

# **PROPOSAL FOR UNIFIED AGRICULTURAL RESEARCH AND EDUCATION SYSTEM SUPPORTING EXTENSION**

**January 25, 2010**



**University of Agriculture, Faisalabad**  
[www.uaf.edu.pk](http://www.uaf.edu.pk)

## CONTENTS

	Acknowledgement	iii
1.	Historical Perspective	1
1.1.	Dr A.G.Bhatti committee (1978)	1
1.2.	World Bank Mission (1987)	2
1.3.	Blue Ribbon panel (1990)	3
1.4.	TIPAN Experience in NWFP.	4
1.5.	Land Grant System of Agricultural Education and Research in India	5
2.	Whether UAF and AARI Have achieved their goals?	6
2.1.	University of Agriculture, Faisalabad	6
2.1.1.	Limiting Factors	7
2.2.	Ayub Agricultural Research Institute	7
2.2.1.	Current Limitations to Agri. Research System	8
3.	Way Forward	9
3.1	Present Committee for unified Agricultural Research System	9
3.2	Stakeholders workshop	10
4.	Recommendations	11
5.	Appendices	13
	Appendix I Syed Babar Ali's Letter	13
	Appendix II Notification of the Committee on Unified Agriculture Research System	14
	Appendix III Presentation at UVAS	15
	Appendix IV Presentation at UAF	18
	Appendix V Minutes and List of the Participants of the Workshop	23
	Appendix VI Organizing Committee of the Workshop	29

## **Acknowledgements**

This report has been compiled by combing the available information from official records and on the basis of deliberations of two meetings, a stakeholders workshop and internal analyses. The draft was prepared by Dr. Muhammad Rashid, Dr. Muhammad Siddique Javed and Mr. Qamar Mohy ud Din. The stakeholders workshop was sponsored by USDA funded endowment at UAF. We are thankful to Syed Babar Ali for his initiative.

( Iqrar Ahmad Khan )

# **PROPOSAL FOR UNIFIED AGRICULTURAL RESEARCH AND EDUCATION SYSTEM SUPPORTING EXTENSION**

## **1. HISTORICAL PERSPECTIVE.**

Agricultural Education and research in Pakistan (then West Pakistan) were separated in 1961. As a result, University of Agriculture, Faisalabad (then WPAU) and Ayub Agricultural Research Institute Faisalabad (AARI) were created bifurcating the two functions of the former Punjab Agriculture College and Research Institute, Lyallpur. The college was originally established in 1906 on the land grant pattern of United States.

Since its establishment, the university has been producing scholars with Bachelor, Master and PhD degrees in various disciplines of agriculture and allied basic and social sciences, who are playing tremendous role in development, not only in Pakistan but also in many countries of the world. University has also initiated education programs in other disciplines like Home Economics, Computer Science and Business Administration/Agribusiness. According to HEC rating, UAF is the top university in the province of Punjab and it stands rated after QAU-Islamabad and Karachi University among all 130 universities in the country. There are 6 agricultural universities in the country and several colleges and institutes including PARC/NARC. There are over 700 PhDs in the entire ag-system of the country and about half of them are employed at UAF and more than 70% of them are stationed in Faisalabad within three organization. There are 1200 HEC funded PhD fellows in ag-sciences and 700 of them are at UAF.

During past 49 years, the Ayub Agriculture Research Institute, Faisalabad has developed into a versatile research center to cope with the emerging needs of the farmers. AARI has regional centers across the province of Punjab to undertake research in different agro-ecological zones as well as mono crop centers like cotton in Multan, mango in Shujabad and citrus in Sargodha. All these developments have made the AARI an institute which has been recognized at national and international levels. AARI has >1000 research positions with only a 100 of them holding PhD degrees.

The university professors and graduate students mainly concentrated on academic and basic research and AARI scientists mainly focused on field problems and variety evolution with little coordination with university. Commissions and committees were constituted to look into the working of UAF and AARI from time to time. Some commissions suggested merger of the AARI with university (National Agriculture Commission 1988, headed by Sartaj Aziz) while others suggested to refocus the goals and orientation of the university to revive its role in Agricultural Development (Blue Ribbon Panel report). The issue of merger of AARI with UAF was considered and recommendations are discussed briefly as below:

### **1.1. Dr A.G.Bhatti committee (1978)**

A committee was constituted under the chairmanship of Dr. A.G. Bhatti, Advisor for Agriculture to Government of the Punjab to look into the merger of education and research. The committee submitted its report stating that:-

- a) As a first step, Punjab Agriculture Research Coordination Board (PARCB) under the chairmanship of the Vice Chancellor may be created to coordinate research activities of the province.

PARCB was an entity without any funding and administrative control on either side of the research and education divide. It was forum for discussion to avoid duplications and overlap and also a bridge to promote voluntary collaboration. Despite its lack of 'teeth' the PARCB got recognition for itself. To improve the situation, the PARCB was shifted to Lahore (early 1990's) under the chairmanship of the chairman P&D with a fulltime CEO and financial help of the World Bank under ARP-II. It remained very active in organizing meetings but without launching a single collaborative research project. Its location in Lahore was also considered a handicap for scientific community which was almost entirely stationed at Faisalabad. It has been restructured recently as PARB. Now (>3 years), it is mainly concentrating on Competitive Grant System (CGS) of funding projects under the chairmanship of Agriculture Minister instead of P&D. The activity of PARB is confined to those scientists (<30 projects) of various organizations who make applications for funding. The organizational structure of research, education and extension are not bound to the working of PARB, alive in their own spheres without any formal coordination and linkages.

## **1.2. World Bank Mission (1987)**

The World Bank Mission while finalizing ARP II, suggested the following.

- i. Merger of Agri. Research Organization with education  
or
- ii. Autonomy for Research institutes  
and
- iii. Funding for Research operations.

The Chairman P&D Punjab constituted a committee comprising following members to look into these points.

- i. Secretary/D.G (O&M) Govt. of Punjab.
- ii. D.G. (Research) Agri. Deptt.
- iii. Deputy Secretary Finance (Exp.)
- iv. Chief Agri. P & D
- v. Director O&M (B)

The committee submitted its report as under:

### **Merger of Research Institute into Agriculture University.**

"The committee considered all aspects of the suggestion and was of the view that it would lead to numerous administrative, financial & personnel problems which will definitely have adverse effects on research. It will create undesirable service rivalries between Uni. staff & merged personnel who at present are governed by different sets of rules. The committee therefore does not support the suggestion."

Dr. Zafar Altaf, then Secretary Agriculture Punjab while reviewing merger stated that:-

"(d) The merging of two different streams, belonging to different cadres is more difficult than what is understood at the moment. The historical experience of merging cadres in this country has not been a happy one. Litigation & prejudice has increased and has led to heart burning, Court cases and general increase in flack and conflict.

(g) The environment at Ayub Agricultural Research Institute is single minded. The Researchers has to achieve or fall by the way. Not so in the University. The hierarchical pattern and the nature of work put research in low priority and hence low gear in the University. The fallacy is that these will not be corrected in the short run. Research is person specific (and not institution specific) and therefore, if the University was to keep on creating developed and systematic minds, it would more than fulfill its mandate...

In general it may be mentioned that a flexible approach is, what is required. Reverting to a tradition bound methodology may not deliver objectives. It may end in catastrophe."

.....'i.e. teaching only (the blunder of 1961) should be the function of university which is surely not in consonance with internationally accepted concept of a university'

### **1.3. Blue Ribbon panel (1990)**

On the recommendation of the Blue Ribbon Panel USAID, the Secretary Agriculture Punjab constituted a committee to look into the recommendation:

"14. UAF should devise ways and means to establish working relationships through collaborative programmes specially with AARI & NIAB. A pool of funds should be set aside for research projects on competitive basis to meet these objectives."

The committee comprised of:-

- i. Malik Khuda Bux Bucha.
- ii. Brig (Retd). Ghazanfar Mehmood.
- iii. Ch. Sultan Ali.
- iv. Dr. A.G. Bhatti.
- v. Commander Agha Abdul Latif.
- vi. Dr. M.A. Bajwa DG(Res.)
- vii. Dr. A. Majid DG(Rice)
- viii. Dr. Ali Muhammad Chaudhry Dean Agri. Economics
- ix. Dr. M. Rafiq Khan Dean Agriculture

The Director General (Research) constituted a committee of the senior officers of AARI to comment on merger proposal so that a well thought view point may be submitted to the main committee. The committee submitted a comprehensive report to DG(R) recording a disagreement to the merger of two entities.

The matter was not resolved till 1993 when it was decided that Faisalabad District Agriculture Extension Activities should be attached with the UAF as a pilot project to see the effect of teaching, research and extension under one umbrella. Ch. Sultan Ali was the chairman of the committee for this purpose. A high level meeting was held on 14.10.93 in Agri. House Lahore under the chairmanship of Ch. Sultan Ali. Vice Chancellor UAF, Chairman PARC, Secretary Agri. Punjab, DG (Extension), DG (Research). Deputy Secretary Finance and Chief Agri. P&D attended the meeting. The Finance Department refused to provide funds to the Agri. Deptt. for Faisalabad Distt. if the administrative control is shifted from Agri. Deptt. to UAF and it was suggested that UAF should get funds from UGC for this purpose. After this discussion, the matter was handed over to another committee comprising VC UAF. DG (Ext.). Chief Agri. P&D and Deputy Secretary Finance. The committee could not reach at any solid conclusion till this day.

#### **1.4. TIPAN (Transformation and Integration of Provincial Agri. Research Network) experience in NWFP.**

This project was initiated with 55 million dollar aid from USAID in 1986 and completed in 1994. The aim of the project was to merge the NWFP Agri. Uni. Peshawar and Agri. Res. System of the NWFP. All administrative and financial powers were vested in the Vice Chancellor of the Agri. Uni. However, the staff belonging to Provincial Government continued to be governed by NWFP civil servants act 1973, oddly under university administration.

This was a loose merger of the two organizations. After the completion of the project, a seminar was held in Peshawar on April 27-28. 1998 and its recommendations on merger were as follows: -

- Partial merger of Agri. Res. & NWFP Agri. Uni. has led to a dual control of the Research Staff resulting in chaos and uncertainty among the staff. More than 95% of the research staff was in favour of complete merger provided, terms and conditions of their service were notified, one step promotion was ensured and they were considered at par with the Uni. faculty in all respects.
- Close coordination of agri. Uni. & Agri. Res. with Agri. Ext. be ensured at all levels. Agri. Ext. Deptt. Merger with the university was not found feasible.

The budget distribution of research should be done through a committee to be constituted for this purpose. This power should not be vested in one person. This will ensure judicious distribution of funds."

Similarly, the Frontier Agri. Res. Scientists Association (FARSA) commented on merger as:

"the administrative arrangements of loosely merged agri. Res. & NWFP Agri. Uni. was highly undesirable.

Research and teaching with in the same Univ. but, governed by two separate set of rules, created disparities among the employees. The research scientists rightly felt as an inferior class within the system.

The FARSA further suggests that:-

- Ext. Res. & teaching should be completely merged in one organization with equal opportunity to all employees in all respects, but before this complete merger, the following disparities among the employees must be minimized.
  - a. Give one step promotion to Research Scientists and Ext. workers.
  - b. Simultaneously, rules for the unified Uni. Service should be framed.
  - c. All the employees of research, extension, and education be given the right to retain their status or to opt new rules. Those who do not opt the Uni. Service rules, could get golden hand shake, retirement or could be put in Govt. surplus pool."

The suggestions were made to improve the situation. Instead of accepting the suggestions, the government of NWFP again separated the research from university.

### **1.5. Land Grant System of Agricultural Education and Research in India**

Agricultural universities in India have been established on the patterns similar to that of the land grant colleges of the United States (they still call it Lyallpur model as it was since 1906 and prior to 1961 separations in Pakistan). Agricultural universities are partners of the agricultural research system. Under the system, agricultural education, research and extension functions have been given under one umbrella i.e. Agriculture universities of the country. Universities have regional centers and control the entire research portfolio while providing extension services through the regional hubs acting as knowledge repositories. The state (provincial) system of extension and development is hooked to the university outreach. The state provides more than 70% of the recurring and development grants and UGC in the center provides funding for strategic educational initiatives. The task of agricultural coordinating and supporting existing agricultural system in the country has been assigned to the Indian council of Agricultural Research Council. The council funds research and agricultural development initiatives in the states through the university system. The adopted system has proved extremely beneficial and various faculties viz. Agriculture, veterinary and Animal Sciences, Engineering and Technology, Home sciences, as well as research and extension, all have come under one umbrella. The objectives of integration of teaching, research and extension have been by and large achieved.

In agricultural universities, teaching, research and extension functions are integrated to mutually reinforce each other. Despite minor problems faced by the system, it has been successful over time on sustainable basis. The state (provincial) agricultural departments are still headed by powerful secretaries who are members of the university boards (syndicates). They have a network of extension and development wings, including the regulatory functions. There is no research wing under the state government.



## 2. WHETHER UAF and AARI HAVE ACHIEVED THEIR GOALS?

The University of Agriculture and Ayub Agriculture Research Institute were created in 1961 with different mandates. The university was given a mandate of teaching to produce trained manpower and to conduct research as part of its faculty responsibility and also to fulfill the requirements of the post graduate degree programs. Nevertheless, university did create a directorate of education and extension to retain its 'land grant' flavor without having the mandate of entering into any direct outreach. The AARI was established to develop and standardize technology to address the issues of the farming community. Both the institutions have produced results by working in isolated environments. The results are briefly narrated below recognizing the underutilized potential, had there been a unified system.

### 2.1. UNIVERSITY OF AGRICULTURE, FAISALABAD

This university played its role in imparting quality education as envisaged at the time of its establishment. University education is a continuous and creative process. Its aim is to develop the capacities latent in human nature and to coordinate their expression for the enrichment and progress of the society with moral and material knowledge. The university has maintained its distinction as: number one university of the country in agriculture sector and number four among all 130 Pakistani universities as notified by HEC during 2009. The UAF produced 44043 graduates earning PhD, M.phil /MS (CS/bioinformatics), M.Sc.(Hons)/MBA/ MBIT, B.Sc.(Hons.)/BSc/ DVM as narrated below:

Ph. D.	716
M. Phil/MS	883
M.Sc.(Hons.)/ M.Sc./MBA	20928
B.Sc.(Hons)/ B.Sc/DVM	21516
<b>Total</b>	<b>44043</b>

The Current Enrolment in the University is around 11,000 as indicated below:

Ph. D.	575
M. Phil/MS	1682
M.Sc.(Hons.)/ M.Sc./MBA	2183
B.Sc.(Hons)/ B.Sc/DVM	5780
Intermediate (Pre Agri.)	99
<b>Total</b>	<b>10319</b>

University Professors are implementing various projects sponsored by National as well as International Donors. During the year 2008-09 alone, University scientists won 165 projects in different faculties amounting to Rs. 534 million. University is also promoting and supporting agricultural research and development through faculty development, technology transfer and product commercialization from the endowment funds. The faculty members of UAF wrote 685 Books / Lab. Manuals/ Technical Reports

and monographs since its inception. The number of Research Papers produced by UAF during 2008-09 alone was 871 of which 301 were published at International level.

#### **2.1.1. Limiting Factors:**

1. Inconsistent supply of approved/recurring and non-recurring budget from the core funding sources
2. Excessive teaching and other demands on faculty
3. A large number of PhDs are not being utilized for problem solving research in the country
4. Limited incentives for research excellence aimed at community building
5. Lack of full-time researchers
6. Competition from local and regional universities for qualified personnel
7. Lack of planning in the creation of new institutions and brain drain by horizontal mobility
8. Competition from local and regional institutions for research funds/duplications
9. Limited funding/support for basic research
10. Unutilized/unimplemented research results/ recommendations
11. Inadequate outreach and regional work
12. Insufficient hostel residence in view of constant increase in the students' enrollment
13. Laboratory facilities are becoming a real limiting factor to accommodate the growing number of students.

#### **2.2. AYUB AGRICULTURAL RESEARCH INSTITUTE:**

Since establishment in 1961-62, AARI has played a major role in agricultural development of Punjab. It is very well appreciated that the provincial Agricultural Research Institutes such as AARI and its substations have contributed immensely to support agricultural production through conventional approaches as reflected in the continuous development of high yielding varieties along with production technologies.

The concerted research efforts of the multidisciplinary teams of scientists have led to the development of 373 high yielding varieties of crops /fruits with complete packages of production and protection technologies for all agro-ecological zones of the province. The crop-wise list of varieties is given below in the following table:

**Table : crop varieties evolved by AARI since 1961-62**

<b>Crop</b>	<b>No. of Varieties evolved</b>
Wheat	71
Cotton	44
Rice	19
Sugarcane	20
Pulses	23
Maize and Millets	18
Oilseeds	18
Fodders	19
Vegetables	51
Fruits	90
<b>Total</b>	<b>373</b>

It is worth mentioning that 66 varieties were released after the year 2000 only. The AARI scientists also standardized the production technologies, pest management strategies for all the major crops and post-harvest technologies for increasing the shelf life of crops/fruits/vegetables. Technologies for the economical utilization of degraded lands such as salt-affected, water-logged, gullied/eroded have also been developed. AARI is playing its key role in implanting quality control of fertilizers & pesticides, in addition to providing regulatory services to the government & industry. The infrastructure investment in the AARI system is spread across the province.

### **2.2.1. Current Limitations to Agri. Research System**

1. Poor and out-dated service structure
2. Contract Mode of appointments
3. Poor monitoring & evaluation system
4. Little funding for Agricultural Research (operational costs?)
5. Largely engaged in traditional research without much of modern knowledge
6. Variety evolution work is heavily dependent on germplasm provided by CGIAR system
7. Lack of HR trainings and capacity building programmes in emerging sciences & technologies.
8. Poor coordination between international and local research institutions.

On account of above-mentioned constraints, AARI scientists are highly demoralized and not in a position to concentrate on work whole heartedly as was the case in the past. As such, efficiency and output is on the decline day by day. There is need to develop and implement a *modern and need based system* to save provincial agricultural research system from further deterioration. If we compare input use and corresponding output from the current agriculture of Punjab, we find a near stagnation and negative

input use efficiency indicating minimal effect of research on productivity which is alarming.

### **3. Way Forward**

Despite very encouraging achievements of both the institutes at their individual levels the facts are that both the institutes could have produced manifolds, had they worked under one umbrella. There is hue and cry all around that Agriculture System is not meeting the requirements of end users, leading to the disappointment and discouragement of the farming community. It is being said with loud voice at all the forums that scientists are not coming up to the expectations of farming community. The typical example could be BT cotton which has covered 70-80% area in the country but the scientists of country cannot claim any contribution to this intervention. The formation of commissions from time to time very clearly indicated and various Governments at various times realized the need for integration of education, research and extension.

#### **3.1. Present Committee for unified Agricultural Research System**

As advised by Syed Babar Ali, the present Government has also realized the need of integration of education, research and extension and the Chief Minister Punjab has constituted following committee to recommend the ways and means for developing the unified Agri. Research System:-

1. Malik Ahmad Ali Aulakh, Minister for Agriculture, Cooperatives, (Chairman) Livestock & Dairy Development, Punjab.
2. Mr. Sami Saeed, Chairman, Planning and Development Board.
3. Capt. (Retd.) Arif Nadeem, Secretary Agriculture.
4. Muhammad Jehanzeb Khan, Secretary, Livestock & Dairy Development.
5. Mr. Babar Hussain Bharwana, Secretary, Forestry, Wildlife and Fisheries.
6. Peer Saad Ahsan ud Din, Vice Chairman, Punjab Board of Investment and Trade.
7. Prof. Dr. Iqrar Ahmad Khan, Vice Chancellor, University of Agri, Faisalabad.
8. Prof. Dr. Muhammad Nawaz, Vice Chancellor, University of Veterinary and Animal Sciences.

The first meeting was held on 7-1-2010 under the chairmanship of Minister Agriculture which was also attended by Syed Babar Ali. There was a consensus on revamping the agricultural research system. A sub committee was constituted comprising following:

1. Prof. Dr. Iqrar Ahmad Khan (Chairman)
2. Dr. Khalid Mehmood Khan
3. Prof. Dr. Muhammad Nawaz
4. Dr. Kauser Abdualah Malik
5. Dr. M.E. Tusneem
6. Mr. Faisal Farid

The sub committee met on 14.01.2010 at UVAS where VC UVAS made a presentation (appendix) and it was realized that there is a need to address the following points:-

1. There is a need to dispel an impression that universities want to take over the provincial research and extension services.
2. Presently less productive performance of the research institutes is primarily because of administrative problems and poor service structure that favor brain drain. Primarily there is a need to give autonomy to the research institutes and bring the service structure at par with that of the Universities.
3. Qualified scientists in research organizations should be declared as adjunct faculty of the universities for teaching and research.
4. The university faculty may be deputed for research in research organizations.
5. Periodic tenure transfers between universities and research institutes should be undertaken.
6. A coordination council from research organization and the universities will ensure implementation of research including findings.
7. All new institutions/universities should be integrated for teaching, research and extension right from inception. For example UVAS Ravi Campus being developed near Buffalo Research Institute (BRI) should not spend on duplication of the facilities rather the facilities available in BRI should be made accessible through integration.
8. Modalities of integrating education and research with extension should be discussed in the next meeting.
9. Like developed countries where industry and extension look towards universities for solution of their problems, similar persuasive linkages should be established and strengthened between industry, extension and academia for research and solution of the problems.
10. Topical agricultural issues of concern to the farmers and national economy should be funded under this unified program.

On 14-1-2010, it was decided to hold a stakeholders workshop at UAF.

### **3.2 Stakeholders Workshop**

On January, 25, 2010 a stakeholders workshop was held at University of Agriculture, Faisalabad in which eminent and renowned scholars, farmers, politicians, planners, scientists participated (list attached). VC-UAF made a presentation (appendix) which was followed by very active discussion. The weaknesses of the system were discussed in detail and following recommendations emerged:

1. There is a need for conducting comparative studies of various crops with regard to other countries like India and USA to find out the weaknesses and strengths of the country's agriculture.
2. There is no shortage of talent in Pakistan but management system is lacking and it is a very sad fact that agriculture sector is under-funded but expectations are quite high.

3. There is a dire need to conduct experiments on hybrids (Cotton, Rice, Maize etc.).
4. There is a paucity of funds due to which most of the research work remained incomplete and investment in agriculture sector remained stagnant.
5. Agricultural universities should go for the socio-economic studies right from very minor crops to high value crops.
6. TIPAN, NWFP model may be kept in view with proper modifications and its shortfalls/bottlenecks should not be repeated during designing a workable model for unification of agricultural system in Punjab.
7. It was indicated that we are short of educationists and expertise in agricultural research and policy making.
8. It was admitted that there are problems in the existing system. The agriculture system is not contributing as much to the National Agricultural Enterprises as it should, resultantly the overall agricultural productivity in the country is declining. There is urgent need and a tremendous scope for its improvement.

#### **4. RECOMMENDATIONS:**

Keeping in view recommendations of various commissions, committees, experiences of TIPAN project and views expressed by various scholars, politicians, professors, researchers and public representatives, following steps may result into logical integration of education, research and extension without affecting the rights and career of individual scientist, professors and extensionists, but with long lasting effects on agricultural productivity in the province:

1. The Lyallpur model based system in the India Punjab is 1/5th of the present system of Agriculture in our Punjab. To make it manageable and productive it is proposed that the current system be divided into three autonomous systems integrating Education and Research in Northern Punjab, Central Punjab and Southern Punjab.
2. Punjab Agriculture Education, Research and outreach Council should be created. All the policies of agriculture should be made by this council. This council will integrate research, education and extension under one umbrella. The Chairman of the council will be Vice Chancellor(s). This council will be represented by the public representatives, secretaries of the Government, eminent scientists, growers' representatives, professors, and representatives of Federal Government.
3. The respective Vice Chancellor will be responsible for implementing the policies of the council. He will be Chief Executive for Education and Research within the scope of a University system.
4. The research and extension should be granted autonomous status as is being enjoyed by a University.
5. The research and extension should be treated at par with education and same service structure should be granted in research and extension as is in vogue in the University.

6. The research, academics and University outreach should be headed by Assistant Vice Chancellor Research, Assistant Vice Chancellor Academics and Assistant Vice Chancellor Extension respectively.
7. The Agriculture department should continue functioning at the current status, with all functions of Secretary intact, excepting research.

## Appendix I

Packages Limited  
Shahrah-e-Roomi  
Lahore-54760, Pakistan  
Tel: +92 (42) 5811976, 5811548  
Fax: +92 (42) 5811978  
E-mail: sahil@packages.com.pk

December 24, 2009

His Excellency Mian Muhammad Shahbaz Sharif  
Chief Minister Punjab  
Lahore

My dear Mian Sahib,

The agriculture sector including livestock and fisheries is the backbone for the prosperity of Punjab and this critical area requires an effective collaboration between education, research, and extension services. Today, these services are operating under different departments and silos with minimal coordination.

I believe that in Agriculture University Faisalabad and University of Veterinary Sciences Lahore you have the best universities in these disciplines. However, without coordinated effort of research and extension, these good educational institutions are not producing the desired result.

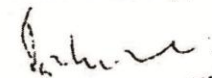
I would strongly urge you to look into the possibility of developing a unified agricultural research system comprising of education, research and extension which would allow maximum interaction with each other. This will save unnecessary administrative expenses, coordinate the functioning of these three areas, and speedily bring classroom knowledge to field operations thus benefiting the farmer.

A major reason for the success of American agriculture is that the State universities created under land grant have been the driving force for research and that is how America is ahead of everybody else in agriculture.

Leadership is needed to put these three disjointed operations under one driving force and my suggestion is that the overall umbrella for this coordinated effort should be the excellent educational institutions that you have

With kind regards,

Yours sincerely,



Syed Babar Ali





1-8/10/09

## Appendix II

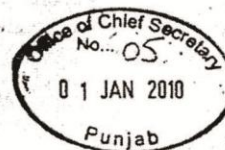
NO.DS(FS)CMS(Agri)/09/OT-4/A 47280  
CHIEF MINISTER'S SECRETARIAT  
PUNJAB

Dated Lahore 30<sup>th</sup> December, 2009

Subject: **DEVELOPMENT OF A UNIFIED AGRICULTURAL RESEARCH SYSTEM COMPRISING OF EDUCATION, RESEARCH AND EXTENSION**

Chief Minister is pleased to constitute the following Committee:

- 1) **Malik Ahmad Ali Aulakh** (Chairman)  
Minister for Agriculture, Cooperatives,  
Livestock & Dairy Development
- 2) **Mr. Sami Saeed**  
Chairman,  
Planning & Development Board.
- 3) **Capt. (Retd.) Arif Nadeem**  
Secretary Agriculture
- 4) **Muhammad Jehanzeb Khan**  
Secretary Livestock & Dairy Development,
- 5) **Mr. Babar Hussain Bharwana**  
Secretary,  
Forestry, Wildlife & Fisheries
- 6) **Peer Saad Ahsan ud din**  
Vice Chairman,  
Punjab Board of Investment & Trade
- 7) **Prof. Dr. Iqbal Ahmad Khan**  
Vice Chancellor,  
University of Agriculture, Faisalabad.
- 8) **Prof. Dr. Muhammad Nawaz**  
Vice Chancellor,  
University of Veterinary & Animal Sciences.



2. Chief Minister has desired that the committee may seek time from Syed Babar Ali, Eminent philanthropist, to discuss his proposal on the above cited subject (copy enclosed). After discussion, the committee may brief Chief Minister regarding its recommendations within ten days (by the 8<sup>th</sup> of January, 2010).

2  
02/01/10

Secy. (I&C)	✓
Dy No. 66	
Dated 2-1-10	
AS (I&C)	
DS (I&C)	
D.S. (Cab)	
D.S. (Dev)	
S	

Add: Secretary (I&C) (S&GAD)	
Diary No. 124	
Date 4/1/10	
D.S. (I&C)	
DS (I&C)	
DS (Dev)	
PAU	
PA	

(SYEDA KULSUME HAI)  
Deputy Secretary  
(Food Security)

Deputy Secretary (I&C) (S&GAD)	
Diary No. 86	
Date 4/01/10	
SO (I&C-I)	
SO (I&C-II)	
SO (FG)	
SO (Liaison)	
SO (Petition)	

### All Committee Members

- CC: ✓
1. Chief Secretary
  2. Secretary to Chief Minister
  3. AS (Staff) / PSO to Chief Minister



## **Effective Collaboration Between Teaching, Research and Extension in Agro- Livestock Sector**

**UVAS, View Point**

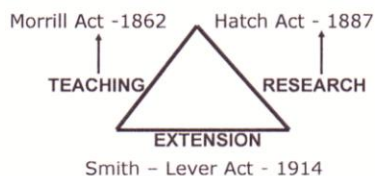
## **Vision**

**Knowledge based enhancement  
in rural economy - Link to  
Industrialization**

## **Mission**

**To provide quality, relevant outreach  
and continuing educational programs  
and services to the agro-livestock  
farmers of Pakistan**

## **The Structure of the Land Grant University: A Success Model**



## **Economic Significance of Livestock**

- Livestock accounts for **52.2** percent of agriculture value added and **10.9** percent of national GDP.
- Foreign exchange earnings, constituting more than **8.5** % of the total exports.
- Livestock is raised by more than **8.5** million small and landless families in the rural areas and is their main livelihood source.
- The value of milk alone exceeds the combined value of wheat, rice, maize and sugarcane in the country.
- Livestock produces 34.064 million tons of milk, making Pakistan **4th** largest producer of milk in the world.

## **Important Problems**

- Unavailability of superior germplasm from known source
- Inadequate feed resources
- Epidemics of infectious diseases
- Poor marketing infrastructure
- Low investment by government
- Poor institutional infrastructure
- Outdated regulatory framework
- Limited credit availability

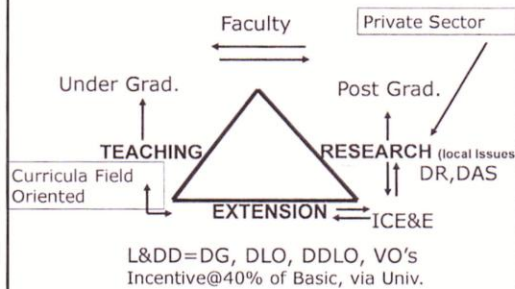
### Objectives of the Project-1

- To establish and reinvigorate existing linkages between teaching, research and extension.
- To improve governance and deliver better services to poor livestock farmers.
- To invest in human capital with renewed emphasis on effective delivery of basic social services and enhancing productivity; and by targeting the poor and vulnerable.

### Objectives of the Project-2

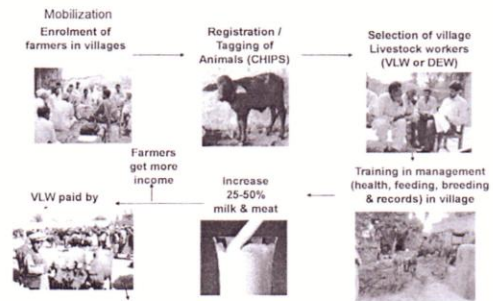
- Focus on smallholders to become commercial entities
- Private sector as the driver of growth
- Improved management of natural resources for sustainable livestock production.
- Participatory approach to ensure strong stakeholders' ownership and support for the measures.

### Proposed Model



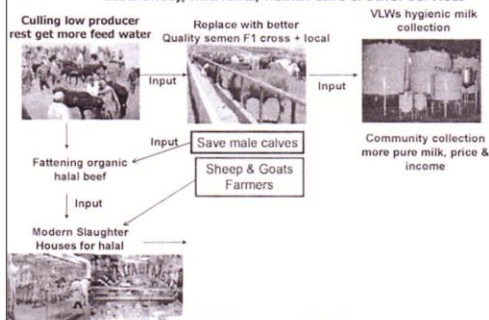
### UVAS Poverty Alleviation Model

Livestock Extension Ravi Campus Pattoki Phase I



### Phase II

UVAS – Quality semen bank (genomic quality assurance), nutrients, health care & other services



### Pilot Project Areas

UVAS: Lahore, Kasur, Sheikhupura, Okara

### Activities-1

#### 1. Nutrition and Fodder

- Demonstration of Fodder Plots
- Demonstrations for fodder conservation
- Straw Treatments
- Urea Molasses Blocks

L&DD Livestock  
Farms will be  
strengthened

#### Impact

- Awareness to be created
- Trials to be conducted
- Adoption rate monitored

### Activities-2

#### 2. Animal Health

- Vaccination (HS, FMD, ND)
- Deworming
- Mastitis Control Test
- Fair price shops for drugs, feed and mineral mixtures

CVH/ centers  
will be  
strengthened

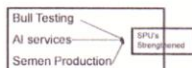
#### Impact

- Create awareness of prophylactic vaccination and deworming.
- Vaccination record monitored.
- Mortality rate monitored.
- Create awareness on management of livestock.
- Opportunity to be provided for cheaper inputs.

### Activities-3

#### 3. Breed Improvement

- AI
- Pregnancy Tests



#### Impact

- Awareness of AI and venereal diseases.
- Cost, quality and Conception rate to be monitored.

### Activities-4

#### 4. Extension



- Prepare technology packages
- Model Farmers identification.
- Field days
- Extension meetings
- Women Extension Service
- Farmer Trainings

ICE&E  
strengthened  
Adoptive  
Research by  
academia will be  
strengthened

#### Impact

- Awareness on various aspects of livestock production.
- Adoption and sustainability to be monitored.
- No. of training courses and trainees trained to be monitored.





## STAKEHOLDER'S WORKSHOP

### Development of Unified Agricultural Research System Comprising Education, Research and Extension

### Contents of Presedntation

- Background
- Progress
- Ag Universities
- Scope of this workshop

### Background

- ....CM Punjab has responded to the initiative of Syed Babar Ali

### Problem Statement

- Agricultural Education, Research and Extension are in silos with minimum coordination

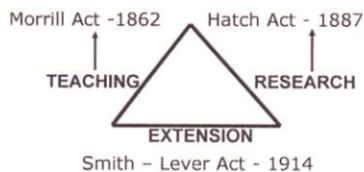
### Mission Statement

- ....Developing a unified system comprising education, research and extension

### Challenge

- Leadership is needed to put three disjointed operations under one driving force/umbrella

### The Structure of the Land Grant University: A Success Model



### Current System of Parallel Lines

- ❑ Federal Education-universities, colleges
- ❑ Provincial Research-AARI and Regional Institutes, Livestock Farms and Poultry Research
- ❑ Federal-PARC, PAEC and others
- ❑ Federal and Provincial Extension and Development
- ❑ Private Sector

### At Planning Commission

- ❑ Complete integration
- ❑ Partial integration
  - ❑ Ludhiana Model
  - ❑ TIPAN Model
- ❑ Transform universities into integrated system without touching 'apple carts'

### Meetings

- ❑ January 7, 2010 (core group)
- ❑ January 14, 2010 (sub committee)
- ❑ January 25, 2010 (Open House)

### January 14, 2010

- ❑ Issues raised
  - ❑ Dispel negative impression
  - ❑ Administrative problems
  - ❑ Service structure
  - ❑ Brain Drain
  - ❑ Lack of autonomy
  - ❑ Budgets

### January 7, 2010

- ❑ Subcommittee was constituted to develop alternative proposals

January 14, 2010

- Solutions included
  - Adjunct faculty
  - Deputations
  - Tenured transfers
  - Coordination council
  - Private sector extension
  - All new institutions should be 'land grant model'

January 14, 2010

- It was decided to hold a stakeholders workshop for discussing the issue wholistically

#### Agricultural Universities

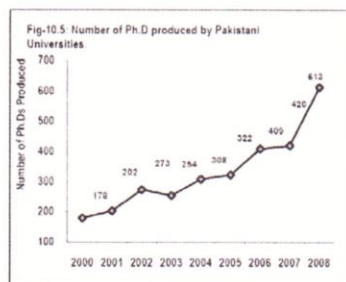
- University of Agriculture, Faisalabad
- PMAS University of Arid Agriculture, Rawalpindi
- Sindh Agriculture University, Tando Jam
- NWFP Agriculture University, Peshawar
- Univ. of Veterinary & Animal Sciences, Lahore
- Balochistan University of Agriculture and Marine Sciences, Las Bela
- DGK College soon to be upgraded

#### Agricultural Universities

- Faculty 1400
- PhDs 500 (600 studying overseas)
- Students 32000
- Postgraduates 9000
- PhD enrollment 1200

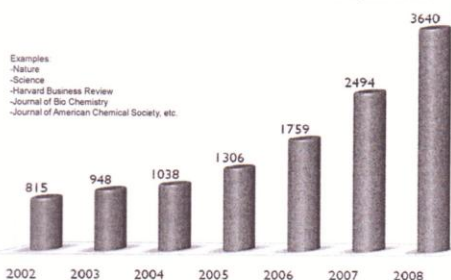
#### Are We Delivering?

- HRD >44000 IN THE SYSTEM
- PhDs 698 (600 studying overseas)
- R&D Projects 139 active
- Outreach/TT
- Community Service



## PAKISTAN: Rising Star Publications in the World's Best Journals

Examples:  
-Nature  
-Science  
-Harvard Business Review  
-Journal of Bio Chemistry  
-Journal of American Chemical Society, etc.



## SWOT Analysis

- INTERNAL
  - Strengths
  - Weaknesses
- EXTERNAL
  - Opportunities
  - Threats

## SWOT Analysis - Strengths

- Considerable & diverse research competencies/capabilities
- Postgraduate programs
- Organisational and institutional infrastructure
- Adequate physical infrastructure
- Several sources of funds
- National, regional and international collaboration
- UAF journals in major disciplines
- Facilities and experience to host conferences
- Membership of editorial boards of international journals
- Membership in administrative and professional forums
- Recognized as leading national research institutions
- Academic promotion emphasizes research

## SWOT Analysis - Weaknesses

- Operational budget is limited to salary alone
- Excessive teaching and other demands on faculty
- High faculty turnover in recent years
- Limited incentives for research excellence
- Limited interdisciplinary interaction
- Decline of research leadership in many areas
- Lack of full-time researchers
- Inadequate outreach and regional work

## SWOT Analysis - Opportunities

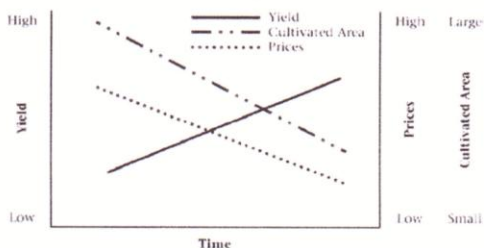
- National and international demand for postgraduate programs
- Potential for international collaboration through MOUs and agreements
- Potential for collaboration with public and private national institutions
- Availability of local pool of research expertise
- Support from the Research Councils/commissions
- Unique natural resources but stagnant output
- Expansion of key economic sectors
- Community service

## SWOT Analysis - Threats

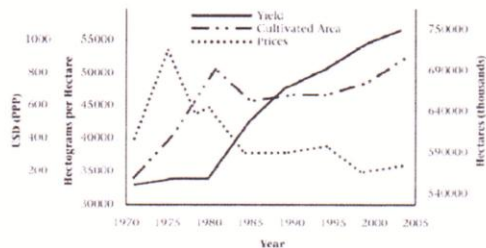
- Competition from local and regional universities for qualified personnel
- Lack of planning in the creation of new institutions and brain drain by horizontal mobility
- Competition from local and regional institutions for research funds/duplications
- Perception that research outcome has minimal impact
- Limited funding/support for basic research
- Public and private sectors' reluctance to provide data
- Unutilized/unimplemented research results/recommendations
- Lack of appreciation for the importance of research



Borlaug hypothesis: Hypothesized relationship between changes in yields per hectare, prices, and cultivated areas.



Global trends over time in yield, cultivated area, and prices for ten major crops.



### Way Forward

- ❑ Investment in Agriculture
- ❑ Integration and
- ❑ Capacity Building

### Current Funding

- ❑ HEC recurring funding of universities is based on number of students and classification of degree programs - teaching focused funding
- ❑ HEC also funds limited competitive research grants primarily aimed at basic knowledge creation – awardees are less than 10% of the faculty
- ❑ These grants are for 2-3 years and not adequate to conduct long term research for developing viable technologies
- ❑ Outreach and community service is now entering the vocabulary at HEC

### Scope of this Workshop

- ❑ To involve stakeholders in the discussion process for developing acceptable models of integration
- ❑ To revisit the known models and have input from stakeholders
- ❑ Outcome shall be published and shared

THANK YOU



**MINUTES OF THE MEETING REGARDING STAKEHOLDERS WORKSHOP  
"DEVELOPMENT OF UNIFIED AGRICULTURAL RESEARCH SYSTEM COMPRISING  
OF EDUCATION, RESEARCH AND EXTENSION" HELD ON 25.01.2010 AT 10:30 A.M. IN  
NEW SENATE HALL UAF WITH THE COLLABORATION OF USDA  
(ENDOWMENT FUND)**

Followings were present:

1. Dr. Amir Muhammed, Ex-Vice Chancellor, UAF
2. Prof. Dr. Iqbal Ahmad Khan, Vice Chancellor, UAF
3. Prof. Dr. Khalid Mahmood Khan, Vice Chancellor, PMAS, Univ. of Arid Agri., Rawalpindi
4. Syed Fakhar Imam, Ex-Speaker National Assembly/Progressive Grower
5. Dr. Kausar Abdullah Malik, Prof. F.C. College Lahore
6. Dr. M.E. Tasneem, Member Planning
7. Dr. Mubarik Ali, Chief Executive, PARB
8. Syed Faisal Hassan, Progressive Grower (Rice)
9. Syed Faisal Imam, Progressive Grower (Cotton)
10. Prof. Dr. Muhammad Ashfaq (T.I.), Dean, Faculty of Agriculture, UAF
11. Prof. Dr. Muhammad Ashraf (S.I.), Dean, Faculty of Sciences, UAF
12. Prof. Dr. Laeeq Akbar Lodhi, Dean, Faculty of Veterinary Science, UAF
13. Prof. Dr. Talat Naseer Pasha, Dean, Univ. of Vet. & Animal Sci., Lahore
14. Prof. Dr. Muhammad Younis, Dean, Faculty of Animal Husbandry
15. Prof. Dr. Muhammad Iqbal Zafar, Dean, Faculty of Agri. Econ. & Rural Sociology, UAF
16. Prof. Dr. Faqir Muhammad Anjum, Director General, Nat. Inst. of Food Sci. & Tech., UAF
17. Prof. Dr. Muhammad Aslam Pervez, Senior Tutor, UAF
18. Prof. Dr. Rashid Ahmad, Director Academics, UAF
19. Prof. Dr. Asif Ali, Director External Linkages, UAF
20. Prof. Dr. Tanvir Ali, Director, Division of Education & Extension, UAF
21. Prof. Dr. Sher Muhammad, Director Farms, UAF
22. Prof. Dr. Zafar Iqbal, Executive Director, Endowment Fund, UAF
23. Prof. Dr. Abdul Salam Khan, Hall Warden, UAF
24. Prof. Dr. Allah Bakhsh, Director Research, UAF
25. Prof. Dr. Muhammad Sarwar, Director Inst. of Animal Nutrition & Feed Tech.
26. Brigd. (Retd.) Muhammad Javed Anwar (SIM), Director Development, UAF
27. Mr. Muhammad Ajmal Khan, Director Planning, UAF
28. Dr. Muhammad Jalal Arif, Principal Officer, PRP, UAF
29. Dr. Mumtaz Akhtar Cheema, Director Advanced Studies, UAF
30. Prof. Dr. Muhammad Aslam Khan, Professor, Emirates, Inst. of Hort. Sci., UAF
31. Prof. Dr. Salim-ur-Rehman, Nat. Inst. of Food Science & Technology, UAF
32. Prof. Dr. Munir A. Sheikh, Chairman, Deptt. of Chemistry & Biochemistry, UAF
33. Dr. Tanvir Ahmad Malik, Controller of Examinations, UAF
34. Dr. Muhammad Aslam Mirza, Principal, UAF Sub-Campus, T.T. Singh
35. Dr. Shahbaz Talib Sahi, Principal, UAF Sub-Campus Depalpur, Okara
36. Dr. Noor-ul-Islam, Director, Cotton AARI, Faisalabad
37. Dr. Abid Mahmood, Director, Barani Agri. Res. Institute, Chakwal (BARI)
38. Rao Farman Ali, EDO, Agriculture, Faisalabad
39. Ch. Muhammad Hussain, Registrar, UAF
40. Mr. Abdul Ghafoor Khan, Treasurer, UAF
41. Mr. Abdul Hafeez, Deputy Registrar (G)
42. Dr. Abdul Rashid, Asstt. Director Research, UAF
43. Dr. Arshad Iqbal, Deptt. of Livestock Management, UAF
44. Dr. Naeem Mahmood, Additional Director, Endowment Fund
45. Dr. Rao Zahid Abbas, Asstt. Prof. Deptt. of Parasitology, UAF
46. Dr. Muhammad Rashid, Subject Expert/Coordinator, UAF
47. Dr. Muhammad Siddique Javed, Subject Expert, UAF
48. Mr. Qamar Mohy-ud-Din, Director, Business Incubation Center, UAF
49. Mr. Amir Saeed Rana, Deputy Director, Endowment Fund, UAF
50. Mr. Sajid Ali, Lecturer, Endowment Fund, UAF
51. Mr. Natiq Hussain, Chief Planning & Evaluation (P&E), Lahore

A-188

09-02-10

A-188

A-188

10/09/10



52. Mr. Muhammad Shafiq, AAJ TV, Pakistan
53. Mr. Masood Qadir Waqar, DDA (M&E)
54. Dr. Ehsan Elahi Bajwa, AARI
55. Mr. Tasawar Abbas, APP Photographer
56. Mr. Iftikhar Ahmad, Reporter APP
57. Mr. Faisal Farid, CEO, Maximum International (Pvt.) Ltd. Sheikhpura
58. Mr. Asif Saeed Khan, Newzealand, Ph.D. Scholar working on Food Security
59. Mr. Qamar Bukhari, Public Relations Officer (PRO), UAF
60. Dr. Najam-ul-Islam, DDLO (Livestock, Faisalabad)
61. Dr. Khalid Iqbal, Representative Extension Wing (EDO) Agriculture

The meeting started with recitation from the Holy Quran by Prof. Dr. Muhammad Younis, Dean, Faculty of Animal Husbandry who also translated the verses of Holy Quran.

**Prof. Dr. Iqbal Ahmad Khan, Vice Chancellor, UAF** welcomed all the participants and apprised them of the background of the subject matter. He highlighted the issues through presentation that Syed Babar Ali wrote a letter to Chief Minister Punjab with the mission statement to develop a unified agriculture research, education and extension system under one driving force, keeping in view the US land grant system. He recorded his gratefulness to the Chief Minister, who framed/constituted a sub-committee to look into the matter thoroughly.

The committee held its meeting on 07.01.2010 at P&D Department, Lahore and decided to constitute a sub-committee to draft proposals for enhancing collaborations to benefit from the faculties and expertise available in the sister organizations. A follow up meeting was held at University of Veterinary and Animal Sciences, Lahore, on 14.01.2010 where it was decided to hold a stakeholder's Workshop.

He emphasized that this workshop was the continuation of that meeting to get feed back from the stakeholders. He also mentioned that committee kept under consideration different models successfully working at Ludhiana University, India and failure of TIPAN in NWFP Pakistan. He also pointed out that:

- Four agricultural universities and one UVAS are located in Pakistan where out of 1400 faculty members, 500 are holding Ph.D. degrees acquired from national and international universities while 600 faculty members were at their different stages of completing their Ph.D. degree programs.
- The expertise of these Ph.Ds. and non Ph.D. faculty members may be utilized to enhance the per acre yields of the farms, which is at present very low from the potential yield.
- Through SWOT analysis and Borlaug Hypothesis he concluded that investment in agriculture, integration within different sectors of agriculture and capacity building are the dire needs to develop a unified agricultural research system in Pakistan in general and in Punjab in particular.
- He also highlighted the scope of the workshop i.e. involvement of the stakeholders for an acceptable model, to revisit the existing models and to overcome the shortfalls and bottle necks of these existing models which were to be published and shared among the participants.
- He pointed out that Lyallpur model of education, research and extension, which has disintegrated here, was working successfully in India where 45 universities are implementing it.
- He concluded with a desire for a doable and acceptable model of integration to ensure food security and economic prosperity in the country, without impeding any existing research, education and extension institution.

**Dr. Noor-ul-Islam, Director Cotton, AARI, Faisalabad** narrated the background of this burning issue and told the participants that since 1987 this issue had been discussed in detail at different forums i.e. in 1987 a committee formulated its proposals, in 1990 USA and Khuda Bakhsh Bucha, Ex-Agri. Minister also floated different ideas in 1993 under the convenership of Ch. Sultan Ali, Ex-Agri. Minister, different proposals were formulated, which were rejected by the Finance Department of the Govt. of Punjab due to involvement of heavy funds. In 1998 Agricultural Research Wing prepared a comprehensive report on the subject matter in which all the problems, resources, bottle necks and their possible solutions had been explained but due to one or the other reason these proposals have not been considered so far. Indirectly he did not fully support the concept of unification of Agri. Education, Research & Extension. He presented the current system, with the perceived and conceived benefits.

**Dr. Amir Muhammed, Ex-Vice Chancellor, UAF**, emphasized that:

- Unification at this stage is very valid issue and this issue did not rise overnight. Whole existing system seems inefficient due to lack of integration among different components scattered at different locations. There is a dire need to devise a model keeping in view all the problems, resources and Government directives and there is no such model available which can be adopted as such.
- He also told that unification should not be considered as merger of different components. All the existing components will work in their specific domains with specific targets and priorities keeping in view the problems faced by the farmers at the field level.

**Dr. Mubarak Ali, Chief Executive, PARB, Lahore**, proposed that:

- There should be a possibility of functional coordination rather than management coordination.
- The solution of the existing problems in the unification of agricultural research system lies in a multidisciplinary approach.
- Some of the problems are due to lack of investment in agriculture sector.
- So investment in agricultural research, education and extension will have to be enhanced for food security of the posterity.
- Throughout the world extension services are provided to the farmers by the private sectors where accountability or the creditability is the main parameter of that private sector.
- This model can be executed in Pakistan on sustainable basis.
- He did not favour integration of research and education.

**Syed Fakhar Imam, Guest of honour** pointed out that:

- In India due to hybrid cotton or Bt Cotton production has been enhanced manifold.
- Cotton growers have been frustrated and if the situation prevailed for a longer period of time, most of the cotton growers will shift from growing of cotton to other high value crops which will be a set back for the economy of Pakistan. He proposed that if unification is not possible at this



stage, cotton may be taken as a test case and a specific model may be devised for cotton crop which will be applied on the other crops accordingly.

- He also pointed out that none of the agricultural research, education or extension institutes has evaluated itself and its previous record is not open for the public which is a very important criteria for the upgradation of a certain institute.
- He proposed that East-Punjab and Egyptian agricultural research and extension system may be taken into consideration before developing strategies for Pakistan or Punjab.
- He committed that despite having sizable number of growers in the parliament as representative of farming community. They failed to formulate a comprehensive agricultural policy on sustainable basis. But it should be kept in mind that agriculture is only the make or break of Pakistan's economy.
- There is a dire need of agricultural mechanization, irrigation technologies and leadership inspiration just like of Quaid-e-Azam Muhammad Ali Jinnah who was a man of commitment. We the farming community need a Norman Borlaug in cotton, sugarcane and livestock. Norman Borlaug was a man of commitment, who created new frontiers across the globe.
- He stated the need of paradigm shift from primitive agriculture to mechanized agriculture but which is effective, less costly, viable and affordable.
- Furthermore, agriculture would remain a driving force with multiple challenges which could only be addressed through adoption of an integrated approach by all the stakeholders.
- He favoured integration of research, education and extension.

**Kausar Abudlllah Malik, Member Planning Commission** pointed out that:

- Provincial agricultural system was devised on its own lines and universities have their own infrastructures and research priorities but due to lack of linkages between research, education and extension, no workable model has been devised and unless, until autonomy is granted to each component of agricultural system, no fruitful result may be expected.
- He proposed that unification should be on equal level. He told that agriculture sector is considered as the engine of economic growth in Pakistan and we must do something to improve provincial agricultural system through allocation of sizable operational budget with same facilities/same grades/same service structure as exists in universities (Agri. Educational Institutes) then some hopes may be established for the improvement of agricultural research and extension system.

**Syed Faisal Hassan**, a progressive grower of rice crop and livestock breeder highlighted that:

- There is a duplication of research in different segments of agriculture sector.
- He emphasized that due to lack of management in agricultural research, education and extension, billion of rupees of the public money are being wasted. In the light of his previous experience he pointed out that agriculture is savior and would be savior in near future if the available knowledge is transformed for the betterment of the farmers. He also emphasized to focus on better training of our graduates to produce competent and skilled human resource.

**Dr. M.E. Tasneem** stated that:

- US land grant model was developed over time. They developed soybean industry by combining research, extension and education and progressed manifold in agriculture sector.
- He pointed out that there is a need to evolve a system i.e. "Agriculture Management System" just as adopted by Asian Development Bank, which restructures its priorities after every five years.
- We should strengthen the existing system, overcome the shortfalls and motivate the public, private as well as government to invest in agricultural research then there are chances to uplift the national economy.

**Rao Farman Ali, Executive District Officer, Agriculture Faisalabad** pointed out that:

- Infrastructure/service structure in Agricultural Extension Wing is the worst as compared to the universities and Agri. Research Institutes.
- He claimed that the existing system is facilitating the farmers at their door steps and if sizable funding is provided these facilities can be enhanced manifold.

**Dr. Khalid Mahmood, Vice Chancellor, PMAS Univ. of Arid Agri., Rawalpindi** pointed out that:

- Enough talent is available, reasonable funding can be generated but there is a need to change the mindset of the scientists/leadership holding the research, education and extension institutes in Punjab.
- Leader should be visionary having full command and approach on the problems, shortfalls and their possible solutions.
- Institutional audit/evaluation should be mandatory for every agricultural research, education & extension institute.
- He very humbly requested all the participants to think out of the box, there will be no harm to their existing seats/setup they have to think for Pakistani farming community and if the time is wasted in such unproductive efforts, there will be no farmer, no agricultural researcher or extension worker.

**Dr. Abid Mahmood, Director, Barani Agricultural Research Institute (BARI), Chakwal** told:

- Accountability is lacking in all the agriculture, research, education and extension institutes. There is no mechanism for the appreciation or punishment for the good doers or the bad doers.
- The policy makers only focus on the buildings, laboratories and other infrastructure but they don't think about the trained manpower which is prerequisite for any institute as drivers are more important than the buses and the trains and if the drivers are well paid, working in healthy environment then there will be more prominent results at national level.
- He proposed that agriculture, research and extension have the potential to be merged but agricultural education does not match with this merger.

In the concluding remarks **Dr. Amir Muhammed** thanked all the participants providing input in this brain storming session on this critical issue and pointed out that:



**Recommendations:**

- The number of functional Ph.Ds. should be enhanced.
- There is a need for conducting comparative studies of various crops with regards to other countries like India and Egypt to find out the weaknesses and strengths of the country's agriculture.
- There is no shortage of talent in Pakistan but management system is lacking and it is a very sad fact that agriculture sector is under-funded but expectations are much more.
- There is a dire need to conduct experiments on hybrids (Cotton, Rice, Maize etc.).
- There is a paucity of funds due to which most of the research work remained incomplete and investment in agriculture sector demands for enhancement.
- We all the professionals should collect facts and figures taking as role model of Indian and Egyptian Agricultural System and present it to the policy makers on quantitative basis.
- Agricultural universities should go for the socio-economic studies right from very minor crops to high value crops.
- TIPAN, NWFP model may be kept in view with proper modifications and its shortfalls/bottle necks should not be repeated during designing a workable model for unification of agricultural system in Punjab.
- He indicated that we are short of educationists and expertise in agricultural research and policy making.
- He admitted that there are problems in the existing system. The agriculture system is not contributing as much to the National Agricultural Enterprises as it should, resultantly the overall agricultural productivity in the country is declining. There is a tremendous scope for its improvement.

The meeting ended with the vote of thanks by the Chair.

Sd/-  
PROF. DR. ALLAH BAKHSH  
DIRECTOR RESEARCH

Confirmed  
Sd/-  
VICE CHANCELLOR

\*\*\*\*\*

UNIVERSITY OF AGRICULTURE, FAISALABAD  
DIRECTORATE OF RESEARCH

Endst. No. 4135 /DR Dated 06-02-2010

Copy forwarded to the Participants of Workshop, for information and necessary action.

  
(PROF. DR. ALLAH BAKHS  
DIRECTOR RESEARCH

Copy to:

1. Dr. Muhammad Rashid
2. Dr. Muhammad Siddique Javed
3. Mr. Qamar Mohy-ud-Din

## **Appendix VI**

### **Organizing committee:**

1. Professor Dr. Iqrar Ahmad Khan, Vice Chancellor UAF
2. Prof. Dr. Asif Ali, Director External Linkages, UAF
3. Prof. Dr. Zafar Iqbal Randhawa, Executive Director Endowment Fund
4. Dr. Muhammad Jala Arif, Principal Officer, Dept. of Public Relations and Publications