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**ACTION PLAN FOR THE SUSTAINABILITY  
OF THE NORTH WEST FRONTIER PROVINCE  
AGRICULTURAL UNIVERSITY**

Based on the Sustainability Consultancy and Workshop  
conducted by John B. Richey and Susan Scribner

August 24 - September 9, 1993

## ACTION PLAN FOR THE SUSTAINABILITY OF THE AGRICULTURAL UNIVERSITY

### I. BACKGROUND

Ten years ago officials from the federal and provincial governments, members of the Pakistan Agricultural Research Council, faculty of the North West Frontier Province (NWFP) Agricultural University (AU), and U.S. experts recognized that agricultural productivity in the NWFP was not improving. They concluded that upgrading the Province's research, education and technology transfer system could stimulate advances in agriculture.

They decided to develop a model for Pakistan that would integrate agricultural education, research and extension as a means to transform agricultural production in the province. The recent establishment of AU provided an opportunity to implement the new approach as the University grew, rather than attempting to change an established institution.

The Transformation and Integration of the Provincial Agricultural Network (TIPAN) Project was initiated in 1984. The stated purpose of the project was to (i) integrate agricultural research in the NWFP with agricultural education at the university level, (ii) improve the quality of education offered and research undertaken by the University, and (iii) strengthen linkages with agricultural extension through a problem-solving, farmer-oriented outreach program at the University.

The TIPAN project represents a major investment by both the governments of the United States and Pakistan. USAID has contributed \$55.5 million; and the GoP has spent Rupees 175.4 million. The accomplishments are significant, including the following examples:

- completed long-term training for 70 participants;
- completed short-term training for 55 participants;
- improved curriculum;
- peer-reviews of research projects; and
- construction of new facilities, including laboratories, research equipment, library, Learning Resource Center, offices, and faculty housing.

The Agricultural University has come to play a key role in contributing to agricultural productivity in the province. For example, it provided consulting advice that eliminated an apple blight. AU increasingly provides practical assistance to farmers through the extension system. Government, larger farmers and agribusiness seek out qualified graduates who assume the majority of provincial research and extension positions.

The TIPAN project will finish on August 29, 1994. The impending project completion date presents two challenges to the Agricultural University. First, the University needs to secure resources to replace those provided by the TIPAN project, including sufficient resources to cover the higher costs that will result from the operation and maintenance of the new facilities. Second, AU needs to institutionalize and continue to strengthen the programmatic and administrative progress made with the assistance of the TIPAN project. AU must maintain the momentum for transforming and integrating the agricultural network, or the province risks losing the elements that make it a unique

model. Together, a solid financial base and a strong program will ensure the sustainability of the Agricultural University and the benefits of the TIPAN investment.

## II. SUSTAINABILITY WORKSHOP

To facilitate a Sustainability Workshop and further the process of developing an action plan for sustainability, USAID and the TIPAN project engaged a team of sustainability specialists from the University of Maryland (UM). John Richey, an institutional specialist, and Susan Scribner, a sustainability specialist, were joined in Peshawar by S. Mehfooz Ali Shah, the former Director of Outreach for the AU. Members of AU's established Sustainability Group -- Jehangir Khan Khalil, Iqbal Shah, Mian Mushtaq Ahmad and Mir Hatam -- actively assisted the sustainability team in preparing and facilitating the Sustainability Workshop. The Sustainability Group is a committee at the University, established in 1989 to address sustainability issues of concern to AU.

The approach of the workshop, which took place from August 30 to September 4, 1993 at the Green's Hotel in Peshawar, was to gather representative individuals who are affected by or concerned with AU's TIPAN project. Through a participatory process, workshop participants worked through the steps to developing an Action Plan for the Sustainability of AU. By soliciting and incorporating the views of workshop participants, the consultant team and Sustainability Group believe that the resulting action plan benefits from widespread support.

Workshop participants, through a combination of small group decision-making sessions and plenary discussion, agreed upon a core list of forty-eight sustainability issues. They then stratified the issues into priority groups of critical, major and important. Critical was defined as essential for the survival or sustainability of AU and imperative to be addressed as soon as possible. Major issues are considered to be essential for sustainability and require action within the coming twelve months. Important issues affect the long-term sustainability of AU and should be addressed expeditiously. Because of the many steps in the action planning process and the limited time available, the workshop proceeded with addressing only the critical issues. The sustainability team strongly recommends that major and important issues, listed in Annex A, are addressed through a consensus-building process in the immediate future.

For the eighteen issues agreed upon as critical, small groups of participants proposed solutions. For each issue, the groups identified (i) the action(s) to be taken; (ii) who must take the action; and (iii) where the associated funds would come from if resources were required. Of the eighteen critical issues, eight were selected and agreed to for complete processing. The issues selected for further processing had been unanimously ranked critical by the groups. Again, limited time did not allow all the proposed solutions to be addressed. Below is a list of all the critical issues; those written in capital letters were selected for complete processing. Annex B lists some proposed solutions for the ten critical issues that were not fully processed. The solutions are presented only as suggestions, as they do not have the agreement of the workshop participants.

For each of the eight issues, the group decided upon a solution, including actions, actor -- the person who must take action -- and source of funds. Small groups each addressed two or three sets of issues and solutions and discussed the strategic issues affecting implementation. Small groups identified strategic issues, the policies and external factors that will affect implementation and the

parties concerned with and able to influence implementation. They developed actions that will comprise the implementation strategies, specified approaches to the issues that will facilitate implementation. For the eight issues which the group developed a full action plan, a synopsis is presented below. A more complete discussion of implementation steps and strategies is presented in Annex C.

### III. CRITICAL ISSUES

#### MANAGEMENT

1. LONG-RANGE AND STRATEGIC PLANNING THAT INTEGRATES PROGRAM AND FINANCIAL ELEMENTS IS NOT PRACTICED.
2. A PARTICIPATORY PLANNING & DECISION MAKING PROCESS DOES NOT EXIST THAT BRING THE FACULTY FULLY INTO THE GOVERNANCE OF AU.
3. There is a lack of a performance-based budgeting system/process (to replace incremental budgeting).
4. THERE IS A LACK OF A DECENTRALIZED A PROGRAM MANAGEMENT APPROACH THAT LINKS DECISION-MAKING, AND FINANCIAL MANAGEMENT AND ACCOUNTABILITY.

#### FACILITIES

5. The auxiliary services for the new buildings will not be complete when they are transferred from the contractor (e.g., telephones, auditorium's A/V system, and spare parts for import equipment).
6. THE NEW BUILDINGS WILL INCREASE THE OPERATIONS COST OF THE PHYSICAL PLANT BY 320% FROM Rs. 619,000 PER MONTH TO Rs.1,978,000 PER MONTH; THAT IS, FROM 1,359,000 PER MONTH OR Rs.16,308,000 PER YEAR.
7. There are insufficient numbers of trained staff to maintain the new physical plant.

#### FINANCES

8. THE FEDERAL GOVERNMENT'S BUDGET ALLOCATION HAS NOT KEPT PACE WITH EITHER THE UGC COMMITMENT OR ACTUAL COST RISES. FOR EXAMPLE, THE CURRENT ALLOCATION IS Rs. 40 MILLION AND THE COST OF FEDERALLY-SUPPORTED STAFF POSITIONS TOTALS Rs. 44 MILLION.

9. The University generates a fraction of its own income, despite dramatic increases in independently generated income in the past seven years.
10. Financial forecasts for the University project a growing deficit from the current Rs. 47 million to hundreds of millions by the year 2000.

#### TEACHING

11. There is a lack of opportunity for practical training of students; lower emphasis on agricultural production techniques - crops and animals.

#### CONTINUING EDUCATION

12. Although there has been observable progress in the development of continuing education programs, the staff, currently one, is insufficient to (i) meet the needs for providing educational services to farmers and other clients; and (ii) operate, develop and utilize the physical resources which provide major visibility and income generation potential for AU.

#### OUTREACH

13. Outreach is not conducted as a regular function of the Agricultural University and the research institutes and stations.
14. ADEQUATE FUNDS ARE NOT PROVIDED IN THE ANNUAL BUDGET OF AU AND THE PROVINCIAL RESEARCH NETWORK FOR OUTREACH ACTIVITIES.
15. University, research, extension and farmers' linkages are weak.

#### RESEARCH

16. The funds are not available for repair and calibration facilities and technicians to maintain the equipment needed for research and lab training.
17. THE FUNDS TO MAINTAIN THE TECHNICAL AND SCIENTIFIC JOURNAL SUBSCRIPTIONS, INCLUDING CD-ROM, FOR THE LIBRARY HAVE NOT BEEN PROVIDED.

#### MERGER

18. ALTHOUGH THERE HAS BEEN NOTABLE PROGRESS TOWARD THE GOAL OF INTEGRATION, THE ON-CAMPUS AND OFF-CAMPUS RESEARCH AND TECHNOLOGY TRANSFER ACTIVITIES ARE NOT FULLY INTEGRATED BECAUSE PERSONNEL SYSTEMS HAVE NOT BEEN MERGED.

#### IV. ACTION PLAN FOR EIGHT ISSUES

**ISSUE 1:** Long-range and strategic planning that integrates program and financial elements is not practiced.

**Impact:** TIPAN was originally conceived as a model for improving agricultural production in NWFP. For AU to continue to serve the needs of provincial agricultural producers and processors into the next century, it must have a comprehensive and feasible plan that reflects the needs and interests in NWFP.

**Solution:** At the request of the Vice Chancellor (VC) and the Director of Planning and Development, each Department Head in the University and each Section Head in the research system should prepare a 20-year plan that incorporates input from faculty, staff, administrators, farmers students and other clients.

**Resources:** Resources to develop the plan should come from the TIPAN project.

**ISSUE 2:** A participatory planning and decision making process does not exist that brings the faculty fully into the governance of AU.

**Impact:** AU cannot maintain the unique elements of the TIPAN model without involving faculty, administrators and clients in the decisions that affect teaching, research and extension. Involving administrators enables them to understand the goals of the faculty and assist in finding workable solutions. Furthermore, with the significant challenges currently facing AU, a participatory decision making process will help gain the support for hard decisions among concerned parties.

**Solution:** The VC should either establish or expand existing task-oriented committees so they include a variety of concerned parties. For key decisions, the committees should be convened a recommend a course of action to the VC that enjoys broad support.

**Resources:** None required.

**ISSUE 3:** There is a lack of a decentralized program management approach that links decision-making, financial management and accountability.

**Impact:** Faculty, researchers and program directors cannot effectively plan or execute their responsibilities without the responsibility to take decisions and allocate the resources necessary to implement them. Furthermore, without being delegated responsibility and resources, they cannot be held accountable for their work programs.

**Solution:** The VC and the Director of Research should modify AU's budgeting, accounting and financial management system to allocate funds to those responsible for academic or administrative units, including individual researchers who are principal investigators for

projects. A monitoring and evaluation system should be established to oversee progress and ensure accountability.

Resources: None required.

**ISSUE 4:** The federal government's budget allocation has not kept pace with either the UGC commitment or actual cost rises. For example, the current allocation is Rs. 40 million and the cost of federally-supported staff positions totals Rs. 44 million.

**Impact:** As a result of the insufficient allocation of funds, AU currently faces a deficit of Rs. 47 million. Without an increase in federal funding, the deficit is expected to grow. Not only is the University's solvency and survival threatened, but AU's ability to develop into a center of excellence is compromised.

**Solution:** The Director of Finance and the VC should ensure that all approved positions are cleared with the GoP's finance department. Similarly, all approved research and outreach positions should be cleared with the provincial finance department. They should request a special waiver from the federal government. In addition, the Planning and Development Department should oversee preparation of a PC-1 to cover the costs of spare parts, fertilizer and chemicals.

Resources: None required.

**ISSUE 5:** The new buildings will increase the operations cost of the physical plant by 320%, from Rs. 619,000 per month to Rs. 1,978,000 per month. That is an increase of Rs. 1,359,000 per month or Rs. 16,308,000 per year.

**Impact:** This represents a significant increase in the recurring costs of the University. Additional sources of revenue must be found, or AU may not be able to afford to use the new buildings.

**Solution:** The Director of Planning and Development, with the assistance of the Director of Works, should prepare an annual budget and a PC-4 to obtain an annual maintenance grant from the federal government. The VC should make a special appeal to the federal government. All parties must try to economize on operations to keep the University from incurring debt.

Resources: None required.

**ISSUE 6:** The funds to maintain the technical and scientific journal subscriptions, including CD-ROM, for the library have not been provided.

**Impact:** A full array of current technical resources improves the quality of education and research. Only if faculty and researchers keep abreast of recent developments in their fields, will they be competitive internationally.

**Solution:** The Planning and Development Department, with the assistance of the librarian, should request that library expenses be included in the annual budgets of both the provincial and federal governments. In addition, the Finance Department should initiate a fee for library users who are not faculty, staff or students.

**Resources:** None required.

**ISSUE 7:** Adequate funds are not provided in the annual budget of AU and the provincial research network for outreach activities.

**Impact:** Insufficient funds will jeopardize the effectiveness of outreach, which is central to the TIPAN concept. Outreach activities provide the crucial linkages between education, research and extension.

**Solution:** Planning and Development Department, supported by Director of Outreach, Director of Continuing Education, Director of Institute of Development Studies and the librarian, should submit a PC-1 to the provincial government.

**Resources:** None required.

**ISSUE 8:** Although there has been notable progress toward the goal of integration, the on-campus and off-campus research and technology transfer activities are not fully integrated because personnel systems have not been merged.

**Impact:** The integration of on- and off-campus activities is necessary to reap the benefits of improved faculty and research capabilities, and to consolidate complementary efforts.

**Solution:** At the urging of the VC, the provincial government should amend the act and complete the merger as soon as possible.

**Resources:** None required.

## V. ROLE AND RESPONSIBILITIES OF THE SUSTAINABILITY GROUP

The participants identified many issues that are significant for their impact on sustainability. They took some of those issues through the complete cycle of steps to develop an action plan. The action plan outlined above addresses these eight issues. In addition to the specific recommendations, however, there are a number of over-arching issues that must be addressed in an action plan for sustainability.

First among these is the need for an individual or committee to be responsible for developing and implementing the action plan. Any action plan, whether the truncated plan presented above for eight critical issues or the not yet developed comprehensive plan, requires many actions by many individual actors. While the Vice Chancellor may have ultimate responsibility for implementing numerous solutions, he will depend on the technical assistance of many among AU's faculty and staff.

Therefore, the consultant team recommends that the Vice Chancellor appoint the Sustainability Group to:

1. oversee the implementation of the action plan for the eight critical issues;
2. organize a representative cross-section of faculty and staff who would use a participatory process to develop an action plan for the remaining issues;
3. coordinate implementation activities among the various parties, including faculty, staff, students, farmers, and government officials; and
4. advise the VC on (and keep him apprised of) the progress on resolving the sustainability issues.

#### VI. ROLE AND RESPONSIBILITIES OF THE VICE CHANCELLOR

#### VII. INCOME GENERATION AND COST SAVINGS INITIATIVES

##### I. ESTABLISH A FOUNDATION/ENDOWMENT.

A "foundation" was discussed as a means of providing a predictable, reliable, long-term source of funds. The exact nature was not finalized, but should be before proceeding. The three primary options include a simple foundation, a trust and an operating foundation. In each model, an endowment is capitalized with donations from individuals, institutions, government, foreign governments and international donor organizations and the private sector. The donor gives a "gift" without an expectation of anything in return; there is not a quid pro quo. The gift may, however, be conditioned as to the types of activities that may be funded by its revenue, the geographic location or target group who should be the principal beneficiaries, et cetera.

A simple foundation would establish an endowment with specifications about investments and the uses for which the revenues could be expended. A trust would function similarly, but would place some or all of the endowment in trust; that is, dedicated for specific activities at AU. The limitations on uses offers some security for international organizations in the event of either liquidation of the endowment or diversion of the revenues to purposes that the donor does not approve. This provision is usually a conditionality of endowment capital from international and many bilateral donor agencies. It is possible to have a mix of trust and simple donation monies in the same endowment to satisfy the needs of donors who have different needs for security.

An operating foundation includes either of the endowment features of the other two models, plus the ability to receive funds from sponsors of research and other projects (i.e., sponsored projects). Donors would give gifts or place funds in the endowment without a quid pro quo relationship. This model is used frequently when an efficient management mechanism is needed to bypass unnecessary public-sector administrative requirements while providing sound business management of the funds and providing sufficient oversight to satisfy donors and sponsors.

## 2. RAISE TUITION.

The tuition rate is so low that a considerable increase would be required to provide sufficient revenue to outweigh the political costs if current students were forced to pay. It is not clear that the government would support this form of income generation when faced with political opposition, despite their strong urging for a tuition increase. The University has had remarkable success in attracting "self-financing" students. This success demonstrates irrefutably that there is a market for AU's education, so that the objective is realistic and achievable.

The solution may be in the method of implementation. During the conference and other discussions, it seems likely that a phased-in approach may be effective. If tuition increases are put in effect for classes beginning in two years, it is likely that few current students would be keen to protest a tuition rise that would affect students not yet admitted. Additionally, the increase would enhance the value of the degree of the current students. The combination of a depersonalized increase and a no-cost appreciation of an AU degree for current students would probably neutralize any efforts of politically-oriented students to protest the issue.

## 3. INSTITUTE USER FEES.

The costs and benefits of increasing fees mirrors those of increasing tuition. An additional cost, however, is the increased management and accounting effort required to account and collect the increases. The solution to implementing this approach may be the same as the solution for tuition.

At present, it is not clear that the University's accounting and financial management system is able to calculate the true costs of the services students receive. Additionally, it is similarly unclear if management is able to account or administer a fee structure with anything but the most elemental fees.

## 4. BEGIN TUITION- OR FEE-BASED CERTIFICATE PROGRAMS.

Certificate programs are popular for working professional and in-service, company- or farm-specific training. Organizations that are too small to mount a sophisticated professional development program may be quite willing to have AU become its professional development "department" under a contractual arrangement. Similarly, upwardly mobile professionals may be willing to pay for such programs operated on an open enrollment basis through the continuing education unit(s). Well regarded training may be attractive human resource development opportunities for international agencies needful of training that supports their programs.

## 5. EXPAND COURSES/CONSULTATION FOR AGRIBUSINESS AND OTHER "CLIENTS."

Larger firms may be willing to contract for specialized training that augments their existing professional development programs. Such training could be coupled with technology transfer, so that the training would become technology-specific.

Industrial and commercial consulting offer income-generation opportunities. There are, however, conflicts and stresses between academic objectives and those of for-profit firms that other universities have had to address to assure that the university's academic mission is not compromised. Before entering into this activity, several policies and procedures should be put in place related to: (i) conflict of interest between the work done for-hire and standard University obligations; (ii) prohibition of the use of students and university facilities on consulting assignments; (iii) the University's management and ownership of intellectual property and proprietary data; and (iv) publication and dissemination of intellectually interesting information that would benefit student's learning experience.

#### 6. RENT FACILITIES FOR CONFERENCES.

The new facilities would be attractive for a range of activities. As with the costs of student fees, however, it is not clear that the current financial management systems would be able to price the facilities accurately. The university may benefit from technical assistance in establishing a conferences and short courses unit. An effective tourism consultant may be quite helpful in assisting AU to design and implement a system. It is not uncommon for a continuing education unit to operate such programs, although for larger programs, such units tend to be operated separately.

#### 7. INCREASE CONTRACT TRAINING FOR INTERNATIONAL AGENCIES.

This income-generating option should be attractive to the private sector. Although some caution is warranted like with industrial consulting, this option may be more promising. As with the certificate training, high quality training may provide attractive human resource development opportunities for international agencies needful of training that supports their programs.

#### 8. MAXIMIZE FARM-INCOME GENERATION THROUGH INNOVATIVE TECHNIQUES.

The participants offered several suggestions for income generation. Although it is important to assure that the innovative techniques are consistent with the University's academic mission, most suggestions seemed relatively risk-free and need only the individual initiative to implement them.

#### 9. ENCOURAGE SALES OF PUBLICATION & BOOKS.

The information generated from some research should be of value to farmers and agribusinesses. Additionally, subscriptions and/or memberships in the main or research center libraries may generate income. At least providing reprints and printouts from CD ROM may offer income generating opportunities. To avoid charges of copyright violation, membership-based charge structure should be developed.

#### 10. RECOVER OVERHEAD COSTS FROM SPONSORED PROJECTS, AND INCLUDE IN PROPOSALS TO EXTERNAL FUNDING AGENCIES.



## ANNEX A: MAJOR AND IMPORTANT ISSUES

During the sustainability workshop, small groups of participants ranked the issues as critical, major or important. In plenary session, all the participants reached agreement on a consolidated list of critical issues. These are presented in Section III. Since there was not sufficient time to reach agreement as a group on what are the major and important issues, the consultant team consolidated the rankings provided by the small groups. When the vote was split, the issues was ranked as major rather than important. As a result, all but three of the remaining issues fall into the major category. Furthermore, the consultant team believes that two of the important issues -- the need for an administrative support system and greater consultation with clients -- may have received higher rankings by the end of the workshop. Therefore, the consultant team recommends that these issues be ranked by consensus before subsequent steps in the action planning process are undertaken.

### MAJOR ISSUES

#### MANAGEMENT

1. M-4. THERE IS INSUFFICIENT MANAGEMENT TRAINING FOR DEPARTMENT CHAIR, SENIOR FACULTY, RESEARCH MANAGER AND PIs.
2. M-7. THERE IS A LACK OF A PERFORMANCE-BASED PERSONNEL EVALUATION SYSTEM FOUNDED ON OBJECTIVE CRITERIA.
3. M-8. THERE ARE TOO MANY PROGRAMS AND DEPARTMENTS.
4. M-9. ADMINISTRATIVE AND FINANCIAL MANAGEMENT ARE NOT RESPONSIVE OR ACCOUNTABLE TO PROGRAMS OR PIs.
5. M-10. THE SELECTION OF ACADEMIC LEADERSHIP IS NOT MADE ON THE BASIS OF MERIT.
6. M-11. THERE IS A GENERAL LACK OF DECENTRALIZED AUTHORITY.

#### FACILITIES

7. FA-3. THE FACILITIES THAT SUPPORT RESEARCH AND TEACHING HAVE NOT BEEN REPLACED OR BUILT, AS THE CASE MAY BE (E.G., POULTRY SHEDS, HOUSING FOR ANIMAL CARETAKERS).

#### TEACHING

8. T-1. THE GRADING SYSTEM IS DEFECTIVE.

9. T-3. THE INTERNSHIP PROGRAM DOES NOT FUNCTION ANY LONGER. WHEN IT WAS IN OPERATION, IT WAS NOT WELL UTILIZED.
10. T-4. THE CURRENT CURRICULA DO NOT DEVELOP MANAGERIAL SKILLS IN STUDENTS.
11. T-6. COURSES DO NOT HAVE ENOUGH FIELD WORK THAT GETS THE TEACHERS AND STUDENTS IN THE FIELD.
12. T-7. TEACHERS ARE NOT EMPOWERED TO SET STANDARDS FOR TEACHING NEEDED TO MAKE THE TIPAN APPROACH WORK WELL (E.G., SETTING EXAM DATES, HOLDING POP QUIZZES, REQUIRING HOMEWORK).

#### OUTREACH

13. O-3. TRAINING AND COMMUNICATION SERVICES, ON-FARM TRIALS AND DEMONSTRATIONS OF TESTED TECHNOLOGIES ARE NOT COORDINATED OR INTEGRATED AS CROSS-CUTTING ACTIVITIES FOR RESEARCH, TEACHING AND OUTREACH.
14. O-5. WOMEN ARE NOT SUFFICIENTLY INVOLVED IN OUTREACH ACTIVITIES.
15. O-6. LINKAGES WITH AGRIBUSINESS AND AGROINDUSTRIES ARE WEAK.
16. O-7. OUTREACH AND EXTENSION SEE EACH OTHER AS COMPETITORS.

#### RESEARCH

17. R-3. THE FUNDS TO MAINTAIN THE LIBRARY NOT BEEN PROVIDED.
18. R-4. RESEARCH (AND TEACHING) SUPPORT FACILITIES/STAFF ARE SUFFICIENTLY FUNDED OR RECOGNIZED FOR THE CONTRIBUTION THAT THEY MAKE. SUCH AS:
  - SOILS. FEED & OTHER TESTING LABS.
  - COMPUTER LABS. WITH COMPUTER-USER SUPPORT.
  - STATISTICAL CONSULTING IN RESEARCH DESIGN.
19. R-5. PAGE COSTS FOR PUBLICATION IN REFEREED JOURNALS INCLUDING GRAPHICS AND TRANSLATION HAVE NOT BEEN PROVIDED.
20. R-7. RESEARCH PROGRAMS ARE NOT FOCUSED THROUGH DEVELOPMENT OF LONG-TERM MASTER RESEARCH PLAN.
21. R-8. THERE IS INSUFFICIENT EMPHASIS ON MULTI- AND INTER-DISCIPLINARY RESEARCH.

22. R-9. THERE IS INSUFFICIENT FOCUS ON FARMING SYSTEM RESEARCH.
23. R-10. ENVIRONMENTALLY-FRIENDLY RESEARCH PROJECTS AND NATURAL RESOURCE CONSERVATION & SUSTAINABLE AGRICULTURE ARE NOT SUFFICIENTLY EMPHASIZED.
24. R-11. MOST FACULTY ARE NOT APPLYING FOR RESEARCH PROJECTS WITH EXTERNAL FUNDERS AND INDUSTRY.
25. R-12. THERE ARE TOO FEW FORMAL INCENTIVES OR REWARDS FOR FACULTY WHO SECURE EXTERNAL FUNDING FOR PROJECTS.
26. R-13. LIBRARY SERVICES AT THE RESEARCH STATIONS ARE WEAK.
27. R-14. TOO FEW STAFF ARE AVAILABLE IN THE COMMUNICATIONS DEPARTMENT TO SUPPORT TEACHING AND RESEARCH.

#### IMPORTANT ISSUES

1. M-5. THERE IS NO RESEARCH ADMIN. SUPPORT SYSTEM OR TRAINING FOR ADMIN. SUPPORT STAFF WHO ASSISTS FACULTY.
2. I-5. THERE ARE NO SPORTS COMPLEX OR OTHER SERVICES FOR STUDENTS.
3. R-6. THE FARMERS, PROCESSORS AND OTHERS ARE NOT CONSULTED FOR PROBLEM -ORIENTED RESEARCH.

ANNEX B: PROPOSED SOLUTIONS FOR "NOT PROCESSED" CRITICAL ISSUES

<u>Issue</u>	<u>Action</u>	<u>By Whom</u>	<u>Source of Funding</u>
<b>MGMT</b>			
3	The budget making process be revised to reflect the programs of the University.	Director Finance/ Director Research	Federal and Provincial Govts.
<b>FACL</b>			
5	A PC-1 for auxiliary services be prepared while the spare parts for imported equipment will be provided by construction contractor.	Director Works/ Director Planning	Federal Govt.
7	A new PC-1 be prepared for provision of trained manpower for operation and maintenance staff.	Director Works/ Director Planning	Federal Govt.
<b>FIN</b>			
9	The additional income through contract services should be institutionalized with a built-in 30% overhead for the University. User charges should be increased to match the expense. Seats in self-finance basis be increased.	Vice Chancellor	-
10	Long-term financial plan for the University be prepared with the assistance of LUMS.	Planning & Development/ Director Finance	University/TIPAN
<b>TCH</b>			
11	Practical training of the students should be organized through the research stations, agribusiness, private farms during summer months.	Director Teaching	University
<b>CE</b>			
12	Short courses for farmers, agribusiness, international agencies, sponsored programs etc. be organized on charge basis.	Director Continuing Education	-
<b>OUTR</b>			
12	Split assignments be enforced for faculty and research staff.	Vice Chancellor	Nil

<u>Issue</u>	<u>Action</u>	<u>By Whom</u>	<u>Source of Funding</u>
14	Linkages between farmers, researchers and faculty be strengthened through multi-disciplinary research, field days, demonstration trials and farming system studies.	Director Outreach/ Director Research/ D.G. Extension	Provincial Govt.
RES			
15	A PC-1 be prepared for obtaining necessary funds.	Director Research/ Director Planning	Provincial Govt.

> ANNEX C: IMPLEMENTATION STEPS AND STRATEGIES FOR EIGHT CRITICAL ISSUES