

AGRICULTURE STATISTICS 2006



(Volume I)

DEPARTMENT OF AGRICULTURE
MINISTRY OF AGRICULTURE
ROYAL GOVERNMENT OF BHUTAN
THIMPHU, BHUTAN

Contact Address:

Information Management Section

Department of Agriculture

Ministry of Agriculture

Ph. # 322228/331316

Fax # 323562

E-mail: imsdoa@moa.gov.bt

Published by : Department of Agriculture, MoA, Thimphu

དཔལ་ལྷན་འབྲུག་གཞུང་
སོན་མ་ལྷན་ཁག།
བཀའ་ཤིས་ཚེས་རྗེང་།
ཐིམ་ཕུ།



DEPARTMENT OF AGRICULTURE
Royal Government of Bhutan
Ministry of Agriculture
Tashichhodzong : Thimphu

Foreword

This publication presents comprehensive data on topics concerning area and production of crops to address the data needs of the various clients. Attempt is made to present the data on the agricultural area, yield and production levels. We hope that the data will provide better understanding of the sector in order to make informed decisions and programs particularly those that aim for rural development. Since the agriculture survey is very quite challenging, we do not claim that the data are as accurate as they should be. We hope to improve the data collection procedures as we progress.

The data are presented in two volumes. Volume-I contains brief descriptions of the objective, census design, methodology, coverage and the limitations. The rest of the volume provides national level data for 20 dzongkhags. Volume-II is an annex to Volume I and presents data by geogs in sub-volumes.

The Department of Agriculture received support and cooperation from various agencies in bringing out this publication. The support and cooperation shows the importance of reliable data. Further, we would like to express appreciation to the Dzongkhag administrations for fullest co operation and support. We are late in bringing out this publication due to inevitable circumstances and conducting reconciliation and validation meetings with the Dzongkhags and Agencies.

I would also like to extend appreciation to all colleagues in the department for bringing out this publication.

Chencho Norbu
DIRECTOR

Date: 21 July 2008

Table of contents.

Foreword.....	i
1. Introduction.....	1
1.1 Objectives	1
Scope and coverage.....	1
Table 1: Paddy Harvested Area, Production and Yield (Kg/Acre).....	4
Table 2: Maize Harvested Area, Production and Yield (Kg/Acre).....	5
Table 3: Wheat Harvested Area, Production and Yield (Kg/Acre)	6
Table 4: Barley Harvested Area, Production and Yield (Kg/Acre).....	7
Table 5: Foxtail Millet Harvested Area, Production and Yield (Kg/Acre)	7
Table 6: Finger Millet Harvested Area, Production and Yield (Kg/Acre)	8
Table 7: Sweet Buckwheat Harvested Area, Production and Yield (Kg/Acre).....	8
Table 8: Bitter Buckwheat Harvested Area, Production and Yield (Kg/Acre)	9
Table 9: Rajma Bean Harvested Area, Production and Yield (Kg/Acre).....	9
Table 10: Mung Bean Harvested Area, Production and Yield (Kg/Acre).....	10
Table 11: Other pulses Harvested Area, Production and Yield (Kg/Acre).....	10
Table 12: Mustard Harvested Area, Production and Yield (Kg/Acre)	11
Table 13: Soya Bean Harvested Area, Production and Yield (Kg/Acre)	11
Table 14: Garlic Harvested Area, Production and Yield (Kg/Acre).....	12
Table 15: Bulb Onion Harvested Area, Production and Yield (Kg/Acre).....	12
Table 16: Ginger Harvested Area, Production and Yield (Kg/Acre)	13
Table 17: Cardamom Harvested Area, Production and Yield (Kg/Acre).....	13
Table 18: Asparagus Harvested Area, Production and Yield (Kg/Acre).....	14

Table 19: Chili Harvested Area, Production and Yield (Kg/Acre).....	14
Table 20: Cabbage Harvested Area, Production and Yield (Kg/Acre).....	15
Table 21: Cauliflower Harvested Area, Production and Yield (Kg/Acre).....	15
Table 22: Carrot Harvested Area, Production and Yield (Kg/Acre)	16
Table 23: Radish Harvested Area, Production and Yield (Kg/Acre)	17
Table 24: Turnip Harvested Area, Production and Yield (Kg/Acre).....	18
Table 25: Beans Harvested Area, Production and Yield (Kg/Acre).....	18
Table 26: Pea Harvested Area, Production and Yield (Kg/Acre).....	19
Table 27: Tomato Harvested Area, Production and Yield (Kg/Acre)	19
Table 28: Potato Harvested Area, Production and Yield (Kg/Acre)	20
Table 29: Egg Plant Harvested Area, Production and Yield (Kg/Acre).....	21
Table 30: Green Leaves Harvested Area, Production and Yield (Kg/Acre)	22
Table 31: Broccoli Harvested Area, Production and Yield (Kg/Acre).....	23
Table 32: Apple total trees, bearing trees, Production and Yield (kg/Tree).....	23
Table 33: Mandarin total trees, bearing trees, Production and Yield (kg/Tree)	24
Table 34: Mango total trees, bearing trees, Production and Yield (kg/Tree)	24
Table 35: Pear total trees, bearing trees, Production and Yield (kg/Tree)	25
Table 36: Peach total trees, bearing trees, Production and Yield (kg/Tree).....	26
Table 37: Plum total trees, bearing trees, Production and Yield (kg/Tree)	27
Table 38: Walnut total trees, bearing trees, Production and Yield (kg/Tree)	27
Table 39: Areca nut total trees, bearing trees, Production and Yield (kg/Tree)	28
Table 40: Guava total trees, bearing trees, Production and Yield (kg/Tree)	28
Table 41: Banana total trees, bearing trees, Production and Yield (kg/Tree).....	29
Table 42. Summary of Major crops for the year 2004 to 2006 statistics	30

Table 42.1 Paddy Harvested Area and Production.....	30
Table 42.2 Maize Harvested area and Production.....	31
Table 42.3 Wheat Harvested area and Production	32
Table 42.4 Barley Harvested area and Production.....	33
Table 42.5 Sweet buckwheat Harvested area and Production	34
Table 42.6 Bitter buckwheat Harvested area and Production	35
Table 42.7 Potato Harvested area and Production	36
Table 42.8 Mustard Harvested area and Production	37
Table 42.9 Chili Harvested area and Production.....	38
Table 42.10 Pea Harvested area and Production.....	39
Table 42.11 Tomato Harvested area and Production.....	40
Table 42.12 Bean Harvested area and Production	41
Table 42.13 Cabbage Harvested area and Production.....	42
Table 42.14 Cardamom Harvested area and Production.....	43
Table 43 Summary of Major crops for the year 2004 and 2006 statistics	44
Table 43.1 Apple total numbers of trees, bearing trees and production.....	44
Table 43.2 Mandarin total numbers of trees, bearing trees and production.....	45
Table 43.3 Peach total numbers of trees, bearing trees and production.....	46
Table 43.4 Pear total numbers of trees, bearing trees and production	47
Table 43.5 Plum total numbers of trees, bearing trees and production.....	48
Table 43.6 Mango total numbers of trees, bearing trees and production.....	49
Table 43.8 Arecanut total numbers of trees, bearing trees and production.....	50
2. Farm Road.....	51
Table 2.1 FARM ROADS DEVELOPMENT IN 9th PLAN	52

Table 2.2 Power Tiller Tracks Development in the Dzongkhags.....	53
Table 44: Year wise Auction Details of the Agriculture Commodities	54
Table 45: Agriculture commodities exported.....	54
Table 46: Infrastructures development in the Dzongkhags (Unit: Nos.)	55
Table 47 Dzongkha wise sale of Vegetable Seeds (in MT).....	56
Table 48.1 Dzongkha wise sale of planting Materials (in Nos.).....	57
Table 48.2 Dzongkha wise sale of Seeds of Cereals and grain legumes (in MT).....	58
Table 48.3 Dzongkha wise sale of Seed Potato (in MT).....	59
Table 48.4 Dzongkha wise sale of Butachlor 5% Granule (in MT).....	60
Table 48.5 Dzongkha wise sale of Fertilizers (in MT)	61
Table 48.6 a Dzongkhag wise pesticides distribution for 2006-2007	62
Table 48.6 b Dzongkhag wise pesticides distribution for 2006-2007.....	64

1. Introduction

Dzongkhag and Geog level estimates are provided for principle crops cultivated by rural households in Bhutan. The publication features area, production and yield in respect of principle crops of food-grains, oil seeds, pulses and spices, horticultural, fruit and cash crops. Further, the publication also provides secondary information on export of agriculture commodities and Infrastructure developments in the agriculture sector.

1.1 Objectives

The main objectives of the survey are:

- To establish reliable information on crop production and land use for planning and monitoring of agriculture development programmes.
- To generate data needed for preparation of the plans, programs and to assess the trends in crop production and land use.
- To initiate the development of time series data.

1.2 Survey Methodology Sampling design

The survey adopted a Linear Systematic Sampling scheme without replacement for the sample selection. All the 202 Geogs in the country served as the domain for the sample survey. All the Geogs were included in the sample survey in order to cover different ecological resources endowment, and development stages. A household is the lowest sampling unit. The rural farming households of each Geog served as the sampling frame from which a 10 percent sample was chosen uniformly from all Geogs irrespective of the sizes and economic activities undertaken. No further stratification was adopted.

Scope and coverage

The survey is focussed on the rural farming households. IMS, DoA took the lead in the conceptualization, preparing of questionnaires and co-ordinating the sample survey. Attempts have been made to cover all 202 geogs. However, due to unavoidable circumstances, Laya and Lunana geogs under Gasa Dzongkhag could not be covered.

The survey covered 5,334 rural households out of 61,825. We had some absentees or non response due to problems with the listings and farmers away on pilgrimage and on holidays. The definition of the household in this survey is having registered and cultivating land and residing in the villages. The publication has not reflected the figures if we have less than 3 samples reported.

Sampling Procedures

The IMS, DoA in consultation with the DAOs and extension agents selected the sample households based on the household lists maintained in the geog centres. The sample was drawn randomly from the household list submitted by the extension staff using Linear Systematic Sampling scheme to identify the required 10 % sample. This sample list was distributed to the enumerators for identification and interview. In the event that the sampled farmer was not available for interview despite repeated visit then the next farmer from the same locality was selected.

1.3 Field Operation

Prior to the survey, training to all the Geog Agriculture Extension Agents were conducted. The extension agents were trained on the contents of questionnaire, methodology and sample list. Questionnaires were also distributed along with the sample lists. The work plan was discussed and the enumeration was conducted from December 2006 till February 2007.

1.4 Data Editing, Processing, Validation and Analysis

Steps for the activities included:

- Firstly, inconsistencies at geog level were eliminated by the extension workers by comparing the yield from the annual crop cut.
- Also data that had extreme values as reported by the farmers were compared with the annual crop cut reports by our field staff and those that showed large differences were deleted.
- Then data reported in local units were converted to standard measurement units. The farmers still use local measurement units that differ from place to place. Instead of reporting in Kg and Acre farmers reports in langdo, bags, baskets, etc.
- Next, all ADAOs of 20 Dzongkhags were trained on the operation of the database in March 2007 and data entry started in June 2007 by the ADAOs in their respective Dzongkhags. However, due to various reasons the data entry was delayed. Submitted data was ready only by October 2007 and some Dzongkhags submitted on March 2008. After the database was received IMS,DoA merged the data into our national database and the analysis was

done. Once the analysis was completed the estimates were produced at the Dzongkhag and Geog level.

- IMS,DoA conducted the workshop to reconcile and validate the data by the concerned agriculture geog staff, ADAOs and DAOs. This exercise was completed in April 2008. This data was presented to the department for further precision and formal endorsement.
- Finally this statistics was presented to the 20 Dzongkhags DAOs and representatives during Extension Co-ordination meeting held in Servithang from 30th May to 2nd June 2008 and the house endorsed the precision of the data.

1.5 Limitations of the survey

As in any survey there are some inherent weaknesses which are noted below:

- The respondents are farmers with different social and educational background. Therefore, response errors are likely to be high although various techniques were used to get accurate responses.
- The respondents, due to low or no educational background do not keep records of their land area, production.
- Tendency to underreport were noticed as there is a misguided notion of high taxation if accurate figures of production were reported.
- Chances of telescoping errors by respondents are likely as the reference period is the last season of cropping.
- As 10 percent sample were taken from all the Geogs irrespective of their size, the estimates for certain crops for Geogs with small number of households will have to be taken with caution as the sample size will be too low to provide reliable estimates.

Table 1: Paddy Harvested Area, Production and Yield (Kg/Acre)

Dzongkhag	Area (Acres)	Production(MT)	Yield
Bumthang	52	97	1,863
Chhukha	3,638	3,580	984
Dagana	5,466	3,959	724
Gasa	209	251	1,200
Ha	507	535	1,055
Lhuentse	3,073	4,268	1,389
Mongar	1,566	2,000	1,278
Paro	3,753	6,904	1,840
Pemagatshel	551	413	749
Punakha	5,575	9,229	1,655
SamdrupJongkhar	4,649	5,902	1,269
Samtse	11,008	8,542	776
Sarpang	10,134	7,510	741
Thimphu	2,355	4,034	1,713
Trashhi Yangtse	1,377	1,814	1,318
Trashigang	1,934	2,592	1,340
Trongsa	1,622	1,802	1,111
Tsirang	4,460	3,470	778
Wangdue	4,062	6,186	1,523
Zhemgang	1,577	1,292	820
Total	67,566	74,380	1,101

Table 2: Maize Harvested Area, Production and Yield (Kg/Acre)

Dzongkhag	Area (Acres)	Production(MT)	Yield
Chhukha	6,521	6,929	1,063
Dagana	8,026	6,005	748
Ha	274	162	591
Lhuentse	3,199	3,749	1,172
Mongar	7,360	10,200	1,386
Paro	89	57	640
Pemagatshel	5,180	5,777	1,115
Punakha	438	287	656
Samtse	11,981	9,452	789
Sarpang	8,444	3,624	429
SamdrupJongkhar	5,801	7,415	1,278
Trashigang	5,648	7,200	1,275
Thimphu	330	245	745
Trongsa	762	607	796
Tsirang	5,772	3,827	663
Trashhi Yangtse	2,365	2,695	1,140
Wangdue	441	420	953
Zhemgang	2,782	2,411	867
Total	75,413	71,062	942

Table 3: Wheat Harvested Area, Production and Yield (Kg/Acre)

Dzongkhag	Area (Acres)	Production(MT)	Yield
Bumthang	125	41	328
Chhukha	1,209	713	589
Dagana	31	14	450
Gasa	48	13	263
Ha	1,604	922	575
Lhuentse	130	71	550
Mongar	683	442	648
Paro	2,541	1,602	630
Pemagatshel	145	96	662
Punakha	1,385	546	394
SamdrupJongkhar	594	436	734
Samtse	2,844	1,374	483
Thimphu	944	612	648
Trashigang	151	91	600
Trashigang	450	245	545
Trongsa	865	334	386
Tsirang	452	179	396
Wangdue	2,004	1,218	608
Zhemgang	1,310	637	486
Total	17,515	9,586	547

Table 4: Barley Harvested Area, Production and Yield (Kg/Acre)

Dzongkhag	Area (Acres)	Production(MT)	Yield
Bumthang	696	377	542
Chhukha	186	125	676
Dagana	103	35	339
Gasa	38	18	464
Ha	167	64	385
Mongar	1,691	829	490
Paro	1,002	597	595
Pemagatshel	1,223	385	315
SamdrupJongkhar	412	240	583
Samtse	77	24	310
Thimphu	266	164	616
Trashigang	25	22	873
Trashigang	699	555	794
Trongsa	424	287	675
Wangdue	362	195	538
Zhemgang	124	87	702
Total	7,494	4,003	534

Table 5: Foxtail Millet Harvested Area, Production and Yield (Kg/Acre)

Dzongkhag	Area (Acres)	Production(MT)	Yield
Chhukha	39	8	207
Dagana	187	97	523
Pemagatshel	895	517	577
SamdrupJongkhar	931	343	368
Samtse	789	192	243
Sarpang	711	332	466
Zhemgang	868	313	360
Total	4,420	1,801	407

Table 6: Finger Millet Harvested Area, Production and Yield (Kg/Acre)

Dzongkhag	Area (Acres)	Production(MT)	Yield
Chhukha	494	187	379
Dagana	896	292	326
Lhuentse	297	166	560
Mongar	155	48	312
Paro	101	40	394
Pemagatshel	602	496	824
SamdrupJongkhar	1,017	748	735
Samtse	5,484	1,841	336
Sarpang	4,152	1,702	410
Trashi Yangtse	296	170	573
Trashigang	383	318	831
Trongsa	159	44	276
Tsirang	1,650	572	346
Wangdue	188	96	509
Zhemgang	683	265	388
Total	16,558	6,984	422

Table 7: Sweet Buckwheat Harvested Area, Production and Yield (Kg/Acre)

Dzongkhag	Area (Acres)	Production(MT)	Yield
Bumthang	526	322	612
Chhukha	1,422	614	432
Dagana	513	188	366
Ha	492	244	495
Mongar	1,014	429	424
Pemagatshel	968	484	500
Punakha	35	8	227
SamdrupJongkhar	1,787	790	442
Samtse	2,127	531	250
Sarpang	714	166	232
Trashi Yangtse	20	14	688
Trashigang	448	166	371
Trongsa	317	139	440
Tsirang	1,077	376	349
Wangdue	317	153	483
Zhemgang	549	279	507
Total	12,325	4,902	398

Table 8: Bitter Buckwheat Harvested Area, Production and Yield (Kg/Acre)

Dzongkhag	Area (Acres)	Production(MT)	Yield
Bumthang	376	162	431
Chhukha	1,104	555	503
Dagana	352	181	515
Ha	587	272	464
Lhuentse	138	37	266
Mongar	795	330	415
Paro	436	342	786
Pemagatshel	720	508	705
Punakha	389	182	469
Samtse	311	95	306
SamdrupJongkhar	2,134	889	417
Trashigang	263	122	464
Trongsa	555	246	442
Trashy Yangtse	15	12	776
Wangdue	392	197	501
Zhemgang	520	320	615
Total	9,088	4,451	490

Table 9: Rajma Bean Harvested Area, Production and Yield (Kg/Acre)

Dzongkhag	Area (Acres)	Production(MT)	Yield
Chhukha	158	105	664
Dagana	508	144	284
Lhuentse	18	10	546
Mongar	660	337	511
Pemagatshel	288	161	558
Samtse	76	29	383
Sarpang	144	37	256
SamdrupJongkhar	382	171	447
Trashigang	361	146	404
Tsirang	263	101	385
Zhemgang	50	38	760
Total	2,908	1,279	440

Table 10: Mung Bean Harvested Area, Production and Yield (Kg/Acre)

Dzongkhag	Area (Acres)	Production(MT)	Yield
Chhukha	38	18	467
Dagana	0.3	0.1	242
Mongar	533	205	384
Pemagatshel	237	129	542
Samtse	47	23	497
Sarpang	84	17	200
SamdrupJongkhar	268	106	641
Tsirang	93	35	373
Trashhi Yangtse	5	3	600
Zhemgang	31	13	418
Total	1,336	549	411

Table 11: Other pulses Harvested Area, Production and Yield (Kg/Acre)

Dzongkhag	Area (Acres)	Production(MT)	Yield
Chhukha	408	161	395
Dagana	93	37	396
Punakha	16	7	404
Mongar	13	8	594
Samtse	589	142	240
Sarpang	852	233	274
SamdrupJongkhar	344	125	363
Tsirang	356	99	278
Total	2,671	811	304

Table 12: Mustard Harvested Area, Production and Yield (Kg/Acre)

Dzongkhag	Area (Acres)	Production(MT)	Yield
Bumthang	194	35	182
Chhukha	1,111	315	284
Dagana	689	130	188
Ha	164	50	305
Lhuentse	171	33	196
Mongar	914	290	317
Paro	842	295	350
Pemagatshel	366	197	539
Punakha	646	161	248
Samtse	1,496	374	250
Sarpang	1,493	267	179
SamdrupJongkhar	1,261	284	225
Trashigang	392	107	272
Thimphu	242	152	628
Trongsa	323	76	234
Tsirang	1,189	378	318
Trashi Yangtse	21	9	411
Wangdue	711	273	384
Zhemgang	897	281	313
Total	13,123	3,706	282

Table 13: Soya Bean Harvested Area, Production and Yield (Kg/Acre)

Dzongkhag	Area (Acres)	Production(MT)	Yield
Dagana	117	26	219
Mongar	863	238	276
Pemagatshel	360	166	461
Samtse	52	11	205
Sarpang	126	96	760
SamdrupJongkhar	557	249	447
Trashigang	422	133	315
Thimphu	127	115	906
Trashi Yangtse	140	51	361
Tsirang	242	228	945
Wangdue	37	36	954
Zhemgang	153	71	462
Total	3,196	1,419	444

Table 14: Garlic Harvested Area, Production and Yield (Kg/Acre)

Dzongkhag	Area (Acres)	Production(MT)	Yield
Dagana	273	130	476
Ha	28	7	263
Lhuentse	99	39	398
Mongar	144	79	547
Pemagatshel	105	56	531
Punakha	25	16	643
SamdrupJongkhar	93	43	460
Samtse	86	33	391
Sarpang	67	36	534
Thimphu	60	23	387
Trashi Yangtse	92	60	650
Trashigang	154	92	597
Trongsa	2	1	533
Tsirang	49	20	415
Wangdue	171	132	770
Zhemgang	71	37	522
Total	1,519	803	529

Table 15: Bulb Onion Harvested Area, Production and Yield (Kg/Acre)

Dzongkhag	Area (Acres)	Production(MT)	Yield
Dagana	68	72	1,060
Lhuentse	40	22	567
Mongar	121	99	815
Pemagatshel	57	58	1,011
Punakha	26	36	1,387
SamdrupJongkhar	71	29	404
Sarpang	97	81	837
Thimphu	103	57	554
Trashi Yangtse	32	12	371
Trashigang	131	120	922
Trongsa	4	5	1,300
Tsirang	40	37	933
Zhemgang	34	18	539
Total	822	646	786

Table 16: Ginger Harvested Area, Production and Yield (Kg/Acre)

Dzongkhag	Area (Acres)	Production(MT)	Yield
Chhukha	451	865	1,919
Dagana	184	90	488
Lhuentse	31	68	2,177
Mongar	81	111	1,377
Pemagatshel	127	288	2,274
SamdrupJongkhar	831	1,242	1,496
Samtse	1,677	3,659	2,182
Sarpang	680	846	1,244
Trashhi Yangtse	4	5	1,181
Trashigang	40	54	1,354
Trongsa	4	9	2,250
Tsirang	189	237	1,258
Wangdue	49	58	1,181
Zhemgang	78	39	490
Total	4,425	7,571	1,711

Table 17: Cardamom Harvested Area, Production and Yield (Kg/Acre)

Dzongkhag	Area (Acres)	Production(MT)	Yield
Chhukha	1,487	1,057	711
Dagana	1,336	403	302
Ha	1,118	122	110
Pemagatshel	5	3	600
SamdrupJongkhar	127	76	600
Samtse	4,940	1,470	298
Sarpang	932	326	349
Tsirang	45	20	431
Total	9,991	3,477	348

Table 18: Asparagus Harvested Area, Production and Yield (Kg/Acre)

Dzongkhag	Area (Acres)	Production(MT)	Yield
Ha	7	12	1,638
Paro	170	163	960
Punakha	6	7	1,200
Thimphu	433	762	1,760
Trashigang	13	14	995
Trashi Yangtse	22	22	999
Total	652	981	1,504

Table 19: Chili Harvested Area, Production and Yield (Kg/Acre)

Dzongkhag	Area (Acres)	Production(MT)	Yield
Chhukha	200	475	2,374
Dagana	248	225	907
Gasa	24	20	821
Ha	19	43	2,293
Lhuentse	329	699	2,124
Mongar	871	2,240	2,572
Paro	618	1,725	2,790
Pemagatshel	220	279	1,266
Punakha	284	943	3,321
SamdrupJongkhar	270	330	1,220
Samtse	216	107	495
Sarpang	298	209	701
Thimphu	441	1,121	2,541
Trashi Yangtse	357	820	2,298
Trashigang	563	865	1,538
Trongsa	198	387	1,958
Tsirang	177	153	861
Wangdue	407	797	1,961
Zhemgang	231	168	727
Total	5,971	11,606	1,944

Table 20: Cabbage Harvested Area, Production and Yield (Kg/Acre)

Dzongkhag	Area (Acres)	Production(MT)	Yield
Chhukha	32	86	2,698
Dagana	157	113	720
Ha	95	237	2,492
Lhuentse	156	282	1,806
Mongar	249	539	2,160
Paro	242	1,292	5,330
Pemagatshel	87	90	1,025
Punakha	3	3	1,133
SamdrupJongkhar	95	85	894
Samtse	151	203	1,346
Sarpang	117	151	1,291
Thimphu	268	517	1,926
Trashhi Yangtse	63	104	1,642
Trashigang	110	160	1,456
Trongsa	16	39	2,448
Tsirang	35	18	499
Wangdue	57	301	5,324
Zhemgang	91	78	856
Total	2,026	4,298	2,121

Table 21: Cauliflower Harvested Area, Production and Yield (Kg/Acre)

Dzongkhag	Area (Acres)	Production(MT)	Yield
Lhuentse	13	20	1,543
Mongar	63	89	1,414
Paro	86	93	1,079
Pemagatshel	25	46	1,816
SamdrupJongkhar	69	84	1,214
Samtse	47	49	1,035
Sarpang	35	34	979
Thimphu	164	329	2,005
Trashhi Yangtse	33	15	457
Trashigang	9	7	757
Tsirang	0	0	500
Wangdue	7	2	2,100
Zhemgang	48	31	657
Total	600	798	1,332

Table 22: Carrot Harvested Area, Production and Yield (Kg/Acre)

Dzongkhag	Area (Acres)	Production(Kg)	Yield
Chhukha	90	220	2,445
Ha	26	40	1,543
Mongar	61	99	1,621
Paro	158	283	1,795
Punakha	11	20	1,861
SamdrupJongkhar	29	26	918
Sarpang	25	19	746
Thimphu	111	116	1,042
Trashigang	14	11	806
Trongsa	4	6	1,542
Tsirang	10	11	1,167
Wangdue	53	142	2,673
Zhemgang	7	3	375
Total	598	997	1,667

Table 23: Radish Harvested Area, Production and Yield (Kg/Acre)

Dzongkhag	Area (Acres)	Production(MT)	Yield
Bumthang	36	300	8,333
Chhukha	225	787	3,491
Dagana	558	549	984
Gasa	7	9	1,257
Ha	68	188	2,745
Lhuentse	151	313	2,067
Mongar	324	1,070	3,298
Paro	202	614	3,046
Pemagatshel	308	893	2,897
Punakha	123	440	3,563
SamdrupJongkhar	156	500	3,212
Samtse	326	429	1,313
Sarpang	283	379	1,337
Thimphu	139	351	2,535
Trashhi Yangtse	81	164	2,030
Trashigang	163	516	3,159
Trongsa	38	184	4,863
Tsirang	220	450	2,045
Wangdue	464	1,933	4,169
Zhemgang	142	149	1,043
Total	4,016	10,218	2,544

Table 24: Turnip Harvested Area, Production and Yield (Kg/Acre)

Dzongkhag	Area (Acres)	Production(MT)	Yield
Chhukha	108	1,090	10,080
Dagana	36	179	4,941
Gasa	1	2	1,500
Ha	343	2,330	6,792
Mongar	21	27	1,287
Paro	584	3,450	5,910
Punakha	8	31	3,717
Thimphu	139	502	3,619
Trashigang	3	2	609
Trongsa	28	213	7,698
Tsirang	18	49	2,667
Wangdue	810	5,023	6,205
Zhemgang	13	17	1,379
Total	2,111	12,914	6,118

Table 25: Beans Harvested Area, Production and Yield (Kg/Acre)

Dzongkhag	Area (Acres)	Production(MT)	Yield
Chhukha	791	723	914
Dagana	520	414	797
Ha	16	21	1,309
Lhuentse	72	135	1,886
Mongar	891	754	846
Paro	208	398	1,913
Pemagatshel	254	229	904
Punakha	150	341	2,276
Samtse	312	118	376
Sarpang	171	144	845
SamdrupJongkhar	193	198	1,029
Trashigang	196	144	735
Thimphu	161	430	2,662
Trongsa	15	28	1,912
Trashi Yangtse	38	55	1,455
Tsirang	223	122	548
Wangdue	134	255	1,904
Zhemgang	157	122	777
Total	4,501	4,632	1,029

Table 26: Pea Harvested Area, Production and Yield (Kg/Acre)

Dzongkhag	Area (Acres)	Production(MT)	Yield
Chhukha	114	106	934
Dagana	5	3	600
Gasa	10	3	250
Ha	126	103	814
Mongar	186	263	1,415
Paro	579	1,357	2,345
Pemagatshel	13	11	840
Punakha	149	186	1,250
Samtse	81	123	1,533
Sarpang	20	13	675
SamdrupJongkhar	117	149	1,278
Trashigang	33	24	710
Trashi Yangtse	53	63	1,201
Thimphu	114	169	1,478
Trongsa	3	3	1,073
Tsirang	83	67	802
Wangdue	155	230	1,481
Zhemgang	19	26	1,344
Total	1,859	2,899	1,559

Table 27: Tomato Harvested Area, Production and Yield (Kg/Acre)

Dzongkhag	Area (Acres)	Production(MT)	Yield
Dagana	38	54	1,423
Mongar	79	136	1,721
Paro	59	197	3,354
Pemagatshel	46	41	897
Punakha	72	168	2,323
SamdrupJongkhar	32	30	952
Samtse	125	70	557
Sarpang	121	138	1,137
Thimphu	45	136	3,034
Trashigang	15	15	968
Tsirang	178	82	463
Wangdue	19	39	2,088
Zhemgang	3	2	567
Total	831	1,108	1,333

Table 28: Potato Harvested Area, Production and Yield (Kg/Acre)

Dzongkhag	Area (Acres)	Production(MT)	Yield
Bumthang	829	4,305	5,194
Chhukha	787	5,081	6,459
Dagana	404	680	1,681
Gasa	622	933	1,500
Ha	1,192	9,004	7,555
Lhuentse	1,791	3,257	1,818
Mongar	1,301	3,264	2,510
Paro	1,257	5,541	4,408
Pemagatshel	1,053	4,001	3,800
Punakha	134	424	3,172
SamdrupJongkhar	756	1,534	2,029
Samtse	643	1,113	1,731
Sarpang	501	1,161	2,320
Thimphu	318	735	2,313
Trashigang	485	1,475	3,043
Trashigang	2,470	10,150	4,110
Trongsa	81	319	3,954
Tsirang	618	1,080	1,748
Wangdue	1,963	13,508	6,882
Zhemgang	427	484	1,132
Total	17,628	68,048	3,860

Table 29: Egg Plant Harvested Area, Production and Yield (Kg/Acre)

Dzongkhag	Area (Acres)	Production(MT)	Yield
Chhukha	19	101	5,200
Dagana	10	8	837
Lhuentse	34	68	1,985
Mongar	68	81	1,192
Paro	23	57	2,428
Pemagatshel	71	57	805
Punakha	38	168	4,388
SamdrupJongkhar	66	76	1,142
Samtse	81	50	620
Sarpang	283	656	2,318
Thimphu	121	164	1,358
Trashigang	5	3	661
Tsirang	28	19	693
Wangdue	15	34	2,305
Zhemgang	35	36	1,022
Total	896	1,577	1,759

Table 30: Green Leaves Harvested Area, Production and Yield (Kg/Acre)

Dzongkhag	Area (Acres)	Production(MT)	Yield
Bumthang	12	9	741
Chhukha	178	520	2,915
Dagana	151	284	1,884
Gasa	1	1	1,500
Ha	44	38	860
Lhuentse	108	190	1,759
Mongar	372	479	1,287
Paro	148	185	1,252
Pemagatshel	118	118	1,003
Punakha	39	114	2,922
SamdrupJongkhar	154	311	2,018
Samtse	415	368	887
Sarpang	283	485	1,714
Thimphu	108	239	2,226
Trashigang	47	40	859
Trashigang	124	188	1,511
Trongsa	14	21	1,495
Tsirang	178	407	2,283
Wangdue	187	277	1,480
Zhemgang	121	111	912
Total	2,803	4,385	1,565

Table 31: Broccoli Harvested Area, Production and Yield (Kg/Acre)

Dzongkhag	Area (Acres)	Production(MT)	Yield
Dagana	28	32	1,155
Ha	15	17	1,149
Mongar	25	23	916
Paro	16	4	236
Pemagatshel	7	5	681
Punakha	18	25	1,412
Sarpang	80	60	745
Thimphu	11	22	2,035
Trashhi Yangtse	9	5	536
Trashigang	77	107	1,391
Tsirang	22	13	585
Wangdue	5	11	2,125
Zhemgang	18	11	591
Total	332	335	1,008

Table 32: Apple total trees, bearing trees, Production and Yield (kg/Tree)

Dzongkhag	Total Trees	Bearing Trees	Production(MT)	Yield
Bumthang	38,272	34,684	762	22
Ha	41,668	26,692	951	36
Lhuentse	4,894	620	10	17
Mongar	3,814	1,944	47	24
Paro	215,295	168,316	4,224	25
Pemagatshel	900	700	21	30
Punakha	590	240	6	23
Trashigang	7,170	2,501	40	16
Thimphu	158,437	138,029	1,223	31
Trashhi Yangtse	160	100	3	25
Wangdue	5,877	5,210	120	23
Total	477,077	379,036	7,406	20

Table 33: Mandarin total trees, bearing trees, Production and Yield (kg/Tree)

Dzongkhag	Total Trees	Bearing Trees	Production(MT)	Yield
Chhukha	385,152	240,887	5,171	21
Dagana	232,490	111,102	6,796	61
Gasa	455	243	4	17
Lhuentse	20,747	7,808	306	39
Mongar	32,145	10,261	412	40
Pemagatshel	290,391	148,970	7,854	53
Punakha	29,533	19,048	426	22
Samtse	287,853	191,035	4,468	23
Sarpang	277,219	190,121	8,983	47
SamdrupJongkhar	234,429	108,584	7,481	69
Thimphu	6,630	5,117	113	22
Trashigang	22,680	11,089	675	61
Trashi Yangtse	25,939	13,832	258	19
Trongsa	8,918	4,999	201	40
Tsirang	314,287	219,168	10,363	47
Wangdue	18,582	11,204	328	29
Zhemgang	109,913	59,612	1,718	29
Total	2,297,364	1,353,080	55,558	41

Table 34: Mango total trees, bearing trees, Production and Yield (kg/Tree)

Dzongkhag	Total Trees	Bearing Trees	Production(MT)	Yield
Chhukha	197	103	2	19
Dagana	2,120	881	83	94
Lhuentse	200	150	2	15
Mongar	20,674	6,266	111	18
Pemagatshel	7,166	2,818	93	33
Punakha	5,496	919	16	17
Samtse	10,133	4,184	127	30
Sarpang	11,275	2,857	130	45
SamdrupJongkhar	4,660	1,654	55	33
Trashigang	4,088	1,825	137	75
Tsirang	2,882	2,017	116	57
Trashi Yangtse	994	45	1	16
Zhemgang	2,526	337	14	43
Total	72,411	24,056	886	37

Table 35: Pear total trees, bearing trees, Production and Yield (kg/Tree)

Dzongkhag	Total Trees	Bearing Trees	Production(MT)	Yield
Bumthang	2,367	2,279	50	22
Chhukha	1,561	1,512	113	75
Dagana	3,425	2,821	47	17
Gasa	218	200	10	49
Lhuentse	3,362	1,660	67	40
Mongar	6,362	3,874	127	33
Paro	1,803	1,003	50	50
Pemagatshel	3,679	2,420	165	68
Punakha	4,193	2,570	152	59
Samtse	6,602	3,277	156	47
Sarpang	1,690	1,616	35	22
SamdrupJongkhar	8,655	3,045	122	40
Trashigang	4,160	2,584	72	28
Thimphu	2,435	1,956	93	48
Trongsa	810	656	10	16
Tsirang	3,820	3,511	79	22
Trashi Yangtse	611	421	8	20
Wangdue	2,236	1,556	57	37
Zhemgang	728	414	9	22
Total	58,716	37,377	1,424	38

Table 36: Peach total trees, bearing trees, Production and Yield (kg/Tree)

Dzongkhag	Total Trees	Bearing Trees	Production(MT)	Yield
Chhukha	2,857	2,539	86	34
Dagana	3,013	2,664	176	66
Gasa	212	212	7	33
Ha	1,851	966	12	12
Lhuentse	4,435	3,082	202	65
Mongar	12,379	8,692	295	34
Paro	8,335	6,567	162	25
Pemagatshel	7,059	5,700	280	49
Samtse	4,469	3,970	120	30
Sarpang	4,095	2,954	95	32
Trashigang	6,385	5,128	218	43
Thimphu	3,249	2,867	70	24
Trongsa	4,525	3,045	202	66
Tsirang	3,252	2,630	131	50
Trashi Yangtse	4,072	3,544	138	39
Wangdue	3,709	2,568	67	26
Zhemgang	4,743	3,720	160	43
Total	78,641	60,848	2,421	40

Table 37: Plum total trees, bearing trees, Production and Yield (kg/Tree)

Dzongkhag	Total Trees	Bearing Trees	Production(MT)	Yield
Bumthang	533	533	13	25
Dagana	3,389	1,200	50	42
Lhuentse	6,200	3,022	220	73
Mongar	4,913	3,480	125	36
Pemagatshel	3,431	2,091	90	43
Punakha	1,256	910	21	23
Samtse	680	366	4	11
Sarpang	1,685	1,504	30	20
SamdrupJongkhar	4,312	3,117	73	24
Trashigang	1,145	930	40	43
Thimphu	2,174	2,013	169	84
Trongsa	1,713	1,029	42	40
Tsirang	3,552	3,242	118	36
Trashhi Yangtse	300	220	12	54
Wangdue	768	662	59	90
Zhemgang	1,228	729	19	26
Total	37,278	25,048	1,086	43

Table 38: Walnut total trees, bearing trees, Production and Yield (kg/Tree)

Dzongkhag	Total Trees	Bearing Trees	Production(kg)	Yield
Bumthang	3,778	143	7	48
Dagana	1,989	1,594	80	50
Ha	1,013	516	10	20
Lhuentse	2,161	842	31	37
Mongar	9,090	1,058	21	20
Paro	5,982	3,313	115	35
Pemagatshel	2,980	1,173	26	22
Punakha	2,583	572	13	23
SamdrupJongkhar	9,241	2,083	38	18
Trashigang	7,705	2,664	101	38
Thimphu	2,675	1,819	127	70
Trongsa	1,294	173	4	25
Trashhi Yangtse	6,304	1,759	32	18
Wangdue	923	635	13	21
Zhemgang	32,036	745	11	15
Total	89,753	19,088	631	33

Table 39: Areca nut total trees, bearing trees, Production and Yield (kg/Tree)

Dzongkhag	Total Trees	Bearing Trees	Production(MT)	Yield
Chhukha	95,290	43,346	1,323	31
Dagana	2,500	1,500	105	70
Pemagatshel	18,149	5,324	421	79
Samtse	323,589	118,871	1,499	13
Sarpang	467,148	111,505	1,634	15
SamdrupJongkhar	75,713	34,863	1,384	40
Zhemgang	7,340	1,856	34	18
Total	989,729	317,266	6,400	20

Table 40: Guava total trees, bearing trees, Production and Yield (kg/Tree)

Dzongkhag	Total Trees	Bearing Trees	Production(MT)	Yield
Chhukha	888	888	82	92
Dagana	2,523	2,079	53	25
Lhuentse	3,751	1,640	38	23
Mongar	9,283	6,675	169	25
Pemagatshel	6,551	5,921	198	33
Punakha	5,759	4,190	136	33
Samtse	9,822	8,153	216	27
Sarpang	8,800	6,290	162	26
SamdrupJongkhar	5,974	4,196	111	26
Trashigang	1,720	1,552	87	56
Thimphu	1,729	1,313	75	57
Trongsa	4,340	3,675	88	24
Tsirang	5,993	5,576	143	26
Trashi Yangtse	500	400	11	26
Wangdue	1,252	842	21	25
Zhemgang	3,715	2,351	78	33
Total	72,599	55,741	1,667	30

Table 41: Banana total trees, bearing trees, Production and Yield (kg/Tree)

Dzongkhag	Total Trees	Bearing Trees	Production(MT)	Yield
Chhukha	32,877	21,422	286	13
Dagana	21,512	15,466	199	13
Ha	5,546	1,193	17	15
Lhuentse	4,487	3,480	72	21
Mongar	61,799	14,592	154	11
Pemagatshel	14,700	7,471	171	23
Punakha	6,758	4,531	63	14
Samtse	71,612	35,265	529	15
Sarpang	58,297	28,055	461	16
SamdrupJongkhar	60,360	23,534	404	17
Trashigang	10,810	4,810	373	78
Thimphu	875	656	8	12
Tsirang	60,310	29,694	437	15
Trashy Yangtse	1,282	1,082	43	40
Wangdue	3,649	2,019	31	16
Zhemgang	21,360	8,482	164	19
Total	436,232	201,752	3,413	17

Table 42. Summary of Major crops for the year 2004 to 2006 statistics

Table 42.1 Paddy Harvested Area and Production

Dzongkhag	2004		2005		2006	
	Area (acre)	Production (MT)	Area (acre)	Production (MT)	Area (acre)	Production (MT)
Bumthang	7	11	45	74	52	97
Chhukha	1,279	1,507	3,555	3,249	3,638	3,580
Dagana	3,406	2,967	4,033	3,145	5,466	3,959
Gasa	130	117	153	135	209	251
Ha	169	138	201	221	507	535
Lhuentse	1,282	1,405	1,787	2,397	3,073	4,268
Mongar	1,317	1,500	2,080	2,805	1,566	2,000
Paro	2,990	4,876	3,674	5,987	3,753	6,904
Pemagatshel	110	140	149	134	551	413
Punakha	4,401	6,906	4,455	6,915	5,575	9,229
Samdrup Jongkhar	1,832	1,385	4,205	3,911	4,649	5,902
Samtse	8,220	6,640	11,858	9,105	11,008	8,542
Sarpang	7,636	9,762	8,238	8,753	10,134	7,510
Thimphu	1,523	1,965	1,807	2,693	2,355	4,034
Trashigang	2,553	3,913	3,712	4,297	1,377	1,814
Trashi Yangtse	939	1,257	1,904	2,654	1,934	2,592
Trongsa	1,620	1,487	1,791	1,658	1,622	1,802
Tsirang	2,951	2,511	4,161	3,503	4,460	3,470
Wangdue	3,129	4,883	3,334	4,816	4,062	6,186
Zhemgang	1,092	956	1,316	1,155	1,577	1,292
Total	46,586	54,326	62,457	67,606	67,566	74,380

Table 42.2 Maize Harvested area and Production

Dzongkhag	2004		2005		2006	
	Area (acre)	Production (MT)	Area (acre)	Production (MT)	Area (acre)	Production (MT)
Chhukha	1,294	2,163	4,438	6,094	6,521	6,929
Dagana	6,286	10,771	8,035	5,448	8,026	6,005
Ha	112	181	207	153	274	162
Lhuentse	2,309	4,936	2,201	4,733	3,187	3,749
Mongar	6,116	12,967	7,026	10,533	7,360	10,200
Paro	12	4	21	11	89	57
Pemagatshel	1,391	1,309	2,773	3,344	5,180	5,777
Punakha	147	296	561	566	438	287
Samdrup Jongkhar	5,132	8,326	7,941	11,591	11,981	9,452
Samtse	9,137	12,203	12,173	13,256	8,444	3,624
Sarpang	4,945	8,237	8,966	10,697	5,801	7,415
Thimphu	18	17	54	41	5,648	7,200
Trashigang	1,211	2,633	2,296	5,204	330	245
Trongsa	8,247	14,765	8,180	11,163	762	607
Tsirang	901	1,377	1,099	1,144	5,772	3,827
Wangdue	4,103	5,492	6,242	5,098	2,365	2,695
Zhemgang	111	214	417	412	441	420
Zhemgang	2,467	4,677	3,229	4,481	2,782	2,411
Total	53,939	90,568	75,859	93,968	75,400	71,062

Table 42.3 Wheat Harvested area and Production

Dzongkhag	2004		2005		2006	
	Area (acre)	Production (MT)	Area (acre)	Production (MT)	Area (acre)	Production (MT)
Bumthang	564	514	999	809	125	41
Chhukha	639	323	4,436	1,624	1,209	713
Dagana	207	118	931	390	31	14
Gasa	111	54	146	40	48	13
Ha	597	337	946	433	1,604	922
Lhuentse	91	80	363	365	130	71
Mongar	20	7	343	182	683	442
Paro	988	557	2,395	1,240	2,541	1,602
Pemagatshel	6	5	265	170	145	96
Punakha	591	226	1,412	570	1,385	546
Samdrup Jongkhar	107	31	990	573	594	436
Samtse	627	258	1,692	810	2,844	1,374
Sarpang	58	31	1,339	670		
Thimphu	496	529	750	472	944	612
Trash Yangtse	14	8	228	447	151	91
Trashigang	44	24	847	444	450	245
Trongsa	552	239	1,070	534	865	334
Tsirang	87	20	321	121	452	179
Wangdue	1,513	736	1,927	1,058	2,004	1,218
Zhemgang	272	95	426	296	1,310	637
Total	7,584	4,192	21,825	11,246	17,515	9,586

Table 42.4 Barley Harvested area and Production

Dzongkhag	2004		2005		2006	
	Area (acre)	Production (MT)	Area (acre)	Production (MT)	Area (acre)	Production (MT)
Bumthang	526	431	861	684	696	377
Chhukha			197	161	186	125
Dagana	102	35	89	47	103	35
Gasa	178	125	81	60	38	18
Ha	141	55	211	111	167	64
Lhuentse	7	5				
Mongar	276	95	1,968	936	1,691	829
Paro	164	99	406	209	1,002	597
Pemagatshel	41	25	433	205	1,223	385
Punakha	49	23	274	167		
Samdrup Jongkhar	122	47	553	308	412	240
Samtse	69	25			77	24
Sarpang	4	1				
Thimphu	24	23	206	240	266	164
Trashigang	26	15	272	97	25	22
Trongsa	92	32	1,076	431	699	555
Tsirang	463	188	793	427	424	287
Tsirang	18	3				
Wangdue	366	152	851	420	362	195
Zhemgang	119	44	180	89	124	87
Total	2,787	1,423	8,450	4,592	7,495	4,004

Table 42.5 Sweet buckwheat Harvested area and Production

Dzongkhag	2004		2005		2006	
	Area (acre)	Production (MT)	Area (acre)	Production (MT)	Area (acre)	Production (MT)
Bumthang	354	272	726	523	526	322
Chhukha			1,556	659	1,422	614
Dagana	444	135	984	393	513	188
Gasa	31	13				
Ha	180	44	383	118	492	244
Lhuentse			40	28		
Mongar	123	35	894	285	1,014	429
Paro	41	18	198	49		
Pemagatshel	16	7	437	167	968	484
Punakha	41	11			35	8
Samdrup Jongkhar	835	239	1,637	610	1,787	790
Samtse	447	112	355	105	2,127	531
Sarpang	217	68	275	117	714	166
Thimphu	1	1				
Trashigang	492	240	1,371	364	448	166
Trongsa	176	52	152	123	317	139
Tsirang	137	26	23	6	1,077	376
Wangdue	83	47	146	74	317	153
Zhemgang	87	40	106	42	549	279
Total	3,707	1,362	9,342	3,700	12,326	4,903

Table 42.6 Bitter buckwheat Harvested area and Production

Dzongkhag	2004		2005		2006	
	Area (acre)	Production (MT)	Area (acre)	Production (MT)	Area (acre)	Production (MT)
Bumthang	295	230	648	514	376	162
Chhukha			688	398	1,104	555
Dagana	400	100	370	228	352	181
Gasa	60	7	10	5		
Ha	150	66	334	132	587	272
Lhuentse	4	3			138	37
Mongar	51	11	317	88	795	330
Paro	66	29	286	158	436	342
Pemagatshel	39	18	221	164	720	508
Punakha	82	48	371	179	389	182
Samdrup Jongkhar	145	38	897	360	2,134	889
Samtse	156	30	449	146	311	95
Sarpang	128	47	256	115		
Thimphu	3	2				
Trashigang	86	18	55	34	15	12
Trongsa	429	158	603	265	555	246
Tsirang	17	7				
Wangdue	258	218	178	77	392	197
Zhemgang	179	86	573	249	520	320
Total	2,629	1,149	6,721	3,298	9,087	4,450

Table 42.7 Potato Harvested area and Production

Dzongkhag	2004		2005		2006	
	Area (acre)	Production (MT)	Area (acre)	Production (MT)	Area (acre)	Production (MT)
Bumthang	657	7,234	827	4,524	829	4,305
Chhukha	1,282	7,705	1,069	5,599	787	5,081
Dagana	171	614	583	1,329	404	680
Gasa	37	35	43	55	622	933
Ha	211	1,783	351	2,236	1,192	9,004
Lhuentse	82	291	446	1,673	1,791	3,257
Mongar	954	3,929	1,107	2,856	1,301	3,264
Paro	806	2,415	1,293	7,582	1,257	5,541
Pemagatshel	164	529	607	1,801	1,053	4,001
Punakha	55	240	237	673	134	424
Samdrup Jongkhar	253	651	398	958	756	1,534
Samtse	82	258	672	1,079	643	1,113
Sarpang	134	704	498	551	501	1,161
Thimphu	235	1,239	398	1,484	318	735
Tsirang	180	484	604	920	618	1,080
Trashigang	258	1,405	540	2,649	485	1,475
Trongsa	100	632	163	698	81	319
Wangdue	985	8,692	1,317	8,406	1,963	13,508
Zhemgang	40	121	146	298	427	484
Total	8,455	47,405	14,482	53,594	17,632	68,049

Table 42.8 Mustard Harvested area and Production

Dzongkhag	2004		2005		2006	
	Area (acre)	Production (MT)	Area (acre)	Production (MT)	Area (acre)	Production (MT)
Bumthang	115	28	365	129	194	35
Chhukha	412	119	1,340	367	1,111	315
Dagana	308	125	1,090	441	689	130
Gasa	43	12	73	28		
Ha	26	12	182	69	164	50
Lhuentse	55	43	115	72	171	33
Mongar	105	28	1,115	356	914	290
Paro	180	56	455	126	842	295
Pemagatshel	27	23	530	261	366	197
Punakha	375	136	1,064	183	646	161
Samdrup Jongkhar	281	96	516	165	1,261	284
Samtse	424	128	1,207	410	1,496	374
Sarpang	328	110	1,485	531	1,493	267
Thimphu	165	59	352	243	242	152
Trashiyangtse	94	11			21	9
Trashigang	289	136	1,032	298	392	107
Trongsa	213	202	576	146	323	76
Tsirang	370	177	1,307	260	1,189	378
Wangdue	461	175	607	208	711	273
Zhemgang	232	92	546	138	897	281
Total	4,503	1,768	13,956	4,382	13,122	3,707

Table 42.9 Chili Harvested area and Production

Dzongkhag	2004		2005		2006	
	Area (acre)	Production (MT)	Area (acre)	Production (MT)	Area (acre)	Production (MT)
Bumthang	2	7	56	123		
Chhukha	255	352	275	448	200	475
Dagana	172	64	223	222	248	225
Gasa	10	4	41	34	24	20
Ha	27	50	51	60	19	43
Lhuentse	175	369	438	1,129	329	699
Mongar	392	417	591	764	871	2,240
Paro	323	492	602	2,041	618	1,725
Pemagatshel	78	153	440	626	220	279
Punakha	185	623	300	978	284	943
Samtse	80	16	210	83	216	107
Sarpang	30	28	146	94	298	209
Samdrup Jongkhar	90	85	271	442	270	330
Trashigang	574	457	621	709	563	865
Thimphu	77	211	250	556	441	1,121
Trashi Yangtse	118	292	194	564	357	820
Trongsa	111	295	320	505	198	387
Tsirang	83	74	206	186	177	153
Wangdue	201	402	265	760	407	797
Zhemgang	77	63	139	120	231	168
Total	3,060	4,454	5,638	10,447	5,971	11,606

Table 42.10 Pea Harvested area and Production

Dzongkhag	2004		2005		2006	
	Area (acre)	Production (MT)	Area (acre)	Production (MT)	Area (acre)	Production (MT)
Bumthang	2	6				
Chhukha	37	35	270	356	114	106
Dagana	15	20	68	130	5	3
Gasa	3	2	6	1	10	3
Ha	53	110	237	333	126	103
Lhuentse	10	12	64	88		
Mongar	13	17	174	141	186	263
Paro	164	254	687	1,405	579	1,357
Pemagatshel	1	1	13	13	13	11
Punakha	51	80	87	124	149	186
Samdrup Jongkhar	3	2	162	164	117	149
Samtse	26	29	18	11	81	123
Sarpang	1	1	50	45	20	13
Thimphu	1	1	159	241	114	169
Trashigang	22	24	242	183	33	24
Trashi Yangtse	5	5	11	13	53	63
Trongsa	1	2	12	14	3	3
Tsirang	9	13	154	119	83	67
Wangdue	24	40	56	105	155	230
Zhemgang	8	8	22	8	19	26
Total	449	662	2,491	3,495	1,860	2,899

Table 42.11 Tomato Harvested area and Production

Dzongkhag	2004		2005		2006	
	Area (acre)	Production (MT)	Area (acre)	Production (MT)	Area (acre)	Production (MT)
Bumthang	1	1				
Chhukha			120	157		
Dagana	20	7	77	33	38	54
Ha	1	1	4	2		
Lhuentse	5	9	37	45		
Mongar	9	21	62	106	79	136
Paro	25	60	208	134	59	197
Pemagatshel	1	1	12	22	46	41
Punakha	7	12	17	33	72	168
Samdrup Jongkhar	7	4	73	154	32	30
Samtse	1	1	82	380	125	70
Sarpang	10	19	82	82	121	138
Thimphu	8	14	116	403	45	136
Trashigang	4	10	130	257	15	15
Trashiyangtse	1	1	6	14		
Trongsa	2	9	20	35		
Tsirang	5	5	40	37	178	82
Wangdue	8	5	26	75	19	39
Zhemgang	19	4	27	13	3	2
Total	134	184	1,139	1,981	832	1,108

Table 42.12 Bean Harvested area and Production

Dzongkhag	2004		2005		2006	
	Area (acre)	Production (MT)	Area (acre)	Production (MT)	Area (acre)	Production (MT)
Bumthang			33	23		
Chhukha	40	27	145	134	791	723
Dagana	237	61	225	187	520	414
Gasa	6	3	4	3		
Ha	8	10	19	18	16	21
Lhuentse	15	16	83	118	72	135
Mongar	187	191	144	220	891	754
Paro	29	43	68	126	208	398
Pemagatshel	67	73	40	55	254	229
Punakha	77	122	84	158	150	341
Samtse	99	21	165	90	312	118
Sarpang	69	47	201	129	171	144
Samdrup Jongkhar	77	54	82	117	193	198
Thimphu	24	71	80	186	161	430
Trashigang	203	205	225	193	196	144
Trashiyangtse	86	42	47	50	38	55
Trongsa	20	23	41	46	15	28
Tsirang	137	263	80	106	223	122
Wangdue	58	63	44	91	134	255
Zhemgang	53	35	56	44	157	122
Total	1,492	1,370	1,867	2,094	4,502	4,631

Table 42.13 Cabbage Harvested area and Production

Dzongkhag	2004		2005		2006	
	Area (acre)	Production (MT)	Area (acre)	Production (MT)	Area (acre)	Production (MT)
Bumthang	5	41	34	71		
Chhukha	127	244	286	530	32	86
Dagana	14	30	88	147	157	113
Gasa	6	5	3	6		
Ha	7	22	13	55	95	237
Lhuentse	35	204	53	109	156	282
Mongar	81	188	113	190	249	539
Paro	147	486	261	1,021	242	1,292
Pemagatshel	15	45	17	32	87	90
Punakha	3	7	27	47	3	3
Samdrup Jongkhar	6	11	25	44	95	203
Samtse	2	2	76	30	151	87
Sarpang	8	7	48	39	117	151
Thimphu	10	32	36	85	268	517
Trashigang	22	37	26	65	63	104
Trongsa	104	324	282	464	110	160
Tsirang	5	9	58	133	16	39
Wangdue	16	21	21	18	35	18
Zhemgang	68	121	60	207	57	301
Zhemgang	23	43	48	52	91	78
Total	704	1,879	1,575	3,346	2,024	4,300

Table 42.14 Cardamom Harvested area and Production

Dzongkhag	2004		2005		2006	
	Area (acre)	Production (MT)	Area (acre)	Production (MT)	Area (acre)	Production (MT)
Chhukha	357	73	1,541	408	1,487	1,057
Dagana	460	90	735	90	1,336	403
Ha	471	86	279	47	1,118	122
Mongar	2	1	8	1		
Pemagatshel	4	1			20	3
Samdrup jongkhar	14	3			127	76
Samtse	2,895	549	2,749	578	4,838	1,470
Sarpang	41	8	521	66	976	326
Trashigang	3	1				
Trongsa	1	1				
Tsirang	26	4			10	20
Total	4,274	817	5,834	1,190	9,912	3,477

Table 43 Summary of Major crops for the year 2004 to 2006 statistics
Table 43.1 Apple total numbers of trees, bearing trees and production

Dzongkhag	2004			2005			2006		
	Total trees	Bearing trees	Production (MT)	Total trees	Bearing trees	Production (MT)	Total trees	Bearing trees	Production (MT)
Bumthang	12,463	7,575	161	14,778	10,945	363	38,272	34,684	762
Chhukha	5,887	3,184	86	11,600	8,090	227			
Dagana	279	98	2						
Ha	21,903	12,267	168	26,957	21,518	514	41,668	26,692	951
Lhuenste	1,622	746	15				4,894	620	10
Mongar	1,669	486	9	3,735	2,419	42	3,814	1,944	47
Paro	203,628	135,526	2,861	209,237	167,412	4,948	215,295	168,316	4,224
Pema gatsHEL	392	48	2	1,072	938	23	900	700	21
Punakha	1,286	204	4	1,774	730	15	590	240	6
Samdrup Jongkhar	369	382	4						
Thimphu	130,381	81,097	2,515	145,173	116,485	4,084	158,437	138,029	1,223
Trashigang	1,279	518	9	4,644	4,537	78	7,880	1,791	40
Trashie Yangtse	1,158	875	20	1,118	610	22	160	100	3
Trongsa	625	76	1	1,118	688	17			
Tsirang	22	22	1						
Wangdue	3,984	2,973	58	4,496	4,151	87	5,877	5,210	120
Zhemgang	12	5	1						
Total	386,959	246,082	5,917	425,703	338,524	10,421	477,787	378,326	7,407

Table 43.2 Mandarin total numbers of trees, bearing trees and production

Dzongkhag	2004			2005			2006		
	Total trees	Bearing trees	Production (MT)	Total trees	Bearing trees	Production (MT)	Total trees	Bearing trees	Production (MT)
Chhukha	304,912	212,563	5,675	340,303	243,797	8,155	385,152	240,887	5,171
Dagana	151,079	93,518	3,532	170,854	109,755	4,944	232,490	111,102	6,796
Gasa							455	243	4
Haa	370	296	8						
Lhuentse	10,250	4,823	201	10,401	5,881	206	20,747	7,808	306
Mongar	46,884	20,303	794	59,258	39,702	1,448	32,145	10,261	412
Pemagatshel	58,813	30,675	1,130	55,588	37,836	2,087	290,391	148,970	7,854
Punakha	34,831	16,203	388	32,414	18,012	572	29,533	19,048	426
Samdrup Jongkhar	336,521	161,618	4,614	348,746	182,669	4,865	234,429	108,584	7,481
Samtse	182,867	138,717	3,477	196,117	153,458	4,088	287,853	191,035	4,468
Sarpang	268,501	118,998	6,088	278,046	204,756	8,138	277,219	190,121	8,983
Thimphu	1,911	1,312	43	2,891	2,640	152	6,630	5,117	113
Trashigang	11,270	5,842	167	19,989	13,190	383	25,939	13,832	258
Trongsa	15,889	7,369	256	25,709	20,625	863	22,680	11,089	675
Tsirang	6,680	2,623	28	5,559	5,089	195	8,918	4,999	201
Wangdue	260,323	99,113	3,501	262,097	180,948	9,581	314,287	219,168	10,363
Zhemgang	13,960	7,790	265	19,056	11,509	341	18,582	11,204	328
	126,251	61,644	1,748	142,251	80,245	2,351	109,913	59,612	1,718
Total	1,831,312	983,407	31,915	1,969,280	1,310,112	48,367	2,297,363	1,353,080	55,557

Table 43.3 Peach total numbers of trees, bearing trees and production

Dzongkhag	2004			2005			2006		
	Total trees	Bearing trees	Production (MT)	Total trees	Bearing trees	Production (MT)	Total trees	Bearing trees	Production (MT)
Bumthang	199	71	1	602	602	11			
Chhukha	1,939	1,799	22	3,306	2,793	78	2,857	2,539	86
Dagana	1,085	804	30	3,299	3,263	244	3,013	2,664	176
Gasa				166	166	3	212	212	7
Ha	316	125	5	428	321	14	1,851	966	12
Lhuentse	3,515	2,164	86	4,342	4,129	186	4,435	3,082	202
Mongar	2,199	1,598	57	7,161	6,767	252	12,379	8,692	295
Paro	1,266	857	21	4,251	4,079	285	8,335	6,567	162
Pemagatshel	558	443	22	2,253	2,253	86	7,059	5,700	280
Punakha	790	613	19	2,052	2,052	73			
Samdrup Jongkhar	1,359	1,177	49	8,143	7,480	179			
Samtse	115	85	2	1,416	1,297	33	4,469	3,970	120
Sarpang	174	168	8	2,878	2,789	123	4,095	2,954	95
Thimphu	827	547	19	2,978	2,875	74	3,249	2,867	70
Trashigang	4,466	2,579	162	8,801	8,563	470	6,385	5,128	218
Trongsa	287	225	7	1,624	1,624	146	4,525	3,045	202
Tsirang	285	263	9	1,652	1,613	92	3,204	2,679	131
Wangdue	679	474	22	2,295	2,820	130	3,709	2,568	67
Zhemgang	444	299	15	1,293	1,293	30	4,743	3,720	160
Total	21,321	15,033	574	61,484	59,323	2,576	78,592	60,897	2,421

Table 43.4 Pear total numbers of trees, bearing trees and production

Dzongkhag	2004			2005			2006		
	Total trees	Bearing trees	Production (MT)	Total trees	Bearing trees	Production (MT)	Total trees	Bearing trees	Production (MT)
Bumthang	211	176	3	536	536	10	2,367	2,279	50
Chhukha	301	203	3	2,411	1,937	46	1,561	1,512	113
Dagana	978	624	26	2,833	2,833	216	3,425	2,821	47
Haa	18	11	1						
Gasa				149	149	5	218	200	10
Lhuentse	1,498	1,342	47	2,539	2,480	125	3,362	1,660	67
Mongar	1,409	681	22	4,452	4,082	160	6,362	3,874	127
Paro	435	327	7	1,414	1,218	65	1,803	1,003	50
Pemagatshel	59	29	1	1,072	715	25	3,679	2,420	165
Punakha	1,259	750	21	1,933	1,933	31	4,193	2,570	152
Samdrup Jongkhar	152	74	7	285	253	4	8,655	3,045	122
Samtse	294	201	9	1,568	1,499	56	6,602	3,277	156
Sarpang	316	309	4	1,105	1,105	51	1,690	1,616	35
Thimphu	971	665	18	1,605	1,550	66	2,435	1,956	93
Trashigang	833	817	33	1,774	1,774	38	611	421	8
Trongsa	1,684	775	18	6,388	6,317	275	4,160	2,584	72
Tsirang	276	184	7	762	762	50	810	656	10
Wangdue	1,764	1,549	38	3,986	3,784	97	3,820	3,511	79
Zhemgang	1,172	733	29	1,414	1,300	67	2,236	1,556	57
Total	13,639	9,459	295		34,549	1,402	58,717	37,375	1,422

Table 43.5 Plum total numbers of trees, bearing trees and production

Dzongkhag	2004			2005			2006		
	Total trees	Bearing trees	Production (MT)	Total trees	Bearing trees	Production (MT)	Total trees	Bearing trees	Production (MT)
Bumthang	221	73	2	470	423	25	533	533	13
Chhukha				1,561	1,588	49			
Dagana	350	297	12	1,917	1,917	90	3,389	1,200	50
Ha	37	26	1	551	448	17			
Lhuentse	939	770	34	3,021	994	51	6,200	3,022	220
Mongar	852	642	35	2,444	2,444	93	4,913	3,480	125
Paro	281	204	5	1,948	574	23			
Pemagatshel	437	290	16	2,397	2,397	90	3,431	2,091	90
Punakha	304	210	6	997	757	22	1,256	910	21
Samdrup Jongkhar	155	114	2	2,511	2,511	137	4,312	3,117	73
Samtse	7	4	1	674	674	6	680	366	4
Sarpang	5	5	1	888	711	58	1,685	1,504	30
Thimphu	314	193	7	2,055	2,055	66	2,174	2,013	169
Trashi Yangtse	740	560	11	830	830	18	300	220	12
Trashigang	1,353	802	17	3,562	3,347	144	1,145	930	40
Trongsa	107	69	2	383	383	5	1,713	1,029	42
Tsirang	549	500	23	2,471	2,147	171	3,552	3,242	382
Wangdue	275	172	7				768	662	59
Zhemgang	53	40	3	609	406	13	1,228	729	19
Total	6,979	4,971	185	29,289	24,605	1,079	37,279	25,048	1,349

Table 43.6 Mango total numbers of trees, bearing trees and production

Dzongkhag	2004			2005			2005		
	Total trees	Bearing trees	Production (MT)	Total trees	Bearing trees	Production (MT)	Total trees	Bearing trees	Production (MT)
Chhukha				592	592	41	197	103	1
Dagana	1,348	719	20	1,850	1,726	85	2,120	881	83
Lhuentse	853	126	3	1,152	960	18	200	150	2
Mongar	4,803	1,445	55	4,313	3,660	143	20,674	6,266	111
Pemagatshel	665	337	9	949	831	37	7,166	2,818	93
Punakha	1,196	328	8	2,470	1,233	51	5,496	919	16
Samdrup Jongkhar	1,720	545	15	3,151	3,256	83	4,660	1,654	55
Samtse	286	113	4	3,552	3,398	179	10,133	4,184	127
Sarpang	2,247	548	19	5,880	4,867	279	11,275	2,857	130
Trashigang	427	99	5	1,242	621	10	994	45	1
Trashigang	1,239	233	11	2,906	2,223	64	4,088	1,825	137
Trongsa	177	44	2						
Tsirang	201	88	3	1,945	1,286	46	2,882	2,017	116
Wangdue	1,119	474	34						
Zhemgang	1,920	27	1	500	333	12	2,526	337	14
Total	18,201	5,126	189	30,501	24,986	1,048	72,411	24,056	886

Table 43.7 Arecanut total numbers of trees, bearing trees and production

Dzongkhag	2004			2005			2006		
	Total trees	Bearing trees	Production (MT)	Total trees	Bearing trees	Production (MT)	Total trees	Bearing trees	Production (MT)
Chhukha	73,711	34,667	956	74,002	38,687	1,535	95,290	43,346	1,323
Dagana	1,083	59	1	2,370	1,778	89	2,500	1,500	105
Pemagatshel							18,149	5,324	421
Samdrup Jongkhar	53,409	17,481	344	84,482	39,379	704	75,713	34,863	1,384
Samtse	127,485	44,497	670	250,379	134,965	2,035	323,589	118,871	1,499
Sarpang	449,743	71,290	1,448	451,849	105,159	2,253	467,148	111,505	1,634
Zhemgang							7,340	1,856	34
Tsirang	39	20	1						
Total	705,470	168,014	3,420	863,082	319,967	6,616	989,729	317,265	6,400

2. Farm Road

The objectives of the Farm Roads Programme are:-

- To link potential Agri-horticultural production areas in the hinterland to markets
- To bring production areas and farmers closer to markets and other social amenities
- To open up production and potential production areas for more intensive farming through farm mechanization
- To improve efficiency in delivery of inputs and services to villages/farms
- To improve accessibility from villages in order to make rural life more attractive

Farm Roads Development Strategy

- To achieve the above objectives a development strategy is set in line with the
- Guidelines for farm road development:
- Selection of farm roads shall be governed by several parameters/selection criteria as specified in the MoA Guidelines for farm road development
- Where prioritization is necessary because of resource constraint, priority shall be given to those potential areas with fewer roads if all other criteria are met.
- Farm road development will be taken up in an Environment Friendly Method and in accordance with guidelines of the Ministry of Agriculture to ensure long-term sustainability
- Participation by beneficiaries in all stages of farm road development is a necessary. A similar approach to that of National Irrigation Policy will be adopted.
- Surveys of farm roads will be done on a multi-disciplinary basis encompassing socio-economic, techno-feasibility, and environmental impacts to ensure long-term viability

Table 2.1 FARM ROADS DEVELOPMENT IN 9th PLAN April 2008

Sl. No.	Dzongkhags	Plan Target(Km)	Spillover Km	Total Km	2002-2003		2003-2004		2004-2005		2005-2006		2006-2007		2007-2008		on going	
					Km	Km	Km	Km	Km	Km	Km	Km	Km	Km	Km	Km	Km	Km
1	Bumthang	9.00	11.00	20.00	5.00	21.90	4.50	9.79	4.20	2.20	4.20	2.20	4.20	2.20	4.20	2.20	47.59	7.50
2	Chukha	15.00		15.00	0	3.50	7.38	0.00	9.13	3.30	23.31	6.00					23.31	6.00
3	Dagana	24.00	5.00	29.00	0	8.25	6.75	8.15	3.50	11.10	37.75	7.75					37.75	7.75
4	Gasa	14.00		14.00	0	0	2.00	2.08	2.71	0.00	6.79	1.80					6.79	1.80
5	Haa	5.00		5.00	0	0	4.50	8.90	0.00	7.00	20.40	15.50					20.40	15.50
6	Lhuentse	75.00	11.00	86.00	5.00	5.70	11.50	23.00	0.00	12.50	57.70	8.80					57.70	8.80
7	Mongar	13.00		13.00	5.00	7.00	5.20	13.70	9.93	23.70	64.53	26.80					64.53	26.80
8	Paro	42.00		42.00	0	7.52	14.15	7.50	0.00	13.00	42.17	17.50					42.17	17.50
9	Pemagatshel	18.00		18.00	0	17.62	0.00	0.00	11.60	11.56	40.78	23.62					40.78	23.62
10	Punakha	15.00		15.00	0	6.42	3.90	31.09	10.13	36.50	88.04	56.23					88.04	56.23
11	S/Jongkhar	97.00	12.00	109.00	0	8.10	11.40	2.00	5.00	22.10	48.60	52.04					48.60	52.04
12	Samtse	14.00		14.00	0	3.49	9.00	0	0.00	12.50	24.99	2.50					24.99	2.50
13	Sarpang	10.00		10.00	0	6.70	7.80	3.15	3.00	8.30	28.95	14.00					28.95	14.00
14	Tashigang	68.00		68.00	9.50	34.66	12.00	0.00	15.33	10.00	81.49	31.73					81.49	31.73
15	Thimphu	36.63		36.63	0	7.25	6.80	0	12.40	5.97	32.42	1.60					32.42	1.60
16	Trongsa	9.00		9.00	0	2.80	6.20	5.38	6.62	22.50	43.50	1.10					43.50	1.10
17	Tashiyangtse	45.00		45.00	4.00	8.50	0	10.00	0.30	4.50	27.30	18.44					27.30	18.44
18	Tsirang	10.00		10.00	0	2.00	8.00	2.96	5.00	3.50	21.46	3.50					21.46	3.50
19	W/phodrang	22.00		22.00	0	15.70	7.28	0.00	12.20	10.87	46.05	18.13					46.05	18.13
20	Zhemgang	17.00		17.00	0	5.91	2.00	4.10	3.50	0.00	15.51	31.00					15.51	31.00
	Grand Total	558.63	39.00	597.63	28.50	173.02	130.36	131.80	114.55	221.10	799.32	345.54					799.32	345.54

Source: Engineering Division, DoA April 2008,

Table 2.2 Power Tiller Tracks Development in the Dzongkhags

Sl.	Dzongkhag/	Length Km	02-03	03-04	04-05	05-06	06-07	07-08	Total Km
			km	km	Km	Km	Km	Km	
1	Trongsa	34.00	0	0	7.50	21.75	0.00		29.25
2	Haa	8.00	0	0	0	1.50	3.00		4.50
3	Paro	9.80	0	0	0.50	3.30	0.00		3.80
4	Mongar	67.24	0	0	0	4.87	14.10	16.30	35.27
5	Trashigang	39.80	0	0	0	4.00	0.00	5.40	9.40
6	Dagana	19.00	0	0	0	0	6.30	6.00	12.30
7	Lhuentse	35.00	0	0	2.00	8.00	2.00	3.00	15.00
8	Chukha	20.00	0	0	0	0	3.00	1.00	4.00
9	Wangdue phodrang	19.00	0	0	0	0	1.13	3.00	4.13
10	T/yangtse	8.50	0	0	0	0	2.50		2.50
11	Zhemgang	12.00	0	0	0	0	6.00	2.00	8.00
12	Tsirang	33.20	0	0	0	0	19.20	6.00	25.20
13	Punakha	17.59	0	0	0	5.00	14.40		19.40
14	Pemagatshel	15.00	0	0	0	0	0.00		0.00
15	S/Jongkhar	11.80	0	0	0	0	0.00		0.00
	Total	349.93	0	0	10.00	48.42	71.63	42.70	172.75

Source: Engineering Division, DoA April 2008

Table 44: Year wise Auction Details of the Agriculture Commodities

Items	Year		
	2004	2005	2006
	Qty (MT)	Qty (MT)	Qty (MT)
Potato	22,834.77	23,766.54	20,622.21
Apple	147.30	0.37	452.53
Orange	2,218.07	1.92	1,863.61
Other Fruits	1.88	0.00	0.31
Pulse/Spices	384.95	0.45	592.29
Vegetable	1,994.34	1.89	1,487.93
Total	27,581.31	23,771.16	25,018.89

Source: AMS,MoA compiled from FCB(s) of Phuntsholing, Gelephu,Sarpang, SamdrupJongkhar, Samtse

Table 45: Agriculture commodities exported

Items	Qty. (MT) 2005	Qty. (MT) 2006
Apple	4,743.464	3,838.730
Mandarin	18,577.667	13,142.75
Mushroom	2.7326	1.674
Cardamom		610.96
Red Rice		89.72

Source: Bhutan Agriculture & Food Regulatory Authority, MoA

Table 46: Infrastructures development in the Dzongkhags (Unit: Nos.)

Dzongkhag	RNR Centre	AEC	Technology Park
Bumthang	2	2	1
Chhukha	5	6	6
Dagana	7	4	4
Gasa	1	1	
Ha	4	1	3
Lhuentse	6	5	1
Mongar	15	1	14
Paro	2	8	1
Pemagatshel	8	3	
Punakha	6	6	2
Samdrup Jongkhar	3	4	
Samtse	2	2	1
Sarpang	8	2	1
Thimphu	7	1	
Trashi Yangtse	8	3	1
Trashigang	12	2	4
Trongsa	4	2	2
Tsirang	5	2	2
Wangdue Phodrang	7	8	4
Zhemgang	8	4	2
Total	120	67	49

Source: Dzongkhag Agriculture Sector. 2008

Table 47 Dzongkha wise sale of Vegetable Seeds (in MT)

Dzongkhag	2004	2005	2006
Thimphu	0.21	0.48	0.60
Paro	1.32	2.98	1.36
Ha	0.63	0.47	0.22
Chukha	1.30	0.77	0.19
Samtse	0.11	0.72	0.16
Punakha	0.07	0.50	0.04
Gasa	0.23	-	-
Wangdue	0.31	0.54	0.09
Tsirang	0.01	0.32	0.01
Dagana	0.42	0.36	0.11
Bumthang	0.07	0.02	-
Trongsa	0.01	0.18	-
Zhemgang	1.01	0.51	0.08
Sarpang	0.03	0.14	0.09
Lhuentse	0.30	0.05	0.22
Mongar	0.43	0.83	0.12
Trashigang	0.51	0.50	0.11
Yangtse	0.44	0.04	0.02
Pemagatshel	0.03	0.05	0.34
S/Jongkhar	0.01	0.05	0.16
Exported	1.66	2.86	1.50
Total	9.11	12.37	5.41

Source: Druk Seed Corporation, Paro

Table 48 Dzongkha wise sale of planting Materials (in Nos.)

Dzongkhag	2004	2005	2006
Thimphu	19,216	3,283	35,434
Paro	9,559	14,680	30,948
Ha	5,962	5,167	450
Chukha	41,930	24,441	6,099
Samtse	5,062	139	1,642
Punakha	31,691	3,524	150
Gasa	8,000	2,000	20,000
Wangdue	8,688	15,100	12,790
Tsirang	-	352	2,435
Dagana	700	-	4,471
Bumthang	-	237	600
Trongsa	1,466	1,982	30,000
Zhemgang	45	35,134	10,231
Sarpang	11,249	2,039	6,933
Lhuentse	1,128	-	18,344
Mongar	9,537	2,695	36,010
Trashigang	2,470	76,433	8,328
Yangtse	13,092	13,060	2,550
Pemagatshel	12,167	2,110	5,800
S/Jongkhar	1,200	502	1,515
Exported			
Total	183,162	202,878	234,730

Source: Druk Seed Corporation, Paro

Table 48.1 Dzongkha wise sale of Seeds of Cereals and grain legumes (in MT)

Dzongkhag	2004	2005	2006	
Thimphu	4.00	3.30	2.12	1.29
Paro	10.58	14.65	7.49	2.69
Ha	1.01	2.83	0.16	0.23
Chukha	7.36	3.13	2.26	4.25
Samtse	10.68	15.73	9.98	5.89
Punakha	3.43	4.72	4.26	4.70
Gasa	-	-	0.00	-
Wangdue	12.29	9.32	5.90	3.40
Tsirang	3.20	4.28	2.40	9.64
Dagana	20.30	3.96	2.00	6.65
Bumthang	-	-	0.00	-
Trongsa	0.30	1.00	0.00	2.54
Zhemgang	3.70	2.65	5.84	2.31
Sarpang	15.36	9.70	13.31	33.36
Lhuentse	2.56	4.35	8.82	2.37
Mongar	2.66	12.19	1.89	4.47
Trashigang	6.15	7.73	0.92	7.22
Yangtse	2.72	1.98	0.95	1.07
Pemagatshel	3.30	3.05	4.93	7.29
S/Jongkhar	1.20	2.74	3.42	11.67
Exported	-	-	0.25	-
Total	110.80	107.31	76.88	111.01

Source: Druk Seed Corporation, Paro

Table 48.2 Dzongkha wise sale of Seed Potato (in MT)

Dzongkhag	2004	2005	2006
Thimphu	57.95	54.30	2.05
Paro	30.15	34.85	13.40
Ha	6.30	16.80	0.00
Chukha	14.00	40.05	64.05
Samtse	-	0.90	1.00
Punakha	19.20	7.00	4.00
Gasa	8.00	2.10	0.00
Wangdue	2.00	-	18.05
Tsirang	-	-	13.00
Dagana	7.20	4.00	8.00
Bumthang	48.75	-	3.80
Trongsa	11.30	6.50	0.00
Zhemgang	21.75	11.55	8.85
Sarpang	-	2.00	1.40
Lhuentse	4.00	4.00	5.55
Mongar	11.40	5.30	0.00
Trashigang	-	32.35	17.40
Yangtse	4.00	-	0.00
Pemagatshel	4.00	8.00	0.00
S/Jongkhar	4.00	-	1.00
Exports	263.65	167.35	224.70
Total	517.65	397.05	386.25

Source: Druk Seed Corporation, Paro

Table 48.3 Dzongkha wise sale of Butachlor 5% Granule (in MT)

Dzongkhag	2004	2005	2006
Thimphu	19.4	17.55	18.23
Paro	65.75	67.45	76.00
Ha	0	1.00	0.50
Chukha	4.83	4.99	4.31
Samtse	3	1.30	0.97
Punakha	34.5	30.20	28.90
Gasa	0	-	-
Wangdue	62.45	60.56	62.84
Tsirang	0	-	4.80
Dagana	5.25	4.92	6.00
Bumthang	0	-	-
Trongsa	10	12.90	11.50
Zhemgang	2.25	1.21	1.60
Sarpang	4	6.79	3.58
Lhuentse	10.62	10.00	1.75
Mongar	3.7	6.12	3.40
Trashigang	12.2	17.63	13.79
Yangtse	13.9	22.00	14.20
Pemagatshel	0	-	-
S/jongkhar	0	-	2.44
Total	251.85	264.62	254.81

Source: Druk Seed Corporation, Paro

Table 48.4 Dzongkha wise sale of Fertilizers (in MT)

Dzongkhag	2004	2005	2006
Thimphu	246.52	187.24	204.58
Paro	231.15	268.39	249.77
Ha	32	43.00	27.50
Chukha	161.65	230.84	176.79
Samtse	16.92	11.30	11.55
Punakha	154.45	146.20	129.45
Gasa	0	-	-
Wangdue	370.25	506.57	488.40
Tsirang	0	-	16.30
Dagana	18.1	3.30	8.86
Bumthang	502.47	503.99	544.06
Trongsa	22	23.5	19
Zhemgang	1	4	4.4
Sarpang	6.5	3.4	6.75
Lhuentse	45.05	46	41.55
Mongar	128.2	142.1	148.95
Trashigang	725.08	701.9	591.26
Yangtse	97.18	165	163.5
Pemagatshel	80	104.05	112
S/jongkhar	8	24	9.55
Total	2846.52	3114.78	2954.22

Source: Druk Seed Corporation, Paro

Table 48.5 a Dzongkhag wise pesticides distribution for 2006-2007

Products	Dzongkhags									
	Bumthang	Chhukha	Dagana	Haa	Lhuentse	Mongar	Punakha	Paro	Pemagatshel	Samtse
I. INSECTICIDES										
1. Chlorpyrifos 20 EC	10.0	5.0	7.5	30.0	0.0	34.0	10.5	155.0	-	10.5
2. Cypermethrin 10 EC	22.0	35.0	6.0	21.0	0.0	64.0	5.0	127.0	-	10.0
3. Dimethoate 30 EC	2.0	3.0	45.0	1.0	0.0	15.0	18.0	35.0	84.0	32.0
4. Fenvelerate 0.4D	0.0	86.0	4.0	2.0	20.0	20.0	-	28.0	-	-
5. Malathion 5 D	2.0	43.0	18.0	0.0	200.0	0.0	37.0	90.0	-	38.0
6. Malathion 50 EC	2.0	29.0	4.0	1.0	0.0	0.0	4.0	10.0	-	-
Total	38.0	201.0	84.5	55.0	220.0	133.0	74.5	445.0	84.0	90.5
II. FUNGICIDES										
1. Calcium Hydroxide	0.0	0.0	0.0	0.0	0.0	-	30.0	-	-	-
2. Copper Sulphate	0.0	0.0	0.0	0.0	0.0	100.0	30.0	-	-	-
3. Captan 50 WP	0.0	0.0	0.0	14.0	0.0	15.0	-	19.0	-	-
4. Carbendazim 50 WP	25.0	11.0	0.0	50.0	0.0	-	7.0	122.0	-	10.5
5. Copper Oxide 50 WP	0.0	18.0	8.5	1.0	0.0	-	8.5	14.0	6.0	21.0
6. Hexaconazole 5 EC	0.0	2.0	0.0	21.0	0.0	-	-	2.0	-	-
7. Mancozeb 75 WP	173.0	6.0	178.0	81.0	0.0	840.0	8.0	171.0	11.0	26.0
8. Ridomil 72 WP	20.0	0.0	0.0	0.0	0.0	-	3.0	-	-	1.0
9. Tridemorph 80 EC		0.0	0.0	0.0	0.0	-	-	-	-	-
10. Tricyclazole 75 WP		0.0	0.0	0.0	0.0	5.0	2.0	-	-	-
Total	218.0	37.0	186.5	167.0	0.0	960.0	88.5	328.0	17.0	58.5

III. HERBICIDES										
1. Glyphosate 41 sl	21.0	0.0	6.0	-	0.0	0.0	2.0	2.0	0.0	0.0
2. Metribuzim 70 WP	163.0	1.0	21.0	2.0	0.0	0.0	0.0	17.0	0.0	0.0
Total	184.0	1.0	27.0	2.0	0.0	0.0	2.0	19.0	0.0	0.0
IV.										
ROPDENTICIDES										
1. Zinc Phosphide 80 W	0.0	0.5	0.3	0.8	5.0	9.0	3.6		0.0	0.0
2. Bromadiolone .005 R	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Total	0.0	0.5	0.3	0.8	5.0	9.0	3.6	0.1	0.0	0.0
V. ACARICIDES										
1. Dicofal 18.5 EC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VI. NON-TOXIC										
1. Lin seed Oil		40.0	0.0	2.0	0.0	0.0	0.0	24.0	0.0	0.0
2. Protein Hydrolysate		25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3. Sandovit	6.0	51.0	0.0	27.0	0.0	0.0	5.0	71.0	0.0	0.0
4. TSO		79.0	0.0	69.0	0.0	6.0	0.0	2,839.0	0.0	0.0
Total	6.0	195.0	0.0	98.0	0.0	6.0	5.0	2,934.0	0.0	0.0
VII.										
BIOPESTICIDES										
1. Axadirachtin 0.3%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source : NPPC, Semtokha

Table 48.5 b Dzongkhag wise pesticides distribution for 2006-2007

Products	Dzongkhags									
	S/ jongkhar	Sarpang	Tsirang	Trongsa	Trashigang	Tyangse	Thimphu	wangdue	Zhemgang	
I. INSECTICIDES										
1. Chlorpyrifos 20 EC	-	5	-	-	12	-	133	7.5	-	-
2. Cypermethrin 10 EC	-	13	1	-	10	-	386	18	105	
3. Dimethoate 30 EC	-	10	-	-	245	-	168	15	56	
4. Fenvelerate 0.4D	-	-	-	-	-	-	801	10	130	
5. Malathion 5 D	-	-	-	-	-	-	532	1	-	
6. Malathion 50 EC	-	-	1	-	8	-	29	3	1	
Total	0	28	2	0	275	0	20,49	54.5	292	
II. FUNGICIDES										
1. Calcium Hydroxide	-	1	2	-	-	-	31	5	-	
2. Copper Sulphate	-	2	2	-	-	-	-	5	-	
3. Captan 50 WP	-	-	30	-	-	-	59	-	-	
4. Carbendazim 50 WP	-	6.5	-	-	-	-	373	2	-	
5. Copper Oxide 50 WP	-	26-	2	-	-	-	100	10	5	
6. Hexaconazole 5 EC	-	-	-	-	-	-	54	-	-	
7. Mancozeb 75 WP	267	-	-	-	218	-	712	-	3	
8. Ridomil 72 WP	-	-	9	-	-	-	2	110	-	
9. Tridimorph 80 EC	-	-	-	-	-	-	-	1.5	-	
10. Tricyclazole 75 WP	-	1	-	-	-	-	-	-	1	
Total	267	10.5	45	0	218	0	13,31	133.5	9	

III. HERBICIDES																
1. Glyphosate 41 sl	0	0	0	0	0	0	0	0	0	0	25	946	0			
2. Metribuzim 70 WP	0	0	0	0	20	0	0	0	0	0	2	625	0			
Total	0	0	0	0	20	0	0	0	0	0	27	15,71	0			
IV.																
ROPDENTICIDES																
1. Zinc Phosphide 80 W	0	0	0	0.1	0	0	2	3	7.6	4			2.8			
2. Bromadiolone .005 R	0	0	0	0	0	0	0	0	2.4	1			0.5			
Total	0	0	0	0.1	0	0	2	3	10	5			3.3			
V. ACARICIDES																
1. Dicolal 18.5 EC	0	0	0	0	0	0	0	0	10	0						
Total	0	0	0	0	0	0	0	0	10	0			0			
VI. NON-TOXIC																
1. Lin seed Oil	0	0	0	2	0	0	0	0	136	0			0			
2. Protein Hydrolysate	0	0	0	0	0	0	0	0	0	0			0			
3. Sandovit	0	1	1	1	0	0	0	0	267	15			30			
4. TSO	0	0	0	0	0	0	0	0	6347	0			0			
Total	0	1	3	3	0	0	0	0	67,50	15			30			
VII. BIOPESTICIDES																
1. Axadirachtin 0.3%	0	0	0	0	0	0	0	0	10	0			0			
Total	0	0	0	0	0	0	0	0	10	0			0			

Source : NPPC, Semtokha