

AGRICULTURE STATISTICS 2014



DEPARTMENT OF AGRICULTURE
MINISTRY OF AGRICULTURE AND FORESTS
ROYAL GOVERNMENT OF BHUTAN
THIMPHU : BHUTAN

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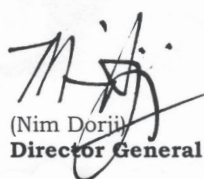


FOREWORD

The Department of Agriculture is pleased to publish the Annual Agriculture Statistics for the year 2014. As usual, it contains data on land use, crop area, yield, production and utilization of the crops cultivated in the country. There are two parts in this publication: Part I includes the data aggregated at the national level, while part II contains the data at the Dzongkhag level. Attempts have been made to bring improvements in the quality of data estimated through establishing a new system of data processing by involving Regional Research and Development Centres.

We hope that this publication will be useful for planners, policymakers, researchers, extension personals, academicians and those who are involved in the development of agriculture sector.

The Department of Agriculture would like to thank the Research and Development Centres in the Regions and the Agriculture sectors of all the 20 Dzongkhags for their contributions.


(Nim Dorji)
Director General



མོན་མཁ་ལས་ཁུངས། མོན་མཁ་དང་ནགས་ཚལ་ལྷན་ཁག། དཔལ་ལྷན་འབྲུག་གཞུང་།

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The Department of Agriculture would like to acknowledge the support and cooperation of the Dzongkhag Agriculture Officers and Gewog Extension Officers of all the 20 Dzongkhags for their contribution and effort in collecting the data from the farming households. The support and facilitation of the Program Directors of Research and Development Centres for compilation and processing of data is also acknowledged. The overall coordination from the Agriculture Extension and Information Management section (AEIMS) of the Department is appreciated.

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A. METHODOLOGY

1) Introduction

The Department of Agriculture (DoA) started the annual agriculture sample survey in 2004 and it has since then been an annual publication of the department. The statistics essentially includes information on agriculture land use, crop area, yield and production of cereals, oil seeds and pulses, spices, vegetables, fruits and nuts that are cultivated in the country. This provides timely and useful statistics for making informed policy decisions and planning appropriate investments.

The publication comes in two parts: 'Part 1' is a summary of the information collected which is presented at national level including data analysis on price and income, food security and crop utilization while the 'Part 2' of the publication contains data at the Dzongkhag level.

2) Objectives

The objectives of the survey are:

- To provide useful information on agricultural land use, crop area, yield and production of the crops cultivated in the country.
- To provide key statistics for helping in monitoring and evaluating agriculture development programmes.
- To provide statistical data for policy makers, agriculture extension workers, researchers and farmers for effective planning for investments in agriculture development.

3) Sampling frame

The household listing is done by the Agriculture Extension Officers (AEOs) who are based in the Gewogs. The AEOs submit the updated household listings to the Dzongkhag Agriculture Sector on an annual basis. The respective Dzongkhag agriculture sector validates and submits the final compiled listing to the DoA.

For 2014 annual agriculture sample survey the 2013 household listing information's were used as a frame and only for those left out Districts and sub districts/Gewogs whose households were not updated was updated using the 2013 format given below.

Format for 2014 annual agriculture sample survey HHs listing

Sl. No	Name of head of the HHs	Village	H.no	T. no	Land cultivated/ not cultivated	If Cultivated		Land left fallow		Land leased out		Land leased in	
						WLC	DLC	WLF	DLF	WLO	DLO	WLI	DLI
1	Pema	Benzibee	Ka-3-42	198	LC		11.37		4.63				
2	Jangchub	Benzibee	KA-3-39	106	LC		8.76		10.59				
3	Dolkar	Benzibee	KA-3-41	231	NC			3.7		1.5			
4	Sangay	Benzibee	KA-3-40	199	LC		14.87		7.93				

During the sampling process, only households actively engaged in agriculture farming have been included in the survey to avoid 'empty' or 'non-response' questionnaires. The data on agriculture land utilization has been used as an indicator/ auxiliary information to deduce the sample size for the survey.

4) Questionnaire design

The survey questionnaire used for Agriculture Survey 2014 is the revised version of Agriculture Survey questionnaire 2013. The revision was done by the Agriculture Extension and Information Management Section (AEIMS) of the Department of Agriculture (DoA) in consultation with the division heads and representatives of all the 20 Dzongkhag Agriculture sectors.

The revision of the 2013 questionnaire was done mainly for the following reasons:

- To do away with the unwanted data variables.
- To adapt the questionnaire as per the changing needs to include a variety of information required over time (eg; to integrate the questionnaire with the 11th Five Year Plan (FYP) for inclusion of information necessary for its effective implementation).

5) Sample size

It is difficult to produce high precision survey results for all crops in each Gewog as the diverse ecological and climatic zones of Bhutan determine the geographical distribution of the crops. Moreover, the estimation of the many indicators in agriculture like the annual crop yield and production, the cropped area, the number of fruit trees etc. becomes difficult as they are a function of many complex variables which in turn are dependent on many other factors. Therefore, making it increasingly difficult to come up with a rigid "sample size" which can give precise, unbiased and efficient estimates. The farmers in Bhutan practice conventional mix farming system with small land holdings.

The formulae given below were used for calculating the sample size, the information on agriculture utilized area at the Gewog level was used as an indicator for the sample size calculation.

$$\text{The initial sample size } n_0 = \left(\frac{Z * 100 * CV \text{ area}}{P} \right)^2$$

Where, n_0 = is the initial sample size

Z = is the statistic that defines the level of confidence desired,
at 95% Confidence Interval the value of $z = 1.96$

$C.V$ = non percentage $C.V$ (coefficient of variation) of the agriculture
utilized area is taken for this survey.

Non percentage $C.V$ = $SD \text{ area} / \bar{x} \text{ area}$

P = the value of population proportion “ p ” or

Margin of error is set at 15% i.e. 0.15 at gewog level.

The final sample size is given by using population correction factor (CF),

$$n = \frac{n_0}{(1 + (n_0 / N))}$$

Where, N = Population size / total farming Households at each Gewog/Sub districts.

The formulae presented above were used to determine the sample size for all the 205 Gewogs in the 20 Dzongkhags.

6) Sampling Design

The “**Circular Systematic sampling**” method was adopted to select the sample at the Gewog/Sub districts level for many of its advantages and conveniences.

The farming households in the geog were taken as the ultimate sampling units from which the samples were drawn/selected using circular systematic sampling approach.

7) Data Collection

The data collection was carried out in mid-March-June 2015, by the AEOs in the gewogs under the supervision of the Dzongkhag Agriculture Sector heads. Twenty Assistant Dzongkhag Agriculture Officers (ADAOs) were briefed on the use of the questionnaire and methods of data collection, who in turn trained the field agriculture staff.

Data Entry and Processing

The database for 2014 survey is an improved version of the 2013 which was designed in CSPRO 6 (Census and Survey Processing Software) version software. The data Managers in the Districts were trained on the use of CSPRO for data cleaning and entry. The data entry and processing was carried out in June 2015 in the Dzongkhags. An improved method for crop cut data collection was introduced to improve the data collection and processing. A focal point each has been identified in the Research and Development Centres (RDCs) who collects and compiles the raw survey and crop cut data from their respective regions. The researchers at the RDCs and the concerned commodity co-ordinators validates the raw data which is then submitted to the DoA for further analysis.

8) Data Analysis and Estimation

The data analysis was done in SPSS version 20 (provided by the NSB) by AEIMS of the DoA.

Yield Estimation:

The yield of the various crops obtained from the survey have been crosschecked and validated with the yields from the crop cuts. In the event where there were inconsistencies in the yield provided by the survey data, the crop cut data was used.

Production= Estimated total area (from the sample survey) * Estimated yield (from the crop cuts)

The 'weight estimation procedure' was used to determine the estimates of population from the sample survey where the data was multiplied by a sampling weight, or expansion factor. The basic weight for each sample household would be equal to the inverse of its probability of selection. The sample design for the agriculture survey 2014 is self-weighting within stratum/Gewog, meaning that all the sampled or the enumerated households within a Gewog will have the same weight.

Adjustment for non-response/ Non response Weight

In order to adjust for the loss of representativeness caused by non-responding households, the weight of the responding units (*Wt_Eh*) was increased by deploying the following formulae. It is the reciprocal/inverse of the percentage responding units from the sample.

$$\text{Non response Weight} / W_{nr} = \frac{1}{Eh / Sh} \Rightarrow \boxed{\frac{Sh}{Eh}}$$

Where: Sh = Sampled farming households in the gewog
 Eh = Enumerated farming households in the gewog

Design Weight / Weighting for probability of sample selection

The design weight or base weight is the inverse of probability of selection of the sample.

Based on the Circular systematic sampling design, the base weight at the Gewog level is calculated as follows:

$$\text{Design weight/Base weight/ } W_d = K \Rightarrow \frac{1}{Sh / Nh} = \boxed{\frac{Nh}{Sh}}$$

Sh = Sampled farming households in the Gewog.

Nh = Total farming households in the Gewog.

Therefore the final weight becomes / $FW = W_d \times W_{nr}$
 (Or)

The Final Weight = Design Weight $\times$ Non response Weight

Finally, the estimation for observed values in the Gewogs has been obtained by multiplying each sample data with the final weight (FW) calculated for each Gewogs.

Therefore, the estimate of a *total value* (such as total production) is the product of the final weight, FW and the value- y_i , for each responding unit, summed over all responding units:

$$\hat{Y} = \sum_{i=1}^n FW \times y_i$$

B. SURVEY COVERAGE AND SCOPE

From the new updated total rural farming households at least 19,339 (31% on an average) of the 61,509 were selected for the enumeration. The coverage was 18,784 (97%) of the total sampled farming households of 19,339. The non-response or the absentees stood at 3% (555) of the households selected for the 2014 survey as compared to 5% from the previous year.

PART 1

NATIONAL LEVEL STATISTICS

C. SUMMARY FINDINGS

Following are the estimated summary statistics based on the data collected from a sample of 18,784 farming Households from mid March to June 2015. The weight estimation method is used to estimate population parameters from the sample data.

Table 1: Coverage of Rural households by the survey 2014

Dzongkhag	Total HHs (Sample frame)Nh	Sample HHs/Sh	Percent sampled	Enumerated HHs/(Eh)	Percent Coverage
Bumthang	1,151	382	33	382	100
Chhukha	2,889	949	33	939	99
Dagana	4,206	1,312	31	1,297	99
Gasa	487	256	53	246	96
Ha	1,300	519	40	500	96
Lhuentse	2,332	771	33	758	98
Monggar	5,363	1,706	32	1,440	84
Paro	2,721	954	35	954	100
Pemagatshel	3,237	1,032	32	955	93
Punakha	3,506	1,046	30	1,024	98
S/Jongkhar	3,960	1,021	26	996	98
Samtse	5,869	1,591	27	1,589	100
Sarpang	3,592	1,156	32	1,139	99
Thimphu	965	450	47	448	100
Trashigang	6,952	1,684	24	1,654	98
Trashiyangtse	2,554	810	32	810	100
Trongsa	1,705	514	30	513	100
Tsirang	2,882	1,095	38	1,094	100
Wangdue	3,961	1,374	35	1,342	98
Zhemgang	1,877	717	38	704	98
BHUTAN	61,509	19,339	31	18,784	97

1. Demographic Characteristics

Table 1.1: Farming Households Population in 2014

Dzongkhag	Avg responding Age	Responding Sex in		0-6 years		6-14 years		15-64 years		Above 64 years	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Bumthang	43	25	75	377	300	501	465	1,365	1,653	304	393
Chhukha	45	62	38	684	514	1,009	978	4,844	4,710	735	715
Dagana	45	59	41	727	616	1,485	1,471	5,125	5,521	636	670
Gasa	51	54	46	48	57	192	152	714	754	74	95
Ha	46	45	55	321	325	292	337	1,581	1,813	329	300
Lhuntse	46	34	66	729	685	994	1,046	3,000	3,559	521	609
Monggar	43	42	58	1,240	1,327	1,725	1,397	6,107	7,301	1,118	1,142
Paro	47	42	58	584	545	971	1,067	4,026	4,626	753	681
Pema-gatshel	48	59	41	414	402	478	587	3,085	3,558	799	736
Punakha	47	32	68	711	658	1,499	1,425	4,681	5,364	633	594
S/Jongkhar	46	67	33	511	386	890	795	4,643	4,928	545	565
Samtse	47	77	23	1,212	1,107	2,359	2,308	10,452	10,484	1,138	963
Sarpang	46	63	37	555	537	938	908	4,814	5,097	667	554
Thimphu	46	37	63	126	112	273	249	1,170	1,351	176	156
Trashigang	47	61	39	1,087	981	2,852	2,880	9,359	9,904	1,603	1,316
Trashi-yangtse	45	46	54	559	531	832	795	2,878	3,290	456	407
Trongsa	45	27	73	176	233	540	445	1,954	2,221	303	340
Tsirang	46	65	35	463	501	984	933	4,206	4,350	669	575
Wangdue	44	37	63	952	897	1,233	1,390	4,726	6,097	732	773
Zhemgang	45	48	52	437	384	849	696	2,630	2,744	436	496
BHUTAN	46	53	47	11,914	11,097	20,896	20,326	81,360	89,325	12,629	12,083

Table 1.2: Dzongkhag wise estimated total population residing on farm by Sex in 2014

Dzongkhag	Male Total	Female Total	Population Total
Bumthang	2,547	2,811	5,359
Chhukha	7,273	6,917	14,190
Dagana	7,973	8,278	16,251
Gasa	1,027	1,059	2,086
Ha	2,524	2,775	5,299
Lhuentse	5,244	5,899	11,143
Monggar	10,190	11,167	21,358
Paro	6,333	6,919	13,252
Pemagatshel	4,776	5,283	10,059
Punakha	7,524	8,041	15,565
Samdrup Jongkhar	6,590	6,675	13,265
Samtse	15,162	14,862	30,024
Sarpang	6,973	7,096	14,069
Thimphu	1,746	1,869	3,615
Trashigang	14,901	15,082	29,983
Trashiyangtse	4,726	5,024	9,750
Trongsa	2,973	3,239	6,212
Tsirang	6,322	6,359	12,681
Wangdue	7,644	9,157	16,801
Zhemgang	4,351	4,319	8,670
BHUTAN	126,799	132,831	259,630

Figure 1: Bhutan’s total population residing on farm by sex, 2014.

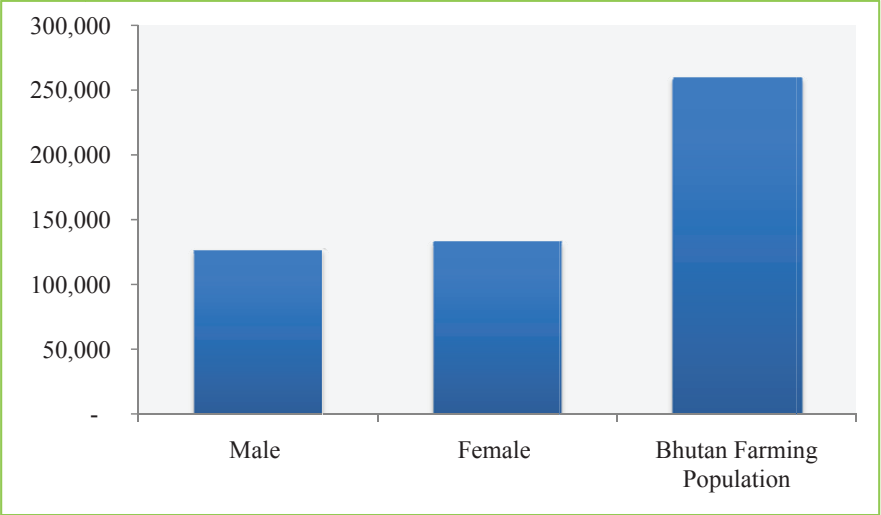
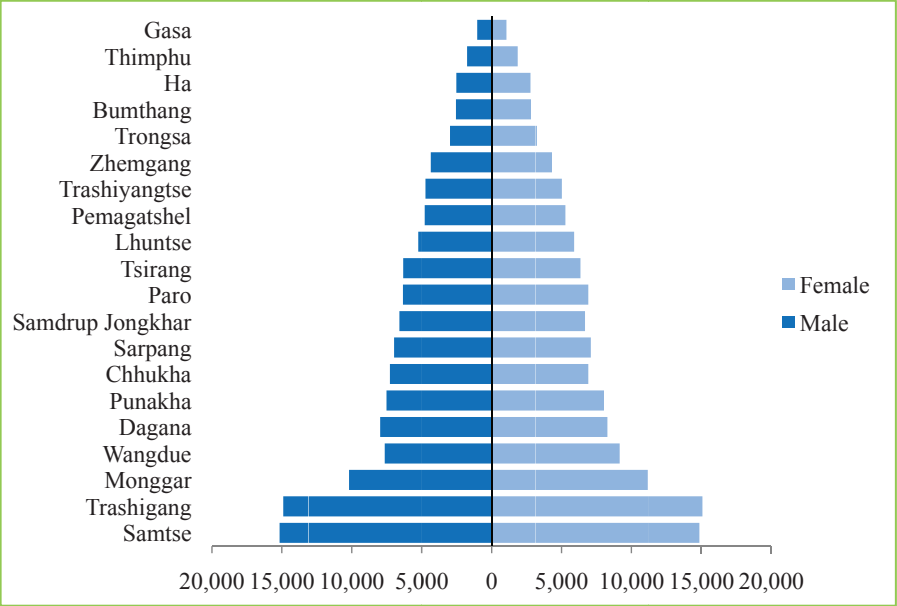


Figure2: Dzongkhag wise Population Pyramid by sex, 2014.



2. Land Utilization 2014

Dry land

Note: Operational land holdings= Kamzhing own land cultivated + Kamzhing fallow + Kamzhing leased in.

Since, only the farming households which are engaged in agriculture activities are included in the annual sample survey 2014 excluding Gungtongs(empty HHs) and HHs having land but not engaged in agriculture activities. The Kamzhing/Dry land left fallow could be much higher than the estimated figure below.

In year 2014 of the total estimated **137,700 acres** of operational Kamzhing land holdings **48,856 acres** were left fallow.

Dzongkhag	Dry land Own Cultivated (Acres)	Dry land left Fallow (Acres)	Dry land leased-Out (Acres)	Dry land leased-In (Acres)	Operational Land holdings
Bumthang	1,640	2,242	105	205	4,087
Chhukha	7,267	2,341	223	56	9,665
Dagana	7,961	2,262	354	128	10,352
Gasa	323	44	0.49	9	376
Ha	2,733	749	5	34	3,517
Lhuentse	3,154	1,859	176	159	5,172
Monggar	8,129	6,527	242	167	14,823
Paro	3,578	560	16	79	4,217
Pemagatshel	4,655	7,162	181	73	11,890
Punakha	985	347	29	14	1,346
S/Jongkhar	6,037	6,156	252	131	12,324
Samtse	10,537	2,022	491	347	12,907
Sarpang	5,635	1,443	84	160	7,238
Thimphu	883	175	45	37	1,095
Trashigang	5,780	5,184	204	286	11,250
Trashiyangtse	1,781	2,227	110	173	4,180
Trongsa	2,168	3,308	114	58	5,533
Tsirang	5,966	929	154	185	7,081
Wangdue	3,595	813	194	486	4,895
Zhemgang	3,234	2,505	50	16	5,755
BHUTAN	86,041	48,856	3,031	2,804	137,700

3. Crop Production

Table 3.1: Cereal, Oilseeds, Spices, Legumes& Pulses and Roots/Tubers.

Crop Type	Crop Name	Harvested Area (acres)	Production (MT)	Yield (Kgs/acre)
Cereal	Paddy	48,873	77,038	1,576
	Maize	58,938	77,244	1,311
	Wheat	4,910	3,465	706
	Barley	2,447	1,753	716
	Buckwheat	4,762	2,583	543
	Millet	4,264	2,362	554
	Cereal Total	124,194	164,445	
Oilseeds	Groundnut	357	266	746
	Mustard	2,783	867	312
	Sunflower	23	9	406
	Soya bean	710	301	424
	Pyrilla(Naam)	212	30	140
	Oilseeds Total	4,085	1,473	
Spices	Cardamom	8,683	1,781	205
	Ginger	2,651	4,983	1,880
	Spices Total	11,334	6,764	
Legumes& Pulses	Rajma Bean	1,668	991	594
	Mung Bean	1,171	577	492
	Lentil	269	74	274
	Legumes & Pulses Total	3,108	1,641	
Roots & Tubers	Sweet Potato	134	80	598
	Tapioca	677	568	838
	Collocacia	158	148	941
	Yam	74	93	1,267
	Roots & Tubers Total	1,042	889	

Table 3.2: Potato and Vegetable production in 2014

Crop Type	Crop Name	Harvested Area (acres)	Quantity Produced (MT)	Yield (Kg/Acre)
Vegetables	Asparagus	275	205	745
	Chilli	4,337	8,586	1,980
	Cabbage	1,884	4,364	2,316
	Cauliflower	1,035	1,650	1,594
	Carrot	444	746	1,679
	Radish	2,491	5,021	2,015
	Turnip	1,664	9,967	5,991
	Beans	2,391	2,830	1,184
	Peas	712	970	1,362
	Tomato	573	899	1,570
	Broccoli	875	1,010	1,154
	Eggplant	726	485	669
	Lady Finger	87	28	321
	Green leaves	2,000	1,938	969
	Onion Bulb	798	757	949
	Garlic	1,282	846	660
	Tree Tomato		424	
	Cultivated Mushroom		17	
	Cucumber		2,484	
	Pumpkin		4,081	
	Squash		2,118	
	Gourds		270	
	Vegetables Total	21,574	49,698	
	Potato	12,785	53,612	4,194

4. Fruit production

Commodities	Total Trees (No's)	Bearing Trees (No's)	Production (MT)	Yield (Kg/bearing tree)
Apple	277,670	217,317	7,051	32
Mandarin	2,061,023	1,060,009	45,226	43
Areca nut	1,285,908	626,207	7,468	12
Mango	57,601	17,458	586	34
Pear	44,739	20,586	1,137	55
Peach	51,222	33,921	1,435	42
Plum	28,079	18,029	783	43
Walnut	38,980	10,386	337	32
Jackfruit	12,721	6,976	1,102	158
Guava	37,071	26,010	787	30
Papaya	5,853	4,419	126	29
Pomegranate	10,370	5,355	111	21
Litchi	22,889	4,785	172	36
Persimmon	8,805	4,988	227	46
Banana	300,360	107,712	1,631	15
Sugarcane			324	
Passion Fruit			135	
Pine Apple			54	
BHUTAN			68,692	

5. Crop Utilization for 2014

Table 5.1: Utilization of Cereals, Spices, Legumes & Pulses, Oil Seeds, Cucurbits and Roots & Tuber

Crop Type	Crop Name	Qty retained for Seed (MT)	Qty sold (MT)	Avg unit price (Nu/kg)	Amount Earned (Million Nu)	Type of Market (in %)	
						Domestic	Export
Cereals	Paddy	1,111	444	34	14	99	1
	Maize	983	1,178	16	19	83	17
	Wheat	168	31	33	0.9	100	0
	Barley	93	24	37	0.9	100	0
	Finger Millet	32	22	26	0.5	100	0
	Foxtail Millet	5	0.7	24	0.02	100	0
	Sweet Buckwheat	89	6	36	0.18	100	0
	Bitter Buckwheat	66	0.8	25	0.02	100	0
Legumes & Pulses	Rajma Bean	63	452	49	17	78	22
	Mung Bean	20	187	65	11	94	6
	Lentil	7	13	81	0.9	96	4
Oil seeds	Mustard	24	70	42	2	97	3
	Sunflower	0.3	1	59	0.05	100	0
	Soya bean	17	36	49	2	96	4
	Groundnut	15	57	67	3	99	1
	Pyrilla (Naam)	1	2	120	0.19	97	3
Roots & Tubers	Sweet Potato	3	6	30	0.16	100	0
	Tapioca		46	21	0.8	96	4
	Collocacia	9	15	21	0.38	87	13
Spices	Garlic	91	222	85	18	97	3
	Onion bulb		82	48	3	99.7	0.3
	Ginger	1,199	2,638	60	126	82	18
	Cardamom		782	1,270	989	55	45
Cucurbits	Cucumber		580	21	13	100	0
	Pumpkin		229	14	3	100	0
	Squash		230	13	3	100	0
	Gourd		68	31	2	100	0

Table 5.2: Utilization of Vegetables and Potato

Crop Type	Crop Name	Qty retained for Seed (MT)	Qty sold (MT)	Avg unit price (Nu/kg)	Amount Earned (Million Nu)	Type of Market (in %)	
						Domestic	Export
Vegetables	Asparagus		96	96	8	100	0
	Chilli		3,085	58	146	97	3
	Cabbage		2,223	20	40	97	3
	Cauliflower		418	33	15	97	3
	Carrot		312	33	11	89	11
	Radish		852	14	11	96	4
	Turnip		13	21	0.2	100	0
	Beans		906	36	33	97	3
	Peas		394	38	13	86	14
	Tomato		106	31	3	99.1	.9
	Eggplant		101	25	2	100	0
	Ladyfinger		5	30	0.1	95	5
	Green leaves		569	21	13	99.7	0.3
	Broccoli		233	45	11	100	0
	Cultivated Mushrooms		13	173	3	98	2
	Dally Chilli		63	115	5	99.2	.8
	Tree tomato		65	37	3	100	0
Potato	Potato	9,139	34,653	23	853	65	35

6. Fruit Utilization for 2014

Commodities	Quantity sold (MT)	Avg unit price (Nu/Kg)	Amount Earned (Million Nu)	Type of Market (in %)	
				Domestic	Export
Apple	4,863	29	131	76	24
Mandarin	34,106	28	555	65	35
Mango	273	41	8	96	4
Pear	250	31	6	99	1
Peach	352	29	8	99	1
Plum	115	23	2	100	0
Walnut	142	99	7	96	4
Areca nut	5,617	23	134	77	23
Jackfruit	40	20	0.8	86	14
Guava	113	25	3	100	0
Papaya	11	24	0.3	97	3
Pomegranate	24	39	0.6	100	0
Litchi	25	34	0.8	100	0
Persimmon	88	35	2	99	1
Banana	286	23	6	99	1
Passion fruit	15	28	0.4	97	3
Pineapple	9	21	0.2	94	6

7. HHs Cash Income

Table 7.1: Dzongkhag wise proportion of HHs having earned / not earned cash income from non timber forest products and other off farm activities

Dzongkhag	Earned	Not Earned
Bumthang	70	30
Chhukha	25	75
Dagana	52	48
Gasa	72	28
Ha	54	46
Lhuentse	44	56
Monggar	48	52
Paro	32	68
Pemagatshel	52	48
Punakha	34	66
Samdrup Jongkhar	50	50
Samtse	23	77
Sarpang	36	64
Thimphu	57	43
Trashigang	49	51
Trashiyangtse	64	36
Trongsa	42	58
Tsirang	42	58
Wangdue	41	59
Zhemgang	44	56
BHUTAN	43	57

Figure 3: Dzongkhag wise proportion of farming HHs having cash income from non-timber forest products and other activities.

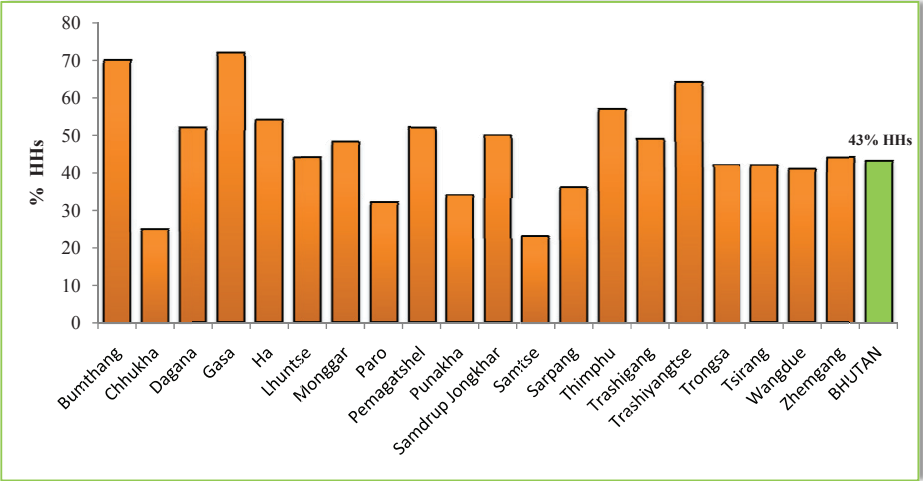


Figure 4: Rural household cash income from forest edible product and other activities in year 2014 (in million nu.).

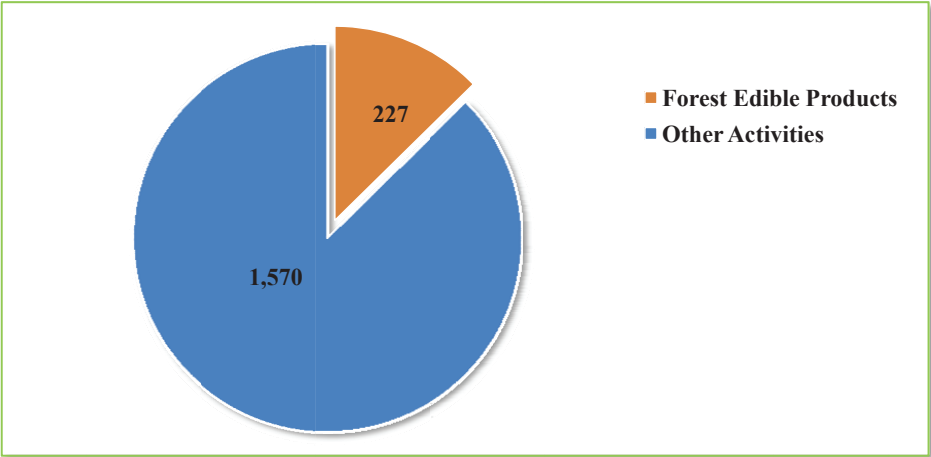


Table 7.2: Cash income from forest edible products and other activities in year 2014.

Forest Edible Products	Amount Earned (Million Nu)
Bamboo products(Bamboo shoot)	1
Cane Products(Cane shoot/Patsha)	0.3
Fern(Nakay)	3
Damru	0.3
Medicinal Aromatic Plants & herbs	5
Wild Mushrooms	19
Cordyceps	198
Total Amount Earned	227
Other Activities	Amount Earned (Million Nu)
Weaving(Weaving and sale of woven products)	95
Pottering(Carrying luggage and other loads)	69
Business/Contact works	980
Part time skilled labour (eg. Carpentry, Wood crafting, traditional painting)	426
Total Amount Earned	1,570

Table 7.3: Cash income from processed cereal products

Processed Cereals	Qty Sold (MT)	Avg Unit Price (Nu/Kg)	Amount Earned (Million Nu)	Type of Market (in %)	
				Domestic	Export
Rice	1,502	67	101	99.9	0.1
Zaw	190	92	14	100	0
Tengma	361	106	38	97	3
Kharang	16	41	0.7	100	0
Wheat Flour	7	49	0.4	100	0
Buckwheat Flour	8	67	0.5	100	0
Zaw Flour	4	108	0.5	100	0
Maykhuu	16	122	4	100	0
Roasted Maize	65	31	2	100	0
Local alcoholic beverage made out of Cereals			15	100	0

8. Food Security 2014

Table 8.1: Proportion of farming households by self sufficiency of food (agriculture crops) for 2014

Dzongkhag	Did you produce enough agriculture crops (food) for your household?		% HHs with food (agriculture crops) shortage by months											
	Enough	Not Enough	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Bumthang	39	61	27	33	41	49	50	43	40	35	30	25	24	21
Chhukha	64	36	2	4	12	20	22	21	20	16	12	9	3	2
Dagana	48	52	11	12	17	24	34	40	39	35	26	16	10	9
Gasa	29	71	49	51	57	63	67	71	71	69	68	55	49	49
Ha	67	33	20	16	14	15	11	9	6	5	8	10	15	11
Lhuentse	78	22	5	7	10	13	17	17	17	13	10	6	5	4
Monggar	75	25	16	8	9	14	20	16	15	23	21	31	11	10
Paro	83	17	10	9	10	11	9	9	9	8	7	6	6	8
Pemagatshel	45	55	8	8	10	13	17	23	21	10	7	6	6	6
Punakha	74	26	9	12	13	17	18	19	18	16	12	10	7	9
Samdrup Jongkhar	58	42	6	12	17	26	29	24	15	13	14	12	7	5
Samtse	48	52	6	10	17	29	41	41	38	31	20	12	6	4
Sarpang	53	47	16	16	17	21	28	38	38	37	29	23	18	16
Thimphu	68	32	34	41	46	42	39	38	35	35	37	33	33	35
Trashigang	76	24	13	15	9	11	9	9	6	4	3	3	3	4
Trashiyangtse	75	25	3	4	7	13	14	15	15	11	5	2	3	3
Trongsa	44	56	16	18	20	24	29	35	36	38	37	27	16	13
Tsirang	50	50	14	19	26	35	44	44	41	32	21	17	15	15
Wangdue	73	27	11	14	15	14	12	14	16	17	14	12	11	10
Zhemgang	45	55	16	17	17	20	21	21	19	16	14	14	25	25
BHUTAN	65	35	10	12	15	19	22	24	22	18	14	11	9	8

Figure 5: Estimated proportion of farming households facing food (Agriculture crop) shortage in the year 2014

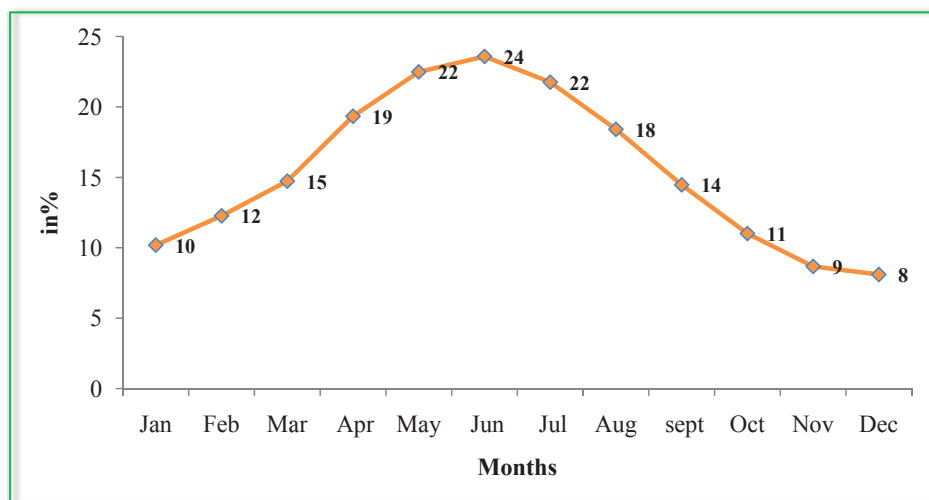
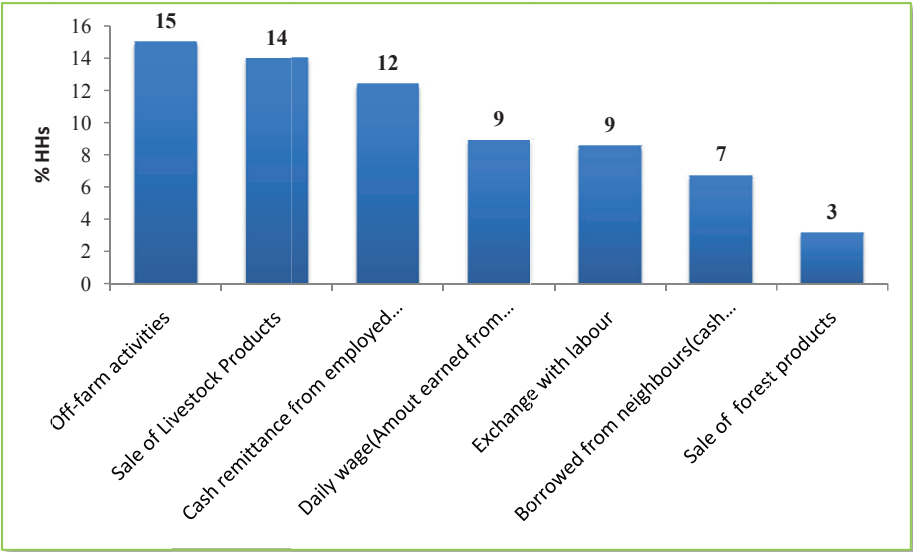


Table 8.2: Food shortage coping mechanism in 2014

Coping Mechanism used	% HHs
Off-farm activities (weaving, pottering, Business/contact etc.)	15
Sale of Livestock Products	14
Cash remittance from employed members	12
Daily wage(Amount earned from working in others field)	9
Exchange with labour	9
Borrowed from neighbours(cash or agricultural products)	7
Sale of forest products	3

Figure 6: Proportion of HHs using various coping mechanisms to address the food (agriculture crop) shortage in the year 2014 for Bhutan.

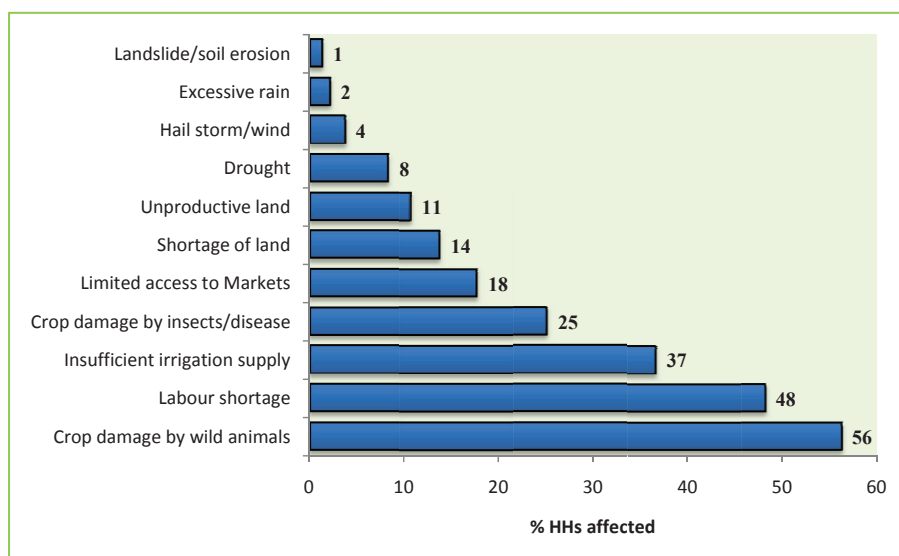


9. Farming Constraints faced

Table 9: Proportion of HHs affected by the various farming constrains in the year 2014

Farming Constrains	HHs affected by the various farming constrains
Crop damage by wild animals	56
Labour shortage	48
Insufficient irrigation supply	37
Crop damage by insects/disease	25
Limited access to Markets	18
Shortage of land	14
Unproductive land	11
Drought	8
Hail storm/wind	4
Excessive rain	2
Landslide/soil erosion	1

Figure 7: Percentage of farming HHs affected by the various constrains in the year 2014.



10. Crop damage by natural calamities and wild animals

Table 10.1: Dzongkhag wise proportion of HHs affected by natural calamities resulting in low food production and low quality of produce.

Dzongkhag	Experienced	Not Experienced
Bumthang	2	98
Chhukha	8	92
Dagana	3	97
Gasa	0	100
Ha	4	96
Lhuentse	4	96
Monggar	17	83
Paro	1	99
Pemagatshel	6	94
Punakha	1	99
Samdrup Jongkhar	5	95
Samtse	11	89
Sarpang	7	93
Thimphu	2	98
Trashigang	21	79
Trashiyangtse	26	74
Trongsa	7	93
Tsirang	9	91
Wangdue	8	92
Zhemgang	3	97
BHUTAN	9	91

* Note:

List of calamities

1. Insufficient irrigation supply
2. Unproductive land
3. Crop damaged by insects /diseases
4. Drought
5. Excessive rain
6. Hail storm/wind
7. Land slides/soil erosion

Figure 8: Proportion of HHs affected by various natural calamities resulting in low production and quality of crops

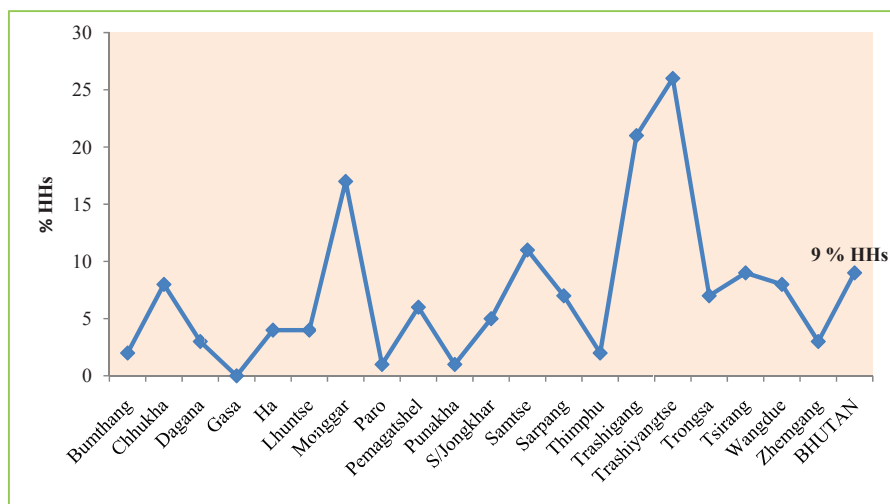


Table 10.2: Estimated paddy area and quantity lost to the wild animals.

Dzongkhag	Area lost(Acres)	Quantity lost (MT)
Bumthang	0.1	0.2
Chhukha	76	46
Dagana	133	90
Ha	18	12
Lhuentse	81	102
Monggar	28	21
Paro	100	109
Pemagatshel	3	1
Punakha	244	222
Samdrup Jongkhar	87	118
Samtse	112	106
Sarpang	163	150
Thimphu	3	7
Trashigang	59	63
Trashiyangtse	91	106
Trongsa	115	81
Tsirang	233	164
Wangdue	249	291
Zhemgang	66	38
BHUTAN	1,862	1,725

Table 10.3: Estimated maize area and quantity lost to the wild animals.

Dzongkhag	Area lost(Acres)	Quantity lost (MT)
Chhukha	210	159
Dagana	452	255
Ha	32	19
Lhuentse	233	300
Monggar	695	584
Paro	12	3
Pemagatshel	211	195
Punakha	21	19
Samdrup Jongkhar	399	490
Samtse	285	243
Sarpang	677	538
Thimphu	2	0.87
Trashigang	422	372
Trashiyangtse	166	229
Trongsa	145	143
Tsirang	757	503
Wangdue	44	26
Zhemgang	152	117
BHUTAN	4,914	4,194

Table 10.4: Estimated wheat area and quantity lost to the wild animals.

Dzongkhag	Area lost(Acres)	Quantity lost(MT)
Bumthang	24	21
Chhukha	9	7
Dagana	1	0.7
Ha	62	33
Lhuentse	0.9	0.9
Monggar	3	3
Paro	34	20
Pemagatshel	1	1
Punakha	9	4
Samdrup Jongkhar	1	1
Samtse	0.9	0.7
Sarpang	0.8	0.6
Thimphu	0.9	0.2
Trashigang	1	0.5
Trashiyangtse	0.7	2
Trongsa	4	2
Tsirang	3	1
Wangdue	12	5
Zhemgang	4	4
BHUTAN	173	108

Table 10.5: Estimated barley area and quantity lost to the wild animals.

Dzongkhag	Area lost(Acres)	Quantity lost (MT)
Bumthang	8	6
Chhukha	2	0.3
Dagana	0.2	0.06
Gasa	0.2	0.04
Ha	0.58	0.7
Monggar	40	28
Paro	0.4	0.2
Pemagatshel	0.2	0.04
Punakha	1	0.2
Samdrup Jongkhar	2	2
Trashigang	0.3	0.4
Trashiyangtse	0.1	0.06
Trongsa	5	3
Tsirang	0.2	0.1
Wangdue	0.9	0.4
BHUTAN	62	41

Table 10.6: Estimated millet area and quantity lost to the wild animals.

Dzongkhag	Area lost(Acres)	Quantity lost(MT)
Bumthang	1	1
Chhukha	22	11
Dagana	20	8
Ha	11	5
Monggar	0.20	0.1
Pemagatshel	4	3
Samdrup Jongkhar	1	0.6
Samtse	36	30
Sarpang	37	23
Trashiyangtse	13	8
Trongsa	2	0.3
Tsirang	15	4
Wangdue	0.1	0.4
Zhemgang	0.5	0.08
BHUTAN	165	94

Table 10.7: Estimated buckwheat area and quantity lost to the wild animals.

Dzongkhag	Area lost(Acres)	Quantity lost (MT)
Bumthang	85	62
Chhukha	2	0.7
Dagana	26	8
Ha	39	15
Paro	4	3
Pemagatshel	3	2
Punakha	3	1
Samdrup Jongkhar	10	6
Samtse	0.5	0.2
Sarpang	0.6	0.3
Trashigang	0.5	0.2
Trongsa	29	10
Tsirang	3	0.8
Wangdue	5	2
Zhemgang	6	5
BHUTAN	216	115

Table 10.8: Estimated vegetable area and quantity lost to the wild animals.

Dzongkhag	Vegetable Area lost(Acres)	Quantity lost (MT)
Chhukha	4	5
Dagana	22	7
Ha	2	2
Lhuentse	2	2
Monggar	0.5	0.7
Paro	7	14
Pemagatshel	1	0.3
Punakha	20	44
Samdrup Jongkhar	6	9
Samtse	12	7
Sarpang	1	6
Thimphu	1	1
Trashigang	2	2
Trashiyangtse	7	8
Trongsa	13	30
Tsirang	71	36
Wangdue	20	23
BHUTAN	191	196

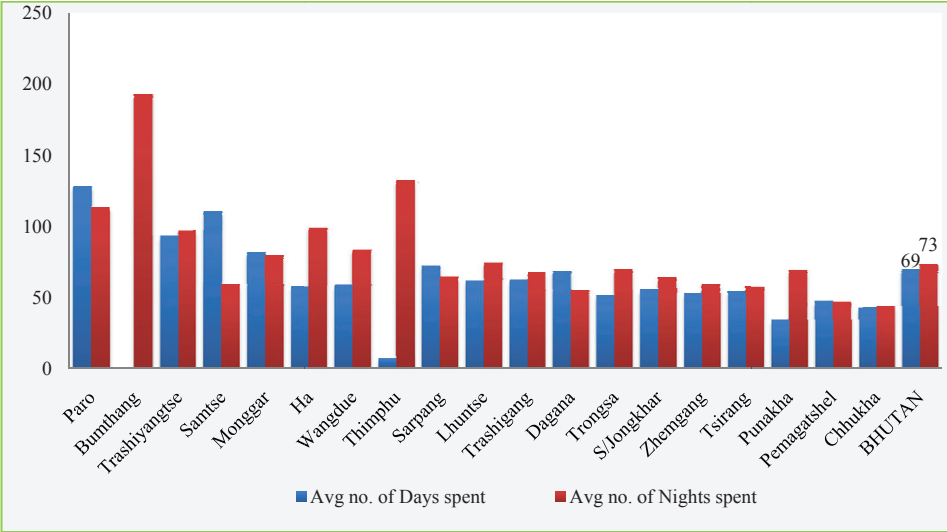
Table 10.9: Estimated potato area and quantity lost to the wild animals.

Dzongkhag	Area Lost (Acres)	Quantity lost (MT)
Bumthang	12	42
Chhukha	30	132
Dagana	5	0.87
Gasa	0.1	0.14
Ha	47	141
Lhuentse	14	16
Monggar	57	74
Paro	113	199
Pemagatshel	4	6
Samdrup Jongkhar	8	13
Samtse	0.5	0.4
Sarpang	0.6	0.2
Thimphu	10	27
Trashigang	57	101
Trashiyangtse	27	58
Trongsa	6	5
Tsirang	14	8
Wangdue	72	244
Zhemgang	0.18	0.11
BHUTAN	476	1,069

11. Dzongkhag wise estimated average number of days and nights spent in guarding crops from wild animal damages in 2014.

Dzongkhag	Average number of Days spent to guard crops	Average number of Nights spent to guard crops
Bumthang		193
Chhukha	42	43
Dagana	68	54
Ha	57	99
Lhuentse	62	74
Monggar	81	79
Paro	127	112
Pemagatshel	48	47
Punakha	34	69
Samdrup Jongkhar	55	64
Samtse	110	59
Sarpang	72	64
Thimphu	7	132
Trashigang	62	67
Trashiyangtse	93	97
Trongsa	51	69
Tsirang	54	57
Wangdue	58	83
Zhemgang	53	59
BHUTAN	69	73

Figure 9: Dzongkhag wise estimated average number of days and nights spent in guarding the crops from wild animals damages.



12. Road Access in 2014

Note: The road access refers to the accessibility of farming households to any type of roads that are pliable to motor vehicles

Table 12: Proportion of rural households by walking distance to the nearest motor able road point.

Dzongkhag	Less than 1 hour	1 to 3 hours	4 to 6 hours	Above 6 hours
Bumthang	99	1	0	0
Chhukha	56	21	13	10
Dagana	73	24	1	2
Gasa	35	0	0	65
Ha	63	4	6	28
Lhuentse	79	18	2	1
Monggar	79	13	7	1
Paro	97	3	0	0
Pemagatshel	91	6	2	1
Punakha	92	8	0	0
Samdrup Jongkhar	56	17	13	13
Samtse	54	27	12	8
Sarpang	80	10	4	6
Thimphu	85	3	0	13
Trashigang	81	15	4	1
Trashiyangtse	76	15	8	1
Trongsa	73	22	3	3
Tsirang	84	14	2	0
Wangdue	79	15	1	5
Zhemgang	53	28	11	8
BHUTAN	75	14	6	5

PART 2
DZONGKHAG LEVEL STATISTICS

13. Cereal Crops

Table 13.1: Paddy harvested area (acres), Production (MT) and Yield (kg/acre)

Dzongkhag	Area(in acres)	Production(in MT)	Yield (kgs/acre)
Bumthang	164	257	1,573
Chhukha	1,866	2,482	1,330
Dagana	3,600	5,256	1,460
Gasa	120	146	1,221
Ha	138	170	1,230
Lhuentse	2,000	3,400	1,700
Monggar	920	1,104	1,200
Paro	4,000	8,800	2,200
Pemagatshel	64	60	930
Punakha	6,339	11,954	1,886
Samdrup Jongkhar	2,223	2,800	1,260
Samtse	7,200	9,360	1,300
Sarpang	4,200	6,309	1,502
Thimphu	460	966	2,100
Trashigang	2,800	4,088	1,460
Trashiyangtse	1,600	2,288	1,430
Trongsa	1,462	2,206	1,508
Tsirang	3,564	4,633	1,300
Wangdue	4,854	9,173	1,890
Zhemgang	1,300	1,586	1,220
BHUTAN	48,873	77,038	1,576

Table 13.2: Maize harvested area (acres), Production (MT) and Yield (kg/acre)

Dzongkhag	Area(in acres)	Production(in MT)	Yield (kg/acre)
Chhukha	3,000	2,571	857
Dagana	6,300	7,390	1,173
Ha	300	255	850
Lhuentse	2,272	3,976	1,750
Monggar	10,277	15,416	1,500
Paro	59	79	1,351
Pemagatshel	4,500	6,750	1,500
Punakha	231	328	1,420
Samdrup Jongkhar	5,200	7,010	1,348
Samtse	5,741	6,572	1,145
Sarpang	3,847	3,793	986
Thimphu	5	4	833
Trashigang	5,324	8,417	1,581
Trashiyangtse	1,800	3,138	1,743
Trongsa	1,186	1,660	1,400
Tsirang	5,000	5,090	1,018
Wangdue	300	316	1,054
Zhemgang	3,597	4,478	1,245
BHUTAN	58,938	77,244	1,311

Table 13.3: Wheat harvested area (acres), Production (MT) and Yield (kg/acre)

Dzongkhag	Harvested Area(Acres)	Production(MT)	Yield(kg/acre)
Bumthang	440	379	861
Chhukha	220	170	774
Dagana	109	61	566
Gasa	19	17	915
Ha	560	400	715
Lhuentse	43	34	789
Monggar	175	91	522
Paro	654	402	614
Pemagatshel	15	9	591
Punakha	732	540	738
Samdrup Jongkhar	147	122	829
Samtse	103	54	520
Sarpang	8	4	458
Thimphu	121	107	880
Trashigang	132	112	849
Trashiyangtse	26	19	720
Trongsa	368	267	726
Tsirang	112	56	500
Wangdue	878	592	674
Zhemgang	47	29	612
Bhutan	4,910	3,465	706

Table 13.4: Barley harvested area (acres), Production (MT) and Yield (kg/acre)

Dzongkhag	Harvested Area(Acres)	Production(MT)	Yield(kg/acre)
Bumthang	206	202	976
Chhukha	69	38	553
Dagana	12	6	494
Gasa	162	169	1,045
Ha	41	25	611
Lhuentse	8	9	1,162
Monggar	922	591	641
Paro	87	49	564
Pemagatshel	59	19	330
Punakha	45	13	291
Samdrup Jongkhar	76	38	499
Samtse	9	6	663
Sarpang	4	2	509
Thimphu	10	12	1,216
Trashigang	241	223	925
Trashiyangtse	13	11	827
Trongsa	268	191	711
Tsirang	22	10	432
Wangdue	168	125	743
Zhemgang	24	14	574
BHUTAN	2,447	1,753	716

Table 13.5: Buckwheat harvested area (acres), Production (MT) and Yield (kg/acre)

Dzongkhag	Harvested Area(Acres)	Production(in MT)	Yield(kg/acre)
Bumthang	592	433	731
Chhukha	335	194	580
Dagana	570	206	361
Gasa	0.2	0.21	1,000
Ha	349	226	648
Lhuentse	10	5	500
Monggar	139	51	368
Paro	149	112	749
Pemagatshel	180	93	517
Punakha	188	87	462
SamdrupJongkhar	584	393	673
Samtse	127	73	575
Sarpang	90	42	469
Trashigang	294	160	543
Trashiyangtse	32	20	634
Trongsa	453	203	448
Tsirang	128	47	363
Wangdue	365	168	460
Zhemgang	176	71	403
BHUTAN	4,762	2,583	543

Table 13.6: Millet harvested area (acres), Production (MT) and Yield (kg/acre)

Dzongkhag	Harvested Area (Acres)	Production (in MT)	Yield(Kg/acre)
Chhukha	482	254	527
Dagana	423	230	544
Ha	79	29	371
Lhuentse	58	48	835
Monggar	51	23	452
Paro	16	9	569
Pemagatshel	261	177	678
Punakha	1.4	0.66	473
SamdrupJongkhar	172	104	601
Samtse	912	486	533
Sarpang	847	466	550
Thimphu	0.88	0.176	200
Trashigang	46	31	667
Trashiyangtse	209	172	822
Trongsa	47	21	449
Tsirang	465	214	460
Wangdue	25	12	490
Zhemgang	168	85	505
Bhutan	4,264	2,362	554

14. Vegetable Crops

Table 14.1: Potato harvested area (acres), Production (MT) and Yield (kg/acre)

Dzongkhag	Harvested Area(Acres)	Production(MT)	Yield(kg/acre)
Bumthang	836	6,019	7,200
Chhukha	918	6,061	6,601
Dagana	120	159	1,329
Gasa	67	187	2,814
Haa	418	1,873	4,480
Lhuentse	338	1,183	3,501
Monggar	2,045	4,975	2,432
Paro	754	3,601	4,777
Pemagatshel	570	1,375	2,412
Punakha	71	118	1,663
Samdrup Jongkhar	718	1,364	1,900
Samtse	111	220	1,985
Sarpang	120	93	773
Thimphu	202	1,297	6,419
Trashigang	1,797	5,356	2,981
Trashiyangtse	594	2,107	3,547
Trongsa	113	377	3,342
Tsirang	241	240	997
Wangdue	2,631	16,820	6,393
Zhemgang	121	187	1,536
BHUTAN	12,785	53,612	4,194

Table 14.2: Asparagus harvested area (acres), Production (MT) and Yield (kg/acre)

Dzongkhag	Harvested Area(Acres)	Production(MT)	Yield(kg/acre)
Bumthang	1.3	0.9	672
Chhukha	7	6	797
Dagana	13	4	287
Gasa	0.1	0.08	600
Ha	10	3	296
Lhuentse	2	0.33	189
Monggar	14	9	673
Paro	91	109	1,200
Pemagatshel	4	0.76	171
Punakha	34	30	882
SamdrupJongkhar	2	0.88	521
Samtse	0.3	0.22	882
Sarpang	0.0	0.01	500
Thimphu	18	11	607
Trashigang	30	15	503
Trashiyangtse	13	4	264
Trongsa	3	2	540
Tsirang	17	2	104
Wangdue	15	8	512
Zhemgang	0.13	0.08	588
BHUTAN	275	205	745

Table 14.3: Chilli harvested area (acres), Production (MT) and Yield (kg/acre)

Dzongkhag	Harvested Areas(Acres)	Production(MT)	Yield(Kg/acre)
Bumthang	37	100	2,717
Chhukha	246	431	1,752
Dagana	161	168	1,049
Gasa	14	20	1,454
Ha	55	75	1,359
Lhuentse	259	555	2,143
Monggar	467	765	1,637
Paro	600	1,983	3,305
Pemagatshel	188	209	1,112
Punakha	378	900	2,381
Samdrup Jongkhar	183	295	1,612
Samtse	66	32	487
Sarpang	58	37	647
Thimphu	96	396	4,124
Trashigang	600	1,046	1,744
Trashigang	184	352	1,919
Trongsa	118	173	1,458
Tsirang	210	146	696
Wangdue	350	828	2,364
Zhemgang	68	75	1,099
BHUTAN	4,337	8,586	1,980

Table 14.4: Cabbage harvested area (acres), Production (MT) and Yield (kg/acre)

Dzongkhag	Harvested Areas(Acres)	Production(MT)	Yield(kg/acre)
Bumthang	36	124	3,451
Chhukha	74	197	2,658
Dagana	88	120	1,369
Gasa	7	13	1,952
Ha	32	89	2,753
Lhuentse	84	97	1,166
Monggar	181	351	1,942
Paro	260	1,280	4,929
Pemagatshel	76	81	1,068
Punakha	53	117	2,224
SamdrupJongkhar	87	143	1,637
Samtse	72	65	905
Sarpang	39	58	1,491
Thimphu	28	165	5,935
Trashigang	401	505	1,259
Trashiyangtse	43	123	2,879
Trongsa	57	162	2,835
Tsirang	165	461	2,790
Wangdue	62	177	2,858
Zhemgang	40	34	839
BHUTAN	1,884	4,364	2,316

Table 14.5: Cauliflower harvested area (acres), Production (MT) and Yield (kg/acre)

Dzongkhag	Harvested Area(Acres)	Production(MT)	Yield(Kg/acre)
Bumthang	12	45	3,757
Chhukha	48	67	1,394
Dagana	26	46	1,780
Gasa	3	6	2,261
Ha	12	24	2,100
Lhuentse	46	84	1,824
Monggar	160	241	1,505
Paro	25	50	2,028
Pemagatshel	30	25	847
Punakha	14	22	1,530
Samdrup Jongkhar	46	78	1,692
Samtse	78	81	1,039
Sarpang	33	34	1,033
Thimphu	40	236	5,906
Trashigang	265	318	1,200
Trashiyangtse	30	60	2,009
Trongsa	21	32	1,507
Tsirang	108	146	1,350
Wangdue	26	41	1,600
Zhemgang	12	12	967
BHUTAN	1,035	1,650	1,594

Table 14.6: Carrot harvested area (acres), Production (MT) and Yield (kg/acre)

Dzongkhag	Harvested Area(Acres)	Production(MT)	Yield(Kg/acre)
Bumthang	6	19	3,246
Chhukha	60	113	1,884
Dagana	12	12	990
Gasa	2	5	2,177
Ha	14	48	3,375
Lhuentse	15	25	1,622
Monggar	41	61	1,497
Paro	39	77	1,950
Pemagatshel	29	17	594
Punakha	25	42	1,700
Samdrup Jongkhar	17	23	1,352
Samtse	8	4	439
Sarpang	5	4	841
Thimphu	19	77	4,047
Trashigang	50	59	1,174
Trashiyangtse	10	15	1,519
Trongsa	17	25	1,483
Tsirang	33	16	490
Wangdue	38	100	2,600
Zhemgang	3	3	926
BHUTAN	444	746	1,679

Table 14.7: Radish harvested area (acres), Production (MT) and Yield (kg/acre)

Dzongkhag	Harvested Area(Acres)	Production(MT)	Yield(kg/acre)
Bumthang	14	74	5,311
Chhukha	107	223	2,086
Dagana	125	294	2,355
Gasa	11	20	1,775
Ha	48	204	4,275
Lhuentse	114	143	1,260
Monggar	373	769	2,062
Paro	44	117	2,679
Pemagatshel	154	279	1,810
Punakha	80	143	1,790
Samdrup Jongkhar	161	375	2,328
Samtse	138	112	811
Sarpang	46	74	1,615
Thimphu	40	237	5,925
Trashigang	444	615	1,388
Trashiyangtse	41	151	3,668
Trongsa	65	125	1,912
Tsirang	233	365	1,567
Wangdue	205	644	3,143
Zhemgang	49	55	1,115
BHUTAN	2,491	5,021	2,015

Table 14.8: Turnip harvested area (acres), Production (MT) and Yield (kg/acre)

Dzongkhag	Harvested Area(Acres)	Production(MT)	Yield(kg/acre)
Bumthang	36	228	6,335
Chhukha	86	576	6,710
Dagana	17	72	4,212
Gasa	7	13	1,707
Ha	270	2,052	7,600
Lhuentse	4	7	1,600
Monggar	8	9	1,210
Paro	119	499	4,212
Pemagatshel	5	7	1,438
Punakha	25	48	1,960
Samdrup Jongkhar	6	11	1,817
Samtse	1	2	1,280
Sarpang	1	0	460
Thimphu	30	181	5,960
Trashigang	8	48	5,859
Trashiyangtse	1	2	1,754
Trongsa	14	61	4,239
Tsirang	14	13	980
Wangdue	1,011	6,137	6,071
Zhemgang	1	2	1,900
BHUTAN	1,664	9,967	5,991

Table 14.9: Beans harvested area (acres), Production (MT) and Yield (kg/acre)

Dzongkhag	Harvested Area(Acres)	Production(MT)	Yield(kg/acre)
Bumthang	6	18	2,974
Chhukha	122	132	1,080
Dagana	145	94	652
Gasa	3	6	2,016
Ha	17	24	1,373
Lhuentse	122	120	982
Monggar	321	335	1,041
Paro	114	262	2,300
Pemagatshel	124	89	714
Punakha	272	563	2,072
Samdrup Jongkhar	151	202	1,344
Samtse	194	154	793
Sarpang	61	50	811
Thimphu	15	47	3,136
Trashigang	200	248	1,242
Trashiyangtse	39	60	1,546
Trongsa	45	60	1,318
Tsirang	283	159	561
Wangdue	102	174	1,700
Zhemgang	54	34	636
BHUTAN	2,391	2,830	1,184

Table 14.10: Peas harvested area (acres), Production (MT) and Yield (kg/acre)

Dzongkhag	Harvested Area(Acres)	Produced(MT)	Yield(Kg/acre)
Bumthang	10	5	529
Chhukha	60	69	1,157
Dagana	23	21	899
Gasa	2	3	1,865
Ha	54	56	1,033
Lhuentse	8	11	1,420
Monggar	69	116	1,690
Paro	181	382	2,115
Pemagatshel	26	12	472
Punakha	61	57	943
Samdrup Jongkhar	31	39	1,275
Samtse	9	6	660
Sarpang	6	4	722
Thimphu	19	38	1,974
Trashigang	30	26	875
Trashiyangtse	10	11	1,040
Trongsa	11	13	1,220
Tsirang	74	59	796
Wangdue	28	39	1,400
Zhemgang	2	2	905
BHUTAN	712	970	1,362

Table 14.11: Tomato harvested area (acres), Production (MT) and Yield (kg/acre)

Dzongkhag	Harvested Area(Acres)	Production(MT)	Yield(kg/acre)
Bumthang	8	16	2,043
Chhukha	31	50	1,607
Dagana	37	66	1,797
Ha	8	9	1,105
Lhuentse	15	13	894
Monggar	36	59	1,633
Paro	34	55	1,615
Pemagatshel	12	17	1,420
Punakha	36	71	1,963
Samdrup Jongkhar	30	39	1,299
Samtse	53	62	1,172
Sarpang	46	48	1,049
Thimphu	24	64	2,671
Trashigang	43	66	1,530
Trashiyangtse	18	32	1,767
Trongsa	14	28	1,985
Tsirang	72	69	956
Wangdue	47	124	2,629
Zhemgang	9	12	1,306
BHUTAN	573	899	1,570

Table 14.12: Broccoli harvested area (acres), Production (MT) and Yield (kg/acre)

Dzongkhag	Harvested Area(Acres)	Production(MT)	Yield(kg/acre)
Bumthang	10	31	3,065
Chhukha	50	80	1,600
Dagana	42	63	1,493
Gasa	4	4	993
Ha	7	9	1,290
Lhuentse	26	35	1,360
Monggar	120	149	1,240
Paro	42	61	1,464
Pemagatshel	9	5	566
Punakha	130	150	1,154
Samdrup Jongkhar	28	36	1,281
Samtse	36	31	860
Sarpang	76	36	480
Thimphu	27	53	1,954
Trashigang	92	111	1,212
Trashiyangtse	18	24	1,343
Trongsa	21	17	796
Tsirang	95	78	818
Wangdue	33	32	980
Zhemgang	9	4	453
BHUTAN	875	1,010	1,154

Table 14.13: Onion bulb harvested area (acres), Production (MT) and Yield (kg/acre)

Dzongkhag	Harvested Area(Acres)	Production(MT)	Yield(kg/acre)
Chhukha	26	29	1,121
Dagana	36	29	817
Ha	1	1	1,097
Lhuentse	29	34	1,168
Monggar	49	45	920
Paro	13	16	1,215
Pemagatshel	15	11	700
Punakha	33	39	1,181
Samdrup Jongkhar	64	58	900
Samtse	27	20	723
Sarpang	36	33	910
Thimphu	4	4	1,017
Trashigang	260	154	591
Trashiyangtse	30	29	970
Trongsa	9	6	700
Tsirang	100	180	1,800
Wangdue	60	66	1,100
Zhemgang	5	3	625
BHUTAN	798	757	949

Table 14.14: Garlic harvested area (acres), Production (MT) and Yield (kg/acre)

Dzongkhag	Harvested Area(Acres)	Production(MT)	Yield(kg/acre)
Bumthang	14	13	931
Chhukha	9	10	1,148
Dagana	64	27	416
Gasa	11	9	793
Ha	16	11	672
Lhuentse	161	102	634
Monggar	158	100	635
Paro	9	7	764
Pemagatshel	68	26	385
Punakha	161	74	463
Samdrup Jongkhar	65	44	679
Samtse	20	10	504
Sarpang	9	4	470
Thimphu	3	3	968
Trashigang	239	209	876
Trashiyangtse	72	65	907
Trongsa	30	24	790
Tsirang	83	42	506
Wangdue	70	51	724
Zhemgang	18	14	745
BHUTAN	1,282	846	660

Table 14.15: Other Vegetables Production (MT)

Dzongkhag	Egg Plant Production(MT)	Lady Finger Production(MT)	Green leaves Production(MT)
Bumthang	0.03	-	19
Chhukha	10	1.19	174
Dagana	30	4.30	179
Gasa	-	-	11
Ha	4	0.08	24
Lhuentse	38	0.30	78
Monggar	40	0.82	136
Paro	37	0.08	36
Pemagatshel	12	0.52	67
Punakha	52	2.01	155
Samdrup Jongkhar	26	4.94	162
Samtse	18	1.98	180
Sarpang	17	2.25	86
Thimphu	6	-	91
Trashigang	24	2.26	109
Trashiyangtse	32	0.16	57
Trongsa	29	2.03	56
Tsirang	36	4.18	172
Wangdue	68	0.46	121
Zhemgang	6	0.34	26
BHUTAN	485	28	1,938

Table 14.16: Tree Tomato Production (MT)

Dzongkhag	Production(MT)
Chhukha	8
Dagana	18
Gasa	2
Ha	2
Lhuentse	40
Monggar	77
Pemagatshel	18
Punakha	66
SamdrupJongkhar	29
Samtse	6
Sarpang	20
Trashigang	46
Trashiyangtse	11
Trongsa	7
Tsirang	30
Wangdue	35
Zhemgang	7
BHUTAN	424

Table 14.17: Mushroom Cultivated Production (MT)

Dzongkhag	Production (MT)
Chhukha	5
Dagana	0.46
Gasa	0.41
Ha	0.10
Lhuentse	0.02
Monggar	4
Paro	1.00
Pemagatshel	0.15
Punakha	0.83
Samdrup Jongkhar	0.39
Samtse	0.26
Sarpang	0.42
Thimphu	0.39
Trashigang	2
Trashiyangtse	0.50
Trongsa	0.43
Tsirang	0.09
Wangdue	0.60
Zhemgang	0.37
BHUTAN	17

Table 14.18: Cucurbits Production (MT)

Dzongkhag	Cucumber Production (MT)	Pumpkin Production (MT)	Squash Production (MT)	Gourds Production (MT)
Bumthang	8	11	-	0.3
Chhukha	103	218	230	18
Dagana	142	354	142	10
Gasa	2	2	3	-
Ha	14	27	15	5
Lhuentse	147	230	40	5
Monggar	265	400	240	0.4
Paro	32	230	1	-
Pemagatshel	145	352	72	13
Punakha	577	221	248	67
Samdrup Jongkhar	233	408	120	22
Samtse	69	208	219	31
Sarpang	53	131	180	12
Thimphu	28	38	0	3
Trashigang	256	365	90	30
Trashiyangtse	102	371	40	9
Trongsa	48	60	21	3
Tsirang	127	260	420	25
Wangdue	112	126	24	12
Zhemgang	22	69	14	5
BHUTAN	2,484	4,081	2,118	270

15. Spices

Table 15.1: Ginger Harvested Area (acres), Production (MT) and Yield (Kg/acre)

Dzongkhag	Harvested Area(Acres)	Production(MT)	Yield(Kg/acre)
Chhukha	647	767	1,185
Dagana	50	49	967
Ha	6	2	383
Lhuentse	4	2	459
Monggar	46	37	815
Paro	0.85	0.08	92
Pemagatshel	121	155	1,283
Punakha	8	4	539
Samdrup Jongkhar	491	1,182	2,409
Samtse	622	1,616	2,596
Sarpang	307	523	1,703
Trashigang	14	12	864
Trashiyangtse	10	12	1,239
Trongsa	8	9	1,123
Tsirang	244	548	2,252
Wangdue	4	6	1,536
Zhemgang	68	58	847
BHUTAN	2,651	4,983	1,880

Table 15.2: Cardamom Harvested Area (acres), Production (MT) and Yield (kg/acre)

Dzongkhag	Harvested Area(Acres)	Production(MT)	Yield(kg/acre)
Chhukha	1,505	256	170
Dagana	754	124	164
Ha	611	93	153
Lhuentse	2	0.13	73
Monggar	0.80	0.06	80
Pemagatshel	11	2	207
Samdrup Jongkhar	166	23	140
Samtse	4,619	1,154	250
Sarpang	698	91	130
Trashigang	6	0.98	178
Trongsa	78	6	72
Tsirang	199	25	125
Zhemgang	35	6	168
BHUTAN	8,683	1,781	205

16. Oil Seeds

Table 16.1: Ground nut Harvested Area (acres), Production (MT) and Yield (kg/acre)

Dzongkhag	Harvested Area(Acres)	Production (MT)	Yield(Kg/acre)
Chhukha	0.98	0.2	200
Dagana	1.07	0.6	592
Monggar	37	27	727
Pemagatshel	72	45	629
Punakha	8	8	916
Samdrup Jongkhar	8	8	1049
Samtse	0.7	0.5	645
Sarpang	4	0.2	47
Trashigang	124	93	748
Trashiyangtse	81	75	924
Trongsa	1	0.1	133
Tsirang	19	9	458
Wangdue	0.3	0.1	259
Zhemgang	0.5	0.1	250
BHUTAN	357	266	746

Table 16.2: Sunflower Harvested Area (acres), Production (MT) and Yield (kg/acre)

Dzongkhag	Harvested Area(Acres)	Production(MT)	Yield(kg/acre)
Bumthang	2	0.8	350
Chhukha	2	0.5	192
Ha	0.2	0.09	429
Paro	2	0.8	450
Punakha	3	0.7	247
Samdrup Jongkhar	1	0.4	381
Samtse	1	0.2	178
Trashigang	5	1.9	420
Trongsa	0.3	0.01	24
Tsirang	6	3	577
Wangdue	0.2	0.2	700
Zhemgang	0.5	0.4	920
BHUTAN	23	9	406

Table 16.3: Mustard Harvested Area (acres), Production (MT) and Yield (kg/acre)

Dzongkhag	Harvested Area(Acres)	Production(MT)	Yield(Kg/acre)
Bumthang	21	7	317
Chhukha	512	170	331
Dagana	214	65	304
Gasa	6	3	465
Ha	72	20	276
Lhuentse	38	20	530
Monggar	124	45	363
Paro	176	53	300
Pemagatshel	90	24	269
Punakha	197	57	288
Samdrup Jongkhar	226	87	385
Samtse	155	49	316
Sarpang	284	96	339
Thimphu	7	3	449
Trashigang	225	53	233
Trashiyangtse	45	6	141
Trongsa	50	12	235
Tsirang	82	23	283
Wangdue	211	60	285
Zhemgang	47	15	314
BHUTAN	2,783	867	312

Table 16.4: Soya bean Harvested Area (acres), Production (MT) and Yield (kg/acre)

Dzongkhag	Harvested Area(Acres)	Produced(MT)	Yield(kg/acre)
Chhukha	14	7	481
Dagana	11	3	263
Ha	4	2	381
Lhuentse	10	5	472
Monggar	127	54	423
Pemagatshel	166	59	356
Punakha	9	4	450
Samdrup Jongkhar	51	22	427
Samtse	49	19	382
Sarpang	6	1	227
Trashigang	121	72	589
Trashiyangtse	88	32	370
Trongsa	3	1	161
Tsirang	38	13	355
Wangdue	1	1	722
Zhemgang	11	7	639
BHUTAN	710	301	424

Table 16.5: Pyrilla (Naam) Harvested Area (acres), Production (MT) and Yield (kg/acre)

Dzongkhag	Harvested Area(Acres)	Production(MT)	Yield(Kg/acre)
Dagana	1	0.27	267
Ha	12	2	199
Lhuentse	4	2	433
Monggar	8	2	253
Pemagatshel	94	4	43
Punakha	5	0.50	92
Samdrup Jongkhar	24	13	515
Samtse	0.16	0.0	120
Sarpang	3	0.3	109
Trashigang	23	1	42
Trashiyangtse	3	0.8	330
Trongsa	10	0.7	63
Tsirang	3	0.5	144
Wangdue	3	0.9	329
Zhemgang	18	2	106
BHUTAN	212	30	140

17. Legumes and Pulses

Table 17.1: Rajma Bean Harvested Area (acres), Production (MT) and Yield(kg/acre)

Dzongkhag	Harvested Area(Acres)	Production(MT)	Yield(Kg/acre)
Chhukha	42	14	323
Dagana	399	156	392
Lhuentse	11	2	169
Monggar	677	594	878
Paro	3	4	1,303
Pemagatshel	120	13	106
Punakha	1	0.46	449
Samdrup Jongkhar	90	41	450
Samtse	16	10	638
Sarpang	13	6	466
Trashigang	228	123	537
Trashiyangtse	1	0.37	467
Tsirang	66	27	404
Zhemgang	1	1	806
BHUTAN	1,668	991	594

Table 17.2: Mung Bean Harvested Area (acres), Production (MT) and Yield(kg/acre)

Dzongkhag	Harvested Area(Acres)	Production(MT)	Yield(Kg/acre)
Chhukha	51	15	296
Dagana	231	150	651
Lhuentse	7	0.20	29
Monggar	138	87	628
Pemagatshel	5	2	338
Samdrup Jongkhar	252	140	554
Samtse	124	37	300
Sarpang	188	64	339
Trashigang	24	21	864
Trashiyangtse	35	6	173
Trongsa	0.05	0.03	750
Tsirang	116	56	477
Zhemgang	1	0.5	754
BHUTAN	1,171	577	492

Table 17.3: Lentil Harvested Area (acres), Production (MT) and Yield(kg/acre)

Dzongkhag	Harvested Area(Acres)	Production (MT)	Yield(Kg/acre)
Chhukha	21	7	323
Dagana	14	3	189
Monggar	1	0.18	276
Pemagatshel	6	1	198
Punakha	0.02	0.002	100
Samdrup Jongkhar	38	16	406
Samtse	108	21	193
Sarpang	45	9	205
Trashigang	3	1	205
Trashiyangtse	0.70	0.3	406
Tsirang	32	16	511
Zhemgang	0.27	0.05	200
BHUTAN	269	74	274

18. Roots and Tubers

Table 18.1: Sweet Potato Harvested Area (acres), Production (MT) and Yield (kg/acre)

Dzongkhag	Harvested area(Acres)	Production(MT)	Yield(Kg/acre)
Chhukha	5	7	1,286
Dagana	9	6	661
Ha	7	3	420
Lhuentse	0.2	0.03	150
Monggar	15	5	344
Pemagatshel	15	8	518
Punakha	13	3	214
Samdrup Jongkhar	12	12	1,006
Samtse	11	9	838
Sarpang	3	2	770
Trashigang	12	8	642
Trashiyangtse	6	3	514
Trongsa	0.5	0.1	195
Tsirang	19	10	511
Wangdue	2	1	581
Zhemgang	3	3	1,090
BHUTAN	134	80	598

Table 18.2: Tapioca Harvested Area (acres), Production (MT) and Yield (kg/acre)

Dzongkhag	Harvested Area(Acres)	Production(MT)	Yield(kg/acre)
Chhukha	218	65	299
Dagana	27	53	1,965
Ha	4	1	415
Monggar	9	8	915
Pemagatshel	32	28	871
Punakha	1	0.8	1,381
Samdrup Jongkhar	173	64	371
Samtse	125	228	1,816
Sarpang	28	80	2,895
Trashigang	3	0.9	364
Trashiyangtse	0.5	2	3,875
Trongsa	0.8	0.2	200
Tsirang	46	23	503
Wangdue	0.7	0.6	916
Zhemgang	11	13	1,219
BHUTAN	677	568	838

Table 18.3: Collocacia Harvested Area (acres), Production (MT) and Yield (kg/acre)

Dzongkhag	Harvested Area(Acres)	Production(MT)	Yield(Kg/acre)
Chhukha	5	10	1,880
Dagana	4	3	730
Monggar	20	30	1,503
Pemagatshel	13	9	711
Punakha	0.09	0.26	3,000
Samdrup Jongkhar	16	12	791
Samtse	40	44	1,106
Sarpang	10	6	598
Trashigang	0.05	0.05	1,000
Trashiyangtse	4	5	1,381
Tsirang	37	18	475
Wangdue	0.03	0.08	2,695
Zhemgang	9	11	1,205
BHUTAN	158	148	941

Table 18.4: Yam Harvested Area (acres), Production (MT) and Yield (kg/acre)

Dzongkhag	Harvested Area(Acres)	Production(MT)	Yield(kg/acre)
Chhukha	0.98	0.7	714
Dagana	1	1	1,193
Monggar	9	29	3,113
Pemagatshel	3	10	3,148
Samdrup Jongkhar	18	27	1,514
Samtse	10	10	1,015
Sarpang	3	3	1,108
Trashigang	0.10	0.24	2,472
Trashiyangtse	0.17	0.17	1,000
Tsirang	26	10	367
Zhemgang	2	2	1,017
BHUTAN	74	93	1,267

Horticulture Fruit Crop Production in 2014

19. Major Fruit Crops

Table 19.1: Apple Production and Yield in 2014

Dzongkhag	Total Tree	Bearing Tree	Production(MT)	Yield (kg/bearing tree)
Bumthang	7,970	7,496	162	22
Chhukha	5,106	4,255	119	28
Dagana	475	113	1	6
Gasa	64	40	1	23
Ha	20,948	16,334	436	27
Lhuentse	1,962	884	27	31
Monggar	4,187	924	18	20
Paro	156,730	128,801	4,637	36
Pemagatshel	538	262	3	12
Punakha	431	155	3	22
Samdrup Jongkhar	262	33	1	19
Thimphu	64,114	55,023	1,554	28
Trashigang	2,997	1,241	45	36
Trashiyangtse	9,570	607	13	21
Trongsa	276	159	1	7
Tsirang	183	15	0	8
Wangdue	1,375	974	28	29
Zhemgang	483		-	
BHUTAN	277,670	217,317	7,051	32

Table 19.2: Mandarin Production and Yield in 2014

Dzongkhag	Total Tree	Bearing Tree	Production(MT)	Yield (kg/bearing tree)
Chhukha	182,367	134,927	3,348	25
Dagana	278,094	165,982	6,639	40
Ha	826	795	13	17
Lhuentse	26,442	5,794	295	51
Monggar	191,370	39,797	2,279	57
Pemagatshel	245,568	118,220	4,292	36
Punakha	22,379	14,570	367	25
Samdrup Jongkhar	296,967	107,395	5,538	52
Samtse	91,317	63,330	1,837	29
Sarpang	228,437	189,252	10,409	55
Trashigang	83,761	14,656	615	42
Trashiyangtse	31,638	8,874	286	32
Trongsa	14,918	6,283	205	33
Tsirang	166,216	113,573	6,658	59
Wangdue	10,209	5,168	161	31
Zhemgang	190,514	71,392	2,285	32
BHUTAN	2,061,023	1,060,009	45,226	43

Table 19.3: Areca nut Production and Yield in 2014

Dzongkhag	Total Tree	Bearing Tree	Production(MT)	Yield (kg/bearing tree)
Chhukha	58,455	32,308	388	12
Dagana	150,961	76,794	732	10
Monggar	3,115	1,174	10	9
Pemagatshel	4,735	691	8	11
Samdrup Jongkhar	87,953	53,562	763	14
Samtse	428,578	200,601	2,606	13
Sarpang	548,534	259,915	2,947	11
Tsirang	600	160	0.8	5
Zhemgang	2,978	1,003	13	13
BHUTAN	1,285,908	626,207	7,468	12

20. Other Fruit Crops

Table 20.1: Mango Production and Yield in 2014

Dzongkhag	Total Tree	Bearing Tree	Production(MT)	Yield (kg/bearing tree)
Chhukha	1,473	281	9	31
Dagana	10,123	3,451	79	23
Ha	3	3	0.05	15
Lhuentse	327	135	7	49
Monggar	7,211	3,399	156	46
Paro	18			
Pemagatshel	8,509	1,003	37	37
Punakha	2,294	1,330	39	29
Samdrup Jongkhar	7,163	1,693	60	35
Samtse	2,013	701	29	42
Sarpang	4,542	1,515	52	35
Trashigang	4,281	1,627	49	30
Trashiyangtse	1,936	294	5	15
Trongsa	513	237	8	33
Tsirang	2,968	797	36	46
Wangdue	398	261	6	25
Zhemgang	3,830	731	14	19
BHUTAN	57,601	17,458	586	34

Table 20.2: Pear Production and Yield in 2014

Dzongkhag	Total Tree	Bearing Tree	Production(MT)	Yield (kg/bearing tree)
Bumthang	249	210	8	38
Chhukha	883	624	32	51
Dagana	1,919	1,372	91	66
Gasa	290	93	2	21
Ha	45	20	0.5	24
Lhuentse	2,643	1,084	43	40
Monggar	7,786	2,465	79	32
Paro	1,393	837	27	32
Pemagatshel	636	240	9	38
Punakha	3,640	2,333	164	70
Samdrup Jongkhar	4,153	1,848	70	38
Samtse	848	647	33	50
Sarpang	1,239	840	83	99
Thimphu	340	267	13	47
Trashigang	9,111	2,997	177	59
Trashiyangtse	3,842	701	7	10
Trongsa	764	520	10	20
Tsirang	2,139	1,643	219	133
Wangdue	2,565	1,712	67	39
Zhemgang	255	135	3	19
BHUTAN	44,739	20,586	1,137	55

Table 20.3: Peach Production and Yield in 2014

Dzongkhag	Total Tree	Bearing Trees	Production(MT)	Yield (kg/bearing tree)
Bumthang	294	248	6	26
Chhukha	1,209	431	17	41
Dagana	4,864	3,280	141	43
Gasa	39	25	1	21
Ha	251	155	4	25
Lhuentse	2,573	1,677	64	38
Monggar	5,672	3,433	136	40
Paro	2,830	2,481	98	40
Pemagatshel	4,107	2,111	118	56
Punakha	2,776	1,827	153	84
Samdrup Jongkhar	3,808	2,625	117	45
Samtse	1,284	1,142	38	34
Sarpang	2,991	2,262	42	19
Thimphu	532	468	16	33
Trashigang	5,265	3,260	205	63
Trashiyangtse	3,462	2,612	75	29
Trongsa	692	456	11	24
Tsirang	4,576	2,931	129	44
Wangdue	2,419	1,805	46	25
Zhemgang	1,578	692	18	25
BHUTAN	51,222	33,921	1,435	42

Table 20.4: Plum Production and Yield in 2014

Dzongkhag	Total Tree	Bearing Tree	Production(MT)	Yield (kg/bearing tree)
Bumthang	242	211	7	35
Chhukha	3,393	3,349	134	40
Dagana	3,937	1,666	89	54
Gasa	5	5	0.18	37
Ha	50	27	0.49	18
Lhuentse	1,219	903	41	45
Monggar	2,897	1,738	81	46
Paro	534	447	13	29
Pemagatshel	1,991	1,005	49	48
Punakha	1,390	981	43	44
Samdrup Jongkhar	2,173	1,261	61	48
Samtse	1,580	1,230	35	28
Sarpang	862	673	30	44
Thimphu	354	269	13	47
Trashigang	2,858	1,489	74	50
Trashiyangtse	1,326	702	27	39
Trongsa	171	151	4	26
Tsirang	1,264	1,113	59	53
Wangdue	437	331	11	33
Zhemgang	1,395	479	13	27
BHUTAN	28,079	18,029	783	43

Table 20.5: Walnut Production and Yield in 2014

Dzongkhag	Total Tree	Bearing Tree	Production (MT)	Yield (kg/bearing tree)
Bumthang	621	393	5	13
Chhukha	525	108	0.8	7
Dagana	2,309	457	23	50
Gasa	2		-	
Ha	433	169	2	15
Lhuentse	1,001	330	14	42
Monggar	5,979	921	24	26
Paro	2,957	1,210	29	24
Pemagatshel	2,097	425	16	37
Punakha	3,986	1,475	45	30
Samdrup Jongkhar	3,054	481	13	28
Samtse	74	3	0.03	10
Sarpang	403	30	0.3	11
Thimphu	759	545	9	17
Trashigang	6,833	1,997	119	60
Trashiyangtse	3,052	813	15	19
Trongsa	548	107	3	27
Tsirang	818	54	0.6	12
Wangdue	2,076	689	10	15
Zhemgang	1,451	180	6	35
BHUTAN	38,980	10,386	337	32

Table 20.6: Jack Fruit Production and Yield in 2014

Dzongkhag	Total Tree	Bearing Tree	Production(MT)	Yield (Kg/bearing tree)
Chhukha	122	69	8	122
Dagana	695	180	27	150
Monggar	190	123	16	129
Pemagatshel	896	319	38	120
Punakha	52	37	3	79
Samdrup Jongkhar	5,369	3,061	538	176
Samtse	3,912	2,320	362	156
Sarpang	807	480	78	163
Trashigang	26	17	0.8	50
Trashiyangtse	27	9	0.7	82
Trongsa	11	11	1	110
Tsirang	226	85	10	118
Wangdue	10	5	0.8	150
Zhemgang	377	259	18	70
BHUTAN	12,721	6,976	1,102	158

Table 20.7: Guava Production and Yield in 2014

Dzongkhag	Total Tree	Bearing Tree	Production(MT)	Yield (kg/bearing tree)
Chhukha	954	606	22	36
Dagana	4,356	2,525	74	29
Lhuentse	578	512	19	38
Monggar	2,633	1,769	54	31
Pemagatshel	2,768	1,507	61	41
Punakha	5,846	4,862	149	31
Samdrup Jongkhar	3,778	2,441	79	32
Samtse	2,056	1,554	49	32
Sarpang	3,008	2,077	33	16
Trashigang	1,889	1,202	45	38
Trashiyangtse	1,011	826	26	31
Trongsa	2,113	1,418	40	28
Tsirang	3,616	2,980	97	33
Wangdue	1,640	1,192	27	23
Zhemgang	826	538	12	22
BHUTAN	37,071	26,010	787	30

Table 20.8: Papaya Production and Yield in 2014

Dzongkhag	Total Tree	Bearing Tree	Production	Yield (kg/bearing tree)
Chhukha	23	17	0.7	43
Dagana	330	231	6	27
Lhuentse	32	32	0.7	23
Monggar	359	292	6	20
Pemagatshel	477	357	6	17
Punakha	219	164	3	20
Samdrup Jongkhar	520	356	11	30
Samtse	369	247	8	33
Sarpang	1,399	1,131	40	35
Trashigang	366	260	9	34
Trashiyangtse	351	300	8	28
Trongsa	112	45	1	27
Tsirang	1,158	892	25	27
Wangdue	65	42	1	22
Zhemgang	73	51	1	25
BHUTAN	5,853	4,419	126	29

Table 20.9: Pomegranate Production and Yield in 2014

Dzongkhag	Total Tree	Bearing Trees	Production(MT)	Yield (kg/bearing tree)
Chhukha	52	20	0.1	4
Dagana	2,197	732	12	17
Lhuentse	224	158	6	36
Monggar	884	421	8	19
Paro	147	85	3	30
Pemagatshel	180	96	2	25
Punakha	1,061	639	11	18
Samdrup Jongkhar	669	305	3	10
Samtse	159	84	2	28
Sarpang	215	102	1.0	9
Trashigang	896	506	15	29
Trashiyangtse	525	353	6	18
Trongsa	796	419	10	24
Tsirang	1,500	824	14	17
Wangdue	837	598	17	29
Zhemgang	30	12	0.1	8
BHUTAN	10,370	5,355	111	21

Table 20.10: Litchi Production and Yield in 2014

Dzongkhag	Total Tree	Bearing Tree	Production(MT)	Yield (kg/bearing tree)
Chhukha	666	61	2	34
Dagana	2,156	249	8	31
Monggar	298	99	2	18
Pemagatshel	3,026	28	0.34	12
Punakha	48	25	0.23	9
Samdrup Jongkhar	2,015	310	10	33
Samtse	1,581	920	35	38
Sarpang	11,862	2,862	112	39
Trashigang	43	9	0.2	20
Trashiyangtse	7	7	0.1	10
Trongsa	14	11	0.2	15
Tsirang	668	189	2	13
Wangdue	5	3	0.1	26
Zhemgang	500	11	0.2	16
BHUTAN	22,889	4,785	172	36

Table 20.11: Persimmon Production and Yield in 2014

Dzongkhag	Total Tree	Bearing Tree	Production(MT)	Yield (kg/bearing tree)
Bumthang	4	4	0.02	5
Chhukha	350	90	3	38
Dagana	253	151	11	75
Lhuentse	158	46	1	15
Monggar	1,172	385	16	43
Paro	381	275	8	30
Pemagatshel	82	18	0.3	18
Punakha	2,407	1,658	88	53
Samdrup Jongkhar	221	30	0.4	13
Samtse	81	70	2	23
Sarpang	276	101	1	11
Thimphu	71	46	1	29
Trashigang	910	466	13	29
Trashiyangtse	385	66	2.39	36
Trongsa	107	92	2	24
Tsirang	254	62	0.9	15
Wangdue	1,656	1,389	75	54
Zhemgang	39	39	0.3	9
BHUTAN	8,805	4,988	227	46

Table 20.12: Banana Production and Yield in 2014

Dzongkhag	Total Tree	Bearing Tree	Production(MT)	Yield (Kg/bearing tree)
Chhukha	12,913	3,802	50	13
Dagana	26,576	14,845	236	16
Ha	314	245	2	8
Lhuentse	1,764	743	11	15
Monggar	30,121	8,289	113	14
Pemagatshel	22,637	4,647	77	17
Punakha	4,633	1,170	22	19
Samdrup Jongkhar	40,416	8,791	131	15
Samtse	34,365	12,633	202	16
Sarpang	36,141	16,185	204	13
Trashigang	20,366	5,954	108	18
Trashiyangtse	7,547	1,965	29	15
Trongsa	3,768	1,940	39	20
Tsirang	44,112	21,356	343	16
Wangdue	7,307	1,950	28	14
Zhemgang	7,381	3,200	34	11
BHUTAN	300,360	107,712	1,631	15

Table 20.13: Other Fruit Crops Production

Dzongkhag	Sugarcane Production(MT)	Passion fruits Production(MT)	Pine Apple Production(MT)
Chhukha	8	5	3
Dagana	27	12	8
Ha	0.50	0.08	-
Lhuentse	1	4	-
Monggar	12	15	5
Pemagatshel	72	14	3
Punakha	26	18	0.36
Samdrup Jongkhar	41	22	14
Samtse	15	4	5
Sarpang	11	9	12
Trashigang	21	10	1
Trashiyangtse	17	2	0.15
Trongsa	4	2	0.15
Tsirang	57	9	1
Wangdue	9	7	-
Zhemgang	2	0.96	1
BHUTAN	324	135	54

