

2024

AGRICULTURE AND LIVESTOCK STATISTICS

Prepared By:
Policy and Planning Division, MoAL



Copyrights © June 2023 All rights reserved.

Printed by Bhutan Printing Solution

ISBN 978-99980-58-02-6

Policy and Planning Division (PPD)

Ministry of Agriculture and Livestock

Royal Government of Bhutan

PO Box No 338 Thimphu, Bhutan

Tel: +975 323745

www.moal.gov.bt

FOREWORD

I on behalf of the Ministry of Agriculture and Livestock is pleased to bring out the Bhutan Agriculture and Livestock Statistics (BALS) 2023 (formerly Bhutan RNR Statistics). It is a comprehensive and systematic compendium of the relevant statistics in the domain of Agriculture and Livestock

The BALS 2023 is expected to serve as the major source of information for planners, policymakers, researchers, and academicians. The statistics presented are compiled based on the information gathered through the statistical surveys and censuses as well as from the administrative data maintained by different agencies and departments under the Ministry of Agriculture and Livestock (MoAL).

The statistics are carefully harmonized and diligently validated by the Policy and Planning Division. The additional features of this year's BALS 2023 include the expenditure and analysis.

This change is aimed at facilitating the readers' insights into medium-term thinking on production, trades, prices, etc. As statistics are compiled from various sources, each statistical table mentions the original source so that the data contributors are duly acknowledged and secondary users may contact the source for any further information.

I would like to sincerely thank the Agriculture Statistics Division of the NSB and all departments/agencies including the dzongkhag RNR sectors for their contributions and support, which made it possible for successful publication. We encourage comments and suggestions from the users of this publication to improve the quality of the statistical information.

This publication will be the official source of information on the Agrifood sector., which we will update annually.



Karma Tshering
Policy and Planning Division
Ministry of Agriculture and Livestock

ACRONYMS

AED	Agriculture Engineering Division
ASD	Agriculture Statistics Division
AEZ	Agro-Ecological Zones
AFS	Annual Financial Statement
AFO	Annual Forestry Statistics
BAFRA	Bhutan Agriculture and Food Regulatory Authority
BAIL	Bhutan Agro Industries Limited
BTS	Bhutan Trade Statistics
CAN	Calcium Ammonium Nitrate
CF	Community Forests
CFM	Centenary Farmers Market
CFMG	Community Forest Management Groups
COTI	Countries Other Than India
DAMC	Department of Agricultural Marketing and Cooperatives
DAP	Diammonium Phosphate
DoA	Department of Agriculture
DoC	Day-old Chick
DoFPS	Department of Forests and Park Services
DoL	Department of Livestock
DPA	Department of Public Accounts
DRC	Department of Revenue and Customs
FCBL	Food Corporation of Bhutan Limited
FMCL	Farm Machinery Corporation Limited
FMU	Forest Management Unit
GDP	Gross Domestic Product
LUPP	Land Use Planning Project
LCMP	Land Cover Mapping Project 2010
LULC	Land Use and Land Cover 2016
LFS	Labour Force Survey

MoAF	Ministry of Agriculture and Forests
MoAL	Ministry of Agriculture and Livestock
MoF	Ministry of Finance
MoLHR	Ministry of Labour and Human Resources
MoDa	Mobile Operational Data Acquisition
NCHM	National Centre for Hydrology and Meteorology
NLCS	National Land Commission Secretariat
NPPC	National Plant Protection Centre
NPRC	National Poultry Research Centre
NRDCL	Natural Resources Development Corporation Limited
NSB	National Statistics Bureau
NSC	National Seed Centre
NWFP	Non-Wood Forest Products
PHCB	Population Housing and Census of Bhutan 2017
PPC	Plant Protection Chemical
PPD	Policy and Planning Division
RNR	Renewable Natural Resources
SYB	Statistical Yearbook of Bhutan
WBI	Wood-Based Industry

TABLE OF CONTENT

CHAPTER 1: PRODUCTION.....	1
TABLE 1.1.1 HARVESTED AREA UNDER CEREALS (2014-2023) (VALUE IN ACRE).....	1
TABLE 1.1.2 CEREAL CROP PRODUCTION (2014-2023) (VALUE IN MT)	1
TABLE 1.2.1 HARVESTED AREA UNDER OILSEEDS (2014-2023) (VALUE IN ACRE).....	3
TABLE 1.2.2 OILSEED PRODUCTION (2014-2023) (VALUE IN MT)	3
TABLE 1.3.1 HARVESTED AREA UNDER ROOTS AND TUBERS (2014-2023) (VALUE IN ACRE).....	4
TABLE 1.3.2 ROOTS AND TUBER PRODUCTION (2014-2023) (VALUE IN MT)	4
TABLE 1.4.1 HARVESTED AREA UNDER PULSES (2014-2023) (VALUE IN ACRE)	5
TABLE 1.4.2 PULSES PRODUCTION (2014-2023) (VALUE IN MT)	5
TABLE 1.5.1 HARVESTED AREA UNDER SPICES (2014-2023) (VALUE IN ACRE).....	5
TABLE 1.5.2 SPICES PRODUCTION (2014-2023) (VALUE IN MT)	5
TABLE 1.6.1 HARVESTED AREA UNDER VEGETABLES (2014-2023) (VALUE IN ACRE).....	6
TABLE 1.6.2 VEGETABLE PRODUCTION (2014-2023) (VALUE IN MT).....	8
TABLE 1.7 FRUIT CROPS PRODUCTION (2014-2023) (VALUE IN MT).....	9
TABLE 1.9 MILKING ANIMAL POPULATION (2014-2023) (VALUE IN HEADCOUNT).....	11
TABLE 1.10 PRODUCTION OF MILK AND DAIRY PRODUCT (2014-2023) (VALUE IN MT)	11
TABLE 1.11 MEAT PRODUCTION (2014-2023) (VALUE IN MT)	12
TABLE 1.12 EGG, HONEY, WOOL PRODUCTION, AND LAYER POPULATION (2014-2023) (VALUE IN '000 NOS., MT, AND '000 HEADS)	12
CHAPTER 2: TRADE	16
TABLE 2.1.1 EXPORT OF MAJOR FOOD ITEMS TO INDIA AND COTI (2014-2023) (VOLUME IN MT UNLESS SPECIFIED)	17
TABLE 2.1.2 EXPORT OF MAJOR FOOD ITEMS TO INDIA AND COTI (2014-2023) (VALUE IN MILLION NU.)	18
TABLE 2.2.1 IMPORT OF MAJOR FOOD ITEMS FROM INDIA AND COTI (2014-2023) (VOLUME IN MT UNLESS SPECIFIED) .	20
TABLE 2.2.2 IMPORT OF MAJOR FOOD ITEMS FROM INDIA AND COTI (2013-2022) (VALUE IN MILLION NU.)	27
TABLE 2.3 (1) AGRICULTURE COMMODITIES AUCTIONED THROUGH FCBL (2014-2023) (VOLUME IN MT).....	34
TABLE 2.3 (2) AGRICULTURE COMMODITIES AUCTIONED THROUGH FCBL (2014-2023) (VALUE IN MILLION NU.).....	35
CHAPTER 3: LABOUR POPULATION IN AGRICULTURE AND LAND USE.....	36
TABLE 3.2 LABOUR FORCE EMPLOYED IN AGRICULTURE (2013-2022).....	37
TABLE 3.2.2 POPULATION OF EMPLOYED PERSONS BY SECTOR (2013-2022).....	39
TABLE 3.3 LABOUR FORCE EMPLOYED IN AGRICULTURE FARMING BY AGE GROUP (2013-2022)	40
TABLE 3.4 LAND COVER BY MAJOR CATEGORIES IN 2010 AND 2016.....	42
TABLE 3.5 DZONGKHAG-WISE GEOGRAPHICAL AREA BY LANDCOVER TYPE (VALUE IN HECTARE)	43
TABLE 3.6 DZONGKHAG-WISE LAND AREA UNDER DIFFERENT AGRICULTURAL LAND-USE IN 2010, 2016, AND 2019 (VALUE IN HECTARE/ACREA).....	44
TABLE 3.7 DZONGKHAG-WISE CASES UNDER LAND-LEASED PROGRAM (2019-2023)	45
TABLE 3.8 (1) DZONGKHAG-WISE NUMBER OF CASE AND AREA RECOMMENDED BY DoA TO NLCS FOR LAND CONVERSION (2014-2023) (NO. OF CASE)	46
TABLE 3.8 (2) DZONGKHAG-WISE NUMBER OF CASE AND AREA RECOMMENDED BY DoA TO NLCS FOR LAND CONVERSION (2014-2023) (AREA IN ACRE)	47
TABLE 3.9 (1) DZONGKHAG-WISE NUMBER OF CASE AND AREA NOT RECOMMENDED BY DoA TO NLCS FOR LAND CONVERSION (2014-2023) (NO. OF CASE).....	48

TABLE 3.9 (2) DZONGKHAG-WISE NUMBER OF CASE AND AREA NOT RECOMMENDED BY DoA TO NLCS FOR LAND CONVERSION (2014-2023) (AREA IN ACRE).....	49
CHAPTER 4: MACHINERY	50
TABLE 4.1 IMPORT OF FARM MACHINERY FROM INDIA (2017-2023) (VOLUME IN NO. AND VALUE IN MILLION NU.).....	51
TABLE 4.2 IMPORT OF FARM MACHINERY FROM COTI (2017-2023) (VOLUME IN NO. AND VALUE IN MILLION NU.).....	52
CHAPTER 5: AGRICULTURAL INPUT SUPPLY	54
TABLE 5.1 IMPORT OF PLANT PROTECTION CHEMICALS FROM INDIA (2014-2023) (VOLUME IN MT, AND VALUE IN MILLION NU.).....	55
TABLE 5.2 IMPORT OF PLANT PROTECTION CHEMICALS FROM COTI (2014-2023) (VOLUME IN MT, AND VALUE IN MILLION NU.).....	56
TABLE 5.3 (1) PLANT PROTECTION CHEMICALS DISTRIBUTED BY NPPC (2017-2023) (VOLUME IN KG OR LITRE UNLESS SPECIFIED)	57
TABLE 5.3 (2) PLANT PROTECTION CHEMICALS DISTRIBUTED BY NPPC (2017-2023) (VOLUME IN KG OR LITRE UNLESS SPECIFIED)	58
TABLE 5.3 (3) PLANT PROTECTION CHEMICALS DISTRIBUTED BY NPPC (2017-2023) (VOLUME IN KG OR LITRE UNLESS SPECIFIED)	59
TABLE 5.4 IMPORT OF FERTILIZER (2014-2023) (VOLUME IN MT, VALUE IN MILLION NU.)	60
TABLE 5.5 (1) FERTILIZER DISTRIBUTED BY NSC (2017-2023) (VOLUME IN MT)	61
TABLE 5.5 (2) FERTILIZER DISTRIBUTED BY NSC (2017-2023) (VOLUME IN MT)	62
TABLE 5.5 (3) FERTILIZER DISTRIBUTED BY NSC (2017-2023) (VOLUME IN MT)	63
TABLE 5.5 (4) FERTILIZER DISTRIBUTED BY NSC (2017-2023) (VOLUME IN MT)	64
TABLE 5.7 TEMPERATE FRUIT AND OTHER CROP SEEDLING DISTRIBUTED BY NSC (2017-2023) (VOLUME IN NO. UNLESS SPECIFIED)	69
TABLE 5.8 SUBTROPICAL FRUIT SEED AND SEEDLING DISTRIBUTED BY NSC (2017-2023) (VOLUME IN NO. UNLESS SPECIFIED)	70
TABLE 5.9 CEREAL SEED AND SEEDLING DISTRIBUTED BY NSC (2017-2023) (VOLUME IN KG UNLESS SPECIFIED).....	71
TABLE 5.10 DOC (DAY OLD CHICK) DISTRIBUTED BY NPRC (2017-2023) (VALUE IN NO. UNLESS SPECIFIED).....	73
TABLE 5.11 BIOGAS PLANT ACHIEVEMENT BY DZONGKHAG (2017-2023) (VALUE IN NO. UNLESS SPECIFIED).....	75
TABLE 5.12 GREENHOUSE DISTRIBUTION TO DZONGKHAG (2018-2023) (VALUE IN NO. UNLESS SPECIFIED).....	76
CHAPTER 6: INFRASTRUCTURE	77
TABLE 6.1 AGRICULTURE CENTRES UNDER DoA (2023)	77
TABLE 6.2 LIVESTOCK CENTRES UNDER DoL (2023).....	78
TABLE 6.3(1)-1 IRRIGATION SCHEMES CONSTRUCTED/RENOVATED (BY DoA) DURING THE 12-FYP (LENGTH).....	79
TABLE 6.3 (1)-2 IRRIGATION SCHEMES CONSTRUCTED/RENOVATED (BY DoA) DURING THE 12-FYP (COMMAND AREA)...	80
TABLE 6.3 (1)-3 IRRIGATION SCHEMES CONSTRUCTED/RENOVATED (BY DZONGKHAG) DURING THE 12-FYP (LENGTH)...	81
TABLE 6.3 (1)-4 IRRIGATION SCHEMES CONSTRUCTED/RENOVATED (BY DZONGKHAG) DURING THE 12-FYP (COMMAND AREA)	82
CHAPTER 7: PRICE	83
TABLE 7.1 AVERAGE RETAIL PRICE OF SECONDARY CEREAL AND PULSE PRODUCTS AT CFM, THIMPHU (2014-2023)(VALUE IN NU.PER KG).....	84
SOURCE: AMISD, DAMC, MoAL.....	84

TABLE 7.2 AVERAGE RETAIL PRICE OF VEGETABLES AT CFM, THIMPHU (2014-2023) (VALUE IN NU. PER KG)	84
TABLE 7.3 AVERAGE RETAIL PRICE OF FRUITS AT CFM, THIMPHU (2014-2023) (VALUE IN NU. PER KG UNLESS SPECIFIED)	85
TABLE 7.4 AVERAGE RETAIL PRICE OF LIVESTOCK PRODUCTS AT CFM, THIMPHU (2014-2023) (VALUE IN NU. PER KG UNLESS SPECIFIED)	86
TABLE 7.6 PRICE OF CEREAL AND OILSEED SEEDS (2014-2023) (VALUE IN NU. PER UNIT SPECIFIED)	87
TABLE 7.7 PRICE OF VEGETABLE SEEDS (2014-2023) (VALUE IN NU. PER UNIT SPECIFIED)	88
TABLE 7.8 PRICE OF TEMPERATE FRUIT SEEDLINGS (2014-2023) (VALUE IN NU. PER UNIT SPECIFIED)	90
TABLE 7.9 PRICE OF SUB-TROPICAL FRUIT SEEDLINGS (2014-2023) (VALUE IN NU. PER UNIT SPECIFIED)	91
TABLE 7.10 PRICE OF FERTILIZERS (2013-2022) (VALUE IN NU. PER UNIT SPECIFIED)	92
CHAPTER 8: METEOROLOGY STATISTICS	93
TABLE 8.1 (2) STATION-WISE ANNUAL RAINFALL 2014-2023 (FIGURE IN MM).....	97
TABLE 8.2 (2) STATION-WISE MONTHLY AND ANNUAL AVERAGE OF TEMPERATURE (MIN.) DURING 2023 (FIGURE IN °C)	100
TABLE 8.2 (3) STATION-WISE ANNUAL AVERAGE OF TEMPERATURE (MAX.) (2015-2023) (FIGURE IN °C)	102
TABLE 8.2 (6) STATION-WISE ANNUAL AVERAGE OF TEMPERATURE (MIN.) (2015-2023) (FIGURE IN °C).....	103
TABLE 8.3 (1) STATION-WISE METEOROLOGY INFORMATION DURING 2023.....	105
TABLE 8.3 (3) STATION-WISE METEOROLOGY INFORMATION DURING 2023.....	107
TABLE 8.3 (4) STATION-WISE METEOROLOGY INFORMATION DURING 2023.....	108
TABLE 8.3 (5) STATION-WISE METEOROLOGY INFORMATION DURING 2023.....	109
TABLE 8.3 (6) STATION-WISE METEOROLOGY INFORMATION DURING 2023.....	110
TABLE 8.3 (7) STATION-WISE METEOROLOGY INFORMATION DURING 2023.....	111
CHAPTER 9: EXPENDITURE.....	112
TABLE 9.1 GDP (TOTAL/PRIMARY SECTOR), GOVERNMENT EXPENDITURE (TOTAL/PRIMARY SECTOR), MODIFIED-Gov. EXPENDITURE (TOTAL/PRIMARY SECTOR) (VALUE IN MILLION NU.) AND THE GDP/M-Gov. EXPENDITURE RATIO (TOTAL/PRIMARY SECTOR).....	113
CHAPTER 10: ANALYSIS.....	116
TABLE 10.3 SECTORAL GDP, SECTORAL LABOUR FORCE, AND SECTORAL GDP PER SECTORAL EMPLOYMENT.....	120
TABLE 10.4 SECTORAL GDP PER SECTORAL EMPLOYMENT (RELATIVE TO THE 2013 FIGURE)	120

List of Figures

FIGURE 1: TRENDS IN PADDY HARVESTED AREA, PRODUCTION VOLUME, AND PRODUCTIVITY, RELATIVE TO 2013 FIGURES (2014-2023)	2
FIGURE 2: TRENDS IN MAIZE HARVESTED AREA, PRODUCTION VOLUME, AND PRODUCTIVITY, RELATIVE TO 2013 FIGURES (2014-2023)	2
FIGURE 3: TRENDS IN MUSTARD HARVESTED AREA, PRODUCTION VOLUME, AND PRODUCTIVITY, RELATIVE TO 2013 FIGURES (2014-2023)	3
FIGURE 4: TRENDS IN POTATO HARVESTED AREA, PRODUCTION VOLUME, AND PRODUCTIVITY, RELATIVE TO 2013 FIGURES (2014-2023)	4
FIGURE 5: TRENDS IN CARDAMON HARVESTED AREA, PRODUCTION VOLUME, AND PRODUCTIVITY, RELATIVE TO 2013 FIGURES (2014-2023)	6
FIGURE 6: TRENDS IN CHILI HARVESTED AREA, PRODUCTION VOLUME, AND PRODUCTIVITY, RELATIVE TO 2014 FIGURES (2014-2023)	7
FIGURE 7: TRENDS IN CABBAGE HARVESTED AREA, PRODUCTION VOLUME, AND PRODUCTIVITY, RELATIVE TO 2014 FIGURES (2014-2023)	7
FIGURE 8: TRENDS IN ASPARAGUS HARVESTED AREA, PRODUCTION VOLUME, AND PRODUCTIVITY, RELATIVE TO 2014 FIGURES (2014-2023)	8
FIGURE 9: TRENDS IN MAJOR FRUITS PRODUCTION, RELATIVE TO 2013 FIGURES (2014-2023)	9
FIGURE 10: TRENDS IN MAJOR LIVE ANIMAL POPULATION, RELATIVE TO 2014 FIGURES (2014-2023)	10
FIGURE 11: TRENDS IN DAIRY PRODUCT PRODUCTION, RELATIVE TO 2014 FIGURES (2014-2023)	11
FIGURE 12: TRENDS IN MAJOR MEAT PRODUCTION, RELATIVE TO 2014 FIGURES (2014-2023)	12
FIGURE 13: TRENDS IN EGG, HONEY, AND WOOL PRODUCTION, RELATIVE TO 2014 FIGURES (2014-2023)	12
FIGURE 14: CHANGES OF GDP AT CURRENT PRICES BY MAJOR SECTORS (2014-2023)	14
FIGURE 15: CHANGES OF GDP AT CURRENT PRICES BY SUB-SECTORS OF THE PRIMARY SECTOR (2014-2023)	14
FIGURE 16: CHANGE OF GDP SHARE (CURRENT PRICES) BY MAJOR SECTORS (2014-2023)	15
FIGURE 17: TRENDS IN EXPORT VALUE OF SELECTED FOOD ITEMS TO INDIA AND COTI, RELATIVE TO 2014 FIGURES (2014-2023)	19
FIGURE 18: TRENDS IN TOTAL EXPORT VALUE OF 27 MAJOR FOOD ITEMS LISTED IN TABLE 2.1.2 (2014-2023)	19
FIGURE 19: TRENDS IN IMPORT VALUE OF RICE (SUM OF ALL TYPES) FROM INDIA AND COTI (2014-2023) (VOLUME)	33
FIGURE 20: TRENDS IN IMPORT VALUE OF RICE (SUM OF ALL TYPES) FROM INDIA AND COTI (2014-2023) (VALUE)	33
FIGURE 21: TRENDS IN ECONOMICALLY ACTIVE POPULATION EMPLOYED IN AGRICULTURE (2013-2022)	38
FIGURE 22: TRENDS IN POPULATION OF EMPLOYED PERSONS BY SECTOR (2016-2022)	39
FIGURE 23: TRENDS IN LABOUR FORCE EMPLOYED IN AGRICULTURE FARMING BY AGE GROUP (2013-2022)	41
FIGURE 24: TRENDS IN THE TOTAL VOLUME OF PLANT PROTECTION CHEMICALS DISTRIBUTED IN BHUTAN (2017-2023) (VOLUME IN KG OR LITRE)	59
FIGURE 25: TRENDS IN THE DAY-OLD-CHICK DISTRIBUTION BY NPRC (2018-2023) (VALUE IN No.)	74
FIGURE 26: TRENDS IN THE BIOGAS PLANT ACHIEVEMENT (2018-2023) (VALUE IN No.)	74
FIGURE 27: IRRIGATION SCHEMES CONSTRUCTED/RENOVATED (BY DoA) DURING 12TH FYP (2018-2023) BY DZONGKHAG (LENGTH IN KM)	79
FIGURE 28: IRRIGATION SCHEME CONSTRUCTED/RENOVATED (DoA) DURING THE 12TH FYP (COMMAND AREA IN ACRE)	80
FIGURE 29: IRRIGATION SCHEMES CONSTRUCTED/RENOVATED (BY DZONGKHAG) DURING THE 12-FYP (LENGTH IN KM)	81
FIGURE 30: IRRIGATION SCHEMES CONSTRUCTED/RENOVATED (BY DZONGKHAG) DURING THE 12-FYP (AREA IN ACRE)	82
FIGURE 31: TRENDS IN AVERAGE RETAIL PRICE OF SELECTED VEGETABLES AT CFM (2014-2023)	85
FIGURE 32: TRENDS IN AVERAGE RETAIL PRICE OF SELECTED FRUITS AT CFM (2014-2023)	85
FIGURE 33: TRENDS IN AVERAGE RETAIL PRICE OF LIVESTOCK PRODUCTS AT CFM (2014-2023)	86
FIGURE 34: STATION-WISE MONTHLY AND ANNUAL RAINFALLS (2023) (IN MM)	93
FIGURE 35: STATION-WISE MONTHLY RAINFALLS DURING 2023 (IN MM)	95
FIGURE 36: STATION-WISE ANNUAL RAINFALL 2014-2023 (IN MM)	98
FIGURE 37: STATION-WISE MONTHLY AVERAGE OF TEMPERATURE (MAX.) DURING 2023 (IN °C)	101
FIGURE 38: STATION-WISE MONTHLY AVERAGE OF TEMPERATURE (MIN.) DURING 2023 (IN °C)	101
FIGURE 39: STATION-WISE ANNUAL AVERAGE OF TEMPERATURE (MAX.) (2015-2023) (FIGURE IN °C)	104

FIGURE 40: STATION-WISE ANNUAL AVERAGE OF TEMPERATURE (MIN.) (2015-2023) (FIGURE IN °C)	104
FIGURE 41: PERFORMANCE OF THE PRIMARY SECTOR AS VIEWED BY GDP MOBILIZED PER GOVERNMENT EXPENDITURE (2013-2021)	114
FIGURE 42: CORRELATION BETWEEN GOVERNMENT EXPENDITURE AND GDP (ALL SECTORS) (2013-2021)	115
FIGURE 43: CORRELATION BETWEEN GOVERNMENT EXPENDITURE AND GDP (PRIMARY SECTOR) (2013-2021)	115
FIGURE 44: ACTUAL AGRICULTURE GDPs AND TARGET AGRICULTURE GDPs REQUIRED TO ACHIEVE Nu. 50 BILLION IN 2029	117
FIGURE 45: CHANGE OF LOST AREA IN PADDY FARMING	119
FIGURE 46: CHANGE OF LOST AREA IN MAIZE FARMING	119
FIGURE 47: CHANGE OF LOST AREA IN POTATO FARMING	119
FIGURE 48: CHANGE OF LOST AREA IN CARDAMOM FARMING	119
FIGURE 49: CHANGE OF SECTORAL LABOUR PRODUCTIVITY AS VIEWED IN GDP PER EMPLOYED PERSON	120

CHAPTER 1: PRODUCTION

This chapter presents summary statistics on the harvested area of primary crops, production of crops & dairy products along with the livestock population at the national level. The crop and livestock statistics are based on the agriculture and livestock statistics 2023 conducted by the Agriculture Statistics Division (ASD) under National Statistics Bureau (NSB).

Agriculture farming had remained one of the mainstays of the Bhutanese population depending on agriculture for livelihood. Bhutanese Agriculture Sector has come a long way since the introduction of modern agriculture techniques in the first Five Year Plan, gradually transitioning to commercial production from that of subsistence systems.

With an average farm size of 2.22 acres (PHCB, 2017), most farmers practice subsistence to semi-subsistence integrated farming systems. Despite its small average size, Bhutan's agroecology is diverse with large variations in altitude and micro climatic conditions across the country.

The livestock-keeping households are enumerated on a complete basis, the statistics given are actual totals and not based on estimates. Another important difference from the crop statistics is that the livestock statistical figures include live animal numbers and production from the government farms as well and hence reflect a complete picture of livestock population and production within the country.

Table 1.1.1 Harvested Area Under Cereals (2014-2023) (Value in Acre)

Crop	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Amaranthus	-	-	-	40	61	64	-	-	-	-
Barley	2,447	2,520	2,451	3,421	1,715	1,957	1,764	1,605	1,305	1,143
Buckwheat	4,762	5,147	6,897	5,817	4,647	5,116	4,949	3,782	2,595	2,343
Maize	58,938	56,805	56,609	66,042	36,836	32,485	27,945	20,289	18,429	17,141
Millet	4,264	3,360	3,245	3,623	2,760	2,686	2,690	2,273	1,298	1,160
Paddy	48,873	49,325	53,055	52,368	37,268	30,298	31,328	24,055	22,683	23,290
Quinoa	-	-	-	73	114	308	223	89	36	24
Wheat	4,919	4,845	3,717	5,259	2,819	2,481	2,457	2,286	1,769	1,805

Source: Annual Agriculture Statistics for 2013-2020 except 2018, and RNR Census 2019 for 2018, by MoAF; Agriculture Statistics by NSB from 2021 on.

Table 1.1.2 Cereal Crop Production (2014-2023) (Value in MT)

Crop	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Amaranthus	-	-	-	3	20	19	-	-	-	-
Barley	1,753	1,800	1,702	2,005	929	1,026	1,123	857	615	518
Buckwheat	2,583	3,234	3,705	3,480	1,991	2,350	2,701	1,855	1,133	966
Maize	77,244	83,714	82,035	94,052	55,259	46,235	40,965	30,939	25,981	25,118
Millet	2,362	1,811	1,714	1,739	1,071	1,241	1,613	1,122	602	530
Paddy	77,038	80,261	83,332	86,385	63,890	49,930	54,088	40,508	41,049	40,804
Quinoa	-	-	-	9	21	83	102	37	18	13
Wheat	3,465	3,730	2,521	3,883	1,445	1,319	1,623	1,169	770	837

Source: Annual Agriculture Statistics for 2013-2020 except 2018, and RNR Census 2019 for 2018, by MoAF; Agriculture Statistics by NSB from 2021 on.

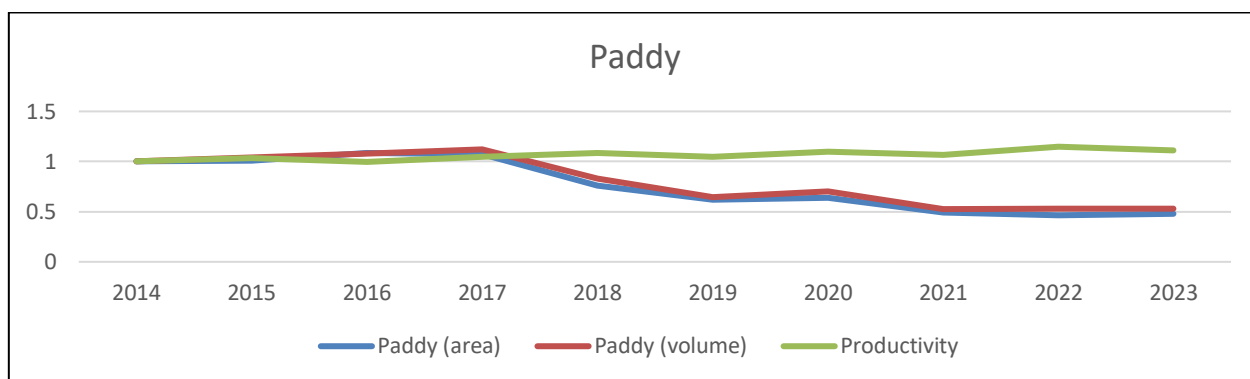


Figure 1: Trends in paddy harvested area, production volume, and productivity, relative to 2013 figures (2014-2023)

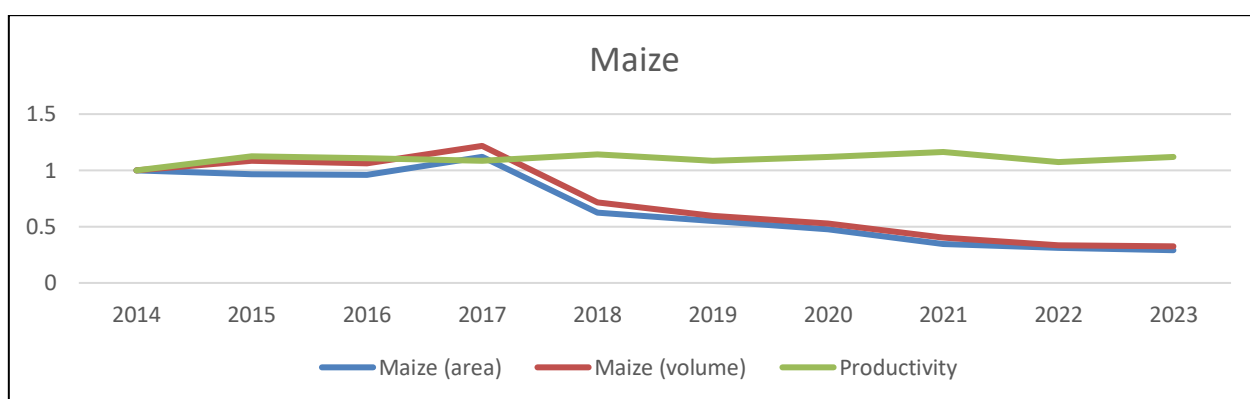


Figure 2: Trends in maize harvested area, production volume, and productivity, relative to 2013 figures (2014-2023)

The major cereal crops grown in the country are paddy and maize. Other cereals include wheat, barley, buckwheat, millet, Amaranthus, and quinoa. The domestic paddy harvested area increased by 2.7% and production decreased by 0.6% in 2023 as compared to that of 2022. The Maize harvested area decreased by 7.0% and production decreased by 3.3% in 2023. Likewise, there is a slight fluctuation in all other crops like vegetables, roots & tuber and fruits, etc. Viewing the ten-year trends in the production area and volume, the trends in both paddy and maize productions show similar trends – both show a slight increase till 2017 followed by a sharp decrease from 2018.

In general, the main reasons for crop reduction are:

1. Due to natural calamities (heavy rainfall during the harvest seasons, hailstorms, frost & wind)
2. Direct and indirect crop damaged by pests (insects, birds & rodents)
3. Due to heavy pruning and die back of the fruit tree
4. New variety less yield
5. Lack of fertilizers and irrigation, and,
6. Farmers leaving farming.

As seen in the figure on “Economically Active Population Employed in Agriculture (2013-2022)” on page 37, the population employed in agriculture decreased by 33% during the decade. In more detail, as seen in the figure “Trends in Labour Force Employed in Agriculture Farming by Age Group (2013-2022)” on page 40, the age group that showed the largest reduction was the 20-29 age group with the reduction rate of 66% compared with a decade ago.

Table 1.2.1 Harvested Area Under Oilseeds (2014-2023) (Value in Acre)

Crop	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Groundnut	357	177	208	436	267	378	274	157	172	197
Mustard	2,783	2,422	2,395	2,697	1,103	1,664	1,746	1,159	863	902
Pyrilla	212	68	41	249	-	-	177	113	61	49
Sesame	-	-	-	-	-	4	-	-	-	-
Soya bean	710	527	544	867	377	621	540	266	159	225
Sunflower	23	11	15	23	8	32	11	7	3	7

Source: Annual Agriculture Statistics for 2013-2020 except 2018, and RNR Census 2019 for 2018, by MoAF; Agriculture Statistics by NSB from 2021 on.

Table 1.2.2 Oilseed Production (2014-2023) (Value in MT)

Crop	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Groundnut	266	126	149	246	197	230	313	48	113	121
Mustard	867	925	887	969	244	394	538	331	224	256
Pyrilla	30	18	12	108	-	-	61	26	14	12
Sesame	-	-	-	-	-	1	-	-	-	-
Soya bean	301	220	254	204	107	171	234	90	58	66
Sunflower	9	3	7	3	2	8	8	3	2	3

Source: Annual Agriculture Statistics for 2013-2020 except 2018, and RNR Census 2019 for 2018, by MoAF; Agriculture Statistics by NSB from 2021 on.

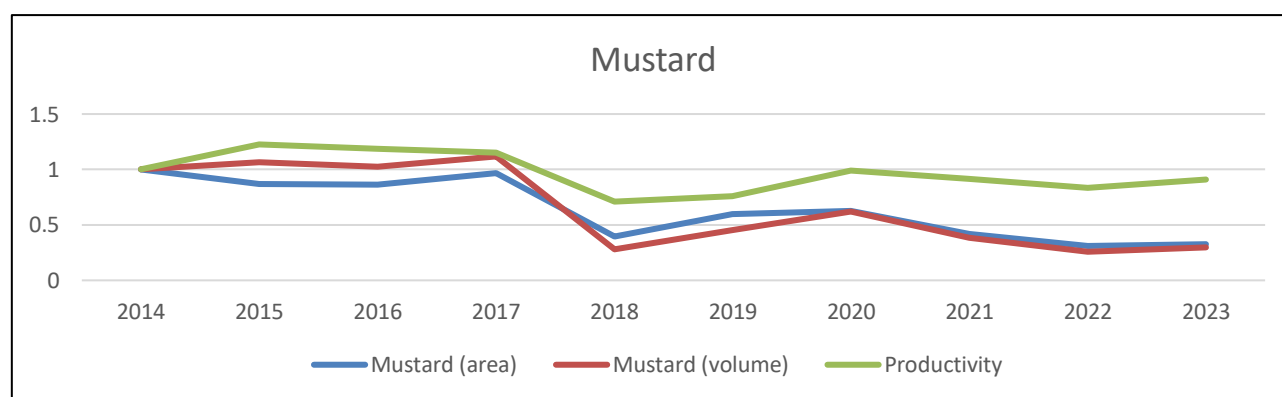


Figure 3: Trends in mustard harvested area, production volume, and productivity, relative to 2013 figures (2014-2023)

Table 1.3.1 Harvested Area Under Roots and Tubers (2014-2023) (Value in Acre)

Crop	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Colocacia/Taro	158	104	-	-	140	127	164	-	58	80
Ground apple	-	-	-	-	-	61	121	73	42	27
Potato	12,785	12,008	14,638	12,824	11,131	10,342	9,964	8,244	7,820	8,016
Sweet potato	134	70	31	203	63	62	66	52	37	42
Tapioca/Cassava	677	293	278	320	389	329	319	213	168	228

Source: Annual Agriculture Statistics for 2013-2020 except 2018, and RNR Census 2019 for 2018, by MoAF; Agriculture Statistics by NSB from 2021 on.

Table 1.3.2 Roots and Tuber Production (2014-2023) (Value in MT)

Crop	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Colocacia/Taro	148	112	-	-	91	210	244	147	75	129
Ground apple	-	-	-	-	-	211	236	146	74	49
Potato	53,612	49,359	58,820	57,223	44,278	43,560	45,500	38,573	31,146	37,749
Sweet potato	80	49	29	80	32	48	67	53	28	33
Tapioca/Cassava	568	437	415	306	448	484	608	389	236	367

Source: Annual Agriculture Statistics for 2013-2020 except 2018, and RNR Census 2019 for 2018, by MoAF; Agriculture Statistics by NSB from 2021 on.

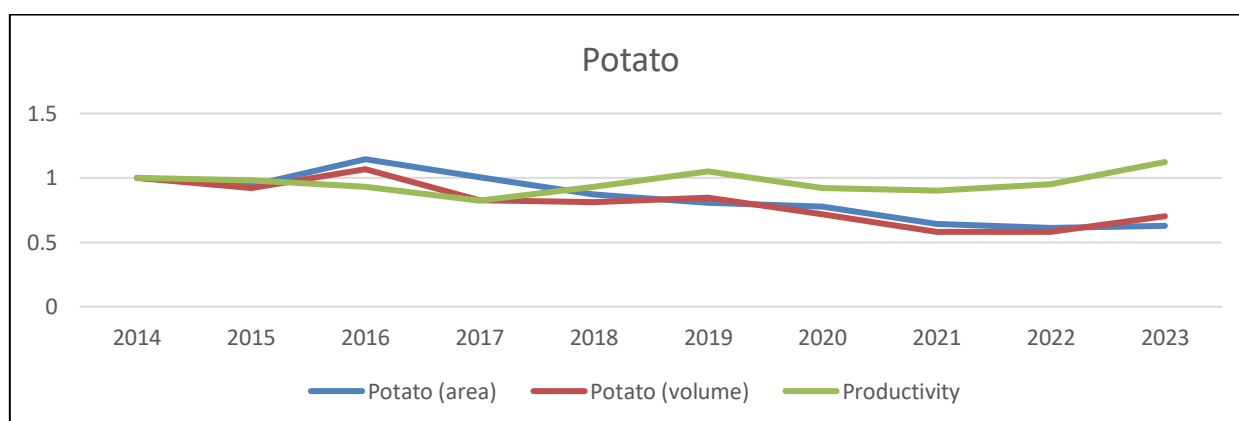


Figure 4: Trends in potato harvested area, production volume, and productivity, relative to 2013 figures (2014-2023)

Table 1.4.1 Harvested Area Under Pulses (2014-2023) (Value in Acre)

Crop	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Beans dry	-	-	-	-	-	929	875	723	-	-
Chick pea	-	-	-	-	-	31	-	-	-	-
Cow pea	-	-	-	-	-	66	-	-	-	-
Lentil	269	353	-	-	617	297	342	39	7	17
Mung bean	1,171	921	952	922	-	1,307	1,084	1,032	726	929
Rajma bean	1,668	1,357	1,565	2,236	-	1,590	1,594	681	1,050	1,089

Source: Annual Agriculture Statistics for 2013-2020 except 2018, and RNR Census 2019 for 2018, by MoAF; Agriculture Statistics by NSB from 2021 on.

Table 1.4.2 Pulses Production (2014-2023) (Value in MT)

Crop	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Beans dry	-	-	-	-	-	407	485	320	-	-
Chick pea	-	-	-	-	-	22	-	-	-	-
Cow pea	-	-	-	-	-	64	-	-	-	-
Lentil	74	82	-	-	138	55	91	15	2	4
Mung bean	577	466	482	298	-	464	382	381	220	258
Rajma bean	991	847	994	932	-	666	850	363	364	353

Source: Annual Agriculture Statistics for 2013-2020 except 2018, and RNR Census 2019 for 2018, by MoAF; Agriculture Statistics by NSB from 2021 on.

Table 1.5.1 Harvested Area Under Spices (2014-2023) (Value in Acre)

Crop	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Cardamom	8,683	10,610	11,086	13,880	21,395	15,615	13,696	11,599	9,461	8,447
Garlic	1,282	1,263	1,409	1,411	874	770	570	255	305	362
Ginger	2,651	3,674	4,773	3,809	2,156	2,386	3,721	3,080	1,975	1,613
Turmeric	-	-	-	-	-	70	156	177	139	140

Source: Annual Agriculture Statistics for 2013-2020 except 2018, and RNR Census 2019 for 2018, by MoAF; Agriculture Statistics by NSB from 2021 on.

Table 1.5.2 Spices Production (2014-2023) (Value in MT)

Crop	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Cardamom	1,781	2,091	2,736	2,245	1,542	1,413	2,175	1,609	1,693	1,104
Garlic	846	899	1,176	708	550	761	691	240	297	366
Ginger	4,983	7,434	10,871	7,859	4,260	6,209	8,890	7,154	3,711	3,076
Turmeric	-	-	-	-	-	92	187	203	145	135

Source: Annual Agriculture Statistics for 2013-2020 except 2018, and RNR Census 2019 for 2018, by MoAF; Agriculture Statistics by NSB from 2021 on.

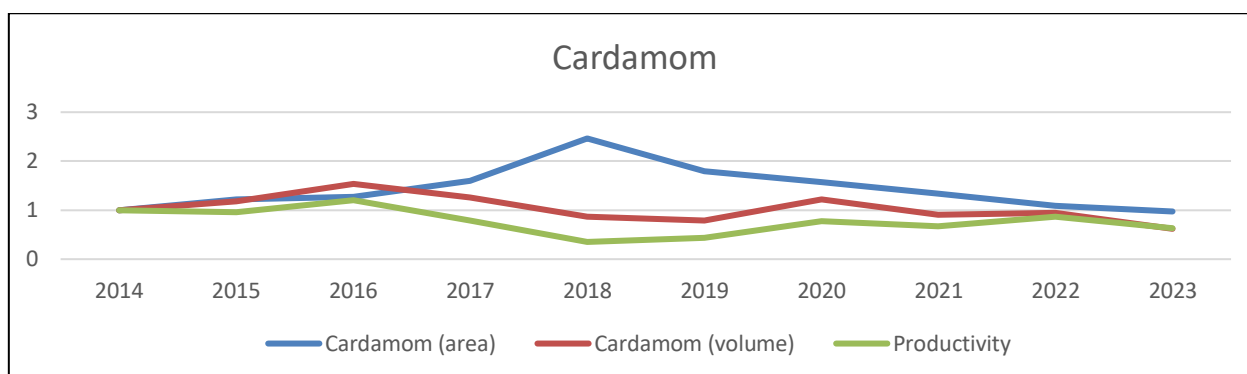


Figure 5: Trends in cardamom harvested area, production volume, and productivity, relative to 2013 figures (2014-2023)

Table 1.6.1 Harvested Area Under Vegetables (2014-2023) (Value in Acre)

Crop	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Asparagus	480	275	420	417	201	154	264	206	181	149	122
Beans	3,248	2,391	3,011	3,385	3,739	3,423	2,058	2,544	1,611	1,595	1,532
Broccoli	846	875	623	725	1,056	781	751	1,107	871	896	639
Bunching onion	-	-	-	-	-	-	243	307	247	277	195
Cabbage	2,427	1,884	2,256	2,738	3,551	1,792	1,737	2,072	1,320	1,536	1,378
Carrot	667	444	559	607	530	415	540	677	438	381	470
Cauliflower	864	1,035	1,029	1,512	1,604	1,001	851	1,198	947	915	755
Chilli	5,171	4,337	4,183	5,538	7,571	4,031	3,524	3,765	3,439	3,415	2,889
Coriander	-	-	-	-	-	-	255	295	171	147	136
Cucumber	-	-	-	-	-	-	247	499	540	412	355
Cultivated Mushroom	-	-	-	-	-	-	-	-	-	-	-
Dally chilli	-	-	-	-	-	-	194	-	-	-	-
Egg-plant	571	726	459	725	751	242	197	301	219	171	141
Green leaves	2,064	2,000	2,577	1,458	3,429	1,780	1,262	-	-	-	-
Lady Finger	96	87	63	43	45	79	15	-	-	-	-
Onion bulb	779	798	542	442	594	394	141	203	415	288	191
Peas	1,230	712	982	795	1,003	642	451	603	386	309	336
Pumpkin/ squash/gourd	-	-	-	-	-	-	569	-	-	-	-
Radish	2,932	2,491	2,812	2,871	3,533	1,644	1,238	2,406	1,244	1,146	1,103
Tomato	550	573	441	347	320	329	148	246	229	172	149
Tree tomato	-	-	-	-	-	-	-	-	-	-	-
Turnip	1,619	1,664	1,841	1,603	1,804	1,433	1,465	1,584	1,244	815	1,105

Source: Annual Agriculture Statistics for 2013-2020 except 2018, and RNR Census 2019 for 2018, by MoAF; Agriculture Statistics by NSB from 2021 on.

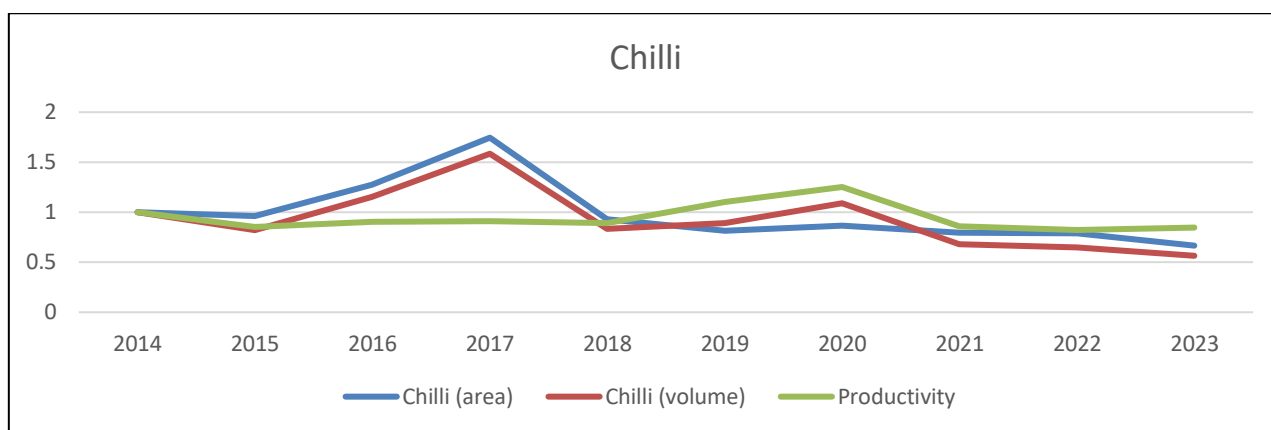


Figure 6: Trends in chili harvested area, production volume, and productivity, relative to 2014 figures (2014-2023)

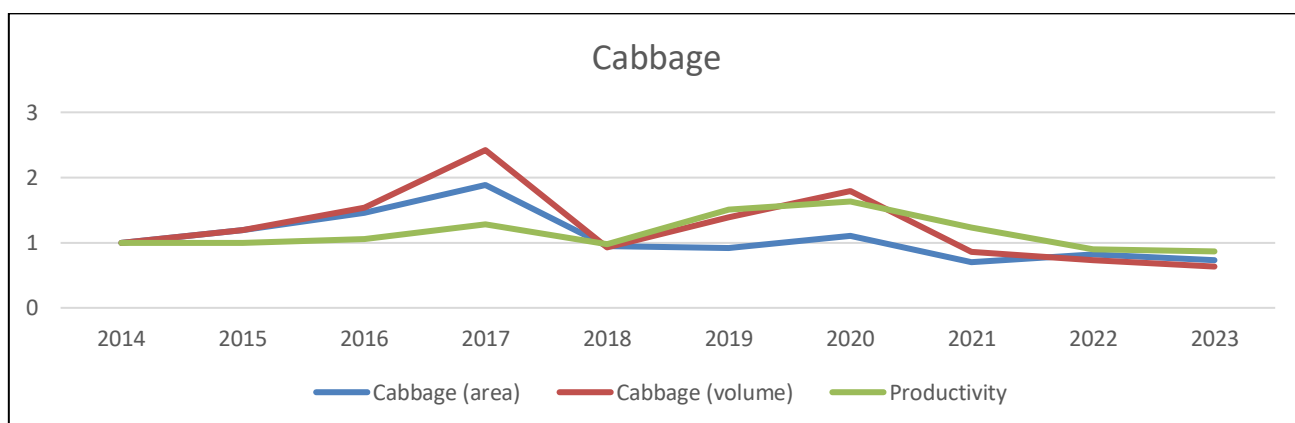


Figure 7: Trends in cabbage harvested area, production volume, and productivity, relative to 2014 figures (2014-2023)

Table 1.6.2 Vegetable Production (2014-2023) (Value in MT)

Crop	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Asparagus	283	205	200	239	79	160	79	127	178	116	97
Beans	2,636	2,830	3,612	4,409	5,273	2,274	2,923	3,169	2,096	1,533	1533
Broccoli	814	1,010	831	1,004	1,371	846	864	1,727	1,156	917	682
Bunching onion	-	-	-	-	-	-	179	268	227	258	176
Cabbage	3,961	4,364	5,209	6,685	10,562	4,036	6,069	7,830	3,763	3,206	2763
Carrot	755	746	1,094	1,276	787	782	1,374	1,787	874	1,300	1562
Cauliflower	922	1,650	1,586	2,082	3,575	1,191	1,446	2,448	1,648	1,196	1063
Chilli	8,321	8,586	7,073	9,907	13,606	7,133	7,673	9,333	5,864	5,557	4848
Coriander	-	-	-	-	-	-	120	301	136	114	108
Cucumber	2,378	2,484	1,697	1,194	1,948	1,541	2,691	1,970	1,194	1,126	1,037
Cultivated Mushroom	19	17	19	82	122	34	44	-	-	-	351
Dally chilli	-	-	-	-	-	-	169	-	-	-	-
Egg-plant	362	485	694	585	643	245	300	429	303	197	164
Green leaves	2,063	1,938	2,871	1,937	4,153	2,049	2,040	3,531	1,779	1,505	2041
Lady Finger	31	28	53	42	26	9	23	-	-	-	-
Onion bulb	420	757	608	414	489	305	155	216	419	265	184
Peas	1,180	970	1,218	1,014	859	567	685	749	482	317	333
Pumpkin/ squash/gourd	3,935	4,081	3,746	3,671	3,171	3,870	6,043	7,918	5,695	4,528	4931
Radish	4,534	5,021	5,840	6,490	6,307	3,649	4,721	5,234	3,162	1,943	2034
Tomato	632	899	627	455	383	261	233	359	289	206	206
Tree tomato	329	-	341	275	404	-	359	441	484	216	209
Turnip	9,757	9,967	10,423	10,499	13,051	9,097	9,293	10,385	3,162	2,349	3083

Source: Annual Agriculture Statistics for 2013-2020 except 2018, and RNR Census 2019 for 2018, by MoAF; Agriculture Statistics by NSB from 2021 on.

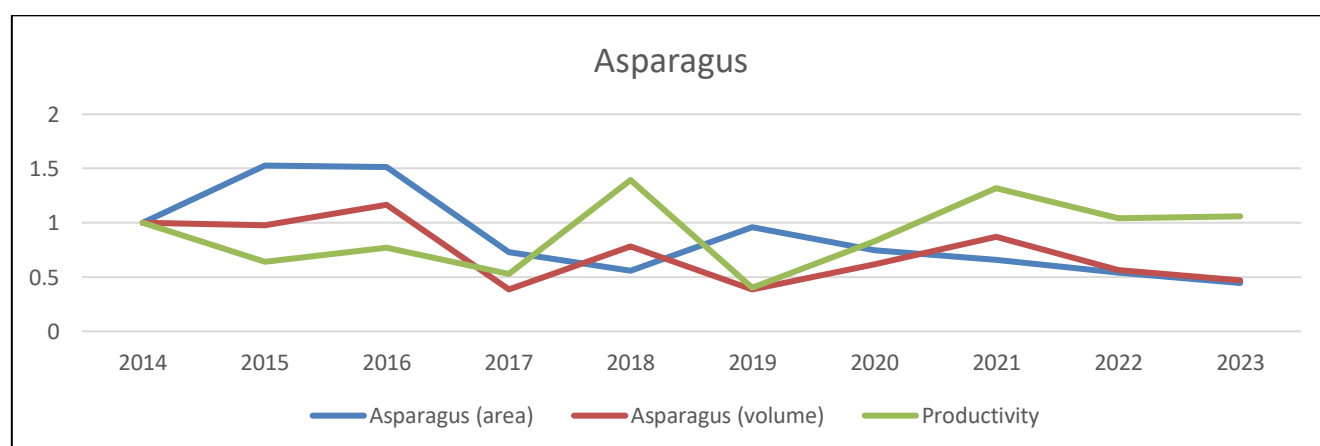


Figure 8: Trends in asparagus harvested area, production volume, and productivity, relative to 2014 figures (2014-2023)

Table 1.7 Fruit Crops Production (2014-2023) (Value in MT)

Fruit	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Apple	7,051	5,308	6,587	8,039	3,684	4,321	4,056	2,324	2,223	2,317
Apricot	-	-	-	-	-	15	36	41	35	24
Areca nut	7,468	9,406	9,467	9,342	11,681	16,107	17,446	21,377	11,106	11,409
Avacado	-	-	-	-	-	61	112	73	136	192
Banana	1,631	2,636	3,076	3,113	2,762	3,754	3,150	3,174	2,139	2,349
Coffee	-	-	-	-	-	8	-	-	-	-
Date plum	-	-	-	-	-	19	-	-	-	-
Dragon fruits	-	-	-	-	-	0.23	0.36	1.00	3.75	4.49
Guava	787	588	665	1,084	895	1,369	1,062	824	515	583
Hazelnut	-	-	-	-	-	3	6	14	13	14
Jackfruit	1,102	1,227	775	528	566	469	285	366	248	336
Kiwi	-	-	-	-	-	20	28	51	26	34
Lemon & Lime	-	-	-	-	-	126	115	139	73	139
Litchi	172	160	134	313	303	385	329	391	249	350
Mandarin	45,226	15,977	42,700	28,017	26,527	27,529	25,661	15,966	18,467	21,170
Mango	586	651	644	530	850	666	819	531	482	543
Papaya	126	214	282	278	161	216	206	164	122	132
Passion fruit	135	66	120	94	-	-	74	51	45	53
Peach	1,435	783	972	1,124	1,135	1,246	1,061	633	515	486
Pear	1,137	867	852	1,510	1,372	1,584	1,107	859	760	670
Persimmon	227	137	49	152	207	235	207	97	95	84
Pine apple	54	64	67	72	279	149	162	128	98	139
Plum	783	385	376	482	532	585	439	257	312	275
Pomegranate	111	63	83	74	59	79	80	63	37	55
Sugarcane	324	508	345	-	101	396	-	-	-	-
Walnut	337	211	152	239	223	256	219	179	129	129
Watermelon	-	-	-	-	-	66	53	156	94	45

Source: Annual Agriculture Statistics for 2013-2020 except 2018, and RNR Census 2019 for 2018, by MoAF; Agriculture Statistics by NSB from 2021 on.

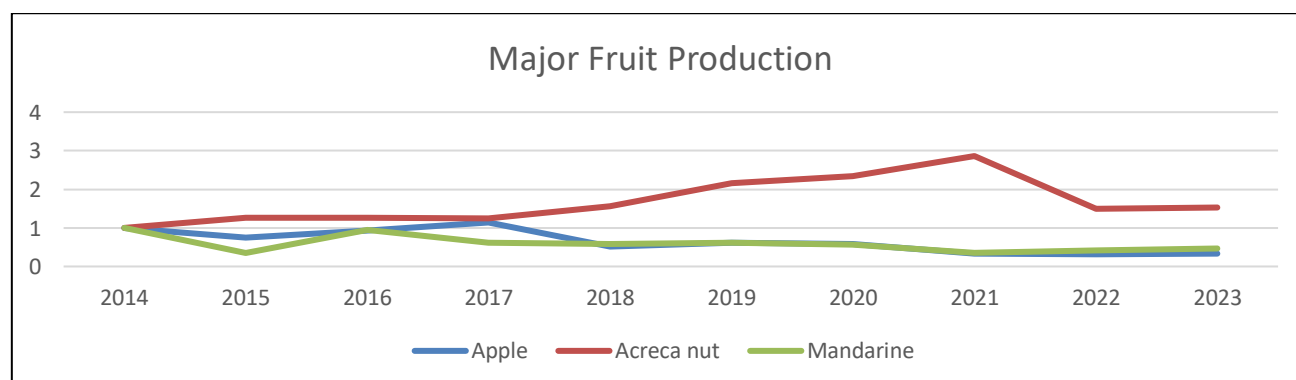


Figure 9: Trends in major fruits production, relative to 2013 figures (2014-2023)

Table 1.8 Live Animal Population (2014-2023) (Value in Headcount)

Animal Type	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Buffalo	574	586	532	550	531	477	398	385	331	422
Cattle	301,331	302,744	303,297	303,250	298,916	302,589	281,015	295,444	254,897	222,597
Equine	21,221	20,253	18,890	18,211	16,820	16,792	14,649	12,418	11,665	11,148
Goat	48,864	41,983	39,513	42,689	43,839	47,735	44,119	59,577	56,004	60,798
Mithun	1,173	742	577	502	418	453	390	347	300	263
Pig	14,204	15,727	15,324	18,815	21,200	20,070	17,577	22,954	33,082	29,625
Poultry	550,715	638,501	1,038,553	1,118,178	1,099,493	1,299,810	1,383,714	1,384,449	975,152	819,335
Sheep	10,778	11,410	11,277	10,444	10,786	11,466	10,793	10,694	10,024	9,411
Yak	37,412	38,222	40,438	41,528	41,463	41,918	40,897	38,642	30,328	29,699
Zo-zom	7,581	8,269	9,179	8,806	9,581	9,904	10,680	11,161	7,435	7,584

Source: Annual Livestock Statistics by DoL/MoAF for 2013-2020; Livestock Statistics by NSB from 2021 on.

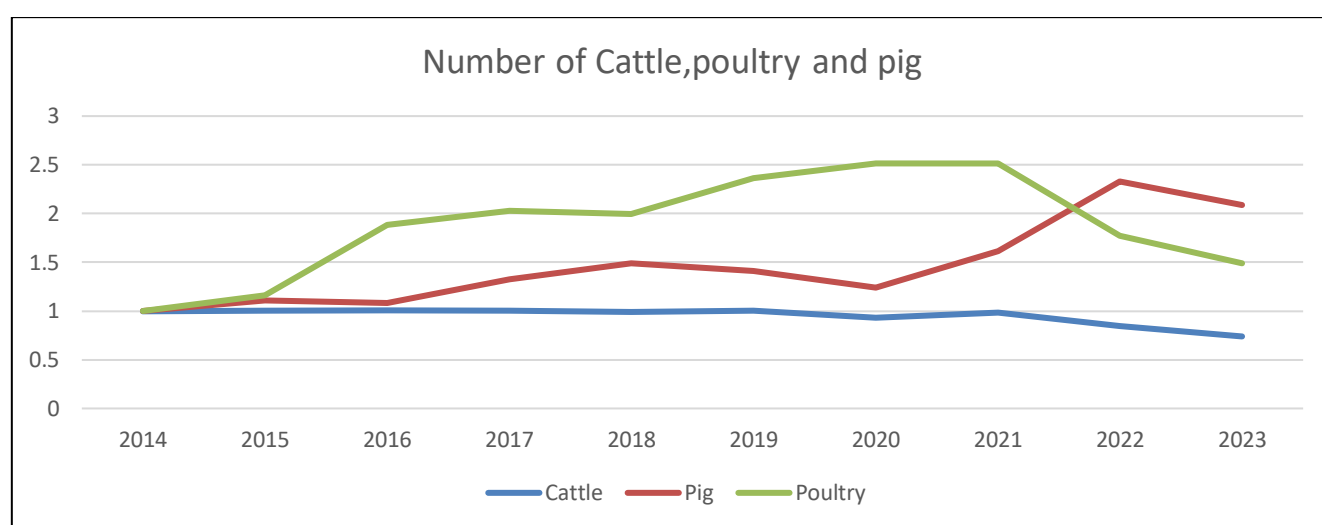


Figure 10: Trends in major live animal population, relative to 2014 figures (2014-2023)

Table 1.9 Milking Animal Population (2014-2023) (Value in Headcount)

Breed Type	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Jersey Pure breed	552	1,167	1,269	1,491	1,377	1,562	1,606	1,944	27,335	26,251
Jersey Cross breed	21,101	23,819	25,894	28,877	31,744	34,525	34,383	29,884		
Brown Swiss pure breed	46	90	37	36	2	5	39	105	1,754	2,140
Brown Swiss cross breed	1,046	1,048	1,257	1,230	1,030	1,240	1,183	1,334		
Holsten-Friesian breed	25	127	214	273	392	456	380	330	236	339
Mithun	270	108	23	38	8	17	18	48	32	23
Jatsha-Jatsam	8,792	9,491	9,430	10,020	10,058	9,729	8,053	6,317	5,982	5,408
Yangku-Yangkum	6,464	6,683	6,517	6,922	6,911	6,960	6,099	4,183	3,085	3,910
Doeb-Doebum	1,761	2,077	2,110	2,176	2,235	1,781	1,776	1,207	842	1,000
Doethra-Doethram	1,660	2,116	2,316	2,582	2,624	2,508	2,434	1,978	1,672	1,951
Nublang-Thrabum	22,553	21,618	20,397	20,002	19,314	19,338	16,776	14,543	16,130	13,822
Jaba	485	426	343	327	380	446	544	650	2,072	1,049
Buffallo	112	127	124	135	111	126	103	107	75	90
Yak	8,735	9,541	10,158	10,521	10,401	11,000	10,285	8,621	7,639	7,372
Zo-zoms	2,856	3,034	3,338	3,386	3,818	3,658	3,680	3,265	3,275	2,954

Source: Annual Livestock Statistics by DoL/MoAF for 2013-2020; Livestock Statistics by NSB from 2021 on.

Table 1.10 Production of Milk and Dairy Product (2014-2023) (Value in MT)

Breed Type	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Butter	1,409	1,629	1,711	2,053	1,948	2,126	2,097	1,930	1,508	1,727
Cheese	2,702	3,471	3,667	4,298	3,953	4,091	4,219	3,154	2,382	2,326
Chugo	357	206	121	148	175	182	179	198	130	132
Milk	34,870	39,844	47,270	50,251	52,816	57,547	58,197	54,654	42,255	43,829

Source: Annual Livestock Statistics by DoL/MoAF for 2013-2020; Livestock Statistics by NSB from 2021 on.

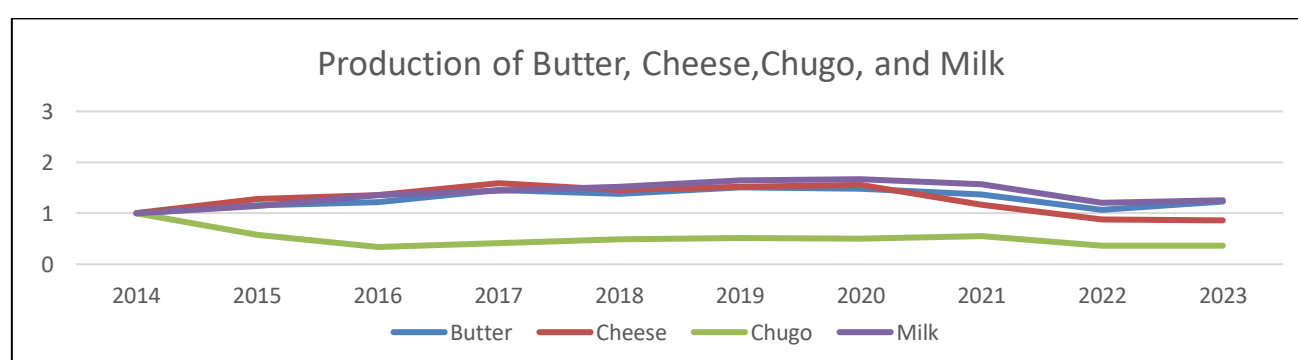


Figure 11: Trends in dairy product production, relative to 2014 figures (2014-2023)

Table 1.11 Meat Production (2014-2023) (Value in MT)

Product	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Beef	639	637	537	501	410	488	697	1,016	1,822	1475
Chevon	161	166	192	195	257	281	296	162	174	231
Chicken	944	1,063	1,209	1,349	1,687	1,926	1,835	1,866	994	1165
Fish	119	149	188	223	200	209	182	193	37	43
Pork	388	462	740	928	972	1,113	879	700	1,232	1590
Yak Meat	116	87	83	134	191	119	107	161	187	142

Source: Annual Livestock Statistics by DoL/MoAF for 2013-2020; Livestock Statistics by NSB from 2021 on.

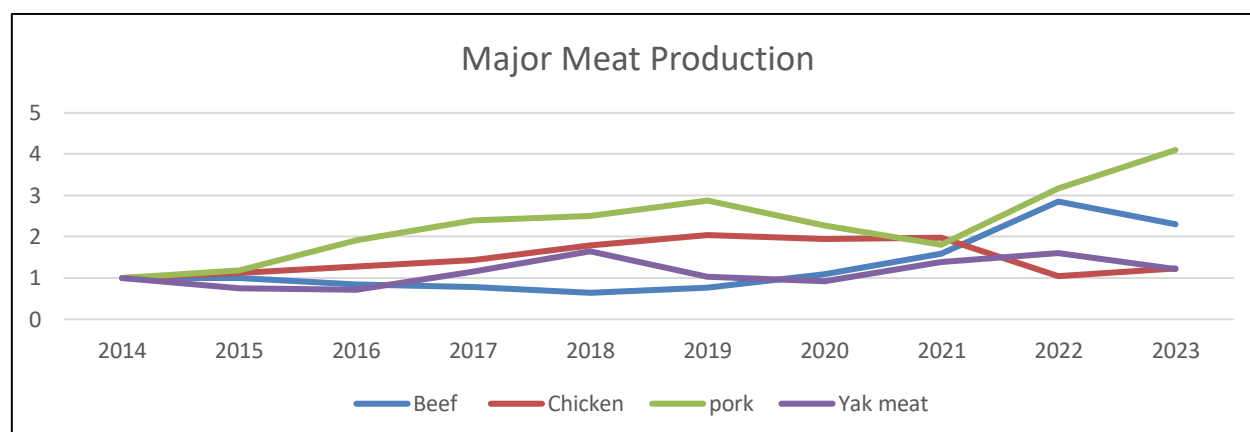


Figure 12: Trends in major meat production, relative to 2014 figures (2014-2023)

Table 1.12 Egg, honey, wool production, and layer population (2014-2023) (Value in '000 nos., MT, and '000 heads)

Product	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Egg ('000 nos.)	58,729	68,695	105,346	116,707	125,180	135,678	172,482	133,302	101,045	85,700
Honey (MT)	22.90	33.10	41.90	48.27	62.00	65.89	44.18	43.19	37.26	42
Layer ('000 heads)	442.00	499.00	660.00	524.77	739.00	672.91	734.45	793.73	535.16	415.33
Wool (Sheep and Yak)(MT)	9.00	42.40	12.40	7.80	8.60	25.29	5.65	5.77	21.19	8.72

Source: Annual Livestock Statistics by DoL/MoAL for 2014-2023; Livestock Statistics by NSB from 2021 on.

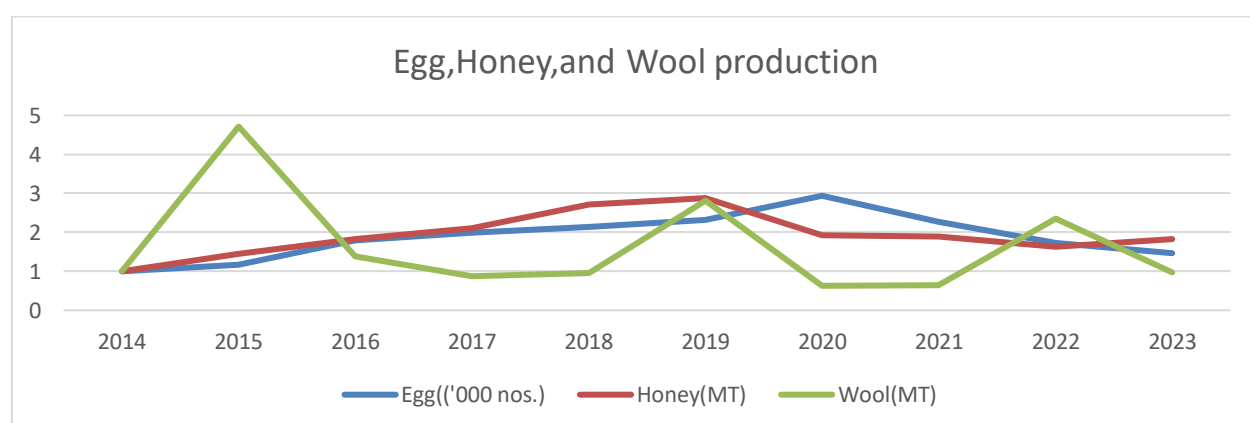


Figure 13: Trends in egg, honey, and wool production, relative to 2014 figures (2014-2023)

Table 1.13 GDP at Current Prices by Major Sectors and its Share (2014-2023) (GDP in Million Nu. and Shares in %)

Sector	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
GDP in Million Nu.										
Primary	15,380.78	16,835.40	19,013.35	21,819.45	23,940.81	24,916.97	28,596.47	32,326.30	33,422.58	37,312.31
<i>crops</i>	6,943.45	7,715.00	8,700.41	10,106.78	10,784.59	11,778.44	13,629.83	15,723.07	15,521.92	16,382.87
<i>livestock</i>	5,273.08	5,675.45	6,305.66	7,680.70	8,118.19	8,591.24	10,043.74	11,273.14	12,025.59	14,743.30
<i>forestry & logging</i>	3,164.25	3,444.95	4,007.28	4,031.97	5,038.03	4,547.29	4,922.89	5,330.08	5,875.06	6,186.14
Secondary	47995.63	53990.99	60908.31	65,879.40	62,304.09	63,754.67	57,893.73	64,721.58	72,501.36	73,701.97
Tertiary	64119.10	69526.25	78491.61	81,054.45	90,428.05	103,976.13	95,617.23	107,616.53	121,889.78	138,373.90
Total	127495.51	140352.64	158413.27	168,753.30	176,672.95	192,647.77	182,107.42	204,664.41	227,813.72	249,388.19
Share in %										
Primary	12.06	12.00	12.00	12.93	13.55	12.93	15.70	15.79	14.67	14.96
<i>crops</i>	5.45	5.50	5.49	5.99	6.10	6.11	7.48	7.68	6.81	6.57
<i>livestock</i>	4.14	4.04	3.98	4.55	4.59	4.46	5.51	5.51	5.28	5.91
<i>forestry & logging</i>	2.48	2.45	2.53	2.39	2.85	2.36	2.70	2.60	2.58	2.48
Secondary	37.64	38.47	38.45	39.04	35.27	33.09	31.79	31.62	31.82	29.55
Tertiary	50.29	49.54	49.55	48.03	51.18	53.97	52.51	52.58	53.50	55.49
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: National Accounts Statistics 2023, NSB. (As the prices used to calculate the GDP are revised in NAS 2023, figures can't be directly comparable with those in NAS reports till 2022.)

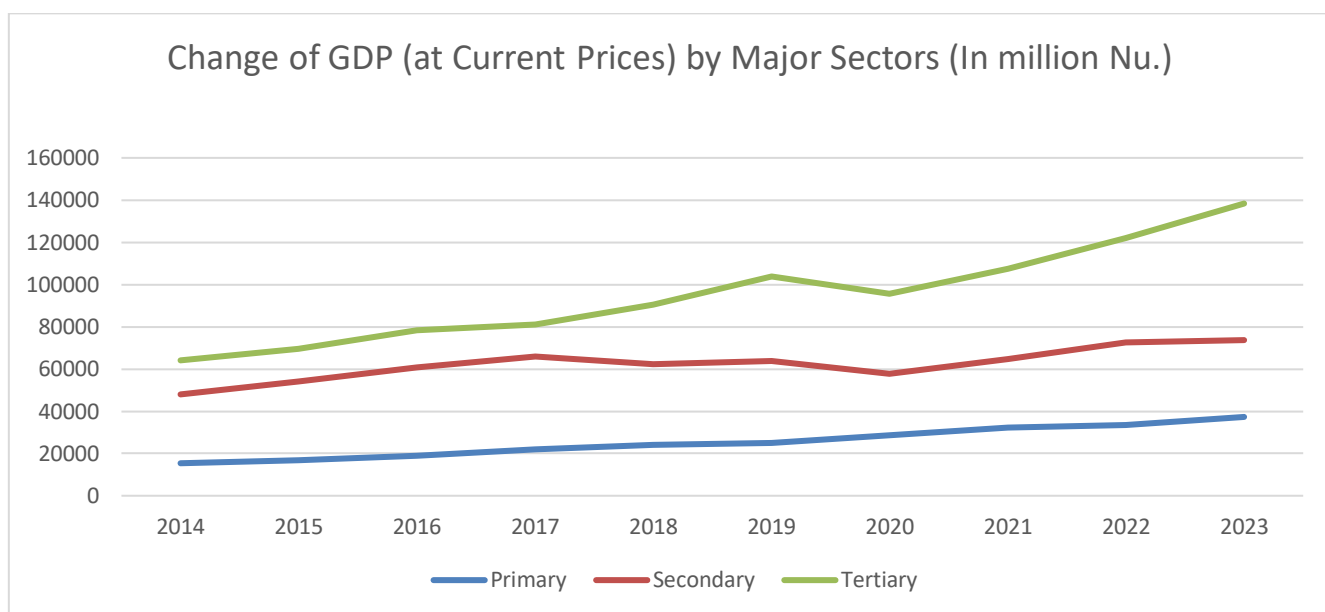


Figure 14: Changes of GDP at Current Prices by Major Sectors (2014-2023).

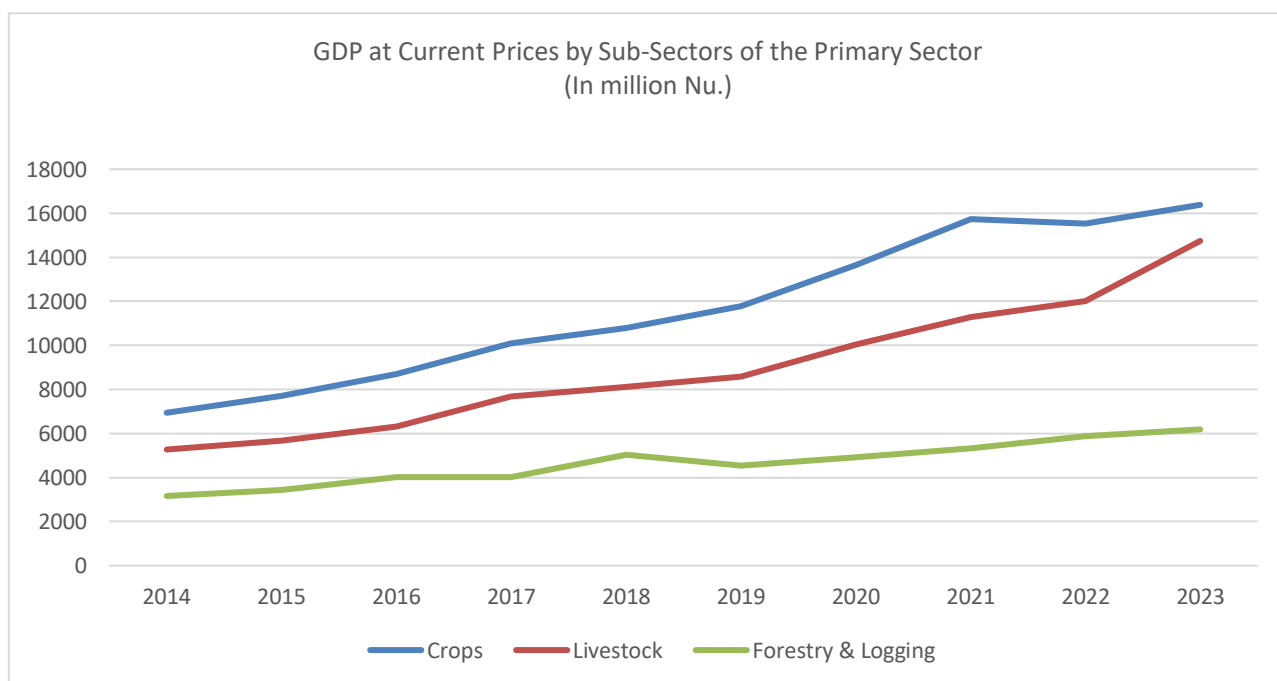


Figure 15: Changes of GDP at Current Prices by Sub-sectors of the Primary Sector (2014-2023).

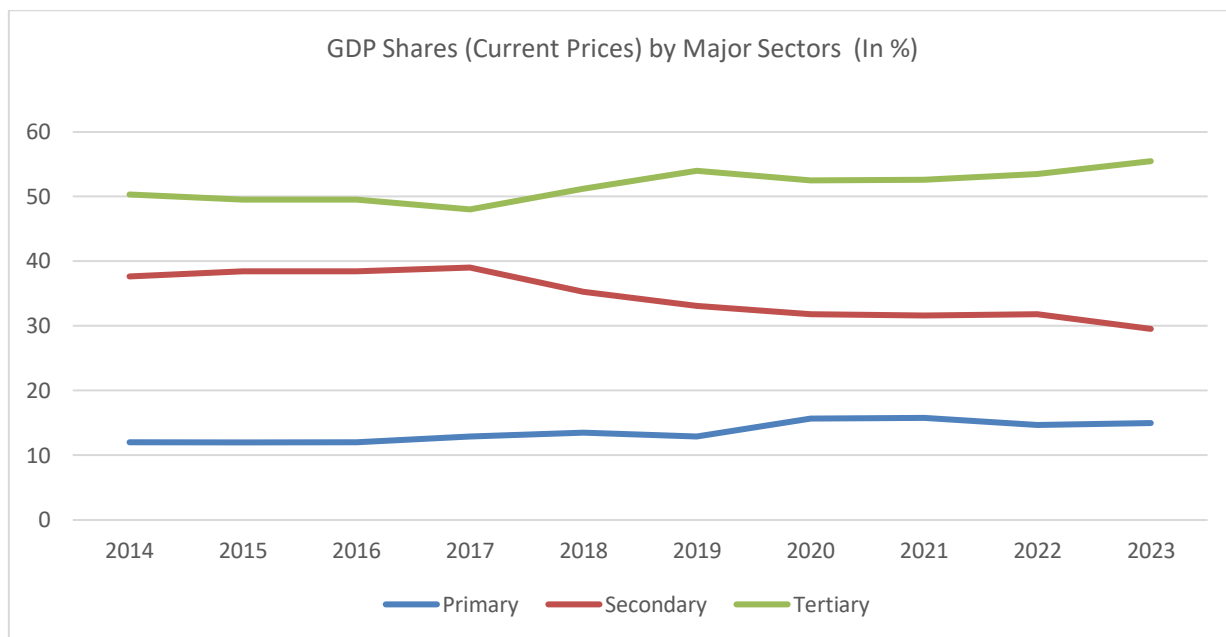


Figure 16: Change of GDP Share (Current Prices) by Major Sectors (2014-2023).

CHAPTER 2: TRADE

This chapter presents the statistical tables on year-wise import and export of RNR commodities from 2014 to 2023, as per the Bhutan Trade Statistics compiled by the Department of Revenue and Customs (DRC), Ministry of Finance. The import of selected types of farm machinery, fertilizers, and plant protection chemicals are presented separately.

The data on trade is useful for calculating trade balance, food balance sheet, food security, and many other indicators. It can also yield useful information with regard to trends in people's consumption patterns, the country's production capacity, and pointers for policymakers in relation to investment in agriculture and related industries.



Table 2.1.1 Export of major food items to India and COTI (2014-2023) (Volume in MT unless specified)

Commodity	BTC code	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Rice in the husk	1006.10.00	0.00	0.01	0.05	-	2.40	0.80	-	-	0.00	0.60
Red Rice	1006.20.20	7.24	0.50	0.74	3.40	-	5.18	-	0.11	0.30	1.29
Semi-milled rice	1006.30.00	0.00	0.00	0.00	-	-	20.56	-	-	0.00	3.34
Wheat & Meslin flour	1101.00.00	5,727.71	4,323.80	0.00	510.72	858.48	1,519.06	228.98	-	0.00	0.00
Soya bean seed	1201.10.00	0.00	4.80	1.75	40.84	7.40	9.00	6.40	-	0.00	0.00
Mustard seed	1207.50.00	19.68	10.10	2.00	3.07	3.00	3.20	-	5.25	0.08	1.51
Oranges	0805.10.00	21,148.09	17,819.80	15,545.65	16,141.16	11,086.85	15,110.58	8,168.52	12,533.28	9,043.83	13382.79
Apples	0808.10.00	5,436.68	3,487.84	3,789.89	2,659.21	1,293.04	2,922.10	262.69	837.46	507.44	1622.38
Cauliflower & broccoli	0704.10.00	11.62	1,012.82	1,381.93	34.05	2.15	8.37	1.61	1.19	17.92	9.87
Cabbage lettuce	0705.11.00	1,556.99	1,193.73	1,545.29	2,096.07	1,247.36	2,608.39	1,834.29	990.03	92.42	28.37
Carrots and turnips	0706.10.00	444.09	551.17	696.10	695.99	386.44	957.19	984.73	1,080.06	1,726.83	1449.18
Potato	0701.90.00	26,849.47	19,907.68	24,443.18	24,045.32	24,983.40	26,074.35	20,137.15	27,104.93	23,789.54	22785.31
Peas	0708.10.00	121.93	114.93	69.43	93.75	46.69	55.21	68.73	34.04	30.69	10.53
Beans	0708.20.00	25.25	6.70	20.40	15.04	17.37	40.34	65.27	64.46	101.34	37.31
Asparagus	0709.20.00	0.13	0.28	0.00	-	-	-	0.01	-	0.00	0.00
Chillies	0709.60.20	30.89	15.85	17.05	18.39	20.52	10.96	3.18	14.59	42.48	17.37
Lentils	0713.40.00	135.79	118.28	81.94	94.79	112.11	133.50	54.30	90.80	38.62	90.73
Betel nuts, in shell	0802.90.10/80.10	453.73	1,457.75	7,719.92	5,714.40	6,510.54	5,194.28	6,239.60	6,038.61	7,114.96	1148.67
Betel nuts, shelled	0802.90.20/80.20	15.56	63.92	30.95	77.46	45.39	9.90	125.44	152.80	271.89	8.25
Betel leaves	1211.90.10	0.00	0.00	0.00	-	3.35	3.75	5.80	2.00	0.00	0.00
Cardamom	0908.31.00	746.38	845.74	1,289.01	2,031.31	1,698.03	2,451.08	1,970.68	3,428.63	2,145.68	2055.94
Ginger	0910.11.00	1,230.00	-	-	3,947.95	3,368.59	2,317.75	3,033.36	4,716.35	4,017.76	2336.95
Chirata	NA	2.10	1.63	0.00	0.06	0.03	2.26	0.00	0.00	0.00	0.00
Cordyceps	1211.90.50	0.67	0.89	0.90	0.41	0.48	0.32	0.18	0.44	0.73	0.12
Poe	3307.41.10	3.14	13.70	21.14	11.17	111.78	30.41	18.46	77.66	16.88	22.06
Matsutake	0709.59.10/55.00	3.28	3.05	4.11	4.01	5.32	5.26	2.65	5.12	3.43	6.34
Rubia (Tsoe)	3203.00.30	39.12	48.18	76.57	135.91	88.98	96.01	-	90.62	40.28	7.55

Source: Bhutan Trade Statistics, DRC

Table 2.1.2 Export of major food items to India and COTI (2014-2023) (Value in Million Nu.)

Commodity	BTC code	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Rice in the husk	1006.10.00	0.00	1.20	4.28	-	0.04	0.02	-	-	0.00	0.01
Red Rice	1006.20.20	0.91	0.08	0.07	0.43	-	0.75	-	0.01	0.02	1.60
Semi-milled rice	1006.30.00	0.00	0.00	0.00	-	-	0.70	-	-	0.00	0.19
Wheat & Meslin flour	1101.00.00	111.97	80.56	0.00	10.25	19.51	35.86	5.63	-	0.00	0.00
Soya bean seed	1201.10.00	0.00	0.22	0.10	1.23	0.31	0.28	0.13	-	0.00	0.00
Mustard seed	1207.50.00	0.46	0.23	0.04	0.10	0.09	0.09	-	0.26	0.07	0.04
Oranges	0805.10.00	542.56	467.62	439.08	478.37	354.84	530.04	295.52	448.82	337.24	500.86
Apples	0808.10.00	139.07	101.86	128.11	69.18	33.83	81.81	6.80	21.01	21.05	51.65
Cauliflower & broccoli	0704.10.00	0.29	22.10	12.12	0.76	0.16	0.25	0.04	3.00	0.40	0.35
Cabbage lettuce	0705.11.00	28.53	23.98	26.11	34.54	22.74	41.81	40.48	10.64	1.53	0.38
Carrots and turnips	0706.10.00	15.36	17.47	22.94	18.85	11.24	28.34	27.49	17.54	45.71	40.56
Potato	0701.90.00	688.79	370.97	542.50	458.70	511.06	521.05	534.36	500.69	383.50	311.58
Peas	0708.10.00	4.17	3.08	2.31	2.64	1.80	1.69	2.97	1.02	0.93	0.56
Beans	0708.20.00	0.82	0.23	0.67	0.41	0.53	1.36	2.67	2.02	3.99	1.75
Asparagus	0709.20.00	0.09	0.01	0.00	-	-	-	0.00	-	0.00	0.00
Chillies	0709.60.20	1.12	0.70	0.63	0.55	0.66	2.78	0.19	0.48	1.48	0.60
Lentils	0713.40.00	7.59	8.12	6.15	6.29	6.81	7.65	3.42	5.71	1.74	4.75
Betel nuts, in shell	0802.90.10/80.10	70.38	84.80	82.88	105.89	120.86	115.42	134.74	176.50	206.25	31.70
Betel nuts, shelled	0802.90.20/80.20	0.14	1.13	0.54	1.48	1.35	0.26	3.38	5.77	7.57	0.27
Betel leaves	1211.90.10	0.00	0.00	0.00	-	0.19	0.11	0.13	0.04	0.00	0.00
Cardamom	0908.31.00	789.19	940.86	1,342.38	1,330.22	929.41	1,227.62	1,011.56	1,712.25	1,320.40	1,226.57
Ginger	0910.11.00	55.04	-	-	70.41	75.10	92.13	95.76	91.71	73.04	52.82
Chirata	NA	0.19	0.09	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00
Cordyceps	1211.90.50	376.06	194.42	141.89	183.94	210.57	172.67	94.89	108.90	214.84	46.84
Poe	3307.41.10	2.38	3.98	6.15	6.78	6.07	6.92	4.86	10.43	5.21	6.81
Matsutake	0709.59.10/55.00	11.37	12.33	18.66	18.59	27.54	27.87	14.76	18.87	21.07	35.47
Rubia (Tsoe)	3203.00.30	0.90	0.97	1.55	3.37	1.78	2.42	-	5.59	3.55	0.44

Source: Bhutan Trade Statistics, DRC

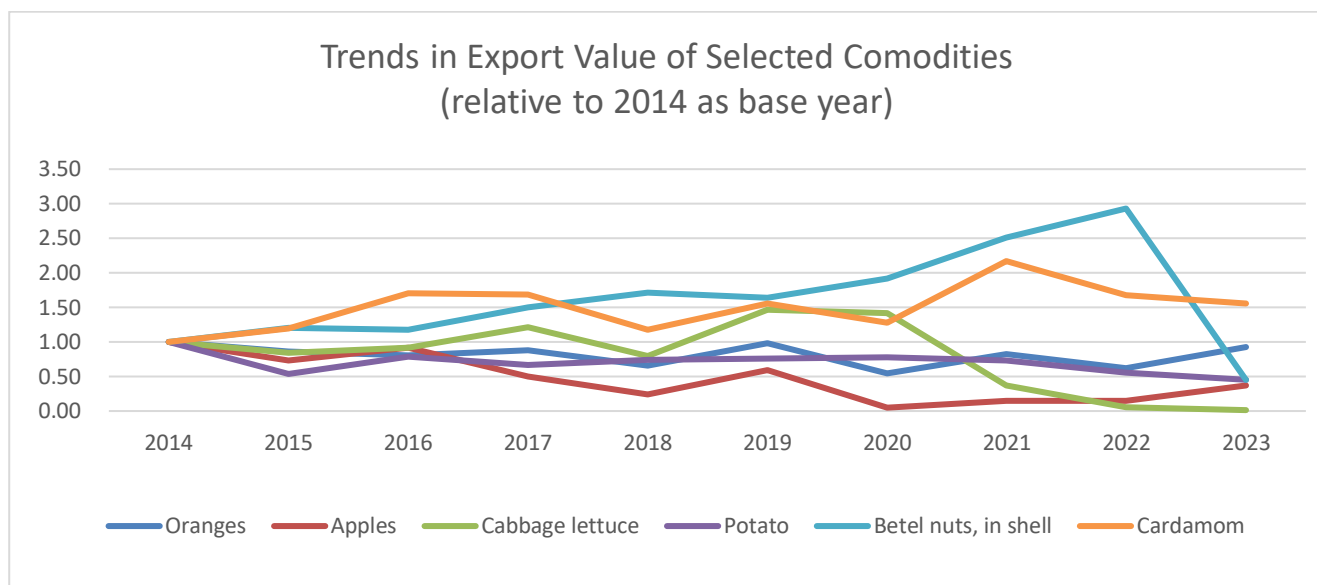


Figure 17: Trends in export value of selected food items to India and COTI, relative to 2014 figures (2014-2023)

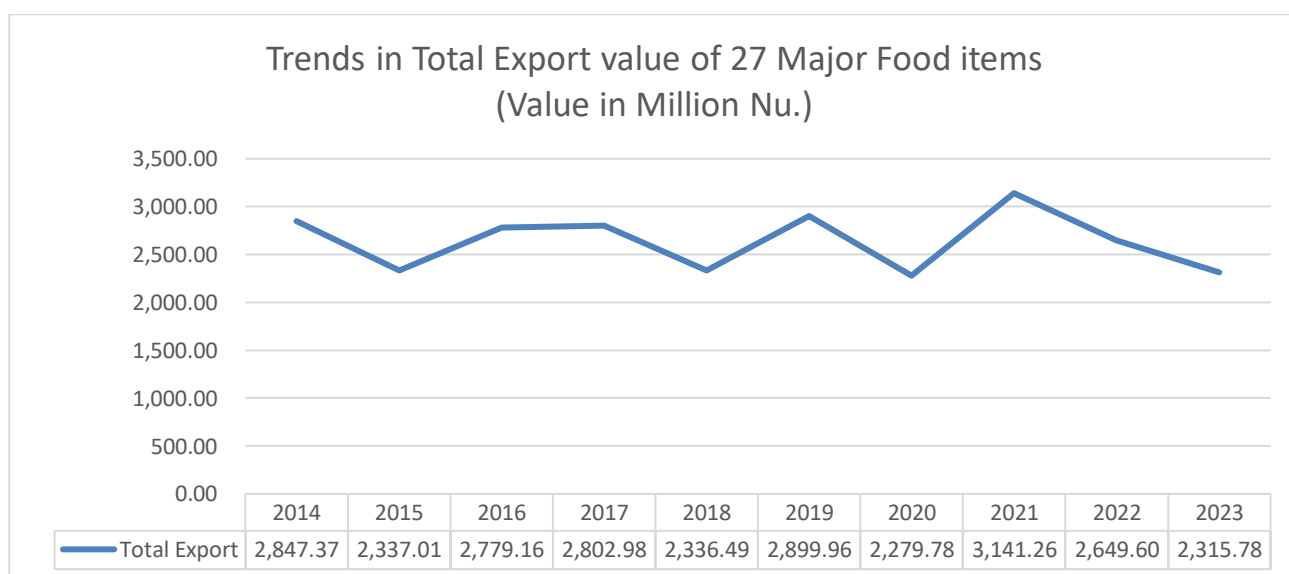


Figure 18: Trends in total export value of 27 major food items listed in Table 2.1.2 (2014-2023)

Table 2.2.1 Import of major food items from India and COTI (2014-2023) (Volume in MT unless specified)

Commodity	BTC code	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Meat											
Bovine meat	02.01/ 02.02	3,743.37	4,111.79	3,470.47	3,120.31	3,194.07	3,788.15	1,729.93	1,728.27	1,972.34	1961.36
Swine meat	02.03	2,163.85	2,242.34	1,879.97	1,869.84	1,755.00	1,684.01	756.24	2,001.46	1,224.37	1.14
Chevon	02.04	35.48	27.81	30.15	34.17	30.93	29.82	2.47	0.58	0.87	2.77
Chicken	02.07	1,302.25	1,369.36	1,474.51	1,584.46	1,575.11	1,631.95	1,647.72	2,275.18	2,825.54	2583.16
Offal of bovine/swine/chevon	02.06	-	-	-	89.91	88.73	115.15	21.07	1.00	16.75	46.08
Fish											
Fish fresh or frozen	03.02/ 03.03	1,468.65	1,327.24	1,262.27	1,316.15	827.82	710.67	1,092.96	1,389.11	1,554.29	1777.02
Fish fillets, fresh, chilled	03.04				9.95	3.93	2.31	15.56	28.26	56.89	27.701
Dry fish	03.05	1,633.67	1,129.17	811.00	189.62	336.25	383.57	766.58	937.39	875.58	916.77
Seafood											
Crustaceans	03.06	-	-	-	18.09	1.03	4.18	28.23	21.02	13.39	19.88
Mollusks	03.07	-	-	-	0.26	0.23	0.23	0.02	-	14.35	0.42
Dairy product											
Fresh milk	0401.20.10	464.86	140.90	131.02	127.49	62.37	16.35	44.37	13.89	16.82	78.94
Tetra pack	0401.20.20	1,114.14	625.03	1,796.50	1,523.41	1,226.81	3,042.24	3,005.78	3,903.17	3,821.76	7015.76
Condensed milk	0401.40.00	334.26	317.20	30.05	16.23	7.40	1.36	56.83	615.21	958.04	433.89
Milk powder	0402.10.00	1,840.82	2,009.84	2,221.89	1,574.74	783.79	696.88	743.45	829.00	785.52	937.58
Yogurt	0403.10.00/ 0403.20.00	-	-	-	5.59	20.08	11.55	4.05	4.35	16.39	30.92
Butter, fresh	0405.10.10	3.28	1.19	0.96	0.79	0.25	2.12	3.81	0.03	0.03	3.35
Butter, processed	0405.10.20	235.71	213.80	200.51	206.50	661.57	170.14	161.68	211.48	215.59	292.17
Cheese, fresh	0406.10.00	13.81	8.80	9.17	4.87	1.60	0.47	12.87	11.41	11.71	2.02
Cheese, processed	0406.30.00	915.31	1,006.54	1,266.33	1,298.80	1,159.19	1,139.28	1,111.69	1,128.65	1,254.20	1,093.90

(Continued)

Continued from the previous page (Table 2.2.1 Import of major food items from India and COTI) (volume)

Commodity	BTC code	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Natural honey	0409.00.00	25.01	34.54	42.79	39.04	64.72	42.29	41.93	52.18	64.91	69.03
Fresh vegetables											
Potatoes seed	0701.10.00	8.05	15.61	0.89	44.23	7.38	17.44	17.82	-	-	0.11
Potatoes others	0701.90.00	5,263.82	5,994.07	5,468.22	5,237.70	4,690.27	4,892.58	4,550.96	6,831.46	4,199.56	5010.30
Tomatoes	0702.00.00	2,628.21	2,538.71	2,831.98	2,978.46	2,636.85	2,590.79	3,017.68	4,296.63	4,769.96	4334.18
Onion & shallots	0703.10.00	3,076.38	3,380.64	3,478.04	3,748.34	3,558.75	3,308.13	4,087.42	6,069.67	6,329.70	5297.10
Garlic	0703.20.00	27.43	36.92	37.25	61.36	49.06	47.88	104.860	368.55	317.72	330.41
Leeks & others	0703.90.00	0.40	13.75	6.37	3.42	4.40	3.19	0.90	2.91	14.30	1.22
Cauliflower & broccoli	0704.10.00	1,225.88	1,219.23	767.54	13.54	19.26	36.58	55.87	38.25	183.50	153.95
Cabbage lettuce	0705.11.00	1,543.54	1,517.93	1,381.94	1,662.90	1,328.81	1,367.93	1,206.11	229.29	566.45	226.17
Carrots and turnips	0706.10.00	218.70	166.33	171.56	266.42	255.89	313.42	286.76	81.52	374.78	410.53
Cucumber & gherkins	0707.00.00	419.41	391.46	435.47	492.05	385.70	409.97	311.31	642.69	667.62	767.57
Peas	0708.10.00	47.31	77.81	107.19	139.39	86.64	120.42	171.33	377.97	304.40	289.82
Beans	0708.20.00	295.88	331.07	335.84	0.68	1.30	-	0.21	0.77	0.06	0.29
Other leguminous vegetable	0708.90.00	2,493.04	2,007.65	1,729.26	1,595.25	1,091.15	1,341.45	560.85	1,245.77	537.30	213.84
Egg-plants)	0709.30.00	653.11	571.00	572.00	713.19	491.43	586.88	467.53	712.87	723.42	698.86
Mushroom	0709.51.00	4.98	11.10	26.47	129.00	178.93	79.69	72.04	548.68	647.87	710.68
Capsicum	0709.60.10	0.97	0.58	2.16	0.08	0.12	0.12	-	0.02	0.92	4.21
Chilli	0709.60.20	1,973.92	2,290.76	1,846.06	333.90	28.94	7.57	-	0.74	1,262.18	2081.86
Spinach	0709.70.00	0.00	1.39	7.29	4.76	1.68	2.52	0.79	1.67	7.65	14.72
Pumpkin/squash/gourd	0709.93.00	71.28	124.03	111.72	147.04	213.20	217.26	261.81	366.19	829.82	901.42
Others	0709.99.00	535.47	1,033.10	1,682.69	1,838.52	2,035.46	749.97	912.28	845.06	1,302.78	1226.32
Dried vegetable											
Onion	0712.20.00	24.29	31.44	24.18	28.47	29.24	46.11	2.36	65.55	85.42	92.82

(Continued)

Continued from the previous page (Table 2.2.1 Import of major food items from India and COTI) (volume)

Commodity	BTC code	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Dry mushroom	0712.31.00	5.32	8.71	12.06	12.24	10.92	21.22	14.29	53.90	32.57	19.45
Mixture of vegetable	0712.90.00	1.23	0.79	0.16	1.10	0.79	2.82	6.72	2.57	4.72	3.29
Pea	0713.10.00	76.88	176.62	292.42	208.37	51.81	38.78	51.06	102.30	50.79	58.86
Chickpea	0713.20.00	38.21	137.24	180.52	186.01	234.12	170.06	279.37	481.17	363.97	358.33
Beans	0713.31.00	0.09	0.21	2.72	0.22	0.08	0.25	0.28	1.26	1.52	0.19
Cow pea	0713.35.00	0.00	0.00	0.02	0.81	0.19	-	-	-	0.02	0.23
Lentils	0713.40.00	2,663.61	2,647.75	2,103.20	2,141.28	2,116.82	2,141.29	2,383.63	3,008.42	2,656.78	2346.53
Fresh fruits											
Plantains	0803.10.00	407.25	187.93	32.29	123.78	70.58	182.79	74.58	121.48	60.88	71.18
Bananas	0803.90.00	127.14	494.14	504.84	472.46	578.42	673.24	588.70	986.78	1,753.07	1913.82
Dates	0804.10.00	1.69	0.38	0.64	0.57	6.43	6.92	18.58	4.33	6.10	4.97
Pineapple	0804.30.00	225.15	706.13	959.63	519.11	276.90	276.87	106.67	164.29	210.88	304.07
Avacado	0804.40.00	0.27	0.00	0.11	1.13	0.10	0.08	0.15	9.24	26.96	13.95
Guavas	0804.50.10	17.87	2.10	1.59	2.26	2.17	2.27	13.19	19.88	14.74	42.10
Mangoes	0804.50.20	634.01	734.46	582.67	619.19	434.81	442.30	806.23	1,116.83	1,227.38	1294.06
Orange	0805.10.00	38.55	93.61	100.58	86.84	86.06	112.07	103.67	103.82	199.69	322.55
Lemon	0805.50.00	35.02	77.62	42.09	89.21	114.50	156.89	114.40	420.91	387.89	392.53
Grapes	0806.10.00	13.44	18.37	16.00	26.91	13.53	20.07	44.00	278.96	281.22	337.76
Watermelons	0807.11.00	680.39	776.17	756.55	813.92	742.33	706.03	628.03	2,338.18	2,370.82	2360.51
Papayas	0807.20.00	55.19	85.67	73.51	79.68	78.27	84.17	42.67	82.17	121.90	119.70
Apples	0808.10.00	52.68	73.25	123.13	185.58	73.58	165.73	265.12	629.69	646.94	742.69
Pears	0808.30.00	12.82	17.95	23.58	41.14	5.86	9.43	13.77	122.86	168.04	201.08
Apricot	0809.10.00	0.00	1.17	0.02	0.03	0.07	8.83	0.09	0.00	0.06	0.92
Kiwi	0810.50.00	2.37	7.51	2.51	1.10	0.01	0.07	0.29	15.90	20.66	16.73

(Continued)

Continued from the previous page (Table 2.2.1 Import of major food items from India and COTI) (volume)

Commodity	BTC code	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Others	0810.90.00	30.26	78.47	419.20	525.04	485.23	159.78	117.57	677.81	344.22	296.01
Dried fruits											
Grapes	0806.20.00	0.06	0.64	0.73	1.00	0.94	4.00	6.31	6.23	9.72	10.86
Apricot	0813.10.00	0.08	0.18	0.01	0.01	0.17	0.15	0.11	0.41	0.60	0.28
Prunes	0813.20.00	0.01	0.12	0.10	0.01	0.32	-	0.09	0.05	0.38	3.75
Apples	0813.30.00	0.00	0.14	0.01	0.04	-	1.27	-	0.10	0.18	0.07
Other fruits	0813.40.00	11.66	20.58	8.36	17.66	11.18	33.48	8.63	23.12	32.68	19.23
Mix nuts & fruits	0813.50.00	15.76	107.26	19.34	19.17	15.23	14.58	8.06	7.86	6.04	13.48
Green tea											
Green tea (not fermented)	0902.10.00	1.40	6.25	5.90	3.07	10.02	15.48	39.50	88.11	120.92	99.08
Other green tea	0902.20.00	69.81	111.93	23.16	40.26	44.32	50.56	65.92	31.38	40.45	12.72
Black tea(fermented)	0902.30.00	263.31	292.59	333.51	346.00	347.08	296.06	430.39	425.47	341.47	256.43
Other	0902.40.90	7.93	59.05	6.88	26.68	11.54	25.69	21.40	42.76	37.23	107.15
Spices											
Chilli dry	0904.21.90	372.90	358.71	365.15	542.99	323.36	250.43	663.37	858.12	477.62	291.95
Chilli crush	0904.22.90	54.59	40.46	41.73	33.47	49.19	0.04	53.54	45.81	54.07	30.16
Cinnamon	0906.11.00	0.21	0.65	0.62	0.82	0.11	0.25	0.67	1.04	0.99	0.95
Clove not crush or ground	0907.10.00	0.55	0.17	0.45	1.57	0.25	0.25	1.08	1.36	3.37	4.23
Clove crush	0907.20.00	0.00	0.00	0.04	0.01	0.82	1.70	1.79	1.71	1.54	0.49
Cardamoms	0908.31.00	1.50	3.40	0.00	0.49	0.49	0.42	1.38	6.74	47.06	3.84
Turmeric	0910.30.00	28.31	32.02	14.43	16.28	11.83	11.16	23.11	33.36	45.28	39.87
Ginger	0910.11.00	0.00	0.00	0.00	1.14	0.97	3.16	3.38	1.96	1.87	1.95
Mixtures	0910.91.00	8.04	1.74	1.19	1.08	8.01	2.95	30.08	32.77	34.36	20.15
Other spices	0910.99.00	131.60	166.75	136.20	112.14	74.28	79.08	148.97	127.38	191.97	97.31

(Continued)

Continued from the previous page (Table 2.2.1 Import of major food items from India and COTI) (volume)

Commodity	BTC code	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Cereals seed											
Wheat seed	1001.11.00	26.66	0.00	0.00	-	-	24.98	55.05	72.02	35.74	4.23
Wheat other	1001.19.00	14,254.55	11,074.72	5,024.99	3,365.70	3,042.16	4,808.54	2,569.01	896.20	800.57	342.91
Meslin seed	1001.91.00	20.00	0.20	20.00	18.52	4.00	4.14	-	12.45	44.34	1.13
Meslin other	1001.99.00	175.57	273.02	34.13	45.39	24.43	55.51	660.43	1,045.78	1,867.58	733.16
Rye	1002.90.00	12.90	4.81	10.66	1.77	2.47	4.31	5.86	0.07	0.00	0.05
Barley	1003.10.00	0.00	61.39	1.50	0.02	0.01	0.06	-	1.05	0.74	0.00
Oats seed	1004.10.00	0.00	0.00	0.11	0.04	0.05	-	0.06	-	0.00	0.00
Oats other	1004.90.00	0.24	0.47	0.93	0.60	0.13	0.13	0.96	0.58	2.79	0.49
Maize (corn) seed	1005.10.00	722.09	16.27	57.15	14.45	45.17	74.98	185.54	129.74	85.38	52.42
Maize others	1005.90.00	18,808.57	9,217.93	19,063.17	24,076.30	21,718.78	15,855.68	18,617.94	26,315.19	25,531.63	39756.00
Buckwheat	1008.10.00	5.68	34.01	2.25	10.40	1.17	12.10	24.38	7.94	5.36	3.59
Buckwheat seed	1008.21.00	0.60	5.75	1.20	0.76	6.96	2.03	3.15	4.32	9.40	1.50
Buckwheat other	1008.29.00	307.89	360.05	307.55	114.94	112.43	107.96	95.25	120.76	100.18	99.08
Other cereals	1008.90.00	25.84	50.63	3.92	3.92	39.57	17.11	32.59	73.35	52.86	13.16
Rice											
Rice in the husk	1006.10.00	190.26	199.02	77.52	538.96	76.75	115.04	93.24	8.00	7.75	161.67
Husked (brown) rice	1006.20.10	44,975.52	11,787.90	12.63	34.84	13.74	1.02	3.34	0.04	7.47	2.27
Red rice (yeechum)	1006.20.20	0.00	0.00	0.33	2.25	8.28	0.30	-	-	0.54	0.00
Semi-milled rice	1006.30.00	24,182.01	52,851.77	64,309.28	62,069.45	60,267.80	61,030.58	77,564.68	68,371.48	79,327.45	93294.52
Broken Rice	1006.40.00	10,027.68	18,807.38	23,271.47	15,804.08	11,144.33	23,443.06	12,820.82	25,353.17	10,347.69	1142.89
Flour											
Wheat & Meslin flour	1101.00.00	7,322.34	6,633.23	6,903.12	7,420.14	7,139.72	7,019.57	9,062.42	8,944.11	8,699.77	8129.46
Maize(corn)flour	1102.20.00	197.78	117.39	366.70	642.81	343.90	127.62	295.56	420.12	377.86	486.76

(Continued)

Continued from the previous page (Table 2.2.1 Import of major food items from India and COTI) (volume)

Commodity	BTC code	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Maize (other)	1102.90.00	206.76	277.62	322.44	125.73	158.72	226.43	95.67	172.83	214.31	516.50
Oil Seeds											
Soya bean seed	1201.10.00	0.07	0.00	0.75	0.72	-	0.01	0.83	0.62	0.06	0.00
Soya bean other	1201.90.00	0.36	1.59	1.02	0.00	0.37	0.33	1.39	3.72	0.65	0.44
Ground nut seed	1202.30.00	0.00	0.00	0.25	0.56	0.28	0.24	15.54	14.64	23.14	7.03
Ground nut, in shell	1202.41.00	54.88	20.90	11.19	9.06	6.57	4.41	1.82	7.74	5.20	11.85
Ground nut, shelled	1202.42.00	15.23	14.51	15.38	17.97	19.75	18.23	17.84	22.05	22.87	29.87
Linseed	1204.00.00	0.00	0.00	0.01	0.00	0.02	0.01	0.24	0.68	3.64	1.13
Sunflower seed	1206.00.00	0.02	1.08	0.24	0.32	0.06	0.42	0.17	0.58	0.37	0.96
Sesamum seed	1207.40.00	0.00	0.02	0.01	0.02	0.13	0.08	2.94	3.75	3.92	1.05
Mustard seed	1207.50.00	18.35	9.88	19.88	8.73	2.06	12.75	6.62	11.09	16.82	10.36
Betel Nuts and leaves											
Betel leaves(total)	1211.90.10	881.02	861.38	670.98	667.21	615.16	675.47	671.12	1,783.56	1,194.95	914.15
Betel nuts, in shell	0802.90.10	165.46	32.32	31.77	12.48	14.45	2.15	79.97	250.23	-	-
Betel nuts shelled	0802.90.20	1,122.79	134.97	187.15	15.24	191.85	186.55	205.16	749.81	-	-
Oil											
Soya bean oil	1507.90.00	14,140.25	12,648.09	10,291.98	10,684.52	9,778.27	10,078.76	10,534.84	11,640.68	11,047.82	11223.72
Ground nut oil	1508.90.00	0.03	0.03	0.56	-	1.49	4.14	0.12	1.66	0.03	-
Olive oil	1509.90.00	28.58	22.56	27.22	12.24	35.89	26.58	37.78	36.86	24.02	25.57
Sunflower oil	1512.19.00	221.79	231.61	255.92	146.36	168.98	85.90	0.02	206.12	115.74	46.24
Palm oil	1511.10.90	1.99	73.04	109.35	0.38	56.49	1.43	-	2.55	2.03	0.00
Refined bleached deodorised palm oil	1511.90.10	90.14	8.52	3.53	-	3.23	6.78	6.00	31.63	0.36	27.96
Refined bleached deodorised palmolein	1511.90.20	127.86	1.93	0.08	1.12	2,900.12	2,084.84	69.08	48.62	357.79	376.76

(Continued)

Continued from the previous page (Table 2.2.1 Import of major food items from India and COTI) (volume)

Commodity	BTC code	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Other palm oil	1511.90.90	0.17	19.09	3.47	1.55	1.48	28.57	28.26	7.81	3.28	49.38
Colza/mustard oil	1514.99.00	147.27	147.16	41.88	50.37	68.41	47.89	-	193.69	167.27	179.96
Safflower/cotton-seed oil	1512.29.00	0.25	0.00	3.49	1.46	0.18	0.22	0.12	5.17	3.04	0.00
Coconut oil	1513.19.00	2.95	0.10	0.48	1.63	2.72	2.23	5.14	9.77	5.07	4.06
Babassu oil	1513.29.00	0.51	0.00	0.97	0.01	0.31	0.95	0.17	0.71	0.07	0.29
Rape oil	1514.19.00	1,193.43	1,098.92	841.16	0.72	636.27	631.26	459.96	274.77	274.30	258.97
Oil Crude											
Olive (crude)	1509.10.00	0.35	0.12	0.24	1.35	3.08	5.34	15.05	5.42	-	-
Sunflower (Crude)	1512.11.00	0.00	4.41	0.00	-	-	0.59	0.04	4.96	-	-
Soya bean (crude)	1507.10.00	0.00	11.55	0.03	1.46	2.57	0.84	1.84	4.06	44.02	63.59
Rape crude	1514.11.00	0.00	0.48	0.02	1.28	0.38	-	0.01	0.26	1.25	6.82
Colza/mustard crude	1514.91.00	0.00	1.66	0.00	4.30	33.82	17.93	6.83	28.06	44.74	52.81
Palm (crude)	1511.10.10	0.00	0.00	0.00	-	-	2,134.94	0.11	0.27	0.35	0.00
Sugar											
Beet sugar	1701.12.00	1.91	94.05	28.07	1.50	67.57	101.77	100.53	14.22	12.73	0.89
Other sugar cane	1701.14.00	9,390.95	9,356.11	9,524.34	10,832.92	9,841.37	9,738.92	8,959.45	9,713.09	9,300.11	7227.80
Salt											
Common salt (iodised)	2501.00.10	6,084.32	6,825.04	4,688.63	5,621.68	6,979.19	6,945.27	6,830.22	7,222.81	7,641.98	7093.41
Common salt (non-iodised)	2501.00.20	100.19	505.35	2,195.37	905.38	191.98	73.48	296.27	246.09	231.41	250.04

Source: Bhutan Trade Statistics, DRC

Table 2.2.2 Import of major food items from India and COTI (2013-2022) (Value in Million Nu.)

Commodity	BTC code	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Meat											
Bovine meat	02.01/ 02.02	505.04	569.71	497.39	447.56	488.56	627.25	317.45	369.70	428.75	407.99
Swine meat	2.03	314.06	327.96	292.50	276.75	274.64	285.95	136.30	451.62	295.14	0.40
Chevon	2.04	11.30	10.37	10.35	10.98	13.68	12.80	1.36	0.67	2.04	4.88
Chicken	2.07	166.07	173.68	185.20	205.09	200.11	211.26	222.27	342.57	491.49	430.81
Offal of bovine/swine/chevon	2.06	-	-	-	9.32	9.45	13.53	2.60	0.11	2.73	7.32
Fish											
Fish fresh or frozen	03.02/ 03.03	195.66	177.43	170.97	180.31	119.02	106.94	171.34	218.51	255.61	298.41
Fish fillets, fresh, chilled	3.04	0.00	0.00	0.00	1.03	2.13	1.78	3.12	4.21	9.55	9.29
Dry fish	3.05	198.61	132.84	103.91	25.68	55.02	61.76	127.67	226.03	225.97	220.48
Seafood											
Crustaceans	3.06	-	-	-	2.70	1.47	3.42	7.65	5.87	9.02	13.02
Mollusks	3.07	-	-	-	0.29	0.40	0.32	0.02	-	0.18	0.75
Dairy product											
Fresh milk	0401.20.10	13.16	5.49	5.10	4.18	3.05	1.07	2.31	0.77	0.93	6.91
Tetra pack	0401.20.20	58.12	30.89	100.91	85.30	69.57	157.18	164.95	215.46	214.92	416.36
Condensed milk	0401.40.00	16.44	15.26	1.53	0.83	0.56	0.13	3.06	33.19	49.81	25.62
Milk powder	0402.10.00	542.33	579.00	598.25	445.44	176.15	167.64	258.01	247.60	255.85	351.06
Yogurt	0403.10.00/ 0403.20.00	-	-	-	0.39	1.23	0.84	0.19	0.45	0.58	2.91
Butter, fresh	0405.10.10	1.53	0.40	0.37	0.28	0.10	0.84	1.53	0.10	0.26	1.54
Butter, processed	0405.10.20	59.64	61.67	62.95	67.88	61.91	58.41	58.98	78.29	87.69	122.78
Cheese, fresh	0406.10.00	2357.87	1.58	1.82	1.03	0.28	0.18	1.92	1.88	2.91	0.54
Cheese, processed	0406.30.00	322.06	356.84	449.17	510.10	477.79	449.42	476.91	518.98	557.41	564.06

(Continued)

Continued from the previous page (Table 2.2.2 Import of major food items from India and COTI) (value)

Commodity	BTC code	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Natural honey	0409.00.00	4.87	7.02	8.36	8.07	11.30	9.72	10.31	12.62	16.42	13.22
Fresh vegetables											
Potatoes seed	0701.10.00	0.12	0.15	0.01	0.43	0.57	0.21	0.78	-	-	4.56
Potatoes others	0701.90.00	80.38	60.32	81.45	50.69	62.76	59.56	97.71	132.57	82.15	88.75
Tomatoes	0702.00.00	48.03	58.32	56.23	70.14	46.73	62.28	99.99	150.19	183.07	152.81
Onion & shallots	0703.10.00	65.45	99.09	60.93	83.78	74.20	83.14	137.12	226.59	184.72	156.22
Garlic	0703.20.00	2.49	3.73	3.93	4.29	2.57	3.32	12.32	53.01	41.49	50.48
Leeks & others	0703.90.00	0.01	0.27	0.40	0.06	0.09	0.08	0.05	0.16	0.57	0.04
Cauliflower & broccoli	0704.10.00	16.61	17.02	11.48	0.23	0.32	0.68	0.90	1.34	5.20	3.52
Cabbage lettuce	0705.11.00	12.60	11.84	13.60	15.07	10.78	13.11	11.72	4.65	12.68	3.74
Carrots and turnips	0706.10.00	2.79	1.97	2.79	3.84	3.07	4.69	5.45	2.79	11.28	11.55
Cucumber & gherkins	0707.00.00	5.53	5.95	8.21	8.26	6.47	8.36	5.09	17.69	19.64	19.79
Peas	0708.10.00	1.45	2.33	3.51	4.90	25.81	4.07	7.25	20.00	16.28	14.82
Beans	0708.20.00	7.86	9.39	9.59	0.02	0.02	-	0.00	0.05	0.00	0.06
Other leguminous vegetable	0708.90.00	45.25	43.75	43.56	37.46	24.56	30.92	13.55	59.56	19.56	6.86
Egg-plants)	0709.30.00	9.53	9.63	10.21	11.75	8.89	11.93	11.48	19.68	24.02	20.61
Mushroom	0709.51.00	0.51	0.10	1.84	8.80	12.71	6.11	6.03	75.82	75.36	78.51
Capsicum	0709.60.10	0.36	0.10	0.12	0.03	0.04	0.01	-	0.01	0.06	0.22
Chilli	0709.60.20	5.60	70.87	59.00	9.28	0.64	0.19	-	0.13	80.77	115.67
Spinach	0709.70.00	0.00	0.02	0.14	0.11	0.04	0.04	0.02	0.09	0.35	0.42
Pumpkin/squash/gourd	0709.93.00	0.05	1.37	1.43	1.62	3.17	3.52	4.73	12.72	25.00	24.43
Others	0709.99.00	9.58	21.94	38.74	35.91	36.96	16.60	26.28	38.71	58.26	48.17
Dried vegetable											
Onion	0712.20.00	0.50	0.92	0.39	0.73	0.53	1.18	0.08	2.22	3.03	2.35

(Continued)

Continued from the previous page (Table 2.2.2 Import of major food items from India and COTI) (value)

Commodity	BTC code	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Others	0810.90.00	2.87	6.95	19.68	21.60	21.35	9.13	8.34	71.68	42.66	39.43
Dried fruits											
Grapes	0806.20.00	0.01	0.15	0.15	0.17	0.18	0.32	1.48	1.52	2.78	2.73
Apricot	0813.10.00	0.15	0.06	0.01	0.01	0.16	0.03	0.09	0.12	0.38	0.22
Prunes	0813.20.00	0.01	0.01	0.01	0.01	0.05	-	0.04	0.03	0.21	0.22
Apples	0813.30.00	0.00	0.01	0.01	0.01	-	0.08	-	0.02	0.05	0.01
Other fruits	0813.40.00	1.60	3.04	2.07	0.65	1.44	2.30	1.07	5.09	7.06	4.14
Mix nuts & fruits	0813.50.00	3.71	6.81	5.33	4.42	2.38	2.18	1.92	2.90	2.19	3.68
Green tea											
Green tea (not fermented)	0902.10.00	0.36	1.57	1.69	1.94	2.55	4.42	13.50	29.47	40.43	27.99
Other green tea	0902.20.00	14.42	2.71	4.84	10.86	9.87	10.84	13.78	8.81	9.68	5.79
Black tea(fermented)	0902.30.00	57.83	70.88	79.23	76.81	78.40	61.47	101.72	118.08	100.97	76.51
Other	0902.40.90	1.74	11.16	1.84	29.50	5.67	1.53	3.03	4.94	8.47	26.91
Spices											
Chilli dry	0904.21.90	28.41	37.88	43.92	38.25	29.62	27.22	100.32	135.62	101.70	67.85
Chilli crush	0904.22.90	7.35	6.30	7.48	5.19	6.22	0.01	11.40	12.39	16.81	11.47
Cinnamon	0906.11.00	0.05	0.09	0.11	0.08	0.05	0.08	0.21	0.59	0.24	0.24
Clove not crush or ground	0907.10.00	0.54	0.13	0.26	1.02	0.05	0.16	0.50	0.87	2.22	2.80
Clove crush	0907.20.00	0.00	0.00	0.02	0.01	0.59	0.89	1.02	1.23	1.23	0.41
Cardamoms	0908.31.00	0.95	2.07	0.00	0.39	0.38	0.62	2.57	3.29	4.53	5.22
Turmeric	0910.30.00	4.06	4.69	2.35	2.94	1.88	1.94	4.02	7.25	10.89	9.72
Ginger	0910.11.00	0.00	0.00	0.00	3.34	0.42	0.18	0.29	0.14	0.22	0.32
Mixtures	0910.91.00	1.66	0.43	0.15	0.30	1.07	2.39	3.72	8.47	10.91	8.73
Other spices	0910.99.00	19.14	34.27	29.19	23.40	14.83	13.79	22.42	30.36	41.60	33.71

(Continued)

Continued from the previous page (Table 2.2.2 Import of major food items from India and COTI) (value)

Commodity	BTC code	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Cereals seed											
Wheat seed	1001.11.00	0.91	0.00	0.00	-	-	0.54	1.10	1.34	0.91	0.13
Wheat other	1001.19.00	242.98	186.69	95.52	62.99	56.69	99.59	57.09	19.77	20.63	12.47
Meslin seed	1001.91.00	0.86	0.00	0.90	0.33	0.08	84.00	-	0.27	1.08	0.04
Meslin other	1001.99.00	5.22	4.41	2.02	2.86	0.48	1.55	14.23	22.80	54.88	25.58
Rye	1002.90.00	0.14	0.20	0.37	0.06	0.13	0.20	0.26	0.00	0.00	0.00
Barley	1003.10.00	0.00	0.98	0.11	0.00	0.00	0.01	-	0.03	0.03	0.00
Oats seed	1004.10.00	0.00	0.00	0.01	0.00	0.00	-	0.01	-	0.00	0.00
Oats other	1004.90.00	0.03	0.06	0.11	0.06	0.03	0.01	0.11	0.02	0.11	0.09
Maize (corn) seed	1005.10.00	10.03	0.27	4.61	0.45	2.74	4.74	12.10	5.08	2.60	1.44
Maize others	1005.90.00	239.28	129.19	301.90	343.90	302.84	327.11	279.24	472.58	617.45	905.24
Buckwheat	1008.10.00	0.11	0.58	0.06	0.25	0.04	0.29	0.40	0.16	0.15	0.13
Buckwheat seed	1008.21.00	0.01	0.11	0.03	0.01	0.10	0.04	0.08	0.12	0.29	0.05
Buckwheat other	1008.29.00	5.58	5.75	5.60	2.84	2.32	2.41	2.41	2.68	2.66	3.15
Other cereals	1008.90.00	0.52	0.99	3.92	3.92	0.77	0.43	0.99	1.52	1.56	0.65
Rice											
Rice in the husk	1006.10.00	3.95	2.79	0.97	8.84	0.95	1.00	1.85	0.34	0.24	6.50
Husked (brown) rice	1006.20.10	1101.33	249.97	0.29	0.78	0.40	0.05	0.03	0.01	0.23	0.07
Red rice (yeechum)	1006.20.20	0.00	0.00	0.01	0.03	0.30	0.01	-	-	0.04	0.00
Semi-milled rice	1006.30.00	518.33	1126.42	1536.83	1677.41	1689.09	1664.61	2382.46	2181.19	2608.47	3060.88
Broken Rice	1006.40.00	164.13	288.96	385.29	292.69	193.26	490.63	254.93	436.56	215.40	31.90
Flour											
Wheat & Meslin flour	1101.00.00	166.23	152.09	171.57	185.70	187.12	202.77	281.88	276.97	301.53	334.11
Maize(corn)flour	1102.20.00	7.21	3.22	7.05	10.31	5.33	3.33	6.46	9.75	11.80	12.78

(Continued)

Continued from the previous page (Table 2.2.2 Import of major food items from India and COTI) (value)

Commodity	BTC code	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Maize (other)	1102.90.00	3.22	5.28	6.92	3.97	4.10	6.45	3.65	5.95	10.16	21.82
Oil Seeds											
Soya bean seed	1201.10.00	0.00	0.00	0.04	0.08	-	0.00	0.05	0.08	0.01	0.00
Soya bean other	1201.90.00	0.02	0.10	0.08	0.00	0.09	0.05	0.11	0.43	0.05	0.04
Ground nut seed	1202.30.00	0.00	0.00	0.03	0.09	0.05	0.04	1.66	1.68	3.12	0.90
Ground nut, in shell	1202.41.00	5.44	2.50	1.47	1.08	0.69	0.55	0.23	0.95	0.80	1.60
Ground nut, shelled	1202.42.00	1.55	1.78	1.62	2.10	2.51	2.48	2.27	3.04	2.84	4.22
Linseed	1204.00.00	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.08	0.87	0.31
Sunflower seed	1206.00.00	0.01	0.06	0.02	0.05	0.06	0.06	0.03	0.09	0.09	0.13
Sesamum seed	1207.40.00	0.00	0.01	0.00	0.02	0.02	0.02	0.53	0.65	0.67	0.19
Mustard seed	1207.50.00	1.34	0.64	1.27	0.60	0.13	0.91	0.37	0.91	1.58	0.66
Betel Nuts and leaves											
Betel leaves (total)	1211.90.10	59.88	61.77	56.01	58.76	48.36	49.98	101.59	491.11	423.07	235.60
Betel nuts, in shell	0802.90.10 / 0802.80.10	1.12	0.84	0.73	0.64	1.47	0.22	9.78	33.55	4.37	8.09
Betel nuts, shelled	0802.90.20 / 0802.80.20	28.29	8.06	10.18	2.28	18.38	14.29	34.21	171.54	339.56	114.79
Oil											
Soya bean oil	1507.90.00	668.17	660.32	729.48	778.01	811.82	852.86	968.05	1629.74	1597.38	1296.66
Ground nut oil	1508.90.00	0.00	0.03	0.05	-	0.16	0.07	0.02	0.20	0.01	0.00
Olive oil	1509.90.00	3.99	2.33	5.10	2.68	5.93	4.34	5.85	6.21	6.97	7.20
Sunflower oil	1512.19.00	16.22	17.89	20.83	12.97	12.43	8.60	0.00	29.95	20.04	6.70
Palm oil	1511.10.90	0.12	11.91	7.20	0.04	4.12	0.10	-	0.35	0.34	0.00
Refined bleached deodorised palm oil	1511.90.10	5.41	0.50	0.25	-	0.26	0.53	0.53	3.16	0.05	3.37
Refined bleached deodorised palmolein	1511.90.20	10.38	0.33	0.15	0.23	144.17	94.19	6.05	5.77	45.61	42.95

(Continued)

Continued from the previous page (Table 2.2.2 Import of major food items from India and COTI) (value)

Commodity	BTC code	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Other palm oil	1511.90.90	0.03	0.98	0.24	0.11	0.14	1.6	2.17	1	0.58	7.18
Colza/mustard oil	1514.99.00	11.93	13.07	3.69	3.8	6.89	4.75	-	30.14	25.67	24.29
Safflower/cotton-seed oil	1512.29.00	0.15	0	0.25	73.79	0.01	0.12	0	0.96	0.65	0.01
Coconut oil	1513.19.00	0.44	0.01	0.05	0.29	0.52	0.37	1	2.48	1.48	0.86
Babassu oil	1513.29.00	0.1	0	0.1	0	0.15	0.17	0.03	0.19	0.01	0.01
Rape oil	1514.19.00	101.8	93.87	73.03	60.72	55.72	57.14	45.42	38.39	43.28	28.51
Oil Crude											
Olive (crude)	1509.10.00	0.19	0.04	0.06	0.98	0.55	1.64	1.09	1.5	0	0
Sunflower (Crude)	1512.11.00	0	0.76	0	-	-	0.13	0	0.74	0	0
Soya bean (crude)	1507.10.00	0	0.82	0	0.12	0.17	0.07	0.12	1.94	7.25	6.28
Rape crude	1514.11.00	0	0.04	0	0.1	0.04	-	0	0.04	0.21	0.33
Colza/mustard crude	1514.91.00	0	0.18	0	0.37	3.37	1.73	0.86	4.51	6.6	6.47
Palm (crude)	1511.10.10	0	0	0	-	-	100.93	0.01	0.04	0.07	0
Sugar											
Beet sugar	1701.12.00	0.08	0.29	1.06	0.06	2.3	3.45	3.81	1.11	0.61	0.06
Other sugar cane	1701.14.00	317.93	278.07	373.95	449.13	353.37	363.72	340.11	367.13	373.73	339.45
Salt											
Common salt (iodised)	2501.00.10	33.41	38.67	28.35	32.49	39.99	42.03	49.45	57.07	63.18	64.42
Common salt (non-iodised)	2501.00.20	0.55	2.36	9.2	3.91	1.18	0.37	1.92	2.49	2.02	2.78

Source: Bhutan Trade Statistics, DRC

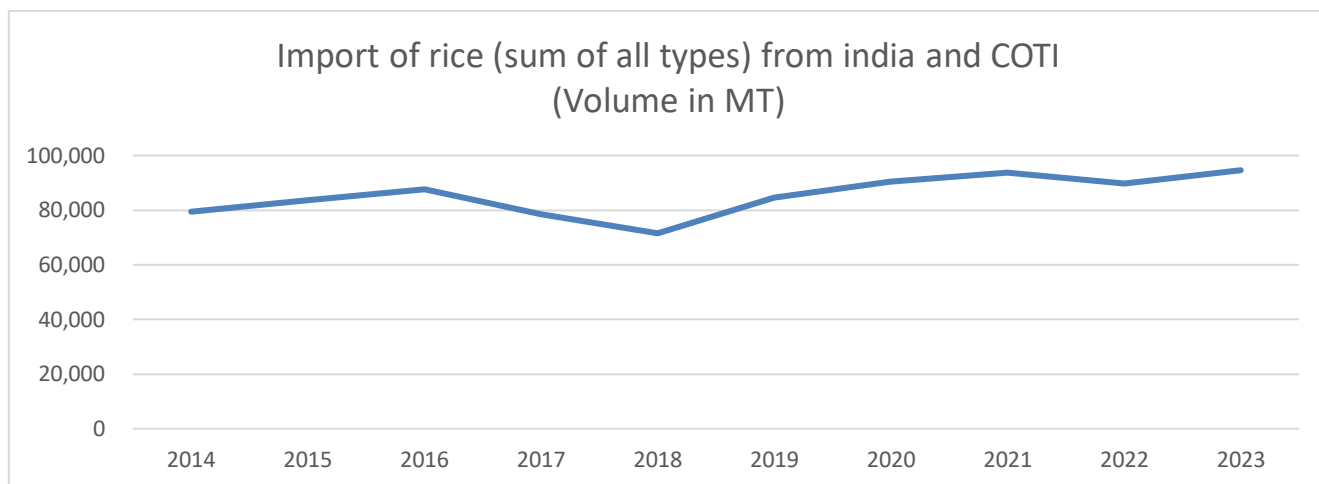


Figure 19: Trends in import value of rice (sum of all types) from India and COTI (2014-2023) (volume)

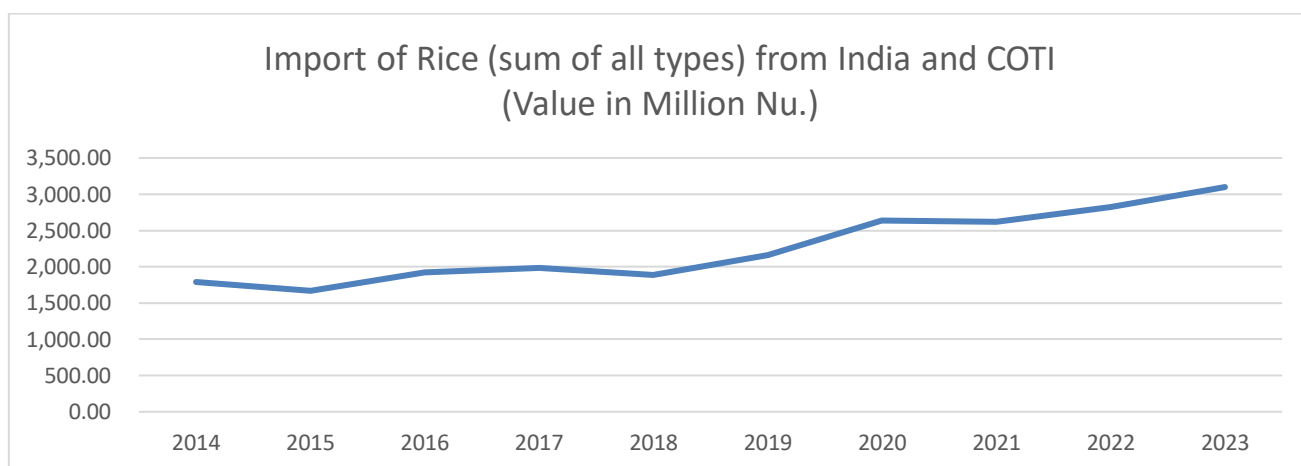


Figure 20: Trends in import value of rice (sum of all types) from India and COTI (2014-2023) (value)

Table 2.3 (1) Agriculture commodities auctioned through FCBL (2014-2023) (Volume in MT)

Commodity	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Potato	26,345.71	22,597.24	25,810.62	25,687.38	31,537.30	30,277.08	2,788.09	5,668.55	11,736.00	18,820.51
Apple	24.87	28.84	13.90	28.26	12.38	32.03	-	-	-	25.00
Vegetables	2,924.37	3,841.41	3,603.58	4,104.04	3,463.10	5,091.66	3,205.48	930.93	1,422.03	2,396.00
Pulses	17.42	16.93	13.31	7.67	8.54	5.67	46.14	0.80	0.00	0.00
Spices	297.40	348.12	502.28	587.41	250.29	167.85	279.68	3,180.45	3,636.09	180.17
Citrus	1,995.18	1,870.88	791.29	667.38	391.28	201.45	62.26	107.07	246.46	165.51
Areca Nut	232.33	437.95	378.86	485.13	131.06	483.46	581.90	1,046.26	137.96	225.98
Pear	0.97	0.50	0.09	0.59	-	-	-	-	-	0.00
Plum	1.80	1.21	0.63	0.61	0.95	0.63	-	-	-	0.05
Peach	1.40	2.09	1.24	1.35	0.31	0.65	-	-	-	0.04
Apricot	0.02	0.00	0.02	0.00	-	-	-	-	-	-
Fruits other than citrus (2020-2023)	-	-	-	-	-	-	0.09	0.87	5.65	-
Total	31,841.47	29,145.18	31,115.81	31,569.82	35,795.21	36,260.48	6,963.64	10,934.92	17,184.19	21,813.25

Source: Food Corporation of Bhutan Limited, Phuentsholing

Table 2.3 (2) Agriculture commodities auctioned through FCBL (2014-2023) (Value in Million Nu.)

Commodity	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Potato	684.10	373.99	584.51	356.54	649.30	709.81	77.04	110.32	193.99	277.46
Apple	0.59	0.68	0.39	0.66	2.80	8.62	-	-	-	0.92
Vegetables	62.72	96.66	87.72	115.86	93.76	162.87	60.50	16.76	40.07	75.26
Pulses	0.86	0.77	0.54	0.44	0.44	0.30	3.20	0.02	0.00	-
Spices	17.01	11.58	11.03	9.35	8.10	9.86	6.89	57.58	143.35	7.32
Citrus	33.24	38.07	14.30	15.28	7.28	6.25	1.50	3.69	6.80	5.02
Areca Nut	4.94	5.66	6.37	9.96	2.47	9.17	13.26	36.46	6.22	6.04
Pear	0.02	0.01	0.01	0.01	-	-	-	-	-	-
Plum	0.03	0.03	0.01	0.02	0.02	0.02	-	-	-	0.00
Peach	0.02	0.04	0.03	0.03	0.01	0.01	-	-	-	0.00
Apricot	-	0.00	0.01	0.00	-	-	-	-	-	-
Fruits other than citrus (2020-2022)	-	-	-	-	-	-	0.00	9.57	0.23	-
Total	803.53	527.49	704.89	508.14	764.18	906.91	162.40	234.39	391.00	372.02

Source: Food Corporation of Bhutan Limited, Phuentsholing

CHAPTER 3: LABOUR POPULATION IN AGRICULTURE AND LAND USE

The primary source of data on agriculture farm labour is the Labour Force Survey, which is conducted by the National Statistics Bureau (NSB) annually, and captures the total farm labour on both the male and female in agriculture sector.



Land is one of the most important elements in agriculture and hence the statistics on land and its use is of special interest to the users. Although the figures may be outdated by now, nonetheless owing to lack of any recent land cover mapping efforts, we present in this chapter the figures from LCMP 2010, National Forest Inventory (NFI) 2016, and RNR Census 2019. Additional statistics on government land leasing and private individuals' land conversion, mainly from wetland to dryland category, are also presented. Therefore, in this chapter it includes the statistics on agricultural land area and farming labour involved by the both genders.

One note-worthy trend observed is the decrease of the economically active population employed in agriculture. As seen in the Table 3.2, it showed a 37% decrease over the seven years from 199,640 in 2015 to 125,160 in 2022. A major contributing factor to this trend is a significant decrease of the population in their twenties employed in agriculture (Figure 20). The group ranked second out of six age-groups in 2013 but has been ranking fifth since 2018.

It is also observed that while in 2016 agriculture employed by far the largest share of population out of the three sectors (57.2% in agriculture followed by 34.2% in service sector and 8.7% in industry sector), in 2022 agriculture and service sectors' shares are largely the same: 43.5% in agriculture and 42.8% in service sector, followed by 13.6% in industry sector (Figure 19).

Table 3.1 Population of Bhutan (2014-2023)

Description	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Total population	755,710	764,667	774,367	728,441	734,374	741,672	748,931	756,129	763,249	770,276
Male	367,005	367,419	376,342	354,891	383,909	387,402	390,877	394,323	397,731	401,092
Female	388,705	397,248	398,025	373,550	350,465	354,270	358,054	361,806	365,518	369,184

Source: LFS/MoLHR for 2013-2017; for other years, Population Projections Bhutan 2017-2047, NSB.

Table 3.2 Labour force employed in agriculture (2013-2022)

Description	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Working age population	529,178	557,047	558,959	570,231	538,435	496,550	481,821	488,336	489,732	484,965
Economically active population	345,786	348,742	352,953	354,652	353,863	310,856	319,758	331,222	338,376	305,983
Economically inactive population	183,392	208,305	206,006	215,579	184,572	185,694	162,063	157,114	151,356	178,983
Economically active male population	NA	189,818	188,047	194,667	185,673	169,328	169,152	169,586	174,264	170,433
Economically active female population	NA	158,925	164,906	159,985	168,190	141,528	150,606	161,636	164,112	135,550
Economically active population employed in agriculture	188,831	192,369	199,640	198,429	175,237	162,239	159,032	157,015	158,511	125,160
Economically active male population employed in agriculture	88,100	90,944	94,689	93,296	79,091	76,502	67,680	67,710	69,354	71,299
Economically active female population employed in agriculture	100,731	101,425	104,951	105,394	96,147	85,737	87,808	89,305	89,157	53,861

Source: LFS/MoLHR for 2013-2017; LFS/NSB for 2018-2022.

Note: While the preceding RNR Statistics Reports used the PHCB 2017 Report as the data source for 2017 figures, it has been changed to LFS to better maintain consistency. For the year 2023, quarterly data was collected percentage-wise (%) and only first quarter has been published by the NSB.

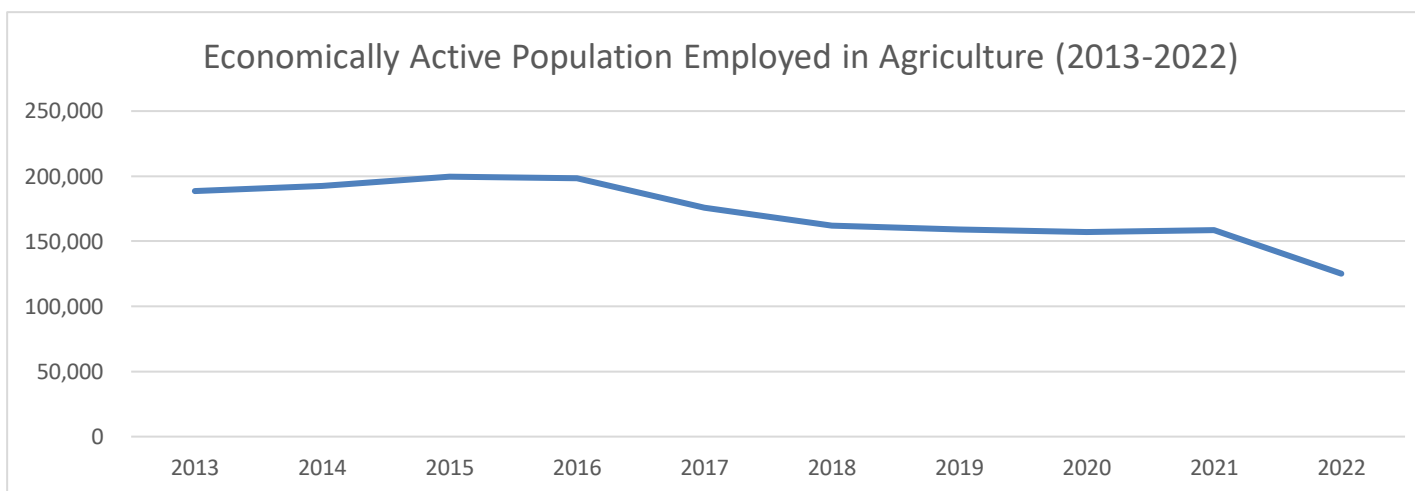


Figure 21: Trends in economically active population employed in agriculture (2013-2022)

Table 3.2.2 Population of employed persons by sector (2013-2022)

Sector	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Agriculture	188,759	192,536	200,102	198,429	175,859	162,239	159,032	157,015	158,511	125,160
Industry	-	-	-	30,137	40,960	34,542	43,550	42,438	45,560	39,414
Service	-	-	-	118,564	125,952	103,660	108,478	115,109	118,052	123,210
All Sectors	335,870	339,569	344,294	347,130	342,771	300,442	311,059	314,562	322,122	287,785

Source: LFS/MoLHR for 2013-2017; LFS/NSB for 2018-2022.

For the year 2023, quarterly data was collected percentage-wise (%) and only first quarter has been published by the NSB.

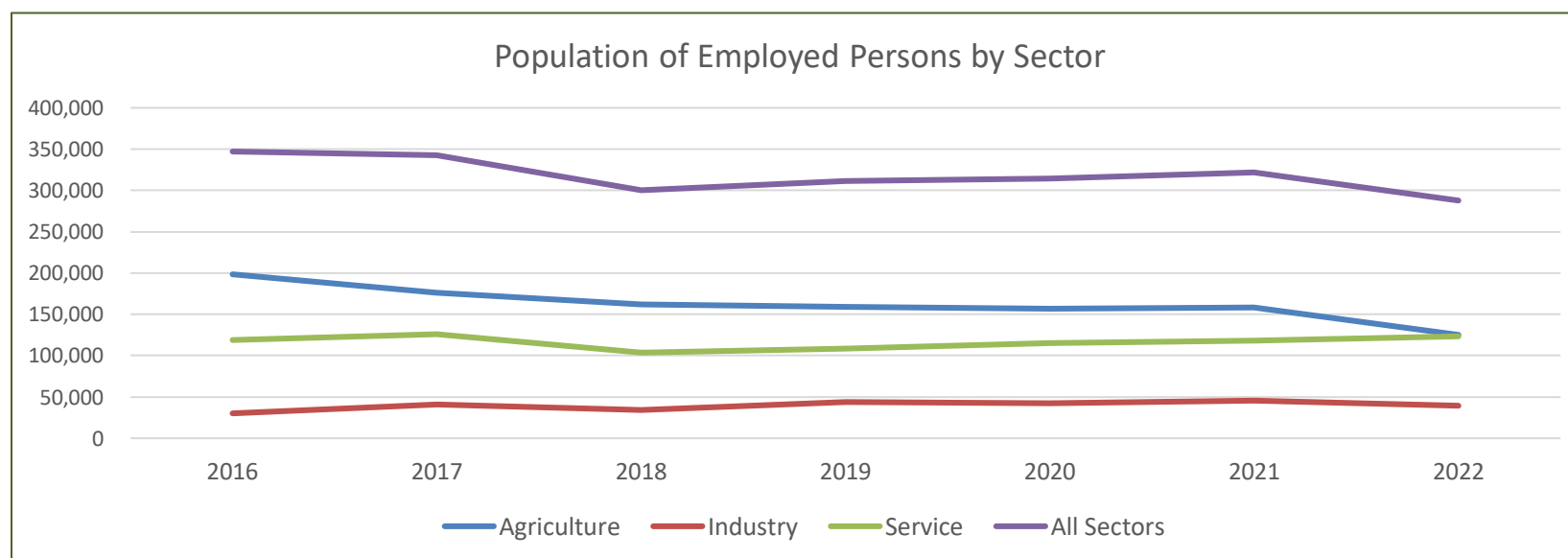


Figure 22: Trends in population of employed persons by sector (2016-2022)

Table 3.3 Labour force employed in agriculture farming by age group (2013-2022)

Year	2013		2014		2015		2016		2017		2018		2019		2020		2021		2022	
Age group	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
15-19	2,818	2,465	2,762	2,676	2,678	3,282	794	1,528	1,487	1,491	1,337	1,011	1,345	1,443	844	760	775	751	724	779
20-24	7,624	10,994	6,633	9,887	8,483	9,330	5,797	10,189	7,556	8,448	4,835	5,147	3,567	5,206	3,101	4,271	3,653	4,491	2,472	2,572
25-29	9,532	12,446	8,443	9,673	9,191	11,037	9,907	10,544	8,527	11,541	7,476	8,549	5,919	8,577	5,462	7,655	5,665	6,904	4,071	4,507
30-34	8,854	13,083	8,339	10,335	7,958	12,371	9,793	13,447	7,987	11,620	7,385	9,384	6,132	10,438	6,655	9,737	5,964	10,157	5,200	7,071
35-39	9,026	11,845	9,569	12,255	9,173	12,286	10,980	15,676	9,133	13,223	7,341	10,823	7,169	11,263	6,008	10,993	6,479	10,005	6,319	9,207
40-44	8,425	10,020	7,711	11,987	9,354	12,763	9,339	13,341	8,238	11,321	7,286	9,784	6,886	9,888	6,716	10,349	6,319	10,797	5,985	8,536
45-49	7,925	11,289	9,008	11,966	10,003	13,533	11,554	12,685	8,666	11,568	7,733	10,097	6,585	10,210	6,806	10,912	6,909	11,757	5,977	7,829
50-54	9,547	10,954	10,188	10,946	10,220	13,127	9,867	11,820	7,578	9,185	7,588	9,770	6,646	10,066	7,404	10,961	7,012	9,705	5,771	7,636
55-59	7,628	7,456	9,160	8,529	9,242	7,097	8,542	7,188	7,532	7,438	7,798	7,612	7,370	8,816	6,757	8,279	6,665	8,090	6,577	6,470
60-64	7,174	4,683	8,083	7,431	8,443	4,839	8,917	5,858	5,702	5,885	7,648	7,262	7,427	6,971	6,736	7,026	7,428	7,425	5,853	5,260
65+	9,546	5,495	11,049	5,740	9,945	5,285	7,805	3,118	6,682	4,426	9,778	6,297	9,192	6,877	10,138	7,938	11,253	8,670	8,932	5,669
Total	88,099	100,730	90,945	101,425	94,690	104,950	93,295	105,394	79,088	96,146	76,205	85,736	68,237	89,754	66,627	88,880	68,122	88,753	57,881	65,536

Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Age group	Male+female	Male+female	Male+female	Male+female	Male+female	Male+female	Male+female	Male+female	Male+female	Male+female
15-19	5,283	5,438	5,960	2,322	2,978	2,349	2,788	1,604	1,526	1,504
20-24	18,618	16,520	17,813	15,986	16,004	9,981	8,773	7,372	8,144	5,044
25-29	21,978	18,116	20,228	20,451	20,068	16,025	14,496	13,117	12,569	8,578
30-34	21,937	18,674	20,329	23,240	19,607	16,768	16,570	16,392	16,121	12,271
35-39	20,871	21,824	21,459	26,656	22,356	18,164	18,432	17,000	16,484	15,526
40-44	18,445	19,698	22,117	22,680	19,559	17,069	16,773	17,065	17,116	14,521
45-49	19,214	20,974	23,536	24,239	20,234	17,830	16,795	17,719	18,666	13,807
50-54	20,501	21,134	23,347	21,687	16,763	17,358	16,712	18,365	16,717	13,407
55-59	15,084	17,689	16,339	15,730	14,970	15,410	16,186	15,036	14,755	13,047
60-64	11,857	15,514	13,282	14,775	11,587	14,910	14,398	13,763	14,853	11,113
65+	15,041	16,789	15,230	10,923	11,108	16,075	16,068	18,076	19,923	14,601
Total	188,829	192,370	199,640	198,689	175,234	161,941	157,991	155,507	156,875	123,417

Source: LFS/MoLHR for 2013-2017; LFS/NSB for 2018-2022.

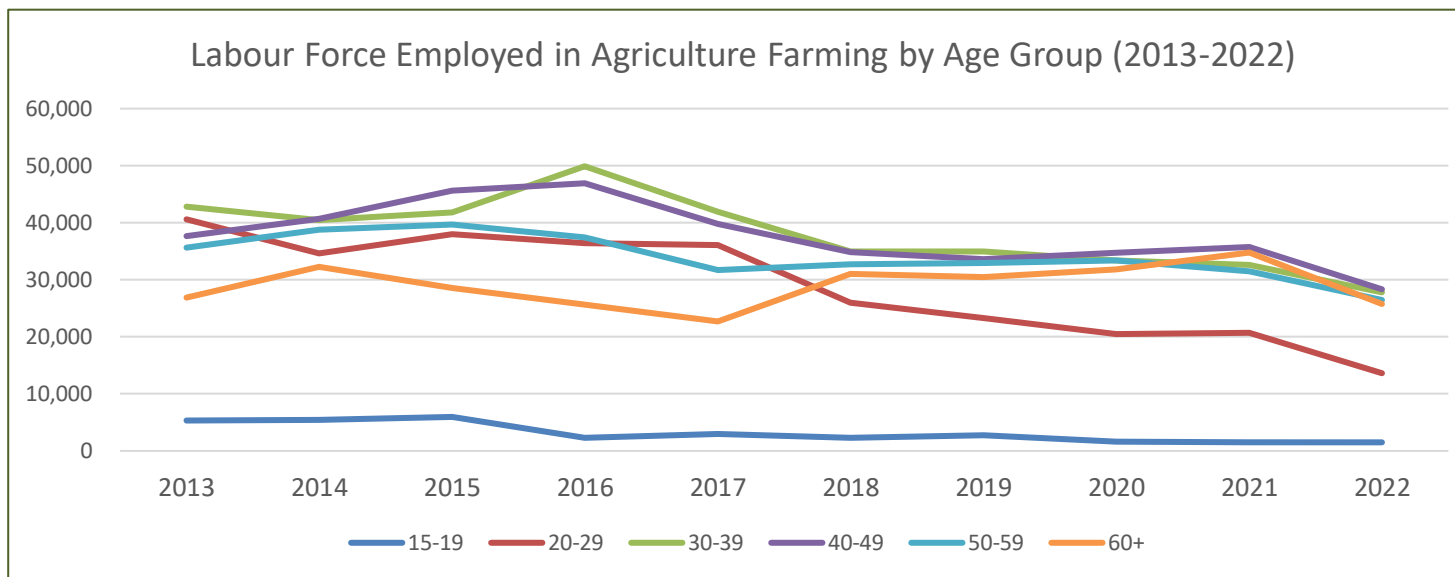


Figure 23: Trends in labour force employed in agriculture farming by age group (2013-2022)

Table 3.4 Land cover by major categories in 2010 and 2016

Land Cover class	Sub-Class	LCMP 2010			LULC 2016		
		Area (Ha)	(%)	Total Area (%)	Area (Ha)	(%)	Total Area (%)
Forests	Fir Forest	183,208.26	4.77	70.46	230,983.99	6.02	70.77
	Mixed Conifer Forest	613,963.92	15.99		519,585.68	13.53	
	Blue Pine Forest	80,023.99	2.08		101,155.06	2.64	
	Chir Pine Forest	107,666.51	2.8		101,537.45	2.64	
	Broadleaf Forest	1,688,956.50	43.99		1,763,899.50	45.94	
	Broadleaf & Conifer Forest	31,472.06	0.82		-	-	
Alpine Scrub	Alpine Scrubs	-	-	-	130,097.72	3.39	3.39
Shrubs	Shrubs	400,526.40	10.43	10.43	374,032.56	9.74	9.74
Meadows	Meadows	157,568.51	4.1	4.1	96,273.61	2.51	2.51
Cultivated Agricultural	Chhuzhing	31,361.23	0.82	2.93	31,891.87	0.83	2.76
	Kamzhing	69,670.79	1.81		68,260.64	1.78	
	Apple Orchard	2,041.47	0.05		5,529.92	0.14	
	Citrus Orchard	5,086.42	0.13				
	Areca nut Plantation	984.92	0.03				
	Cardamom Plantation	3,397.95	0.09				
	Others	13.43	-		-	-	
Built up areas	Built up Areas	6,150.87	0.16	0.16	7,457.03	0.19	0.19
Non-Built-up areas	Non-Built-up Areas	330.1	0.01	0.01	595.89	0.02	0.02
Snow Cover	Snow Cover	285,479.22	7.44	7.44	205,343.63	5.35	5.35
Bare Areas	Rock Outcrops	99,659.29	2.6	3.2	119,754.16	3.12	3.12
	Scree	23,287.71	0.61		39,701.39	1.03	1.03
	Bare Soils	26.87	-		-	-	-
Water Bodies	Lakes	4,753.42	0.12	0.72	6,252.58	0.16	0.65
	Reservoirs	130.7	-		-	-	
	Rivers	22,684.66	0.59		18,923.20	0.49	
Marshy Areas	Marshy Areas	319.47	0.01	0.01	-	-	-
Degraded Areas	Landslides	7,032.54	0.18	-	3,730.22	0.1	0.1
	Gullies	6.66	-	0.54	-	-	-
	Ravines	-	-	-	-	-	-
	Moraines	13,596.24	0.35	-	14,393.94	0.37	0.37
Total		3,839,400.00	100	100	3,839,400.00	100	100

Source: LCMP & LULC, MoAF

Table 3.5 Dzongkhag-wise geographical area by landcover type (Value in Hectare)

Dzongkhag	Land Cover Types										
	Forests	Cultivated Agriculture	Shrubs	Meadows	Built up	Non Built-up	Moraines	Rocky Outcrops	Land-slides	Snow & Glacier	Water Bodies
Bumthang	139,411	3,399	58,927	10,096	481	-	2,033	23,779	4	29,118	1,844
Chhukha	166,099	7,892	6,414	2,625	894	45	-	462	343	-	1,375
Dagana	152,086	7,397	6,038	2,252	108	7	-	850	291	-	1,581
Gasa	60,842	458	94,883	10,985	44	-	9,402	62,701	64	68,734	2,284
Haa	125,768	1,718	34,424	9,481	275	3	-	15,883	19	391	673
Lhuentse	183,360	3,769	37,947	3,246	170	9	966	4,935	104	47,426	1,161
Monggar	175,879	6,530	7,810	736	316	8	-	2	364	-	893
Paro	66,238	5,462	34,347	12,704	655	37	-	5,599	-	1,897	523
Pema Gatschel	91,925	3,665	4,221	8	210	48	-	219	275	-	647
Punakha	91,887	4,704	9,250	483	298	4	-	250	6	2,189	809
Samdrup Jongkhar	168,645	5,497	8,798	479	191	35	-	174	363	-	1,698
Samtse	105,150	14,803	5,619	245	300	160	-	201	615	3	2,121
Sarpang	146,852	8,030	5,094	15	456	10	-	63	441	-	2,967
Thimphu	71,212	1,693	53,153	18,329	1,390	86	755	20,988	-	9,767	469
Trashigang	172,795	9,812	26,720	7,087	600	-	-	77	235	199	729
Trashigang Yangtse	100,379	3,492	20,883	823	103	-	-	464	32	16,460	860
Trongsa	153,780	2,556	16,300	4,463	399	8	-	556	118	1,002	426
Tsirang	55,265	5,705	1,390	60	70	2	-	216	24	-	432
Wandue Phodrang	264,060	5,826	64,131	12,066	512	133	1,239	21,756	53	27,876	1,988
Zhemgang	225,429	3,449	7,639	78	127	1	-	294	357	273	1,660
Total	2,717,061	105,855	503,987	96,262	7,598	595	14,394	159,467	3,705	205,336	25,140

Source: LULC (2016), DoFPS

Table 3.6 Dzongkhag-wise land area under different agricultural land-use in 2010, 2016, and 2019 (Value in Hectare/Acrea)

Dzongkhag	LCMP 2010 (in Hectare)			LULC 2016 (in Hectare)			RNR Census 2019 (in Acre)		
	Chuzhing	Kamzhing	Orchard	Chuzhing	Kamzhing	Orchards	Chuzhing	Kamzhing	Orchards
Bumthang	24.7	2,883.9	11.5	68.6	3,330.7	-	3.3	9,612.0	3.0
Chhukha	1,586.7	5,735.8	1,918.0	1,882.9	5,682.2	327.1	1,934.9	14,985.0	734.2
Dagana	1,493.7	4,588.3	1,455.3	2,028.4	4,798.9	569.2	3,745.8	11,641.0	627.4
Gasa	143.6	386.3	-	148.4	309.9	-	197.7	646.0	-
Haa	88.5	2,068.5	624.6	181.4	1,486.8	49.6	171.7	4,362.0	280.1
Lhuentse	1,575.6	4,328.5	1.0	1,733.5	2,032.7	2.3	1,781.4	4,688.0	31.0
Monggar	436.4	5,300.0	3.3	687.4	5,832.1	10.0	1,330.6	17,525.0	27.0
Paro	1,763.7	3,555.8	1,023.7	1,888.4	2,886.6	686.8	2,911.9	5,426.0	296.5
Pema Gatshel	82.6	4,837.1	335.1	18.3	2,787.2	859.9	348.2	16,409.0	1,086.7
Punakha	5,073.0	261.9	16.7	4,304.0	390.9	8.9	6,488.4	1,653.0	28.0
Samdrup Jongkhar	1,147.6	6,731.3	249.1	1,121.0	4,212.4	163.2	1,779.5	16,023.0	430.9
Samtse	5,680.5	8,149.7	3,533.4	4,312.3	10,079.8	410.5	6,666.9	20,726.0	2,193.3
Sarpang	1,942.7	3,351.6	923.6	3,062.3	3,906.4	1,061.1	4,512.9	10,398.0	2,156.9
Thimphu	458.2	913.8	902.1	484.9	466.4	741.7	421.2	1,692.0	102.3
Trashigang	1,439.5	4,982.3	-	1,658.6	8,149.2	4.1	2,217.1	15,372.0	36.0
Trashy Yangtse	946.6	2,112.4	-	1,049.6	2,442.6	-	1,500.6	4,948.0	32.4
Trongsa	1,082.0	1,205.0	-	1,231.8	1,321.7	2.2	1,718.0	4,849.0	64.0
Tsirang	1,527.2	2,867.5	314.4	2,080.7	3,320.4	303.5	3,851.6	8,029.0	805.1
Wandue Phodrang	4,013.7	1,930.0	0.1	3,113.1	2,713.2	-	4,218.3	4,564.0	13.0
Zhemgang	639.6	3,251.0	211.3	789.2	2,300.2	359.3	1,595.5	11,985.0	144.2
Total	31,146.1	69,440.6	11,523.4	31,844.9	68,450.5	5,559.6	47,395.6	185,533.0	9,091.8

Source: Land Cover Map Project (LCMP), Land Use and Land Cover (LULC), and RNR Statistics Division, MoAF

Table 3.7 Dzongkhag-wise cases under land-leased program (2019-2023)

Dzongkhag	2019-2020		2020-2021		2021-2022		2022-2023		2023-2024	
	No. of case	Area (acre)	No. of case	Area (acre)	No. of case	Area (acre)	No. of case	Area (acre)	No. of case	Area (acre)
Bumthang	3	2.49	4	0.92	6	32.77	3	6.7	5	4.95
Chhukha	26	120.78	12	33.20	23	121.40	58	420.56	97	3361.45
Dagana	5	31.40	0	0.00	22	7.74	22	118.38	24	43.879
Gasa	2	0.34	3	5.34	9	6.63	1	0	1	0.05
Haa	2	0.21	5	2.76	3	0.70	11	40.964	5	83.16
Lhuentse	2	0.20	2	0.20	8	1.64	13	28.74	3	0.505
Monggar	4	1.51	7	65.05	12	1.62	31	19.81	14	13.52
Paro	9	13.22	4	3.67	9	0.65	12	22.07	17	32.02
Pema Gatshel	37	25.47	9	1.98	5	54.25	18	42.052	38	22.08
Punakha	2	7.40	1	3.75	10	3.89	15	9.869	13	3.99
Samdrup Jongkhar	41	578.59	31	43.09	5	0.98	27	33.29	23	57.73
Samtse	14	55.06	21	71.36	10	1.50	35	218.614	105	2428.427
Sarpang	15	20.15	30	55.85	6	28.90	21	68.868	48	49.1
Thimphu	3	2.23	6	16.73	25	283.46	27	32.82	29	18.03
Trashigang	9	1.28	0	0.00	24	132.74	7	1.04	12	32.83
Trashigang Yangtse	7	0.83	7	1.42	26	99.62	4	15.21	4	6.2
Trongsa	3	1.86	0	0.00	14	122.12	7	25.32	15	91.561
Tsirang	24	7.46	12	39.36	27	145.64	10	5.605	11	2.83
Wandue Phodrang	29	79.39	12	87.22	0	0.00	18	153.063	40	41.296
Zhemgang	1	0.50	2	0.44	4	30.95	24	126.323	12	7.667
Total	238	950.36	168	432.33	248	1,077.20	364	1389.298	516	6301.275

Source: National Land Commission (NLC)

Table 3.8 (1) Dzongkhag-wise number of case and area recommended by DoA to NLCS for land conversion (2014-2023) (No. of case)

Dzongkhag	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Bumthang	0	-	0	0	-	-	-	-	-	-
Chhukha	0	2	3	0	1	2	2	-	-	21
Dagana	14	3	23	12	-	7	-	6	-	24
Gasa	0	1	0	0	-	-	-	-	-	-
Haa										
Lhuentse	0	0	0	0	-	1	-	-	-	-
Monggar	2	0	0	1	1	-	-	-	6	9
Paro	1	0	37	2	26	51	18	30	-	-
Pema Gatshel	0	0	0	2	6	-	-	-	-	38
Punakha	0	26	1	9	26	15	-	32	6	-
Samdrup Jongkhar	0	0	0	0	16	-	-	-	-	4
Samtse	3	12	1	0	3	13	10	-	-	78
Sarpang	2	0	0	0	6	10	-	-	-	37
Thimphu	2	0	3	0	28	15	9	19	-	-
Trashigang	0	0	0	3	-	-	-	-	5	-
Trashigang Yangtse	0	0	0	5	12	23	-	-	6	-
Trongsa	7	6	0	1	-	5	-	2	-	-
Tsirang	0	1	0	1	-	-	-	3	-	4
Wandue Phodrang	0	11	0	4	3	8	-	9	-	-
Zhemgang	0	0	0	0	-	56	-	-	-	-
Total	31	62	68	40	128	206	39	101	23	215

Source: DoA, MoAL

Table 3.8 (2) Dzongkhag-wise number of case and area recommended by DoA to NLCS for land conversion (2014-2023) (Area in acre)

Dzongkhag	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Bumthang										
Chhukha		0.71	1.91		2.15	0.63	0.93			11.26
Dagana	13.64	1.32	23.97	8.14		3.91		3.43	-	24.50
Gasa	0.00	0.78	0.00	-	-	-	-	-	-	-
Haa										
Lhuentse	0.00	0.00	0.00	0.00	0.00	0.40	-	-	-	-
Monggar	0.98	0.00	0.00	0.13	0.29				7.44	1.08
Paro	0.14	0.00	12.09	0.48	6.84	17.09	3.94	10.46	-	-
Pema Gatshel	0.00	0.00	0.00	2.34	5.96	-	-	-	-	12.88
Punakha	0.00	27.04	3.48	4.42	35.82	8.41		12.89	3.01	-
Samdrup Jongkhar	0.00	0.00	0.00	0.00	15.21	-	-	-	-	0.84
Samtse	5.36	12.78	0.80	-	5.59	12.23	7.78	-	-	53.67
Sarpang	3.53	-	-	-	4.43	4.98		-	-	41.09
Thimphu	0.61	0.00	0.77	0.35	20.15	5.26	3.23	4.40	-	-
Trashigang	0.00	0.00	0.00	1.69					0.80	-
Trashigang Yangtse	0.00	0.00	0.00	3.39	16.03	5.22	-	-	3.68	-
Trongsa	2.95	3.13	0.00	0.50	-	1.77	-	1.10	-	-
Tsirang		0.50	0.00	1.04	-		-	1.73	-	4.98
Wandue Phodrang		7.26	0.00	1.10	4.86	6.78	-	4.80	-	-
Zhemgang			0.00	0.00	0.00	16.81	-	-	-	-
Total	27.21	53.52	43.02	23.57	117.34	83.48	15.88	38.80	14.93	150.29

Source: DoA, MoAL

Table 3.9 (1) Dzongkhag-wise number of case and area not recommended by DoA to NLCS for land conversion (2014-2023) (No. of case)

Dzongkhag	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Bumthang	0	0	0	0	-	-	-	-	-	-
Chhukha	0	0	0	0	-	4	-	-	-	7
Dagana	54	0	42	23	-	10	-	15	-	-
Gasa	0	0	0	0	-	-	-	-	-	-
Haa										
Lhuentse	0	0	0	0	-	-	-	-	-	-
Monggar	3	0	0	0	-	-	-	-	2	-
Paro	0	0	14	1	28	22	13	10	-	-
Pema Gatshel	0	0	0	0	-	-	-	-	-	-
Punakha	0	20	0	10	18	20	-	22	4	-
Samdrup Jongkhar	0	0	0	0	4	-	-	-	-	4
Samtse	0	0	0	0	1	5	4	-	-	35
Sarpang	0	0	0	0	1	11	-	-	-	26
Thimphu	0	0	1	0	7	12	3	10	-	-
Trashigang	0	0	0	0	8	-	-	-	-	-
Trashy Yangtse	0	0	0	0	-	-	-	-	1	-
Trongsa	0	0	0	1	-	-	-	-	-	-
Tsirang	0	0	0	8	-	-	-	-	-	-
Wandue Phodrang	0	3	0	21	3	14	-	4	-	-
Zhemgang	0		0	0	-	-	-	-	-	-
Total	57	23	57	64	70	98	20	61	7	72

Source: DoA, MoAL

Table 3.9 (2) Dzongkhag-wise number of case and area not recommended by DoA to NLCS for land conversion (2014-2023) (Area in acre)

Dzongkhag	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Bumthang	0.00	0.00	0.00	0.00	0.00		-	-	-	-
Chhukha	0.00	0.00	0.00	0.00	0.00	4.92	-	-	-	5.40
Dagana	45.32	0.00	37.99	29.16	0.00	8.84	-	20.71	-	-
Gasa	0.00	0.00	0.00	0.00	0.00	-	-	-	-	-
Haa										-
Lhuentse	0.00	0.00	0.00	0.00	0.00	-	-	-	-	-
Monggar	0.85	0.00			0.00	-	-	-	0.61	-
Paro	0.00	0.00	3.22	0.30	7.27	8.95	3.49	2.58	-	-
Pema Gatshel							-	-	-	-
Punakha	0.00	11.01		7.90	12.65	14.16	-	19.48	1.48	-
Samdrup Jongkhar	0.00	0.00			2.77	-	-	-	-	3.12
Samtse	0.00	0.00			2.42	7.41	6.73	-	-	39.21
Sarpang	0.00	0.00			0.37	18.86	-	-	-	35.41
Thimphu	0.00	0.00	0.56		2.33	3.72	1.85	1.76	-	-
Trashigang	0.00	0.00			2.81	-	-	-	-	-
Trashy Yangtse	0.00	0.00				-	-	-	1.67	-
Trongsa	0.00	0.00		0.64		-	-	-	-	-
Tsirang	0.00	0.00		8.75		-	-	-	-	-
Wandue Phodrang	0.00	1.04		25.67	2.20	8.57	-	0.89	-	-
Zhemgang	0.00	0.00				-	-	-	-	-
Total	46.17	12.05	41.77	72.42	32.82	75.40	12.07	45.41	3.76	83.13

Source: DoA, MoAL

CHAPTER 4: MACHINERY

Mechanization of Bhutanese farming has been given importance since the 1980s and continues to this day. With the trend of young and able-bodied people seemingly leaving the rural farms in search of jobs in towns, the farms in the countryside face labor shortages, and wages have steadily increased, driving the whole production prices up. Farm mechanization is therefore seen as one area that requires major focus.

The major importer of farm machinery was the Agriculture Machinery Centre (AMC) under the MoAL. However, in recent years, a number of private bodies have also entered the scene and play an important role in mechanizing Bhutanese farms. Further, the government in a drive to speed up the farm mechanization process created Farm Machinery Corporation Limited (FMCL), a state-owned enterprise. The job of importing, distributing, hiring, and providing maintenance services which until recently was carried out by AMC is now looked after by FMCL.

This Chapter presents the statistics on the number of different types of farm machinery imported, owned by government agencies, and also owned by private individuals for farming purposes in households.



Table 4.1 Import of farm machinery from India (2017-2023) (Volume in No. and Value in Million Nu.)

Type of machinery	BTC code	2017		2018		2019		2020		2021		2022		2023	
		Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value
Ploughs	8432.10.00	958	5.48	215	3.77	1,024	3.13	3,571	6.19	5,708	7.82	7,413	8.97	640	1.39
Power tiller	8432.29.10	340	14.87	152	11.01	338	14.16	1,238	5.39	231	8.12	207	8.14	197	11.76
Straw /fodder Balers	8433.40.00	-	-	-	-	-	-	45	1.29	35	0.08	140	2.66	-	-
Combine harvester - threshers	8433.51.00	574	1.12	-	-	21	0.21	29	0.17	-	-	112	0.97	1	0.03
Threshing machines	8433.52.00	-	-	72	0.28	70	0.28	95	1.02	191	1.59	103	1.03	19	0.60
Root or tuber harvesting machines	8433.53.00	-	-	-	-	-	-	15	0.30	142	1.37	-	-	-	-
Milking machines	8434.10.00	146	1.16	356	3.65	629	1.36	922	2.18	1,777	4.38	1,207	4.12	1,313	3.91
Rice huller and husking machine	8437.80.10	-	-	-	-	-	-	-	-	-	-	277	6.92	163	2.85
Flour-mill	8437.80.20	-	-	-	-	-	-	-	-	-	-	85	3.40	186	1.83
Pedestrian controlled tractors (single axle tractor)	8701.10.00	9	6.28	5	2.61	4	2.97	6	4.55	1	0.80	-	-	2	0.31

Source: Bhutan Trade Statistics, DRC, MoF compiled by RNR-SD or PPD

Table 4.2 Import of farm machinery from COTI (2017-2023) (Volume in No. and Value in Million Nu.)

Type of machinery	BTC code	Imported from	2017		2018		2019		2020		2021		2022		2023	
			volume	value	volume	value	volume	value	volume	value	volume	value	volume	value	volume	value
Ploughs	8432.10.00	China	351	6.58	450	10.01	100	3.53	470	17.19	838	23.47	395	19.22	270	9.06
		Japan	596	22.82	144	5.18	0	0.00	0	0.00	200	22.58	0	0.00	0	0.00
		Singapore	64	0.42	191	1.17	352	1.90	355	2.26	540	3.33	40	0.45	0	0.00
		Switzerland													1	0.66
		Thailand	10	0.03	0	0.00	120	0.03	0	-	0	0.00	0	0.00	0	0.00
Power tiller	8432.29.10	Vietnam	234	36.13	180	31.64	218	39.12	358	53.53	426	65.12	212	48.03	0	0.00
		Indonesia	0	0.00	20	7.16	2	0.49	20	7.44	0	0.00	272	99.60	0	0.00
		Japan	96	12.98	260	24.62	0	0.00	192	12.07	150	36.54	223	19.66	0	0.00
		China	65	8.50	0	0.00	2	0.03	0	0.00	262	29.54	561	74.86	547	51.05
		Thailand	401	80.27	0	0.00	2	0.44	0	0.00	0	0.00	0	0.00	0	0.00
		Singapore	446	11.78	169	9.48	219	9.08	140	11.50	135	11.84	70	5.09	0	0.00
Manure spreaders and fertilizer distributors	8432.41.00	Singapore	0	0.00	0	0.00	180	4.00	0	0.00	0	0.00	0	0.00	0	0.00
Combine harvester-threshers	8433.51.00	Japan	0	0.00	0	0.00	3	5.34	1	0.71	40	36.05	0	0.00	0	0.00
		Hong Kong	-	-	-	-	-	-	-	-	-	-	4	0.01	0	0.00
		China	0	0.00	0	0.00	0	0.00	8	0.54	5	0.10	12	0.72	104	0.50
Threshing machines	8433.52.00	China	228	2.83	500	10.10	4	0.29	324	8.16	346	11.52	303	12.37	20	0.37
		Singapore	0	0.00			-	-	100	1.05	0	0.00	25	0.20	0	0.00
		Japan	0	0.00	0	0.00	-	-	5	3.01	0	0.00	0	0.00	0	0.00
Root or tuber harvesting machines	8433.53.00	China	20	0.72	0	0.00	0	0.00	0	0.00	5	0.02	3	0.00	0	0.00
		Vietnam	270	6.20	0	0.00	0	0.00	0	0.00	0	0.00	40	0.10	0	0.00
Milking machine	8434.10.00	China	0	0.00	0	0.00	0	0.00	0	0.00	5	0.08	0	0.00	200	0.21
Rice huller and husking machine	8437.80.10	Singapore	0	0.00	0	0.00	0	0.00	200	1.01	270	3.24	0	0.00	0	0.00
		Japan	0	0.00	0	0.00	0	0.00	0	0.00	8	1.00	0	0.00	0	0.00
		China	0	0.00	0	0.00	0	0.00	526	4.52	671	5.30	597	5.27	175	6.04

Flour-mill	8437.80.20	Singapore	0	0.00	0	0.00	0	0.00	50	0.46	870	6.15	50	0.82	0	0.00
		Hong Kong	-	-	-	-	-	-	-	-	-	-	10	0.20	0	0.00
		China	0	0.00	0	0.00	0	0.00	104	1.65	77	0.70	0	0.00	65	0.76

Source: Bhutan Trade Statistics, DRC, MoF compiled by RNR-SD or PPD

CHAPTER 5: AGRICULTURAL INPUT SUPPLY

Since the inception of the 1st FYP, the ministry has been providing the agriculture inputs such as agrochemicals, seed & seedlings, and green house to all the farming communities in the country to promote the national food sufficiency and security.

The demand of seeds and seedlings were mostly produced in the farms of National Seed Centre and the deficit were produced by the Registered Seed Growers who were the collaborators of NSC. The farmers often depend on agrochemicals (pesticides and fertilizers) to combat pests and diseases, boost productivity, and improve crop quality.

Bhutan may not become totally organic, at least in the near future, but certainly the country is aware of the harmful effects of agrochemical pesticides and therefore strict measures are put in place to control the import and use. No private players are allowed to import agrochemicals due to fear that all kinds of dangerous and/or inferior quality chemicals may



be imported. Only National Plant Protection Centre (NPPC), an agency under Department of Agriculture, MoAF, is mandated to oversee the import and its distribution. From the statistics over the years, one will notice a gradual increase in the quantity of agrochemicals imported and distributed.

This chapter first presents the statistics on import quantity and value of agrochemical imported from 2017 to 2021 based on the data maintained by Bhutan Trade Statistics. It gives an idea of the trend in agrochemical usage. Then we present data on agrochemical distribution by National Seed Centre and National Plant Protection Centre. One difference between the two sources is that BTS data is by calendar year basis (Jan – Dec) while NPPC&NSC data is by financial year basis (Jul – Jun).

Table 5.1 Import of plant protection chemicals from India (2014-2023) (Volume in MT, and Value in Million Nu.)

Commodity	BTC code	volume/value	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Insecticides	3808.91.00	vol	60.05	77.44	553.13	53.09	78.97	69.12	82.51	114.03	86.09	44.10
Fungicides	3808.92.00	vol	0.13	0.00	1.98	5.04	0.00	5.94	5.57	2.95	46.17	1.21
Herbicides	3808.93.00	vol	0.17	314.00	45.66	0.08	0.00	536.50	568.68	5.01	2,273.44	591.06
Disinfectants	3808.94.00	vol	50.94	59.33	88.40	69.93	83.67	82.47	197.54	188.03	230.59	248.18
Others	3808.99.00	vol	36.61	185.87	132.72	438.80	179.78	23.79	31.19	496.00	11.90	47.27
Insecticides	3808.91.00	val	14.70	12.24	37.20	18.91	23.64	24.96	34.63	44.98	37.84	32.18
Fungicides	3808.92.00	val	0.03	0.00	0.66	1.43	0.00	2.97	1.15	1.30	16.51	1.01
Herbicides	3808.93.00	val	0.05	8.52	2.40	0.48	0.00	32.09	25.98	1.75	100.83	25.90
Disinfectants	3808.94.00	val	4.48	6.04	8.06	6.89	11.59	12.66	38.17	26.42	36.45	42.19
Others	3808.99.00	val	15.31	8.47	5.76	16.97	6.94	7.24	5.97	23.71	5.59	7.59

Source: Bhutan Trade Statistics, DRC, MoF compiled by RNR-SD or PPD

Table 5.2 Import of plant protection chemicals from COTI (2014-2023) (Volume in MT, and Value in Million Nu.)

Commodity	BTC code	volume/value	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Insecticides	3808.91.00	vol	2.59	1.38	1.03	0.88	0.43	0.88	0.67	1.64	0.51	0.33
Fungicides	3808.92.00	vol	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Herbicides	3808.93.00	vol	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	2,862.10	0.00
Disinfectants	3808.94.00	vol	0.00	0.05	0.00	0.00	0.01	0.02	6.28	10.92	1.31	0.03
Others	3808.99.00	vol	0.00	0.00	0.00	0.06	0.43	0.30	0.22	1.29	3.75	0.85
Insecticides	3808.91.00	val	5.99	3.70	0.62	0.65	0.24	1.24	5.16	0.31	0.04	0.40
Fungicides	3808.92.00	val	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Herbicides	3808.93.00	val	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	108.00	0.00
Disinfectants	3808.94.00	val	0.00	0.15	0.00	0.00	0.11	0.11	2.11	4.69	1.33	0.02
Others	3808.99.00	val	0.00	0.00	0.00	0.04	0.11	0.38	0.06	0.10	0.81	0.37

Source: Bhutan Trade Statistics, DRC, MoF compiled by RNR-SD or PPD

Table 5.3 (1) Plant protection chemicals distributed by NPPC (2017-2023) (Volume in Kg or Litre unless specified)

Product Dzongkhag	Insecticides							Fungicides						
	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2017-18	2018-19	2019-20	2020-21	2021-22	2022-2023	2023-24
Bumthang	40.80	31.60	45.50	72.90	52.20	96.3	65.7	217.75	218.50	4.20	333.20	229.45	33.55	71.15
Chhukha	92.80	72.50	127.00	402.20	233.20	231.1	211.85	146.50	1.00	0.00	147.25	8.00	58.25	57
Dagana	23.00	72.80	112.10	329.30	302.60	64.5	106.9	1.25	0.00	0.50	65.25	43.90	40.75	9.7
Gasa	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0	0
Haa	202.70	152.70	108.90	114.00	184.50	181	137.88	191.45	93.25	0.00	80.75	95.85	63.85	34.8
Lhuentse	30.00	26.40	0.00	70.70	117.60	143.5	19.2	3.50	1.25	0.00	12.50	29.00	39.6	15.55
Monggar	170.00	339.00	342.50	781.80	467.60	438.8	314.1	0.75	200.50	0.00	142.50	41.35	52.25	260.7
Paro	1,972.60	1,598.20	949.00	1,793.90	1,892.30	1,521.10	1,565.22	1,018.85	879.30	20.10	1,139.40	1,389.60	845.5	976.95
Pema Gatshel	0.00	0.00	0.50	78.10	6.40	14	0	0.00	0.00	0.00	35.75	0.00	0	0
Punakha	195.20	339.20	250.80	312.90	374.60	354.5	350.2	18.50	25.55	6.80	201.65	38.85	120.75	125.65
Samdrup Jongkhar	0.00	0.00	0.00	2.00	0.00	0	67.6	0.00	0.00	0.00	4.00	0.00	0	5
Samtse	0.00	0.00	7.80	12.00	72.10	70	32.4	0.00	0.00	0.00	2.50	32.65	221	14.95
Sarpang	147.50	76.70	34.00	251.50	394.80	103.6	146.2	66.20	30.45	0.00	212.50	199.20	56.5	162.5
Thimphu	30.50	1,321.00	70.00	1,841.70	610.20	767	760.8	21.60	44.60	0.00	696.25	519.45	846.5	505.4
Trashigang	1,849.30	1,509.60	589.60	502.10	394.60	370.6	12.55	1,010.00	703.50	0.50	304.40	1.00	3.25	16.75
Trashigang	41.50	40.00	90.00	269.00	274.70	214.7	30.45	112.45	104.05	50.00	193.00	118.00	265	155.3
Trongsa	51.00	0.00	12.80	66.00	114.50	66.4	85	40.00	2.75	0.00	0.75	62.25	12.75	4.75
Tsirang	61.30	42.60	12.00	55.00	26.10	57.7	59.2	32.40	1.00	5.00	32.25	4.75	29.1	31.7
Wandue Phodrang	250.60	410.70	318.40	1,039.10	838.90	660.5	1230.9	2,083.40	3,741.95	9.60	5,194.45	6,183.05	5632	6366.7
Zhemgang	0.00	2.00	11.00	123.30	288.80	0.4	30	0.30		1.00	26.00	0.00	1.4	2
Total	5,158.80	6,035.00	3,081.90	8,117.50	6,645.70	5,355.70	5,226.15	4,964.90	6,047.65	97.70	8,824.35	8,991.60	8322	8,816.55

Source: NPPC/DoA, MoAL

Table 5.3 (2) Plant protection chemicals distributed by NPPC (2017-2023) (Volume in Kg or Litre unless specified)

Product	Herbicides							Rodenticides						
Dzongkhag	2017-18	2018-19	2019-20	2020-21	2021-22	2022-2023	2023-24	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Bumthang	409.25	414.75	179.00	-	380.75	361.5	414	0.37	0.09	0.00	-	0.00	0	0
Chhukha	10,543.50	16,742.25	8,582.50	-	20,310.00	268.1	11544.75	0.00	0.12	0.00	-	0.00	0	0
Dagana	5,014.25	5,287.50	5,012.00	-	8,650.00	89.5	5585.87	0.10	15.30	3.31	-	1.00	12	0
Gasa	0.00	0.00	0.00	-	0.00	0	0	0.00	0.00	0.00	-	0.00	0	0
Haa	5,311.50	74.50	10,107.75	-	6,201.00	486.85	255.15	2.67	0.82	0.00	-	0.00	2	0
Lhuentse	14,025.00	23,132.75	14,520.00	-	24,006.50	35	17018.4	2.00	0.53	0.00	-	0.00	0	0
Monggar	7,230.00	11,941.00	10,093.00	-	6,919.50	531.3	5785.9	1.00	0.50	0.00	-	1.00	3	0
Paro	161,986.75	163,130.50	132,028.50	-	133,983.00	1,203.20	137,834.55	0.50	0.67	0.00	-	0.00	1	0.00
Pema Gatshel	0.00	0.00	0.00	-	0.00	5	0	0.00	0.00	0.00	-	0.00	0	0
Punakha	90,009.50	70,098.00	75,014.25	-	90,078.30	448.55	67600.5	0.28	2.67	0.26	-	0.00	3	0
Samdrup Jongkhar	0.00	1,000.00	1,000.00	-	0.00	0	0	0.00	0.00	0.00	-	0.00	0	0
Samtse	7,300.00	5,000.00	4,502.00	-	28.00	5.5	4002.5	0.10	0.00	0.00	-	0.00	0	0
Sarpang	10,235.00	9,103.00	20,010.00	-	12,403.00	430.5	8038	0.00	1.80	0.00	-	0.00	0	0
Thimphu	27,010.00	20,036.00	18,000.00	-	41,430.35	774.4	37296.55	0.10	11.75	0.00	-	2.00	1	0
Trashigang	36,029.00	30,434.00	35,273.25	-	24,018.00	111	24200	0.61	2.01	0.47	-	15.00	0	0
Trashy Yangtse	46,000.00	62,100.00	30,934.50	-	40,737.05	375	33542.55	1.00	0.05	0.00	-	1.00	4	0
Trongsa	16,182.00	17,165.00	20,033.00	-	19,148.35	165.25	18044.25	0.00	0.05	0.00	-	0.00	0	0
Tsirang	11,171.50	10,871.00	20,512.50	-	6,007.00	69.6	7507.5	1.18	12.37	0.30	-	0.00	0	0
Wandue Phodrang	41,590.75	57,989.25	52,418.25	-	66,487.60	6,736.70	45,117.45	4.53	9.02	0.40	-	4.00	34	0.00
Zhemgang	0.00	0.00	0.00	-	2.50	61	1	0.00	0.00	0.00	-	0.00	2	0
Total	490,048.00	504,519.50	458,220.50	0.00	500,790.90	12,157.95	423,788.92	14.44	57.75	4.74	0.00	24.00	62	0.00

Source: NPPC/DoA, MoAL

Table 5.3 (3) Plant protection chemicals distributed by NPPC (2017-2023) (Volume in Kg or Litre unless specified)

Product	Non-toxic						
Dzongkhag	2017-18	2018-19	2019-20	2020-21	2021-22	2022-2023	2023-24
Bumthang	0.00	28.60	20.00	408.10	20.50	42.2	2.5
Chhukha	5.50	3.50	13.50	664.15	35.00	8	0
Dagana	10.00	51.25	62.00	554.95	15,955.40	0	185
Gasa	0.00	0.00	0.00	0.00	0.00	440	286
Haa	26.25	20.00	81.00	211.15	0.00	28.5	0
Lhuentse	0.00	0.00	0.00	88.70	0.00	125	0
Monggar	100.00	230.00	0.00	1,489.30	420.50	8.8	113
Paro	4,297.40	3,934.40	2,729.05	3,689.00	2,667.30	2,194.10	2,843.90
Pema Gatshel	0.00	0.00	0.00	123.85	0.00	0	0
Punakha	0.00	105.00	27.50	586.15	0.10	284	1.4
Samdrup Jongkhar	0.00	0.00	0.00	6.00	0.00	160	0
Samtse	2.00	5.00	30.50	19.50	405.70	106.2	0
Sarpang	117.50	72.25	23.80	620.00	275.20	35	13.5
Thimphu	0.00	0.20	0.00	3,894.75	1,743.90	870.3	1345.75
Trashigang	3,402.75	1,205.70	2,967.95	1,029.00	0.00	0	98.5
Trashi Yangtse	0.00	0.00	38.10	476.50	5.00	0	98
Trongsa	0.00	0.00	0.60	80.75	5.00	0	0
Tsirang	0.00	20.00	30.00	110.25	0.00	24.1	180.5
Wandue Phodrang	430.75	424.15	33.90	6,872.65	532.40	126.5	150.45
Zhemgang	0.10	0.50	0.00	152.00	420.50	0	15
Total	8,392.25	6,100.55	6,057.90	21,076.75	22,486.50	4,452.70	5,333.50

Source: NPPC/DoA, MoAL

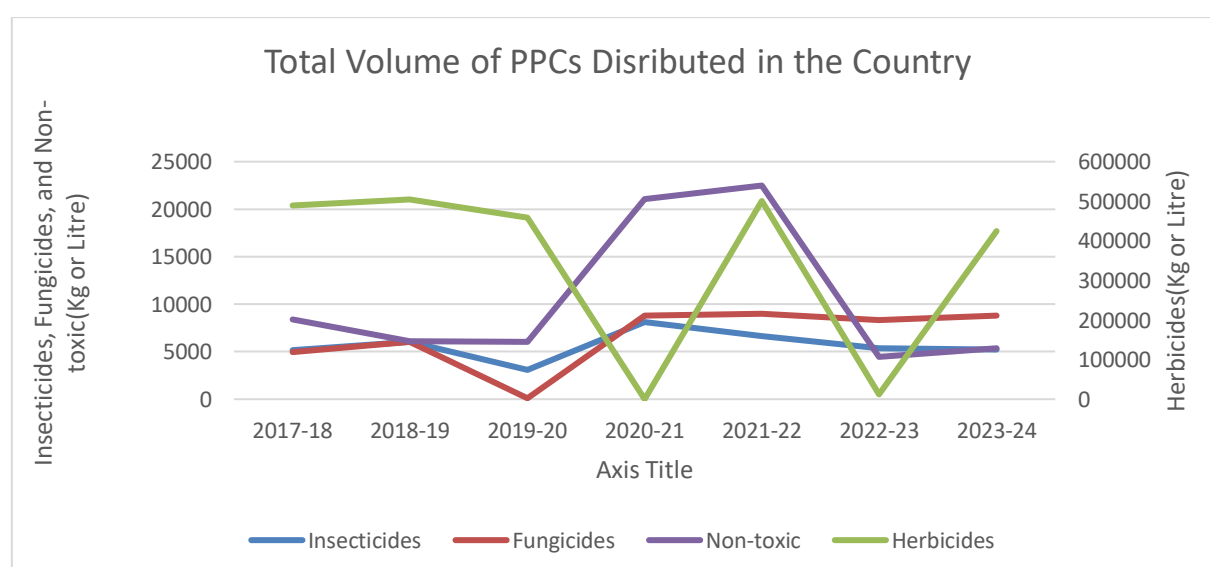


Figure 24: Trends in the total volume of plant protection chemicals distributed in Bhutan (2017-2023) (Volume in Kg or Litre)

Table 5.4 Import of fertilizer (2014-2023) (Volume in MT, Value in Million Nu.)

Commodity	BTC code	Volume/Value	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Urea	3102.10.00	vol	2,476.00	2,142.00	2,935.15	1,196.06	2,110.03	1,517.93	1,849.46	74.63	164.22	72.78
Ammonium Sulphate	3102.21.00	vol	0.09	-	0.04	3.50	-	0.01	30.15	0.04	110.00	0.00
Ammonium Nitrate	3102.30.00	vol	0.01	-	0.01	7.51	-	0.02	0.01	-	-	5.33
Sodium Nitrate	3102.50.00	vol	-	-	-	0.00	-	0.01	-	-	0.00	0.00
Superphosphate	3103.10.00	vol	1,418.45	2,888.95	1,771.75	0.45	-	-	-	-	-	-
Potassium Chloride	3104.20.00	vol	0.51	0.42	0.42	0.01	0.91	0.44	0.30	1.99	2.36	4.09
Potassium Sulphate	3104.30.00	vol	-	-	0.13	3.45	0.02	0.01	0.00	0.01	0.01	0.02
Mixture of NPK	3105.90.00	vol	-	2.10	1.00	2.25	-	0.57	160.00	579.25	2.36	0.35
Urea	3102.10.00	val	40.54	31.38	44.48	17.69	35.49	25.19	30.99	5.24	12.40	2.63
Ammonium Sulphate	3102.21.00	val	0.01	-	0.03	0.03	-	-	0.51	0.03	3.77	0.00
Ammonium Nitrate	3102.30.00	val	-	-	-	0.29	-	-	0.00	-	-	0.26
Sodium Nitrate	3102.50.00	val	-	-	-	0.00	-	-	-	-	0.00	0.00
Superphosphate	3103.10.00	val	32.80	75.27	47.16	0.55	-	-	-	-	-	-
Potassium Chloride	3104.20.00	val	0.16	0.06	0.10	0.04	0.08	0.08	0.04	0.16	0.21	0.30
Potassium Sulphate	3104.30.00	val	-	-	0.03	0.09	0.01	0.00	0.00	0.01	0.01	0.01
Mixture of NPK	3105.90.00	val	-	0.07	0.05	0.04	-	0.06	5.18	13.07	0.59	0.02

Source: Bhutan Trade Statistics, DRC, MoF, compiled by RNR-SD or PPD

Table 5.5 (1) Fertilizer distributed by NSC (2017-2023) (Volume in MT)

Product	Suphala							Urea						
Dzongkhag	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Bumthang	33.55	49.94	41.40	52.94	53.20	36.85	33.80	89.50	146.49	143.36	199.44	64.38	138.57	104.50
Chhukha	176.96	66.57	175.45	254.30	90.51	122.05	87.00	37.40	106.02	117.36	118.95	25.30	37.45	40.46
Dagana	1.25	11.19	18.50	13.20	17.00	8.35	28.90	0.75	7.85	9.77	6.84	5.99	8.49	9.00
Gasa	0.00	0.00	0.00	-	-		0.00	0.00	0.00	0.00	0.00	-	-	-
Haa	16.00	15.65	0.00	21.00	35.00	36.15	23.50	8.50	12.52	19.98	17.55	24.06	19.49	23.00
Lhuentse	5.30	0.10	11.00	18.65	-	0.25	2.00	6.50	110.38	62.91	25.11	74.93	47.08	46.98
Monggar	49.50	44.84	58.95	53.05	27.80	19.50	38.53	111.05	149.07	58.86	34.34	56.98	26.28	25.38
Paro	128.65	109.55	174.25	298.55	164.91	120.18	136.50	150.80	86.21	126.45	147.02	131.19	100.09	86.04
Pema Gatshel	2.00	0.04	8.75	0.00	-	-	0.00	0.00	0.08	1.31	5.13	-	-	-
Punakha	90.65	106.23	96.25	97.44	59.50	50.90	81.98	130.89	123.61	134.85	151.16	120.42	98.71	94.50
Samdrup Jongkhar	0.00	0.00	3.50	0.00	-	0.15	0.00	0.00	0.00	16.02	0.00	-	-	-
Samtse	2.90	1.79	0.00	4.05	5.00	1.03	5.00	3.60	3.99	0.00	3.51	1.53	1.33	4.50
Sarpang	6.65	4.20	4.95	4.50	6.00	8.15	29.90	15.50	15.84	7.65	27.05	29.07	47.94	47.97
Thimphu	140.65	113.67	46.50	136.30	86.50	63.50	104.60	55.20	78.78	143.82	71.88	53.15	84.52	84.96
Trashigang	73.30	107.15	179.35	243.80	55.65	105.45	111.68	445.20	170.44	99.72	101.39	414.39	164.71	129.27
Trashy Yangtse	49.55	36.15	271.85	62.51	45.00	28.53	51.40	89.50	143.17	372.56	28.85	107.35	90.01	87.98
Trongsa	9.00	12.00	17.85	21.40	17.45	4.23	6.50	6.85	11.95	10.89	13.86	14.69	9.63	35.91
Tsirang	4.00	9.32	5.60	10.05	14.25	5.98	20.23	12.00	17.57	9.86	9.77	18.75	16.00	17.96
Wandue Phodrang	588.35	507.10	652.35	563.75	231.00	537.35	411.23	105.00	90.14	113.09	119.28	59.64	109.59	99.99
Zhemgang	0.00	0.00	0.00	0.00	-		0.00	0.00	0.00	0.00	0.00	-	-	0.00
Total	1,378.26	1,195.49	1,766.50	1,855.49	908.76	1,148.58	1,172.73	1,268.24	1,274.00	1,448.43	1,081.10	1,201.80	999.86	938.37

Source: NSC, DoA, MoAL

Table 5.5 (2) Fertilizer distributed by NSC (2017-2023) (Volume in MT)

Product	Single Super Phosphate							Muriate Potash						
Dzongkhag	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Bumthang	0.00	298.40	280.00	351.45	68.75	176.70	175.00	0.00	0.00	0.00	0.35	-	-	0.35
Chhukha	4.80	0.00	0.00	5.10	0.55	0.00	0.50	0.00	0.00	0.00	0.05	0.85	-	-
Dagana	0.00	0.00	0.00	0.00	-	0.50	0.25	0.00	0.00	0.00	0.00	-	0.50	-
Gasa	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00	-	-	-
Haa	0.00	0.00	0.00	2.50	-	0.00	3.00	0.00	0.00	0.00	0.00	-	-	-
Lhuentse	0.00	0.20	0.25	0.35	1.25	0.00	0.00	0.00	0.00	0.00	0.00	-	-	-
Monggar	0.00	0.25	4.20	14.20	5.15	0.65	0.75	0.00	0.00	0.00	0.00	1.40	-	-
Paro	82.00	32.55	3.50	7.70	5.15	3.20	3.50	1.20	1.75	0.00	1.60	-	-	0.60
Pema Gatshel	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00	-	-	-
Punakha	10.00	9.35	14.00	17.95	5.00	2.00	1.50	0.05	0.00	0.00	0.00	-	-	-
Samdrup Jongkhar	0.00	0.00	0.70	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00	-	-	-
Samtse	0.00	0.00	0.00	0.00	-	-	0.00	0.00	0.00	0.00	0.00	-	-	7.05
Sarpang	1.60	2.75	1.00	0.50	-	4.30	4.25	0.10	0.20	0.00	1.00	-	3.10	-
Thimphu	53.95	40.35	0.00	45.95	15.15	28.10	26.55	9.75	1.80	0.00	4.15	0.15	0.90	2.65
Trashigang	28.85	21.60	59.65	42.25	-	17.50	7.20	0.15	0.00	1.50	0.00	-	-	-
Trashigang Yangtse	0.00	0.00	57.20	3.50	-	2.00	0.00	0.00	0.00	0.00	0.00	-	-	-
Trongsa	0.00	0.00	0.00	0.00	0.05	-	0.50	0.00	0.00	0.00	0.00	-	-	-
Tsirang	0.00	0.00	0.00	0.60	1.00	-	0.00	2.78	0.00	0.00	0.00	-	-	-
Wandue Phodrang	26.05	145.20	170.60	183.20	1.50	83.65	88.40	0.60	0.80	0.00	1.75	25.30	-	-
Zhemgang	0.00	0.00	0.00	0.00	-	0.00	-	0.00	0.00	0.00	0.00	-	-	-
Total	207.25	550.65	591.10	675.25	103.55	318.60	311.40	14.63	4.55	1.50	8.40	27.70	4.50	10.65

Source: NSC, DoA, MoAL

Table 5.5 (3) Fertilizer distributed by NSC (2017-2023) (Volume in MT)

Product	Bone Meal							Diammonium Phosphate (DAP)						
Dzongkhag	2017-18	2018-19	2019-20	2020-21	2021-22	2022-2023	2023-24	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Bumthang	0.00	0.25	-	-	-	-	-	-	0.00	0.00	0.00	-	-	-
Chhukha	0.00	0.00	-	-	-	-	-	-	1.15	0.00	0.90	0.20	-	-
Dagana	0.00	0.00	-	-	-	-	-	-	0.00	0.00	0.00	-	-	-
Gasa	0.00	0.00	-	-	-	-	-	-	0.00	0.00	0.00	-	-	-
Haa	0.00	0.20	-	-	-	-	-	-	0.00	0.00	0.00	-	-	-
Lhuentse	0.00	0.00	-	-	-	-	-	-	0.00	0.00	0.00	-	-	-
Monggar	0.00	0.00	-	-	-	-	-	-	0.00	0.00	0.00	-	-	-
Paro	0.00	0.00	-	-	-	-	-	-	0.00	0.00	0.00	-	-	-
Pema Gatshel	0.00	0.00	-	-	-	-	-	-	0.00	0.00	0.00	-	-	-
Punakha	0.00	0.00	-	-	-	-	-	-	0.00	0.00	0.00	-	-	-
Samdrup Jongkhar	0.00	0.00	-	-	-	-	-	-	0.00	0.40	0.00	-	-	-
Samtse	0.00	0.00	-	-	-	-	-	-	0.20	0.00	0.00	-	-	-
Sarpang	0.15	0.00	-	-	-	-	-	-	0.00	0.00	0.00	-	-	-
Thimphu	0.75	0.15	-	-	-	-	-	-	0.20	0.00	0.00	-	-	-
Trashigang	0.00	0.00	-	-	-	-	-	-	0.00	0.00	0.00	-	-	-
Trashy Yangtse	0.00	0.00	-	-	-	-	-	-	0.00	0.00	0.00	-	-	-
Trongsa	0.00	0.00	-	-	-	-	-	-	0.00	0.00	0.00	-	-	-
Tsirang	0.00	0.85	-	-	-	-	-	-	0.00	0.00	0.00	-	-	-
Wandue Phodrang	0.00	0.75	-	-	-	-	-	-	0.00	0.00	0.00	-	-	-
Zhemgang	0.00	0.00	-	-	-	-	-	-	0.00	0.00	0.00	-	-	-
Total	0.90	2.20	-	-	-	-	-	-	1.55	0.40	0.90	0.20	-	-

Source: NSC, DoA, MoAL

Table 5.5 (4) Fertilizer distributed by NSC (2017-2023) (Volume in MT)

Product	Borax							Calcium Ammonium Nitrate (CAN)						
Dzongkhag	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Bumthang	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	-	-	-	-	-
Chhukha	0.00	0.02	0.00	0.00	-	-	-	0.45	0.25	-	-	-	-	-
Dagana	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	-	-	-	-	-
Gasa	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	-	-	-	-	-
Haa	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	-	-	-	-	-
Lhuentse	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	-	-	-	-	-
Monggar	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	-	-	-	-	-
Paro	0.00	0.19	0.21	0.15	-	20.00	130.00	0.10	0.00	-	-	-	-	-
Pema Gatsel	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	-	-	-	-	-
Punakha	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	-	-	-	-	-
Samdrup Jongkhar	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	-	-	-	-	-
Samtse	0.00	0.00	0.00	0.00	-	-	-	0.00	0.25	-	-	-	-	-
Sarpang	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	-	-	-	-	-
Thimphu	0.15	0.19	0.00	0.18	100.00	55.00	130.00	0.15	0.00	-	-	-	-	-
Trashigang	0.00	0.00	0.25	0.00	-	-	-	0.00	0.00	-	-	-	-	-
Trashy Yangtse	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	-	-	-	-	-
Trongsa	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	-	-	-	-	-
Tsirang	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	-	-	-	-	-
Wandue Phodrang	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	-	-	-	-	-
Zhemgang	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	-	-	-	-	-
Total	0.15	0.41	0.46	0.33	100.00	75.00	260.00	0.70	0.50	-	-	-	-	-

Source: NSC, DoA, MoAL

Table 5.6 Vegetable seed and seedling distributed by NSC (2017-2023) (Volume in Kg unless specified)

Commodity	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Vegetable seed							
Bean Borlotto Climber	5,134.40	3,210.95	4,783.85	5,819.20	1,598.55	399.20	322.35
Bean Borlotto Drawf	-	93.70	703.00	499.45	460.95	774.15	122.50
Beans Rajma	-	-	2,603.50	2,130.65	1,017.75	1,249.90	906.30
Bean Pole	143.10	81.05	602.45	242.25	445.10	381.90	277.00
Bean Top Crop	11.25	70.55	33.95	56.00	109.50	153.10	378.80
Beetroot DDR	157.33	148.61	283.70	135.94	71.65	151.05	331.57
Bitter Gourd	33.67	43.75	43.94	127.41	32.63	40.49	37.57
Bottle Gourd	22.34	35.31	17.71	60.00	42.60	22.58	1.35
Brinjal PP Long	116.24	68.34	96.07	315.20	117.30	68.50	43.91
Brocoli Centauro Hybrid	133.54	196.77	382.81	512.26	383.20	314.76	252.65
Brocoli Dessico	224.13	139.46	228.54	154.58	23.64	10.41	25.77
Bunching Onion No. 21	-	31.09	77.16	24.13	43.94	33.29	18.45
Cabbage Bondy Cross Hybrid	116.54	144.22	226.74	154.51	122.42	130.00	105.03
Cabbage Golden Acre	297.66	137.06	229.58	285.30	159.93	159.61	8.48
Cabbage Golden Cross Hybrid	120.00	158.73	311.58	344.73	292.83	305.00	263.18
Cabbage Green Coronet Hybrid	54.00	91.20	146.35	116.57	129.04	139.85	57.62
Carrot All Season Hybrid	63.24	64.30	155.40	202.77	104.90	129.60	54.10
Carrot New Kuroda	426.11	420.24	820.23	711.82	503.26	943.61	1,044.99

Cauliflower Khangma Early	257.40	134.43	187.74	119.79	148.76	114.29	52.09
Cauliflower Snow Mystique Hybrid	-	232.62	484.03	359.93	398.27	402.06	269.08
Cauliflower (Pragati 40)	-	-	-	34.06	7.07	15.46	7.06
Cauliflower white express 50	-	-	-	38.34	24.71	6.95	0.00
Chili Hyb Pan 1498	42.15	2.00	-	-	0.00	0.00	0.00
Chili Hyb SHP4884	42.03	35.00	43.35	174.27	219.10	78.03	58.78
Chili Hyb SV2319HA	64.37	35.00	70.02	148.09	39.14	58.66	0.00
Chili IR-8	134.56	113.40	130.97	177.26	63.23	46.68	9.44
Chili Sha Ema	53.37	66.29	208.20	263.66	120.19	57.79	25.13
Chili Urka Bangla	-	-	0.25	-	0.00	0.00	0.00
Chinese Cabbage Kyoto	-	46.87	60.44	30.20	0.56	0.56	0.00
Coriander	118.11	70.05	140.20	178.61	229.06	163.77	80.10
Cucumber Frontier Hybrid	3.71	7.31	10.48	19.54	13.31	14.34	9.15
Cucumber Santon No. 1	11.94	33.18	46.65	52.60	51.64	31.03	20.52
Cucumber Shaba Genchu	21.95	12.10	19.26	1.24	25.15	37.80	19.49
Garlic	-	200.00	-	-	0.00	0.00	0.00
Japanese Green Mibuna	9.92	1.56	20.00	4.02	25.80	38.20	7.10
Japanese Green Taisai	9.72	7.68	-	-	18.96	37.41	31.46
Ladies Finger Kranti	33.67	28.52	124.96	171.23	74.57	32.40	8.87
Lettuce Great Lake	44.54	23.99	51.14	59.27	42.35	45.93	19.57
Mustard Green Him Beauty	169.13	88.74	228.71	62.05	125.96	152.52	58.41

Onion Bombay Red	165.72	147.93	171.79	136.65	597.01	209.95	111.21
Onion Pune Red Hybrid	217.80	260.08	362.37	1,219.80	982.35	628.19	197.62
Onion (red creole)	-	-	-	8.00	0.00	0.00	0.00
Onion (white creole)	-	-	-	3.77	4.88	0.51	0.00
Pea Arkel	47.70	181.80	318.20	1,262.20	1,584.60	321.45	633.53
Pea Mr. Big	37.50	117.00	121.85	33.90	65.00	58.70	137.40
Pea Usui	1,165.95	1,996.40	3,879.40	974.50	708.45	854.10	515.40
Radish-35 days	27.71	-	25.50	18.32	31.63	20.76	16.22
Radish Minowase	100.00	137.32	338.06	273.34	137.78	147.82	200.00
Radish SPTN	410.18	262.95	335.00	514.68	343.46	292.16	287.60
Spinach All Green	-	4.90	52.15	81.19	54.86	46.62	12.95
Spinach Leaf Beet	59.00	29.62	0.03	38.23	13.67	0.03	0.24
Squash Zucchini	14.75	12.58	49.66	17.01	13.42	18.42	16.88
Tomato Cosmic	-	-	-	1.77	4.18	14.03	9.51
Tomato PS-61 Hybrid	-	12.76	41.83	107.96	46.88	24.76	28.45
Tomato Garv					1.31	11.81	5.67
Tomato Rattan	38.64	22.94	55.93	58.74	26.85	9.62	5.89
Tomato Roma	65.10	24.13	58.41	62.51	39.29	30.54	4.72
Turnip PTWG	31.81	21.58	41.53	44.99	34.81	24.07	21.66
Water Melon Sugar Baby	19.47	34.84	43.33	96.33	55.06	0.04	0.00
Organic commodities							

Beans borlotto-Indeterminate	-	-	-	30.00	560.00	600.50	20.00
Beans borlotto-Determinate	-	-	-	65.00	217.95	102.55	94.00
Chilli-Sha ema					1.88	1,082.10	0.50
Royal quinoa seeds	184.00	-	-	145.00	48.00	1,017.00	7,497.00
Buck wheat-sweet/Bitter	-	-	-	1,600.00	5,326.00	3,591.82	966.00
Ginger-Local	-	-	25,330.00	3,400.00	9,488.00	1,500.00	500.00
Turmeric-Local	-	-	21,200.00	2,500.00	2,000.00	500.00	500.00
Potato Seeds							
Potato Chipsona	-	3,000.00	-	-	-	-	-
Potato-Desiree	384,850.00	229,000.00	331,381.00	247,686.00	231,550.00	171,535.00	4,004.00
Potato-Desiree (G3)	-	-	-	3,900.00	-	-	-
Potato-Desiree (Oversize)	1,350.00	450.00	1,000.00		-	-	-
Potato-Desiree (Under Size)	998.00	1,600.00	5,750.00	1,000.00	-	-	10,000.00
Potato-NKK (off size)	-	-	-	-	-	-	14,250.00
Potato-NKK (seed size)	-	1,000.00	1,950.00	7,100.00	2,450.00	500.00	700.00
Potato-Yusimaap	-	-	33,941.00	6,450.00	121,800.00	102,350.00	154,800.00
Potato-Yusimaap (Off size)	-	-	-	-	-	-	3,441.50
Potato-Khangma Kaap	-	-	7,800.00	-	6,250.00	0.00	3,800.00

Source: NSC, DoA, MoAL

Table 5.7 Temperate fruit and other crop seedling distributed by NSC (2017-2023) (Volume in No. unless specified)

Category/Commodity	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Temperate fruit seedling							
Apple	45,185	8,613	22,523	9,576	51,775.00	14,872.00	48,632.00
Almond Kagzi	114	-	412	597	54,680.00	103,144.00	37,032.00
Apricot Shakapara	2,417	490	766	1,453	9,755.00	4,214.00	382.00
Cherry Seneca	866	204	291	116	4,810.00	97.00	500.00
Chestnut Jewphu-1	96	44	315	417	2,665.00	565.00	1,216.00
Peach	1,906	1,151	2,340	3,218	52,635.00	20,530.00	1,592.00
Pear	7,548	2,550	6,541	9,692	86,465.00	35,543.00	2,620.00
Persimmon	1,925	1,546	2,135	830	69,833.00	23,223.00	3,012.00
Plum	461	785	1,173	1,451	41,946.00	18,095.00	654.00
Prune	14	14	-	-			500.00
Walnut Kagzi grafted	1,001	1,895	658	1,000	10,258.00	3,946.00	2,038.00
Walnut seedling	-	-	-	-	37,928.00	109,625.00	29,273.00
Assorted seedlings							
Cardamom Barlangay	-	46,751	30,005	-	61,310.00	2,370.00	-
Asparagus	63,850	84,880	665,400	146,995	102,100.00	30,700.00	98,420.00
Strawberry seedling	5,107	1,508	2,035	3,435	2,751.00	3,002.00	6,042.00
Pecan nut	-	-	-	-	12300	17618	26102
Kiwi	-	-	-	-	27662	73988	40132

Source: NSC, DoA, MoAL

Table 5.8 Subtropical fruit seed and seedling distributed by NSC (2017-2023) (Volume in No. unless specified)

Commodity	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Arecanut Bhur S-1	17,979	4,921	5,539	7,444	6,325.00	6,075.00	9,019.00
Avocado Hass	9,614	6,771	6,196	9,260	113,306.00	190,843.00	4,041.00
Citrus Seedlings	24,549	12,350	10,241	35,928	57,380.00	194,879.00	8,043.00
Banana G-Naine	1,974	6,539	3,747	9,500	60,575.00	4,256.00	628.00
Dragon Fruit Gewaringpa-1	-	652	5,171	5,817	103,589.00	75,974.00	1,760.00
Guava Bebsew Shakha	968	1,531	577	598	11,553.00	458.00	76.00
Jack Fruit Bhur S-1	202	31	145	7	71.00	13.00	9.00
Litchi	13,943	8,845	4,678	2,042	38,559.00	6,083.00	372.00
Mango Grafted	13,463	16,196	6,473	6,780	123,139.00	25,007.00	2,519.00
Papaya Bhur S-1	1,019	115	1,119	1,699	5,990.00	2,127.00	48.00
Passion Fruit	54,781	2	820	400	25,181.00	2,800.00	7,104.00
Pineapple	25,130	120,845	56,000	7,860	2,700.00	25,100.00	-
Pomegranate Bedana	2,986	1,752	1,265	1,012	9,961.00	800.00	96.00
Macadamia	-	-	-	-	0	8881	1508
Bears Lime/seedless lime	-	-	-	-	0	143813	5391
Erwin Mango	-	-	-	-	0	70055	318
Sour sop	-	-	-	-	0	31500	3
Cardammom	117696	-	-	-	61310	2370	-

Source: NSC, DoA, MoAL

Table 5.9 Cereal seed and seedling distributed by NSC (2017-2023) (Volume in Kg unless specified)

Commodity	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Maize							
Maize Chaskharpa	90	9,350	8,520	7,950	6,250.00	5,630.00	2,500.00
Maize Hybrid	15,000	10,304	14,003	40,068	10,856.00	0.00	-
Maize Shaphangma	900	3,265	1,970	680	3,730.00	678	44574
Maize Yangtsepa	76,387	56,873	46,310	52,890	49,500.00	96,860.00	87,608.00
Maize Rejects	-	1,890			0.00	0.00	-
Paddy							
Paddy Bajo Maap-1	2,200	80	810		-	2,330.00	-
Paddy Bajo Maap-2	6,031	2,225	5,070	1,700	2,140.00	20.00	-
Paddy Bajo maap 3					-	1,800.00	1,500.00
Paddy Bajo Kaap-1	707		720		-	230.00	-
Paddy Bajo Kaap-2	770		500	1,000	-	230.00	-
Paddy IR-20913	935-	0	370	200	60.00	0.00	120.00
Paddy IR-64	9,955	500	1,830	1,700	1,440.00	760.00	-
Paddy Khangma Maap	11,165	13,700	17,120	16,420	16,900.00	12,996.00	6,170.00
Paddy No.11	2,321	2,150	1,260	2,240	3,580.00	880.00	120.00
Paddy	-	-	-	-	-	-	-
Bhur Kamja 1	18900.00	22,333	28,415	19,700	23,700.00	19,200.00	
Paddy-SRK 111	-	-	-	-	-	-	10,250.00
Paddy GB-1	6150.00						
Paddy Yusi Ray Maap	9,120	7,420	3,560	2,560	9,660.00	1,880.00	80.00
Paddy Reject	-	397	-	-	-	-	-
Wheat							
Wheat Bajosokha Kaa	40	1,140	60	69	-	-	-
Wheat Bumthang Kaa-60	1,280	0	260		820.00	780.00	2,620.00

Wheat Gumasokha Kaa	44,615	16,720	25,203	26,900	28,046.00	31,790.00	9,640.00
Gulum	-	-	-	272	0.00	0.00	-
Wheat Duram	-	-	-	-	0.00	1,675.00	6,000.00
Other cereals							
Quinoa	-	212	-	-	0.00	0.00	-
Millet	-	-	510	-	0.00	0.00	-
Buckwheat	-		1,045	-	0.00	0.00	-
Oil seeds & pulses							
Mustard M-27	12,405	6,451	8,238	8,730	4,710.00	15,377.00	1,960.00
Soya Bean Khangma Lebi-1	505	2,635	1,870	455	1,705.00	-	-
Yusi Peka-1	385	149	-	-	-	-	-
Yusi Peka-2	-	1	7,179	975	84.00	9.50	190.00
Lentil (WBL-58)	-	-	-	4,770	-	-	-

Source: NSC, DoA, MoAL

Table 5.10 DOC (Day Old Chick) distributed by NPRC (2017-2023) (Value in No. unless specified)

Dzongkhag	2017-18	2018-19	2019-20	2020-21	2021-22	2022-2023	2023-2024
Bumthang	-	0	0	0	0	0	0
Chhukha	-	0	0	0	0	0	0
Dagana	-	500	3,830	2,420	10,915	3,650	5,200
Gasa	-	0	0	2,265	2,500	0	0
Haa	-	0	0	1,000	0	0	0
Lhuntse	-	0	0	0	0	0	0
Monggar	-	0	0	0	0	0	0
Paro	-	0	0	0	0	0	0
Pema Gatshel	-	0	0	0	0	0	0
Punakha	-	15,300	13,300	8,710	14,225	5,000	1,000
Samdrup Jongkhar	-	3,000	9,450	0	0	0	0
Samtse	-	15,450	7,100	4,505	0	0	3,500
Sarpang	-	153,199	118,175	37,591	105,802	25,800	109,640
Thimphu	-	2,500	0	0	0	0	0
Trashigang	-	0	0	0	0	0	0
Trongsa	-	700	0	3,745	10,863	6,800	11,950
Tsirang	-	56,145	26,075	27,534	56,048	7,100	65,590
Wangdue Phodrang	-	2,900	2,450	5,600	19,245	2,400	2,000
Zhemgang	-	2,200	2,175	2,000	9,990	2,150	6,150
BLDCL	-	0	0	1,500	1,500	0	-

Source: National Poultry Research Centre, Sarpang, DoL, MoAL

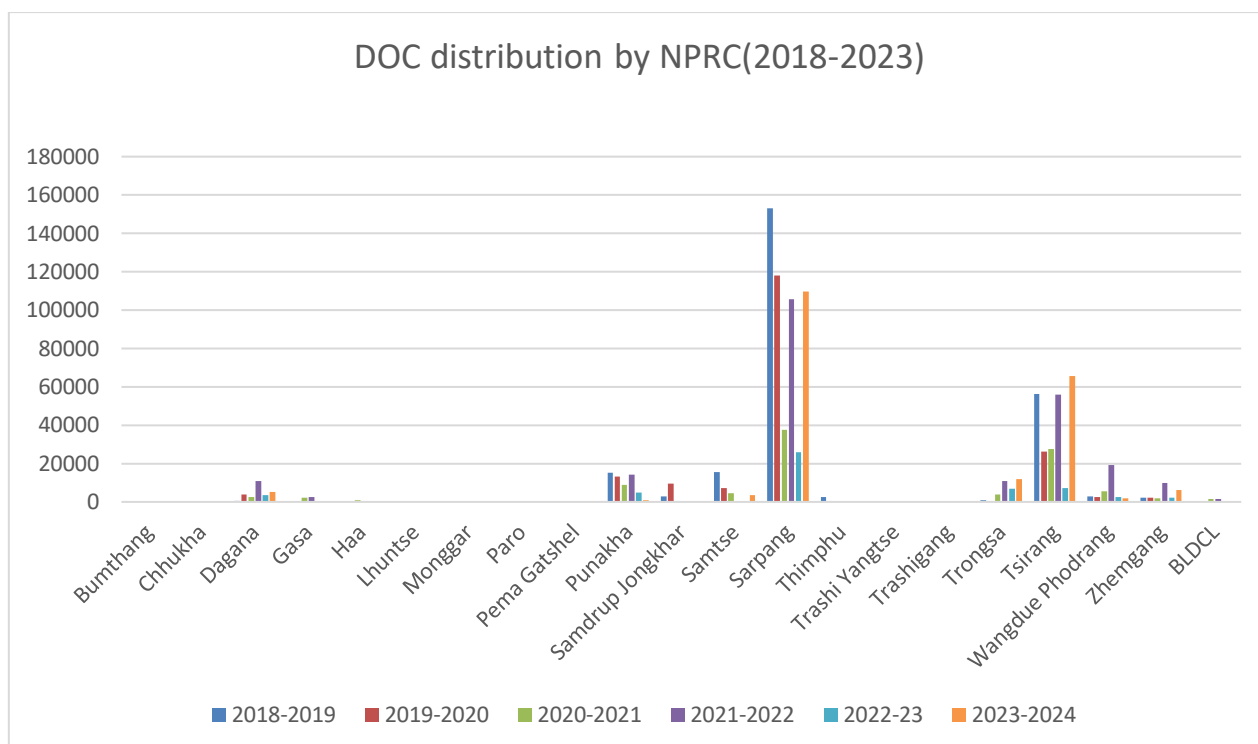


Figure 25: Trends in the day-old-chick distribution by NPRC (2018-2023) (Value in No.)

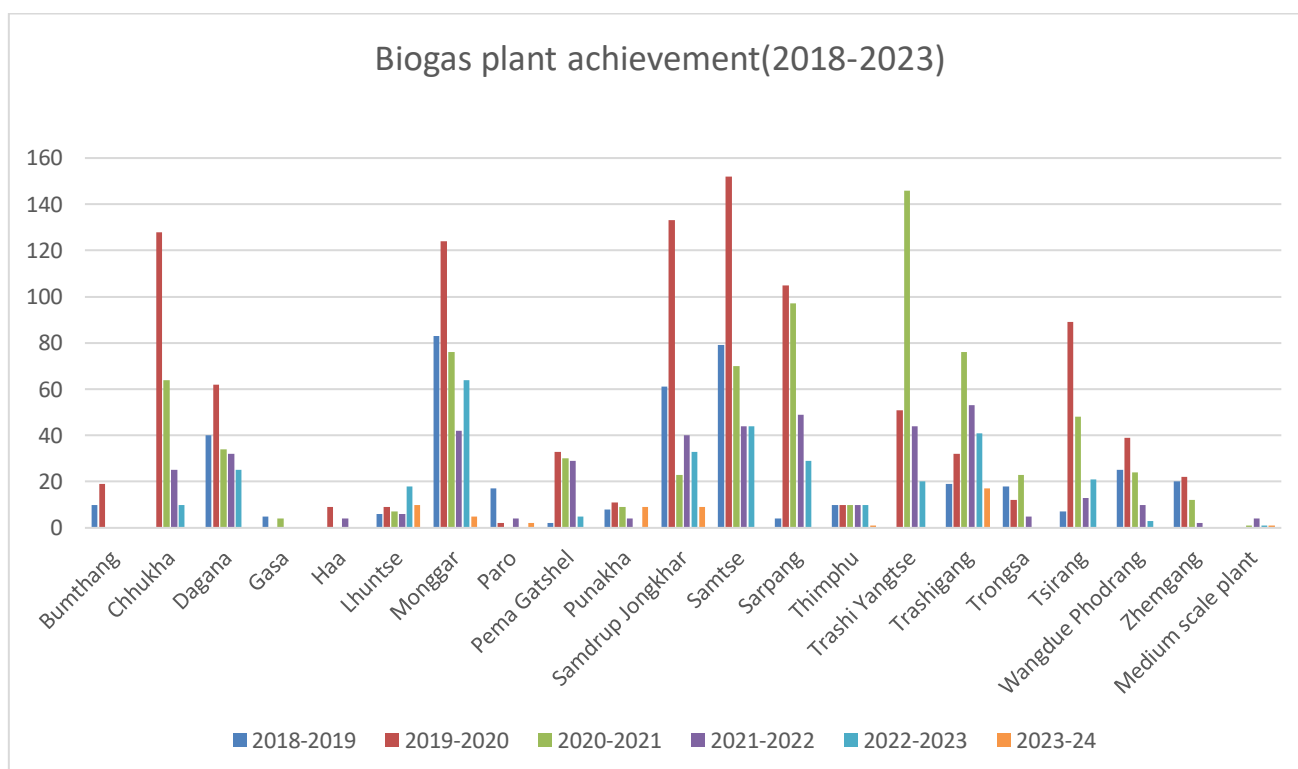


Figure 26: Trends in the biogas plant achievement (2018-2023) (Value in No.)

Table 5.11 Biogas plant achievement by Dzongkhag (2017-2023) (Value in No. unless specified)

Dzongkhag	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Bumthang	-	10	19	0	0	0	0
Chhukha	-	0	128	64	25	10	0
Dagana	-	40	62	34	32	25	0
Gasa	-	5	0	4	0	0	0
Haa	-	0	9	0	4	0	0
Lhuntse	-	6	9	7	6	18	10
Monggar	-	83	124	76	42	64	5
Paro	-	17	2	0	4	0	2
Pema Gatshel	-	2	33	30	29	5	0
Punakha	-	8	11	9	4	0	9
Samdrup Jongkhar	-	61	133	23	40	33	9
Samtse	-	79	152	70	44	44	0
Sarpang	-	4	105	97	49	29	0
Thimphu	-	10	10	10	10	10	1
Trashy Yangtse	-	0	51	146	44	20	0
Trashigang	-	19	32	76	53	41	17
Trongsa	-	18	12	23	5	0	0
Tsirang	-	7	89	48	13	21	0
Wangdue Phodrang	-	25	39	24	10	3	0
Zhemgang	-	20	22	12	2	0	0
Medium scale plant	-	0	0	1	4	1	1

Source: National Poultry Research Centre, Sarpang, DoL, MoAL

Table 5.12 Greenhouse distribution to Dzongkhag (2018-2023) (Value in No. unless specified)

Dzongkhag	Fabricated plastic					
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Bumthang	17	17	-	-	210	199
Chhukha	38	79	99	10	277	30
Dagana	11	83	178	17	175	0
Gasa	-	1	13	-	63	0
Haa	19	7	5	-	300	0
Lhuntse	10	39	102	-	77	16
Monggar	14	33	43	13	130	37
Paro	33	39	147	-	34	0
Pema Gatshel	3	49	57	6	74	14
Punakha	10	38	57	2	124	0
Samdrup Jongkhar	7	50	101	33	47	0
Samtse	2	8	47	1	170	89
Sarpang	39	72	240	8	226	0
Thimphu	2	12	84	-	68	0
Trashigang	9	10	55	-	101	23
Trashigang	4	42	57	1	72	97
Trongsa	15	55	57	-	96	0
Tsirang	2	47	89	41	65	1
Wangdue Phodrang	2	13	56	11	107	19
Zhemgang	6	22	4	1	119	6
Total	243	716	1,491	144	2,535	531

Source:DoA, MoAL

CHAPTER 6: INFRASTRUCTURE

This chapter presents statistics on the state of various production infrastructures such as offices, irrigation canals, farm roads, and electric fencing across the country. These kinds of hardware inputs are crucial in keeping rural farms up and running, combating rural-urban migration and ensuring food self-sufficiency or food security.

The construction of irrigation canals and farm roads is often executed by both central bodies in Thimphu (e.g. by the engineering division of DoA) and the Dzongkhags themselves through funding from various sources, hence compilation of statistics accurately and timely on these infrastructures is quite challenging.

Electric fencing, which has become quite popular as a means to keep wild animals off crops is another input that is executed by several bodies such as NPPC under DoA, various functionaries under DoFPS, various projects, and even NGOs. Private individuals are also known to put electric fencing around their fields. Nonetheless, we present here reliable and updated figures to the best extent possible.

Table 6.1 Agriculture Centres under DoA (2023)

Indicators	As of 31st Mar,2023	As of 30th June,2023	As of 30th Sept,2023	As of 31st Dec,2023
Agriculture extension centres	209	207	207	205
Agriculture Seed Production Farms	8	8	8	4
National plant protection centre	1	1	1	1
Agriculture Machinery and Training Centre	1	1	1	1
National mushroom centre	1	1	1	1
National post harvest centre	5	1	1	1
Agriculture research and development centres	3	3	3	3
Agriculture research and development sub-centres	4	4	4	3
Soil & plant analytical laboratory	1	1	1	1
National Centre for Organic Agriculture (NCOA)	1	1	1	1
Farm machinery cooperation limited (SOE)	1	1	1	1
National Soil Service Center	1	1	1	1

Source: DoA, MoAL

*Agriculture Extension Centre was considered part of the RNR Centre 2019-2022.

**Named Agriculture Seed Production Farm till 2019.

Note: Civil Service reform took place in Dec. 2022 and some Centres were renamed including the RNR Centre.

Table 6.2 Livestock Centres under DoL (2023)

Indicators	As of 31st Mar. 2023	As of 30th June, 2023	As of 30th Sept. 2023	As of 31st Dec. 2023
National Livestock Research Centre	1	1	1	1
National center for animal health	1	1	1	1
Dzongkhag veterinary hospitals	20	20	20	20
Regional livestock development centres	1	1	1	1
National veterinary hospital	1	1	1	1
Regional Veterinary Hosiptal & Epidemiology Centre	3	3	3	3
Statellite Veterinary Laboratory	1	1	1	1
Government livestock farms (for breeding/production)	12	12	12	16
Vaccine production centre	1	1	1	1
Liquid nitrogen and semen processing centre	3	3	3	2
Livestock product value addition centre	-	-	-	
National Development Centre for Animal Nutrition	1	1	1	1
National Highland Development Centre	2	2	2	1

Source: DoL, MoAL

Table 6.3(1)-1 Irrigation schemes constructed/renovated (by DoA) during the 12-FYP (Length)

Dzongkhag	Irrigation schemes constructed/renovated (length in km)					
	2018-19	2019-20	2020-21	2021-22	2022-23	Total
Bumthang	-	-	-	-	-	0.00
Chhukha	-	-	-	-	-	0.00
Dagana	-	-	3.70	-	3.70	7.40
Gasa	-	-	-	-	3.02	3.02
Haa	-	10.00	-	-	4.50	14.50
Lhuntse	3.00	-	-	10.56	5.50	19.06
Monggar	-	-	-	-	-	0.00
Paro	-	-	-	-	3.00	3.00
Pema Gatshel	-	-	-	-	-	0.00
Punakha	-	25.00	3.50	13.50	38.20	80.20
Samdrup Jongkhar	-	-	-	-	13.34	13.34
Samtse	21.00	-	-	5.00	7.84	33.84
Sarpang	11.00	-	1.50	2.50	4.50	19.50
Thimphu	-	-	-	-	-	0.00
Trashigang	7.80	-	-	-	2.45	10.25
Trashhi Yangtse	-	-	-	1.70	17.00	18.70
Trongsa	-	2.30	7.00	-	17.40	26.70
Tsirang	-	7.20	2.50	4.20	2.00	15.90
Wangdue Phodrang	-	-	26.90	22.60	46.92	96.42
Zhemgang	-	-	-	4.50	4.00	8.50
Total	42.80	44.50	45.10	64.56	173.37	370.33

Source: DoA, MoAL

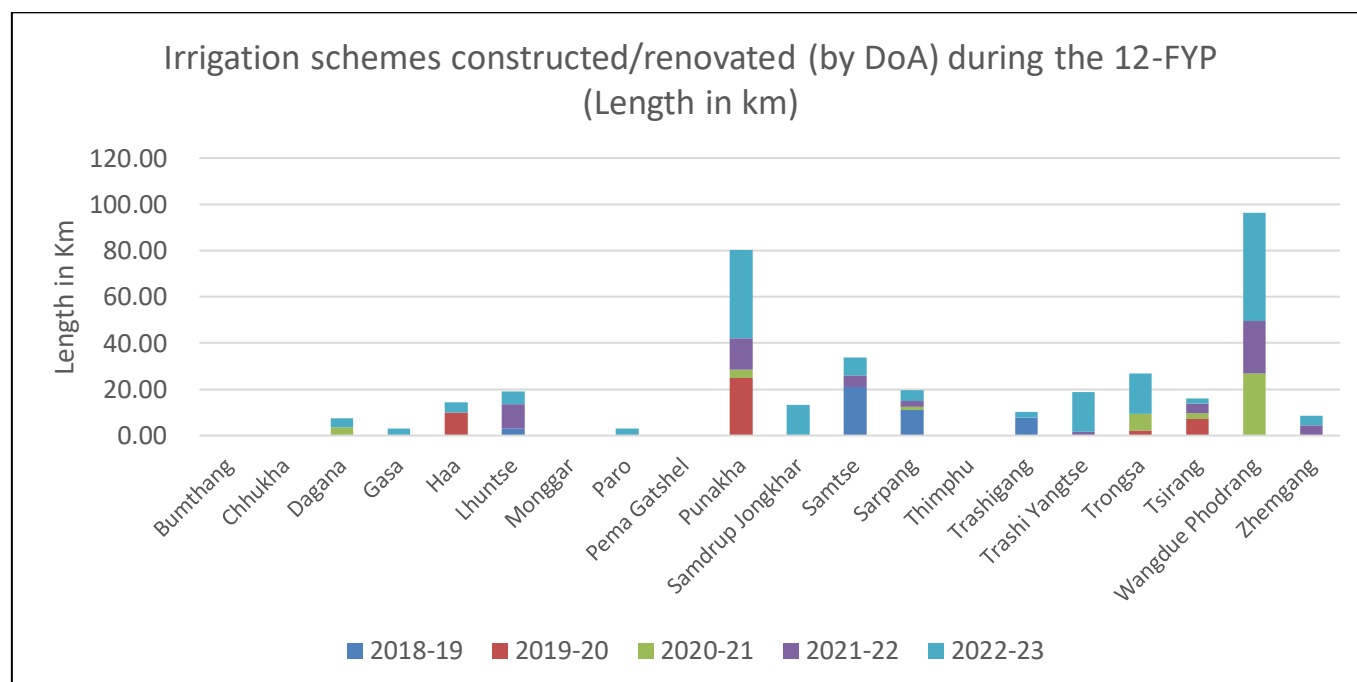


Figure 27: Irrigation Schemes Constructed/Renpvated(by DoA) during 12th FYP(2018-2023) by Dzongkhag(Length in Km)

Table 6.3 (1)-2 Irrigation schemes constructed/renovated (by DoA) during the 12-FYP (Command area)

Dzongkhag	Irrigation schemes constructed/renovated (command area in Acre)					
	2018-19	2019-20	2020-21	2021-22	2022-23	Total
Bumthang	-	-	-	-	-	0.00
Chhukha	-	-	-	-	-	0.00
Dagana	-	-	70.00	-	104.60	174.60
Gasa	-	-	-	-	120.00	120.00
Haa	-	20.00	-	-	39.00	59.00
Lhuntse	116.10	-	-	400.00	361.00	877.10
Monggar	-	-	-	-	-	0.00
Paro	-	-	-	-	131.00	131.00
Pema Gatshel	-	-	-	-	-	0.00
Punakha	-	200.00	49.00	604.00	1,623.86	2,476.86
Samdrup Jongkhar	-	-	-	-	1,306.00	1,306.00
Samtse	1,717.96	-	-	300.00	157.00	2,174.96
Sarpang	648.37	-	75.00	130.00	327.55	1,180.92
Thimphu	-	-	-	-	-	0.00
Trashigang	500.00	-	-	-	136.54	636.54
Trashhi Yangtse	-	-	-	150.00	630.00	780.00
Trongsa	-	180.00	300.00	-	360.00	840.00
Tsirang	-	224.00	59.00	204.00	54.96	541.96
Wangdue Phodrang	-	-	509.00	413.00	1,034.54	1,956.54
Zhemgang	-	-	-	80.00	52.00	132.00
Total	2,982.43	624.00	1,062.00	2,281.00	6,438.05	13,387.48

Source: DoA, MoAL

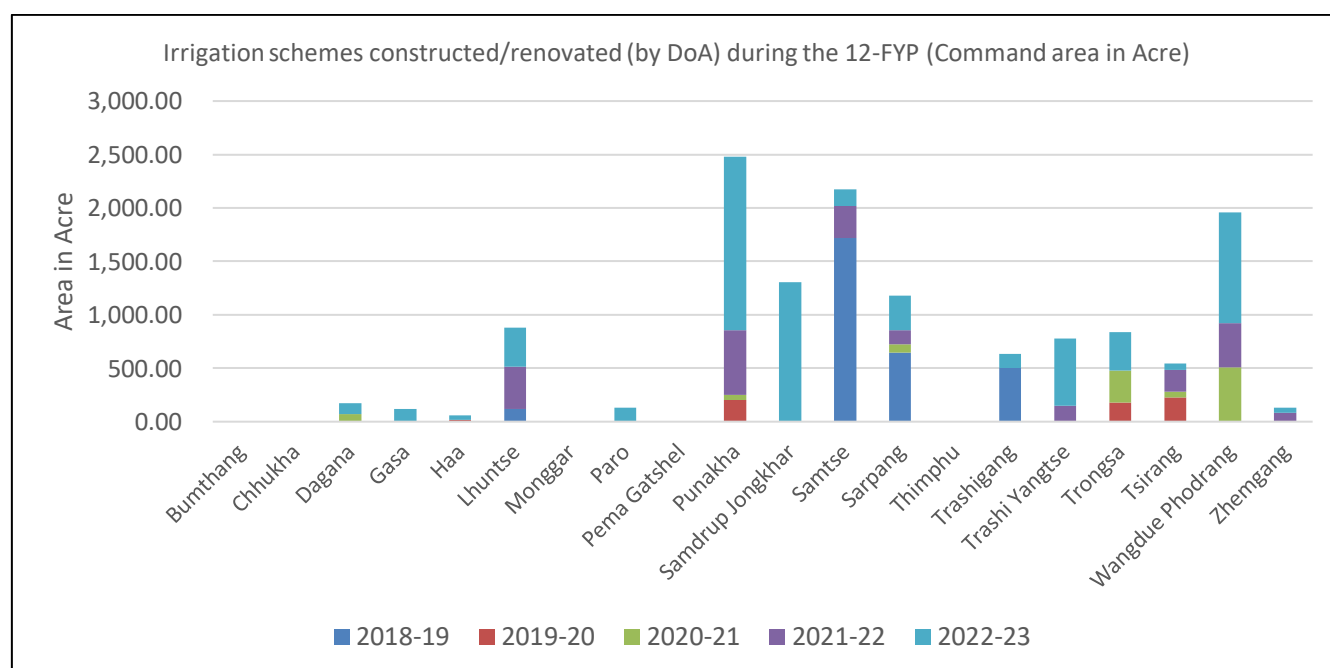


Figure 28:irrigation scheme Constructed/renovated(DoA) during the 12th FYP(Command area in Acre)

Table 6.3 (1)-3 Irrigation schemes constructed/renovated (by Dzongkhag) during the 12-FYP (Length)

Dzongkhag	Irrigation schemes constructed/renovated (length in km)					
	2018-19	2019-20	2020-21	2021-22	2022-23	Total
Bumthang	-	-	-	-	-	0.00
Chhukha	-	-	-	-	-	0.00
Dagana	-	-	-	-	-	0.00
Gasa	-	-	-	-	-	0.00
Haa	-	-	-	-	-	0.00
Lhuntse	-	-	-	-	11.00	11.00
Monggar	-	-	-	-	-	0.00
Paro	-	-	-	-	-	0.00
Pema Gatshel	-	-	-	-	16.00	16.00
Punakha	-	-	-	-	8.00	8.00
Samdrup Jongkhar	-	-	-	-	-	0.00
Samtse	-	-	-	-	-	0.00
Sarpang	-	-	-	-	-	0.00
Thimphu	-	-	-	-	-	0.00
Trashigang	-	-	-	-	-	0.00
Trashigang Yangtse	-	-	-	-	6.60	6.60
Trongsa	-	-	-	-	-	0.00
Tsirang	-	-	-	-	-	0.00
Wangdue Phodrang	-	-	-	-	-	0.00
Zhemgang	-	-	-	-	-	0.00
Total	0.00	0.00	0.00	0.00	41.60	41.60

Source: DoA, MoAL

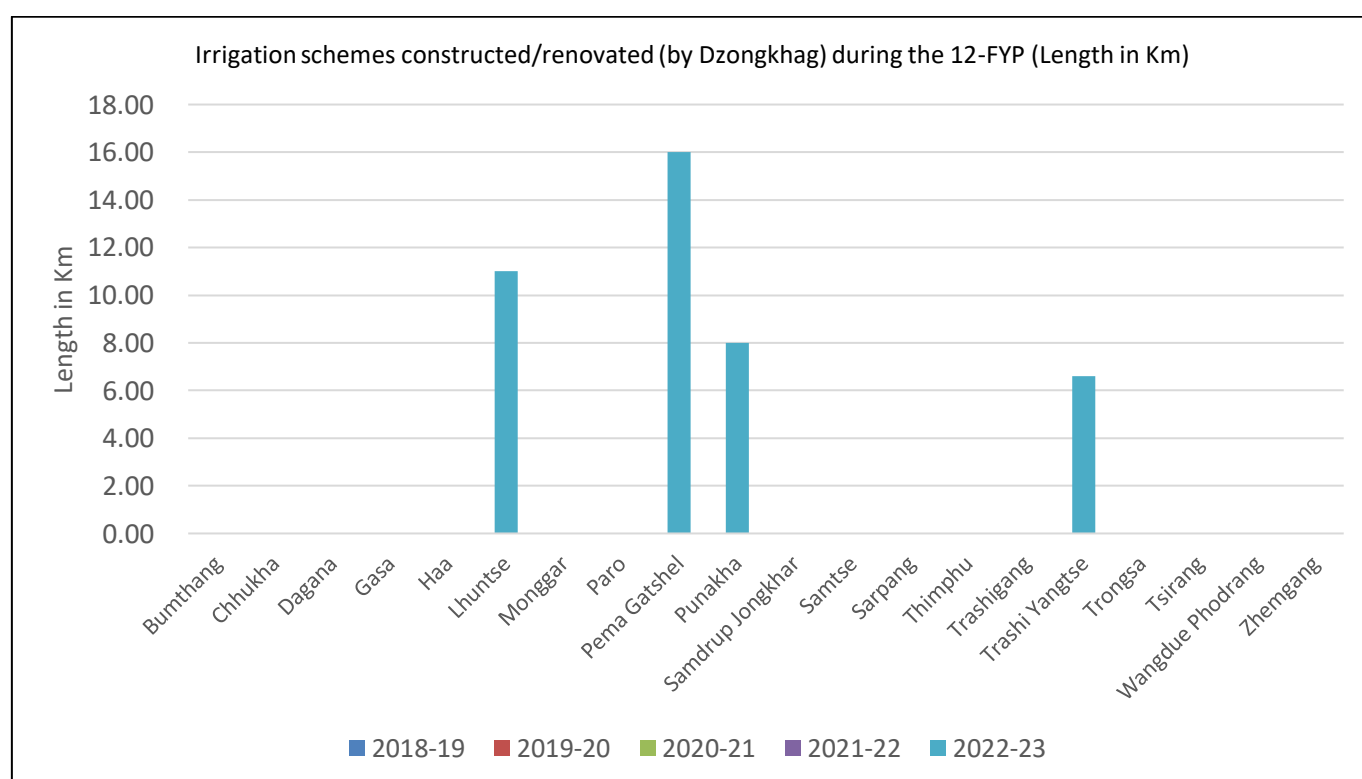


Figure 29: Irrigation schemes constructed/renovated (by Dzongkhag) during the 12-FYP (Length in Km)

Table 6.3 (1)-4 Irrigation schemes constructed/renovated (by Dzongkhag) during the 12-FYP (Command area)

Dzongkhag	Irrigation schemes constructed/renovated (length in km)					
	2018-19	2019-20	2020-21	2021-22	2022-23	Total
Bumthang	-	-	-	-	-	0.00
Chhukha	-	-	-	-	-	0.00
Dagana	-	-	-	-	-	0.00
Gasa	-	-	-	-	-	0.00
Haa	-	-	-	-	-	0.00
Lhuntse	-	-	-	-	424.55	424.55
Monggar	-	-	-	-	-	0.00
Paro	-	-	-	-	-	0.00
Pema Gatshel	-	-	-	-	0.00	0.00
Punakha	-	-	-	-	115.00	115.00
Samdrup Jongkhar	-	-	-	-	-	0.00
Samtse	-	-	-	-	-	0.00
Sarpang	-	-	-	-	-	0.00
Thimphu	-	-	-	-	-	0.00
Trashigang	-	-	-	-	-	0.00
Trashy Yangtse	-	-	-	-	162.00	162.00
Trongsa	-	-	-	-	-	0.00
Tsirang	-	-	-	-	-	0.00
Wangdue Phodrang	-	-	-	-	-	0.00
Zhemgang	-	-	-	-	-	0.00
Total	0.00	0.00	0.00	0.00	701.55	701.55

Source: DoA, MoAL

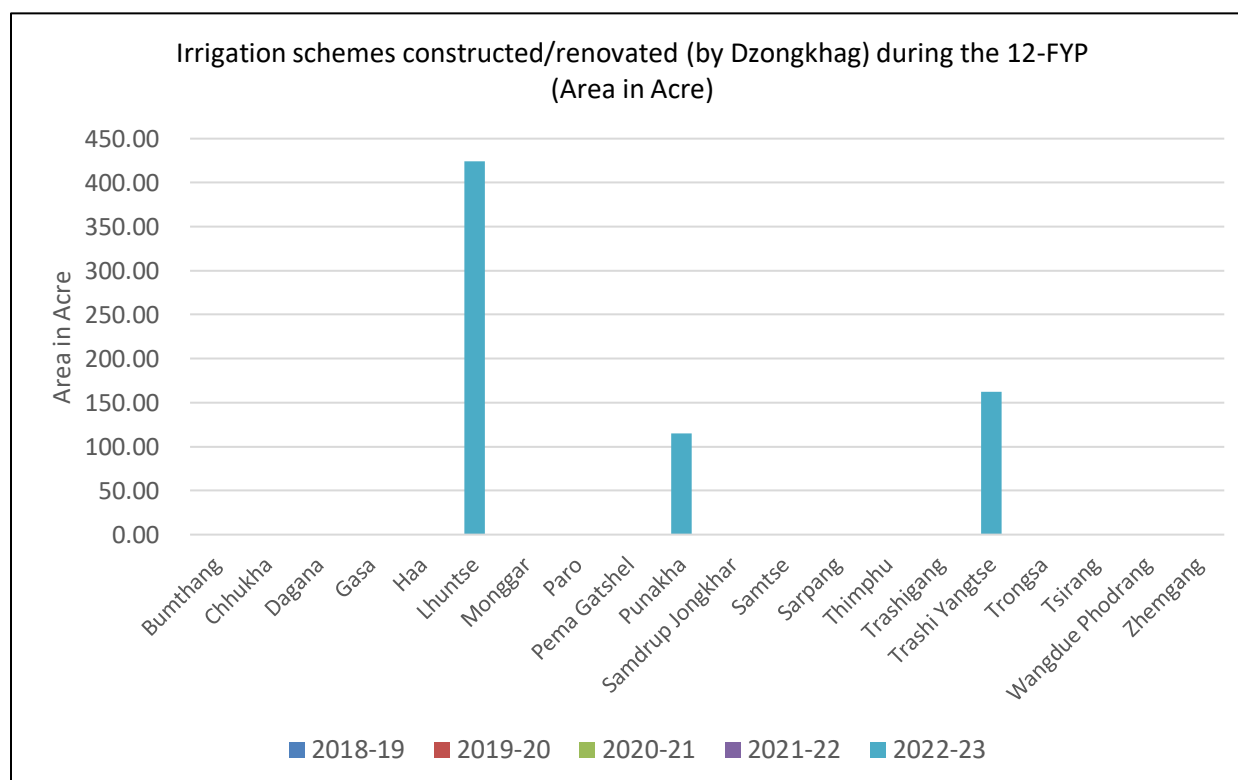


Figure 30: Irrigation schemes constructed/renovated (by Dzongkhag) during the 12-FYP (Area in Acre)

CHAPTER 7: PRICE

Price received by farmers for their produce is an important indicator and therefore this chapter is devoted to price statistics. Price received by farmers means the farm-gate price. The annual agriculture sample survey collects price of products sold by farmers and is a good source. However, for livestock products like milk, meat, eggs and so on, farm gate price data are not available as the annual livestock census does not collect this indicator. Another source of price received by farmers is the auction price of commodities available from FCBL. Auction price is however not farm-gate price as farmers have to bear transportation cost from the villages to the border towns.

Prices for locally produced commodities sold at the Farmers' Centennial Market in Thimphu, collected regularly by DAMC, are also presented to give an idea of the retail prices, which are often several times higher than the prices received by farmers. Price of the imported commodities is also presented and gives further insight into the differential prices occurring.

This chapter also presents price of the various inputs such as seeds, seedling and fertilizers supplied by National Seed Centre. The price charged by NSC are at subsidized rate.



Table 7.1 Average retail price of secondary cereal and pulse products at CFM, Thimphu (2014-2023)(value in Nu.per Kg)

Crop	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
White Rice (local)	63.08	71.00	75.02	80.33	89.00	95.00	-	95.00	100.00	100.00
Red Rice (local)	63.25	67.00	72.99	73.39	74.00	83.00	-	90.00	100.00	100.00
Beaten/Flatten Rice	142.50	190.00	230.96	200.00	199.00	150.00	-	25.00	190.00	110.00
Zaw (roasted rice)	85.17	92.25	104.68	95.77	105.00	135.00	-	120	100.00	100.00
Maize (grinded/kharang)	-	-	83.00	86.00	88.00	90.00	-	93.00	150.00	150.00
Beaten/Flatten Maize	153.67	170.00	276.07	250.00	244.00	325.00	-	350.00	200.00	200.00
Wheat Flour (roasted/kapchi)	48.17	48.00	52.94	55.50	58.00	70.00	52.87	70.81	75.00	85.00
Buckwheat Flour (sweet/bitter)	102.00	102.00	150.00	150.00	157.00	175.00	127.62	183.00	200.00	200.00
Rajima Beans (dried)	125.67	135.00	128.33	147.00	173.00	180.00	-	180.00	190.00	199.00

Source: AMISD, DAMC, MoAL

Table 7.2 Average retail price of vegetables at CFM, Thimphu (2014-2023) (Value in Nu. per Kg)

Vegetable	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Asparagus	85.67	144.00	125.19	146.09	238.00	220.00	122.95	268.00	148.33	120.00
Bamboo shoot	120.00	-	116.00	100.00	125.00	130.00	130.00	130.00	-	100.00
Bean (flat type)	77.78	74.00	108.68	139.39	122.00	125.00	130.00	151.00	137.14	150.00
Bean (round type)	87.91	-	102.50	135.90	122.00	125.00	130.00	151.00	137.14	100.00
Bean (long type)	-	-	76.00	-	-	125.00	130.00	151.00	137.14	-
Bitter Gourd	102.38	-	98.45	97.61	85.00	90.00	95.36	89.00	77.46	60.00
Brinjal	63.11	-	71.90	75.66	56.00	70.00	70.00	73.00	72.40	35.00
Broccoli	67.42	69.80	78.42	90.20	91.00	85.00	87.00	96.00	101.50	80.00
Cabbage	39.25	30.33	41.90	45.15	40.00	50.00	41.25	44.00	59.14	40.00
Carrot	73.33	66.00	75.70	76.85	81.00	90.00	71.65	77.00	92.28	80.00
Cauliflower	87.92	90.00	122.29	149.46	138.00	120.00	128.15	132.00	136.85	150.00
Chilli dry (big)	166.89	-	177.61	159.14	198.00	725.00	223.63	222.00	143.56	150.00
Chilli dry (small)	110.83	-	205.00	206.25	252.00	190.00	320.11	335.00	169.09	270.00
Coriander	-	-	30.00	30.00	30.00	35.00	35.00	30.00	-	40.00
Cucumber	-	-	78.46	83.00	72.00	80.00	77.09	85.00	90.14	80.00
Garlic	184.50	213.33	210.00	224.76	185.00	215.00	291.85	259.00	228.91	300.00
Ginger	187.00	184.20	100.97	122.25	121.00	160.00	174.00	94.00	95.36	180.00
Mushroom (oyster)	551.60	-	-	-	118.00	305.00	-	256.00	190.28	120.00
Mushroom (shiitake)	-	-	710.90	747.62	674.00	430.00	-	450.00	-	110.00
Onion	44.60	80.00	73.70	67.20	54.00	83.00	74.02	58.00	47.16	50.00
Peas	66.63	65.00	86.07	104.43	100.00	145.00	150.00	116.00	132.08	100.00
Potato	43.08	-	38.78	38.42	36.00	50.00	45.22	43.00	39.51	50.00
Pumpkin	27.73	29.00	36.85	46.20	43.00	63.00	46.22	45.00	39.66	40.00
Radish	35.67	26.25	37.35	40.36	39.00	45.00	35.46	42.00	44.11	50.00
Spinach (saag)	43.34	53.60	59.94	63.72	67.00	40.00	60.00	40.00	80.75	40.00
Squash	46.82	47.50	47.78	57.18	43.00	65.00	65.00	60.00	-	40.00
Tomato	66.00	59.75	86.61	90.11	72.00	90.00	88.14	85.00	68.42	50.00
Turnip	39.83	-	43.21	49.40	93.00	40.00	35.98	40.00	49.22	40.00

Source: AMISD, DAMC, MoAL for 2013-2021 figures; SYB 2023 for 2022 figures.

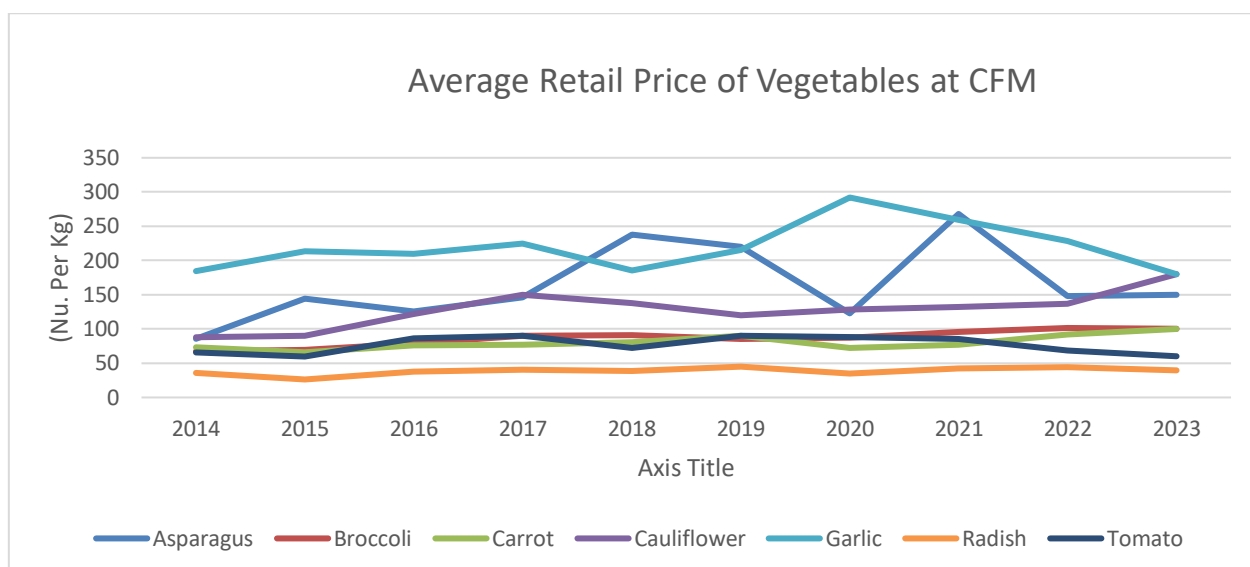


Figure 31: Trends in average retail price of selected vegetables at CFM (2014-2023)

Table 7.3 Average retail price of fruits at CFM, Thimphu (2014-2023) (Value in Nu. per Kg unless specified)

Fruit	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Apple	131.11	118.00	150.00	130.00	211.00	150.00	167.00	198.00	176.75	200.00
Avocado	404.25	-	270.83	352.25	333.00	375.00	446.00	515.00	399.12	400.00
Banana (per dozen)	80.42	98.57	75.00	82.39	77.00	80.00	53.00	111.00	109.08	80.00
Guava	125.00	-	74.38	88.24	84.00	140.00	-	110.00	-	60.00
Lemon	45.00	-	118.65	150.00	162.00	145.00	-	-	-	-
Mango	74.20	-	104.28	138.33	142.00	205.00	169.00	219.00	248.28	200.00
Orange	87.67	97.22	106.18	123.79	171.00	170.00	98.00	156.00	178.96	100.00
Papaya	74.14	-	74.55	85.57	97.00	150.00	-	120.00	-	-
Passion Fruit	68.50	-	178.00	100.00	235.00	200.00	-	-	-	-
Pear	74.20	-	107.94	137.39	178.00	175.00	-	170.00	-	150.00
Pineapple (per piece)	56.00	78.00	61.30	61.03	66.00	75.00	-	75.00	-	50.00

Source: AMISD, DAMC, MoAL

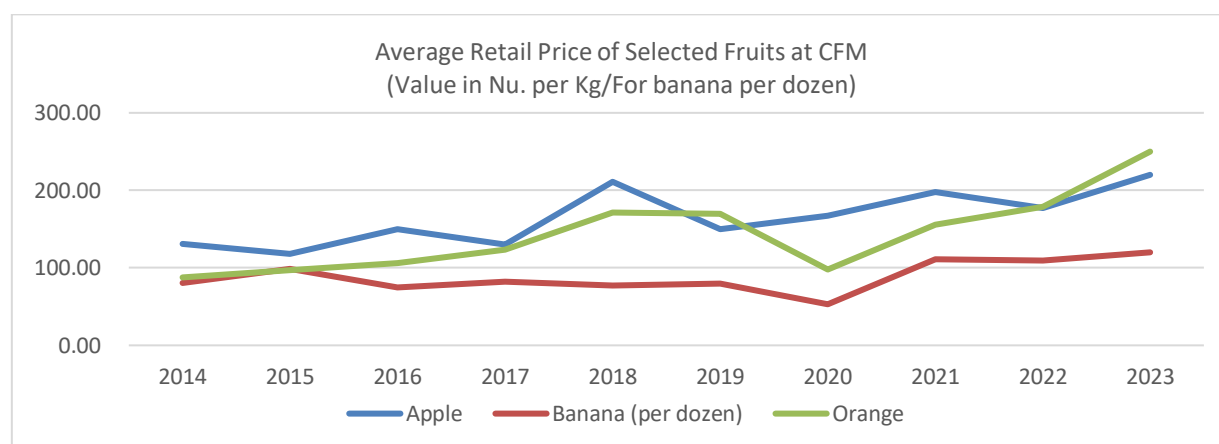


Figure 32: Trends in average retail price of selected fruits at CFM (2014-2023)

Table 7.4 Average retail price of livestock products at CFM, Thimphu (2014-2023) (Value in Nu. per Kg unless specified)

Product	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Butter (per kg)	345.67	371.15	372.59	404.29	408.00	440.00	477.00	515.00	600.00	550.00
Cheese (per Kg)	370.64	345.24	385.83	368.13	462.00	510.00	517.00	515.00	550.00	500.00
Honey (per Litre)	576.00	-	-	-	3,492.00	1,000.00	-	-	1,300.00	1,200.00
Egg (per Dozen)	106.00	129.40	112.00	112.00	122.00	128.00	149.00	159.00	130.00	280.00

Source: AMISD, DAMC, MoAL

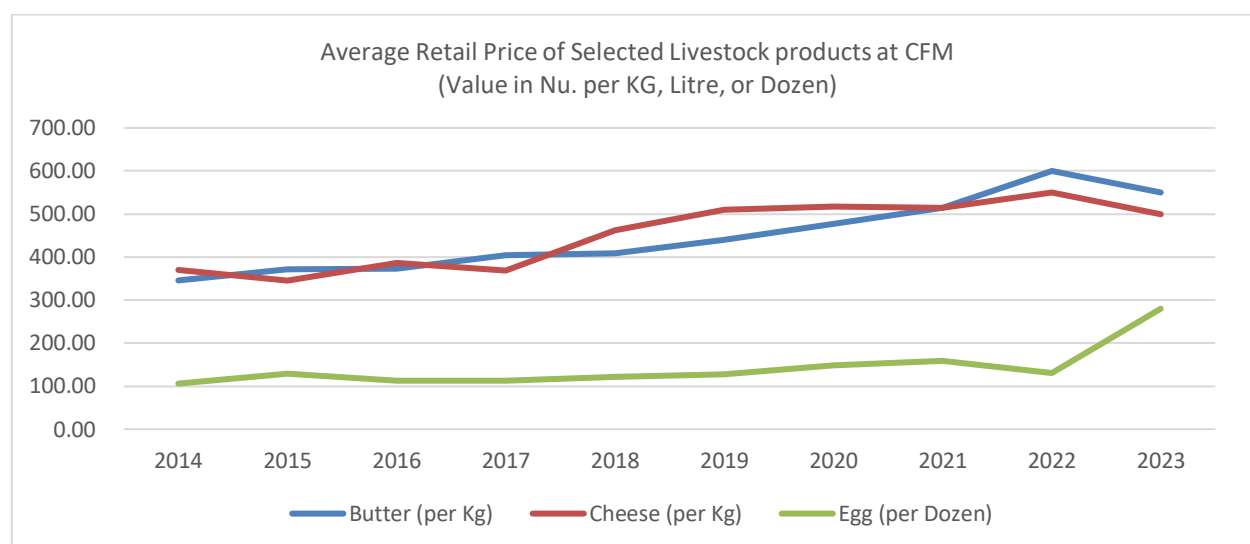


Figure 33: Trends in average retail price of livestock products at CFM (2014-2023)

Table 7.6 Price of cereal and oilseed seeds (2014-2023) (Value in Nu. per unit specified)

Cereal and Oilseed	Unit	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Maize (Y/pa, S/phangma, C/karpa)	5 kg/bag	28.0	28.0	30.0	30.0	-	30.0	30.0	30.0	32.0	32.0
Maize (P3377)	2 kg/pkt	-	190.0	225.0	290.0	290.0	267.0	267.0	267.0	267.0	267.0
Maize (P344)	2 kg /pkt	-	190.0	190.0	290.0	290.0	-	-	-	-	-
Paddy (BRK-1 & 2, BK-1 & 2)	20 kg/bag	31.0	35.0	35.0	35.0	35.0	40.0	40.0	40.0	40.0	40.0
Paddy (Bajo maap-1 & 2)	20 kg/bag	43.0	43.0	50.0	50.0	-	50.0	50.0	50.0	50.0	50.0
Paddy (Bajo kaap-1&2 & IR-64)	20 kg/bag	37.0	43.0	50.0	40.0	-	45.0	45.0	45.0	44.0	44.0
Paddy (No.11, K/Map, YRK-1 & 2 and Yrm-1&2)	20 kg/bag	55.0	55.0	60.0	60.0	68.0	71.0	71.0	71.0	71.0	71.0
Wheat (Duram, Baj & Agreeem)	20 kg/bag	31.0	31.0	35.0	35.0	38.0	38.0	45.0	50.0	59.0	59.0
Dhaincha	20 kg/bag	44.0	45.0	60.0	60.0	-	61.0	61.0	61.0	65.0	65.0
Mustard (M-27) &Yusipeka-1	5 kg /Bag	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	113.0	113.0
Soya bean (Lebi-1)	10 kg/bag	62.0	62.0	85.0	85.0	-	86.0	86.0	86.0	86.0	86.0

source: NSC, DoA, MoAL

Table 7.7 Price of vegetable seeds (2014-2023) (Value in Nu. per unit specified)

Vegetable seed	Unit	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Beans (Top crop/borlotto)	50 gm/pkt	10	10	10	10	11	13	14	18	13	13
Beetroot (DDR)	10 gm/pkt	10	10	10	10	13	15	15	15	19	19
Bitter Gourd (Hybrid)	10 gm/pkt	27	27	27	25	-	32	32	32	32	32
Bottle Gourd (Hybrid)	10 gm/pkt	27	27	27	25	-	32	32	32	32	32
Brinjal (PP Long)	10 gm/pkt	15	15	15	15	-	15	15	15	15	15
Broccoli (Centauro)	10 gm/pkt	195	195	310	310	-	226	255	255	280	280
Broccoli (Dessico - OP)	10 gm/pkt	10	10	10	10	10	13	13	13	12	12
Bunching Onion (No-21)	10 gm/pkt	25	25	25	25	25	25	25	25	25	25
Cabbage (Hybrid)	10 gm/pkt	135	135	145	205	-	149	156	-	186	186
Cabbage (Golden Acre	10 gm/pkt	25	25	30	40	29	32	41	-	33	33
Carrot (ASC - Hybrid)	50 gm/tin	75	75	80	115	86	95	-	-	563	563
Carrot (N. Kuroda)	10 gm/pkt	20	20	20	20	20	22	22	22	22	22
Cauliflower (Hybrid)	10 gm/pkt	155	155	180	255	172	177	202	-	222	222
Cauliflower (K.early/K.late)	10 gm/pkt	15	15	15	15	17	19	19	-	15	15
Chilli-IR-8 (Indian)	10 gm/pkt	10	10	10	10	10	13	13	13	13	13
Chilli (Sha ema))	10 gm/pkt	10	10	10	10	-	20	20	20	20	20
Chinese Cabbage	10 gm/pkt	10	10	10	10	10	13	13	13	13	13
Coriander (Local)	10 gm/pkt	15	15	15	15	15	15	15	15	15	15
Cucumber (Frontier)	10 gm/pkt	100	100	100	100	100	100	100	100	100	100
Cucumber (S. Genchu)	10 gm/pkt	15	15	15	15	17	23	23	23	23	23
Cucumber (santon No 1)	10 gm/pkt	15	15	25	25	28	29	29	29	29	29
Garlic (Local)	10 gm/pkt	200	200	195	195	-	195	195	195	195	195
Ginger (Local)	10 gm/pkt	48	96	96	96	96	96	96	96	96	96
Japanese Green (Mibu-)	10 gm/pkt	41	10	10	10	10	15	15	15	15	15
Japanese Green (Taisai)	10 gm/pkt	10	10	10	10	10	15	15	15	15	15
Ladies Finger (PS)	10 gm/pkt	15	15	15	15	17	18	18	18	18	18
Lettuce (Great Lake)	5 gm/pkt	20	20	20	20	25	29	29	29	29	29

Sag (Him Beauty)	10 gm/pkt	10	10	10	10	14	15	15	-	-	-
Onion (OP/ B-Red)	10 gm/pkt	20	20	20	20	20	22	22	22	22	22
Onion (Pune Red)	10 gm/pkt	25	25	25	25	25	25	25	25	20	20
Peas (Mr. Rig). Hybrid	50 gm/pkt	10	10	10	10	11	13	13	13	13	13
Peas (Usui/Arkel)	50 gm/pkt	10	10	10	10	11	13	13	13	13	13
Beans (Pole bean white)	50 gm/pkt	14	10	14	10	11	-	18	18	18	18
Pumpkin (T-Kabuta)	10 gm/pkt	15	10	15	10	13	15	15	15	15	15
Radish (Ivory white)	10 gm/pkt	10	10	10	10	10	11	11	-	-	-
Radish (Minowase)	10 gm/pkt	10	10	10	10	10	13	13	13	13	13
Radish (Toki-shi)	10 gm/pkt	15	15	15	15	19	20	11	20	20	20
Spinach All (Green/Beet)	10 gm/pkt	10	10	10	10	10	13	20	13	13	13
Squaush (Zucchini)	10 gm/pkt	15	10	15	10	14	15	13	15	15	15
Tomato (PS-61)	5 gm/pkt	110	110	110	110	121	122	122	122	122	122
Tomato (Ratan/Roma)	5 gm/pkt	15	15	15	15	17	18	18	18	18	18
Turnip (PTWG)	10 gm/pkt	10	10	10	10	13	13	13	13	13	13
Water melon (Sugar Baby)	10 gm/pkt	15	15	15	15	18	22	22	22	22	22
Water melon (Hybrid)	10 gm/pkt	330	330	330	330	330	-	-	-	192	192
Potato Red (Desiree)	50 kg/bag	26	22	25	27	-	27	28	32	31	28
Potato White varieties	150 kg/bag	25	21	24	25	-	26	26	26	28	26

Source: NSC, DoA, MoAL

Table 7.8 Price of temperate fruit seedlings (2014-2023) (Value in Nu. per unit specified)

Cereal and Oilseed	Unit	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Almond (Kagzi)	Seedling	79	90	90	90	90	100	100	100	100	100
Apple (All varieties)	Seedling	72	80	80	80	80	90	90	90	90	90
Apricot (Shakharpara)	Seedling	79	90	90	90	90	100	100	100	100	100
Asparagus seedlings (MW)	Seedling	4	4	4	4	4	4	4	4	4	4
Cherry (Seneka/Jabouny)	Seedling	72	80	80	80	90	95	90	90	90	90
Chestnut (Jeuphu-1)	Seedling	46	50	50	50	50	60	60	60	60	60
Peach (N-wase/S-Hakuto)	Seedling	79	90	90	90	90	100	100	100	100	100
Pear (Hosui/Kosui/ Chujoro/William)	Seedling	70	75	75	75	75	96	96	96	96	96
Persimmon (Fuyu/Jiro)	Seedling	102	110	110	110	110	125	125	125	125	125
Plum (Santarosa/Stamley)	Seedling	79	90	90	90	90	100	100	100	100	100
Strawberry (Chandler)	Seedling	7	7	7	7	7	9	9	9	9	9
Walnut (Grafted-Kagzi)	Seedling	161	185	185	185	185	205	205	205	205	205

Source: NSC, DoA, MoAL

Table 7.9 Price of sub-tropical fruit seedlings (2014-2023) (Value in Nu. per unit specified)

Cereal and Oilseed	Unit	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Areca nut (Bhur S-1)	Seedling	33	33	40	40	40	55	55	55	55	55
Avocado (Hasa/Pink caton)	Seedling	133	133	135	135	135	150	150	-	150	150
Banana (Chini-Champa/Jahaji)	Seedling	23	25	40	40	40	50	50	50	50	50
Cardamom (seedling multiplied)	Secker	11	11	11	9	9	10	10	10	9	9
Cardamom (through seeds)	Seedling	13	13	13	13	-	-	10	9	9	9
Mandarin Orange (grafted)	Seedling	79	79	90	90	-	-	-	-	-	-
Mandarin Orange (seedlings)	Seedling	33	33	35	35	35	50	50	50	50	50
Gauva (L-49)	Seedling	36	36	45	45	45	45	45	45	45	45
Jack fruit (Bhur S-1)	Seedling	13	13	15	15	15	21	21	21	21	21
Litchi (E-Beda-/Shahi)	Seedling	49	49	60	60	60	75	75	75	75	75
Mango graft (Langra/DS/AP/CH)	Seedling	68	68	75	75	75	85	85	85	85	85
Papaya	Seedling	13	13	15	15	15	23	23	23	23	23
Passion fruit (local)	Seedling	11	11	15	15	15	20	20	20	20	20
Pine apple (Sugar baby)	Seedling	30	30	35	35	35	25	25	25	24	24
Pomegranate (Bedana)	Seedling	28	28	30	30	30	50	50	50	46	46

Source: NSC, DoA, MoAL

Table 7.10 Price of fertilizers (2013-2022) (Value in Nu. per unit specified)

Fertilizer	Unit	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Urea (46 % N)	50 Kg pack	695	785	895	935	938	983	885	885	885	1,524	1,524
Urea (46% N)	10 Kg pack	148	165	190	200	220	218	218	218	218	352	352
Suphala (NPK 15:15:15/18:11:13)	50 Kg pack	1,337	1,490	1,690	1,785	1,870	1,876	1,876	1,876	1,876	3,016	3,016
Suphala (NPK 15:15:15/18:11:13)	20 Kg pack	546	605	690	730	780	775	775	775	775	-	-
Suphala (NPK 15:15:15)	10 Kg pack	-	-	-	-	400	396	-	-	-	-	-
SSP (16% P2O)	50 Kg pack	669	770	895	930	985	977	977	977	977	1,740	1,740
Bone Meal	50 Kg pack	1,337	1,335	1,335	2,840	2,840	2,065	2,065	2,065	2,065	-	-
MOP (60% K2O)	50 Kg pack	1,230	1,395	1,855	1,980	2,145	2,132	2,132	2,132	2,132	2,132	2,132
Borax (20% Boron minimum)	5 Kg pack	1,185	1,230	1,230	870	945	938	938	938	938	938	938
DAP (18%N 46%P2O)	50 Kg pack	2,135	2,405	2,405	2,405	2,405	-	-	-	2,405	-	-
CAN	50 Kg pack	2,670	1,335	1,335	1,335	1,335	-	-	-	-	-	-

Source: NSC, DoA, MoAL

CHAPTER 8: METEOROLOGY STATISTICS

For agriculture, water is one of the most important natural resources. The main source of water is rainfall which keeps the rivers flowing, lakes filled, and mountains peaks snow-covered or directly supplies moisture to the crops.

This chapter presents data on total and monthly precipitation (in millimeters) at 20 weather stations which are set up and managed by National Centre for Hydrology and Meteorology (NCHM) across the country. The chapter also presents data on temperature and other meteorological items of agricultural significance.

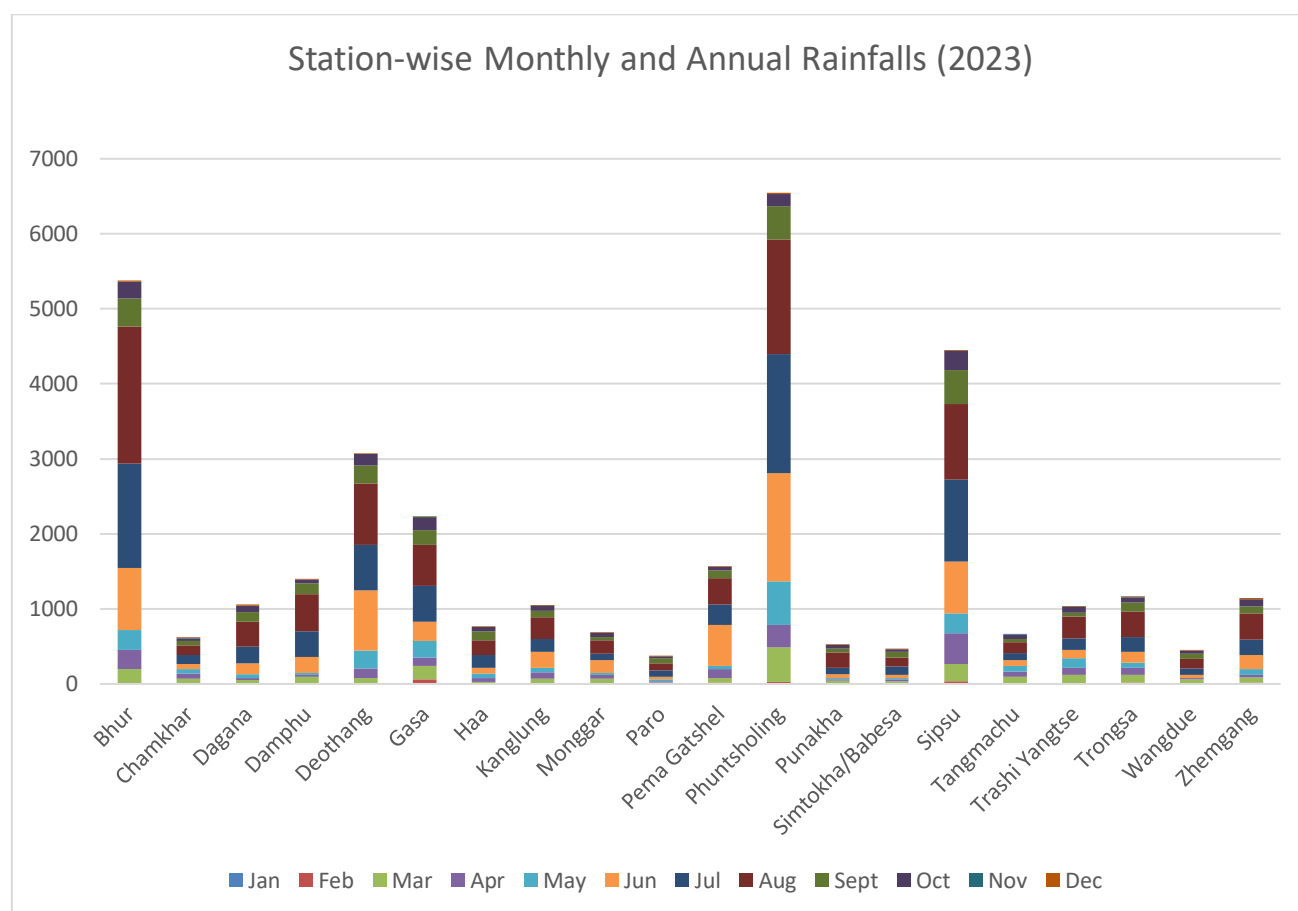


Figure 34: Station-wise Monthly and Annual Rainfalls (2023) (in mm)

Table 8.1 (1) Station-wise Monthly and Annual Rainfalls during 2023 (figure in mm)

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Annual
Bhur	0.00	-	198.90	255.90	263.20	826.00	1,396.30	1,823.40	379.20	217.90	0.00	15.91	5,376.71
Chamkhar	0.00	10.10	56.80	72.80	55.00	71.00	124.30	120.10	62.90	38.10	5.30	1.60	618.00
Dagana	0.00	0.80	51.00	23.10	54.70	147.60	219.80	328.30	130.50	88.10	0.00	15.80	1,059.70
Damphu	0.00	0.00	97.80	22.50	23.25	217.40	336.60	502.60	138.00	51.60	0.00	10.70	1,400.45
Deothang	0.00	11.60	70.00	123.00	244.50	802.20	606.50	817.00	237.50	157.00	0.00	4.00	3,073.30
Gasa	2.00	60.10	181.60	104.60	224.90	253.80	481.20	543.20	198.90	163.60	13.40	11.80	2,239.10
Haa	0.00	0.40	30.20	45.70	64.00	76.70	172.40	194.10	119.80	54.00	0.00	9.60	766.90
Kanglung	0.00	8.60	65.20	81.50	62.30	209.40	168.40	293.70	86.90	67.60	2.40	7.20	1,053.20
Monggar	0.00	5.60	61.60	56.90	26.10	167.20	87.90	176.00	42.20	63.00	0.00	8.80	695.30
Paro	0.00	0.20	20.60	19.00	22.90	33.50	88.70	88.30	70.00	29.00	0.00	4.40	376.60
Pema Gatshel	0.00	17.40	64.20	112.50	47.80	544.20	273.00	346.50	108.10	52.90	0.00	3.00	1,569.60
Phuntsholing	0.00	27.80	458.90	301.70	574.80	1,449.40	1,582.20	1,529.90	446.50	161.20	0.00	16.70	6,549.10
Punakha	0.00	0.00	46.40	13.20	14.90	58.20	80.40	204.00	58.20	43.20	0.00	3.80	522.30
Simtokha/Babesa	0.00	1.20	33.70	28.60	14.70	46.10	105.20	118.10	76.80	35.70	0.00	4.60	464.70
Sipsu	0.00	35.60	228.60	411.20	266.60	685.90	1,095.20	1,008.00	453.40	251.90	0.60	11.20	4,448.20
Tangmachu	1.30	11.60	81.50	68.10	79.10	76.60	89.10	149.40	39.40	61.40	1.40	0.00	658.90
Trashigang	0.00	8.40	111.80	95.00	127.80	109.70	152.60	289.50	56.70	73.80	3.60	3.60	1,032.50
Trongsa	0.00	22.30	102.30	90.80	70.50	145.10	194.80	343.10	116.90	71.80	1.70	0.40	1,159.70
Wangdue	0.00	0.20	60.30	16.20	1.50	46.60	83.00	127.80	70.60	38.80	0.00	3.60	448.60
Zhemgang	0.00	15.90	73.20	35.90	70.00	190.60	201.00	352.60	96.40	90.20	2.70	18.90	1,147.40

Source: NCHM

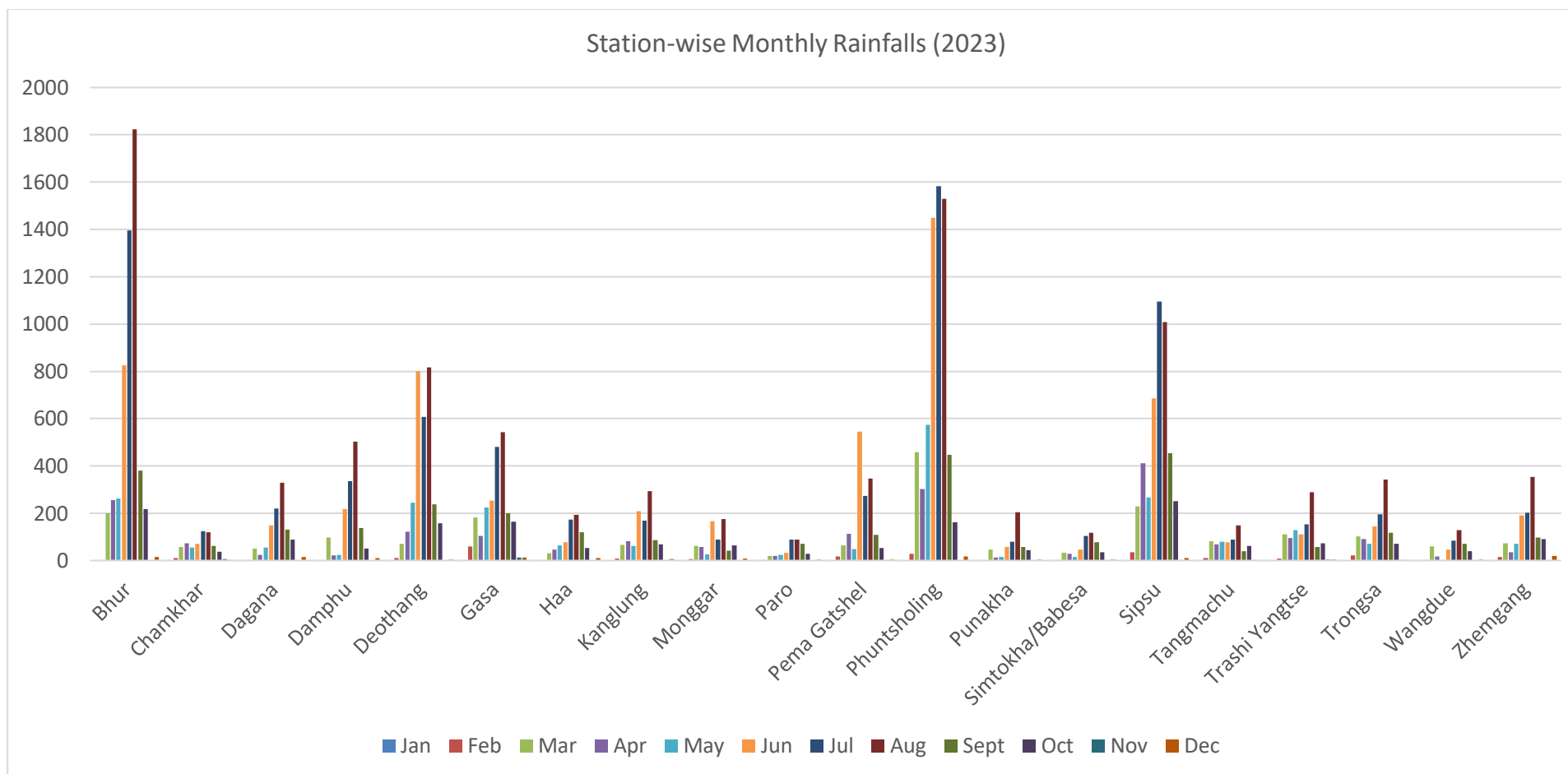


Figure 35: Station-wise Monthly Rainfalls during 2023 (in mm)

Table 8.1 (2) Station-wise Monthly and Annual Rainfalls during 2023 (figure in mm)

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Annual
Bhur	0.00	-	198.90	255.90	263.20	826.00	1,396.30	1,823.40	379.20	217.90	0.00	15.91	5,376.71
Chamkhar	0.00	10.10	56.80	72.80	55.00	71.00	124.30	120.10	62.90	38.10	5.30	1.60	618.00
Dagana	0.00	0.80	51.00	23.10	54.70	147.60	219.80	328.30	130.50	88.10	0.00	15.80	1,059.70
Damphu	0.00	0.00	97.80	22.50	23.25	217.40	336.60	502.60	138.00	51.60	0.00	10.70	1,400.45
Deothang	0.00	11.60	70.00	123.00	244.50	802.20	606.50	817.00	237.50	157.00	0.00	4.00	3,073.30
Gasa	2.00	60.10	181.60	104.60	224.90	253.80	481.20	543.20	198.90	163.60	13.40	11.80	2,239.10
Haa	0.00	0.40	30.20	45.70	64.00	76.70	172.40	194.10	119.80	54.00	0.00	9.60	766.90
Kanglung	0.00	8.60	65.20	81.50	62.30	209.40	168.40	293.70	86.90	67.60	2.40	7.20	1,053.20
Monggar	0.00	5.60	61.60	56.90	26.10	167.20	87.90	176.00	42.20	63.00	0.00	8.80	695.30
Paro	0.00	0.20	20.60	19.00	22.90	33.50	88.70	88.30	70.00	29.00	0.00	4.40	376.60
Pema Gatshel	0.00	17.40	64.20	112.50	47.80	544.20	273.00	346.50	108.10	52.90	0.00	3.00	1,569.60
Phuntsholing	0.00	27.80	458.90	301.70	574.80	1,449.40	1,582.20	1,529.90	446.50	161.20	0.00	16.70	6,549.10
Punakha	0.00	0.00	46.40	13.20	14.90	58.20	80.40	204.00	58.20	43.20	0.00	3.80	522.30
Simtokha/Babesa	0.00	1.20	33.70	28.60	14.70	46.10	105.20	118.10	76.80	35.70	0.00	4.60	464.70
Sipsu	0.00	35.60	228.60	411.20	266.60	685.90	1,095.20	1,008.00	453.40	251.90	0.60	11.20	4,448.20
Tangmachu	1.30	11.60	81.50	68.10	79.10	76.60	89.10	149.40	39.40	61.40	1.40	0.00	658.90
Trashig Yangtse	0.00	8.40	111.80	95.00	127.80	109.70	152.60	289.50	56.70	73.80	3.60	3.60	1,032.50
Trongsa	0.00	22.30	102.30	90.80	70.50	145.10	194.80	343.10	116.90	71.80	1.70	0.40	1,159.70
Wangdue	0.00	0.20	60.30	16.20	1.50	46.60	83.00	127.80	70.60	38.80	0.00	3.60	448.60
Zhemgang	0.00	15.90	73.20	35.90	70.00	190.60	201.00	352.60	96.40	90.20	2.70	18.90	1,147.40

Source: NCHM

Table 8.1 (2) Station-wise Annual Rainfall 2014-2023 (figure in mm)

Station	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Bhur	3,910.20	5,260.40	5,374.10	5,930.30	5,571.70	5,070.20	6,759.40	5,024.80	5,326.30	5,376.20
Chamkhar	677.40	705.50	740.10	837.80	531.20	618.70	652.80	670.70	562.40	618.00
Dagana	1,227.90	1,395.10	1,304.80	1,147.50	833.70	985.90	1,316.70	884.00	992.80	1,059.70
Damphu	1,514.50	1,652.20	1,894.70	1,395.80	1,130.70	1,253.00	1,907.00	1,301.50	1,070.70	1,399.70
Deothang	3,374.60	3,839.90	3,639.80	3,581.70	3,277.40	4,489.80	4,824.60	2,783.50	4,942.70	3,073.30
Gasa	2,063.90	2,590.20	1,940.00	2,428.40	2,361.40	1,980.90	2,508.30	2,455.40	2,244.80	2,239.10
Haa	844.40	1,042.90	976.80	858.40	726.20	796.30	974.80	980.40	794.40	766.90
Kanglung	944.80	1,062.40	1,043.60	1,115.60	834.00	1,219.10	1,348.40	1,055.30	1,165.90	1,053.20
Monggar	907.60	874.70	987.20	1,024.80	672.14	1,065.20	1,039.90	834.40	768.60	695.30
Paro	561.80	646.40	695.50	386.80	313.00	423.00	472.70	550.90	403.10	376.60
Pema Gatshel	1,437.80	1,692.30	1,659.00	1,649.60	1,136.20	1,790.30	2,347.60	1,497.10	2,031.00	1,569.60
Phuntsholing	-	1,852.30	3,226.50	4,979.40	6,145.70	5,463.60	3,986.90	3,222.70	8,255.80	6,549.10
Punakha	696.00	836.50	624.20	786.40	758.50	575.90	553.10	798.60	688.80	522.30
Simtokha/Babesa	672.30	563.00	711.90	606.70	394.10	462.10	490.10	575.10	535.80	464.70
Sipsu	4,111.70	5,585.50	5,137.80	5,968.40	4,912.70	5,266.55	6,324.20	5,991.30	5,064.30	4,448.20
Tangmachu	675.70	775.50	713.10	943.50	586.40	801.80	776.80	-	644.50	658.90
Trashi Yangtse	959.20	1,261.90	1,246.50	1,240.10	1,134.50	920.99	1,117.80	1,145.90	1,081.40	1,032.50
Trongsa	1,246.90	1,457.90	1,368.00	1,567.20	1,193.10	1,316.60	1,481.80	1,225.60	1,216.70	1,159.70
Wangdue	513.20	774.60	626.60	569.60	460.60	494.10	643.00	771.80	432.70	448.60
Zhemgang	1,410.90	1,555.40	1,567.00	1,358.80	1,024.10	1,451.80	1,494.20	1,343.90	1,368.40	1,147.40

Source: NCHM

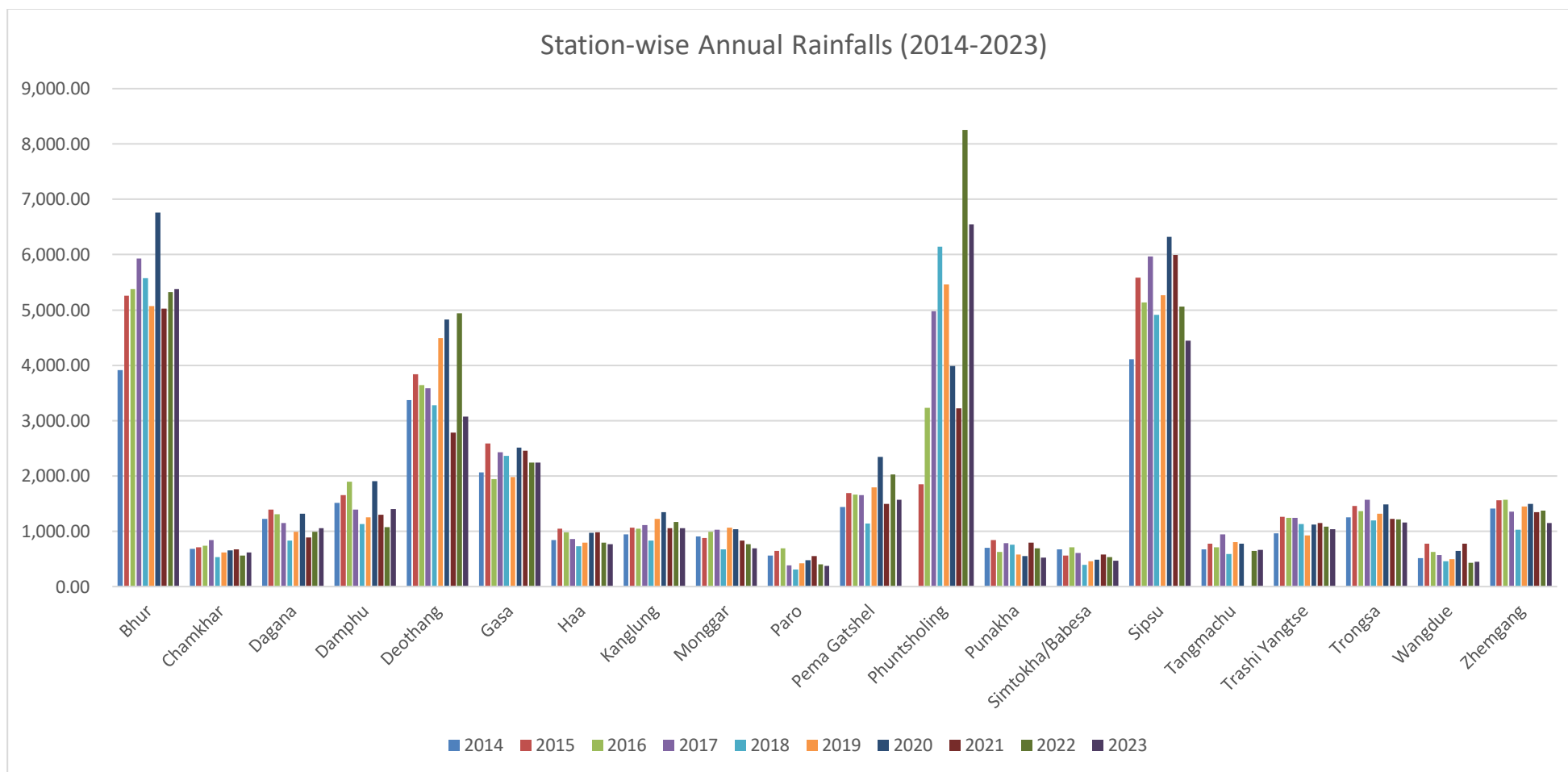


Figure 36: Station-wise Annual Rainfall 2014-2023 (in mm)

Table 8.2 (1) Station-wise Monthly and Annual Average of Temperature (max.) during 2023 (figure in °C)

Station	Jan	Feb	March	April	May	June	July	Aug	Sep	oct	Nov	Dec	Average
Bhur	23.72	-	26.58	29.33	29.89	30.64	32.31	30.98	33.88	32.31	30.23	26.23	29.65
Chamkhar	12.34	12.86	14.69	17.85	18.68	21.72	21.98	21.55	22.23	19.23	17.35	13.61	17.84
Dagana	20.00	20.13	22.19	25.17	26.63	25.37	24.94	24.42	26.68	24.94	24.60	21.74	23.90
Damphu	16.16	18.29	19.23	21.42	21.42	23.92	24.08	23.89	25.15	22.71	21.00	17.76	21.25
Deothang	21.23	22.21	21.77	24.73	25.27	25.07	30.74	29.48	29.42	27.02	25.80	20.79	25.29
Gasa	9.26	9.89	11.32	15.23	15.48	20.52	20.39	20.52	22.60	18.73	17.48	13.89	16.28
Haa	11.19	11.41	12.44	15.68	17.31	20.25	20.65	20.69	21.42	17.69	15.68	12.97	16.45
Kanglung	15.94	16.95	19.53	22.57	23.48	24.82	26.48	24.92	27.45	24.81	22.75	19.13	22.40
Monggar	16.19	18.36	20.23	22.87	24.19	25.20	25.60	24.68	27.10	23.74	21.78	17.66	22.30
Paro	15.08	15.46	16.44	20.38	22.29	25.23	25.32	25.08	24.88	20.63	18.88	15.81	20.46
Pema Gatshel	18.06	18.29	20.94	24.55	25.47	25.85	26.52	25.71	28.30	26.18	24.65	20.05	23.71
Phuntsholing	25.42	27.52	27.90	31.68	31.34	31.32	30.69	30.26	32.45	30.76	30.70	28.60	29.89
Punakha	23.73	25.04	28.18	30.47	30.72	32.01	32.27	31.41	32.55	31.35	27.75	25.85	29.28
Simtokha/Babesa	14.63	15.57	16.58	20.53	22.87	26.58	25.94	25.16	26.09	21.50	19.74	16.11	20.94
Sispu	24.16	25.13	27.10	29.95	30.35	29.63	29.79	29.47	31.95	30.65	30.17	26.84	28.76
Tangmachu	20.34	21.30	23.58	26.07	27.34	29.50	29.90	27.76	30.63	26.81	25.22	21.76	25.85
Trashi Yangtse	16.10	17.07	22.10	22.70	23.06	25.33	25.87	25.02	27.22	23.06	20.63	17.82	22.17
Trongsa	14.99	14.41	16.56	19.51	20.66	21.76	22.29	21.58	24.39	20.71	18.83	16.24	19.33
Wangdue	21.29	21.45	24.42	27.88	29.71	30.90	30.47	29.31	30.68	28.66	25.50	22.63	26.91
Zhemgang	14.73	15.80	18.18	21.45	22.52	23.97	24.97	24.18	25.97	22.44	19.93	16.60	20.89

Source: NCHM

Table 8.2 (2) Station-wise Monthly and Annual Average of Temperature (min.) during 2023 (figure in °C)

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	AVERAGE
Bhur	14.23	-	20.31	22.33	24.34	24.30	24.32	23.84	23.88	20.69	17.32	14.58	20.92
Chamkhar	(1.53)	2.27	4.53	6.87	8.35	13.53	14.65	15.08	12.77	8.16	0.98	(1.02)	7.05
Dagana	6.32	8.95	10.82	13.18	15.34	18.48	19.39	19.52	18.57	14.50	11.05	8.45	13.71
Damphu	5.40	8.57	10.44	11.65	11.65	18.57	19.63	19.31	18.78	14.48	9.92	7.60	13.00
Deothang	10.42	13.09	15.52	17.35	18.37	20.97	22.94	21.87	22.17	20.05	15.95	12.32	17.58
Gasa	(2.95)	(0.36)	1.16	4.23	5.94	10.81	12.32	12.66	10.58	5.89	1.00	(1.39)	4.99
Haa	(6.52)	(1.00)	(0.06)	2.98	5.69	11.32	14.39	15.10	11.07	4.77	(2.32)	(4.15)	4.27
Kanglung	4.18	5.98	7.82	10.38	12.05	14.93	16.53	16.65	16.00	11.90	8.25	5.58	10.85
Monggar	6.94	9.64	10.97	13.47	15.10	18.40	18.87	19.00	18.68	14.63	10.90	8.53	13.76
Paro	(4.65)	0.57	2.45	4.83	7.77	13.17	14.15	14.42	12.65	6.71	0.17	(1.18)	5.92
Pema Gatshel	5.40	8.11	10.37	12.35	14.71	18.17	19.23	19.27	19.73	14.32	10.23	7.74	13.30
Phuntsholing	10.65	12.23	14.26	18.10	20.60	20.50	21.23	21.00	21.32	19.23	15.90	13.10	17.34
Punakha	7.90	11.98	14.03	16.37	18.17	21.70	23.13	23.08	22.17	18.26	11.35	9.58	16.48
Simtokha/Babesa	(4.21)	0.80	2.76	5.09	8.18	14.05	15.18	15.53	13.18	7.05	0.42	(1.37)	6.39
Sipsu	11.95	13.48	16.03	18.70	19.81	21.72	22.19	22.35	22.42	19.45	16.30	13.87	18.19
Tangmachu	7.85	10.70	12.16	16.34	17.16	20.22	21.27	22.00	20.28	20.13	10.85	9.13	15.68
Trashy Yangtse	1.89	5.69	6.18	8.58	10.68	15.63	16.92	17.40	15.82	10.53	4.38	2.81	9.71
Trongsa	2.36	5.02	6.45	8.33	10.52	15.10	16.00	16.21	14.53	9.79	4.90	3.00	9.35
Wangdue	5.40	10.04	11.69	13.97	16.47	20.67	21.13	21.13	20.37	15.58	9.70	6.91	14.42
Zhemgang	4.34	6.16	7.84	10.20	11.95	15.82	16.74	17.21	16.13	11.35	6.68	4.55	10.75

Source: NCHM

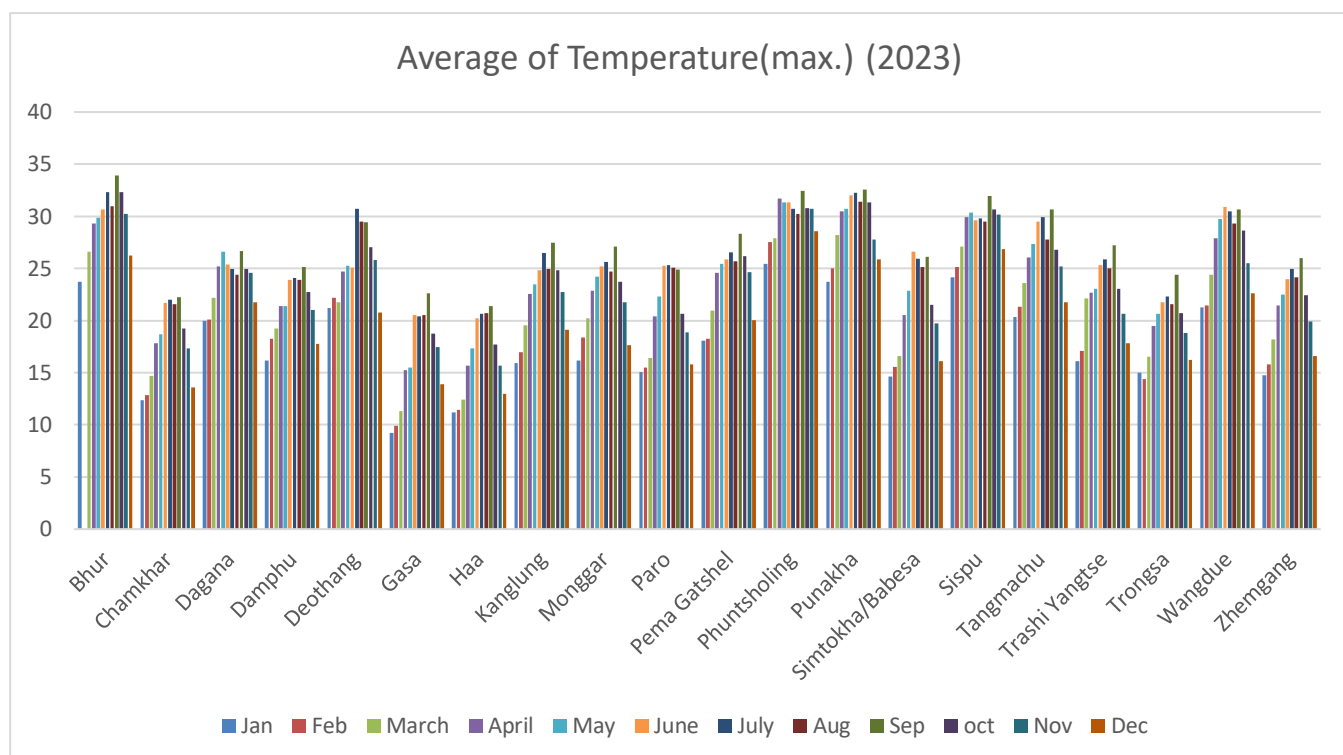


Figure 37:Station-wise Monthly Average of Temperature (max.) during 2023 (in °C)

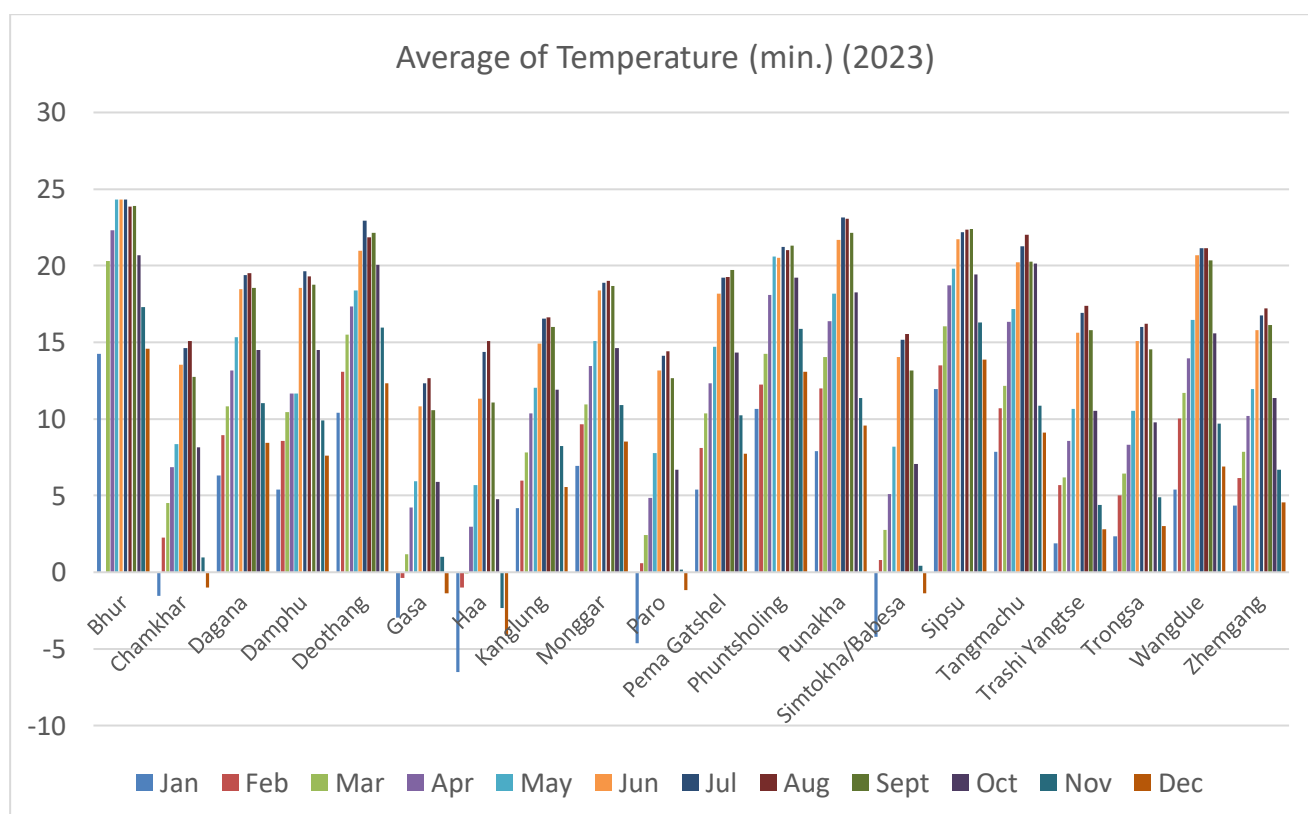


Figure 38:Station-wise Monthly Average of Temperature (min.) during 2023 (in °C)

Table 8.2 (3) Station-wise Annual Average of Temperature (max.) (2015-2023) (figure in °C)

Station	2015	2016	2017	2018	2019	2020	2021	2022	2023
Bhur	24.03	25.98	25.96	25.19	24.17	27.25	27.93	27.97	29.65
Chamkhar	18.15	18.32	18.29	18.03	17.91	17.59	18.21	17.88	17.84
Dagana	18.29	18.7	21.59	23.03	22.67	22.4	22.97	23.35	23.90
Damphu	19.35	21.24	21.07	20.74	20.55	20.18	20.58	20.98	21.25
Deothang	26.92	27.66	27.62	27.28	27.54	23.88	24.95	24.38	25.29
Gasa	14.39	15.69	15.72	14.44	14.52	14.31	14.96	15	16.28
Haa	15.64	16.09	15.91	15.27	15.26	14.91	15.02	15.61	16.45
Kanglung	24.88	25.26	24.22	23.96	22.3	21.1	21.47	21.09	22.40
Monggar	23.16	22.7	22.6	22.39	21.91	21.41	22.45	22.12	22.30
Paro	19.31	19.78	20.18	19.78	19.64	18.98	19.52	20.8	20.46
Pema Gatshel	21.34	21.92	22.04	21.99	21.79	21.45	22.92	22.83	23.71
Phuntsholing	30.36	30.39	28.93	28.89	28.84	27.77	28.02	29.01	29.89
Punakha	29.42	29.38	28.79	28.25	26.75	28.3	28.85	29.09	29.28
Simtokha/Babesa	22.26	22.89	22.83	22.71	20.42	19.52	20.09	20.59	20.94
Sipsu	28.10	28.66	29.13	28.05	27.87	27.15	27.88	27.73	28.76
Tangmachu	27.13	27.79	27.83	28.63	27.53	26.58	-	26.42	25.85
Trashie Yangtse	21.79	22.35	22.13	21.13	22.17	19.55	22.63	22.58	22.17
Trongsa	18.94	19.52	19.33	19.04	19.38	18.99	19.7	19.7	19.33
Wangdue	20.11	20.7	20.56	20.46	26.01	25.11	25.65	25.94	26.91
Zhemgang	27.12	27.4	26.89	27.3	20.06	19.96	20.12	20.13	20.89

Source: NCHM

Table 8.2 (6) Station-wise Annual Average of Temperature (min.) (2015-2023) (figure in °C)

Station	2015	2016	2017	2018	2019	2020	2021	2022	2023
Bhur	14.86	16.60	16.71	16.29	16.68	-	21.12	21.66	20.92
Chamkhar	6.61	6.95	6.77	6.15	6.56	6.67	7.16	6.87	7.05
Dagana	8.83	9.27	10.40	10.63	12.46	13.23	13.71	13.58	13.71
Damphu	13.31	13.67	13.61	13.04	13.19	-	13.47	13.37	13.00
Deothang	20.99	21.58	20.60	20.47	20.64	16.48	17.20	16.63	17.58
Gasa	2.21	5.05	5.00	4.62	4.67	4.48	4.94	4.74	4.99
Haa	3.50	4.78	4.57	4.30	4.52	4.58	4.94	4.56	4.28
Kanglung	10.12	10.45	10.27	9.91	10.38	10.35	10.65	10.71	10.85
Monggar	12.68	13.50	13.47	12.99	13.13	13.22	13.55	13.50	13.76
Paro	6.16	6.61	6.11	5.78	6.23	6.37	7.08	6.10	5.92
Pema Gatshel	12.85	13.18	13.11	12.54	12.50	12.49	13.16	12.99	13.30
Phuntsholing	17.94	20.76	19.34	17.07	16.92	16.28	16.07	17.19	17.34
Punakha	15.42	15.51	15.25	15.00	16.39	15.94	16.61	16.47	16.48
Simtokha	7.39	7.42	6.98	6.07	6.42	6.27	6.76	6.78	6.39
Sipsu	18.29	18.76	18.46	17.93	17.94	17.90	18.30	18.05	18.19
Tangmachu	13.56	14.00	13.99	13.23	13.64	13.81	-	15.16	15.68
Trashigang	9.23	9.68	9.58	9.44	9.52	5.55	10.21	9.77	9.71
Trongsa	9.45	9.65	9.21	9.14	9.26	-	9.50	9.57	9.35
Wangdue	11.41	11.97	11.61	10.82	14.98	15.62	16.15	15.68	14.42
Zhemgang	13.38	13.86	14.09	14.05	10.77	10.70	10.93	10.94	10.75

Source: NCHM

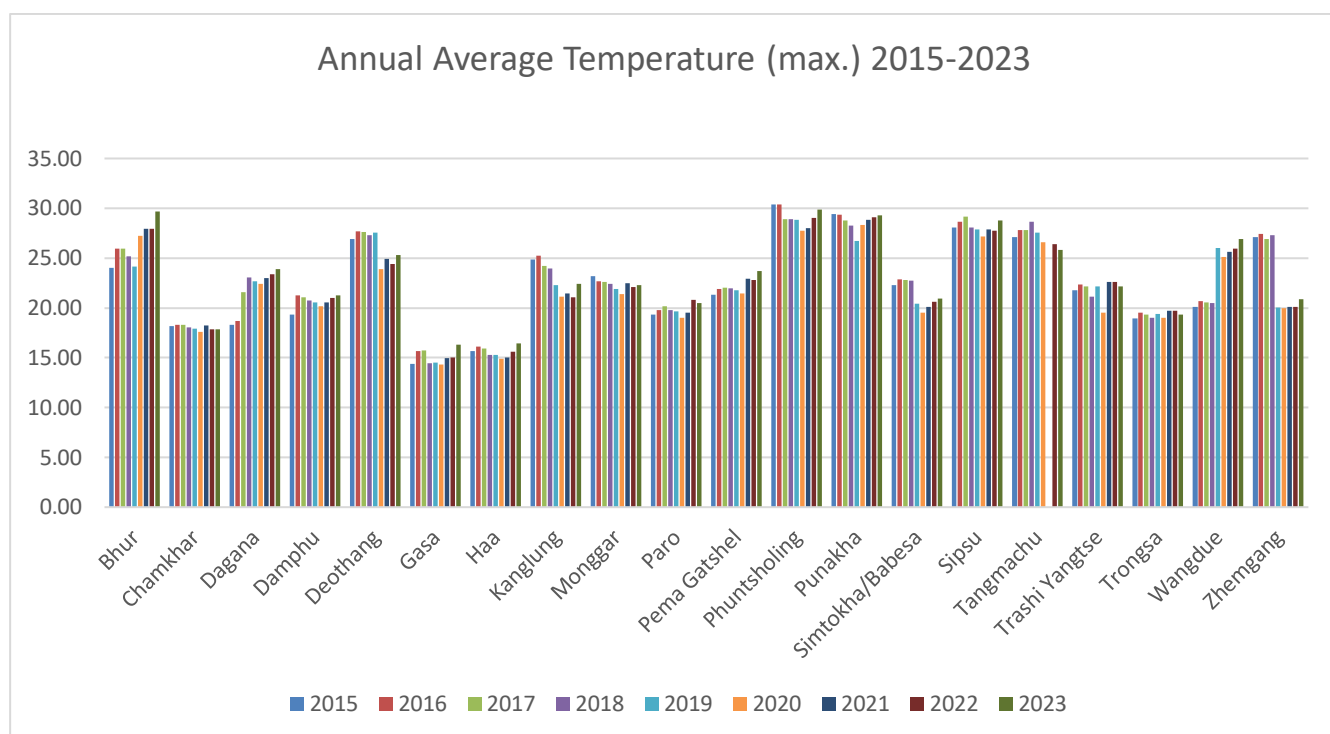


Figure 39: Station-wise Annual Average of Temperature (max.) (2015-2023) (figure in °C)

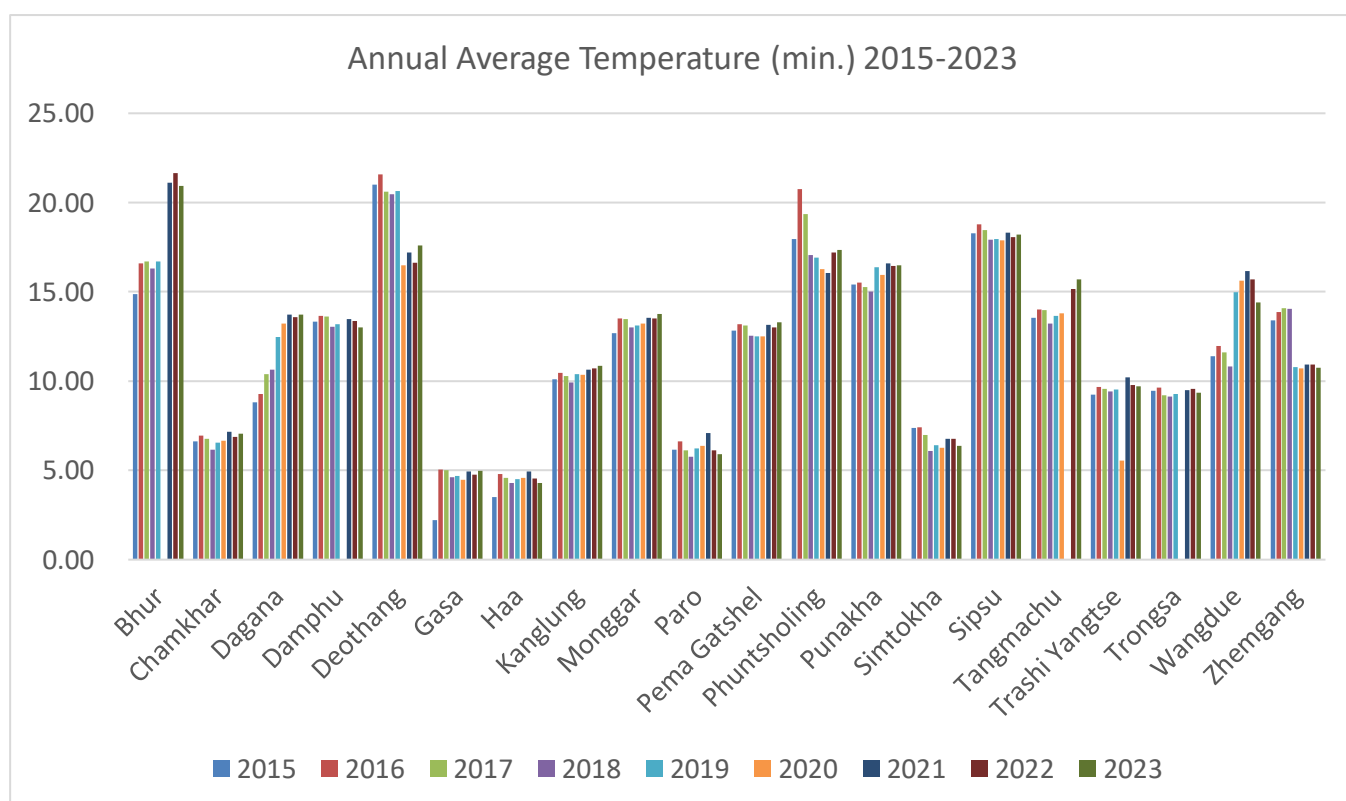


Figure 40: Station-wise Annual Average of Temperature (min.) (2015-2023) (figure in °C)

Table 8.3 (1) Station-wise Meteorology Information during 2023

Station	Indicator		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Bhur	Total Rainfall (mm)		0.0	-	198.9	255.9	263.2	826.0	1,396.3	1,823.4	379.2	217.9	0.0	15.9
	Average of Temperature (°C)	max.	23.7	-	26.6	29.3	29.9	30.6	32.3	31.0	33.9	32.3	30.2	26.2
		min.	14.23		20.31	22.33	24.34	24.30	24.32	23.84	23.88	20.69	17.32	14.58
	Average of RH (%)		67.6		70.5	71.1	77.9	87.7	87.5	92.3	79.7	76.0	60.0	69.4
	Average of Evap. Amount (mm)		-	-	0.7	1.1	1.6	3.3	0.8	0.7	0.9	1.6	1.4	2.8
	Average of Sunshine (hours)		6.2		4.6	4.8	4.5	2.7	2.6	1.8	5.2	6.7	8.8	7.2
Chamkhar	Total Rainfall (mm)		0.0	10.1	56.8	72.8	55.0	71.0	124.3	120.1	62.9	38.1	5.3	1.6
	Average of Temperature (°C)	max.	12.3	12.9	14.7	17.9	18.7	21.7	22.0	21.5	22.2	19.2	17.4	13.6
		min.	(1.5)	2.3	4.5	6.9	8.4	13.5	14.6	15.1	12.8	8.2	1.0	(1.0)
	Average of RH (%)		67.3	70.0	65.6	65.6	64.7	71.0	78.9	80.6	73.1	73.9	65.6	76.2
	Average of Evap. Amount (mm)		2.6	2.3	2.7	3.6	3.8	3.5	3.1	3.1	4.4	2.8	2.5	3.1
	Average of Sunshine (hours)		6.8	4.4	5.1	6.1	4.2	4.9	3.4	2.9	5.5	6.0	6.5	5.8
Dagana	Total Rainfall (mm)		0.0	0.8	51.0	23.1	54.7	147.6	219.8	328.3	130.5	88.1	0.0	15.8
	Average of Temperature (°C)	max.	20.0	20.1	22.2	25.2	26.6	25.4	24.9	24.4	26.7	24.9	24.6	21.7
		min.	6.3	8.9	10.8	13.2	15.3	18.5	19.4	19.5	18.6	14.5	11.1	8.5
	Average of RH (%)		50.5	58.5	62.4	59.6	63.9	83.1	91.8	94.4	79.5	69.6	47.0	49.5
	Average of Evap. Amount (mm)		2.5	1.6	2.1	2.9	3.2	2.6	1.7	2.0	2.9	2.6	2.7	2.3
	Average of Sunshine (hours)		6.6	4.1	4.2	5.6	3.4	2.2	2.0	2.3	5.3	6.7	7.8	6.7

Source: NCHM

Table 8.3 (2) Station-wise Meteorology Information during 2023

Station	Indicator		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Dampphu	Total Rainfall (mm)		0.0	0.0	97.8	22.5	23.3	217.4	336.6	502.6	138.0	51.6	0.0	10.7
	Average of Temperature (°C)	max.	16.2	18.3	19.2	21.4	21.4	23.9	24.1	23.9	25.2	22.7	21.0	17.8
		min.	5.4	8.6	10.4	11.7	11.7	18.6	19.6	19.3	18.8	14.5	9.9	7.6
	Average of RH (%)		86	87	84	79	78	90	90	96	98	93	79	79
	Average of Evap. Amount (mm)		2.1	1.7	2.4	3.9	4.1	2.9	2.1	2.1	3.3	3.4	4.2	2.0
	Average of Sunshine (hours)		6.7	6.8	5.3	5.3	7.3	2.5	2.8	3.6	7.4	5.9	7.8	6.4
Deothang	Total Rainfall (mm)		0.0	11.6	70.0	123.0	244.5	802.2	606.5	817.0	237.5	157.0	0.0	4.0
	Average of Temperature (°C)	max.	21.2	22.2	21.8	24.7	25.3	25.1	30.7	29.5	29.4	27.0	25.8	20.8
		min.	10.4	13.1	15.5	17.4	18.4	21.0	22.9	21.9	22.2	20.0	16.0	12.3
	Average of RH (%)		52.8	59.0	64.3	66.1	75.7	87.3	86.5	89.0	80.9	68.6	53.4	60.7
	Average of Evap. Amount (mm)		2.0	1.9	2.4	2.2	2.6	1.8	0.9	0.4	1.3	1.6	2.6	2.1
	Average of Sunshine (hours)		5.9	4.3	4.1	3.4	1.9	1.1	1.1	1.4	3.4	4.2	5.8	4.4
Gasa	Total Rainfall (mm)		2.00	60.10	181.60	104.60	224.90	253.80	481.20	543.20	198.90	163.60	13.40	11.80
	Average of Temperature (°C)	max.	9.26	9.89	11.32	15.23	15.48	20.52	20.39	20.52	22.60	18.73	17.48	13.89
		min.	(2.95)	(0.36)	1.16	4.23	5.94	10.81	12.32	12.66	10.58	5.89	1.00	(1.39)
	Average of RH (%)		51.5	69.8	69.8	69.6	73.0	83.6	93.3	93.9	79.6	80.0	57.5	60.3
	Average of Evap. Amount (mm)		0.7	0.5	0.3	1.4	0.6	1.3	0.2	0.3	1.6	1.2	1.4	1.0
	Average of Sunshine (hours)		5.8	2.7	3.1	4.4	3.4	3.2	1.3	1.9	5.5	4.6	6.8	5.8

Source: NCHM

Table 8.3 (3) Station-wise Meteorology Information during 2023

Station	Indicator		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Haa	Total Rainfall (mm)		0.00	0.40	30.20	45.70	64.00	76.70	172.40	194.10	119.80	54.00	0.00	9.60
	Average of Temperature (°C)	max.	11.19	11.41	12.44	15.68	17.31	20.25	20.65	20.69	21.42	17.69	15.68	12.97
		min.	(6.52)	(1.00)	(0.06)	2.98	5.69	11.32	14.39	15.10	11.07	4.77	(2.32)	(4.15)
	Average of RH (%)		65.6	61.8	58.0	57.1	58.2	61.4	84.5	93.0	77.9	-	45.8	63.1
	Average of Evap. Amount (mm)		-	-	1.7	2.8	2.7	2.8	1.8	1.7	2.8	2.4	1.7	1.2
	Average of Sunshine (hours)		6.2	4.6	4.1	5.1	3.4	1.0	1.1	1.1	4.3	5.0	5.3	5.4
Kanglung	Total Rainfall (mm)		0.00	8.60	65.20	81.50	62.30	209.40	168.40	293.70	86.90	67.60	2.40	7.20
	Average of Temperature (°C)	max.	15.94	16.95	19.53	22.57	23.48	24.82	26.48	24.92	27.45	24.81	22.75	19.13
		min.	4.18	5.98	7.82	10.38	12.05	14.93	16.53	16.65	16.00	11.90	8.25	5.58
	Average of RH (%)		71.9	73.0	73.8	68.4	74.0	82.4	86.5	91.5	81.1	72.2	64.4	71.8
	Average of Evap. Amount (mm)		1.2	1.3	1.3	2.4	1.9	2.1	1.7	1.4	2.2	1.6	1.6	1.5
	Average of Sunshine (hours)		5.6	4.6	5.2	5.7	4.3	3.6	3.3	2.1	5.5	6.2	6.7	5.6
Monggar	Total Rainfall (mm)		0.00	5.60	61.60	56.90	26.10	167.20	87.90	176.00	42.20	63.00	0.00	8.80
	Average of Temperature (°C)	max.	16.19	18.36	20.23	22.87	24.19	25.20	25.60	24.68	27.10	23.74	21.78	17.66
		min.	6.94	9.64	10.97	13.47	15.10	18.40	18.87	19.00	18.68	14.63	10.90	8.53
	Average of RH (%)		66.6	70.6	72.2	66.5	71.0	80.8	83.9	89.8	78.2	71.2	58.7	64.4
	Average of Evap. Amount (mm)		1.2	1.7	2.6	2.8	2.8	2.1	2.1	1.9	2.4	2.3	2.0	1.3
	Average of Sunshine (hours)		5.9	4.5	4.6	6.2	4.4	3.3	2.4	2.2	5.2	6.8	8.4	5.9

Source: NCHM

Table 8.3 (4) Station-wise Meteorology Information during 2023

Station	Indicator		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Paro	Total Rainfall (mm)		0.00	0.20	20.60	19.00	22.90	33.50	88.70	88.30	70.00	29.00	0.00	4.40
	Average of Temperature (°C)	max.	15.08	15.46	16.44	20.38	22.29	25.23	25.32	25.08	24.88	20.63	18.88	15.81
		min.	(4.65)	0.57	2.45	4.83	7.77	13.17	14.15	14.42	12.65	6.71	0.17	(1.18)
	Average of RH (%)		70.7	68.9	68.9	63.8	61.3	67.9	76.7	80.8	76.3	77.7	70.1	75.9
	Average of Evap. Amount (mm)		2.0	2.3	2.4	3.1	3.5	3.3	2.4	2.1	2.8	2.2	1.8	2.3
	Average of Sunshine (hours)		7.7	5.3	4.7	5.8	5.6	3.5	2.6	1.7	4.2	5.9	7.6	6.8
Pema Gatshel	Total Rainfall (mm)		0.00	17.40	64.20	112.50	47.80	544.20	273.00	346.50	108.10	52.90	0.00	3.00
	Average of Temperature (°C)	max.	18.06	18.29	20.94	24.55	25.47	25.85	26.52	25.71	28.30	26.18	24.65	20.05
		min.	5.40	8.11	10.37	12.35	14.71	18.17	19.23	19.27	19.73	14.32	10.23	7.74
	Average of RH (%)		85.3	85.4	82.1	78.8	81.7	87.8	90.1	90.6	87.7	85.1	80.7	83.3
	Average of Evap. Amount (mm)		-	-	-	-	-	-	-	-	-	-	-	-
	Average of Sunshine (hours)		5.7	4.4	4.7	5.7	5.8	3.1	2.5	1.9	4.8	6.2	6.5	4.7
Phuntsholing	Total Rainfall (mm)		0.00	27.80	458.90	301.70	574.80	1,449.40	1,582.20	1,529.90	446.50	161.20	0.00	16.70
	Average of Temperature (°C)	max.	25.42	27.52	27.90	31.68	31.34	31.32	30.69	30.26	32.45	30.76	30.70	28.60
		min.	10.65	12.23	14.26	18.10	20.60	20.50	21.23	21.00	21.32	19.23	15.90	13.10
	Average of RH (%)		61.1	64.2	72.1	68.2	66.9	78.5	83.7	87.8	78.5	70.1	55.7	62.0
	Average of Evap. Amount (mm)		2.7	2.2	3.4	4.5	3.8	2.4	2.1	1.2	2.7	4.5	6.4	4.3
	Average of Sunshine (hours)		3.7	2.7	3.7	4.7	3.9	2.4	2.4	1.2	2.9	4.7	7.0	5.3

Source: NCHM

Table 8.3 (5) Station-wise Meteorology Information during 2023

Station	Indicator		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Punakha	Total Rainfall (mm)		0.00	0.00	46.40	13.20	14.90	58.20	80.40	204.00	58.20	43.20	0.00	3.80
	Average of Temperature (°C)	max.	23.73	25.04	28.18	30.47	30.72	32.01	32.27	31.41	32.55	31.35	27.75	25.85
		min.	7.90	11.98	14.03	16.37	18.17	21.70	23.13	23.08	22.17	18.26	11.35	9.58
	Average of RH (%)		84.0	83.6	81.9	79.7	70.7	67.8	80.7	84.5	75.1	74.0	69.6	82.6
	Average of Evap. Amount (mm)		2.1	1.8	1.7	4.8	4.2	6.0	1.7	3.0	4.7	3.7	4.2	1.8
	Average of Sunshine (hours)		5.5	3.3	4.6	6.0	5.3	4.6	3.4	2.9	5.8	5.8	6.5	6.5
Simtokha/ Babesa	Total Rainfall (mm)		0.00	1.20	33.70	28.60	14.70	46.10	105.20	118.10	76.80	35.70	0.00	4.60
	Average of Temperature (°C)	max.	14.63	15.57	16.58	20.53	22.87	26.58	25.94	25.16	26.09	21.50	19.74	16.11
		min.	(4.21)	0.80	2.76	5.09	8.18	14.05	15.18	15.53	13.18	7.05	0.42	(1.37)
	Average of RH (%)		62.5	61.7	60.4	59.3	49.1	63.2	69.9	73.0	68.6	66.0	57.9	71.4
	Average of Evap. Amount (mm)		0.9	1.6	2.4	3.3	3.3	3.7	2.4	2.3	2.9	3.0	2.5	2.1
	Average of Sunshine (hours)		6.5	5.3	4.8	5.8	5.3	4.3	3.1	3.1	6.1	6.7	7.5	6.5
Sipsu	Total Rainfall (mm)		0.00	35.60	228.60	411.20	266.60	685.90	1,095.20	1,008.00	453.40	251.90	0.60	11.20
	Average of Temperature (°C)	max.	24.16	25.13	27.10	29.95	30.35	29.63	29.79	29.47	31.95	30.65	30.17	26.84
		min.	11.95	13.48	16.03	18.70	19.81	21.72	22.19	22.35	22.42	19.45	16.30	13.87
	Average of RH (%)		55.0	61.8	64.9	59.6	62.1	80.8	85.7	89.2	79.9	69.1	53.0	57.5
	Average of Evap. Amount (mm)		2.8	2.1	2.6	2.4	2.8	1.7	1.5	1.5	2.1	2.7	3.5	3.1
	Average of Sunshine (hours)		5.6	3.5	3.9	5.2	5.7	2.7	2.0	1.5	4.0	6.4	8.1	6.2

Source: NCHM

Table 8.3 (6) Station-wise Meteorology Information during 2023

Station	Indicator		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Tangmachu	Total Rainfall (mm)		1.3	11.6	81.5	68.1	79.1	76.6	89.1	149.4	39.4	61.4	1.4	0.0
	Average of Temperature (°C)	max.	20.3	21.3	23.6	26.1	27.3	29.5	29.9	27.8	30.6	26.8	25.2	21.8
		min.	7.9	10.7	12.2	16.3	17.2	20.2	21.3	22.0	20.3	20.1	10.9	9.1
	Average of RH (%)		77.5	72.9	76.2	75.4	77.3	82.5	86.2	87.3	84.2	83.9	82.9	86.1
	Average of Evap. Amount (mm)		0.3	0.8	0.6	1.7	0.8	0.6	0.5	0.4	0.5	0.4	0.3	1.0
	Average of Sunshine (hours)		5.9	3.7	4.5	4.1	4.7	3.5	2.7	3.8	5.8	6.2	7.4	5.4
Trashhi Yangtse	Total Rainfall (mm)		0.0	8.4	111.8	95.0	127.8	109.7	152.6	289.5	56.7	73.8	3.6	3.6
	Average of Temperature (°C)	max.	16.1	17.1	22.1	22.7	23.1	25.3	25.9	25.0	27.2	23.1	20.6	17.8
		min.	1.9	5.7	6.2	8.6	10.7	15.6	16.9	17.4	15.8	10.5	4.4	2.8
	Average of RH (%)		73.1	76.8	80.7	78.4	72.3	78.8	84.8	85.2	79.2	77.7	70.7	78.2
	Average of Evap. Amount (mm)		1.8	0.2	2.8	0.4	0.6	0.9	1.1	1.4	2.4	2.2	1.9	1.6
	Average of Sunshine (hours)		5.6	2.9	3.1	3.7	4.0	3.4	2.3	2.2	4.9	5.7	6.7	5.6
Trongsa	Total Rainfall (mm)		0.00	22.30	102.30	90.80	70.50	145.10	194.80	343.10	116.90	71.80	1.70	0.40
	Average of Temperature (°C)	max.	14.99	14.41	16.56	19.51	20.66	21.76	22.29	21.58	24.39	20.71	18.83	16.24
		min.	2.36	5.02	6.45	8.33	10.52	15.10	16.00	16.21	14.53	9.79	4.90	3.00
	Average of RH (%)		73.6	83.8	77.6	73.9	78.6	83.7	85.6	89.9	81.3	79.0	71.9	74.0
	Average of Evap. Amount (mm)		1.4	2.9	1.7	2.3	2.2	1.9	1.5	1.3	2.3	1.9	1.5	1.3
	Average of Sunshine (hours)		6.1	3.7	4.3	5.6	5.1	2.9	1.7	1.5	5.0	5.9	7.5	5.5

Source: NCHM

Table 8.3 (7) Station-wise Meteorology Information during 2023

Station	Indicator		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Wangdue	Total Rainfall (mm)		0.00	0.20	60.30	16.20	1.50	46.60	83.00	127.80	70.60	38.80	0.00	3.60
	Average of Temperature (°C)	max.	21.29	21.45	24.42	27.88	29.71	30.90	30.47	29.31	30.68	28.66	25.50	22.63
		min.	5.40	10.04	11.69	13.97	16.47	20.67	21.13	21.13	20.37	15.58	9.70	6.91
	Average of RH (%)		78.6	77.2	72.2	68.8	64.3	71.0	79.2	83.7	77.5	76.7	76.4	76.5
	Average of Evap. Amount (mm)		2.7	2.5	3.3	4.5	4.9	4.9	4.2	3.5	4.9	3.8	2.9	2.2
	Average of Sunshine (hours)		5.6	3.7	4.7	6.0	5.0	4.4	3.5	3.2	5.6	5.0	4.8	4.0
Zhemgang	Total Rainfall (mm)		0.00	15.90	73.20	35.90	70.00	190.60	201.00	352.60	96.40	90.20	2.70	18.90
	Average of Temperature (°C)	max.	14.7	15.8	18.2	21.5	22.5	24.0	25.0	24.2	26.0	22.4	19.9	16.6
		min.	4.34	6.16	7.84	10.20	11.95	15.82	16.74	17.21	16.13	11.35	6.68	4.55
	Average of RH (%)		69.2	73.4	73.5	64.3	71.2	84.8	87.8	89.7	82.3	73.9	66.0	74.3
	Average of Evap. Amount (mm)		1.3	1.5	1.8	2.4	2.8	2.8	2.9	2.7	3.0	2.6	2.2	1.9
	Average of Sunshine (hours)		6.4	3.6	4.3	5.8	4.8	2.9	2.4	1.9	5.5	6.6	7.7	6.0

Source: NCHM

CHAPTER 9: EXPENDITURE

Government expenditure is aimed at delivering outputs like sectoral services to citizens, and the sectoral GDP is an important indicator of the sector's annual overall output. This chapter presents the government's sector-wise expenditures, sector-wise GDPs, and the ratio of the former to the latter, i.e. the sectoral GDP (as output) divided by the sectoral expenditure (as input) for nine years (2013-2021). (As the expenditure figures specific to the secondary and tertiary sectors are not published, all-sectors' figures and the primary-sector's figures are used for comparison. Since Expenditure figures reported in the Statistical Yearbook of Bhutan are organized in the fiscal year and don't synchronize with GDP figures (organized in calendar year), modified Expenditure figures are used. See footnote of Table 9.1 for details.)

The ratios (output/input ratio) obtained for all sectors (Table 9.1) ranged from 2.83 to 3.79 (the average being 3.29), and the ratios for the primary sector ranged from 2.97 to 4.43 (the average being 3.61), which suggests that the primary sector performed as well as, or slightly better than, all-sectors as a whole during 2013-2021 (Figure 41).

Likewise, correlation was tested between sector-wise expenditure and sector-wise GDP (by linear regression analysis) using the same data sets. (Again, only all-sector figures and the primary-sector figures are used.)

As shown in Figure 42 and Figure 43, the slope of 2.366 ($p < 0.001$) was obtained for all-sectors, whereas a steeper slope of 3.715 ($p < 0.005$) was obtained for the primary sector (crop, livestock and forestry). Here again, the result suggests that the primary sector performed as well as, or slightly better than, all-sectors combined when viewed in Expenditure-GDP ratio.

Table 9.1 GDP (total/primary sector), Government Expenditure (total/primary sector), Modified-Gov. Expenditure (total/primary sector) (Value in Million Nu.) and the GDP/M-Gov. Expenditure ratio (total/primary sector).

GDP (current price)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
GDP (all sectors)	112,107.20	125,557.90	138,242.37	156,076.60	168,753.30	176,672.95	192,647.77	182,107.42	204,664.41	227,813.72
GDP (primary sector)	13,499.73	15,380.78	16,835.40	19,013.35	21,819.45	23,940.81	24,916.97	28,596.47	32,326.30	33,422.58
Government Expenditure (current + capital)	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Gov. Expenditure (all sectors)	36,527.82	34,609.90	36,475.85	44,688.45	49,966.61	56,331.36	44,054.13	57,572.28	71,091.82	69,156.61
Gov. Expenditure (primary sector)	4,747.86	4,074.09	4,143.26	6,027.98	6,764.55	6,205.46	4,593.23	7,115.10	8,652.73	8,609.67
M-Gov. Expenditure (current + capital) (modified for calendar year)*	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
M-Gov. Expenditure (all sectors)	35,568.86	35,542.88	40,582.15	47,327.53	53,148.98	50,192.74	50,813.21	64,332.05	70,124.21	NA
M-Gov. Expenditure (primary sector)	4,410.97	4,108.67	5,085.62	6,396.26	6,485.00	5,399.34	5,854.16	7,883.91	8,631.20	NA
GDP/M-Expenditure Ratio	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
GDP/M-Expenditure (all sectors)	3.15	3.53	3.41	3.30	3.18	3.52	3.79	2.83	2.92	NA
GDP/M-Expenditure (primary sector)	3.06	3.74	3.31	2.97	3.36	4.43	4.26	3.63	3.75	NA

Source: National Accounts Statistics (with modification), NSB

*Note: "Government Expenditure" figures are modified from the published figures by calculating the mean of two consecutive years; e.g. the mean of 2012/13 and 2013/14 is used for 2013.

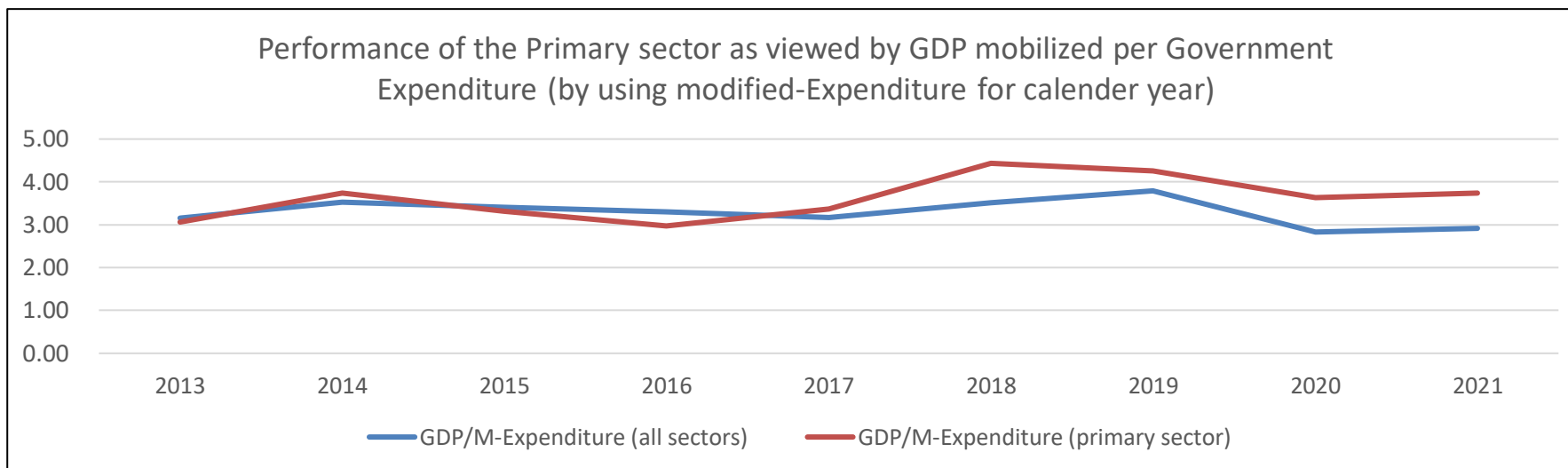


Figure 41: Performance of the Primary sector as viewed by GDP mobilized per Government Expenditure (2013-2021)

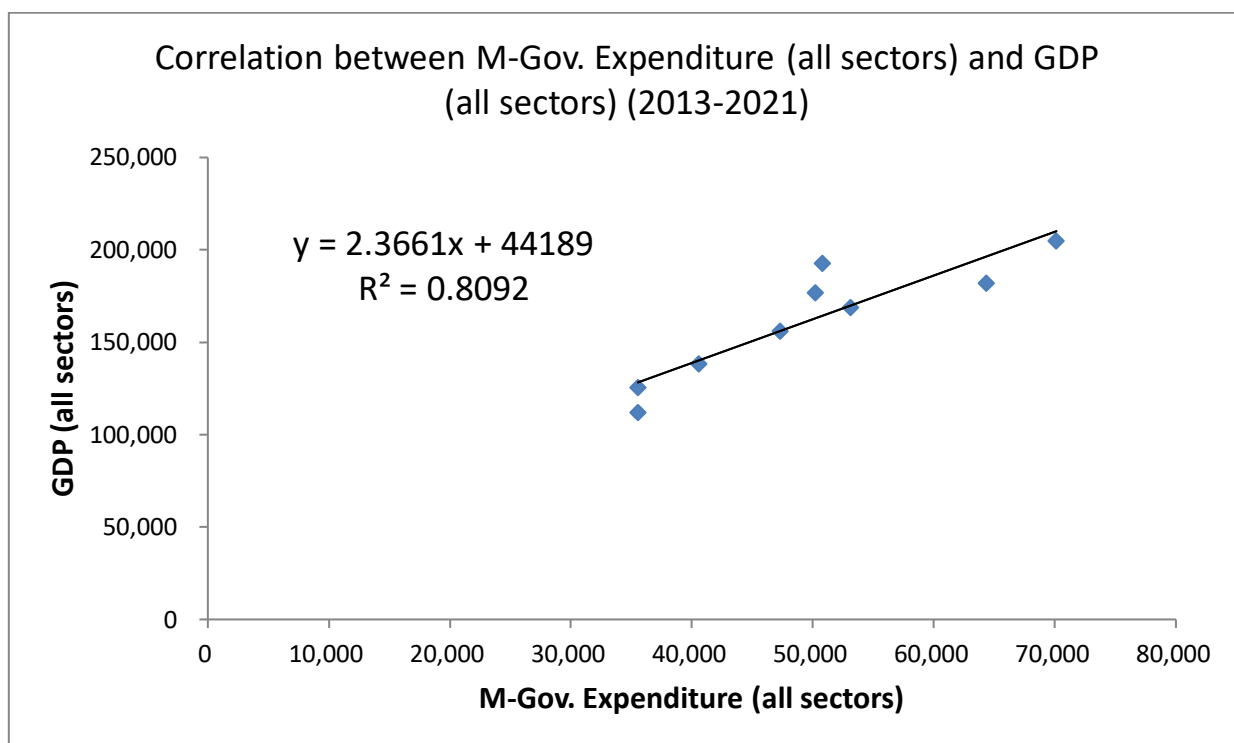


Figure 42: Correlation between Government Expenditure and GDP (all sectors) (2013-2021)

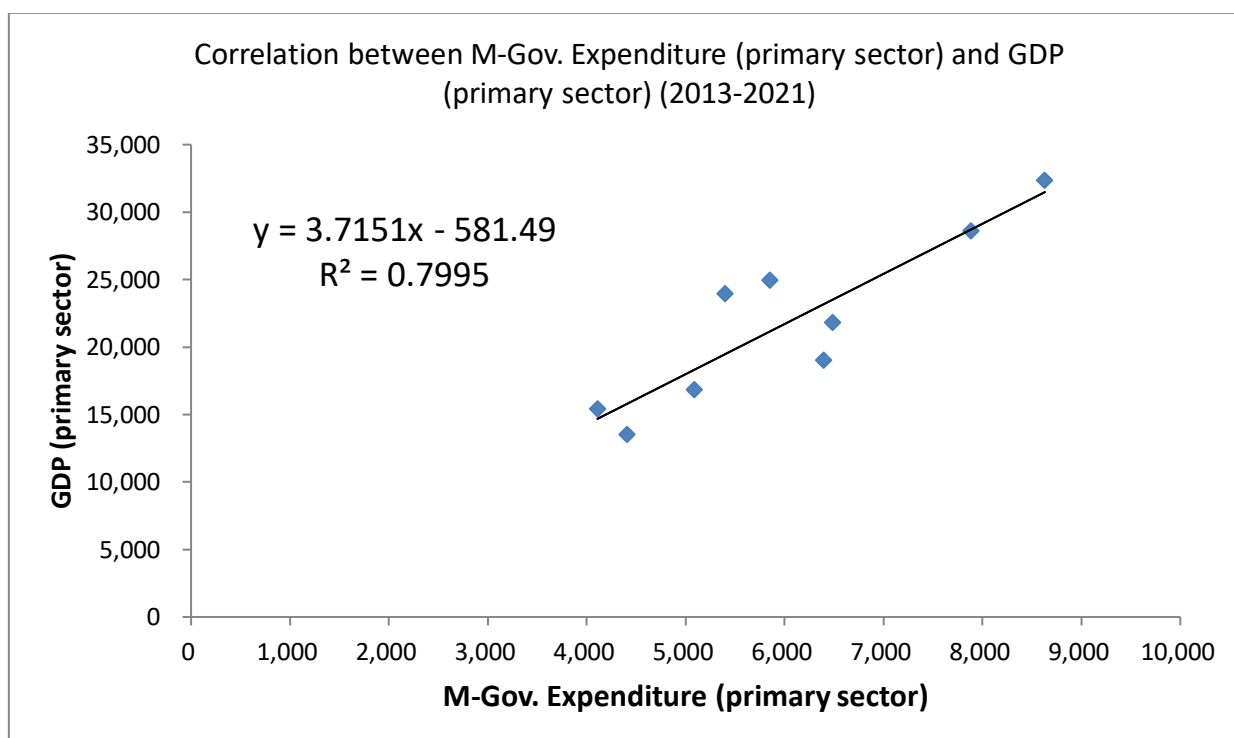


Figure 43:: Correlation between Government Expenditure and GDP (primary sector) (2013-2021)

CHAPTER 10: ANALYSIS

Bhutan's agrifood sector 13th FYP advocates boosting of sectoral GDP (crop and livestock sub-sectors combined) from Nu. 31 billion in 2023 to Nu. 50 billion in 2029. This chapter first presents an analysis to see the feasibility of this scenario. As shown in Table 10.1, achievement of the target in 2029 requires an 8.89% annual growth of the sectoral GDP for seven years (2023-2029). Looking at the recent five years' data (2018-2022), where actual annual agricultural GDP growth rate averaged 9.27%, 8.89% target seems appropriately set (Figure 44).

A second analysis is conducted of the lost area (difference between sown area and harvested area) of selected crops (paddy, maize, potato and cardamom) to see whether the lost area is decreasing. The most recent three years' data (2021-2023) show that paddy and potato saw a decrease in the lost area (Figure 45 and 47). However, looking at five years' data, the lost area largely fluctuated and no clear trend of decrease is observed for all four crops. As for cardamom, the lost area is rather on the increase during that period (Figure 48).

Labour force employed by agriculture sector has decreased since 2015 till now (199,640 to 125,160), while the number has by and large increased for industry sector (30,568 to 39,414) and service sector (114,083 to 123,210). Despite labour force decrease, agriculture sector has constantly increased the sectoral GDP. Now a third analysis is conducted to see how agriculture sector's labour productivity changed over time, along with comparison with other sectors. Table 10.3 shows sectoral GDP, sectoral labour force (employed persons), and sectoral GDP per employed-person (the former divided by the latter). While agricultural labour productivity, viewed in GDP per labour, is small compared with other sectors, the speed of growth it showed over time is significantly faster than other sectors. The agriculture sector's per labour GDP was Nu. 0.071 million in 2013, but it more than tripled to register Nu. 0.267 million in 2022. The speed of growth (of GDP per labour) was slower with industry and service sectors than agriculture sector (Figure 49). The analysis suggests that there is a solid progress in modernization of agriculture in Bhutan.

Table 10.1 Actual and target agriculture GDP at current prices (2018-2029) (Value in Million Nu.)

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Actual agriculture GDP (crop & livestock)	18,903	20,370	23,674	26,996	27,548	31,126	-	-	-	-	-	-
Target agriculture GDP with 8.22% growth	-	-	-	-	-	-	33,685	36,454	39,450	42,693	46,202	50,000

Source: Actual agriculture GDP from National Accounts Statistics 2024, NSB

Note: Annual growth rate 8.22% is required to increase agriculture GDP from Nu. 31.1 billion in 2023 to Nu. 50 billion in 2029.

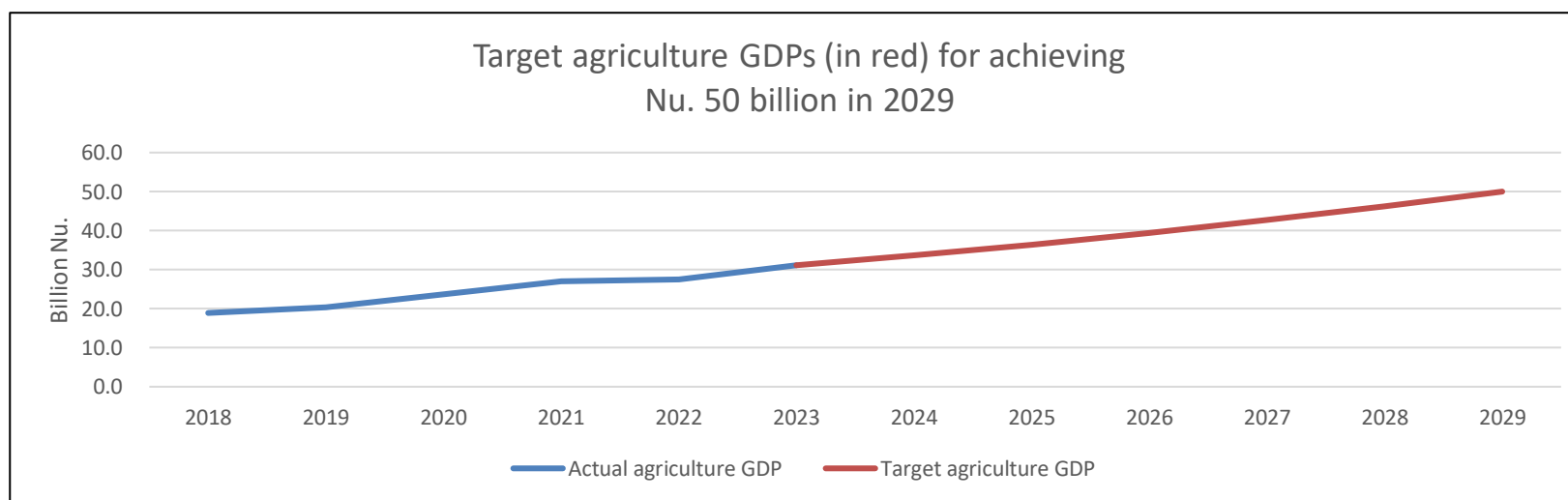


Figure 44: Actual agriculture GDPs and target agriculture GDPs required to achieve Nu. 50 billion in 2029

Table 10.2 Sown area and lost area for selected crops (2019-2023) (Value in Acre and %)

Crop	Sown Area, Lost Area and %	2019	2020	2021	2022	2023
Paddy (irrigated & upland)	Sown area (acre)	32,169	32,217	26,699	23,995	24,557
	Lost area (acre)	1,855	888	2,643	1,313	1,267
	Lost area as % of sown area	5.8	2.8	9.9	5.5	5.2
Maize	Sown area (acre)	37,239	31,813	25,473	21,920	21,031
	Lost area (acre)	4,754	3,868	5,184	3,490	3,890
	Lost area as % of sown area	12.8	12.2	20.4	15.9	18.5
Potato	Sown area (acre)	10,764	10,411	8,825	8,331	8,434
	Lost area (acre)	422	448	581	512	418
	Lost area as % of sown area	3.9	4.3	6.6	6.1	5.0
Cardamom	Sown area (acre)	16,386	13,978	12,813	9,461	10,084
	Lost area (acre)	772	282	1,214	1,465	1,637
	Lost area as % of sown area	4.7	2.0	9.5	15.5	16.2

Source: Agriculture Survey Report, NSB.

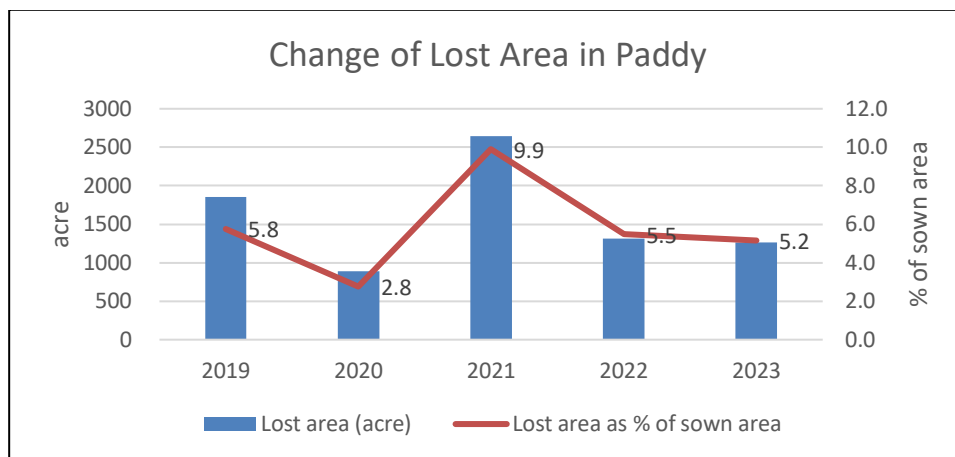


Figure 45: Change of Lost Area in Paddy Farming

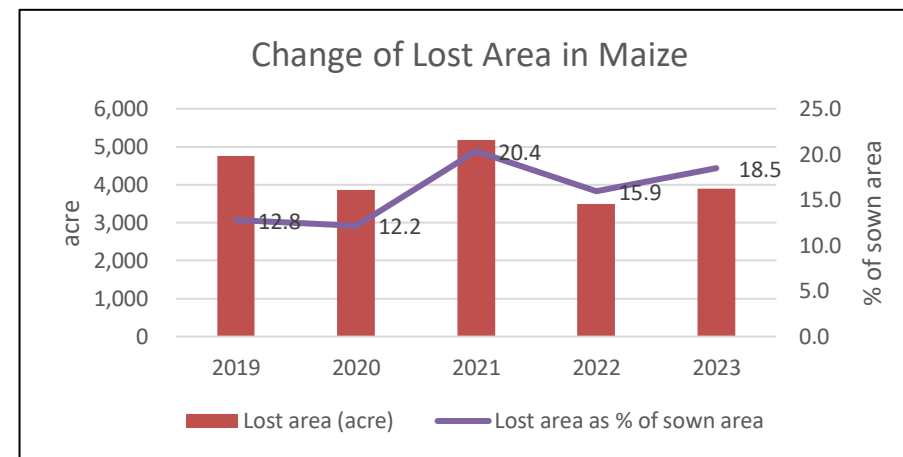


Figure 46: Change of Lost Area in Maize Farming

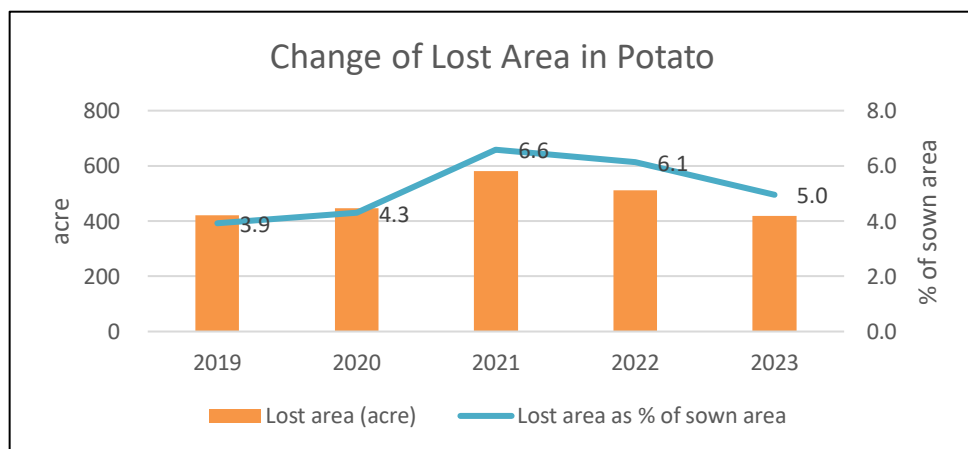


Figure 47: Change of Lost Area in Potato Farming

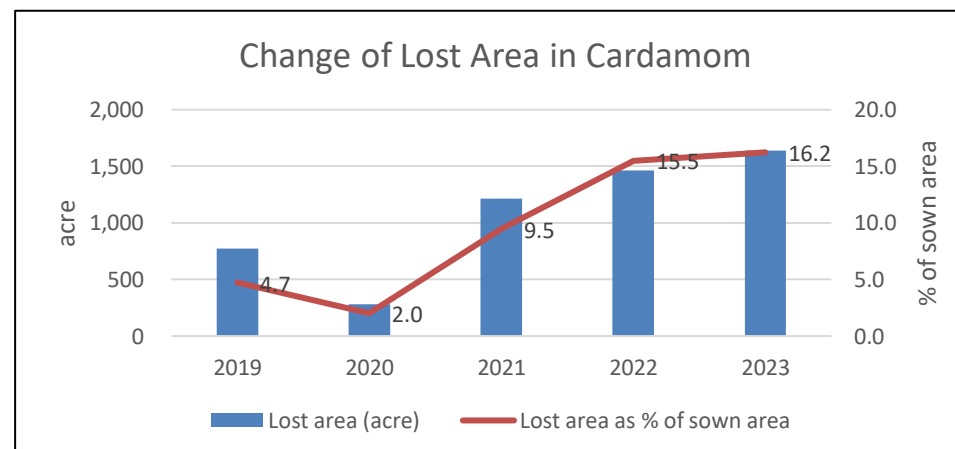


Figure 48: Change of Lost Area in Cardamom Farming

Table 10.3 Sectoral GDP, sectoral labour force, and sectoral GDP per sectoral employment.

Sector	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
GDP (Million Nu.)										
Primary	13,500	15,381	16,835	19,013	21,819	23,941	24,917	28,596	32,326	33,423
Secondary	44,242	47,996	53,991	60,908	65,879	62,304	63,755	57,894	64,722	72,501
Tertiary	54,365	62,181	67,416	76,155	81,054	90,428	103,976	95,617	107,617	121,890
Labour Force (employed person)										
Primary	189,245	192,369	199,640	198,429	175,859	162,239	159,032	157,015	158,511	125,160
Secondary	32,766	33,635	30,568	30,137	40,960	34,542	43,550	42,438	45,560	39,414
Tertiary	113,861	113,565	114,083	118,564	125,952	103,660	108,478	115,109	118,052	123,210
GDP/employed person (Mill Nu per person)										
Primary	0.071	0.080	0.084	0.096	0.124	0.148	0.157	0.182	0.204	0.267
Secondary	1.350	1.427	1.766	2.021	1.608	1.804	1.464	1.364	1.421	1.839
Tertiary	0.477	0.548	0.591	0.642	0.644	0.872	0.958	0.831	0.912	0.989

Source: National Account Statistics (NAS), NSB; and Labour Force survey Report (LFS), NSB.

Note: 1) LFS counts Mining & Quarrying, Manufacturing, and Construction in the Secondary Sector.

2) Electricity and Water Supply are counted in the Secondary Sector by GDP, but in the Tertiary Sector by LFS.

Table 10.4 Sectoral GDP per sectoral employment (relative to the 2013 figure)

Sector	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
GDP/employed person (relative to 2013 figure)										
Primary	1.000	1.121	1.182	1.343	1.739	2.069	2.196	2.553	2.859	3.743
Secondary	1.000	1.057	1.308	1.497	1.191	1.336	1.084	1.010	1.052	1.362
Tertiary	1.000	1.147	1.238	1.345	1.348	1.827	2.007	1.740	1.909	2.072

Note: This table is created to highlight the fastest growth exhibited by the primary sector in per employment GDP.

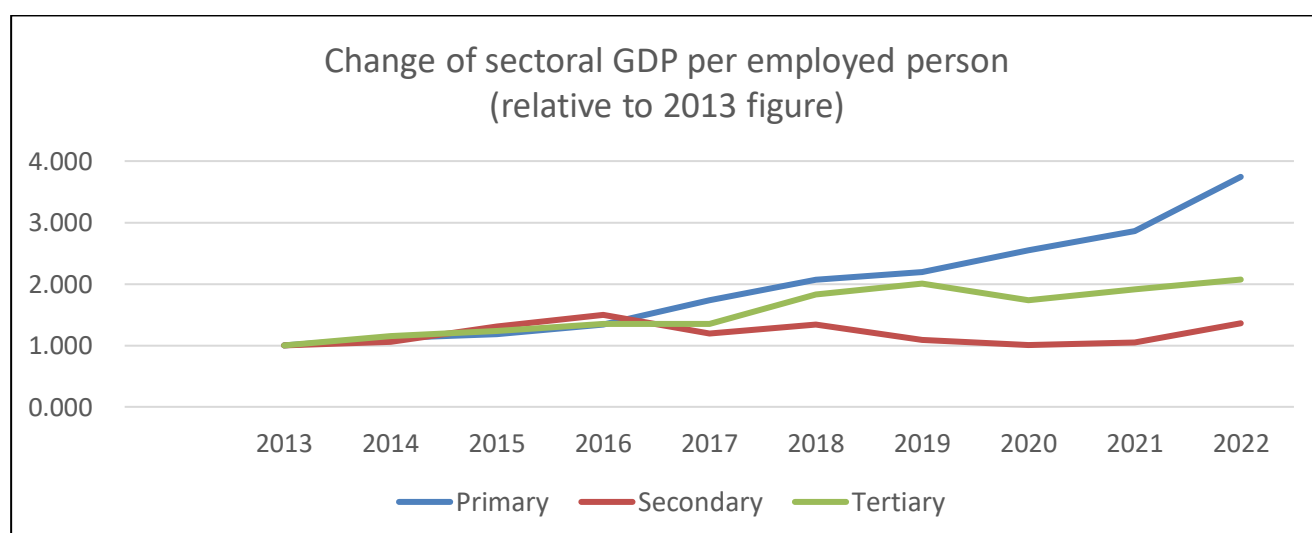


Figure 49: Change of sectoral Labour Productivity as viewed in GDP per employed person

Prepared by:
Policy and Planning Division
Ministry of Agriculture and
Livestock

