Feed Assessment Tool (FEAST) Individual Farmer Interview Questionnaire (Pigs)

Contributors:
Alan Duncan (International Livestock Research Institute)
Luke York (Independent Consultant)
Ben Lukuyu (International Livestock Research Institute)
Arindam Samaddar (International Livestock Research Institute)
Werner Stür (International Center for Tropical Agriculture)

CGIAR ILRI

Introduction

As of 2014, approximately 500 million smallholder farmers (i.e., farmers with 1 hectare or less of cultivated land) provide food for over 2 billion people worldwide. Feed for livestock is often cited as the main constraint to improved productivity for smallholder farms. Overcoming this constraint often seems an elusive goal as intervention programs tend to adopt a scattergun or trial-and-error approach which often fails to adequately diagnose the nature of the feed problem and therefore the means to deal with it.

The Farmer-Centered Diagnosis methodology provides a means to systematically and rapidly assess feed resources at site level with a view to developing a site-specific strategy for improving feed supply and utilization through technical or organizational interventions.

Part of the Farmer-Centered Diagnosis approach involves using the Feed Assessment Tool (FEAST), a set of forms and spreadsheets to help collect and analyze data related to local conditions and agricultural practices.

Components of the FEAST Tool

- Focus Group Discussion Guide
- Individual Farmer Interview Questionnaire (this document)
- FEAST Data Template (Microsoft Excel spreadsheet)
- FEAST Data Template Manual

Steps in a Farmer-Centered Diagnosis

1. **Preliminary Scoping Exercise:** The FEAT facilitator visits the site to collect information, secure approval from local officials, recruit a team to help manage the process, identify demographically representative groups of farmers to participate in focus group discussions and select a meeting point for the focus groups.
2. **Focus Group Discussions:** The FEAST facilitator schedules meetings with groups of 16 -25 farmers for the purpose of collecting their input regarding local conditions, problems and potential solutions related to livestock feed resources. Using the Focus Group Discussion Guide, the facilitator leads the farmers in a conversation on
3. **Individual Farmer Interviews:** From each focus group, 9 farmers are selected to participate in one-on-one interviews to collect additional data using the Individual Interview Questionnaire. There should be 3 small, 3 medium and 3 large farmers (however those categories are defined during the focus group).

4. **Follow-Up Research:** The FEAST facilitator conducts additional research on site to verify / ground-truth the data collected in the focus group discussions and individual farmer interviews.
5. **Data Entry and Analysis:** Data collected during the focus group discussions and individual interviews is entered into the FEAST Data Template, in order to generate reports and graphs to inform the development of intervention strategies.
6. **Development and Implementation of Livestock Feed Intervention Strategies:** Site-specific strategies for improving livestock feed resources are developed based on the output of the FEAST Data Template and other data collected during the Farmer-Centered Diagnosis. These strategies are then presented to the community, implemented then evaluated and refined on a periodic basis.

Individual Farmer Interview: Overview

1. **Livestock Holdings:** What type of livestock does the farmer currently own? What are their average weights?
2. **Crops Grown on Farm:** What are the main crops grown by the farmer on their land? What is the typical yield and what is done with residue?
3. **Cultivated fodder:** What are the main types of crops planted on the farm specifically as forage material for livestock feeding? How much land is used for each crop?
4. **Collected Fodder:** Does the farmer collect any naturally occurring fodder material? If so, how much does this source of feed contribute to the diet of their animals?
5. **Purchased Feed:** What feeds does the farmer purchase over a 12 month period? How much do they cost, how often do they purchase feed and how much is purchased at a time?
6. **Grazing:** Do the animals spend any time grazing? If so, how much does this source of feed contribute to the diet of the animals (as a percentage)?
7. **Sources of Household Income:** What are the main contributors to household income? How much (as a percentage) does each named income source contribute to total household income?
8. **Production per Household:** How many animals has the farmer sold over the past three years and what were their weights? What was the overall milk production from the farmer's animals?
9. **Sale of Livestock and Livestock Products:** How much did the farmer receive per head of livestock sold? How much per litre of milk?
10. **Seasonality:** How much does feed availability vary over the course of a typical year?

Conducting a FEAST Individual Farmer Interview

- **Selecting Farmers to Interview -** Towards the end of each Focus Group Discussion, farmers will be asked to define what ranges of cultivated land constitute a "small" farm versus a "medium" farm or a "large" farm. Based on whatever consensus the farmers reach, 3 focus group participants from each category will be invited to participate in individual interviews (3 small farmers, 3 medium farmers and 3 large farmers, for a total of nine individual interviews). Ideally, each of the selected farmers should fall near the middle of their category's range in terms of farm size.

  The Farmer-Centered Diagnosis methodology works best with a sample size of at least 9 farmers. If it is impossible to recruit three farmers from each category, then it is possible to proceed with just one farmer from each category, though the results will be less than optimal.

- **Scheduling –** Typically, only 1 to 3 FEAST technical team members will be available to interview the 9 farmers. This means that there will need to be as many as 3 to 4 rounds of individual interviews, of about 45 minutes each.

  It is important to account for this, and ensure that farmers do not leave before their interview. One suggestion would be to offer lunch to farmers who are waiting or else after the interviews.

- **Purpose of the Interview / Estimates vs. Exact Numbers –** While the interviewer should strive to collect complete and accurate data from each farmer, the goal of the individual interviews is to extrapolate average statistics for the entire area based on all of the farmers' responses, taken together. In cases where a farmer cannot provide an exact number (e.g., for the weight of an animal or price received at market). If the farmer cannot give an estimate, continue with the interview then later consult secondary sources such as literature or local extension staff for an estimate.

- **Closed vs. Open Questions –** Unlike the focus group discussion, the individual farmer interviews focus on specific, quantitative information. Use closed questions ("How many non-lactating dairy cattle do you own?") rather than open-ended questions to make sure you get the necessary data.

- **Asking Probing / Follow-Up Questions –** If the farmer gives a vague or overly general answer to a question, ask probing / follow-up questions to elicit more detailed information. Probing questions might include:

  - "Tell me more"
  - "Give an example"
  - Using nonverbal cues (remain silent, nod, make quizzical face)

General Respondent Information

Date of Interview:

Interviewer Name:

Respondent Name:

Landholding Category: Landless | Small | Medium | Large (circle one)

Occupation:

Name of Settlement:

Name of Village:

GPS Coordinates of Interview Location:

Latitude: **Longitude:**

It is interviewer's responsibility, not respondent's, to determine GPS coordinates (if possible).

How much land do you own?: Acres | Hectares | Local Units (circle one)

How much land do you cultivate?: Acres | Hectares | Local Units (circle one)

If local units, name of local unit: *1 hectare =* *Local units*

Cooperative / Organization Affiliations (which household members?)

1. Livestock Holdings

Questions

- **What types of livestock do you currently own?**
- **What is the approximate weight of the animals?**
- **What is the dominant breed?**

Notes

- Explain to the farmer the livestock categories and age group terminologies used
- Only inquire about types of livestock that are relevant to the farm. Try to specify local breeds if possible.
- In the event that farmer does not know or cannot estimate the weight of his/her animals consult secondary sources such as literature or local extension staff. The Domestic Animal Diversity Information System has an inventory of livestock breeds at *dad.fao.org* which may be useful in determining livestock weights.

Type of Livestock	# Currently Owned	Approx. weight per animal (kg)	Dominant Breed
Local Dairy cows – lactating			
Local Dairy cows - non lactating (dry)			
Local Dairy heifers (>6mths old - < 1st calving)			
Local Dairy calves (<6mths old) – female			
Local Dairy calves (<6mths old) – male			
Improved dairy cows – lactating			
Improved dairy cows - non lactating (dry)			
Improved Dairy heifers (>6mths old - < 1st calving)			

Type of Livestock	# Currently Owned	Approx. weight per animal (kg)	Dominant Breed
Improved Dairy calves (<6mths old) – female			
Improved Dairy calves (<6mths old) – male			
Local buffalo – lactating			
Local buffalo cows - non lactating (dry)			
Local buffalo heifers (>6mths old - < 1st calving)			
Local buffalo calves (<6mths old) - female			
Local buffalo calves (<6mths old) - male			
Improved buffalo – lactating			
Improved buffalo - non lactating (dry)			
Improved buffalo heifers (>6mths old - < 1st calving)			
Improved buffalo calves (<6mths old) – female			
Improved buffalo calves (<6mths old) – male			
Bulls or castrated male cattle (> 2 year)			
Bulls or castrated male cattle (>6mths old - < 2 years)			
Bulls or castrated male buffalo (>2 years)			
Bulls or castrated male buffalo (>6mths old - < 2 years)			
Sheep			

Type of Livestock	# Currently Owned	Approx. weight per animal (kg)	Dominant Breed
Goats			
Pigs			
Poultry			
Camels			
Horse			
Donkeys			

Inventory of type of pigs kept:

Type of Pig	# Currently Owned	Approx. weight per animal (kg)	Dominant Breed
Boars			
Sows			
Weaners/piglets			
Gilts			
Finishers (porkers/baconers)			

2. Crops Grown on Farm

Questions

- **What crops are grown on your farm?**
- **How much would you normally expect these areas to yield (in local units)?**
- **What do you do with the residue material (as a percentage)?**

Notes

- ***EXCLUDE CROPS GROWN SOLELY FOR FODDER PRODUCTION*. WE WILL COLLECT DETAILS FOR THOSE CROPS LATER**
- If residue material is fed to livestock, obtain an estimate of yield from the farmer. If the farmer cannot provide estimate of yield the crop residue material will not count as contributing to the diet of the animal.

Cultivation Area & Yield (if using local units, specify below)			Residue Use (%) (if any allocated to 'other', specify below)				
Crop	Area	Yield	Feeding	Burnt	Mulching	Sold	Other*

Name of local unit (Area): _____ *1 hectare =* _____ *Local units*

Name of local unit (Yield): _____ *1 tonne =* _____ *Local units*

Specify "Other" Residue Use: _____

3. Cultivated Fodder

Questions

- **What plants (including deliberately planted forage trees) are deliberately grown on your farm for the sole purpose of feeding livestock?**
- **How much area is used to grow these crops?**

Notes

- Fodder are plants that are specifically grown for livestock feeding

Crop	Area

Name of local unit (Area): _____ *1 hectare =* _____ *Local units*

4. Collected Fodder

Questions	Notes
• **Do you collect any other naturally occurring green fodder material from surrounding areas?** • **If so, how much does this material contribute to the total diet (as a percentage)?**	○ Naturally occurring green fodder can include: - Thinnings - Weeds from cropping areas, - Roadside weeds, - Naturally occurring grasses - Any other naturally occurring green material collected for livestock feed

Contribution of collected fodder to animals' diet (%): ____ %

5. Purchased Feed

Questions

- **What feeds do you purchase over a typical 12 month period?**
- **What is the price of these feeds?**
- **How much do you purchase (in kilograms) each time you purchase the feed?**
- **How many times throughout the year do you purchase each feed?**

Notes

- Feeds can include:
  - Crop residues
  - Green fodder
  - Commercially available mixed concentrate feeds
  - Industrial by-products
  - Any other material that is purchased for the purpose of livestock feed.

Feeds Purchased	Price / Local Unit	Typical Quantity per Purchase	Number of Times Purchased per Year

Name of local unit (Mass): _____ *1 kilogram =* _____ *Local units*

6. Purchased Feed

Questions

- **Considering everything eaten by livestock (eg. crop residues, roadside grasses cut and bought back to animal, grown fodder material, purchased feed), how much does grazing contribute to this over the course of a year (as a percentage)?**

Contribution of grazing to animals' diet (%): [ ] %

7. Sources of Household Income

Questions

- **From the list given, what are the four main sources of household income? What percentage (%) of household income do each of these sources contribute?**

Notes

- Percentages for all sources must add up to 100%

Income Source (Select 4)	Contribution to Income (%)
Cash crops	
Charcoal making	
Dairying	
Draft animals	
Fattening - cattle	
Fattening - sheep and goats	
Food crops	
Handicrafts	
Laboring/service	
Off- farm business	
Poultry (eggs)	
Poultry (meat)	
Pigs (sale of live animals)	
Pigs (meat)	
Remittances	
Other (Specify)	
Must add up to 100%	*100*

8. Livestock Off-Take Rate by Category (per Household)

Questions

- **How many ruminants (cattle, sheep, buffalo, goats) have been sold (or slaughtered for home consumption) over the past 3 years?**
- **How many non-ruminants (pigs) have been sold (or slaughtered for home consumption) over the past 3 years?**
- **What was the approximate weight of the animals sold?**

For ruminants:

Type of Livestock	# of Males Sold	Approx. weight per male (kg)	# of Females Sold	Approx. weight per female (kg)
Number of **cattle** sold over past 3 years				
Number of **goats** sold over past 3 years				
Number of **sheep** sold over past 3 years				
Number of **buffalo** sold over past 3 years				

For Non-ruminants:

Type of Livestock	# of Males Sold	Approx. weight per male (kg)	# of Females Sold	Approx. weight per female (kg)
Breeding animals (boars and sows)				
Growers (Weaners/piglets)				
Growers (Gilts)				
Finishers (porkers/baconers)				

9. Sale of Livestock and Livestock Products

Questions

- **What is the average price received for livestock and livestock products throughout a year?**

Notes

- If respondent has trouble determining an average price for cattle, ask for them to imagine a 400kg fattened castrated male, and how much would that be worth at different periods in the year.
- If respondent has trouble determining an average price for sheep or goats. Ask them to imagine a 30kg fattened castrated male, and how much would that be worth at different periods in the year?
- If respondent has trouble determining an average price for different types of pigs. Ask them to imagine a 63kg sow, 75kg Boar, or a 38kg finisher, and how much would that be worth at different periods in the year?

For ruminants:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Market price for cattle (per head)												
Market price for sheep (per head)												
Market price for goats (per head)												

For Non-ruminants:

Market price (per head)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Boars												
Sows												
Weaners/piglets												
Gilts												
Finishers (porkers/baconers)												

10. Milk Yield, Home Consumption and Sales

Questions

- **What is the average milk yield in litres per day over the course of a year?**
- **What is the average price received per litre of milk over the course of a year?**
- **How much milk is retained for household consumption per day?**

Notes

- If household consumption is fairly consistent over the course of a year, it is not necessary to estimate monthly variances.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Total average milk yield (litres/day)												
Average price received for milk (per litre)												
Amount of milk retained for household use (litres/days)												

11. Seasonality

Questions

- **On a scale of 0-10, where 10 = excess feed available, 5= adequate feed available and 0=no feed available, how does the availability of feed vary over an average year?**
- **How much does each source of feed contribute to the diet of the animals throughout a year? (Proportion of nutrition derived from different sources)**

Notes

- To make this section quicker and easier for respondents, show them their responses on the chart as they are answering, to allow them to visualize trends.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Feed availability (score 0-10)												

Sources of Feed by Month (rate on a scale of 1-10, total for all sources for each month must add up to 10)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Crop residues (eg. Rice straw, maize stover)												
Legume crop residues from legume crops (eg. chickpeas, lentils)												
Green forage (eg. roadside weeds, cut fodder crops)												
Grazing												
Concentrates (eg. Wheat bran, grains, oilseed cakes)												
Kitchen waste/Swill												
Other – Specify												
Must add up to 10!	10	10	10	10	10	10	10	10	10	10	10	10

This is the end of the Individual Farmer Interview.

Thank the respondent for their time.

Explain that the data will be analyzed to identify major issues and potential solutions related to livestock feed, and the findings and recommendations will be shared with the community once the study is complete.