

RENEWABLE NATURAL RESOURCES CENSUS 2009

Ministry of Agriculture
Royal Government of Bhutan



~~Address of the Respondents~~

Ignore this Respondent's Address. Start filling up from the Dzongkhag.

Dzongkhag :

Geog :

Town :

Chiwog :

Village :

Need not fill up this section. This is for official use in Thimphu

Respondent No:
(For office use only).

--	--	--

--	--	--	--

--	--	--	--

1. BACKGROUND INFORMATION

1.1: Respondent's Identity		
Name:.....	Relationship to household head:	1 = head
Age:		2 = spouse
Sex: (1 = Male, 2 = Female):		3 = daughter / son
Gung No. Thram No:		4 = in-laws
		5 = other

1.2: Distances of road points and amenities from the household (Ask the following questions if there is no road).			
How long do you have to walk to reach motor-road point?			Distance 1 = < 1 hour 2 = 1 - 3 hours 3 = 3 - 6 hours 4 = 6 hours - 1 day 5 = > 1 day
How long do you have to walk to reach nearest extension centres?	Tick the nearest one		
	RNRC	AEC	LEC

2. SOURCES OF HOUSEHOLD CASH INCOME.

Q 2.1: Main sources of cash Income during 2008							
Code	Sources of Income	Tick	Rank in order of importance (1,2 and 3)	Code	Sources of Income	Tick	Rank in order of importance (1,2 and 3)
1	Horticulture crops (fruits, potato, vegetables and cardamom)			7	Salaries / wages		
2	Cereal grains			8	Remittances		
3	Livestock products (meat and dairy products)			9	Contract works		
4	Non-wood forest products (edible and non-edible products)			10	Bussiness		
5	Mules / horses transports			11	Other off-ram activities		
6	Motor transports						

3. AGRICULTURAL MACHINERY AND EQUIPMENT.

Q 3.1: Serviceable machinery and equipment on the farm (numbers) in 2008					
Item	Nos	Item	Nos	Item	Nos
1	Tractor	8	Power Reaper	15	Secature
2	Power Tiller	9	Maize Sheller	16	Water Pump
3	Power Thresher	10	Paddy Transplanter	17	Power Chain Saw
4	Paddle Thresher	11	Bullock Drawn Plow (Improved)	18	Hand Operated Winnowing
5	Diesel Engine for Thresher	12	Rotary Paddy Weeder	19	Comflake (tengma) machine
6	Rice Mill Set	13	Power Sprayer	20	Veg.& fruit driers
7	Oil Mill Set	14	P.P. Equipment	21	Silo

Note: Indv. = Individually owned or Comm. = Community owned.

Q 3. .2: What did you use for ploughing your land during 2008? Tick as responded.	
<input type="checkbox"/> Bullocks	<input type="checkbox"/> Power tillers / other machineries
<input type="checkbox"/> Both bullocks and power tillers / other machineries	<input type="checkbox"/> Other (specify)

4. AGRICULTURE

4.1 HOUSEHOLD LAND HOLDINGS

Q 4.1.1: Land holdings: Thram records information, 2008 (Respondent should produced Lag-thram)			
Do you own land? YES <input type="checkbox"/> NO <input type="checkbox"/> . If the answer is NO then proceed to Table 4.1.2			
Land type	Area (acres)	Land type	Area (acres)
Wetland		Kitchen garden	
Dry land		Orchard	

Q 4.1.2: Land ownership and tenure status during 2008 (Need not fill up the shaded box)				
Land Use Status		Wet Land (acres)	Dry Land (acres)	Orchard (acres)
1	Own land cultivated			
2	Leased out			
3	Leased in			
4	Left fallow			
Give reasons for leaving land fallow. (Tick as responded)		<input type="checkbox"/> Unproductive	<input type="checkbox"/> Stony	<input type="checkbox"/> Wildlife problems
		<input type="checkbox"/> Very steep	<input type="checkbox"/> No irrigation	<input type="checkbox"/> House construction purpose
		<input type="checkbox"/> Far from resident	<input type="checkbox"/> Affected by landslides	<input type="checkbox"/> Town planning

4.2. CROP PRODUCTIONS

Q 4.2.1: Cereals production for the year 2008					
Crops	Harvested Area (acres)	Qty. Prod. (kgs)	Qty. retained for seed (kgs)	Qty. Sold. (kgs)	Price/ kg (Nu)
Paddy (irrigated)					
Paddy (upland)					
Maize					
Wheat					
Barley					
Finger Millet					
Foxtail Millet					
Sweet Buckwheat					
Bitter Buckwheat					

Q 4.2.2: Cereals production (2nd cropping) for the year 2008					
Crops	Harvested Area (acres)	Qty. Prod. (kgs)	Qty. retained for seed (kgs)	Qty. Sold. (kgs)	Price/ kg (Nu)
Paddy (irrigated)					
Paddy (upland)					
Maize					

Q 4.2.3: Oil seeds production for the year 2008					
Crops	Harvested Area (acres)	Qty. Prod. (kgs)	Qty. retained for seed (kgs)	Qty. Sold. (kgs)	Price/ kg (Nu)
Mustard					
Sunflower					
Soya bean					
Till / Sesemu					
Ground nut					

Q 4.2.4: Grain Legumes production for the year 2008					
Crops	Harvested Area (acres)	Qty. Prod. (kgs)	Qty. retained for seed (kgs)	Qty. Sold. (kgs)	Price/ kg (Nu)
Rajma bean					
Mung bean					
Dhal					
Lentil					
Beans					
Peas					

Q 4.2.5: Vegetables production for the year 2008					
Crops	Harvested Area (acres)	Qty. Prod. (kgs)	Qty. retained for seed (kgs)	Qty. Sold. (kgs)	Price/ kg (Nu)
Potato					
Sweet potato					
Topioca					
Collocacia					
Asparagus					
Chilli					
Cabbage					
Cauliflower					
Spinach					
Sag					
Egg plant					
Lady finger					
Green leaves					
Broccoli					
Tomato					
Mushroom (Shitake)	Nos. of billets				
Mushroom (Straw)	Nos. Packets				

Q 4.2.6: Roots, tubers and rhizomes production for the year 2008					
Crops	Harvested Area (acres)	Qty. Prod. (kgs)	Qty. retained for seed (kgs)	Qty. Sold. (kgs)	Price/ kg (Nu)
Carrot					
Radish					
Turnip					
Cassava					

Q 4.2.7: Vegetable (cucurbits) production for the year 2008. (Need not fill up the grey columns)					
Crops	Harvested Area (acres)	Qty. Prod. (kgs)	Qty. retained for seed (kgs)	Qty. Sold. (kgs)	Price/ kg (Nu)
Cucumber					
Pumpkin					
Squash					
Guards					

Q 4.2.8: Spices production for the year 2008					
Crops	Harvested Area (acres)	Qty. Prod. (kgs)	Qty. retained for seed (kgs)	Qty. Sold. (kgs)	Price/ kg (Nu)
Onion					
Ginger					
Garlic					
Cardamom					

Q 4.2.9: Fruit crops production for the year 2008						
Fruit crop	Total Trees	Total Bearing Trees	Production Qty.(kg)	Qty. Sold (kg)	Price/ kg (Nu)	
Apple						
Mandarin						
Mango						
Pear						
Peach						
Plum						
Walnut						
Areca nut						
Jack fruit						
Guava						
Pomegranate						
Apricot						
Avocado						
Litchi						
Persimmon						
Sugarcane						
Banana						
Tree tomato						

Q 4.2.10: Quantity and type of fertilizers used for crops during 2008. (MT)							
Farm yard manure (FYM)		Phosphate (SSP)	Urea	Suphala (NPK)	Other chemical fertilizer	Leaf mould	Did not use fertilizer
H/prod.	Purchased						

Note: H/prod = Home produced

Q 4.2.11: Quantity and type of plant protection chemicals used for crops during 2008. (in kgs / litres)				
Insecticides	Fungicides	Herbicides	Tree spray oil	Other PP chemicals

5. LIVESTOCK

5.1 Livestock population for the year 2008								
Cattle, Yaks and Buffaloes		Young		Adult				
		Male	Female	Hiefer	Milch cow	Dry cow	Breeding bull	Bullock
1	Mithun Pure							
2	Mithun Cross (Jatsa/Jatsam/Yangku/Yangkum)							
3	Nublang breed (Local cattle)							
4	Jersey Pure							
5	Jersey Cross							
6	Brown Swiss Pure							
7	Brown Swiss Cross							
8	Yak							
9	Zo / Zom							
10	Buffaloes							
Other livestock		Local		Improved				
		Male	Female	Male	Female			
11	Horses							
13	Mules							
14	Donkeys							
15	Goats							
16	Sheep							
16	Pigs							
17	Poultry							
Ask total nos. for cats and dogs.		Total nos.						
18	Cats							
19	Dogs							

5.2 Livestock death population for the year 2008			
Cattle, Yaks and Buffaloes		Young	Adult
1	Mithun Pure		
2	Mithun Cross (Jatsa/Jatsam/Yangku/Yangkum)		
3	Nublang breed (Local cattle)		
4	Jersey Pure		
5	Jersey Cross		
6	Brown Swiss Pure		
7	Brown Swiss Cross		
8	Yak		
9	Zo / Zom		
10	Buffaloes		
Other livestock		Young	Adult
11	Horses		
12	Mules		
13	Donkeys		
14	Goats		
15	Sheep		
16	Pigs		
17	Poultry		

Q 5.3: Livestock productions and marketing during 2008. (Need not fill up the grey columns)

Type of products	Qty. Produced (kg.)	Used for processing (kg.)	Qty. Sold (kg.)	Price / kg	Type of products	Qty. Produced (kg.)	Qty. Sold (kg.)	Price / kg
Milk					Pork (pig meat)			
Butter					Beef (cattle/buffalo meat)			
Cheese					Mutton (goats / sheep meat)			
Eggs (Nos)					Yak meat			
Wool					Chicken			
Fish								

Q 5.4: Live animals sold during 2008. (Need not fill up the grey columns)

Type of livestock	Sex	Nos. Sold	Price / No	Type of livestock	Sex	Nos. Sold	Price / No
Mithun Cross	Male			Zo / Zoms	Male		
	Female				Female		
Nublang	Male			Buffaloes	Male		
	Female				Female		
Jersey	Male			Horses			
	Female			Mules			
Brown Swiss	Male			Donkeys			
	Female			Sheep			
Yaks	Male			Goats			
	Female			Pigs			
				Poultry			

Q 5.5: Feed and fodder

Improved pasture Area (acres)	Fodder trees (nos)	Ask this question, in case there was no improved pasture. What do you feed to your cattle? TICK as responded.
		<input type="checkbox"/> Feed from the planted fodder trees <input type="checkbox"/> Collect fodder from forest <input type="checkbox"/> Send to graze on the native pastures <input type="checkbox"/> Buy feeds from the market <input type="checkbox"/> Feed crop residues <input type="checkbox"/> Feed some portion of food grains <input type="checkbox"/> Feed turnip and other vegetables

6. FORESTRY

Q 6.1: Non-wood forest products / by-products and firewood, 2008								
Code	Forest Products	Unit code		Unit code				
		1. Kg	2. Pieces / nos	3. Head load	4. Bundle	5. Litre	6. Truck Load	7. Tractor Load
		Qty. Collected or produced	Unit	Qty. Sold	Price Nu / Unit			
1	Bangchung (bamboo product)							
2	Baskets (bamboo & Cane products)							
3	Others products made of bamboo and cane							
4	Cups (wood products)							
5	Dhapa (wood products)							
6	Others products made of wood							
7	Cordyceps							
8	Mushroom (Wild)							
9	Wild Orchid flowers							
10	Illicium fruits / Star anis (Domleeshee)							
11	Walnut (wild)							
12	Hezel nut / Chest nut							
13	Rubia cordifolia (Soe / Laneru / Majeto)-Dyes							
14	Medicinal plants (Chirata)							
15	Medicinal plants (Pipla)							
16	Medicinal plants (Others)							
17	Resin							
18	Lemon grass							
19	Cane shoots (Pa-chag)							
20	Bamboo shoots (Ba-chag)							
21	Fern shoots (Nagkey)							
22	Damru							
23	Pan leaves							
24	Incense (Tsang-zey)							
25	Oil seeds							
26	Daphne bark (Dheynap)							
27	Quantity of firewood used during 2008							

Q 6.2: Issues related to forests, 2008							
1	Do you have private forests? <input type="checkbox"/> Yes <input type="checkbox"/> No If No, what are the reasons? <input type="checkbox"/> Limited land holding <input type="checkbox"/> Not aware <input type="checkbox"/> Others reasons <input type="checkbox"/> No reasons						
2	What types of trees would you like to plant in your land? <input type="checkbox"/> Fodder species <input type="checkbox"/> Firewood species <input type="checkbox"/> Timber species <input type="checkbox"/> Fruit trees <input type="checkbox"/> Bamboo <input type="checkbox"/> Other (specify)						
3	Is there any co-operatives in your village for the NWFP / forest products use? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, are you a member? ? <input type="checkbox"/> Yes <input type="checkbox"/> No						
4	Are you a member of community forestry? (Tick as responded) <input type="checkbox"/> Yes <input type="checkbox"/> No		If No, what are the reasons? <input type="checkbox"/> Not aware <input type="checkbox"/> Not interested <input type="checkbox"/> No area <input type="checkbox"/> Other (specify).....				
5	Is there a forest office in your village? (Tick as responded)		<input type="checkbox"/> Dz. Forest Extension Office <input type="checkbox"/> Park Office <input type="checkbox"/> Range Office <input type="checkbox"/> FMU Office <input type="checkbox"/> Beat Office <input type="checkbox"/> There is no any forest office				
6	How far do you have to walk to reach the nearest forest office? (Tick as responded)		< 1 hour <input type="checkbox"/>	1 – 3 hours <input type="checkbox"/>	3 – 6 hours <input type="checkbox"/>	6 hours – 1 day <input type="checkbox"/>	> 1 day <input type="checkbox"/>
7	Are you aware of the forest management unit systems? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, how does it affect your livelihood? <input type="checkbox"/> Positively <input type="checkbox"/> Negatively						
8	How far do you have to walk to get firewood? (Tick as responded)		< 1 hour <input type="checkbox"/>	1 – 3 hours <input type="checkbox"/>	3 – 6 hours <input type="checkbox"/>	6 hours – 1 day <input type="checkbox"/>	> 1 day <input type="checkbox"/>
9	Do you find it more difficult to get firewood now than 10 years ago? (Tick as responded)		If Yes, what would be the reasons? Tick as responded. Yes <input type="checkbox"/> <input type="checkbox"/> Increasing population <input type="checkbox"/> Strict forest rules No <input type="checkbox"/> <input type="checkbox"/> Diminishing forest cover <input type="checkbox"/> Other (specify).....				
10	Do you find it more difficult to get timber now than 10 years ago? (Tick as responded)		If Yes, what would be the reasons? Tick as responded. Yes <input type="checkbox"/> <input type="checkbox"/> Increasing population <input type="checkbox"/> Strict forest rules No <input type="checkbox"/> <input type="checkbox"/> Diminishing forest cover <input type="checkbox"/> Other (specify).....				
11	Getting the forestry permit to collect NWFPs is: <input type="checkbox"/> Easy <input type="checkbox"/> Difficult <input type="checkbox"/> Can't say						
12	What do you think of the present royalty rates on NWFPs? <input type="checkbox"/> Very high <input type="checkbox"/> Very low <input type="checkbox"/> Moderate						
13	Do you think that dependence on forests resources will decrease if there is electricity in the village? <input type="checkbox"/> Yes <input type="checkbox"/> No						
14	Are you aware about the forestry rules and acts? <input type="checkbox"/> Yes <input type="checkbox"/> No						

7. CONSTRAINTS ON THE FARM.

Q 7.1: Constraints faced by household during the year 2008. Select 3 most important constraints and rank them 1, 2 and 3 in the order of importance. (1 being the most important constraint and 3 the least).							
Code	Constraints	Tick	Rank	Code	Constraints	Tick	Rank
1.	Insufficient irrigation supply			8	Hail storm / wind		
2.	Unproductive land			9	Landslides / soil erosion		
3.	Labour shortage			10	Wild animal attack on livestock		
4.	Crop damage by wild animals			11	Livestock diseases		
5.	Crop damage by insects / diseases			12	Lack of feed and fodder supply		
6.	Drought			13	Shortage of land		
7	Excessive rain			14	Limited access to Markets		

Q 7.2: Crops damaged by wildlife and domestic animals during 2008?																	
Code	Main crops	Wild pigs		Deer / Sambhar		Monkey		Elephant		Bear		Porcupine		Birds		Domestic animals	
		A	P	A	P	A	P	A	P	A	P	A	P	A	P		
1	Paddy																
2	Maize																
3	Wheat																
4	Barley																
5	Potato																
6	Apple																
7	Mandarin																
8	Other tree crop 1 (specify)																
9	Other tree crop 2 (specify)																
10	Other tree crop 2 (specify)																

Note: A = Area in acres and P = Estimated production in kgs. For fruit crops, report in nos. of trees instead of area.

Q 7.3: Livestock killed by wildlife during 2008?																	
Code	Livestock	Tigers		Wolves		Snow Leopards		Common Leopard		Clouded Leopard		Jackals / Foxes		Bears		Wild dogs	
		AD	YG	AD	YG	AD	YG	AD	YG	AD	YG	AD	YG	AD	YG		
1	Local cattle																
2	Imp. cattle																
3	Horses																
4	Mules																
5	Donkeys																
6	Yaks																
7	Buffaloes																
8	Sheep																
9	Goats																
10	Pigs																
11	Poultry																

Note: AD = Adult, YG = Young and Improved.

8. **FOOD SECURITY.**

Q 8.1: Household Food-Grain Self Sufficiency												
Did you produce enough food-grain for your household's consumption in 2008? Tick as responded on the right.				<input type="checkbox"/> Enough <input type="checkbox"/> Not enough <input type="checkbox"/> Food grain production not feasible here								
If No enough: Which months did you face food-grain shortages? (Tick months 1-12 as responded)												
Bhutanese calendar →	1	2	3	4	5	6	7	8	9	10	11	12
English calendar →	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
Tick as responded →	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8.2: How do you cope with the shortages?							
Code	Copping mechanisms	Tick as responded	Rank in order of importance (1,2 and 3)	Code	Copping mechanisms	Tick as responded	Rank in order of importance (1,2 and 3)
1	Purchase from Market	<input type="checkbox"/>		9	Barter with dairy products	<input type="checkbox"/>	
2	Sale of potato	<input type="checkbox"/>		10	Cash remittance from employed members	<input type="checkbox"/>	
3	Sale of vegetables	<input type="checkbox"/>		11	Off farm activities (contract works, weaving)	<input type="checkbox"/>	
4	Sale of fruits	<input type="checkbox"/>		12	Hire out of bullocks, horses and mules	<input type="checkbox"/>	
5	Sale of other cash crops (specify).....	<input type="checkbox"/>		13	Exchange with labour	<input type="checkbox"/>	
6	Borrowed from neighbours	<input type="checkbox"/>		14	Others (specify)	<input type="checkbox"/>	
7	Sale of livestock dairy and meat products	<input type="checkbox"/>		15	Others (specify)	<input type="checkbox"/>	
8	Sale of forest product and by-products	<input type="checkbox"/>				<input type="checkbox"/>	

Q 8.3: How much of the following food commodities did you purchase during 2008 for household consumption?								
Commodities	Qty. (kgs)	Approx. expenditure (Nu)	Commodities	Qty. (kgs)	Approx. expenditure (Nu)	Commodities	Qty. (kgs)	Approx. expenditure (Nu)
Rice			Butter			Goat meat		
Wheat			Cheese			Eggs (nos)		
Flour			Beef			Other-1 (specify)		
Cooking oil			Pork			Other-2 (specify)		
Vegetables			Dry fish			Other-5 (specify)		
Milk (liquid)			Chicken					
Milk (powder)			Mutton (sheep meat)					

9. COMMENTS.

Q 9.1: Comments and notes (by the enumerators and supervisors)

Enumerator's name: Date: Signature:

Designation:

Supervisor's name: Date: Signature:

Designation:

THANK YOU AND TRASHI DELEK

UNITS CONVERSION TABLES

Land use categories			
Local Term	English	Local Term	English
Chhuzhing	Wetland	Tsoesa / Tsoezhi	Kitchen garden
Kamzhing	Dry land	Khimsa	Residential area
Ngulthog Dumra	Orchard	Tsamdrog	Pasture

Measures of surface			
Name	Area	Name	Area
1 hectare	2.471 acres	1 Acre	100 decimals
Dry land		Wetland	
1 langdo (1day plow)	34 dec = 0.34 acre	1 langdo (1 day plow)	25 dec = 0.25 acre
3 langdo	1 acre	4 langdo	1 acre
1 Dromo (1 morning plow)	17 dec = 0.17 acre	1 Dromo (1 morning plow)	13 dec = 0.13 acre
1 haal	34 dec = 0.34 acre	1 haal	25 dec = 0.25 acre

Measures of grain volume: From local measurement units to kilograms				
Commodities	Drey / Bray / Khaw	Ba-drey / Tho-drey / Wong-drey	Pathi	Phita / Lamshu / Mana
Paddy	1.210	1.890	2.870	0.320
Rice	1.660	2.240	3.740	0.430
Maize	1.660	2.130	3.520	0.390
Wheat	1.470	2.280	3.110	0.390
Barley	1.360	2.520	3.250	0.390
Buckwheat	1.270	1.820	3.010	0.330
Millet	1.380	1.920	2.810	0.330
Mustard	1.290	1.450	3.140	0.320
Sesame	1.080	1.170	3.120	0.260
Soya bean	1.420	1.750	3.670	0.350
Beans	1.470	1.770	3.400	0.390
White Dal	1.730	2.260	3.300	0.410
Black Dal	1.690	2.150	3.420	0.420
Peas	1.400	2.230	3.450	0.360

Conversion various commodities volume from different units to kilograms					
Items	Local units	In kgs	Items	Local units	In kgs
Vegetables			Fruits		
Spinach	Bundle	0.410	Apple	Number	0.24 kg (1 box = 18 kgs)
Mushroom	Drey	0.140	Mandarin	Number	0.15 kg (1 box = 15 kgs)
Onion shoot	Bundle	0.210	Areca nut	Number	0.05 kg (1 pon = 4 kgs)
Garlic shoot	Bundle	0.260	Walnut	Number	0.030
Coriander	Bundle	0.090	Lemon	Number	0.100
Broccoli	Bundle	0.290	Guava	Number	0.210
Asparagus	Bundle	0.280	Pomegranate	Number	0.820
Garlic (bulb)	Phita / Lamshu / Mana	0.140	Banana	Number	0.180
Fresh chilli	Drey	0.280	Mango	Number	0.180
Dry chilli	Drey	0.180	Pear	Number	0.080
Forest products			Groundnut	Phita / Lamshu / Mana	0.300
Cane shoot	Number	0.440	Livestock products		
Fern	Bundle	0.280	Butter	Tsang	0.390
Damru	Bundle	0.240	Butter	Sher	1.000
Pan leaves	Bundle	0.140	Butter	Phog	1.333
			Cheese	Number	0.090
			Hard cheese (chugo)	Chugo-shey	0.180