

## APPENDIX - I

### HARYANA STATE

The Haryana State, which came into existence on November 1, 1966, is one of the leading food-grains producing States of India. The Haryana State is located in North Central part of the country between longitude 74.29° East to 77.30° East and latitude 27.45° North to 33.45° North. The climate of the State is sub-tropical, arid to dry sub-humid, continental and monsoonic. The South-West-monsoon normally sets in by the end of June and cover the entire State before the middle of July. Normal annual rainfall in the State varies from 300 mm in the South-Western region to more than 1100 mm in the northern hilly region of Ambala and Yamunanagar districts. Nearly 75.00 to 80.00 per cent of annual rainfall is received during monsoon season (July to September).

The State has a geographical area of 44,200 sq.km. which is merely 1.40 per cent of the total geographical area of the country. The State has a population of about 16.30 million (based on 1991 census) and about 75.00 per cent population live in rural areas and depend upon agriculture as the main source of livelihood. According to an estimate 60.00 per cent of the total income of the State comes from agriculture. The State comprises 16 districts, 39 administrative sub-divisions, 55 tehsils, 108 community development Blocks, 94 towns and 6745 villages. The population density is 369 persons per km which is above the national average of 267 (1991 census). The State has 1.53 million farm holdings, with an average size of about 2.4 hect. Despite being an advanced State economically, literacy level is only 55.33 per cent which is about 3.00 per cent more than the national average of 52.11 per cent.

Due to the wide variability in climate, soil types and irrigation facilities, a wide variety of crops are cultivated ranging from pearl millet to rice. About 3.8 million hect. area is cultivated annually with 5.7 million hect. (1989-90) of crops sown, thus giving a cropping intensity of 157.00 per cent. An estimated 2.7 million hect. or 74.00 per cent of the cultivated area is irrigated (1989-90). About 70.00 per cent of the gross cropped area is under food-grain crops. The main food-grains crops are wheat, rice, pearl millet and pulses. Sorghum, maize and barley are minor crops. Oilseeds, cotton and sugarcane are also important crops of the State. When Haryana State came into being, it was producing only 25.92 lakh tonnes of food grains, which has now gone upto 91.07 lakh tonnes (1991-92). The Haryana State is contributing 30 to 35 lakh tonnes of food-grains to the central pool every year.

APPENDIX - II

From

The Additional Director of Extension Education  
Haryana Agricultural University,  
Hisar-125004

To

The Professors & Heads of  
Agronomy, Soils, Entomology, Plant Pathology,  
Agril.Engg., Agril.Economics, Horticulture,  
Vegetables, Livestock Production & Management,  
Veterinary Medicine & Extension.

No. EFH/S/23433-87  
Dated: July 23, 1971

At the meeting with the Vice-Chancellor in the Committee Room of College of Veterinary held on 21.7.71 at 10 AM, the V.C.'s cyclostyled Note was handed over to each one of you. A few typed copies of another Note showing the role of Extension Specialists, their time use analysis and job descriptions prepared by me on the basis of discussions held with the AESs, ESs, and Heads of Departments from time to time, were also distributed. Most of you could not get copies of the same. A copy is now sent herewith. This Note is only tentative.

Sd/-

Encl: As above

Addl. Director of Extension  
Education

CC:

1. Extension Specialists
2. Heads of Departments except the ones mentioned above alongwith the notes for information

PROFESSOR & HEAD OF DEPARTMENT

DIRECTORATE OF EXTENSION EDUCATION

Collection and sieving out applicable research findings and feeding back problems for research

Planning and execution of extension education programme in collaboration with other subject matters

ROLE OF UNIVERSITY-LEVEL EXTENSION SPECIALIST

Processing applicable technical know how for production of information materials

Providing technical guidance and supervision for ensuring effective execution of their work

Providing technical guidance through contact, training, etc.

Directing all efforts of Farmers Advisory Service to finding and solving problems of these clients

Farm Information Service of HAU

District Extension Specialist

Other field staff

Farmers Home-makers

Agri-business and others

## SUGGESTED TIME-USE ANALYSIS FOR EXTENSION SPECIALISTS (U.L.)

## In a Year:

Total number of days	365
Number of Sundays	52
Number of Second Saturdays	12
Number of other holidays	19
Number of leave days on an average (Permissible limit 20 casual leaves plus 33 earned leave = 53 days)	20
Total	<u>103</u>
Number of work days left	262

## In a Month:

Average number of work days =  $262 \div 12 = 22$  approximately

Major work	Number of days (Approx.)	Time percentage (Approx.)
1. Collecting and sieving applicable technical knowhow	4	17.00
2. Processing the knowhow for production of information material	2	9.00
3. Work in field (by touring)	11	50.00
4. Other Farm Advisory work at headquarters	5	24.00
	<u>22</u>	<u>100.00</u>

**JOB DESCRIPTION OF AN EXTENSION SPECIALIST (UNIVERSITY-LEVEL)****I. Collection of latest knowhow in his subjectmatter**

For keeping abreast with the latest research findings in his and related subjectmatters at HAU and elsewhere - findings that are applicable in the field and useable by his clients. The following measures are to be followed:

1. Regular study in the Library of HAU, Directorate of Extension, concerned College and Department. This study should cover all books and periodicals pertinent to the above purpose. Special attention should be paid to HAU Journal of Research, Annual and other reports of the Department concerned, Theses, Terms Papers, etc. in the concerned Department.
2. Attend Departmental meetings, Seminars, Symposia, Colluquia, Workshops, Summer Institutes, etc. relevant to Extension Education in his subjectmatter, that may be held at Hisar or elsewhere. The Head of Department will keep the ES informed of these under intimation to DEE.
3. In each departmental meeting of the concerned Department, the Head of Department will keep two fixed items on the Agenda - (a) Transmitting applicable knowhow to the Extension Specialists, (b) Collecting field problems for research from the E.S.
4. The Head of Department will give the ES a programme for his visit to each experimental field, laboratory, and those incharge of research projects in the Department, after taking into account their availability for the ES. The ES will follow this programme to discuss necessary details.
5. As and when problem arises, the ES will consult the concerned technical official in the Department.

**II. Sieving and processing of latest technical knowhow in his subjectmatter**

While following the measures described under I, the E.S. will:

1. Take notice emerging out of the above measures.

2. Examine each Note carefully and spell out the exact use that the Note is to be put to.
3. Discussing above Notes with concerned officials, like DEE, Head of the Department, AESs, research workers, AIO, etc. for seeking clarification and determining use.
4. Fix up priorities of action on different Notes.
5. Prepare draft write-ups on new aspects in easily understandable language for preparation of leaflets, bulletins, success stories, articles and visuals.
6. Spell out list of illustrations needed for each write-up in consultation with information staff.
7. Handover the write-up and illustrations to AIO sufficiently in advance for production so that it is ready before the time it is needed.
8. Workout a schedule for use of each information material in Extension Education programme.
9. Implement and execute the above schedule.

### III. Preparing and implementing training programmes in his subjectmatter

1. Prepare, in consultation with Professor and Head concerned, exhaustive list of aspects on which training is needed by farmers, home makers, agribusiness man, and field personnel\*.
2. For each aspect, spell out the content, list out the appropriate university officials who can deliver the content, desirable duration of the training, particular time of a year that is most suitable for arranging the training.
3. Discuss the above details with the Superintendent, Junior staff school, work out detailed lesson plans for each lecture/practical/discussion/demonstration, etc. Training aids to be used should also be clearly spelled out.

---

\* The term 'Field Personnel', wherever used in these notes means the technical staff of the Departments of Agriculture, Animal Husbandry, Development & Panchayats, Co-operation, Irrigation, Forestry, Fishery, etc., as may be pertinent to the respective subjectmatter.

4. Work out date and time schedule as well as detailed plan of work for each training course in consultation with Superintendent, Junior Staff School so that each training fits in well in the total schedule of trainings at the Junior Staff School as well as in each district so that one training does not upset any other programme. This scheduling has to be done for one full year in the month of October of the preceding year and got approved from the DEE.
5. The approved schedule should be announced in the Haryana Agricultural Handbook, Haryana Kheti and other publications of HAU and in local newspapers, radio and to panchayats offices, etc., as the case may be with the help of AIO.
6. Arrangements should be made to ensure effective implementation strictly according to this schedule. Assigning specific responsibilities and roles to specific officials is essential.
7. Separate list of training courses should be prepared venue-wise. For example, those at the Kisan Ashram at Hisar, Krishi Gyan Kendras, Farmers' Training Centres, Sites of National Demonstrations, Field Days, in villages, etc. Classification of courses group-wise and enterprise-wise should also be shown.

#### IV. Organizing and implementing extension education programme in field in his subjectmatter

1. Prepare a full year's Extension Education programme for the subjectmatter in October of the preceding year in consultation with the Professor. This programme will also include their aspects described earlier.
2. Programme of different subjectmatters will be finalised at a meeting of the Extension Specialists, corresponding Professors, and DEE.
3. The field programme should clearly specify the different responsibilities of the AESS and ESS in the matter of developing a model village(s), Demonstration Centres, National Demonstrations, other result and method Demonstrations, Varietal Trials, Adaptive Research Trials, Field Days, Training Programmes, Farmers' Meetings, Distribution of literature, attending to written, and verbal queries of farmers, preparation and issue of monthly calendar of operations, other handouts, articles, etc., distribution of and enrolling subscribers to university publications, touring schedule and other routine matters.

4. For effective implementation of the field programme in districts, the Extension Specialists will tour all the districts according to scheduled programme approved in advance. While on tour, they will perform the tasks listed under point VI.

#### V. Other farm advisory work at headquarter

1. Regular feed to Farm Information Service as outlined under II. Timely submission of articles for HAU magazines, supplements, newspapers, etc., write-ups for inclusion in Haryana Agricultural Handbook, Package of Practices, evolving and issue of a model monthly and weekly calendar of operations for different weeklies, monthlies, etc., should be paid particular attention. Variations for different agro-climatic zones should be clearly indicated in this calendar.
2. Regular issue of subjectmatter tips of utility to AESs and other field personnel.
3. Initiating and follow through actions emanating from tour reports.
4. Ensuring prompt action on correspondence received from Krishi Gyan Kendras, farmers, Professors, DEE, Information staff, etc.
5. Listing technical equipment, materials and other facilities required by AESs, procurement thereof, and ensuring timely supply to destination.
6. Preparing budget requirements in respect of their subject-matter based on approved extension programme in consultation with Professor and submitting these to DEE at stipulated time.
7. Tabulation and analysis of different reports received from AESs - monthly, quarterly and annual.
8. Timely communication of the above reports, together with the observations and description by the ES to the concerned quarters.
9. Co-ordination of work of AESs of different districts for giving advantage to all districts of a good idea introduced in one district. While uniformity and conformity will be desirable, flexibility may be necessary in some cases to take care of variability of the area.

10. Stimulating and ensuring co-operation by AESs of his subjectmatter to AESs of other subjectmatters. This is necessary in securing complementary support of other subjectmatters to his subjectmatter and also for inculcating team's spirit and harmony. After all relating each subjectmatter to others so that everything is part of one whole is essential for benefitting the client who is common to all of us.
11. Be responsible to the respective Head of Department for the accuracy of the subjectmatter.
12. Broadcast radio talks.

#### VI. Tasks to be performed by E.Ss. while on tour

1. Find out and list problems of different areas in so far as his subjectmatter is concerned.
2. Find out and list shortcomings, bottlenecks, problems, obstacles, lapses, difficulties, etc., encountered by the AESs.
3. Communicate to the Professors concerned under intimation to the DEE the problems as listed under (1) above.
4. Bring the points, as listed under (2) above, to the notice of the concerned officials/people in the university or elsewhere under intimation to the DEE and follow them through so as to iron out them.
5. Meet officials/people in the district who matter for effective implementation of our programmes.
6. Provide technical guidance on problems posed by the AESs.
7. Provide latest additional subjectmatter information to the AESs.
8. Participate in field days, Farmers' Training Camps, District Coordination Committee Meetings, National Demonstrations, District Extension Programme Planning Meetings, Clinical Conferences, etc. as the case may be.
9. Attend to special problems of farmers where the AES is not able to help.
10. Verify facts from periodical reports given by the AESs.
11. Check progress of all projects and campaigns of AESs like Demonstration Centres, National Demonstration Plots, Varietal Trials, Adaptive Research Trials, Rural Clubs, etc.

12. Help AESs in organizing and operating Farmers' Clubs, Poultry Clubs, Kitchen Gardening Clubs, School and Community Gardens, Landscaping of village institutions and waste lands, etc. as the case may be.
13. Visit, with the AESs, institutions connected with agriculture livestock, rural development, e.g. Gaushalas, Milk Plants, Training Centres, etc.
14. Check stocks of inputs and equipments pertaining to the subjectmatter and whether they are being judiciously used and properly maintained. List out defects, damages, losses, detected and take steps to get things serviced/ repaired/written off/condemned and auctioned/replaced.
15. Check AESs' records like Visitors' Book, Library Register, Movement Register, tour programmes, TA bills and actual verification of some tours at random.
16. Maintain complete list of Demonstration Centres, ND Plots, Varietal Trial Plots, Adaptive Research Plots, Training Camps, Field Days, Clubs, Model Villages, Young Farmer Alumni, etc. and keep them upto date for providing an accurate basis for inclusion of places while on tour.
17. Deliver inputs, stationery and other sundry requirements from Hisar campus to Krishi Gyan Kendras. The Directorate Office will be responsible for intimating these lists in advance to the ESs as per their tour schedules.
18. Record observations on germination, crop stand, incidence of diseases and pests in crops and livestock, nutrient deficiencies, planting of fruit trees and mortalities, inter-cultural and other operations, soil and water management practices, assessment expected yields, observance of recommended Package of Practices, how rapidly soil and water samples are analysed and guidance rendered to farmers, etc., depending on the subjectmatter of the E.S.
19. Comprehensive and precise notes on findings, observations, recommendations, etc., emerging from tours must be submitted by each ES in respect of each tour to the Professor concerned and DEE in forms to be prescribed.

## APPENDIX - III

## QUESTIONNAIRE FOR HEAD OF THE DEPARTMENT

Title of Research: TECHNOLOGY TRANSFER MODEL - AN ANALYSIS OF LINKAGES  
Project

Important Note: The information/figures to be provided should be based on your performance as HOD

Name of Department \_\_\_\_\_ Designation \_\_\_\_\_

- 1 Educational Qualifications: \_\_\_\_\_
- 2 Field of Specialization (if any)
- 3 a) Have you obtained training(s) in Extension Education?  
YES/NO

If yes, give the following information:

<u>Name of training</u>	<u>Duration</u>	<u>When &amp; where obtained</u>
-------------------------	-----------------	----------------------------------

- b) How did the training benefit you?
- c) Do you feel interested in obtaining a training in Extension Education? If yes, where and for what duration you want to be trained.
- 4 How do you conceptualize Extension or Extension Education (frankly define the term as you feel and want to) ?
- 5 a) In your present capacity how much percentage of your time you actually devote to Extension Education functions.

<u>Sl.No.</u>	<u>Activity</u>	<u>Percentage of time</u>
i)	Training	
ii)	Field Extension	
iii)	Any other	

b) In your capacity as Head of Department in which of the following extension activities you had occasions to participate (Tick-mark).

Sl.No.      Activities

A. Publications brought out

- i)          Research Newsletter
- ii)         Bulletin
- iii)        Special issue of Haryana Kheti
- iv)         Special issue of Haryana Farming
- v)          Paper published in Haryana Kheti
- vi)         Paper published in Haryana Farming
- vii)        Research results given for Newsletter
- viii)       Research results published in proper form in newspapers or elsewhere
- ix)         Any other related to publication

B. Demonstrations

- i)          Method Demonstration conducted
- ii)         Result Demonstration conducted

C. Training Organized

- i)          Organized in villages
- ii)         At farmers' field
- iii)        At KGKs'

D. Group Discussion with farmers

E. Meetings with farmers

F. Visits paid to KGK

G. Visits paid to farmers' field

H. Lectures delivered in training programmes

I. Lectures delivered to farmer's on other occasions

6 Point out the weaknesses which you have actually observed in implementing extension education work of your Department.

- i)
- ii)
- iii)
- iv)

- 7 Look back into your extension experience and suggest concrete steps which need to be promptly followed for strengthening the linkages in the existing technology transfer model of the university (these could be in the shape of additional funds, functionaries, remodelling of Extension Education Systems, etc.).
  - i)
  - ii)
  - iii)
  - iv)
  - v)
  - vi)
- 8 Specify the actual functional constraints encountered by you in promoting the Extension Education Programmes of your discipline.
  - i)
  - ii)
  - iii)
  - iv)
  - v)
- 9 List at least five important research findings of your Department which in your opinion need to be passed on to the farmers through the extension agency.
  - i)
  - ii)
  - iii)
  - iv)
  - v)
- 10 List as to which one of the above mentioned research findings you have already managed to have passed on to the farmers and how?
  - i)
  - ii)
  - iii)
- 11 Give reasons or circumstances which hindered the forwardal of the other research findings to extension agency.
  - i)
  - ii)
  - iii)
  - iv)

- 12 In your opinion, what should be the ideal administrative and technical control of the Extension Specialists and District Extension Specialists of your Department.
- Complete control with the Department
  - Complete control with the Directorate of Extension Education
  - Technical control with the Department and administrative control with the Directorate of Extension Education

- 13 Do you agree that Extension Specialists and District Extension Specialist should be given teaching and/or research work in addition to their extension duties.

YES/NO

i) If yes, why

ii) If no, why

- 14 How do you keep your Extension Specialist and District Extension Specialists abreast with the latest research findings?

- 15 Indicate with a tick mark (✓) as to which of the seating arrangement of ES of your Department is the best in your opinion.

i) Whole-time in Department

ii) Forenoon in the Department and Directorate of Extension Education in the afternoon.

iii) Forenoon in the Directorate of Education and in the Department in the afternoon.

iv) Whole-time in the Directorate of Extension Education.

- 16 a) Are the extension activities of your department carried out independently or in collaboration with other Department?

b) Name the collaborating Departments.

c) Do you get required cooperation from the collaborating Department?

YES/NO

If No, point out the problems encountered in obtaining required cooperation from the related Departments.

i)

ii)

iii)

iv)

d) How should university strengthen this collaboration?

- 17 Indicate with a tick mark (✓) the extent of help available from the Directorate of Extension Education in implementing the extension activities of your Department.

Satisfactory

Good

Not to the required extent

(Thank you very much for the cooperation given)

## APPENDIX - IV

## QUESTIONNAIRE FOR UNIVERSITY-LEVEL EXTENSION SPECIALISTS (ULES)

Title of Research: TECHNOLOGY TRANSFER MODEL - AN ANALYSIS OF LINKAGES Project

Important Note: The information/figures to be provided should be based on your one year performance as University Level Extension Specialist.

Sl.No. \_\_\_\_\_ Date \_\_\_\_\_

Name \_\_\_\_\_ Discipline \_\_\_\_\_

1 Actual Field of Specialization:

Master's Level \_\_\_\_\_

Doctorate Level \_\_\_\_\_

2 Experience (in years):

Asstt.Prof. + Assoc.Prof. + Professor	+	Extension	Total
_____		<u>Specialist</u>	_____

3 Average no. of days spent on tour during a month \_\_\_\_\_

4 For most of the times what is the mode of conveyance for undertaking tours. \_\_\_\_\_

5 Average no. of districts visited in a month \_\_\_\_\_

6 Average no. of villages visited in a month for supervising the work of District Extension Specialist (DES) \_\_\_\_\_

(In case no village is visited, say none)

7 a) Indicate some of the shortcomings often observed by you at the time of supervision:

i)

ii)

iii)

iv)

v)

b) How do you help your DES to overcome the shortcomings ?

8 How do you make an assessment of Quantitative and Qualitative changes brought out through the Extension Activities of your discipline?

a) Quantitative changes

b) Qualitative changes

c) Give some concrete examples of Quantitative and Qualitative changes brought out through the Extension Activities of your discipline among the farmers.

i)

ii)

iii)

9 a) Average number of letters received from farmers in a year.

b) Indicate the type of advice/feedback sought by the farmers through correspondence (Tick mark).

Technical guidance

Demand for inputs

Personal problems

Any other (specify)

b) On an average within how much period (No. of days) the reply is sent to the farmers.

Within a week

Within a fortnight

Within a month

More than a month

10 a) Briefly indicate the steps followed by in preparing the Annual Programme of Work related to your discipline.

i)

ii)

iii)

iv)

v)

vi)

vii)

viii)

b) Do you discuss the annual programme of work with:

- i) Head of Department YES/NO
- ii) Professors in your Department YES/NO
- iii) Faculty members of your Department YES/NO
- iv) DES of your discipline YES/NO

c) Do you present a seminar on the Annual Programme of Work?

- i) In the Department YES/NO
- ii) Directorate of Extension Education YES/NO

11 a) Indicate the Extension Specialists with whose cooperation and collaboration you carry out the extension work at the university level:

- i)
- ii)
- iii)

b) Indicate the name of Departments and persons whose collaboration you need but it becomes problematic to obtain the same.

- i)
- ii)
- iii)

12 Average number of meetings attended by you in an year with the following:

<u>Official</u>	<u>No.of meetings</u>	<u>Purpose of meeting</u>
a) DEE		
b) DR		
c) Dean		
d) HOD		
e) DES		
f) Farmers		
g) Private Agencies		
h) Any other		

13 Indicate the facilities, authority or powers which in your opinion would make you still more effective in carrying out your job as University-Level Extension Specialists (ULES) and which should be provided to you or vested in you.

- i)
- ii)
- iii)
- iv)
- v)
- vi)
- vii)
- viii)
- ix)
- x)

14 How do you utilize your one-third of time?

15 List the number of papers published by you as ES.

Type of paper	No.	Name of the Journal/Magazine where most of the papers published
---------------	-----	---

- i) Research papers
- ii) Popular/extension papers

16 List at least TEN problems in order of priority which are encountered by you in your routine work and need immediate solution.

- i)
- ii)
- iii)
- iv)
- v)
- vi)
- vii)
- viii)
- ix)
- x)

17 a) Are you working on a research project: YES/NO

If yes, name the research project and faculty members in whose collaboration you are working.

b) What type of difficulties you encounter in working on the research project?

i)

ii)

iii)

18 Appointed on the present job through transfer/selection.

19 Do you feel satisfied on your present extension job or want to be shifted to Teaching or Research?

Tick mark ( \_/ ) in the appropriate column.

i) Satisfied

ii) be shifted to Teaching

iii) be shifted to Research

20 Do you bring out a monthly Newsletter related to your subject-matter area?

YES/NO

If Yes, with whose collaboration the Newsletter is brought out.

21 How do you keep yourself abreast with the latest advances in your subject-matter?

i)

ii)

iii)

iv)

22 How do you get professional support from your subject-matter Department?

i)

ii)

iii)

23 List the farmers' problems related to farming which you intimated to the Head of your Department during last one year for research and finding suitable solution.

i)

ii)

iii)

24 Name the method, ways and means which are being followed by you for popularising the latest research findings of applicable value among the farmers.

i)

ii)

iii)

iv)

v)

25 a) If you are given an opportunity for undergoing a training programme indicate the specific areas and field of specialization in which you would like to be trained.

Field of specialization

Duration

Institution

b) Are you interested in obtaining training in Extension Methodology?

YES/NO

26 List the facilities which in your opinion should be immediately provided to the DES of your subject-matter to make them work efficiently.

i)

ii)

iii)

iv)

v)

vi)

27 In what way the following wings of Directorate of Extension Education are helping you in the discharge of your duties as Extension Specialist.

i) Training wing

ii) Farm Information and Communication wing

(Thank you very much for the cooperation given)

## APPENDIX - V

## QUESTIONNAIRE FOR DISTRICT EXTENSION SPECIALIST (DES)/COORDINATOR

Title of Research; TECHNOLOGY TRANSFER MODEL - AN ANALYSIS OF LINKAGES Project

Important Note: The information/figures to be provided should be based on your performance as DES/Coordinator.

Sl.No. \_\_\_\_\_ Date: \_\_\_\_\_

Name \_\_\_\_\_ Discipline \_\_\_\_\_ District \_\_\_\_\_

1 Date of posting on the present post \_\_\_\_\_

2 Total experience (in years)

Teaching	Research	Extension	Total
_____	_____	_____	_____

3 Appointed on the present post through:

(Tick mark)

Transfer/Selection

4 Educational qualifications :

Degree	Field of specialisation
_____	_____
_____	_____
_____	_____

5 Trainings obtained (if any)

Name of Training	Duration	Where obtained
_____	_____	_____
_____	_____	_____

6 Average number of farmers in a month who contacted you in Krishi Gyan Kendra (KGK). \_\_\_\_\_

7 Average no. of days spent on tour to villages in <sup>a</sup> month \_\_\_\_\_

8 Frequent mode of journey while on tour (Tick mark):

Public vehicle

University vehicle

Personal vehicle

9 In your opinion what should be the number of days a DES should be on tour in a month.

10 For most of the times do you tour alone or with other DES:

11 How frequently your work is supervised by:

Supervising Officer	Monthly	Quartely	Half yearly	Yearly	Once in two years
ES					
HOD					
DEE					
Coordinator					

12 Name the agencies at the district headquarters whose collaboration you have obtained during the last year:

- i)
- ii)
- iii)
- iv)
- v)

13 a) List some farming problems which you intimated to your ES or other authorities at the university headquarters during the last one year.

<u>Sl.No.</u>	<u>Problem</u>	<u>To whom intimated</u>
i)		
ii)		
iii)		
iv)		

b) What was the feedback/solutions provided to the above mentioned problems?

<u>Sl.No.</u>	<u>Problem</u>	<u>Feedback provided</u>
i)		
ii)		
iii)		
iv)		

c) What were the steps or methods adopted by you at KGK to bring home the feedback on the problems to farmers?

i)

ii)

iii)

iv)

14 Indicate the difficulties being encountered by you in carrying out your routine work and which need immediate attention of the authorities.

i)

ii)

iii)

iv)

v)

vi)

vii)

viii)

ix)

x)

15 List the facilities which you think need to be immediately provided to make you carry out extension work still more efficiently.

i)

ii)

iii)

iv)

v)

vi)

vii)

viii)

ix)

x)

16 Do you want to continue on your present job? YES/NO

If No, to which position you want to be shifted: Tick mark

Teaching/Research

17 Of your total duty hours, how much percentage of time in an year you spend on:

<u>Sl.No.</u>	<u>Activity</u>	<u>Percentage of time</u>
---------------	-----------------	---------------------------

i) Attending to farmers at KGK

ii) Tour to villages

<u>Sl.No.</u>	<u>Activity</u>	<u>Percentage of time</u>
iii)	Tour to HAU headquarters	
iv)	Local tour (meeting concerned officials collaborating with you)	
v)	Meeting at KGK	
vi)	Research work (Data collection/ Report writing)	
vii)	Attending to official paper work	
viii)	Study of books, journals literature, etc.	
x)	Miscellaneous work (specify, if any)	
<b>TOTAL</b>		<b>100.00</b>

18 How do you keep yourself abreast of the latest advances in your discipline/subject?

- i)
- ii)
- iii)
- iv)

19 Do you feel adequate library facilities are available at KGK?

YES/NO

If No, list in order of priority the books, journals, magazines of your discipline which should be provided at KGK (provide complete reference)

<u>S.No.</u>	<u>Name of the book/journal</u>	<u>Price</u>	<u>Address of Publisher</u>
i)			
ii)			
iii)			
iv)			
v)			
vi)			

20 a) If you are provided opportunities for obtaining advanced training, indicate the areas of your interest.

<u>S.No.</u>	<u>Name of the training areas</u>	<u>Duration</u>	<u>Institute</u>
i			
ii			
iii			

b) Do you feel that you need training in Extension Methodology?

YES/NO

21 a) Are you working on a research project or adaptive research trials?

YES/NO

b) If yes, provide the following information:

<u>Name of Research Project</u>	<u>Since Collaborators</u>	<u>Financing Institution</u>	<u>Papers published</u>
---------------------------------	----------------------------	------------------------------	-------------------------

c) If No, point out the difficulties

i)

ii)

iii)

iv)

22 Indicate as to what information, guidelines, help and assistance you often receive from the following wings of of the Directorate of Extension Education which strengthen the performance of your routine functions:

a) Training Wing

i)

ii)

iii)

b) Farm Information and Communication Wing

i)

ii)

iii)

23 Name the Department, Agencies, Offices whose cooperation/ collaboration is often needed by you in carrying out your routine jobs but you do not get.

<u>S.No. Department/Agencies</u>	<u>Reasons for not cooperating (in your opinion)</u>
----------------------------------	--

i)

ii)

iii)

24 Should the DESs in your opinion be given some incentive?

YES/NO

i) If yes, what type of incentive?

ii) Justify the grant of incentive to DESs with some concrete arguments.

25 Procedural steps followed by you in preparing your:

i) Monthly programme of work

ii) Annual programme of work

iii) How and when your annual programme of work is finalised?

iv) How do you ensure to stick to your approved annual programme of work in carrying out your routine duties?

26 Suggest at least TEN measures which in your opinion would make KGKs quite popular among farmers.

i)

ii)

iii)

iv)

v)

vi)

vii)

viii)

ix)

x)

(Thank you very much for the cooperation given)

## APPENDIX - VI

## QUESTIONNAIRE FOR FIELD FUNCTIONARIES OF DEPARTMENT OF AGRICULTURE

Title of Research: TECHNOLOGY TRANSFER MODEL - AN ANALYSIS LINKAGES  
Project

Designation \_\_\_\_\_ Total experience \_\_\_\_\_

- 1 Indicate the extension-oriented problems which you often encounter in your day-to-day work.
- i)
  - ii)
  - iii)
  - iv)
- 2 a) List some of the crop production problems of serious nature which were intimated by you to your seniors.
- i)
  - ii)
  - iii)
- b) How do you deal with such problems?
- i)
  - ii)
  - iii)
- 3 a) In what way, you feel, the university is helping you directly or indirectly in your professional enrichment.
- | <u>S.No.</u> | <u>Directly</u> | <u>Indirectly</u> |
|--------------|-----------------|-------------------|
| i)           |                 |                   |
| ii)          |                 |                   |
| iii)         |                 |                   |
| iv)          |                 |                   |
- b) Do you maintain contact with the university at your level for seeking guidance on the farming problems observed by you while working in the field.
- YES/NO
- c) If yes, how
- Personal visit
  - Through correspondence
  - Any other method

[xxx]

d) What in your opinion the university should do for promoting scientific farming?

4 The University organises Agricultural Officers' Workshops (AOWs) before Kharif and Rabi seasons. Do the Officers who participate in these workshops pass on important recommendations to the field functionaries operating at the grass-root level?

YES/NO

a) If yes, how do they do it?

b) If no, how should the Department ensure percolation of recommendations to the field functionaries whose participation is not obtained in the workshops.

(THANK YOU VERY MUCH)

## APPENDIX - VII

## INTERVIEW SCHEDULE FOR FARMERS

Title of Research: TECHNOLOGY TRANSFER MODEL - AN ANALYSIS LINKAGES  
Project

Sl. No. \_\_\_\_\_ Date \_\_\_\_\_  
Village \_\_\_\_\_ Block \_\_\_\_\_ District \_\_\_\_\_

1. Age \_\_\_\_\_
2. Education \_\_\_\_\_
3. Size of land holding \_\_\_\_\_
4. Membership status \_\_\_\_\_
5. Self farming/share cropping \_\_\_\_\_
6. Have you ever visited Krishi Gyan Kendra (KGK) : YES/NO

i) If no, why?

ii) If yes, how frequently you visit KGK? (Tick mark)

Weekly	Fortnightly	Once in	Once in	Once in	Any
_____	_____	a month	two months	three months	other
_____	_____	_____	_____	_____	_____

a) Indicate the actual purpose for which you visit KGK?

b) Indicate the subject-matter areas whose DES, you often contact at the KGK.

S.No.	Subject-matter	Approximate time spent with each
_____	_____	_____
i)	Agronomy	
ii)	Agril.Engineering	
iii)	Entomology	
iv)	Farm Management	
v)	Horticulture	
vi)	Plant Protection	
vii)	Soil Science	
viii)	Vegetable Crops	
ix)	Animal Sciences	
x)	Poultry	
xi)	Veterinary Sciences	
xii)	Home Science	

c) To what extent your visit to KGK is beneficial? (Tick mark)

Highly beneficial

Beneficial

Not so beneficial

d) Do you get the required information from District Extension Specialists (DESS) to your satisfaction?

YES/NO

If yes, how

If no, why

7. a) Has any of the DESSs ever visit your village? YES/NO

b) Did you contact the DESSs, when they visited your village? YES/NO

8. a) Has the KGK ever organised any of the extension activities in your or nearby village?

Yes/NO

b) If yes, name of the activities:

i) Training

ii) Group meetings

iii) Demonstration

iv) Field day

v) Mini Kisan Mela

vi) Campaign

vii) Any other

c) Did you participate in the extension activity organised in your village or in a nearby village?

YES/NO

9. Whom do you contact for seeking information related to crop farming.

i) Formal

- ADO

- DES

- Sarpanch

- Panchayat member

- Any other

ii) Informal

- Dealer
- Neighbour
- Relative
- Progressive farmer of the village
- Nambardar
- Any other

10. a) Have you ever visited the university campus at Hisar?

YES/NO

b) If yes, for what purpose and whom you contacted?

c) Have you ever visited the university campus on any of the following occasions?

- Kisan Mela
- Farm Darshan
- Participation in training
- Any other

11. a) How KGK in your opinion is helping you in improving crop farming?

b) How KGK in your opinion is helping you in improving your livestock production?

12. Name some of the facilities/services which need to be provided to the farmers by KGK to make it still more useful for farmers.

- i)
- ii)
- iii)
- iv)

13. Point out some of the problems which you encounter in utilizing the services being provided to farmers at KGK.

14. Do you subscribe to Haryana Kheti/Haryana Farming? YES/NO

i) If yes, since when ...

ii) Whether life member or yearly member ..

iii) Indicate the level of utility for getting information related to crop and livestock production.

Highly informative/Informative/Somewhat informative/Not informative

iv) Have you ever asked for the solution of your problems through 'Pathak Personouttri' column in Haryana Kheti/Haryana Farming?

YES/NO

v) Suggestions for improvement, if any.

## ANNEXURE - VIII

## ABOUT THE AUTHOR

Joginder S. Malik son of Shri Dalip Singh Malik was born on April 13, 1967 in village Kinana District Jind (Haryana). Having studied in Snatan Dharam High School, Jind, he did his matriculation in 1981 with 76.77 per cent marks from the Board of School Education, Haryana. For his academic achievements, he was awarded merit scholarship by the Board of School Education.

He was admitted to B.Sc. (Hons.) Agriculture 5 year study programme in College of Agriculture, Haryana Agricultural University, Hisar, in 1981. He completed B.Sc. (Hons.) Agri. study programme in 1986 with an OGPA of 3.15 on the basis of 4.00 (68.11%). Continuing his studies in the same university he obtained M.Sc. (Agri.) Extension Education degree in 1988 with an OGPA of 3.77 on the basis of 4.00 (85.40%).

Soon after having acquired M.Sc. (Agri.) Extension Education qualifications, he got appointed as Sub-Inspector (Executive) in Central Security Force and attended with success one year training programme from National Police Academy, Hyderabad. However, the author had interest in academic pursuits and instead of going for police services preferred to carry out Doctorate studies in Extension Education. He got admitted to Haryana Agricultural University for undertaking Ph.D. Extension Education study programme in 1989.

The author is married to Mrs. Seema daughter of Shri Daljit Singh of village Puthar District Panipat (Haryana).

Presently, the author is working as Assistant Scientist (Extension Education) in the Directorate of Extension Education CCSHAU, Hisar. He has keen interest in sports and cocurricular activities and has to his credit number of prizes and medals for achievements at the State and National levels.

# TECHNOLOGY TRANSFER MODEL - AN ANALYSIS OF LINKAGES

By

JOGINDER SINGH MALIK

MAJOR ADVISOR: Dr. R.K.Sharma  
Professor of Extension Education &  
Former Head of Department  
CCS Haryana Agricultural University  
Hisar-125004

(An abstract of the dissertation submitted for the degree of Doctor of Philosophy in Extension Education, Department of Extension Education, Chaudhary Charan Singh Haryana Agricultural University, Hisar)

The study was conducted in Haryana State. The specific objectives of the study were (1) To study the university technology transfer model in historical perspective, (2) To critically examine the interdepartmental linkages essential for reinforcing and revitalizing the technology transfer model, (3) To determine the adequacy of linkages within and outside the university for efficient feedback, (4) To make an assessment of farmers' perception of the technology transfer system of the university, and (5) To suggest modifications in the existing extension model for quick transfer of technology.

The data were collected from 18 HODs amenable to extension education, 12 ULESSs, 84 DESs, 100 field functionaries (comprising SMSs, CAOs and ADOs) and 100 farmers.

Based on the recommendation of Nalagarh Committee, the scheme on the farm advisory service was started during the year 1961-62 with a provision for SMSs in four subjects only. Under this programme, trainings were organized for inservice staff and farmers. The Extension Wing at Hisar started functioning during the year 1964-65. A Junior Staff School was added to this department in 1966-67 for strengthening training activities. After HAU came into being (February 2, 1970) KGKs were set up at all the district headquarters in which a team of DESs was provided for 8 disciplines. With ICAR support KGKs have been converted into KVKs.

Majority of HODs (83.33%) had not obtained training in extension education and there was a need for developing correct concept of the discipline among them. Some of the impediments in the forwardal of research findings to extension agencies were non-availability of funds, for production of HYVs seeds, lack of rapport between department and extension agencies, lack

faculty members having interest on extension jobs. The functional constraints of HODs in promoting extension work were the shortage of budget, problem of mobility, lack of audio-visual aids, etc.

The ULESSs reported increase in the adoption of new technology on continued basis at the level of farmers and pointed out both qualitative and quantitative improvements in extension work. Their problem constituted difficulty in touring for want of a vehicle, shortage of funds for TA and DA, etc.

The monthly programme of work was prepared by DESs based on the needs of the area and resources at their disposal. Majority of them (77.38%) had not associated themselves in a research project. They intimated a number of farming problems to their seniors for investigation. The library facilities at KGKs were not adequate. Most of them pointed out the need for training in extension education. Their problems included lack of budget (30.59%), lack of transportation facilities (64.29%), lack of audio-visual aids (30.71%), etc. Majority of DESs (90.48%) were for the grant of incentive.

The HODs devoted only 5 to 10 per cent of their time to extension work. The shortcomings observed by ULESSs on their visits to KGKs were lack of maintenance of records, lack of transport and other facilities, lack of funds for laying demonstrations, etc. For making KGKs popular, DESs suggested sale counters for important inputs (80.95%), facilities for training of farmers (45.24%) and a waiting room and stay facilities for farmers at KGKs (19.05%).

The field functionaries acknowledged both direct and indirect help from HAU for their professional enrichment. More than half of them (53.00%) maintained contacts with the university at their individual level.

The utilization of different DESs by farmers in descending order was found to be Plant Pathology (78.00%), Agronomy (72.00%), Entomology (68.00%) and Vegetable Crops (56.00%). While the utilization of DES Home Science was the least (6.00%), DES Veterinary Science (48.00%) was better utilized as compared to his counterpart in Animal Sciences (26.00%).

There was a need for a coherent strategy for implementing the extension activities in the field and efficient feedback of the problems. Modifications in the existing technology transfer model have been suggested.