

#9 43

Training Programme and Syllabii
for
Social Forestry Short Courses



Punjab Forestry Research Institute
Faisalabad
January, 1995

PREFACE

To impart pre-service forestry education at technical level and training of inservice personnel as well as farmers and NGOs in the field of social forestry and forestry extension techniques is a normal activity of the Punjab Forestry Research Institute. In view of priority of Social Forestry in the Punjab and with the creation of additional facilities like hostels at PFRI and Ghoragali, crash training programme has been planned for inservice personnel of the Forest Department as well as farmers and others for training in social forestry and extension education techniques.

This booklet contains the detailed training programme for the years 1994-98, syllabii for social forestry and forestry extension education and list of resource persons for different types of training. The information is given for all the three venues of training i.e. PFRI, PFS Ghoragali and PFS Bahawalpur.

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TRAINING PROGRAMME

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INTRODUCTION

One of the main functions of the Punjab Forestry Research Institute, Faisalabad is to impart education and training to the sub-professional level of the Forest Department and to popularise growing of trees by farmers, private individuals through advanced extension techniques and to conduct refresher courses/seminars and special courses for inservice personnel. To strengthen the above functions a scheme "Social Forestry Training Programme in the Punjab" is being implemented. Under this scheme it is decided that all the technical staff of the Forest Department should be given training in Forestry Extension techniques in a phased programme. In addition to motivational techniques, forestry knowledge of the technical staff shall also be refreshed by holding short courses to improve their working efficiency. Tree farmers as well as members of NGOs shall also be trained in the field of Social Forestry like seed technology, nursery raising techniques, methods of tree planting, management of wood lots and trees on farm, harvesting and marketing etc. by holding special short courses and through Open University Courses.

OBJECTIVES

The objectives of training are:

- To orientate trainees in the basic concepts of an extension programme.
- To understand the role of extension staff in promoting such a programme.
- To achieve an understanding of the joint contributions of forestry, agriculture, animal husbandry and other rural development programmes.
- To suggest means by which staff can establish good working relations with the public and assist them in improving their living conditions.
- To develop skills in the techniques of communication and training staff to achieve the objectives.
- To indicate some of the administrative procedures necessary to maintain a smooth flow of support to the public.

ACHIEVEMENT TARGETS

At the end of the course, a trainee should be able:

- To express clearly the basic concept and objectives of a forestry extension programme and relate these to the area in which he expects to work.
- To have the required skills to meet and communicate and to adopt traditional forestry practices for rural development.
- To identify areas in which forestry activities can be associated with other rural development programmes.
- To understand the administrative procedures necessary to ensure an efficient flow of support to individuals or groups engaged in forestry activities.
- To create an awareness of and interest in integrated rural development of association with other organizations.
- To organize the activities to assist public in solving their problems at local level.

CONDENSED TRAINING PROGRAMME

UNDER PC-1 "SOCIAL FORESTRY TRAINING PROGRAMME IN PUNJAB"

Nature of Training : Forestry Extension and Social Forestry.
Level of Training : All levels of Staff and Farmers.

Month	Year 1994-95			Year 1995-96			Year 1996-97			Year 1997-98			
	Venue	G.G	Bwp	Venue	G.G	Bwp	Venue	G.G	Bwp	Venue	G.G	Bwp	
Jul				G	30								
Aug				G	30		G	30	F	20		G	30
Sep				F	20	J	20	G	30	F	20	G	30
Oct				SO	20	F	20	F	20	G	20	SO	20
Nov				SD	20	J	20	F	20	G	20	SD	20
Dec						F	20	F	20	F	20	J	20
Jan						F	20			F	20		
Feb				G	50	D	10	F	20	D	10	F	20
Mar	F	20	G	G	50	F	20	F	20	F	20	F	20
Apr	F	20	G	G	25	F	20	F	20	F	20	F	20
May	F	20	G	G	25	F	20	F	20	F	20	F	20
Jun				F	20	F	20	F	20	F	20	F	20

Abbreviations

F : Farmer
G : Forester/Forest Guard
SO : Senior Office Staff
SD : SDO/Office Staff
D : DFO/Senior Officer
Each independent figure indicates Number of Participants per batch.

Duration of course

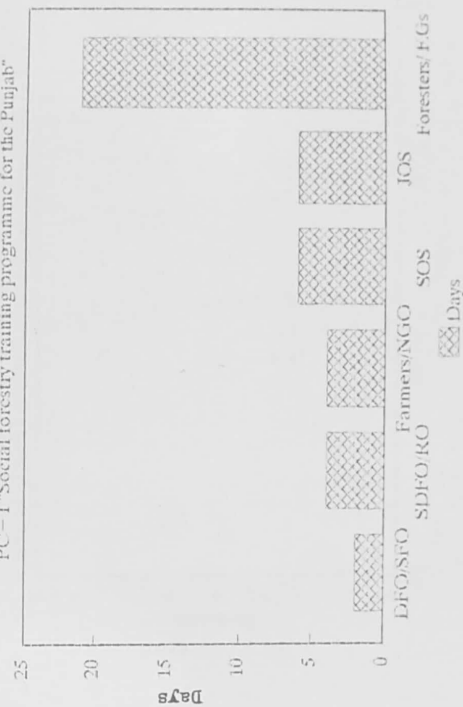
4 Day
21 Days
6 Days
4 Days
2 Days

Indicates Number of Participants per batch.

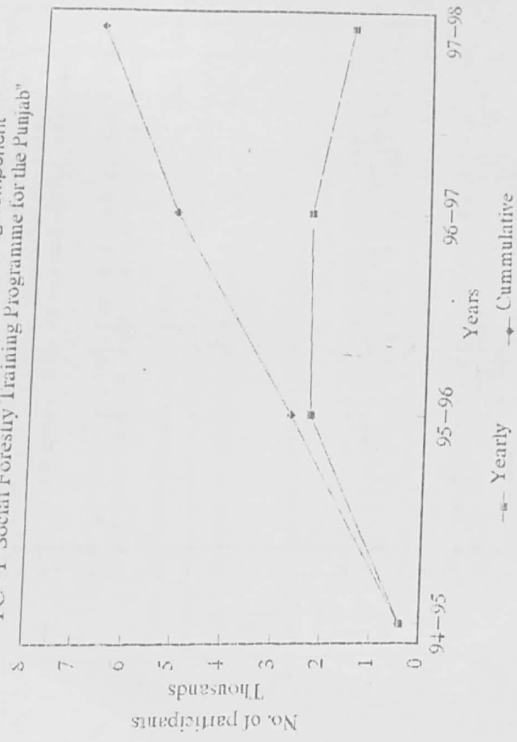
YEARWISE ABSTRACT OF NUMBER OF PARTICIPANTS TO BE TRAINED FOR DIFFERENT LEVELS OF TRAINING UNDER THE PC-1 "SOCIAL FORESTRY TRAINING PROGRAMME IN PUNJAB"

Category of participants	1994-95	1995-96	1996-97	1997-98	Total
Farmers/NGO,s	100	500	600	300	1500
Foresters/ Forest Guards	300	100	100	100	600
SDFO,s/ Range Officers	-	20	20	20	60
DFO,s/ Senior Forest Officers	-	10	10	10	30
Senior Office Staff	-	20	20	20	60
Junior Office Staff	-	40	40	40	120
Farmers through Open University	-	1500	1500	1000	4000
Social Forestry Workshops participants	-	150	150	150	450
Total	400	2340	2440	1640	6820

Duration for different categories of trainees
PC-1 "Social forestry training programme for the Punjab"



Allocated physical targets for training component
 PC-1 "Social Forestry Training Programme for the Punjab"



TRAINING SCHEDULE.

Regular Courses of Forestry Training.

Two regular courses i.e. Diploma-in-Forestry and Certificate-in-Forestry are organized and conducted regularly in the existing forest schools at Ghoragali & Bahawalpur to train the lower tiers of the staff of forest department at technical level.

- Diploma-in-Forestry course.

This is of two years duration. It usually starts from 1st September every year but some times it starts from March also if more personnel are required to be trained.

The particulars of the diploma course to be conducted during current year are as under:-

Date of commencement	Venue	No. of trainees.	Duration.
Ist. February, 1995.	Ghoragali.	30	Two years.

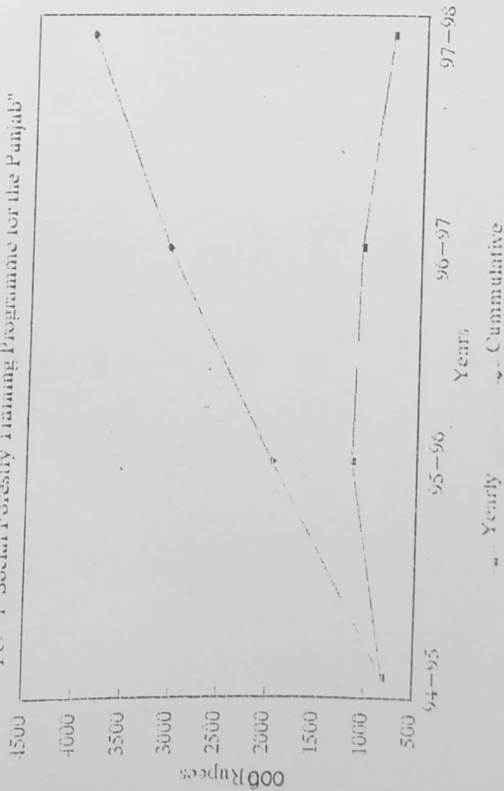
- Certificate-in-Forestry course.

This course is of one year duration. It also usually starts from 1st September every year but some times it starts from March also if more persons are to be trained.

The particulars of certificate course to be conducted during this year are as under:-

Date of commencement	Venue	No. of trainees.	Duration.
Ist. February, 1995	Ghoragali	110	One year
Ist. February, 1995	Bahawalpur	100	One year
	Total:-	210	
Ist. August, 1995	Ghoragali	100	One year
Ist. August, 1995	Bahawalpur	114	One year.
	Total:-	214	
	G.Total:-	424	

Allocated financial targets for training component PC-1 "Social Forestry Training Programme for the Punjab"



REFRESHER/SPECIAL COURSES FOR SOCIAL FORESTRY TRAINING.

1. TRAINING OF FARMERS.
(DURATION : 4 DAYS)

Year	Batch No.	Month.	Venue.	No. of Participants.
1994-95.	1st	March	PFRI.	20
	2nd	March	PFRI.	20
	3rd	April	PFRI.	20
	4th	April	PFRI.	20
	5th	May	PFRI.	20
Total:	5 Batches.			100

1995-96.	1st	September.	G/Gali.	20
	2nd	September.	G/Gali.	20
	3rd.	October.	G/Gali.	20
	4th	October.	G/Gali.	20
	5th	December.	B/Pur.	20
	6th	December.	B/Pur.	20
	7th	January.	B/Pur.	20
	8th	January.	B/Pur.	20
	9th	February.	B/Pur.	20
	10th	February.	B/Pur.	20
	11th	March.	G/Gali.	20
	12th	March.	B/Pur.	20
	13th	March.	G/Gali.	20
	14th	March.	B/Pur.	20
	15th	April.	G/Gali.	20
	16th	April.	B/Pur.	20
	17th	April.	G/Gali.	20
	18th	April.	B/Pur.	20
	19th	May.	G/Gali.	20

20th	May.	B/Pur	20
21th	May.	G/Gali.	20
22nd	May.	B/Pur.	20
23rd	June.	G/Gali.	20
24th	June.	B/Pur.	20
25th	June.	G/Gali.	20
TOTAL:	25 BATCHES.		500

1996-97.	1st	August.	B/Pur.	20
	2nd	August.	B/Pur.	20
	3rd	September.	B/Pur.	20
	4th	September.	B/Pur.	20
	5th	October.	G/Gali.	20
	6th	October.	G/Gali.	20
	7th	November.	G/Gali.	20
	8th	November.	G/Gali.	20
	9th	December.	B/Pur.	20
	10th	December.	B/Pur.	20
	11th	January.	B/Pur.	20
	12th	January.	B/Pur.	20
	13th	February.	B/Pur.	20
	14th	February.	B/Pur.	20
	15th	March.	G/Gali.	20
	16th	March.	B/Pur.	20
	17th	March.	G/Gali.	20
	18th	March.	B/Pur.	20
	19th	April.	G/Gali.	20
	20th	April.	B/Pur.	20
	21st	April.	G/Gali.	20
	22nd	April.	B/Pur.	20
	23rd	May.	G/Gali.	20
	24th	May.	B/Pur.	20
	25th	May.	G/Gali.	20
	26th	May.	B/Pur.	20
	27th	June.	G/Gali.	20
	28th	June.	B/Pur.	20
	29th	June.	G/Gali.	20
	30th	June.	B/Pur.	20
TOTAL:	30 BATCHES.		600	

Year.	Batch No.	Month.	Venue.	No. of Participants.
1997-98.	1st	October.	G/Gali.	20
	2nd	October.	G/Gali.	20
	3rd	November.	G/Gali.	20
	4th	January.	B/Pur.	20
	5th	January.	B/Pur.	20
	6th	February.	B/Pur.	20
	7th	February.	B/Pur.	20
	8th	March.	G/Gali.	20
	9th	March.	E/Pur.	20
	10th	March.	G/Gali.	20
	11th	March.	B/Pur.	20
	12th	April.	G/Gali.	20
	13th	April.	G/Gali.	20
	14th	May.	G/Gali.	20
	15th	May.	G/Gali.	20
TOTAL: 15 BATCHES				300

TOTAL NO. OF BATCHES 75

TOTAL NO. OF PARTICIPANTS 1500

A B S T R A C T.

PARTICIPANTS / BATCH.	DURATION
20	4 days

TOTAL NO. OF PARTICIPANTS.

2. TRAINING OF FORESTERS & FOREST GUARDS.

DURATION: 3 WEEKS.

Year.	Batch No.	Month.	Venue.	No. of Participants.
1994-95.	1st	February.	B/pur.	30
	2nd	March.	G/Gali.	30
	3rd	March.	B/pur.	40
	4th	April.	G/Gali.	40
	5th	April.	B/pur.	40
	6th	May.	G/Gali.	40
	7th	May.	B/pur.	40
	8th	June.	B/pur.	40
Total:- 8 Batches.				300
1995-96.	1st	July.	G/Gali.	30
	2nd	August.	G/Gali.	30
	3rd	October.	B/pur.	20
	4th	November.	B/pur.	20
Total:- 4 Batches.				100
1996-97.	1st	August.	G/Gali.	30
	2nd	September.	G/Gali.	30
	3rd	October.	B/pur.	20
	4th	November.	B/pur.	20
Total:- 4 Batches.				100
1997-98.	1st	August.	G/Gali.	30
	2nd	September.	G/Gali.	30
	3rd	October.	B/pur.	20
	4th	November.	B/pur.	20
Total:- 4 Batches.				100

A B S T R A C T

Total No. of Batches.	Participants/ Batch.	Duration.	Total No. of Participants.
20	20 to 40	21 days	600

3. TRAINING FOR SDFO'S AND FOREST RANGERS.

Year.	Batch No.	Month.	Venue.	No. of participants.
1994-95	-	-	-	-
1995-96	1st	November, 1995.	PFRI	20
1996-97	2nd	November, 1996.	PFRI.	20
1997-98	3rd	November, 1997.	PFRI.	20
Total:-	3 Batches.			60

A B S T R A C T

Total No. of Batches.	Participants/ Batch.	Duration.	Total No. of participants.
3	20	4 days.	60

4. TRAINING FOR DFO'S AND SFO'S.

YEAR.	BATCH NO.	MONTH.	VENUE	NO. OF PARTICIPANTS.
1995-96	1st	February, 96.	PFRI	10
1996-97	2nd	February, 97.	PFRI	10
1997-98	3rd	February, 98	PFRI	10
TOTAL:	3 BATCHES			30

A B S T R A C T.

TOTAL NO. OF BATCHES.	PARTICIPANTS/ BATCH.	DURATION.	TOTAL NO. OF PARTICIPANTS.
3	10	2 days	30

5. TRAINING OF JUNIOR OFFICE STAFF.

DURATION: 6 DAYS.

YEAR.	BATCH NO:	MONTH.	VENUE	NO. OF PARTICIPANTS
1995-96	1st	September.	B/Pur	20
	2nd	November.	G/Gali.	20
TOTAL:	2 BATCHES.			40
1996-97.	3rd	December.	B/Pur	20
	4th	March.	G/Gali.	20
TOTAL:	2 BATCHES			40
1997-98.	5th	September.	B/Pur.	20
	6th	November.	G/Gali.	20
TOTAL:	2 BATCHES			40

A B S T R A C T.

TOTAL NO. OF BATCHES.	PARTICIPANTS/ BATCH.	DURATION	TOTAL NO. OF PARTICIPANTS.
6	20	6 days	120

6. TRAINING OF SENIOR OFFICE STAFF.

DURATION: 6 DAYS.

Year.	Batch No.	Month.	Venue.	No. of participants.
1995-96.	1st	October.	PFRI	20
1996-97.	2nd	October.	PFRI	20
1997-98.	3rd	October.	PFRI	20
TOTAL:	3 BATCHES.			60

A B S T R A C T.

Total No. of Batches.	Participants/ Batch.	Duration.	Total No. of participants.
3	20	6 days.	60

A B S T R A C T.

TOTAL NO. OF BATCHES.	PARTICIPANTS/ BATCH.	DURATION	TOTAL NO. OF PARTICIPANTS.
137	10-40	2-21 days.	2370

7. TRAINING OF FARMERS THROUGH OPEN UNIVERSITY SYSTEM.

Year.	Batch No.	Quarter No.	No. of Participants.
1995-96	Ist	Ist	400
		2nd	400
		3rd	400
		4th	300
	Total: 4 Batches.			1500
1996-97	Ist	Ist	400
		2nd	400
		3rd	400
		4th	300
	Total: 4 Batches.			1500
1997-98	Ist	Ist	250
		2nd	250
		3rd	250
		4th	250
	Total: 4 Batches.			1000
G. Total: 12 Batches.			4000

Categorywise percentage of in-house trainees to be trained PC-1 "Social forestry training programme for the Punjab"



SYLLABUS FOR DFO'S/SFO'S.

I. SOCIAL FORESTRY.

A: HARD CORE.

1. SOCIAL/FARM FORESTRY.

Concept, need & prospects. Identification of existing Social/Farm Forestry practices, the need and importance of strengthening such practices.

2. SEED COLLECTION.

Importance of seed quality, selection of species, provenances, stands and trees. Determining seed quantity, collection season, methods and equipment needed in seed collection for major species of the Punjab. Seed handling/seed processing, seed storage, seed viability, seed pre-treatment, seed analysis for purity & Germination percentage.

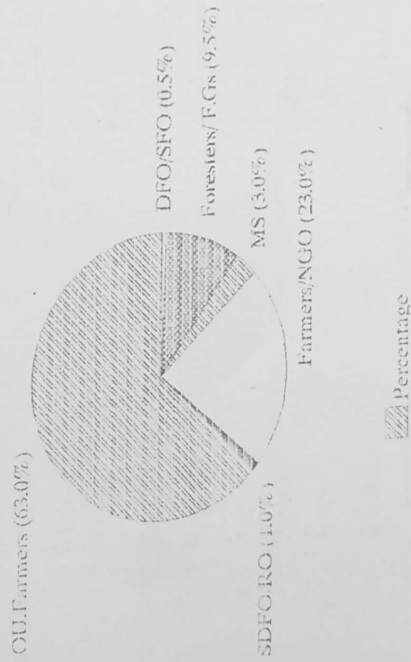
3. RAISING OF NURSERIES.

Improved techniques for major species, Shisham, Kikar, Eucalyptus, Poplar, Semal, Chir & Kail and/or any other species participants are interested to know, Preliminary operations of site selection and determining size, area and shape of nursery, soil requirements, soil Texture, & structure.

a) Bad Nursery.

Site selection, preparation of land, layout, sowing of seed/planting of cuttings, irrigation, weeding cullings, extraction of plants, preparation of stumps, protection against nursery pests.

Categorywise percentage of trainees to be trained
PC-1 "Social forestry training Programme for the Punjab"



b) Potted Nursery.

Site selection, layout and making of beds, preparation of soil medium, purchase of appropriate size of P.bags, pricking out of seedlings, culling, hardening off for out-planting carriage, & transportation to the planting site, sale of nursery plants, Nursery records.

4. PLANTING ON FARM LANDS.

Field planting methods for a stumps, P.bags, bare rooted plants, Planting techniques for different sites, saline and water logged, eroded, denuded, sandi etc. Strip and patch sowing, line sowing, Planting patterns on farmlands, boundary planting, wind breaks/shelterbelts, compact and block planting, different agri. Silvicultural patterns of planting, spatial and temporal arrangements. Silvo-pastoral and agri. Silvo-pastoral practices, species suitable for different agri. ecozones and civil divisions of the Punjab.

5. HARVESTING AND MARKETING.

Optimal rotation, different types of rotations depending upon objectives of management. Factors influencing the optimal rotation age, Different approaches to determine financial optimal. Stumpage sale, Felling, conversion, extraction and stacking of wood. Grading, standardization and classification of wood. Marketing for size specifications. Volume tables/yield tables and sale methods.

MARKETING.

Definition, need prospects and scope. Main mechanisms to control market price in agriculture. Distinctive features of wood marketing in Pakistan. Possible unfair trade practices possible by wood traders & remedies, Improvements in marketing. Co-operative marketing.

6. FOREST UTILIZATION.

Multiple uses of wood and wood products of important tree species in Punjab. Consumption of wood for house hold and cottage level industries, Important wood industries including furniture making industry, Match industry, Pulp industry, Chip board and Ply wood industry & their demands for different size specifications/grades. Consumption levels of domestic wood based industry and future prospects.

B: PERIPHERAL.

7. API CULTURE.

Role in integrated farm management, procurement and raising of colonies on farmlands, yield of honey, possible pests & other enemies. Prevention and cure. Economics of raising of colonies. Important tree and agricultural crops for raising honey bee colonies.

8. SERICULTURE.

Raising of mulberry for Sericulture, procurement of eggs/seed, rearing of silkworms and equipment needed for. Possible pests and cure. Economics of silk seed rearing and its role in integrated farm management.

9. FISH FARMING.

Fish farming on private farmlands, its role in rural economy. Important fish breeds for culture, Methods and techniques of fish culture, its economics and sale methods. Possible pests/problems and remedies.

10. ENVIRONMENT AND POLLUTION.

Environment's role as life support system, pollution of environment by human activities, causes of pollution, pollution source, content, pollution gases, Green house effect. Pollution of atmosphere, waters and land fills. Treatment/abatement plants, ways and approaches to control pollution. Role of forests & trees in amelioration of climate.

11. BRIEF ON COMPUTERS.

Computers in modern age development. Expenditious handling of information through computers. Storage and manipulation of documents & data on word processing & spread sheets.

12. THE RELIGIOUS SPIRIT OF ISLAM IN EXTENSION EDUCATION.

Role of religion in the betterment of mankind. Sunnah, Hadith & Quranic emphasis on education with particular reference to extension education.

13. Any other topic as per need of the occasion.

SYLLABUS FOR DFO'S/SFO'S.

II. EXTENSION EDUCATION.

1. EXTENSION EDUCATION.

Extension Education concept, philosophy, Material and methods merits & demerits of methodologies.

2. ADOPTION & DIFFUSION.

Concept & its importance in transfer of technology. Process, stages of adoption, classification of adopters.

3. COMMUNICATION IN EXTENSION EDUCATION.

Communication process. Elements, strategies, Extension communication. Interpersonal group/mass communication. Audiovisual communication, Feed back.

4. PROGRAMME PLANNING & SUPERVISION IN RURAL EXTENSION.

Statement of extension programme. Approaches in programme planning, programme planning process & Appraisal of accomplishments, concept & importance of supervision in rural extension. Different approaches of supervision & their comparative merits & demerits.

5. HUMAN RESOURCE DEVELOPMENT.

Concept, need & importance of Human resource development. Organization of human resource in rural development. Socio-cultural variables in rural development.

6. COMMUNITY DEVELOPMENT.

Community development through extension education/participation. Main approaches to community development.

Integration of C.D. & extension education. Similarities & differences in C.D & extension education.

7. EVALUATION.

Evaluation philosophy, principles, kinds of evaluation. Instruments, Tools & techniques, Levels of evaluation.

8. ADMINISTRATION.

Introduction to public administration, principles of administration, Role of administration in management. Qualities of a good administrator, leadership behaviour, required professional competencies of an administrator, problem identification, valuing alternatives, Administrative decision making. Corruption in public service.

9. PUBLIC RELATIONING.

Definition & concept, importance and principles of public relationing in management, skills of effective public relationing. Public relationing programmes and practices. Scope for future improvement. Public relationing in extension education & transfer of technology.

10. Any other topic as per need of the occasion.

SYLLABUS FOR DFO'S/SFO'S.

III. ACCOUNTS & PROCEDURE.

1. Responsibilities of drawing & disbursing officers & controlling officers. Types of cheques, precautions to avoid embezzlements and misappropriations.
2. Audit, Internal, External & performance audit, annotation & preparation of working papers for DAC, PAC, & SDC's etc.
3. Administrative & financial rules & delegation of powers.
4. A.C.R. writing. Cares in writing & countersigning. ACR's submission schedules, Adverse remarks, Appeals against adverse remarks.
5. (E&D) Rules, 1975.
6. Conduct Rules, 1964.
7. Any other topic as per need of the occasion.

SYLLABUS FOR SDFO'S/RO'S.

I. SOCIAL FORESTRY.

A: HARD CORE.

1. SOCIAL/FARM FORESTRY.

Concept, need and prospects. Identification of existing Social/Farm Forestry practices, the need and importance of strengthening such practices.

2. SEED COLLECTION.

Importance of seed quality, selection of species provenances, stands and trees. Determining seed quantity, collection season, methods and equipment needed in seed collection for major species of the Punjab. Seed harvesting/seed processing, seed storage, seed viability, seed pre-treatment, seed analysis for purity & germination percentage.

3. RAISING OF NURSERIES.

Improved techniques for major species, Shisham, Kikar, Eucalyptus, Poplar, Semal, Chir & Kail and/ or any other species participants are interested to know. Preliminary operations of site selection and determining size, area and shape of nursery, soil requirements, soil texture, & structure.

a) Bed Nursery.

Site selection, preparation of land, layout, sowing of seed/planting of cuttings, irrigation, weeding, culling, extraction of plants, preparation of stumps, protection against nursery pests.

b) Potted Nursery.

Site selection, layout and making of beds, preparation of soil medium, purchase of appropriate size of P.bags, pricking out of seedlings, culling, hardening off for out-planting carriage, & transportation to the planting site, sale of nursery plants, Nur-sery records.

4. PLANTING ON FARM LANDS.

Field planting methods for stumps, P.bags, bare rooted plants. Planting techniques for different sites, saline and water logged, eroded, denuded, sandi etc, Strip and patch sowing, line sowing. Planting patterns on farm-lands, boundary planting, Wind breaks/shelterbelts, compact and block planting, different agri. Silvicultural patterns of planting, spatial and temporal arrangements. Silvo-pastural and agri-silvo-pastural practices, species suitable for different agri. ecozones and civil divisions of the Punjab.

5. MANAGEMENT PRACTICES FOR FARM TREES AND WOOD LOTS.

Necessity of management practices, Important management practices including tending and other silvicultural operations. Weeding, cleaning, pruning/branch cutting, Girdling of climbers, thinning, improvement felling etc. Choice of season, methods and tools of pruning, effects of pruning on trees, classification into crown classes, Types and Grades of thinnings.

6. TREE PESTS, PREVENTION, CURE AND ERADICATION.

Common pests of major species, their prevention, cure and eradication with particular reference to Shisham, Poplar, Kikar, Semal, Eucalyptus, Toot, Chir & Kail.

Pests of nursery, cutworms, grass hoppers and crickets. Army worms, termites and snails, Agricultural insecticides/pesticides and their methods of preparation & spraying for eradication. Damage to tree by porcupine, rats, and Wild boars. Damage by fire, frost etc.

7. HARVESTING & MARKETING.

Optimal rotation, different types of rotations depending upon objectives of management. Factors influencing the optimal rotation age, Different approaches to determine financial optimal. Stumpage sale, Felling, conversion, extraction and stacking of wood. Grading, standardization and classification of wood. Marketing for size specifications. Volume tables/yield tables and sale methods.

MARKETING.

Definition, need prospects and scope. Main mechanisms to control market price in agriculture. Distinctive features of wood marketing in Pakistan. Possible unfair trade practices possible by wood traders & remedies, Improvements in marketing. Co-operative marketing.

8. FOREST UTILIZATION.

Multiple uses of wood and wood products of important tree species in Punjab. Consumption of wood for house hold and cottage level industries. Important wood industries including furniture making industry, Match industry, Pulp and paper industry, Chip board and Ply wood industry & their demands for different size specifications/grades. Consumption levels of domestic wood based industry and future prospects.

B: PERIPHERAL.

9. APICULTURE.

Role in integrated farm management, procurement and raising of colonies on farmlands, yield of honey, possible pests & other enemies. Prevention and cure. Economics of raising of colonies. Important tree and agricultural crops for raising honey bee colonies.

10. SERICULTURE.

Raising of mulberry for Sericulture, procurement of eggs/seed, rearing of silkworms and equipment needed for. Possible pests and cure. Economics of silk seed rearing and its role in integrated farm management.

11. FISH FARMING.

Fish farming on private farmlands, its role in rural economy. Important fish breeds for culture, Methods and techniques of fish culture, its economics and sale methods, possible pests/problems and remedies.

12. ENVIRONMENT AND POLLUTION.

Environment's role as life support system, pollution of environment by human activities, causes of pollution, pollution source, content, pollution gases, green house effect. Pollution of atmosphere, waters and land fills. Treatment/abatement plants, ways and approaches to control pollution. Role of forests & trees in amelioration of climate.

13. BRIEF ON COMPUTERS.

Computers in modern age development. Expeditious handling of information through computers. Storage and manipulation of documents & data on word processing & spread sheets.

14. POPULATION PLANNING.

Important population statistics of world and Pakistan. Resource: scarcity & population pressure. Need for population planning to remain within means and sustain life support system on Biosphere.

15. COOPERATIVES, LOCAL GOVT: & RURAL DEVELOPMENT.

Role of cooperatives & local Govt: in raising farm incomes, rural development & reduction of urban/rural income disparities. Cooperatives in promotion of farm forestry.

16. THE RELIGIOUS SPIRIT OF ISLAM IN EXTENSION EDUCATION.

Role of religion in the betterment of mankind. Sunnah, Hadith & Quaranic emphasis on education with particular reference to extension education.

17. Any other topic as per need of the occasion.

SYLLABUS FOR SDFO'S/TO'S.

II. EXTENSION EDUCATION.

1. EXTENSION EDUCATION.
Extension Education concept, philosophy, Material and methods, merits & demerits of methodologies.
2. ADOPTION & DIFFUSION.
Concept & its importance in transfer of technology. Process, stages of adoption, classification of adopters.
3. COMMUNICATION IN EXTENSION EDUCATION.
Communication process. Elements, strategies, Extension communication. Interpersonal group/mass communication. Audiovisual communication, Feed back.
4. PROGRAMME PLANNING & SUPERVISION IN RURAL EXTENSION.
Statement of extension programme. Approaches in programme planning, programme planning process & Appraisal of accomplishments, concept & importance of supervision in rural extension. Different approaches of supervision & their comparative merits & demerits.
5. HUMAN RESOURCE DEVELOPMENT.
Concept, need & importance of Human resource development. Organization of human resource in rural development. Socio-cultural variables in rural development.

6. COMMUNITY DEVELOPMENT.

Community development through extension education/ participation. Main approaches to community development. Inter-Integration of C.D. & extension education. Similarities & differences in C.D. & extension education.

7. EVALUATION.

Evaluation philosophy, principles, kinds of evaluations. Instruments, Tools & techniques. Levels of evaluation.

8. ADMINISTRATION.

Introduction to public administration, Principles of administration, Role of administration in management. Qualities of a good administrator, leadership behaviour, Required professional competencies of an administrator, Problem identification, valuing alternatives, Administrative decision making. Corruption in public service.

9. PUBLIC RELATIONING.

Definition & concept, importance and principles of public relationing in management, skills of effective public relationing. Public relationing programmes and practices. Scope for future improvement. Public relationing in extension education & transfer of technology.

10. Any other topic as per need of the occasion.

SYLLABUS FOR SDFO'S/RO'S.III. ACCOUNTS & PROCEDURE.

1. Maintenance of files/Record keeping.
2. Accounts & procedure.
 - i. Cash Book writing, FAC Form No.14, preparation, checking & issuing objection statement.
 - ii. Preparation of Account Forms giving reference to the cash book.
 - iii. Responsibilities of drawing & disbursing officers. Types of cheques, precautions to avoid embezzlements & misappropriations.
 - iv. Lease/Contract Account/Tenders, Quotations, Work Orders, sale conditions & Execution of agreement deed etc.
 - v. Maintenance of Timber Forms No.7,8,9,10 & 12.
 - vi. Form No.11,13 & 14 Damage reports (Form No.15 Forest cases, prosecution & compensation cases (FC's PC's and CC's).
 - vii. Maintenance of material Form No.7 & Form No.16 (Stock register).
 - viii. Budget allocation, distribution to formations, Reappropriation, excess & surrender lists, Budget monitoring.
 - ix. Annual chapters, History files, Annual Administrative & Technical reports.
 - x. Audit, Internal, External & performance audit, annotation & preparation of working papers for DAC, PAC, & SDC's etc.
 - xi. Development schemes & SNE'S.
3. T.A.bills, preparation & checking T.A. Rules 1934.
4. A.C.R. writing, care in writing & countersigning. ACR's submission schedules, Adverse remarks, Appeals against adverse remarks.
5. Administrative & financial rules & delegation of powers.
6. (24D) Rules, 1975.
7. Conduct Rules, 1964.

SYLLABUS FOR FORESTERS/FOREST GUARD'S.I. SOCIAL FORESTRY.A: HARD CORE.

1. SOCIAL/FARM FORESTRY.
Concept, need and prospects. Identification of existing Social/Farm Forestry practices, the need and importance of strengthening such practices.
2. SEED COLLECTION.
Importance of seed quality, selection of species, provenances, stands and trees. Determining seed quantity, collection season, methods and equipment needed in seed collection for major species of the Punjab. Seed handling/seed processing, seed storage, seed viability, seed pre-treatment, seed analysis for purity & germination percentage.
3. RAISING OF NURSERIES.
Improved techniques for major species, Shisham, Kikar, Eucalyptus, Poplar, Semal, Chir & Kail and/or any other species participants are interested to know. Preliminary operations of site selection and determining size, area and shape of nursery, Soil requirements, Soil Texture, & structure.
a) Bed Nursery.
Site selection, preparation of land, layout, sowing of seed/planting of cuttings, irrigation, weeding, culling, extraction of plants, preparation of stumps, protection against nursery pests.

b) Potted Nursery.

Site selection, layout and making of beds, preparation of soil medium, purchase of appropriate size of P.bags punching and filling, sowing/planting of P.bag, pricking out of seedlings, culling, hardening off for out-planting, carriage, & transportation to the planting site, sale of nursery plants. Nursery records.

4.

PLANTING ON FARM LANDS.

Field planting methods for stumps, P.bags, bare rooted plants. Planting techniques for different sites, saline and water logged, eroded, denuded, sandi etc. Strip and patch sowing, line sowing. Planting patterns on farmlands, boundary planting, Wind breaks/Shelterbelts, Compact and block planting, different agri. silvicultural patterns of planting, spatial and temporal arrangements. Silvo-pastural and agri. silvo-pastural practices. Species suitable for different agri. ecozones and civil divisions of the Punjab.

5.

MANAGEMENT PRACTICES FOR FARM TREES AND WOOD LOTS.

Necessity of management practices, Important management practices including tending and other silvicultural operations. Weeding, cleaning, pruning/branch cutting, girdling of climbers, thinning, improvement felling etc. Choice of season, methods and tools of pruning, effects of pruning on trees, classification into crown classes. Types and grades of thinnings.

6.

TREE PESTS, PREVENTION, CURE AND ERADICATION.

Common pests of major species, their prevention, cure and eradication with particular reference to Shisham, Poplar, Kikar, Sewal, Eucalyptus, Toot, Chir & Kail.

Pests of nursery, cutworms, grass hoppers and crickets. Army worms, termites and snails. Agricultural insecticides/pesticides and their methods of preparation & spraying for eradication. Damage to tree by porcupine, rats, and Wild boars. Damage by fire, frost etc.

7.

HARVESTING & MARKETING.

Optimal rotation, different types of rotations depending upon objectives of management. Factors influencing the optimal rotation age. Different approaches to determine financial optimal. Stumpage sale, Felling, conversion, extraction and stacking of wood. Grading, standardization and classification of wood. Marketing for size specifications. Volume tables/yield tables and sale methods.

MARKETING.

Definition, need prospects and scope. Main mechanisms to control market price in agriculture. Distinctive features of wood marketing in Pakistan. Possible unfair trade practices possible by wood traders & remedies. Improvements in marketing. Co-operative marketing.

8.

FOREST UTILIZATION.

Multiple uses of wood and wood products of important tree species in Punjab. Consumption of wood for house hold and cottage level industries. Important wood industries including furniture making industry, Match industry, Pulp and paper industry, Chip board and Ply wood industry & their demands for different size specifications/grades. Consumption levels of domestic wood based industry and future prospects.

B: PERIPHERAL.

9.

APICULTURE.

Role in integrated farm management, procurement and raising of colonies on farmlands, yield of honey, possible pests & other enemies. Prevention and cure. Economics of raising of colonies. Important tree and agricultural crops for raising honey bee colonies.

10.

SERICULTURE.

Raising of mulberry for Sericulture, procurement of eggs/seed, rearing of silkworms and equipment needed for. Possible pests and cure. Economics of silk seed rearing and its role in integrated farm management.

11.

FISH FARMING.

Fish farming on private farmlands, its role in rural economy. Important fish breeds for culture. Methods and techniques of fish culture, its economics and sele methods. Possible pests/problems and remedies.

12.

ENVIRONMENT AND POLLUTION.

Environment's role as life support system, pollution of environment by human activities, Causes of pollution, pollution source, content, pollution gases, green house effect. Pollution of atmosphere, waters and land fills. Treatment/abatement plants, ways and approaches to control pollution. Role of forests & trees in amelioration of climate.

13.

POPULATION PLANNING.

Important population statistics of world and Pakistan. Resource scarcity & population pressure. Need for

population planning to remain within means and sustain life support system on Biosphere.

14.

COOPERATIVES, LOCAL GOVT: & RURAL DEVELOPMENT.

Brief on co-operatives & local Govt: concept, need and organizational structure in rural economy. Role of cooperatives & local Govt: in raising farm incomes/ rural development & reduction of urban/rural income disparities. Local Govt: & cooperatives in promotion of farm forestry.

15.

THE RELIGIOUS SPIRIT OF ISLAM IN EXTENSION EDUCATION.

Role of religion in the betterment of mankind. Sunnah, Hadith & Quranic emphasis on education with particular reference to extension education.

16.

Any other topic as per need of the occasion.

SYLLABUS FOR FORESTERS/FOREST GUARDS.II. EXTENSION EDUCATION.1. EXTENSION EDUCATION.

Extension Education concept, philosophy, Material and methods, merits & demerits of methodologies.

2. ADOPTION & DIFFUSION.

Concept & its importance in transfer of technology. Process, stages of adoption, classification of adopters.

3. COMMUNICATION IN EXTENSION EDUCATION.

Communication process. Elements, strategies, Extension communication. Interpersonal group/mass communication. Audiovisual communication, Feed back.

4. PROGRAMME PLANNING & SUPERVISION IN RURAL EXTENSION.

Statement of extension programme. Approaches in programme planning, programme planning process & Appraisal of accomplishments, Concept & importance of supervision & rural extension. Different approaches of supervision & their comparative merits & demerits.

5. HUMAN RESOURCE DEVELOPMENT.

Concept, need & importance of Human resource development. Organization of human resource in rural development. Socio-cultural variables in rural development.

6. COMMUNITY DEVELOPMENT.

Community development through extension education/participation. Main approaches to community development. Integration of C.D. & extension education. Similarities & differences in C.D. & extension education.

7. EVALUATION.

Evaluation philosophy, principles, kinds of evaluations. Instruments, Tools & techniques. Levels of evaluation.

8. PUBLIC RELATIONING.

Definition & concept, Importance and principles of public relationing in management, Skills of effective public relationing. Public relationing programmes and practices. Scope for future improvement. Public relationing in extension education & transfer of technology.

9. Any other topic as per need of the occasion.

SYLLABUS FOR FORESTERS/FOREST GUARDS.III. ACCOUNTS & PROCEDURE.

1. Maintenance of files & record keeping, concept, idea & importance.
2. Despatch & receipt procedure in office.
3. Preparation & maintenance of Markaz level records.
 - i) Maintenance of nurseries register.
 - ii) Demographic & land tenure register for markaz level.
 - iii) Registers of linear & block plantations at the markaz level.
 - iv) Register of trees pest problems & report of any epidemics.
 - v) Training & visit register. Importance of training & visit programme & maintaining the record/register.
4. Writing of monthly diaries & progress report.
5. Any other topic as per need of the occasion.

SYLLABUS FOR TREE FARMERS/NGO'S.I. SOCIAL FORESTRY.A: HARD CORE.

1. SOCIAL/FARM FORESTRY.
Concept, need and prospects. Identification of existing Social/Farm Forestry practices, the need and importance of strengthening such practices.
2. SEED COLLECTION.
Importance of seed quality, selection of species, provenances, stands and trees. Determining seed quantity, collection season, methods and equipment needed in seed collection for major species of the Punjab. Seed handling/seed processing, seed storage, seed viability, seed pre-treatment, seed analysis for purity & germination percentages.
3. RAISING OF NURSERIES.
Improved techniques for major species, Shisham, Kikar, Eucalyptus, Poplar, Semal, Chir & Kail and/ or any other species participatns are interested to know. Preliminary operations of site selection and determining size, area and shape of nursery, soil requirements, soil texture, & structure.
a) Bed Nursery.
Site selection, preparation of land, layout, sowing of seed/planting of cuttings, irrigation, weeding, culling, extraction of plants, preparation of stumps, protection against nursery pests.

b) Ported Nursery.

Site selection, layout and making of beds, preparation of soil medium, purchase of appropriate size of P.bags, punching and filling, sowing/planting of P.bags, pricking out of seedlings, culling, hardening off for out-planting, carriage, & transportation to the planting site, sale of nursery plants. Nursery records.

4. PLANTING ON FARM LANDS.

Field planting methods for stumps, P.bags, bare rooted plants, planting techniques for different sites, saline and water logged, eroded, denuded, sandy etc. strip and patch sowing, line sowing. Planting patterns on farmlands, boundary planting, wind breaks/shelterbelts, compact and block planting, different agri. silvicultural patterns of planting, spatial and temporal arrangements. Silvo-pastoral and agri. silvo-pastoral practices. Species suitable for different agri-ecozones and civil divisions of the Punjab.

5. MANAGEMENT PRACTICES FOR FARM TREES AND WOOD LOTS.

Necessity of management practices, important management practices including tending and other silvicultural operations. Weeding, cleaning, pruning/branch cutting, girdling of climbers, thinning, improvement felling etc. Choice of seasons, methods and tools of pruning, effects of pruning on trees, classification into crown classes, Types and grades of thinning.

6. TREE FORM, PREPARATION, CURS AND EXHIBITION.

Common pests of major species, their prevention, cure and eradication with particular reference to *Shisham*, *Poplar*, *Alder*, *Scrub*, *Eucalyptus*, *Teak*, *Chir & Eoil*.

Pests of nursery, cutworms, Grass hoppers and crickets. Army worms, termites and snails, Agricultural insecticides/pesticides and their methods of preparation & spraying for eradication. Damage to tree by porcupine, rats, and wild boars. Damage by fire, frost etc.

7. HARVESTING & MARKETING.

Optimal rotation, different types of rotations depending upon objectives of management. Factors influencing the optimal rotation age, Different approaches to determine financial optimal. Stumpage sale, Felling, skidding, extraction and stacking of wood, Grading, standardisation and classification of wood. Marketing for size specifications. Volume tables/yard tables and sale methods.

MARKETING.

Definition, need prospects and scope, Main mechanisms to control market price in agriculture. Marketing features of wood marketing in Pakistan. Possible unfair trade practices possible by wood traders & remedies. Improvement in marketing. Co-operative marketing.

8. FOREST UTILIZATION.

Multiple uses of wood and wood products of important tree species in Punjab. Consumption of wood for house hold and cottage level industries. Important wood industries including Furniture making industry, Pulp and paper industry, Chip board and Ply wood industry & their growth for different uses specific to Punjab. Consumption levels of domestic wood based industry and future prospects.

B: PERIPHERAL.

9. APICULTURE.

Role in integrated farm management, procurement and raising of colonies on farmlands, yield of honey, possible pests & other enemies. Prevention and cure. Economics of raising of colonies. Important tree and agricultural crops for raising honey bee colonies.

10. SERICULTURE.

Raising of mulberry for Sericulture, procurement of eggs/seed, rearing of silkworms and equipment needed for. Possible pests and cure. Economics of silk seed rearing and its role in integrated farm management.

11. FISH FARMING.

Fish farming on private farmlands, its role in rural economy. Important fish breeds for culture. Methods and techniques of fish culture, its economics and sale methods, possible pests/problems and remedies.

12. ENVIRONMENT AND POLLUTION.

Environment's role as life support system, pollution of environment by human activities, causes of pollution, pollution source, content, pollution gases, green house effect. Pollution of atmosphere, waters and land fills. Treatment/abatement plants, ways and approaches to control pollution. Role of forests & trees in amelioration of climate.

13. POPULATION PLANNING.

Important population statistics of world and Pakistan. Resource scarcity & population pressure. Need for population planning to remain within means and certain life support system on Biosphere.

14. COOPERATIVES, LOCAL GOVT. & RURAL DEVELOPMENT.

Brief on co-operatives & local Govt: concept, need and organizational structure in rural economy. Role of cooperatives & local Govt: in raising farm income/rural development & reduction of urban/rural income disparities. Local Govt: & cooperatives in promotion of farm forestry.

15. THE RELIGIOUS SPIRIT OF ISLAM IN EXTENSION EDUCATION.

Role of religion in the betterment of mankind. Sunnah, Hadith & Quranic emphasis on education with particular reference to extension education.

16. Any other topic as per need of the occasion.

SYLLABUS FOR TREE FARMERS/NGO'S.II. EXTENSION EDUCATION.1. EXTENSION EDUCATION.

Extension Education concept & philosophy, principles, Role of extension education in cohesive social structure of rural economy.

2. ADOPTION & DIFFUSION.

Concept & its importance in transfer of technology. Process, stages of adoption, classification of adopters.

3. COMMUNICATION IN EXTENSION EDUCATION.

Communication process. Elements, strategies, Extension communication. Interpersonal group/mass communication. Audiovisual communication, Feed back.

4. COMMUNITY DEVELOPMENT.

Community development through extension education/participation. Application of Extension Education principles in community development.

5. Any other topic as per need of the occasion.

SYLLABUS FOR OPEN UNIVERSITY FARMERS.I. SOCIAL FORESTRY.A: HARD CORE.1. SOCIAL/FARM FORESTRY.

Concept, need and prospects. Identification of existing Social/Farm Forestry practices, the need and importance of strengthening such practices.

2. SEED COLLECTION.

Importance of seed quality, selection of species, provenances, stands and trees. Determining seed quantity, collection season, methods and equipment needed in seed collection for major species of the Punjab. Seed handling/seed processing, seed storage, seed viability, seed pre-treatment, seed analysis for purity & Germination percentage.

3. RAISING OF NURSERIES.

Improved techniques for major species, Shisham, Kikar, Eucalyptus, Poplar, Semal, Chir & Kail and or/ any other species participants are interested to know. Preliminary operations of site selection and determining size, area and shape of nursery, soil requirements, soil texture & structure.

a) Bed Nursery.

Site selection, preparation of land, layout, sowing of seed/planting of cuttings, irrigation, weeding cutting, extraction of plants, preparation of stumps, protection against nursery pests.

b) Potted Nursery.

Site selection, layout and making of beds, preparation of soil medium, purchase of appropriate size of P.bags, punching and filling, sowing/planting of P.bags, pricking out of seedlings, culling, hardening off for out-planting, carriage, & transportation to the planting site, sale of nursery plants. Nursery records.

4. PLANNING ON FARM LANDS.

Field planting methods for stumps, P.bags, bare rooted plants, planting techniques for different sites, saline and water logged, eroded, denuded, sandi etc. Strip and patch sowing, line sowing, planting patterns on farmlands, boundary planting, wind breaks/shelterbelts, compact and block planting, different agri. silvicultural patterns of planting, spatial and temporal arrangements. Silvo-pastoral and agri-silvo-pastoral practices. Species suitable for different agri. ecozones and civil divisions of the Punjab.

5. MANAGEMENT PRACTICES FOR FARM TREES AND WOOD LOTS.

Necessity of management practices, Important management practices including tending and other silvicultural operations, Weeding, cleaning, pruning/branch cutting, Girdling of climbers, thinning, improvement felling etc. Choice of season, methods and tools of pruning, effects of pruning on trees, classification into crown classes, Types and Grades of thinnings.

6. TREE PESTS, PREVENTION, CURE AND ERADICATION.

Common pests of major species, their prevention, cure and eradication with particular reference to Shisham, Poplar, Kikar, Semel, Eucalyptus, Toot, Chir & Kail. Pests of nursery, cutworms, Grass hoppers and crickets.

Army worms, termites and snails. Agricultural insecticides/pesticides and their methods of preparation & spraying for eradication. Damage to tree by porcupine, rats, and wild boars, Damage by fire, frost etc.

7. HARVESTING, & MARKETING.

Optimal rotation, different types of rotations depending upon objectives of management. Factors influencing the optimal rotation age. Different approaches to determine financial optimal. Stumpage sale, Felling, conversion, extraction and stacking of wood. Grading, standardization and classification of wood. Marketing for size specifications. Volume tables/yield tables and sale methods.

MARKETING.

Definition, need prospects and scope. Main mechanisms to control marketing price in agriculture. Distinctive features of wood marketing in Pakistan. Possible unfair trade practices possible by wood traders & remedies. Improvements in marketing. Co-operative marketing.

8. FOREST UTILIZATION.

Multiple uses of wood and wood products of important tree species in Punjab. Consumption of wood for house hold and cottage level industries. Important wood industries including furniture making industry, Match industry, pulp industry, Chip board and Ply wood industry, & their demands for different size specifications/grades. Consumption levels of domestic wood based industry and future prospects.

B: PERIPHERAL.9. POPULATION PLANNING.

Important population statistics of world and Pakistan.
Resource scarcity & population pressure. Need for
population planning to remain within means and sustain
life support system on Biosphere.

10. COOPERATIVES, LOCAL GOVT: & RURAL DEVELOPMENT.

Brief on co-operatives & local Govt: concept, need and
organizational structure in rural economy. Role of
cooperatives & local Govt: in raising farm incomes/rural
development & reduction of urban/rural income disparities.
Local Govt: & cooperatives in promotion of farm forestry.

11. THE RELIGIOUS SPIRIT OF ISLAM IN EXTENSION EDUCATION.

Role of religion in the betterment of mankind. Sunnah,
Hadith & Quranic emphasis on education with particular
reference to extension education.

12. Any other topic as per need of the occasion.

SYLLABUS FOR OPEN UNIVERSITY FARMERS.II. EXTENSION EDUCATION.1. EXTENSION EDUCATION.

Extension Education concept, philosophy & principles.
Role of extension education in cohesive social structure
or rural economy.

2. ADOPTION & DIFFUSION.

Concept & its importance in transfer of technology.
Process, stages of adoption, classification of adopters.

3. COMMUNITY DEVELOPMENT.

Community development through extension education/
participation. Application of extension education
principles in community development.

4. Any other topic as per need of the occasion.

SYLLABUS FOR SENIOR OFFICE STAFF.

I. ACCOUNTS & PROCEDURE.

1. Maintenance of files/record keeping.
2. Accounts & procedures.
 - i. Cash book writing, (FAC Form No.14)preparation checking & issuing objection statement.
 - ii. Preparation of Account Forms giving reference to the cash book.
 - iii. Leave/Contract Account/Tenders, quotations, work orders, sale conditions & Execution of agreement deed etc.
 - iv. Maintenance of Timber Forms 7,8,9,10, & 12.
 - v. Form Nos:11,13, & 14- Damage reports (Form No:15) Forest Cases, prosecution & compensation cases (FC's, PC's, & CC's).
 - vi. Budget allocation, distribution to formations, Reappropriation, excess & surrender lists, Budget monitoring.
 - vii. Maintenance of Timber Form No.7 & Form No.16 (Stock register).
 - viii. Annual chapters, History files, Annual Administrative & Technical reports.
 - ix. Audit, Internal, External & performance audit, annotation & preparation of working papers for DAC, PAC, & SDC's etc.
3. T.A. Bills-Preparation & checking. T.A.Rules 1984.
4. Administrative & financial rules & delegation of powers.

5. (E&D) Rules, 1975.

6. Moveover, selection grade, promotions & Maintenance of cadre of various categories and fixation of Pay.

7. G.P.Fund, Benevolent Fund, Group Insurance.

8. Pension & Leave Rules Types of leaves, Calculation of leave salary, leave rules 1980.

9. Conduct Rules, 1964.

10. Any other topic as per need of the occasion.

SYLLABUS FOR SENIOR OFFICE STAFF.

II. SOCIAL FORESTRY.

A: HARD CORE.

1. SOCIAL/FARM FORESTRY.

Concept, need and prospects, Identification of existing Social/Farm Forestry practices, the need and importance of strengthening such practices.

2. SEED COLLECTION.

Importance of seed quality, selection of species, provenances, stands and trees. Determining seed quantity, collection season, methods and equipment needed in seed collection for major species of the Punjab. Seed handling/seed processing, seed storage, seed viability, seed pre-treatment, seed analysis for purity & germination percentage.

3. RAISING OF NURSERIES.

Improved techniques for major species, Shisham, Kikar, Eucalyptus, Poplar, Semal, Chir & Kail and/or any other species participants are interested to know. Preliminary operations of site selection and determining size, area and shape of nursery, soil requirements, soil texture, & structure.

a) Bed Nursery.

Site selection, preparation of land, layout, sowing of seed/planting of cuttings, irrigation, weeding, culling, extraction of plants, preparation of stumps, protection against nursery pests.

b) Potted Nursery.

Site selection, layout and making of beds, preparation of soil medium, purchase of appropriate size of P.bags, punching and filling, sowing/planting of P.bags, pricking out of seedlings, culling, hardening off for out-planting, carriage, & transportation to the planting site, sale of nursery plants. Nursery records.

4. PLANTING ON FARM LANDS.

Field planting methods for stumps, P.bags, bare rooted plants. Planting techniques for different sites, saline and water logged, eroded, denuded, sandi etc. Strip and patch sowing, line sowing. Planting patterns on farmlands, boundary planting, Wind breaks/shelterbelts, Compact and block planting, different agri. silvicultural patterns of planting, spatial and temporal arrangements, Silvo-pastoral and agri. silvo-pastoral practices. Species suitable for different agri.economies and civil divisions of the Punjab.

5. MANAGEMENT PRACTICES FOR FARM TREES AND WOOD LOTS.

Necessity of management practices, Important management practices including tending and other silvicultural operations. Weeding, cleaning, pruning/branch cutting, Girdling of climbers, thinning, improvement felling etc. Choice of season, methods and tools of pruning, effects of pruning on trees, classification into crown classes, Types and grades of thinnings.

6. TREE PESTS, PREVENTION, CURE AND ERADICATION.

Common pests of major species, their prevention, cure and eradication with particular reference to Shisham, Poplar, Kikar, Semal, Eucalyptus, Toot, Chir & Kail. Pests of nursery, cutworms, Grass hoppers and crickets.

Army worms, termites and snails, Agricultural insecticides/pesticides and their methods of preparation & spraying for eradication. Damage to tree by porcupine, rats and wild boars, Damage by fire, frost etc.

7. FOREST UTILIZATION.

Multiple uses of wood and wood products of important tree species in Punjab. Consumption of wood for house hold and cottage level industries. Important wood industries including furniture making industry, Match industry, pulp and paper industry, Chip board and Ply wood industry & their demands for different size specifications/grades. Consumption levels of domestic wood based industry and future prospects.

B: PERIPHERAL.

8. API CULTURE.

Role in integrated farm management, procurement and raising of colonies on farmlands, yield of honey, possible pests & other enemies. Prevention and cure. Economics of raising of colonies. Important tree and agricultural crops for raising honey bee colonies.

9. SERICULTURE.

Raising of mulberry for Sericulture, procurements of eggs/seed, rearing of silkworms and equipment needed for. Possible pests and cure. Economics of silk seed rearing and its role in integrated farm management.

10. FISH FARMING.

Fish farming on private farmlands, its role in rural economy. Important fish breeds for culture. Methods and techniques

of fish culture, its economic-s and sale methods possible pests/problems and remedies.

11. ENVIRONMENT AND POLLUTION.

Environment's role as life support system, pollution of environment by human activities, causes of pollution, pollution source, content, pollution gases, green house effect. Pollution of atmosphere, waters and land fills. Treatment/abatement plants, ways and approaches to control pollution. Role of forests & trees in amelioration of climate.

12. BRIEF ON COMPUTERS.

Role of computer and computer age in development. Manipulation of documents & data on word processing & spread sheets.

13. POPULATION PLANNING.

Important population statistics of world and Pakistan. Resource scarcity & population pressure. Need for population planning to remain within means and sustain life support system on Biosphere.

14. THE RELIGIOUS SPIRIT OF ISLAM IN EXTENSION EDUCATION.

Role of religion in the betterment of mankind. Sunnah, Hadith & Qurenic emphasis on education with particular reference to extension education.

15. Any other topic as per need of the occasion.

SYLLABUS FOR SENIOR OFFICE STAFF.

III. EXTENSION EDUCATION.

1. EXTENSION EDUCATION.

Extension Education concept, philosophy, Material and methods, merits & demerits of methodologies.

2. ADOPTION & DIFFUSION.

Concept & its importance in transfer of technology, process, stages of adoption, classification of adopters.

3. COMMUNICATION IN EXTENSION EDUCATION.

Communication process, Elements, strategies, Extension communication. Interpersonal group/mass communication. Audiovisual communication, Feed back.

4. COMMUNITY DEVELOPMENT.

Community development through extension education/participation. Application of extension education principles in community development.

5. Any other topic as per need of the occasion.

SYLLABUS FOR JUNIOR OFFICE STAFF.I. ACCOUNTS & PROCEDURE.

1. Maintenance of files/record keeping.
2. Accounts & procedures.
 - i. Cash book writing, (FAC Form No:14)preparation checking & issuing objection statement.
 - ii. Preparation of Accounts Forms Giving reference to the cash book.
 - iii. Lease/Contract Account/Tenders, Quotations, work orders, sale conditions & Execution of agreement deed etc.
 - iv. Maintenance of Timber Forms 7,8,9,10 & 12.
 - v. Form Nos:11,13 & 14- Damage reports (Form No.15 Forest cases, Prosecution & compensation cases (FC's, PC's & CC's).
 - vi. Budget allocation,distribution to formations, Reappropriation, excess & surrender lists,Budget monitoring.
 - vii. Maintenance of Timber Form No:7 & Form No: 16 (Stock register).
 - viii. Annual chapters, History files, Annual Administrative & Technical reports.
 - ix. Audit, Internal, External & performance audit, annotation & preparation of working papers for DAC, PAC, & SDC's etc.
 - x. Development schemes & SNE's.
3. T.A. Bills- Preparation & checking. T.A. Rules, 1984.
4. Administrative & financial rules & delegation of powers.

5. (E&D) Rules 1975.
6. Moveover, selection grade, promotions & Maintenance of cadre of various categories and fixation of Pay.
7. G.P.Fund, Benevolent Fund, Group Insurance.
8. Pension & Leave Rules, Types of leaves, calculation of leave salary, leave rules 1980.
9. Conduct Rules, 1964.
10. Any other topic as per need of the occasion.

SYLLABUS FOR JUNIOR OFFICE STAFF.

II. SOCIAL FORESTRY.

A: HARD CORE.

1. SOCIAL/FARM FORESTRY.

Concept, need and prospects, Identification of existing Social/Farm Forestry practices, the need and importance of strengthening such practices.

2. SEED COLLECTION.

Importance of seed quality, selection of species, provenances, stands and trees, Determining seed quantity, collection season, methods and equipment needed in seed collection for major species of the Punjab. Seed handling/seed processing, seed storage, seed viability, seed pre-treatment, seed analysis for purity & germination percentage

3. RAISING OF NURSERIES.

Improved techniques for major species, Shisham, Kikar, Eucalyptus, Poplar, Samal, Chir & Kail and/or any other species participants are interested to know. Preliminary operations of site selection and determining size, area and shape of nursery, soil requirements, soil texture, & structure.

e) Bed Nursery.

Site selection, preparation of land, layout, sowing of seed/planting of cuttings, irrigation, weeding, culling extraction of plants, preparation of stumps, protection against nursery pests.

Army worms, termites and snails, Agricultural insecticides/pesticides and their methods of preparation & spraying for eradication. Damage by fire, frost etc.

FOREST UTILIZATION.

Multiple uses of wood and wood products of important tree species in Punjab. Consumption of wood for house hold and cottage level industries. Important wood industries including furniture making industry, Match industry, Pulp and paper industry, Chip board and Ply wood industry & their demands for different size specifications/grades. Consumption levels of domestic wood based industry and future prospects.

B: PERIPHERAL.

8. APICULTURE.

Role in integrated farm management, procurement and raising of colonies on farmlands, yield of honey, possible pests & other enemies. Prevention and cure. Economics of raising of colonies. Important tree and agricultural crops for raising honey bee colonies.

9. SERICULTURE.

Raising of mulberry for Sericulture, procurements of eggs/seed, rearing of silkworms and equipment needed for. Possible pests and cure. Economics of silk seed rearing and its role in integrated farm management.

10. FISH FARMING.

Fish farming on private farmlands, its role in rural economy, Important fish breeds for culture. Methods and techniques of fish culture, its economics and sale methods possible pests/problems and remedies.

b) Potted Nursery.

Site selection, layout and making of beds, preparation of soil medium, purchase of appropriate size of P.bags, punching and filling, sowing/planting of P.bags, pricking out of seedlings, culling, hardening off for out-planting, carriage, & transportation to the planting site, sale of nursery plants, Nursery records.

4. PLANTING ON FARM LANDS.

Field planting methods for stumps, P.bags, bare rooted plants. Planting techniques for different sites, saline and water logged, eroded, denuded, sandi etc. Strip and patch sowing, line sowing. Planting patterns on farmlands, boundary planting, wind breaks/Shelterbelts, Compact and block planting, different agri.silvicultural patterns of planting, spatial and temporal arrangements, silvo-pastoral and agri. silvo-pastoral practices. Species suitable for different agri.economies and civil divisions or the Punjab.

5. MANAGEMENT PRACTICES FOR FARM TREE AND WOOD LOTS.

Necessity of management practices, Important management practices including tending and other silvicultural operations. Weeding, cleaning, pruning/branch cutting, girdling of climbers, thinning, improvement felling etc. Choice of season, methods and tools of pruning, effects of pruning on trees, classification into crown classes, Types and grades of thinning.

6. TREE PESTS, PREVENTION, CURE AND ERADICATION.

Common pests of major species, their prevention, cure and eradication with particular reference to Shisham, Poplar, Kikar, Sewal, Eucalyptus, Toot, Chir & Kail. Pests of nursery, cutworms, grass hoppers and crickets.

11. ENVIRONMENT AND POLLUTION.

Environment's role as life support system, pollution of environment by human activities, causes of pollution, pollution source, content, pollution gases, green house effect. Pollution of atmosphere, waters and landfills. Treatment/abatement plants, ways and approaches to control pollution, Roles of forests & trees in amelioration of climate.

12. BRIEF ON COMPUTERS.

Role of computer and computer age in development. Manipulation of documents & data on word processing & spread sheets.

13. POPULATION PLANNING.

Important population statistics of world and Pakistan. Resource scarcity & population pressure. Need for population planning to remain within means and sustain life support system on Biosphere.

14. THE RELIGIOUS SPIRIT OF ISLAM IN EXTENSION EDUCATION.

Role of religion in the betterment of mankind. Sunnah, Hadith & Quranic emphasis on education with particular reference to extension education.

15. Any other topic as per need of the occasion.

SYLLABUS FOR JUNIOR OFFICE STAFF.

III. EXTENSION EDUCATION.

1. EXTENSION EDUCATION.

Extension Education concept, philosophy, Material and methods, merits & demerits of methodologies.

2. ADOPTION & DIFFUSION.

Concept & its importance in transfer of technology, process, stages of adoption, classification of adopters.

3. COMMUNITY DEVELOPMENT.

Community development through extension education/participation. Application of extension education principles in community development.

4. Any other topic as per need of the occasion.

LIST OF RESOURCE PERSONS.

I. EXTENSION EDUCATION.

<u>S.NO.</u>	<u>NAME.</u>	<u>DESIGNATION.</u>	<u>DEPARTMENT/ ORGANIZATION.</u>
1.	Dr. Saeed Ahmad Khan.	Professor.	Extension Education Department, UAF.
2.	Dr. Tanvir Ali.	Asst:Professor.	-do-
3.	Mr. Munir Ahmad.	Lecturer.	-do-
4.	Mr. Mohammad Akram Zia.	Asstt: Professor.	-do-
5.	Mr. Khalid Mehmood Ch.	Lecturer.	-do-
6.	Ch. Ghulam Hussain.	Asstt:Prof.(Rtd).	-do-
7.	Mr. Tariq Mehmood.	S.R.O.	PFRI, Faisalabad.
8.	Mr. Muhammad Nazir.	SDFO.	PF&DP.
9.	Pakistan Forest Institute, Peshawar, personnel.	.....	.....
10.	Syed Ejaz Hussain Sherazi.	S.D.F.O. Attock.	Rawalpindi Circle.
11.	Raja Tariq Mehmood.	S.D.F.O. Kahuta.	MKWA.
12.	Mr. Faisal Haroon.	Park Manager.	Gatwala, Faisalabad
13.	Mr. M.Zia-ul-Islam.	S.D.F.O/W.P.	Working Plan Kamalia.
14.	Mr. Mohammad Mushtaq.	A.R.O.	PFRI, Faisalabad.
15.	Mr. Muhammad Saleem.	K.O.	PFRI, Faisalabad.
16.	Mr. Muhammad Aslam.	RFO, F.F.BWP.	Behawalpur.
17.	Mr. Shabir Hussain.	PFRI.	PFS, Ghoragali.
18.	Mr. Muntaz Khan.	F.R.	Attock Division.
19.	Mr. Ghulam Yazdani.	SDFO, D.G.Khan.	D.G.Khan.
20.	Abdul Chaffar Khan.	SDFO, Chakwal.	Rawalpindi.
21.	Ch. Abdul Khaliq.	K.O.	PFRI, Faisalabad.

22.	Muntaz Ahmad Babar.	S.D.F.O, Kahuta.	MKDA
23.	Muhammed Salim Anwar.	S.D.F.O, Sabinawal.	Multan Circle.
24.	Anwar-ul-Haq.	F.R.	MKDA.
25.	Rana Mehmood Ahmed.	S.D.F.O, Okara.	Multan Circle.
26.	Mr. Akbar Ali.	RFO, Bahawalpur.	Bahawalpur.
27.	Mr. Allah Dad.	RFO, Jhelum.	FPDP.
28.	Malik Muhammad Khan.	RFO, Pindigheb.	Rawalpindi.
29.	Mr. Hakim Kuan.	RFO, Multan.	Multan.
30.	Mr. Mehmood Ahmad.	S.D.F.O, Khanewal.	Multan.
31.	Mr. Zahoor Ahmad.	S.D.F.O.D.G.Khan.	Range Mgt.D.G.Khan.
32.	Mr. Ghulam Abbas.	RFO, Chakwal.	FPDP.
33.	Mr. Dilshad Shah.	S.D.F.O, Punjab BWP.	MKDA. Rawalpindi.
34.	Mr. Kamran Babar.	RFO, Texila.	Rawalpindi.
35.	Gul Noor Kuan.	S.D.F.O, Rawalpindi.	Rawalpindi.
36.	Muhammad Goher Mushtaq.	RFO, Silva: Lahore.	PFRI.
37.	Mr. Abid Ishaq.	S.D.F.O, Sargodha.	Sargodha.
38.	Dr. M. Irshad	D.F.O. Extension	Lahore.
39.	Shahid Rashid Awan.	S.D.F.O. Changa Manga.	Lahore Circle.

LIST OF RESOURCE PERSONS.

II. SOCIAL FORESTRY.

S.No.	N A M E .	DESIGNATION.	DEPARTMENT/ ORGANIZATION.
1.	Mr. Muhammad Hafeez.	Director.	PFRI, Faisalabad.
2.	Raja Atta Ullah.	D.F.O.Silva:	PFRI, Faisalabad.
3.	Dr. Zafar Iqbal.	S.R.O.	PFRI, Faisalabad.
4.	Mr. Tariq Mehmood.	S.R.O.	PFRI, Faisalabad.
5.	Mr. M.I. Sheikh.	Forestry Mgt. Specialist.	COP/USAID, Islamabad.
6.	Mr. Muhammad Muslim.	S.R.O.	Sericulture Lahore.
7.	Mr. Muhammad Nazir.	S.D.F.O.	FP&DP.
8.	Dr. Muhammad Afzal.	Deputy Secretary Planning.	FW&T, Deptt: Lahore.
9.	Mr. Mohammad Saleem.	R.O.	PFRI, Faisalabad.
10.	Mr. S.K. Khanzada.	CCF/Sect.(Rtd).	.....
11.	Dr. Muhammad Rafique.	Principal.	P.F.S. Chorgali.
12.	Mian Khizar Hayat.	Principal.	P.F.S. Bahawalpur.
13.	Mr. Feroz Din.	Instructor.	P.F.S. Chorgali.
14.	Mr. Muhammad Farooq.	Instructor.	P.F.S. Chorgali.
15.	Mr. Sabbir Qureshi.	Instructor.	P.F.S. Chorgali.
16.	Mr. Riaz Hussain.	Instructor.	P.F.S. Chorgali.
17.	Pakistan Forest Institute, Peshawar, Personnel.	.....	.....
18.	Fisheries Deptt. Personnel.	.....	.....
19.	Syed Ejaz Hussein, Sherazi.	S.D.F.O, Attock.	Rawalpindi.
20.	Raja Tariq Mehmood.	S.D.F.O, Kahuta.	H.K.D.A.

21.	Mr. Faisal Haroon.	Park Manager.	Catwala, Faisalabad.
22.	M. Zia-ul-Islam.	S.D.F.O., Working Plan.	Working Plan, Kamalia.
23.	Mr. Muhammad Mushtaq.	A.R.O.	PFRI, Faisalabad.
24.	Mr. Mumtaz Khan.	F.R.	Attock Division.
25.	Mr. Muhammad Aslam.	RFO, F.F.BWP.	Banawalpur.
26.	Mr. Shabir Hussain.	Instructor.	P.F.S., Choragali.
27.	Syed Ashiq Hussain Shah.	S.D.F.O.	F.F.Lahore.
28.	Mr. Ghulam Yazdani.	S.D.F.O., D.G.Khan.	D.G.Khan.
29.	Abdul Shaffar Khan.	S.D.F.O., Chakwal.	Rawalpindi.
30.	Ch. Abdul Khalig.	R.O.	PFRI, Faisalabad.
31.	Mumtaz Ahmad Babar.	S.D.F.O., Kahuta.	MKDA.
32.	Muhammad Salim Anwar.	S.D.F.O., Sahiwal.	Multan.
33.	Mr. Anwar-ul-Haq.	F.R.	MKDA.
34.	Rana Mahmood Ahmad.	S.D.F.O., Okara.	Multan.
35.	Mr. Akber Ali.	RFO, Bahawalpur.	Bahawalpur.
36.	Mr. Allah Dad.	RFO, Jhelum.	FPDP.
37.	Malik Muhammad Khan.	RFO, Pindigheb.	Rawalpindi.
38.	Mr. Hakim Zhan.	RFO, Multan.	Multan.
39.	Mr. Mahmood Ahmad.	S.D.F.O., Khanawal.	Multan.
40.	Mr. Zahoor Ahmad.	S.D.F.O., D.G.Khan.	Range Management, D.G.Khan.
41.	Mr. Ghulam Abbas.	RFO, Chakwal.	FPDP.
42.	Mr. Dilshad Shah.	S.D.F.O., Punjor R/Pind.	MKDA.
43.	Mr. Kasran Basir.	RFO, Taxila.	Rawalpindi.
44.	Gul Noor Khan.	SDFO, Rawalpindi.	Rawalpindi.
45.	Muhammad Coher Mushtaq.	RFO, PFRI.	Silva: Lahore.
46.	Mr. Abid Iltahi.	S.D.F.O., Sargodha.	Sargodha.

LIST OF RESOURCE PERSONS.

III. ACCOUNTS & PROCEDURE.

S.NO.	NAME.	DESIGNATION.	DEPARTMENT/ ORGANIZATION.
1.	Mr. Muhammad Hafeez.	Director.	PFRI, Faisalabad.
2.	Raja Atta Ullah.	DFO, Silva.	PFRI, Faisalabad.
3.	Dr. Muhammad Afzal.	Deputy Secretary Planning.	FW&T, Deptt., Lahore.
4.	Mr. Akbar Minhas.	Deputy Secretary Admin.	FW&T, Deptt., Lahore.
5.	Mr. Nisar Ehatti.	Director (B&A) Forests.	-do-
6.	Rana M. Ismail Shahin.	Admin. Officer.	PFRI, Faisalabad.
7.	Mr. Javid Jhangir.	Chief Internal Auditor, Budget.	Director, (B&A) LHR.
8.	Mr. Feroz Din.	Instructor.	PFS, Choragali.
9.	Mr. Muhammad Farooq.	Instructor.	PFS, Choragali.
10.	Mr. Riaz Hussain.	Instructor.	PFS, Bahawalpur.
11.	Haji Saifur-Rehman.	Ex-Chief Internal Auditor.	.....
12.	Mr. Ahmad Shah.	Accounts Officer.	CCF (N.Z) Office Rawalpind.
13.	N.A. Warsi.	-do-	Wildlife Deptt. Lahore Zoo.
14.	Mr. Sheikh Naseer Ahmad.	Admin. Officer.	CCF (R&E) Office Lahore.
15.	Speaker on Sociology, public relationing & public Admin/NLPA.	.....	University of the Punjab.
16.	Mr. Gellani.	Accounts Officer.	O/O CCF (S.Z) Multan.
17.	Ch. Muhammad Saleem.	Chief Internal Audit (Rtd).	.....

LIST OF RESOURCE PERSONS.

IV. MISCELLANEOUS.

S.NO.	NAME.	DESIGNATION.	DEPARTMENT/ ORGANIZATION.
1.	Mr. Muhammad Hafeez.	Director.	PFRI, Faisalabad.
2.	Raja Atta Ullah.	DFO, Silva.	PFRI, Faisalabad.
3.	Mr. M.I. Sheikh.	Forestry Mgt. Specialist.	GOP/USAID, Islamabad.
4.	Dr. Mohammad Afzal.	Deputy Secretary Planning.	FWM&T, Deptt; Lahore.
5.	Mr. Akbar Minhas.	Deputy Secretary Admin.	-do-
6.	Mr. S.K. Khanzada.	CCF/Sect. (Rtd).	.....
7.	Ch: Inayat Ullah.	CCF (Rtd).	.....
8.	Mr. Muhammad Farooq.	Instructor.	PFS, Choragali.
9.	A.S. Bukhari.	.....	FF&DP, Islamabad.
10.	Ch. Ghulam Hussain/ Khan.	DFO/SRO, Pest Control.	108-Ravi Road, Lahore.
11.	Khan Ikhlaq Ahmad	O.S.D.	SG&D, Lahore.
12.	Local Govt/Rural Development Personnel.	.....	.....
13.	Qazi Ishtiaq Ahmad.	CCF (Rtd).	.....
14.	Communication tips for a public speakers.	Personnel from Distt; Administration.	.....
15.	Effective communication on Radio broadcasts & T.V. telecasts.	Programme producer.	Radio/T.V. Stations.
16.	PAF Base Sarloha.	Education Branch personnel.	For lecture on reli- gion & better- ment of mankind.
17.	Speaker on Environment & Pollution.	AARI/Dr. Aqil Khan.	.....
18.	Speaker on computer brief.	.....	Co-operative Deptt.
19.	Co-operatives Personnel.	.....	Population Planning Deptt; Institute.
20.	Population Planning.	.....	.....
21.	Fisheries Department.	.....	.....

VERTICAL LIST OF RESOURCE PERSONS.

I. P.F.R.I.

i) EXTENSION EDUCATION.

S.NO.	NAME.	DESIGNATION.	DEPARTMENT/ ORGANIZATION.
1.	Dr. Saeed Ahmed Khan.	Professor.	Extension Educat- tion Deptt. UAF.
2.	Dr. Tanvir Ali.	Assistant Prof.	-do-
3.	Mr. Munir Ahmad.	Lecturer.	-do-
4.	Mr. Mohammad Akram Zia.	Asstt: Prof.	-do-
5.	Mr. Khalid Mehmood Ch.	Lecturer.	-do-
6.	Ch. Ghulam Hussain.	Asstt: Prof. (Rtd).	-do-
7.	Mr. Tariq Mehmood.	S.R.O.	PFRI, Faisalabad.
8.	Mr. Mohammad Nazir.	S.D.F.O.	PF&DP.
9.	Mr. Faisal Haroon.	Park Manager.	Gatwala, Faisalabad.
10.	Mr. Muhammad Zia-ul- Islam.	S.D.F.O./W.P.	W/Plan Kamalia.
11.	Mr. Muhammad Mushtaq.	A.R.O.	PFRI, Faisalabad.
12.	Mr. Mohammad Saleem.	R.O.	PFRI, Faisalabad.
13.	Ch. Abdul Khaliq.	R.O.	PFRI, Faisalabad.
14.	Mr. Muhammad Goher Mushtaq.	RF0, Siva; Lahore.	PFRI.
15.	Mr. Abid Ishaq.	S.D.F.O.	Sargodha.
16.	Dr. M. Ishaq.	D.F.O. Extension.	Lahore.
17.	Shahid Rashid Agha.	S.D.FO. Changa Manga.	Lahore Circle.

ii) SOCIAL FORESTRY.

S.NO.	NAME.	DESIGNATION.	DEPARTMENT/ ORGANIZATION.
1.	Mr. Muhammad Hafeez.	Director.	PFRI, Faisalabad.
2.	Raja Atta Ullah.	D.F.O.Silva.	PFRI, Faisalabad.
3.	Dr. Zafar Iqbal.	S.R.O.	PFRI, Faisalabad.
4.	Mr. Tariq Mehmood.	S.R.O.	PFRI, Faisalabad.
5.	Mr. M.I.Sheikh.	Forestry Mgt. Specialist.	GOP/USAID, Islamabad
6.	Mr. Muhammad Muslim.	S.R.O.	Sericulture, Lahore.
7.	Mr. Muhammad Nazir.	S.D.F.O.	FF&DP.
8.	Dr. Muhammad Afzal.	Deputy Secretary Planning.	FWF&T.Deptt.Lahore.
9.	Mr. Mohammed Saleem.	K.O.	PFRI, Faisalabad.
10.	Mr. S.K.Khanzada.	CCF/Sect.(Rtd).	.....
11.	Ch.Inayat Ullah.	CCF(Rtd).	.....
12.	Khan Ikhtlaq Ahmad Khan.	O.S.D.	SK&GAD, Lahore.
13.	Qazi Ishtiaq Ahmad.	CCF.(Rtd).	.....
14.	Ch. Ahsan Khaliq.	R.O.	PFRI, Faisalabad.
15.	Muhammad Salim Anwar.	S.D.F.O.Sahiwal.	Multan.
16.	Muhammad Goher Mushtaq.	EFO, Silva: Lahore.	PFRI.
17.	Mr. Abid Ishaq.	SDFO, Sargodha.	Sargodha.
18.	Dr. M.Archad.	D.F.O.Extension.	Lahore.
19.	Shahid Rashid Awan.	S.D.FO. Changa Manga.	Lahore Circle.

iii) ACCOUNTS & PROCEDURE.

S.NO.	NAME.	DESIGNATION.	DEPARTMENT/ ORGANIZATION.
1.	Mr. Muhammad Hafeez.	Director.	PFRI, Faisalabad.
2.	Raja Atta Ullah.	D.F.O.Silva;	PFRI, Faisalabad.
3.	Dr. Muhammad Afzal.	Deputy Secretary Planning.	FWF&T.Deptt.Lahore.
4.	Mr. Akbar Minhas.	Deputy Secretary Admin.	-do-
5.	Mr. Nisar Bhatti.	Director(B&A) Forests.	-do-
6.	Rana M. Ismail Shahin.	Admin. Officer.	PFRI, Faisalabad.
7.	Mr. Javaid Jahangir.	Chief Internal Auditor, Budget.	Director, (B&A)IHR.
8.	Mr.S.K. Khanzada.	CCF./Sect.(Rtd).	.....
9.	Ch. Inayat Ullah.	CCF.(Rtd).	.....
10.	Haji Saif-ur-Rehman.	Ex. Chief Internal Audit.	.....
11.	Mr. Ahmad Shah.	Accounts Officer.	CCF.(N.Z)Office Rawalpindi.
12.	N.A. Warsi.	Accounts Officer.	Wildlife Deptt.IHR.
13.	Mr.Sheikh Naseer Ahmad.	Admin. Officer.	CCF(EE)Office Lahore.
14.	A.S. Bukhari.	.....	FF&DP, Islamabad.
15.	Speaker on Sociology Public Relationing & Public Admin.	.....	University of the Punjab/WIPA.
16.	Khan Ikhtlaq Ahmad Khan.	O.S.D.	SK&GAD, Lahore.
17.	Mr. Gellani.	Accounts Officer.	O/O CCF(S.Z)Multan.
18.	Qazi Ishtiaq Ahmad.	CCF.(Rtd).	.....
19.	Ch. Muhammad Saleem.	Chief Internal Audit(Rtd).	.....

VENUEWISE LIST OF RESOURCE PERSONS.

iv) MISCELLANEOUS.

S.NO.	NAME	DESIGNATION.	DEPARTMENT/ ORGANIZATION.
1.	Mr. Mohammad Hafeez.	Director.	PFRI, Faisalabad.
2.	Raja Atta Ullah Khan.	D.F.O.Silva.	PFRI, Faisalabad.
3.	Mr.M.I.Sheikh.	Forestry Met. Specialist.	GOP/USAID, Islamabad
4.	Dr. Mohammed Afzal.	Deputy Secretary Planning.	FWF&T Deptt.Lahore.
5.	Mr. Akbar Minhas.	Deputy Secretary Admin.	-do-
6.	Mr. S.K.Khanzada.	CCF/Sect.(Rtd).	.....
7.	Ch.Inayat Ullah.	CCF. (Rtd).	.....
8.	A.S. Bukhari.	.....	FF&DP, Islamabad.
9.	Ch.Ghulam Hussain/ Noor Mohammed Malik.	DFO/SRO.	108-Ravi Road,LHR.
10.	Khan Ikhtlaq Ahmad Khan.	O.S.D.	SE&GD, Lahore.
11.	Local Govt./Rural Development personnel.	.....	.....
12.	Qazi Ishtiaq Ahmad.	CCF. (Rtd).	.....
13.	Communication tips for a public speakers.	Personnel from Disut: Administration.	.....
14.	Effective communication Programme Producer. T.V. telecasts.	.....	Radio/T.V.Station.
15.	PAP, Base Sargodha.	Education Branch personnel.	For lectures on religion & better- ment of mankind.
16.	Speaker on Environment & Pollution.	M.Rafique Ahmad Principal.	Sarghad Forest School Abbottabad.
17.	Speaker on computer brief.	.....	.....
18.	Muzaffar Hussain Ch.	Director, A.S.Information (Rtd).	Member Kissan Board Lahore.
19.	Co-operatives personnel.	.....	Co-operative Deptt.
20.	Population Planning.	.....	Population Plann- ing Deptt/Institute.
21.	Fisheries Department.	.....	.....

VENUEWISE LIST OF RESOURCE PERSONS.

II. PPS, BAHAWALPUR.

i) EXTENSION EDUCATION.

S.NO:	NAME	DESIGNATION.	DEPARTMENT/ ORGANIZATION.
1.	Dr. Saeed Ahmad Khan.	Professor.	Extension Education Department,UAF.
2.	Dr. Tanvir Ali.	"sstt: Prof.	-do-
3.	Mr. Munir Ahmad.	Lecturer.	-do-
4.	Mr. Tariq Mehmood.	S.R.O.	PFRI,Faisalabad.
5.	Sayed Ejaz Hussain Sherazi.	S.D.F.O.Kamalia.	Sargodha.
6.	Mr. Faisal Haroon.	Park Manager.	Gatwala,Faisalabad.
7.	Mr. M. Zia-ul-Islam.	SDFO/W.Plan.	Working Plan, Kamalia.
8.	Mr. Muhammad Mushtaq.	A.R.O.	PFRI, Faisalabad.
9.	Mr. Mohammad Saleem.	R.O.	PFRI, Faisalabad.
10.	Mr.Muhammad Aslam.	RFO,F.F.Bahawalpur.	Bahawalpur.
11.	Mr. Ghulam Yazdani.	SDFO,D.G.Khan.	D.G.Khan.
12.	Ch. Abdul Khaliq.	R.O.	PFRI, Faisalabad.
13.	Mr.Muhammad Salim Anwar.	SDFO, Sahiwal.	Multan Circle.
14.	Rana Mehmood Ahmad.	SDFO, Okara.	-do-
15.	Mr. Akbar Ali.	RFO, Bahawalpur.	Bahawalpur.
16.	Mr. Hakim Knan.	RFO, Multan.	Multan.
17.	Mr.Mehmood Ahmed.	SDFO, Khanewal.	-do-
18.	Mr. Zahoor Ahmed.	SDFO. D.G.Khan.	-do-
19.	Mr. Muhammad Goher Mushtaq.	RFO, Silva;Lahore.	PFRI, Faisalabad.
20.	Mr. Abid Ilaahi.	SDFO, Sargodha.	Sargodha.
21.	Mr.Fida Hussain.	R.O.Bahawalpur.	PFRI, Faisalabad.
22.	Dr. M. Iqbal.	D.F.O.Extension.	Lahore.
23.	Shahid Rashid Aven.	S.D.F.O.Changa Manage.	Lahore Circle.

VENUEWISE LIST OF RESOURCE PERSONS.

ii) SOCIAL FORESTRY.

S.NO.	NAME	DESIGNATION	DEPARTMENT/ ORGANIZATION
1.	Mr. Muhammad Hafeez.	Director.	PFRI, Faisalabad.
2.	Raja Atta Ullah Khan.	D.F.O. Silva:	-do-
3.	Dr. Zafer Iqbal,	S.R.O.	-do-
4.	Mr. Tariq Mehmood.	S.R.O.	-do-
5.	Mr. M.I. Sheikh.	Forestry Mgt. Specialist.	GOE/USAID, Islamabad
6.	Mr. Muhammad Muslim.	S.R.C.	Sericulture, Lahore.
7.	Mr. Muhammad Nazir.	S.D.F.O.	PF&DP.
8.	Dr. Muhammad Afzal.	Deputy Secretary Planning.	FWF&T. Deptt. Lahore
9.	Mr. Muhammad Saleem.	R.O.	PFRI, Faisalabad.
10.	Mian Khizar Hayat.	Principal.	PFS, Bahawalpur.
11.	Mr. Riaz Hussain.	Instructor.	-do-
12.	Fisheries Deptt. Personnel.	.....	.....
13.	Syed Ejaz Hussain Sherazi	SDFO, Kamalia.	Sargodha Circle.
14.	Mr. Faisal Haroon.	Park Manager.	Getwala, Faisalabad.
15.	Mr. M. Zia-ul-Islam.	SDFO/W. Plan.	Working Plan Kamalia.
16.	Mr. Muhammad Mushfaq.	A.R.O.	PFRI, Faisalabad.
17.	Mr. Muhammad Aslam.	RFO, F.F.B. Pur.	Bahawalpur.
18.	Syed Aniq Hussain Shah.	S.D.F.O.	F.F. Lahore.
19.	Mr. Ghulam Yazdani.	SDFO, D.G. Khan.	D.G. Khan.
20.	Ch. Abdul Khaliq.	R.O.	PFRI, Faisalabad.
21.	Muhammad Salim Anwar.	SDFO, Sahiwal.	Multan.
22.	Rana Mehmood Ahmad.	SDFO, Okara.	-do-
23.	Mr. Akbar Ali.	RFO, Bahawalpur.	Bahawalpur.
24.	Mr. Hakim Khan.	RFO, Multan.	Multan.
25.	Mr. Mehmood Ahmsi.	SDFO, Khewwal.	Multan.
26.	Mr. Zahoor Ahmad.	SDFO, D.G. Khan.	R.M.D.G. Khan.
27.	Mr. Muhammad Gohar	RFO, FF	Silva; PFRI.
28.	Mr. Abid Iftik.	SDFO, Sargodha	Sargodha.
29.	Mr. Fiaz Hussain.	R.O. S/Pur.	PFRI, Faisalabad.

iii) ACCOUNTS & PROCEDURE.

S.NO.	NAME	DESIGNATION	DEPARTMENT/ ORGANIZATION
1.	Mr. Muhammad Hafeez.	Director.	PFRI, Faisalabad.
2.	Raja Atta Ullah Khan.	D.F.O. Silva.	PFRI, Faisalabad.
3.	Rana M. Ismail Shahin.	Admin. Officer.	PFRI, Faisalabad.
4.	Mr. Javaid Jahangir.	Chief Internal Auditor, Budget.	Director, (B&A) Lahore.
5.	Mr. S.K. Khanzada.	CCF/Sect. (Rtd).	.....
6.	Mr. Muhammad Farooq.	Instructor.	PFS, Ghoragali.
7.	Mr. Riaz Hussain.	Instructor.	PFS, Bahawalpur.
8.	Haji Saif-ur-Rehman.	Ex. Chief Internal Auditor.	.....
9.	N.A. Warsi.	Accounts Officer.	Wildlife Department Zoo.
10.	Mr. Sheikh Naseer Ahmad.	Admin. Officer.	O/O. CCF(P&E) Lahore.
11.	Mr. Gellani.	Accounts Officer.	O/O. CCF(S.Z) Multan.
12.	Ch. Muhammad Saleem.	Chief Internal Audit. (Rtd).	.....

VENUEWISE LIST OF RESOURCE PERSONS.

iv) MISCELLANEOUS.

S.NO.	NAME.	DESIGNATION.	DEPARTMENTAL/ ORGANIZATION.
1.	Mr. Muhammad Hafeez.	Director.	PFRI, Faisalabad.
2.	Raja Abta Ullah Khan.	D.F.O.Silva.	-do-
3.	Mr. Mi I. Sheikh.	Forestry Mgt. Specialist.	GOP/USAID, Islamabad
4.	Mr. Muhammad Farooq.	Instructor.	PFS, Choragali.
5.	A.S.Bukhari.	.....	FP&DP, Islamabad.
6.	Ch.Ghulam Hussain/ Noor Mohammad Malik.	DFO/SRO. Pest Control.	108-Ravi Road, LHR.
7.	Local Govt/Rural Development personnel.	.....	.....
8.	Communication tips for a public speakers.	Personnel from Distt:Administration.	.....
9.	Effective communication on Radio broadcasts & T.V. telecasts.	Programme Producer.	Radio/T.V. Station.
10.	Speaker on Environment & pollution.	M.Refiq, Principal.	Sachad Forest School, Abbotabad.
11.	Speaker on computer brief.	.....	.....
12.	Muzaffer Hussain Ch.	Director, A.S. Information (Rtd).	Member Kissan Board, Lahore.
13.	Co-operatives personnel.	.....	Co-operative Deptt.
14.	Population Planning.	.....	Population Planning Deptt/Institute.
15.	Fisheries Department.	.....	.....

III. PFS, GHORAGALI.

i) EXTENSION EDUCATION.

S.NO.	NAME.	DESIGNATION.	DEPARTMENTAL/ ORGANIZATION.
1.	Mr. Munir Aamad.	Lecturer.	Ext. Education Department, UAF
2.	Mr. Mohamm-ud Akram Zia.	Asstt: Prof.	-do-
3.	Mr. Khalid Mehmood Ch.	Lecturer.	-do-
4.	Ch. Ghulam Hussain.	Asstt.Prof.(Rtd).	-do-
5.	Mr. Tariq Mehmood.	S.R.O.	PFRI, Faisalabad.
6.	Mr. Muhammad Nazir.	SDFO.	FP&DP.
7.	Raja Tariq Mehmood.	SDFO, Kahuta.	MKDA.
8.	Mr. Faisal Haroon.	Park Manager.	Gatwala, Faisalabad.
9.	Mr. Muhammad Mushtaq.	A.R.O.	PFRI, Faisalabad.
10.	Mr. Muhammad Saleem.	R.O.	-do-
11.	Mr. Shabir Hussain.	PFRI.	PFS, Ghoragali.
12.	Mr. Mumtaz Khan.	F.R.	Attock Division.
13.	Abdul Chaffar Khan.	SDFO, Chakwal.	Rawalpindi.
14.	Ch. Abdul Khaliq.	R.O.	PFRI, Faisalabad.
15.	Answer-ul-Haq.	F.R.	MKDA.
16.	Mr. Allah Dad.	RFO, Jhelum.	FPDP.
17.	Malik Muhammad Khan.	RFO, Pindigheb.	Rawalpindi.
18.	Mr. Ghulam Abbas.	RFO, Chakwal.	FPDP.
19.	Mr. Dilshad Shah.	SDFC, Punjer RMP.	MKDA, R/Pindi.
20.	Mr. Kamran Babar.	RFO, Texila.	Rawalpindi.
21.	Gul Noor Khan.	SDFO, Rawalpindi.	Rawalpindi.
22.	Mr. Muhammad Goher Mushtaq.	RFO, Silva: Lahore.	PFRI.
23.	Mr. Abid Isha.	SDFO, Sargodha.	Sargodha.
24.	Dr. M. Irshad.	D.F.O. Extension.	Lahore.
25.	Shehid Rashid Awan.	S.D.F. O. Changa Naug.	Lahore Circle.

VERUEWISE LIST OF RESOURCE PERSONS.

ii) SOCIAL FORESTRY.

S.NO.	NAME.	DESIGNATION.	DEPARTMENT/ ORGANIZATION.
1.	Mr. Muhammad Hafeez.	Director.	PFRI, Faisalabad.
2.	Raja Atta Ullah Khan.	D.F.O.Silva.	-do-
3.	Dr. Zafar Iqbal.	S.R.O.	-do-
4.	Mr. Tariq Mehmood.	S.R.O.	-do-
5.	Mr. M.I. Sheikh.	Forestry Mgt. Specialist.	GOP/USAID, Islamabad
6.	Mr. Muhammad Muslim.	S.R.O.	Sericulture, Lahore.
7.	Mr. Muhammad Nazir.	SDFO.	FF&DP.
8.	Mr. Muhammad Saleem.	R.O.	PFRI, Faisalabad.
9.	Dr. Mohammed Rafique.	Principal,	PFS, Chorangali.
10.	Mr. Peroz Din.	Instructor.	PFS, Chorangali.
11.	Mr. Muhammad Farooq.	Instructor.	PFS, Chorangali.
12.	Mr. Shabir Qureshi.	Instructor.	PFS, Chorangali.
13.	Mr. A.S. Bukhari.	.....	FF&DP, Islamabad.
14.	Fisheries Dept: Personnel.	.....	.....
15.	Reja Tariq Mehmood.	SDRO, Kahuta.	MKDA.
16.	Mr. Faisal Haroon.	Park Manager.	Gatwal, Faisalabad.
17.	Mr. Muhammad Mushtaq.	A.R.O.	PFRI, Faisalabad.
18.	Mr. Muntaz Khan.	F.R.	Attock Division.
19.	Mr. Shabir Hussain.	Instructor.	PFS, Chorangali.
20.	Syed Asiq Hussain Shah.	SDFO.	F.F.Lahore.
21.	Mr. Abdul Chafar Khan.	SDFO, Chakwal.	Rawalpindi.
22.	Ch Abdul Khaliq.	R.O.	PFRI, Faisalabad.
23.	Mr. Muntaz Ahmad Babar.	SDFO, Kahuta.	MKDA.
24.	Mr. Anwar-ul-Haq.	F.R.	MKDA.
25.	Mr. Alich Didi.	RFO, Jhelum.	FPDP.
26.	Melik Munawar Khan.	RFO, Pindigheb.	Rawalpindi.
27.	Mr. Chuliam Abbas.	RFO, Chakwal.	FPDP.
28.	Mr. Dilshad Shah.	SDFO, Punjab RWP.	MKDA.
29.	Mr. Kamran Babar.	RFO, Taxila.	Rawalpindi.
30.	Gul Noor Khan.	SDFO/R.Pindi.	Rawalpindi.
31.	Mr. Muhammad Gohar Mushtaq.	RFO, Silva: Lahore.	PFRI, Faisalabad.
32.	Mr. Abid Ilahi.	SDFO, Sargodha.	Sargodha.
33.	Dr. M. Irshad.	D.F.O. Extension.	Lahore.
34.	Shahid Bashir Awan.	S.D.F.O. Changa Manga.	Lahore Circle.

VERUEWISE LIST OF RESOURCE PERSONS.

iii) ACCOUNTS & PROCEDURE.

S.NO.	NAME.	DESIGNATION.	DEPARTMENT/ ORGANIZATION.
1.	Mr. Muhammad Hafeez.	Director.	PFRI, Faisalabad.
2.	Raja Atta Ullah Khan.	D.F.O.Silva.	-do-
3.	Rana M.Ismail Shehin.	Admin. Officer.	-do-
4.	Mr. Javid Jahangir.	Chief Internal Auditor Budget.	Director, (E&A)IHR.
5.	Mr. Peroz Din.	Instructor.	PFS, Chorangali.
6.	Mr. Muhammad Farooq.	Instructor.	PFS, Chorangali.
7.	Haji Saifur-Rehman.	Ex. Chief Internal Auditor.	.....
8.	Mr. Ahmad Shan.	Accounts Officer.	CCF(N.Z)Office Rawalpindi.
9.	N.A. Warsi.	Accounts Officer.	Wildlife, Deptt. LHR Zoo.
10.	Mr. Sheikh Naseer Ahmad.	Admin. Officer.	CCF(F&E)Office, IHR.
11.	A.S. Bukhari.	.....	FF&DP.
12.	Speaker on Sociology Public Relationing & Public Admin.	.....	University of the Punjab, NIFA.
13.	Ch. Muhammad Saleem.	Chief Internal Audit. (Rtu).	.....

VENUEWISE LIST OF RESOURCE PERSONS.iv) MISCELLANEOUS.

S.NO.	NAME.	DESIGNATION.	DEPARTMENT/ ORGANIZATION.
1.	Mr. Muhammad Hafeez.	Director.	PFRI, Faisalabad.
2.	Raja Atta Ullah Khan.	D.F.O.Silva:	-do-
3.	Mr. M.I.Sheikh.	Forestry Mgt. Specilist.	GOP/USAID, Islamabad
4.	Mr. Muhammad Farooq.	Instructor.	PFS, Ghoragali.
5.	A.S. Bukhari.	.....	FP&DP, Islamabad.
6.	Ch. Ghulam Hussain/ Mr.Noor Mohammad Malik.	DFO/SRO, Pest Contrbl.	108-Ravi Road, Lahore
7.	Local Govt/Rural Devel- opment personnel.	.....	.....
8.	Communication tips for a public speakers.	Personnel from Distt.Adminstration.	.....
9.	Effective communi- cation on Radic broadcasts & T.V. telecasts.	Programme Producer.	Radio/T.V.Station.
10.	P.A.F. Base Sargodha.	Education Branch personnel,	For lecture on relegion & better- ment of mankind.
11.	Speaker on Environment & pollution.	M.Rafique Ahmad, Principal.	Sarhad Forest School, Abbotabad.
12.	Speaker on computer brief.	.....	.....
13.	Mazaffer Hussain Ch.	Director, A.G.Information (Rtd).	Member Kissan Board
14.	Co-operatives personnel.	.....	Co-operative Deptt.
15.	Population Planning.	.....	Population Planning Deptt:/Institute.
16.	Fisheries Department.	.....	.....