APPENDIX

CHECKLIST - I

Discussion with Focus Group (Farmers)

1. Name of village

2. Cattle: Indigenous, Crossbred

3. Buffalo: Murrah, Any Other

4. General practices followed
   - Feeding
   - Breeding
   - Management regarding lactation problems

5. Developmental agencies working in the village
   - Government
   - Semi government
   - Non-government organisation
   - Cooperative
   - Private

6. Source of information related to dairying
   - Local
   - Stage govt.
   - Electronic media
   - Print media
   - NDRI
15 Constraints faced in information flow

Farmer to researcher
Researcher to farmer
Farmer to extension worker
Extension worker to farmer

16 What do you perceive

Role of scientist
Role of extension personnel
Role of farmer
Role of input suppliers
Role of marketing agencies
Role of co-operatives

17 Breeding

Popularity of A.I.

Any problems related to A.I. i)

ii)

iii)

iv)

Any superior indigenous cattle in village
Use of good quality indigenous bull
Highest to lowest range of milk yield
Crossbred
Indigenous
Buffalo
Method of disposal of male buffalo calves
Awareness regarding male buffalo calves can be sold for meat
Problem in selling buffalo calves
Problem in selling crossbred cattle
Number of crossbred animal sold/year from the village
Average cost of animal

On-farm trials
State whether any on-farm trial
If yes, Area/topic
Whether objectives were explained to villagers
Extent of participation in on-farm trial
From planning stage
In implementation
Only in providing site/animal
Only giving manpower
While showing final result
Whether any group meeting/PRA
Conducted to identify problems
Prior to on-farm trials
During on-farm trials
Whether villagers were satisfied with the trials
**Feeding**

Usual practices of feeding and frequency

<table>
<thead>
<tr>
<th>Name</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compound feed</td>
<td></td>
</tr>
<tr>
<td>Concentrate</td>
<td></td>
</tr>
<tr>
<td>Green fodder</td>
<td></td>
</tr>
<tr>
<td>Straw</td>
<td></td>
</tr>
<tr>
<td>Mineral mixture</td>
<td></td>
</tr>
<tr>
<td>Salt</td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td></td>
</tr>
<tr>
<td>Urea treatment of straw</td>
<td></td>
</tr>
</tbody>
</table>

  How many farmers practice it

  Is it useful

Problem faced and opinion regarding this practice

**Lactation related problems**

Type of problem

Technologies which helped in restoring

Lactation in affected animals
CHECKLIST - II

Discussion with Extension Worker/Officer in State Govt. department.

1  Links with following
    NDRI researchers/extension scientist
    KGK
    Dairy farmers
    State agriculture department
    Veterinary officers
    Dairy co-operatives
    ICDP
    Milk vendor
    Veterinary medical agent
    Input suppliers
    Print media
    Electronic media
    Extension literature

2  Frequency of visits with
    Researchers
    Extension scientist
    Farmers

4  Regular meeting with
    Researchers
    Extension scientist
    Farmers
Bimonthly meetings with Researchers
Extension scientist
Farmers

On-farm trails jointly with researchers

Combined problem analysis with Researchers
Extension scientist
Farmers

Exchange of information with Researchers
Extension scientist
Farmers

Share input with Researchers
Extension scientist
Farmers

Exchange of extension literature with Extension scientist
Farmers

Collaborative workshop/symposium/meeting with farmer

Village level workshops

Availability of Dairy Samachar

Reading of Dairy Samachar

Information gained through Dairy Samachar

Frequency of getting other extension literature and regularity of reading

Links with print media

Links with electronic media
Opinion regarding

Objective of dairy farming
Cross breeding
Silage making
Dehulled mixture
By-pass protein technology
Single cell protein technology
Urea treatment of straw
Farmers formulated rations
Traditional feeding practices
Evaluation of feed
management of lactation problem
Oxytocin injection
Induced lactation using hormone therapy

Research-Extension-Farmer linkages
CHECKLIST - III

Discussion with Extension Scientist

1. Links with following
   - NDRI researchers/extension scientist
   - KGK
   - Dairy farmers
   - State agriculture department
   - Veterinary officers
   - Dairy co-operatives
   - ICDP
   - Milk vendor
   - Veterinary medical agent
   - Input suppliers
   - Print media
   - Electronic media
   - Extension literature

2. Frequency of contract with
   - Dairy farmer
   - Extension worker
   - Officer in state department
   - NDRI scientist
3 Regular/bimonthly-co-ordination meeting with
   Researcher
   Extension worker
   Farmer

4 On-farm trails jointly with
   Researcher
   Extension worker
   Farmer

5 Combine problem analysis with
   Researcher
   Extension worker
   Farmer

6 Exchange of information with
   Researcher
   Extension worker
   Farmer

7 Sharing input with
   Researcher
   Extension worker
   Farmer

8 Exchange of extension literature with
   Extension worker
   Farmer

9 Collaborative workshop/symposium/meeting with farmer
10 Village level workshop
11 Distribution of Dairy Samachar
12 Preparation of extension massage
13 Publication of extension literature
14 Publication in extension research journal & farm magazine
15 Links with television and radio
16 Opinion regarding
   Objective of dairy farming
   Cross breeding
   Silage making
   Decgeurc mixture
   By-pass protein technology
   Single cell protein technology
   Urea treatment of straw
   Farmers formulated rations
   Traditional feeding practices
   Evaluation of feed
   Management of lactation problem
   Oxytocin injection
   Induced lactation using hormone therapy
17 Liaison committee with researcher
18 input suppliers and marketing agents as actors in DKIS
19 Research-Extension-Farmers linkage
CHECKLIST - IV

Discussion with Key Informants

1. Approximate no. of cattle per farmers
   - Indigenous
   - Crossbred

2. Average yield
   - Indigenous
   - Crossbred

3. Approximate no. of buffaloes
   - Indigenous
   - Crossbred

4. Average yield
   - Indigenous
   - Crossbred

5. Predominant type of farmers in focus group/key informant
   - Resource rich/resource poor

6. Dairying is practised
   - Commercial/Subsistence
   - Agency & frequency
   - A.H. officer & Vet. officer
   - Extension workers
   - Input suppliers
   - Marketing agencies
   - NDRI/KVK/KGK
   - Rural bank
   - Extension scientist
   - Researcher
8 Media exposure

Television
Radio
Newspaper
Magazines
NDRI Dairy Samachar
Other extension publications

9 Constraints felt in getting information

10 Practices generally followed

Breeding
Feeding
Management

11 Adoption of technologies

Crossbreeding
New fodder crops
New methods of fodder cultivation
Scientific feeding
Feeding compound feed
Feeding mineral mixture
Licking salt bricks
(traditional/ improved)
Urea enriched straw
Fattening of male buffalo calves
Degecure mixture
Induced lactation

12 Most prompting feature to adoption an innovation
8 Media exposure

Television
Radio
Newspaper
Magazines
NDRI Dairy Samachar
Other extension publications

9 Constraints felt in getting information

10 Practices generally followed

Breeding
Feeding
Management

11 Adoption of technologies

Crossbreeding
New fodder crops
New methods of fodder cultivation
Scientific feeding
Feeding compound feed
Feeding mineral mixture
Licking salt bricks
(traditional/ improved)
Urea enriched straw
Fattening of male buffalo calves
Deg curvature mixture
Induced lactation

12 Most prompting feature to adoption an innovation
The specific traditional knowledge / practices in the area of
  Feeding
  Breeding
  Health management

Specific questions on breeding, feeding and on-farm trials

Method of selling milk
  Co-operative
  Vendor
  Direct

Any problems related to marketing of milk

Sale of crossbred cattle

Approximate cost fetched for crossbred cow / descript buffalo
CHECKLIST -V

Discussion with Researchers

A Planning

1 Main factors taken into consideration for selecting research problem
2 Feedback from farmers
   If yes, through whom
3 Use of feedback from farmers for selection & planning of research
4 Direct link with farmers
5 Awareness regarding farmers priority needs and problems
6 Priority given to links with farmer and extension workers
7 Links between on-farm and on-station researchers
8 Emphasis on economic viability and matching with local needs
9 Discussion with extension worker during priority setting and planning research
10 Involving extension scientists in research project planning
11 Role of farmers working knowledge and local practices in feeding, breeding and health care practices
B Decision making

1 Consultation with extensionists while setting priority on research agenda

2 Consulting extensionist for deciding which technology has to be transferred

3 Involving extension personnel in meeting where research has to be undertaken

4 Involvement of extensionists while deciding on time and venue for demonstrations

5 Extensionists help for selection of farmers for transfer of technology

6 Consultation with extensionist to know about the adaptability of any technology

7 Blending on station research with on-going field level practices

8 Perception of self in the role of scientist

9 Objectives of dairy farming.
C Research-extension activities

1. Regular meeting between research, extension and farmers.
2. Priority to linkages with farmers and extension workers.
3. Contact with extension scientists of the Institute.
4. Interaction with extension personnel for specific task or have only general interaction.
5. Opinion regarding involving extension personnel at the onset of research project.
6. Opinion regarding involving extension personnel only at the fag end of project / or only at transfer of technology stage.
7. Involvement in field activities like demonstrations, RRA, PRA etc.
8. Interested to take part in field activities.
9. Importance of organising workshops, seminars, group meeting jointly with extension.
10. Researcher and extensionist working together for solving each others problems.
11. Awareness regarding indigenous knowledge of farmers.
12. Knowledge regarding how farmers evaluate feeds/breeds/farmers objectives in dairying.
D **Exchange of Information**

1. Exchange of information with
   - Extension scientist
   - Extension worker

2. Frequency of interaction with farmers

3. Exchange of information with extension personnel and farmers
   - frequent, sometimes, never

4. Frequency of use of the following:
   - Research journals
   - Popular articles
   - Institute newsletter
   - Staff research council
   - Pamphlets/leaflets
   - Meetings
   - Field days
   - Workshops
   - Extension campaign
   - Fertility campaign
   - Dairy mela
   - Correspondence/telephone
   - Newspaper
   - Radio/television
   - Personal visit
   - Training programmes