

Some notes on a workshop on a  
**Feed Resource Assessment in Smallholder Systems**  
held at  
ICRISAT Campus Hyderabad 13-15 June 09

### Summary

A small group met for three days with the **aim** of developing a simple tool for characterizing the smallholder feeding system in different environments. The vision was to produce something that would be useful for development agencies to diagnose feed issues and provide guidance for potential interventions. With this in mind, the group included participants from the NGO sector (BAIF and Himothan) to maintain the focus of the researchers making up the rest of the group, on producing something practical.

On **Day 1** the workshop started with a **series of presentations** from India, Vietnam and Ethiopia outlining what different participants had been doing so far on feed resource assessment. Presentations showed the breadth of approaches including formal surveys, expert knowledge tools, PRA approaches, informal consultations with farming communities and national scale assessments based on secondary data.

The next phase of the workshop involved an **extended discussion on what the purpose of the tool would be** and what its main elements would be. It was agreed that to be useful, the tool should identify the nature of the major feed constraints in a given system and provide guidance on intervention strategies. Such interventions would be primarily technical but could include organizational or market intervention possibilities. The **main elements** of the tool which emerged from discussion were:

- Areas of different crops grown per year
- Alternative livelihood strategies; alternatives to livestock?
- Quantification of major feed resources
- Animal holdings
- Purchase and sale of feeds
- Labour
  - Number of people involved
  - Hired labour
  - Seasonality – when is labour limiting?
  - Is labour important for feed resources?
- Economics
- Seasonality of some of the above
- Wealth classification

On **Day 2**, we split into two groups to devise a methodology for data collection. The first group, led by Werner Stur, devised a **PRA-type methodology** focusing in on feed issues. The second group, led by Alan Duncan, refined a **quick survey tool** designed to provide some simple indices of the nutritional status of a livestock enterprise at farm level. Both groups were charged with developing a method to guide intervention strategies.

In the afternoon, participants traveled to Kothapally to conduct field work. We met with around 8-10 farmers. The PRA group conducted a discussion with around 6 farmers and a key informant from Reliance (milk procurement company) while the Quick Survey group interviewed 3 farmers.

On **Day 3**, the morning was spent analyzing and presenting the results of the field work. The presentation from the PRA group demonstrated that such approaches can generate a picture of the farming system and some of the key constraints very rapidly. The main intervention strategy suggested by this approach was a change to the species of green fodder used by farmers to deal with the issue of erratic irrigation supply during the dry season. The Quick Survey presentation highlighted some of the challenges of estimating feed supply at farm level with sufficient precision to come up with meaningful indices of nutrient use for livestock at farm level but did show that such approaches were possible and could be a useful complement to PRA approaches by providing some objective assessment of nutritional constraints. Both methods highlighted the large farm-to-farm variation in feeding practices, possibly a reflection of the fact that commercial milk production is relatively new in this system and that optimal feeding strategies have yet to emerge.

On the final afternoon, we reflected on the field exercise and agreed that a tool which combined a feed-focused PRA with a more detailed but rapid quantitative survey of selected households could form the basis for a useful Feed Assessment Tool (Box 1).

During the final session a series of next steps were agreed:

1. More detailed/specific protocol for PRA component; 2 pager (Werner) by end of June.
2. Refine the quick survey tool – make it more user-friendly. Protocol for quick survey to be developed (Alan) by mid-July.
3. Test in Himothan/BAIF/Ethiopia/Vietnam sites (Yashpal, Aware/Takawale, Aberra, Khanh). Reports by end of Sept. Should include comments on problems/solutions.
4. Cross-site comparison by mid-Oct - to synthesise what worked/didn't work.

### **Box 1 Components of a simple PRA/semi-quantitative feed assessment tool**

Preliminary scoping exercise with local stakeholders (in advance of field visit.

PRA (with farmers and stakeholders)

1. Introduction – asked them to explain farming system (as a warm up). Land use pattern. Village livestock profile.
2. Asked about income sources – ranking (could use livelihood matrix tool)
3. More detailed discussion about livestock system in the village. Cross-checking with individuals.
4. What are problems, issues, opportunities within the livestock system? Problem tree.
5. Major feed sources throughout the year
6. Seasonal calendar (feed, labour)
7. Used seasonal calendar to discuss potential interventions

Lunch

1. Conduct quick quantitative survey with a sub-set of farmers. 15 households stratified by wealth.
2. Visit some surveyed farms for validation

Follow-up: prepare brief report and present results to farmers and stakeholders.

# **Raw Notes on Feed Assessment in Small holder Systems workshop**

**13 – 15 June 2009**

## **ICRISAT – Patancheru, India**

Aim: to discuss ideas for developing a simple tool for characterizing the small holder feeding system in different environments.

Purpose of the tool:

1. To allow comparison of the feed situation in the different study sites in FAP and beyond
2. To act as FAP output to be used beyond the project by interested parties e.g. NGOs seeking to develop intervention strategies

### **Saturday 13/6 Morning**

Introduction and Opening of the workshop - Alan Duncan

Dr Alan welcomed the participants and invited all participants for self introduction and their respective affiliation and responsibilities. Alan then made brief introduction of the work shop with what is expected at the end and asked if there are other expectations by the participants from the work shop. Accordingly the following additional points were suggested by the participants:

- Tools may not be 100% uniform as they will serve variable situations
- Tools have to include elements which suggest mitigation options rather than only assessment tools
- The term “small holder” should be defined clearly
- Tools should be participatory instead of being just simple survey
- Nutritional values of different feeds should be considered when quantifying feeds
- Tools should also address the different community land use system (plains, forest areas)

Main points discussed on each presentation:

1. Feed Resource Assessment by FAP in Vietnam - Werner Stur
  - Three approaches used to assess feed resources: Seasonality mapping of the feed resources, Participatory discussions, sample measurement of the feed resources
  - HHs of homogenous groups of gender and wealth categories were included in the assessment exercise
  - There are two farmer groups: Cattle fattening group who use planted fodder and cow calf producers group who use native grass
  - Farmers are asked when is the season for optimum feed supply and draw times of excess/scarcity and mention reasons for excess/scarcity
  - Feed supply may be calculated as %age demand, but farmers may perceive maintenance quantity as 100% demand?

- Quantifying feed resources based on farmers information is difficult as the measurements are not uniform and inconsistent
- Are there any expectations for incentives from farmers' side to do the assessment? This depends on what we deliver to them and the farmers' perception of what we are doing for them.
- Basic information from the farmers regarding the history of the locality and the system is important for the assessment

## 2. Feed Resource Assessment by BAIF in India - Takawale, P .S. and Aware, M.J

- There are basically two types of feeding systems: Scavenger types and small/marginal farmers
- Basic feed issues are improving the quality of crop residues (Ammoniation, steam treatment, urea molasses straw treatment, urea molasses block, feed blocks, pellet) strategic supplementation, mineral mapping, compound concentrate feed, milk replacer, mother liquor & sludge, pasture land developments, introducing some draught tolerant species and un conventional feed resources like fruit kernels
- Capacity building (focus on empowering women and self help groups, social organizations)
- Major crops are wheat, paddy, sorghum, kadbies?
- There is significant feed wastage in times of availability
- Feed assessments are done by informal communications, 2<sup>ary</sup> data and PRA
- Changes due to interventions: dairy development increased, area grown to improved fodder increased
- Are interventions economically feasible/sustainable? The tool we are developing should consider such elements.

## 3. Feed Resource Assessment by FAP in Ethiopia – Alan Duncan and Aberra Adie

- Why assess feed resources? Base line information for the project, to diagnosis the problems and suggest intervention options
- Feed is a problem both in terms of quantity and quality
- Approaches used include: Formal survey and Quick survey (PRA?)
- Economic aspects of inputs and outputs to be captured
- Expert knowledge is needed at woreda level
- Estimating quantities of daily feeding practices and feed produced has been difficult
- Survey to include different production systems/agro ecological zones instead of being woreda based
- Diversity of knowledge and stake holders needed as intervention options might be variable

## 4. Feed Resources Assessment in India – Ananadan, S. and Michael Blummel

- Why feed assessment? Need for dynamic data base
- Methods used: 2<sup>ary</sup> data

- Data base program include: Land use pattern, crop, livestock (production animals get priority)
- 2<sup>ary</sup> data is only at district level and it lacks information about feed resources
- Feed sufficiency could be calculated using requirements and production indexes?

### 13/6 Afternoon

*Brain storming on parameters to be captured in the tool and methodologies to capture the information*

General discussion to agree on the scope and purpose of the feed resource assessment – Werner

- Could we combine PRA and survey? How can we harmonize if there is mismatch?
- Two levels of assessment: Village level and hh level
- Feed costs/relative costs to be considered
- Feed from grazing is difficult to estimate
- Labor for feed is a problem in some areas and the tool should consider this
- Consider environmental and policy changes and possible interventions to consider this. The tool should be flexible and allow room for changes
- Economic feasibility of interventions to be considered
- Considering the whole value chain might be difficult and may lose focus but involving many relevant stake holders in the process may be way out

*Break out groups to define the main elements of a simple feed resource assessment tool and come up with a methodology to collect information*

Reporting back of groups

Group 1

Tool elements

- Constraints and opportunities to be identified by the tool
- Farmers perception of livestock situation which includes problem diagnosis, source of income,
- Broad assessment of nutritive values of feeds
- Demand side: Current livestock, purpose of keeping, market orientation, future aspirations, etc
- Supply side: Feed management practices, grazing (where & what time) , other sources of feed

Group 2

Tool elements

- Demographic info – village level
- Farming system – hh level
- Is feed a major problem?
- Is livestock a major source of income or livelihood?

- Why is feed a constraint? List of possible reasons (Bio physical, socio economic, institutional)

Methodology:

- PRA for rapid appraisal of inputs, population, cropping pattern, markets, climate, production, etc
- HH level survey for typical characteristics of family size, labour allocation, land holding, livestock holding, feeding practices, irrigation practices, previous knowledge of livestock production, etc

Points of discussions on the reports

- Tools should suggest whether a certain intervention option is worth pursuing or not
- Commercial sectors like input suppliers are to be included in the list of respondents of PRA
- There should be some comparator information collection system with which we have to compare our newly designed tools and evaluate its contribution to facilitating intervention options
- What comes in as livestock input and what goes out as livestock output from the community to be captured at village level and hh level
- Selection of group members for PRA should consider the inclusion of various stakeholders who may have various info and help in undertaking different intervention options
- Tools should consider feed costs/relative to output production to design different options at hh level

### **Sunday 14/6 Morning**

*Break out groups to develop a data collection strategy (check list/questionnaire)*

Report back of groups:

Group 1:

- Designed quick survey tool which includes various elements to be done at hh level

Group 2

- Designed a PRA tool which includes various elements to be done with 5 hh members specialized in dairy (crop-livestock system). The tool contains: questions on major crops, livestock holdings, family labor, feeding practices, output markets, any problem with livestock production and possible reasons, current livestock productivity, seasonality of feed availability, etc

### **Sunday 14/6 Afternoon**

*Testing of the tools by the two groups at farm level*

The team traveled to Kothapally Participatory Farmers Integrated Watershed Management at Adarsha (about 30 km away from ICRISAT). The team met about eight farmers at the site and made brief introduction of the team and the purpose of the visit by Mr Anandan. The team and the farmers split into two groups to test the PRA and the quick survey tools respectively. The testing was followed by visits to individual farms (one per group) to verify the information generated at the farm. The team returned in the evening after successfully accomplishing the intended duty with farmers who participated with enthusiasm and full interest.

### **Monday 15/6 Morning**

#### *Data Analysis and Presentations*

Each group collated and made analysis of the information it collected from the village and made presentations

Lessons from the overall activities:

- Conclusions based on sole farmers estimated quantification of feed production and feed offered to livestock may be a problem and as such elements of the tool should include diverse methodologies like PRA, Quantitative quick survey and some measurements
- Characterizing the livestock outputs and then consider what is fed to know where the gap is
- Can the tool be used by anybody even in the absence of us being there?
- Pilot the tool in multiple locations before it is implemented
- Farmers feeding practice is not consistent and it is rather adaptive
- Expert knowledge seems to me more of a guess
- Calculations of feed offered to livestock based on the farmers' info of daily feeding practice or from harvest index? Is still ambiguous? Figures differ with the different approaches.
- Farmers estimates of livestock output is also not consistent

#### *Discussion*

Where does this lead us?

- Larger sample size instead of few to validate the information
- Make simple questions to get clearer info
- Info on daily feeding practices may not work so let's check the accuracy of it with an approach of estimating it from harvest index
- Bring together elements from different questionnaires used so far and pull important elements together
- Refine the diagnosis for meaningfulness to suggest relevant interventions
- The diagnosis should include the hypothesis of feed sufficiency/deficiency in relation what is required
- Do the quick survey on an existing conventional survey dataset with some modifications
- Broaden the scope of intervention instead of focusing on feed only and as such inclusion of different stake holders in the group is mandatory

- The PRA tool should be simple

#### Components of the combined tool

##### PRA section:

- Introduction – to understand the farming systems
- Income sources (not livelihood as this wide in context)
- Livestock systems – at village and hh levels
- Major feed resources
- Problems of specific livestock commodity production
- Seasonal calendars to discuss potential intervention options
- 2<sup>ary</sup> data for village level info (if possible)

##### Quick Survey Section:

- Quick quantitative elements with sub-set of farmers
  - Crops with areas
  - Livestock
  - Feeding practices
  - Production
  - Labour
  - Seasonality
  - Wealth categorization

##### Next steps:

- More specific PRA protocol for feed resources assessment Werner to finalize by the end of June
- Revised quick survey tool – Alan to finalize by mid July
- Develop common format to be tested across sites – Alan/Werner by end October
- Test the format at Himothan, BAIF, Ethiopia – Yashpal, Aware/Takawale, Aberra by mid September
- Sample size to be 15 for PRA and 15 for quick survey
- Cross site comparison and report including comments on problems and possible solutions - end October (workshop to refine/inaugurate the tool)?

##### Closing

Dr Alan asked the participants to express their feelings of the work shop and the participants unanimously expressed that it was a very good lesson which revealed that simple is beautiful but not easy. All hoped that we will come up with something workable across locations. Alan then closed the meeting at 5:00 pm by thanking all for the active participation and their invaluable contributions to developing the tool.

Aberra Adie  
18/6/09

## Annex 1 – Programme

# Feed Resource Assessment in Smallholder Systems

13-15 June, 2009

## ICRISAT Hyderabad Campus

### Programme

*Aim:* to discuss ideas for developing a simple tool for characterizing the smallholder feeding system in different environments. The tool would have a couple of purposes:

1. To allow comparison of the feed situation in the different study sites in FAP and beyond
2. To act as a FAP output to be used beyond the project by interested parties e.g. NGOs seeking to develop intervention strategies.

As such we will aim for the workshop to yield a publication e.g. working paper, from which a more polished tool could be developed.

*Programme:*

#### **Sat June 13**

Morning: Presentations from various participants on what they have been doing in the area of feed resource assessment

- 0900 Welcome and Introductions – Alan Duncan
- 0930 Feed Resource Assessment by FAP in Vietnam – Werner Stür
- 1000 Feed Resource Assessment by BAIF in India - Dr Aware/Mr Tawakale
- 1030 Tea/coffee
- 1100 Feed Resource Assessment by FAP in Ethiopia – Alan Duncan/Aberra Adie
- 1130 Feed Resource Assessment in India – Michael Blummel
- 1200 General discussion

1230 Lunch

Afternoon: brainstorming on what parameters a tool should capture and the methodology for capturing the information.

- 1330 General discussion to agree on the scope and purpose of feed resource assessment – led by Werner
- 1400 Breakout groups to define the main elements of a simple feed resource assessment tool and come up with a methodology to collect information
- 1515 Tea/coffee
- 1545 Reporting back and synthesis of group work – led by Michael
- 1700 Close

**Sun June 14**

Morning: Group work to develop a template for data collection

0900 In two groups develop a data collection strategy – could be checklists or questionnaires?

1000 Tea/coffee

1030 Continue group work

1130 Reporting back – led by Dr Aware

1200 Lunch

Afternoon: Data collection in the field with a few resource farmers or experts –facilitated by Anandan?

1300 Depart to nearby field site to interact with some farmers/knowledgeable observers

1700 Return

**Mon June 15 (Ranjitha joins)**

Morning: Data analysis and preparation of presentations

0900 Collation and analysis of data and preparation of presentations. Presentations should characterize the feed system and suggest interventions.

1100 Group 1 presentation

1130 Group 2 presentation

1200 General Discussion – led by Ranjitha

1230 Lunch

Afternoon: Alignment on a common methodology for data collection and discussion of next steps

1330 General discussion to agree a structure for a feed resource assessment tool – led by Werner

1500 Tea/coffee

1530 Discussion on how the tool could be used to support decisions about interventions – led by Dr Aware or Mr Tawakale

1600 Agree on next steps – led by Alan Duncan

1630 Summing up – Alan Duncan

1700 Close



