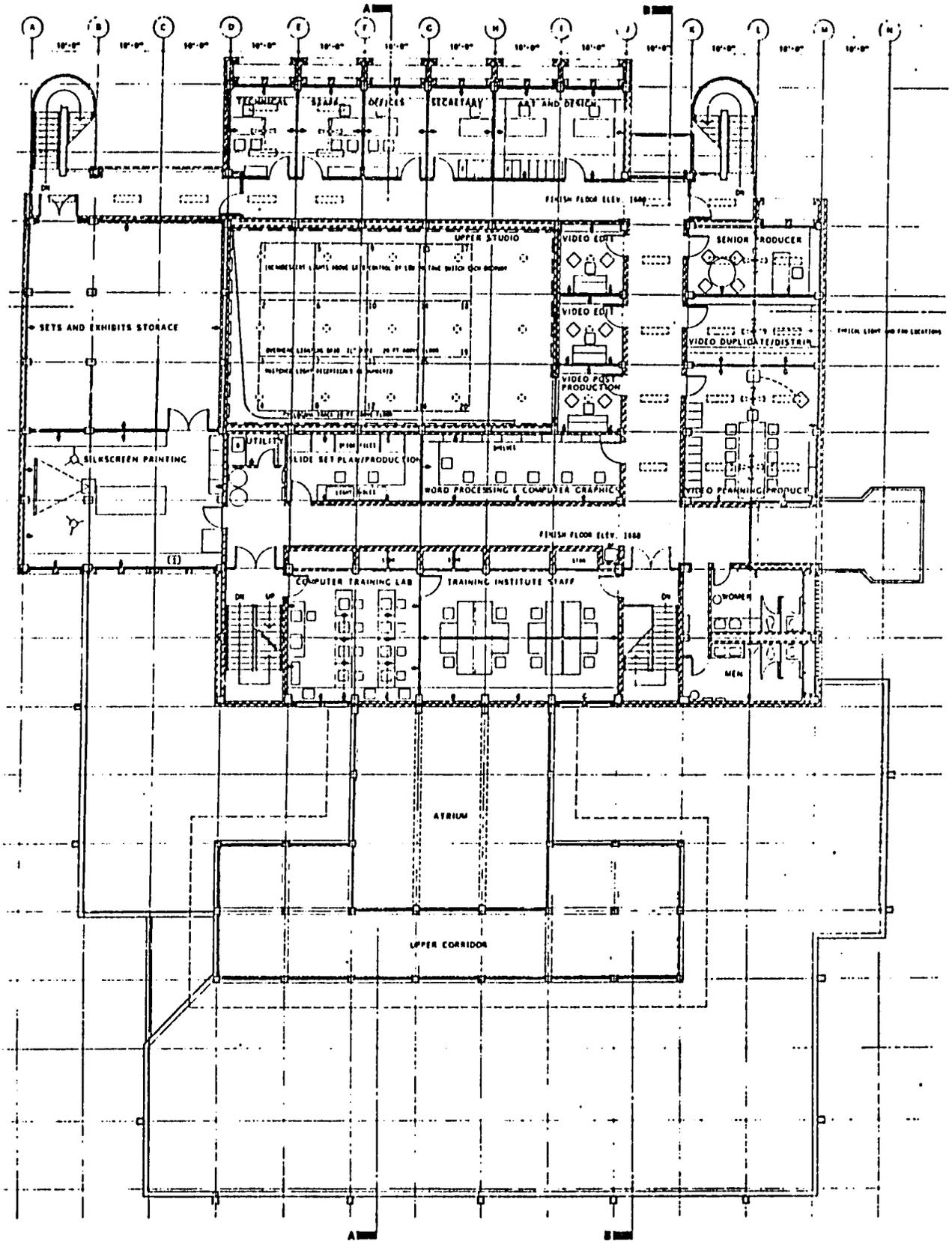
xv. Assume primary responsibility for the identification of specific training requirements, recommending specific individuals and proposing training courses and institutions able to meet training needs in the area of information transfer for graduate study fellowships in the U.S.

xvi. Assume direct responsibility for the overall institution-building aspects of the new Multi-Media Production Studio at the NARC.

The Advisor's counterpart shall be the Director of PARC's Science Information Directorate. He shall also work closely with PARC's Technology Transfer Directorate and the 30 recently hired staff members of the new Multi-Media Production Studio at NARC.



GROUND FLOOR PLAN



FIRST FLOOR PLAN

NARC TRAINING CENTER ADDITIONS - MART PROJECT

ANNEX B

TITLE Audio Control

ROOM PRESCRIPTION FLOOR AREA FT²



DESCRIBE PROPOSED USE OF ROOM - (ACTIVITIES, FREQUENCY)

For audio engineering, mixing and recording of audio inputs during video, audio, radio, or other AV productions.

NO. PEOPLE TO BE ACCOMMODATED - (MAX) 2

HOURS OF USAGE - DAYS MTWTFSS HRS 15-20

FURNITURE REQUIRED:

1. Equipment Racks
2. Operator's Chair
3. Producer's Chair
4. _____ 10.
5. _____ 11.
6. _____ 12.

EQUIPMENT REQUIRED:

1. Mixing Board
2. Master Recorder
3. Cassette Decks
4. Turntables
5. Cartridge Machine
6. _____ 12.

PLUMBING REQUIRED: None

but conduits leading to Video Control and AV Studio

SPECIAL LIGHTING:

Incandescent Overhead recessed on dimmer (S/D)

AC REQUIRED:

Voltage Regulated.
As shown (AC)

DIAGRAM DESIRED ARRANGEMENT

(over)

COMMENTS - SPECIAL REQUIREMENTS:

18-8th Avenue
 Ramna 5
 Islamabad
 PAKISTAN
 Telex : 54270 USAID PK

MART

Management of Agricultural Research and Technology Project

DATE: December 2, 1986
 FROM: J. Cordell Hatch
 TO: Messrs. Anwar A. Chaudhry and Malik Mushtaq
 RE: PARC/NARC AV Unit Staffing Schedule and Priorities

May I suggest the PARC/NARC Audio-Visual Communications staff positions specified in PC-I and the MART Project paper be filled as follows:

<u>POSITIONS</u>	<u>GRADE</u>	<u>1986-87</u>	<u>1987-88</u>	<u>1988-89</u>
Director	19		1 (1)	1
Sr. Producer	18		1 (7)	1
Sr. Scriptwriter	18	1 (3)	1	1
Sr. Cameraman	18		1 (8)	1
Sr. Engineer	18		1 (9)	1
Media Researcher	18 (proposed)			1 (11)
Utilization Specialist	18 (proposed)			1 (10)
Producer (2)	17	1 (1-offered)	1	2 (1)
Scriptwriter (2)	17		1 (4)	2 (2)
Engineer (2)	17		1 (2)	2 (3)
Cameraman (4)	17		1 (3)	4 (4)
Graphic Artist	16	1 (2)	1	1
Set Designer	16			1 (5)
Secretaries (2)	16		1 (5)	2 (6)
Stenographers (2)	15	1 (4)	1	2 (7)
Junior Clerk	5		1	1 (8)
Drivers (6)	4	1 (5)	2 (6)	6 (9)
	STAFF STRENGTH	<u>5</u>	<u>14</u>	<u>30</u>

() Priority order for filling positions.

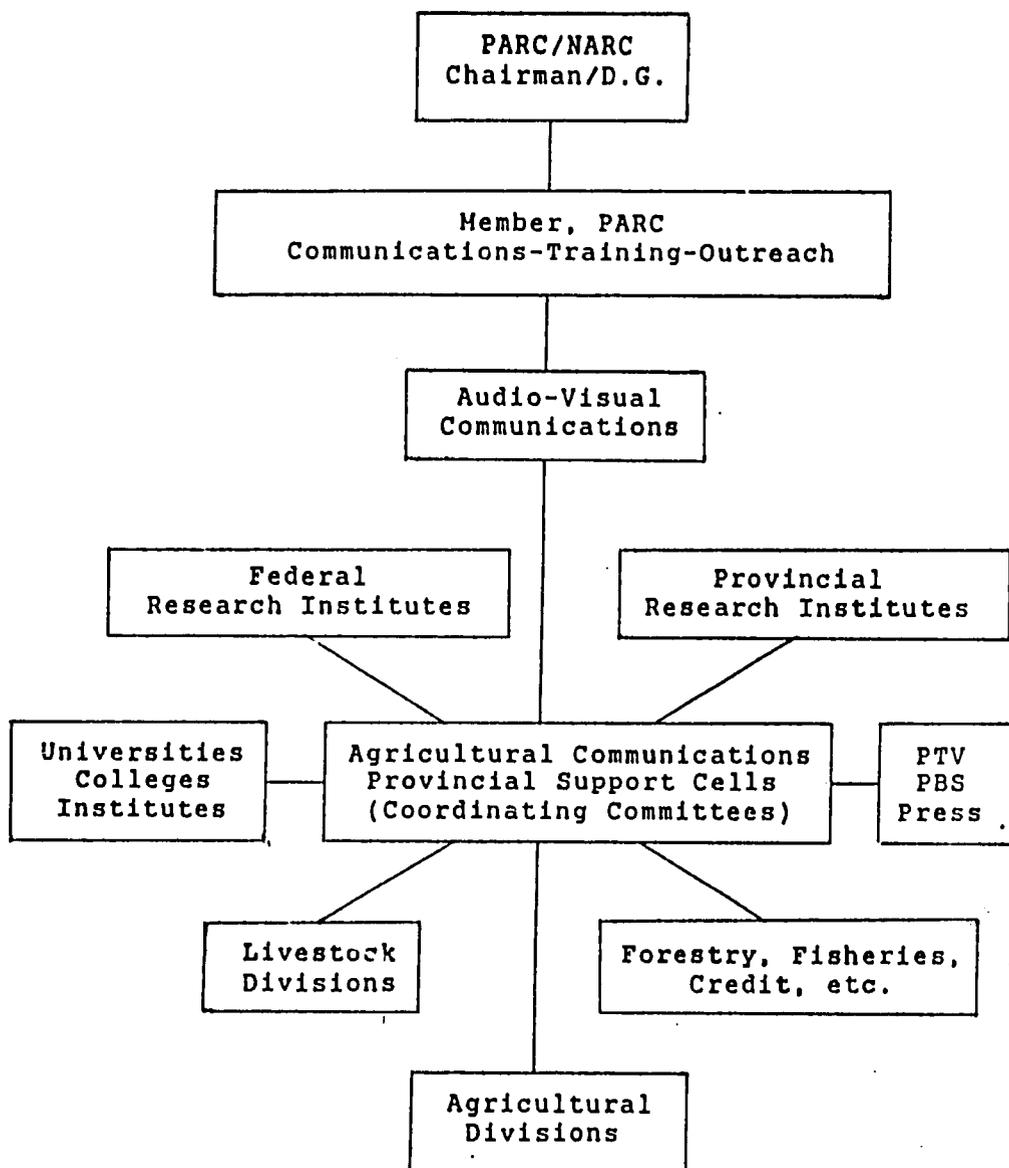
cc: Dr. Amir Mohammad
 Dr. Bill Wright

AUDIO VISUAL EQUIPMENT

MARF CODE	QTY.	DESCRIPTION
A-4(08)	1	Electro-Voice C090 Lapel Microphone
A-5	2	Electro-Voice 635-A Hand Microphone
B-1	1	3M Overhead Projector 2140,110V
B-3	1	Telex Caramete 35mm Project,240V
B-10	1	Drapper Luma Projection Screen,60"x60"
B-12	2	Welt Portable Projector Stand with Shelf
D-3	2	35mm Slide Mounts,2 Boxes, 40 pieces
E-2	10	U-Matic 3/4" Colour Cassette, UCA-20S
E-3	2	U-Matic 3/4" Colour Cassette, UCA-30
E-5	2	1/2" VHS Video Cassette. T-60
H-35	1	Heavy Duty Plier
E-4	10	VHS 1/2" Video Cassettes, T-120
E-7	10	Open Reel Audio Tapes, 1200
	10	Open Reel Audio Tapes, 1800
G-3	1	Mini Plug to Mini Plug Patch Cable
G-4	1	Standard Phone Plug to Phone Plug Patch Cable
G-5	1	Mini Plug to Standard Phone Adaptor
G-6	1	Phono RCA Jack to Two Parallel Phone Plugs
G-7	1	Standard Phone Plug to Mini Plug
G-8	1	Standard Phone Plug to Phone(RCA)
G-9	1	Mini Plug to Phone(RCA) Plug
G-15	10	Lables-PAL
G-29	1	Every Thing Universal Video Case
H-6	2	Video Head Cleaner
H-10	2	Audio Tape Head Cleaner
H-12	1	LPS Audio-Video Cleaner
H-18	1	Six Pes. Precission Assorted Tools
H-19	1	Five Pes. Precission Assorted Nut Driver
H-20	1	General Purpose Knife
H-21	1	Screw Driver Kit, Five Pes. Heavy Duty
H-22	2	Resine Solder
H-23	1	BNC To Aligator Clip Test Cable.
H-24	1	Universal Test Lead Kit
H-26	1	Brooks AC Energy Centre.
H-27	1	Delux Anti-Static Desoldering Tool
H-28	1	Stereo Patch Cable-3 Dual RCA Phono
H-29	1	Stereo Patch Cable-6 Dual RCA Phono
H-30	1	Electrician's Tape-Black.
H-31	1	70 PSI Cleaner
H-32	1	VCR Foam Swabs
H-34	1	Mini Diagonal Cutter
I-6	3	Faging Horn Outdoor Loudspeakers
I-8	2	Metal Mono Phone Plug
I-9	2	3.5mm Mono Plug to 3.5mm Stereo input
I-10	2	3 Pin XLR Male Plug
I-11	2	3 Pin XLR Male Jack
I-16	1	Everedy Flash Light
I-17	1	Everedy Disposable Pin Light

I-20	1	RC-59 Cable BNC to RCA Phono Patch Cable
I-21	1	RG-59 Cable RCA to RCA Phono Patch Cable
I-22	2	Feather Weight Micro Headphone
I-24	2	Unidirectional Dynamic Micro Phone
I-30	1	Video Dubbing Kit
J-9	1	Transparency Film for Plain Paper Copier
J-12	1	Megaphone with Siren, 15W, Battery Power
C-7	1	Slide Storage & Editing Cabinet, Base & Files
E-8	4	Audio Cassette, Studio Master AVX-60
	4	Instant Recorder Cassette IRC-30
	4	Instant Recorder Cassette IRC-60
	4	Instant Recorder Cassette IRC-90
G-16	1	Video Cassette Reck for 30 VHS Tapes
I-4	1	Public Address Amplifier, 20 watts, 12 V
I-23	1	Lapel Microphone
J-3	1	Film Roll 10-1/2"x50 for Overhead Projector
A-7(09)	1	Sony Video Light, Battery Belt, Spare Lamp
B-5	1	Sony 19" TV Receiver/Monitor, 7-System
B-11	1	Sony 27" TV Receiver/Monitor, 15-System
B-12	1	Cassette Player/Recorder/Duplicator
		CSFW-500S Sony TCM-5000 EV
E-3	1	AC Power Adaptor, AC-D4M
E-4	2	Portable Audio Casstte Recorder, Sony TCM-21
E-5	2	AC Power Adaptor, AC-D2M, for TCM-21
F-1	1	AC/DC Gasolint-Power Generator, 500 W
G-7a	1	Head Demagnetize
C-4	1	Heavy Duty Dolly
C-5	1	Video Cassette Holder/Divider
D-1	1	VHS 1/2" Video Camcorder, Panasonic M7
E-1	1	Open Reel Audio Tape Recorder Teac X-300
D-8	1	VHS Recorder/Player, Panasonic NV-G15PX
F-2	1	Automatic Voltage Regulator, 1000 W
F-3	1	Automatic Voltage Regulator, 1500 W
G-5a	1	High Performing Soldering Iron
D-5	1	JVC TV/Receiver, 6" with Battery
G-3	1	Analog VOA Meter
WI	1	Strand Lighting Kit with Lamps
WI	1	Spare Battary for M7 Camcorder
WI	1	Line Adaptor for M7 Camcorder
WI	1	Car Battery Cord for M7 Camcorder
WI	1	Pause Remote Control for M7 Camcorder
WI	1	Camera Repair Kit for M7 Camcorder
WI	1	Camera Cleaning Kit for M7 Camcorder
WI	1	RF Cable for M7 Camcorder.

PROPOSED ORGANIZATIONAL STRUCTURE
PARC/NARC Audio-Visual Communications Support to Provinces



NO. DDRI-92. 1394Dated. 28/4/92

Research Information Section,
Ayub Agricultural Res. Instt.
Faisalabad.

To

Dr. C. Hatch,
Technology Transfer Adviser,
MART, NARC, Islamabad.

Subject: PROGRESS REPORT OF PACSC:

Kindly refer our letter No. 1334 dated. 20/4/92 on the cited subject. Although you have already received your required information, yet I feel when I gone through it carefully, that still it contains several spelling mistakes etc. Now I am sending another revised copy on the progress report of our PACSC, Faisalabad for the period between January 1990 to March, 1992. I have also attached one page containing main activities and achievements obtained/conducted during April, 1992. I would be obliged if you talk to me on telephone before you leave MART and move on to TIPAN at Peshawar. Thank you for your keen interest, efforts, appreciation and encouragement and strengthening communication cells in our country particularly for our cell. So far you are in Pakistan, we hope we can expect your cooperation in our work. I am also interested to know about your efforts made to get double cab for my cell for outdoor video shooting.

A. S. Khan
DEPUTY DIRECTOR, RESEARCH INFORMATION. 27-4-92

PROGRESS REPORT OF PROVINCIAL AGRICULTURAL COMMUNICATION SUPPORT
CELL, FAISALABAD FROM JANUARY 1990 TO MARCH, 1992.

VIDEO PRODUCTION

<u>Video Produced</u>	<u>Video in Process</u>	<u>Copies supplied</u>	<u>Assistance provided for T.V. Programmes</u>
7	9	50	24

AUDIO TALKS/RADIO BROADCAST

<u>Radio talks recorded and supplied to Radio Pak. Faisalabad and Lahore.</u>	<u>Audio talks recorded and supplied to Dir. Agri. Information Punjab, Lahore for cassettes publicity.</u>	<u>Special audio programmes produced and supplied to Radio Station, Faisalabad.</u>	<u>Conference recording</u>
584	137	4	1

PHOTO PRINT SERVICE

<u>Black & White</u>	<u>Coloured</u>	<u>Coloured slides</u>
850	600	500

MEDIA LIAISON

<u>Media coverage of important events.</u>	<u>Handout issued to press.</u>	<u>Photographs issued to press.</u>	<u>Agri. features articles supplied to press and Ziraat Nama.</u>
60	200	850	260

SEMINAR ARRANGED

<u>One Man seminars</u>	<u>Awareness Seminars</u>
11	17

137

TRAINING

Arranged	Supported	Received	Delivered lectures
3	6	4	5

UTILIZATION OF A&V EQUIPMENTS

For arrangement of Public Address System.	Provided overhead slide projector facilities to scientist.	Projection of A&V Programmes
75 times	110 times	100 times

TECHNICAL STAFF INVOLVED IN A&V COMMUNICATION

1. One Assistant Director (Inf. & Films) BS-17+Rs.150/-
2. One V.C.R. Operator (BS-11)
3. One Sound Recordist (BS-11)
4. One Photographer (BS-8)
5. One Copyist (BS-6)

DISTINCTION

Won best Documentary Video Films Prize continuously two years at NARC during training 1990-91.

BOTTLEMARKS/SHORTCOMINGS

1. Transport facility needed for outdoor video production/shooting.
2. Video room needs to be air conditioned.
3. More A.V. Equipments required for editing as:
 - 1) VHS Editing Unit.
 - ii) U.Matic Video Camera.
 - iii) U.Matic Portable V.C.R
 - iv) U.Matic Editing Unit.
 - v) S.E.G. Audio Mixer.

DETAIL OF VIDEO FILMS/PROGRAMMES

	VIDEO COMPLETE TITLE	VERSION	DURATION	FORMATION
1.	Necessary measures for wheat cultivation.	Punjabi	05 Mints.	VHS
2.	Stripe planting, new method of Cane Cultivation.	Urdu	12 ""	VHS
3.	Soil Testing Kit.	Urdu	12 ""	VHS
4.	Soil Analysis and its Fertility.	Urdu	10 ""	VHS
5.	Role of Azotobacter bacteria in Agri.	Urdu	45 ""	VHS
6.	Water testing why and how?	Urdu + Punjabi	10 ""	VHS
7.	Ceremony - Old Boys Gathering at Univ. Agri., Faisalabad 1990.	Urdu	2 Hours	VHS

VIDEOS IN PROCESS

1. Mushroom Plantation.
2. Welcome to Ayub Agricultural Research Institute, Faisalabad.
3. Wheat Cultivation in Standing Cotton.
4. Preparation of Lemon Barley Squash.
5. How a farmer can get pure wheat seed?
6. Farmer and farming system research.
7. Ensilaging of fodders.
8. Identification of weeds in wheat crop.
9. Old Boys Gathering Ceremony of University of Agriculture, Faisalabad, 1992.

TITLES/TOPICS OF VIDEO GRAPHY AS LIBRARY SHORTS.

- Preparation of Azotobactor in Laboratory.
- comments of experts about Azotobactor.
- Exposing of کھجور plants in field.
- Exposing dwarf wheat in kinnow orchard at Sargodha.
- Exposing iron deficiency symptoms in kinnow plants.
- NPK and Zn controlled kinnow plant.
- Fertilizer trials in Kinnow orchards.
- Picking and grading of kinnow fruit.
- Coverage of Inauguration session of Old Boys Gathering, 1990.
- Sowing of Sugarcane.
- Irrigating sugarcane fields.
- Exposing primary and middle stage of sugarcane crop at UAF.
- Exposing pit plantation method of sugarcane at Univ. Agri. Faisalabad.
- Intercropping/garlic and masoor in sugarcane.
- Plant protection measures, fertilizer application another safety measures for sugarcane crop.
- Sugarcane grown crop.
- Detail of strip planting technique for sugarcane crop.
- Coverage of sugarcane seminar at AARI, Faisalabad.
- Land levelling of rice field.
- Fertilizer spreading.
- A view of a traditional fight between a dog and a bear at Sargodha.
- Rice harvest.
- Horse dance, camel dance show at National Horse and Cattle Show, Lahore.
- View of different wheat varieties.
- Experimentations in wheat fields.
- General views of wheat crop.
- Threshing of wheat.
- Vertical setting of wheat bundles for the purpose of protection against rain.
- Close ups of major weeds of wheat.
- Wheat plantation in standing cotton crop including seedling, germination, cotton harvest and different growth stages of wheat, drama between two farmers and matured wheat crop stages at Agronomy Section, Ayub Agri. Research Institute, Faisalabad.
- Soil testing kit, method of its use at farmer's field for soil analysis purpose at AARI, Faisalabad.
- Zero tillage in wheat at FSR Project, Shahkot.
- Matured wheat crop at FSR Project, Shahkot.
- Wheat crop and lentil in a similar field.
- Close up of lentil.
- Harvesting of lentil crop at FSR Project, Shahkot.
- Loading cane for its transplantation to sugar mills.
- Harvesting of sugarcane.
- Matured tomato crop in plastic tunnels.
- Matured tomato crop.
- Cattle grazing in meadow.
- Comparison of healthy and weak animals.
- View of a sugar mill.
- Berseem field.
- Fodder harvesting.
- Mushroom plantation at University of Agric. Faisalabad.
- Preparation of compost for growing mushroom at UAF.
- Harvesting of mushroom at Univ. Agri. Faisalabad.
- Matured mushroom crop at Univ. Agri. Faisalabad.
- Different views of Zero tillage.
- Fields with rice plant stem/stubbles.
- Removal of rice plant stem/stubble through tractor drawn cultivator.

DETAIL OF AUDIO (RADIO) BROADCASTS FOR RADIO STATION, FAISALABA AND LAHORE DURING 1990.

* All these broadcasts were recorded with the equipments received under MART Project.

SR.	MONTH	WHEAT	OILSEEDS	PULSES	SUGARCANE	COTTON	RICE	MAIZE	VEGETABLES	FRUITS	MISC.	JUTE	FOOD	FODDER	TOTAL
1.	Jan.	3	3	2	8	-	-	2	5	3	2	1	2	-	30
2.	Feb.	1	2	3	2	1	-	-	2	1	3	1	3	1	20
3.	March	2	2	1	2	2	-	-	5	7	1	-	-	-	22
4.	April	1	1	1	2	2	-	-	2	1	-	2	-	-	12
5.	May	-	4	-	3	7	1	-	2	-	2	-	2	-	21
6.	June	1	2	2	2	1	4	1	5	2	8	-	3	-	28
7.	July	-	2	-	3	3	-	3	2	1	2	1	1	-	18
8.	Aug.	1	2	2	3	3	-	-	22	2	1	2	3	1	22
9.	Sept.	1	2	2	-	1	-	-	1	-	1	-	1	-	9
10.	Oct.	6	8	2	3	-	-	-	9	-	3	1	3	2	37
11.	Nov.	7	5	5	-	4	-	-	1	3	1	-	3	-	29
12.	Dec.	3	3	3	2	2	1	-	-	2	-	-	1	1	18
Total:-		25	36	23	30	26	6	6	36	22	24	7	22	5	266

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DETAIL OF AUDIO (RADIO) BROADCASTS FOR RADIO STATION, FAISALABA AND LAHORE DURING 1991.

* All these broadcasts were recorded with the equipments received under MART Project.

SR.	MONTH	WHEAT	OILSEEDS	PULSES	SUGARCANE	COTTON	RICE	MAIZE	VEGETABLES	FRUITS	MISC.	JUTE	FOOD	FODDER	TOTAL
1.	Jan.	2	5	2	5	-	-	2	4	2	2	-	3	-	27
2.	Feb.	1	4	1	2	1	-	-	6	5	1	1	2	1	25
3.	March	-	2	2	4	1	-	-	2	1	4	1	3	-	20
4.	April	4	1	1	3	4	1	-	2	-	1	1	1	-	19
5.	May	-	2	3	1	9	2	-	2	1	-	1	2	-	23
6.	June	1	4	-	-	1	1	2	3	-	-	1	-	2	15
7.	July	1	5	2	-	3	-	1	2	2	2	1	2	-	21
8.	August	1	2	1	-	-	1	-	-	-	-	1	2	1	9
9.	Sept.	12	4	3	1	2	-	-	5	1	2	1	2	1	34
10.	October	7	1	2	-	-	-	-	3	1	-	-	2	-	16
11.	Nov.	8	2	3	3	1	-	-	1	3	2	-	1	-	24
12.	Dec.	5	1	1	-	1	-	-	1	3	-	2	1	1	16
Total		42	33	21	19	23	4	5	32	19	14	10	21	6	249

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DETAIL OF AUDIO (RADIO) BROADCASTS FOR RADIO STATION, FAISALABA AND LAHORE DURING 1992.

* All these broadcasts were recorded with the equipments received under MART Project.

SR.	MONTH	WHEAT	OILSEEDS	PULSES	SUGARCANE	COTT'N	RICE	MAIZE	VEGETABLES	FRUITS	MISC.	JUTE	FOOD	FODDER	TOTAL
1.	Jan.	1	3	2	5	-	-	2	4	3	3	-	1	1	25
2.	Feb.	2	3	1	10	-	-	2	-	4	3	2	2	-	29
3.	March	1	2	-	1	-	-	-	5	3	2	-	1	-	15
Total		4	8	3	16	-	-	4	9	10	8	2	4	1	69

DETAILS OF AUDIO TALKS OF AGRICULTURAL EXPERTS RECORDED FOR CASSETTE PUBLICITY SCHEME DURING 1990.

SR.	MONTH	WHEAT	OILSEEDS	PULSES	SUGARCANE	COTTON	RICE	MAIZE	VEGETABLES	FRUITS	MISC.	JUTE	FOOD	FODDER	TOTAL
1.	Sept.	2	-	1	6	2	-	-	-	-	-	-	-	-	11
2.	Oct.	5	-	-	-	-	-	-	-	-	-	-	-	-	5
3.	Nov.	1	-	-	-	-	-	-	-	4	-	-	-	-	5
4.	Dec.	2	-	2	2	-	-	-	1	-	1	-	1	-	13
TOTAL:		10	-	3	8	2	-	-	1	4	1	-	1	-	34

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DETAILS OF AUDIO TALKS OF AGRICULTURAL EXPERTS RECORDED FOR CASSETTE PUBLICITY SCHEME DURING 1991

SR.	MONTH	WHEAT	OILSEEDS	PULSES	SUGARCANE	COTTON	RICE	MAIZE	VEGETABLES	FRUITS	MISC.	JUTE	FOOD	FODDER	TOTAL
1.	Jan.	2	1	2	1	-	-	1	3	1	2	-	-	-	13
2.	Feb.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.	March	1	1	-	-	4	-	-	-	-	-	-	-	-	-
4.	April	4	-	-	2	4	1	-	1	-	1	-	-	-	6
5.	May	-	1	1	-	11	2	-	-	1	-	-	2	-	13
6.	June	-	-	2	1	-	-	-	-	-	-	-	-	-	18
7.	July	-	-	-	-	-	-	-	-	-	-	-	-	-	3
8.	Aug.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.	Sept.	2	-	1	1	-	-	-	-	-	-	-	-	1	5
10.	Oct.	5	-	-	-	-	-	-	-	-	-	-	-	-	5
11.	Nov.	7	-	-	1	-	1	-	-	1	-	-	-	-	10
12.	Dec.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL:		23	3	6	6	19	4	1	4	3	3	-	2	1	73

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DETAILS OF AUDIO TALKS OF AGRICULTURAL EXPERTS RECORDED FOR CASSETTE PUBLICITY SCHEME DURING 1992

SR.	MONTH	WHEAT	OILSEEDS	PULSES	SUGARCANE	COTTON	RICE	MAIZE	VEGETABLES	FRUITS	MISC.	JUTE	FOOD	FODDER	TOTAL
1.	Jan.	-	1	3	3	-	-	2	1	-	-	-	-	-	10
2.	Feb.	-	-	-	4	-	-	2	-	-	-	-	-	-	6
3.	March	2	1	-	4	1	-	-	1	1	4	-	-	-	14
TOTAL:		2	2	3	11	1	-	4	2	1	4	-	-	-	30

DETAILS OF SPECIAL AUDIO PROGRAMMES: .

Sr.	Title	Duration	Broadcast from
1.	Urea treatment of wheat straw and paddy.	2 mints.	Radio Station, Faisalabad.
2.	Interview of progressive farmer of sugarcane about variety BF162	5 ""	-do-
3.	Panel discussion on use of gypsum in connection with celebrating "soil health week"	7 ""	-do-
4.	Three talks of experts about correct use of gypsum to reclaim sick soils.	5 ""	-do-

DETAIL OF CONFERENCE RECORDING

Proceedings of wheat conference (under the chairmanship of Cr. N.E. Borlang at AARI) which consisted of nine audio cassettes.

DETAIL OF SEMI-NARS ARRANGED (ONE-MAN SEMINARS)

TITLE OF SEMINAR	PLACE	EQUIPMENT USED
Effect of salinity and relative humidity on transpiration, absorption and compartmentation of ions in rice.	AARI, Fsd.	1. Public Address System 2. Microphone 3 nose 3. Tape recorder 4. Overhead Projector 5. Slide Projector 6. Screen 7. Extension Board 8. Stabilizer
Effect of salinity and temperature on transpiration, absorption and compartmentation of ions in rice.	""	"" ""
K dynamics in soil and plants	""	"" ""
Our living planet	""	"" ""
Balance of Nature	""	"" ""
Communication through mass media	""	"" ""
Strategic planning of Agri. Publications.	""	"" ""
How to use library for writing research papers/reports.	""	"" ""
How to talks on radio/T.V.	""	"" ""
Wheat planting in rice, Cotton-wheat planting system.	""	"" ""

DETAILS OF AWARENESS SEMINARS

Sr. No.	NAME OF DIRECTORATE/SECTION	EQUIPMENT USED
1.	Agronomy	1. Public Address System 2. Microphone 3 nose 3. Tape recorder 4. Overhead Projector 5. Slide Projector 6. Screen 7. Extension Boardculture 8. Stabalizer
2.	Horticulture	"" ""
3.	Pulses	"" ""
4.	Soil Chemistry	"" ""
5.	Jute Agronomy	"" ""
6.	Wheat Research institute	"" ""
7.	Plant Pathology/Virology	"" ""
8.	Soil Bacteriology/Biochemistry	"" ""
9.	Food Technology	"" ""
10.	Vegetables	"" ""
11.	Oilseeds	"" ""
12.	Fodder Research Instt. Sargodha.	"" ""
13.	Regional Agri. Research Instt. Bahawalpur and Tobacco Bot. Sahiwal	"" ""
14.	Correlation between labial and alsen P ratio in oil and plant growth.	"" ""
15.	An overview of research activities in Soil Chemistry-I.	"" ""
16.	An overview of research activities in Soil Chemistry-II.	"" ""
17.	Rice Research Instt, Kala Shah Kaku.	"" ""

MAIN ACTIVITIES DURING APRIL, 1992.

1. Attended/conducted seminar on agricultural presentations in 26th Annual Science Conference held at Islamia University, Bahawalpur from 9-13 April.
2. Organized/conducted one day's Workshop/Seminar of agricultural officers, EADAs and DDAs of Agri. Department (Extension) to impart training on Pest Management.
3. Delivered lecture to Agri. Officers of Extension Department in Use of Audio/Video Aids in Agri. Communication at University of Agriculture, Faisalabad on 19.4.1992. Participants were 30.
4. Attended/covered certificate distribution ceremony on vegetable/fruits preservation activities organized by Food Technology Section of Ayub. Agri. Res. Instt. Faisalabad for young ladies on 29.4.1992.
5. Attended/covered one day's travelling workshop "Wheat Cultivation in Standing Rice" organized by Department of Agronomy, AARI, Faisalabad on 21.4.1992. Twenty scientists participated and visited Shahkot, Gujrat and Shahkot farmer areas.
6. Attended/covered a 30 member Afghan scientists delegation visiting AARI. Director General Agricultural (Research) briefed the delegation about AARI's main activities and achievements.
7. Meeting with Director General (NIAB), Dr. Tuki Azuno and MART Project Officer Dr. Senykoff, Director PPI, Bahawalnagar, Director Cotton and discuss ways of exchanging and dissemination of agricultural information to scientists/growers.
8. Travelled to Pindi Bhattian alongwith Dr. T. Azuno and Dr. Sennykoff, MART Project Officer, Dr. M.A.Jalees and Dr. Sadaqat Hanjra on a study Tour visited Milk Pak, attended two farmer group meetings in two villages and discussed how for technology transfer by Milk Pak people is effective to increase their milk fodder productivity.
9. Being attended/organized one day's national seminar on Cotton Production at AARI, Faisalabad on 30.4.1992.

All the above mentioned activities were fully given audio/video coverage.

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Participating Institutions
PAKISTAN AGRICULTURAL LIBRARIES STRENGTHENING PROGRAM
MART Project, USAID

"A" Category Libraries

- A-1 National Agricultural Research Centre, Park Road, Islamabad.
- A-2 University of Agriculture, Faisalabad.
- A-3 NWFP Agricultural University, Peshawar.
- A-4 Sind Agriculture University, Tandojam.

"B" Category Libraries

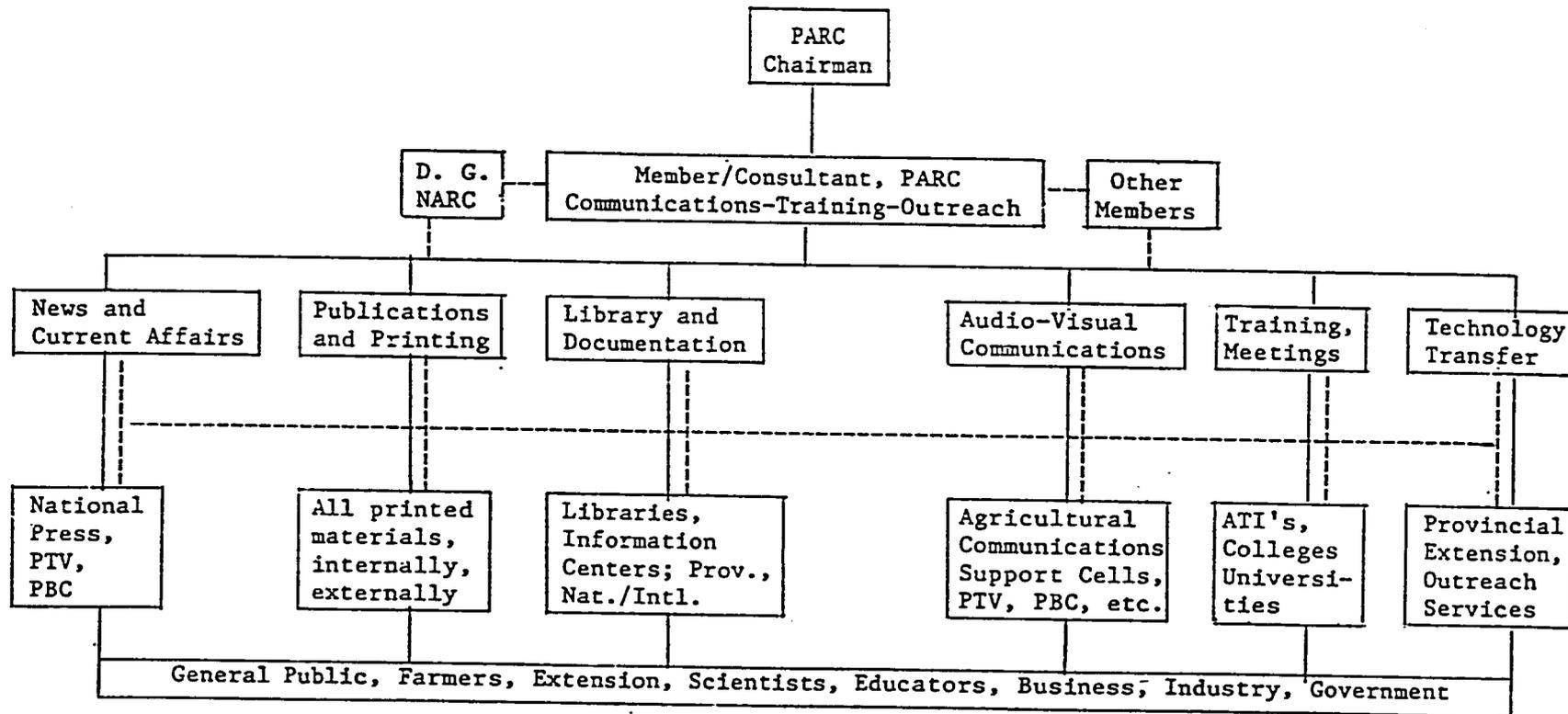
- B-1 Ayub Agricultural Research Institute, Jhang Road, Faisalabad.
- B-2 Faculty of Agriculture, Gomal University, D.I. Kahn.
- B-3 Office of the Director General Agriculture, P.O. Box 301, Sariab, Quetta.
- B-4 Pakistan Forest Institute, Peshawar.
- B-5 College of Veterinary Sciences, Lahore.
- B-6 Barani Agriculture College, Murree Road, Rawalpindi.
- B-7 University College of Agriculture, Rawalakot, Azad Jamu & Kashmir.
- B-8 Central Cotton Research Institute, Old Shujabad Road, Multan.

"C" Category Libraries

- C-1 Arid Zone Research Institute, Brewery Road, Quetta.
- C-2 Pest Management Research Institute,
Tropical Agricultural Research, Karachi.
- C-3 Agricultural Research Institute, Tarnab, Peshawar.
- C-4 Nuclear Institute for Agriculture and Biology, Jhang Road,
P.O. Box 128, Faisalabad.
- C-5 National Documentation Centre Library & Information
Network (NADLIN), F-8/3, Islamabad.

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Proposed Organizational Structure
 PARC/NARC COMMUNICATIONS-TRAINING-OUTREACH (CTO)



_____ Direct Relationship
 - - - - - Functional Relationship

(J. Cordell Hatch)

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