



## APPENDICES

ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่

Copyright© by Chiang Mai University

All rights reserved

## Annex 1 : Questionnaire for Survey

**The Uplands Program****Research for Sustainable Land Use and Rural****Development in Mountainous Regions of****Southeast Asia***Funded by DFG*

**Options for overcoming genotype x environment interactions by improvements in husbandry and feeding management**

District :		Commune:	
Village:			
Name of farmer (husband & wife)		Respondent: Male    Female    couple	
Interview language: Viet/H'mong/Thai		Date:	ID of household:

## Appendix I. General information and main socio-economic data

### 1.1. Household members

Household members	Age	Sex	Speak Kinh language?	Illiterate?	Education level?

### 1.2 Land resources

Land type	Owned area	Rent area
Irrigated land		
Sloping land (excluding forest)		
Forest area		
House + Garden		
Pond		
Pasture		
Others		
Total area		

## Appendix II. Crop production

Crop production from the last year?	
Crop	Area
Rice	
Maize	
Cassava	
Sugar cane	

### 1. Rice

Rice crops	Period	Area?	Cultivar?	Harvest time?	Yield?

Total yield of rice	Amount of sell?	Price?	Amount for household food consumption?	Amount for animal?

Species	Amount of rice per day?	Total amount per year?

How do you harvest rice?	Cut by hand	By machine
How do you pluck rice off the ears?	Thrash by hand	By thresher machine
How do you use rice straw?		
Keep for cattle	How much?	
Use as combustible	How much?	
Produce mushroom	How much?	
Burn on the field	How much?	
Other?	How much?	
Is your own rice straw enough for all of your demand?		
If no, where do you get more rice straw for your consumption?		
If rice straw source is limited, which activity is priority of using rice straw?		
Keep for cattle	Use as combustible	Produce mushroom
Burn on the field	Others?	
Is your own rice straw enough for your cattle?		

## 2. Maize

Maize crops	Period	Area?	Cultivar?	Harvest time?	Yield?

Total yield of maize	Amount of sell?	Price?	Amount for household food consumption?	Amount for animal?

Species	Type of maize feed?	Amount of per day?	Total amount per year?

How do you dry your maize? Under sunlight Dry machine      Leave on the maize stem until dry
What do you do with maize stem after harvested? Give it to ruminant    Use as silage    Non-use
Do you grow maize as feed for cattle?
If yes, when and how much area?

## 3. Cassava

Cassava crops	Period	Area?	Cultivar?	Harvest time?	Yield?

Total yield of cassava	Amount of sell?	Price?	Amount for household food consumption?	Amount for animal?

Species	Type of cassava feed?	Amount of per day?	Total amount per year?

Do you make silage from cassava top?

## 4. Sugar cane

Sugar cane crops	Period	Area?	Cultivar?	Harvest time?	Yield?

Total yield of sugar cane	Amount of sell?	Price?	Amount for household food consumption?	Amount for animal?

Species	Type of sugar cane feed?	Amount of per day?	Total amount per year?
Do you use molasses for ruminant?			
If yes, how much?			
Where do you buy molasses?		How much?	

### Appendix III. Cattle production

3.1. *How many cattle do you have?* (Please write in the number for each of the following types of animals you have in your operation.)

Types of cattle	Calves (<1year)		Weaned calf (>1year)		Adult cattle (>2years)		Fattening		Total
	Male	Female	Male	Female	Cow	Bulls	Male	Female	
Number of animals									
Breed									
Source									

### 3.2. *What is the goal of your cattle production?*

What is your reason to keep cattle? Saving money Manure source Other?	Drought power Generate income
What are the products from cattle that you expected? Meat consumption          Manure          Hide          Others?	

### 3.3. *Feeding resources*

On-farm feeding resources for cattle

Types of Feed for cattle	Type of cattle	Amount	Time available	Treatment

*Types of feed: natural grass, growned grass, corn stem, rice straw, cassava top, cassava leaf, maize meal, rice bran, broken rice, rice, banana stem, ....*

Off-farm feed for cattle

Types of Feed	Bought from	Where	Price	Amount per day	Treatment	Type of cattle	Time available

Do you know any method to improve quality and quantity of crop by-products as feed for your cattle?

Urea-treated rice straw

Urea molasses multiprotein block

Maize stem silage

Others

Method	Where do you get	Why didn't you	Support need to

	information from?	apply it?	apply it?

Which method did you apply?			
Method	Types of crop by-product	Cost	Time available
You are trained by whom?			
Do you still using these methods?		If not, why?	
Which method do you want to apply in the future?			
What are the difficulties of applying that method in your case?			
Do you cook feed for cattle?			
What kind of feed do you cook?			
How much do you feed cattle per day?			

Do you grow grass for cattle?			
Grass cultivar	Area	Yield	Time available
Why do you choose these cultivars to grow?			
Do you want to change to others cultivar?		Which cultivar?	
Why?			

Do you apply cut and carry system for your cattle herd?			
Types of cattle	Age	Feed supply (kg)	Time available

### ***3.4. Pasture management***

Is there some care or special management for pasture?
Describe management for communal pastures?
Are animals intended individually or in a common herd?
Who is looking after grazing animals?
Do you utilize a rotational grazing system in your cattle operation?
Who responsible for raising cattle (tending, feeding, cut-and-carry)?
How far from your house to the pasture?
Do you have stable with roof for cattle on the pasture?



**3.5. Health management**

Did you vaccinate your cattle?			
Which type of disease did you vaccinate last year?			
Diseases	Times of using this vaccine	When did you vaccinate last time	Fee/time

Did your animals get disease last year?								
How many animals lost from diseases last year?								
Did you call veterinarian when your animals get diseases?								
No.	Breed	Age	Disease last year	Died		Recovered	Cost for treatment last year	Month
				untreated	treated			

**3.6. Herd management**

How many years have you been rising cattle?	
Have you ever changed the cattle breeds since 1990?	
If yes, which breeds?	
Why did you change?	
Do you want to keep other cattle breeds?	Which breed?
What do you expected with that breed?	

How do you category your cattle?		
By frame	By reproductive traits	Others (specify)
How do you separate large and small frame cattle respectively?		

How many kilograms of your newborn cattle?
When do you wean your calf?
How many months old when your cattle have the first calf?
How long is the interval period?
How many calves per year?
How many calves per time of pregnant?

Where do you keep your cattle?	Home?	Pasture?	Forest?
What did you make the stables from?			

Cost for stable construction?												
How far these stable from your house?												
Did you buy or sell any cattle last 3 year?												
When bought							When sold					
Type	No.	Breed	Age	Kg	Price	month	No.	Breed	Age	Kg	Price	Month
Where do you sell your cattle to?      Abatoir      Local market      Traders												
What did you do with the cash from selling the cattle?												
Did you receive any cattle from another person last year?												
Type		No.	Breed		From whom		Age		month			
Did you give any cattle to another person last year?												
Type		No.	Breed		To whom		Age		Month			
Did you keep any cattle as contracted farmer with other farmer?												
Type		No.	Breed		To whom		Age		Month			
Did you give any cattle to other farmer as contracted farmer?												
Type		No.	Breed		To whom		Age		Month			
Did you slaughter any cattle last year? Yes/no												
Type		No.	Breed		Age		month					
How did you use products of slaughtered cattle last year?												
Type of products		Amount of home consumption			Amount of give away			Amount of selling		Price		
How many animals lost last year (except from died by disease or slaughtered)?												
Type of cattle		No.	Breed		Age		month		Reason?			
Were your cattle being poisoned last year?												
If yes, how many cattle died?							What kind of poison?					
How many seminars and/or meetings did you attend since 2000 that dealt with beef production and/or beef industry issues?												

<p>What problems did you cope on the farm/ family? Please describe them? When in the year of how often?(e.g. labor, capital investment, selling your crop products and animal products, buying crop products or fertilizer, seeds, animals (products), etc.)</p>
<p>What problems did you cope with in animal production in general and cattle in particular? Please describe them? (e.g. on feed, on breed and breeding, capital investment, etc)</p>

How many times do you feed to your cattle per day?		
When and where are your cattle grazing?		
How often?		
And how long per day?		
In rainy season (April- October)	In dry season (November- March)	
When your cows are in the period of being pregnant/ having birth/ and lactation, do you supply more feed for them?		
Which types of feed? And how?		
Do you fattening your cattle before selling?		
How long do you fattening your cattle?		
What do you feed your cattle during fattening period?		
Type of feed	How much per day?	How much in total?

Do you raise your own replacement heifers?	A) yes	b) no	
Where did you buy your heifers?	Neighbors	Breed station	Market
Do you keep calf with your cow or separately?			
Do you apply any method for controlling mating on the pasture?			
Did you apply AI on your herd?			
Where do you get the semen from?	Breed?	Cost?	
Age at culling/ disposal of male?	Female?		
Reason for culling?			
What problems did you observe from your cows when giving birth, after giving birth, etc.?			

Date, Place .....

Interviewer .....

**CURRICULUM VITAE**

<b>Name</b>	Mr. Dang Dinh Trung
<b>Date of Birth</b>	10 <sup>th</sup> January, 1983
<b>Education Background</b>	
2008-2011	Master in Sustainable Agriculture and Integrated Watershed Management. Faculty of Agriculture, Chiang Mai University - Hohenheim University Chiang Mai, Thailand - Germany
2001-2005	B.Sc. in Animal Science Faculty of Animal Husbandry and Veterinary Hanoi University of Agriculture, Vietnam
<b>Scholarships</b>	
2008-2011	Eiselen Foundation Ulm
<b>Working Experiences</b>	
2005 to 2006	Technican in Tien Phong dairy farm, Tuyen Quang, Vietnam
2006 to 2008	Researcher in National Institute of Animal Science, Ha Noi, Vietnam