



**METADATA FOR
NATIONAL AGRICULTURAL STATISTICS**

BHUTAN

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List of Acronyms

ACSC	Agricultural Census Steering Committee
AMC	Agriculture Machinery Centre
AMS	Agricultural Marketing Services
BAFRA	Bhutan Agriculture and Food Regulatory Authority
BDFC	Bhutan Development Finance Corporation
BLSS	Bhutan Living Standard of Bhutan
BNB	Bhutan National Bank
BoB	Bank of Bhutan
CMU	Census Management Unit
CoRRB	Council for RNR Research of Bhutan
CSO	Central Statistical Organization
DANIDA	Danish International Development Association
DoA	Department of Agriculture
DoL	Department of Livestock
DoF	Department of Forests
DRC	Department of Revenue and Customs
DSC	Druk Seed Corporation
DSLRL	Department of Survey and Land Records
FCB	Food Corporation of Bhutan
FDCL	Forestry Development Corporation Limited
GDP	Gross Domestic Product
ICS	Information Communication Services
IMS	Information Management Section
MoA	Ministry of Agriculture
MoF	Ministry of Finance
MoHCA	Ministry of Home and Cultural Affairs
MTI	Ministry of Trade and Industry
NGOs	Non-Governmental Organizations
NPPC	National Plant Protection Centre
NRTI	Natural Resources Training Institute
NSB	National Statistical Bureau
PPD	Policy and Planning Division
RICB	Royal Insurance Corporation of Bhutan
RNR	Renewable Natural Resources
WFP	World Food Programme

CHAPTER 1. NATIONAL SYSTEM OF AGRICULTURAL STATISTICS

1.1 Legal Framework and Statistical Advisory Bodies

There does not exist a legal framework. The existing arrangement within the Ministry of Agriculture (MoA) pertaining to agricultural statistics is that the technical departments and non-departmental agencies collect data related to their respective mandates and functions. The Policy and Planning Division (PPD) facilitates technical backstopping and fund mobilization if necessary, to the departments and other agencies within the MoA in the implementation of statistical surveys. In order to avoid duplication of efforts and resources, the PPD is mandated to compile the information collected by the departments, validate, analyze and publish agricultural statistics covering all sub-sectors mainly, agriculture, livestock and forestry. The PPD also coordinates or carries out other ad-hoc special studies in collaboration with relevant departments / agencies within and outside the MoA including international organizations and donor projects. The National Statistical Bureau (NSB) stands as the national statistical advisory body. Its technical supports and advices are being collaborated in the statistical surveys that are carried out within the MoA.

1.2 Structure and Organization of the Major Agricultural Statistical Agencies

The Past

Until 1998, the agricultural statistics was very inconsistent and unsatisfactory. Various agencies used to collect data in different methodologies and formats at varied intervals for fulfilling their own purposes. Often, the data collected were left unutilized for lack of processing and analytical skills or poor data. In 1992, the mandate for agricultural statistics was centralized to Central Statistical Organization (CSO) under the then Ministry of Planning in accordance with the Royal Government's policy to reduce duplication of efforts among various agencies.

However, the CSO was then a small organization and information produced was insufficient or in other words did not cover some of the important areas in the agricultural system. In 1998, the mandate for agricultural statistics has been therefore, transferred to the MoA. It was placed with the Policy and Planning Division as it provides cross-sectoral services and has the role to monitor and evaluate programmes of various agencies within the MoA. To take up this responsibility, an Information Management Section (IMS) was established within PPD.

Having created the IMS, efforts have been made to develop a consistent and efficient system of agricultural statistics. Data collection was streamlined to one agency within the MoA to avoid duplication of efforts and to produce consistent and reliable data and regular and timely dissemination of the information. A set of survey

questionnaires covering fields of agriculture, livestock and forestry was prepared to be used for annual data collection and a database was developed in Microsoft Access with technical assistance of a Danish consultant and financial assistance from the Danish International Development Association (DANIDA).

The PPD coordinated the first 10% sample survey conducted in 1999 followed by a nation wide agricultural census in 2000 and two more 10% sample surveys in 2002 and 2003. The results of all the surveys and census have been published and being disseminated.

The Present

In 2004, the annual data collection mandates have been further decentralized among departments and non-departmental agencies within the MoA. The aim of this change was to improve the coverage and accuracy of data and to facilitate sufficient time for the IMS/PPD for further in-depth analysis and special studies. The MoA, since then, has its statistical programmes administered and operated by various departments and non-departmental agencies. The information management sections or units in these departments collect and compile the data through annual surveys, administrative records, and periodic reports obtained from institutions, households, enterprises and others. The compilation of information produced by the departments and publication of annual Renewable Natural Resources (RNR) statistics for the Ministry of Agriculture is delegated to the IMS/PPD. The IMS/PPD is also responsible for overall coordination of the agricultural statistical information. The PPD also gathers information from non-departmental agencies, corporations, projects within the ministry and other organizations outside the ministry to fulfill the ministry's requirement in planning of programmes, policy formulation, monitoring and evaluation of programmes.

The National Statistical Bureau (NSB) erstwhile, Central Statistical Organization (CSO) as the central body for national statistics takes lead role in coordination of the national statistics. The NSB gathers information from various sectors, which are further, aggregated to national level and analyzed for economic purposes. It is also delegated to carry out general statistical surveys as and when required by the government for strategic planning and programming purposes. Given its superior technical expertise, the NSB provides backstopping to various sectors in designing surveys and other studies.

The various agencies within the MoA are responsible for collection/ management of data related to their respective roles and functions. The major agencies concerned in agricultural statistics are as follows:

1. Policy and Planning Division
Ministry of Agriculture
Tel # +975-2-323745/324669
Fax # +975-2-323748

2. Department of Agriculture
Ministry of Agriculture
Tel # +975-2-32228/322805
Fax # +975-2-323562
3. Department of Livestock
Ministry of Agriculture
Tel # +975-2-322418/322795
Fax # +975-2-322094
4. Food Corporation of Bhutan
Ministry of Agriculture
Tel # +975-5-252241
Fax # +975-5-252289
5. Department of Forests
Ministry of Agriculture
Tel # +975-2-322395/322487
Fax # +975-2-322395
6. Department of Survey and Land Records
Ministry of Agriculture
Tel # +975-2-321743/321745/322939/328181
Fax # +975-2-321746
7. Agricultural Marketing Services
Ministry of Agriculture
Tel # +975-2-322909
Fax # +975-2-324898
8. Bhutan Agriculture and Food Regulatory Authority
Ministry of Agriculture
Tel # +975-2-327031/325790
Fax # +975-2-327032

1.3 Outputs and Dissemination of Agricultural Statistics

The information is disseminated at free of cost in publications, soft copies, and through the Ministry's website, www.moa.gov.bt. Some of the agricultural statistics are also uploaded on the website of FAO's Regional Data Exchange System's on Food and Agricultural Statistics in Asia and the Pacific Countries, www.faorap-apcas.org. As of now, there is not yet a plan for selling them but may be in the future charging of minimal cost would be necessary. The Ministry of Agriculture has produced a number of statistical reports and publications since the transfer of agricultural mandates back to MoA from CSO in 1998.

Outputs and Dissemination of Agricultural Statistics

Title of Publication	Domain/Contents	Medium	Format	Periodicity/ Frequency	Release calendar
RNR Statistics 2000	Mainly production and marketing	English	Book	Planned for every after 5 years	August 2002
Selected RNR Statistics 2002 and 2003	Mainly production	English	Book	Annually	January 2004
Selected RNR Statistics 2003	Mainly production	English	Book	Annually	October 2004
Rural-Urban Migration		English	Book	To be updated as and when required.	February 2005
Agriculture Statistics 2004	Mainly production	English	Book	Annually	January 2006
Vulnerability Analysis and Mapping	Vulnerability to food insecurity	English	Book	To be updated as and when required.	September 2005
RNR Sector Food Security Strategy		English	Report		

Note: The publications listed above are the ones published already. Some of the publications may not necessarily come out annually. Because of certain drawbacks as expressed in Chapter 1 under section 1.5 there is no timeframe yet as to which month of the year the publications should come up.

1.4 Dialogue with Data Users and Cooperation with International Organizations

As part of the steps for preparation of first RNR survey conducted for the year 1999, all the agencies within the MoA including dzongkhag (district) RNR sectors were sensitized through a series of workshops. The same thing was followed for the RNR Census 2000. The draft designs of survey questionnaires were presented to the relevant stakeholders including the CSO for discussions and comments incorporated prior to venturing into actual field data collection. The survey results were also presented to the same groups of stakeholders before they were published for use. In 2000, MoA and FAO Regional Project (GCP/RAS/171/JPN) jointly conducted a national seminar on the System of Food and Agricultural Statistics, in which various stakeholders from national government agencies including members from CSO have participated. Consultations are being done among the data producers and the users through distributions of survey questionnaires, meetings etc. before the surveys are carried out and the before the publication of the results.

1.5 Strategic Framework

The present agricultural statistical organization system has lots of limitations in all aspects. Since the decentralization of the annual data collection mandates to the respective departments in 2004, the ministry has not been able to produce annual agricultural statistics. This is mainly due to failure of some of the departments to generate data for compilation. The data produced by some of the agencies do not qualify for compilation for production of annual RNR statistics due to varied levels, frequencies, coverage and collection time periods. On the other hand, there is not yet a strategic framework to overcome these limitations. There is of course, an urgent need to look at the following areas to improve the overall systems of agricultural (RNR) statistics in the country.

- Review of present organizational information systems in all the agencies within MoA.
- Coordination and collaboration concerns among various agencies with the agricultural statistical system within the MoA.
- Capacity development of the staff concerned with handling the information systems in all the agencies within MoA
- Collaboration with NSB and other relevant organizations
- Institution of a legal framework for agricultural statistical system

CHAPTER 2. MAJOR DOMAINS AND SELECTED INDICATORS OF AGRICULTURAL STATISTICS

2.1 List of Major Domains and Selected Statistics and Indicators

Domain	Statistics/Indicators
Production	Volume of crop, livestock and forest productions Livestock population
Land use	Area holdings by land use types Planted/harvested area by type of crops
Agricultural inputs	Volume of sales of fertilizers Volume of sales of plant protection chemicals
Rural infrastructures	Nos. of extension centers, farm roads, irrigation channels etc.
Trade	Total value of exports and imports Volume and value of agricultural exports and imports
Prices of food commodities	Average monthly retail prices by district markets Price index by commodity group Price index of major commodities in the capital, Thimphu
Agricultural credit	Loan disbursed to nos. of farmers and groups

2.2 Metadata for Each of the Major Domains

2.2.1 Production

2.2.1.1 Concepts, Definitions and Classifications

Production refers to quantity of agriculture crops (cereals and horticulture crops), livestock population and productions (such as meat, wool, eggs and dairy products) and forest products (timber and non-timber such as medicinal plants, sand, stones, bamboos, lemon grass oils and consumable non-wood products).

The main cereals cultivated in Bhutan are paddy (rice), maize, wheat, barley, millet and buckwheat; and the main cash crops include oranges (citrus), apples, walnuts, potatoes and vegetables. Forests provide materials for construction houses, food, medicines, energy, shelter, animal fodder, organic fertilizers etc. Free access to such natural resources, especially for rural people, has effectively helped avert situation of extreme poverty, destitution and homelessness.

2.2.1.2 Coverage, Availability, Data Sources and Responsible Agencies

Statistics/Indicators	Coverage	Availability	Data Source	Responsible Agency
Production	Sub-district, district and national level	Available for four years (2000-2004)	RNR Census and RNR Surveys	PPD, DoA, DoL

2.2.1.3 Data Processing, Estimation and Revision Methodology

Data are punched into the databases developed in Microsoft Access. Data processing is done using query facilities in Microsoft Access and Excel programs. No estimation is normally required to do in case of the RNR Census because the census usually covers all agricultural households. Estimation is done for the RNR surveys. For the past surveys, the estimation was done in the following manner:

The value of the sampled households / number of the sampled households * Total agricultural households in a Sub-district.

2.2.2 Land Use

2.2.2.1 Concepts, Definitions and Classifications

Land use pertains to country's land cover, such as area under forest cover, water bodies, snow/glaciers, shrubs, grazing and agriculture (arable). The arable area is further categorized into wetland (terraced and irrigated), dryland (un-terraced and not normally irrigated) and pangzhing (a type of land use system which is cultivated with 3 or more years of fallow periods for want of soil fertility). The other two land categories under the arable area are kitchen garden (where all sorts of vegetables in small scale are grown to meet households' requirements) and orchard (where fruit trees are grown in larger scale).

The area suitable for agricultural production is limited by the steep and rugged terrain, altitude, and the high priority given to maintaining forest cover. Agricultural land holdings are fairly evenly distributed in the country but fragmented with small parcels of land in different locations.

2.2.2.2 Coverage, Availability, Data Sources and Responsible Agencies

Statistics/Indicators	Coverage	Availability	Data Source	Responsible Agency
Land Use	Sub-district, district and national level	Available for four years (2000-2004)	RNR Census and RNR Surveys	PPD, DoA, DSLR and DoF

2.2.2.3 Data Processing, Estimation and Revision Methodology

Data are punched into the databases developed in Microsoft Access. Data processing is done using query facilities in Microsoft Access and Excel programs. No estimation is normally required to do in case of the RNR Census because the census usually covers all agricultural households. Estimation is done for the RNR surveys. For the past surveys, the estimation was done in the following manner:

**The value of the sampled households / number of the sampled households *
Total agricultural households in a Sub-district.**

2.2.3 Agricultural Inputs

2.2.3.1 Concepts, Definitions and Classifications

Agricultural inputs refer to supply of seeds/seedlings, fertilizers, plant protection chemicals, farm machineries / tools, breeding livestock and extension services being provided to farmers. Transportation cost of inputs is born by the MoA so that all farmers have access to the inputs at a uniform price. In the rural areas where there are no suppliers, the extension agents facilitate the collection of farmers demand for inputs and accordingly intimate the regional branches or the commission agents.

2.2.3.2 Coverage, Availability, Data Sources and Responsible Agencies

Statistics/Indicators	Coverage	Availability	Data Source	Responsible Agency
Agricultural Inputs	District and national level	Available from 2004 – 2006	Administrative records	PPD, DoA, DSLR, DoF, DoL and AMS

2.2.3.3 Data Processing, Estimation and Revision Methodology

Concerned agencies maintained records while distributing to the consumers. The PPD or the other users compile and analyze data on agricultural inputs gathered from the concerned agencies as and when required.

2.2.4 Rural Infrastructures

2.2.4.1 Concepts, Definitions and Classifications

Availability of **infrastructures** is the major incentives for increasing farm productivity and productions. The major agricultural (RNR) infrastructural requirements, such as

extension services, and research centers, veterinary hospitals, market sheds, forest offices are in place. Farm roads and irrigation channels have been and being constructed.

2.2.4.2 Coverage, Availability, Data Sources and Responsible Agencies

Statistics/Indicators	Coverage	Availability	Data Source	Responsible Agency
Rural Infrastructures	Sub-district, district and national level	Available from 2004 – 2006	Administrative records	PPD, DoA, DoF, DoL and AMS

2.2.4.3 Data Processing, Estimation and Revision Methodology

The PPD and other users compile and analyze data which are gathered from the concerned agencies as and when required.

2.2.5 Trade

2.2.5.1 Concepts, Definitions and Classifications

A liberal, flexible trade with India guarantees duty-free access to and from any part of the world. Trade is mostly confined to retails outlets in administrative units. Trends are what matter most to investors when it comes to the policy regime. Major reforms in the trading regime have been implemented. Micro trade has been de-licensed and licensing process made simple with the issuance of Bhutan Trade, Wholesale and Retail Trade Guidelines, 2006. Ministry of Trade and Industry (MTI) has the mandate for investment issues and licensing.

2.2.5.2 Coverage, Availability, Data Sources and Responsible Agencies

Statistics/Indicators	Coverage	Availability	Data Source	Responsible Agency
Trade	National level	Available from 2004 – 2006	Administrative records	FCB, AMS, MTI and NSB

2.2.5.3 Data Processing, Estimation and Revision Methodology

The users compile and analyze data which are gathered from the concerned agencies as and when required.

2.2.6 Prices of Food Commodities

2.2.6.1 Concepts, Definitions and Classifications

The pricing for agricultural products in the country is essentially market based. The open market and free trade relations with India limit the use of price incentives as a means of increasing productivity. The only support price maintained by the government is in the sale of quota-food-grains by FCB at prices below the open market, which is important for poverty reduction and food security.

2.2.6.2 Coverage, Availability, Data Sources and Responsible Agencies

Statistics/Indicators	Coverage	Availability	Data Source	Responsible Agency
Prices	National level	Available from 2004 – 2006	Administrative records	FCB, AMS, MTI and NSB

2.2.6.3 Data Processing, Estimation and Revision Methodology

The users compile and analyze data which are gathered from the concerned agencies as and when required.

2.2.7 Agricultural Credit

2.2.7.1 Concepts, Definitions and Classifications

The system of microfinance has grown in Bhutan mainly out of reforms of agricultural strategy in the late 1980s. The early years of agricultural development were characterized by the introduction of modern farming methods and the free provision of inputs like fertilizers, plant protection chemicals, seeds and extension services. Since the 6th Five Year Plan (1987-1992), the government placed greater emphasis on the liberalization of markets and self-reliance, resulting in the reduction and eventual withdrawal of most subsidies. With farmers no longer able to rely on subsidies for modern inputs, the need for rural credit to enable farmers to improve farming practices was considered essential for agricultural development. To meet this need, Rural Credit Division with the Royal Monetary Authority was transformed into Bhutan Development Finance Corporation (BDFC) in 1988 with a mandate to provide credit to rural areas, as well as for small and medium scale industries.

While BDFC is the main source of microfinance, other institutions such as Bank of Bhutan (BoB), Bhutan National Bank (BNB) and Royal Insurance Corporation of Bhutan (RICB) are engaged in extending agricultural loans on a bigger scale to commercial undertakings. Unlike in other countries, however, there are no NGOs or

quasi-financial institutions providing microfinance services in the rural areas, except for the National Women's Association of Bhutan, which has a very small credit programme in Eastern Bhutan.

2.2.7.2 Coverage, Availability, Data Sources and Responsible Agencies

Statistics/Indicators	Coverage	Data Source	Responsible Agency
Prices	National level	Administrative records	MoA, and Financial Institutions

2.2.7.3 Data Processing, Estimation and Revision Methodology

The users compile and analyze data which are gathered from the concerned agencies as and when required.

CHAPTER 3. MAJOR DATA SOURCES FOR AGRICULTURAL STATISTICS

3.1 List of Major Agricultural Censuses, Surveys and Registers

Census

1. RNR Census

Surveys

1. RNR Sample Surveys
2. Annual Agriculture Survey

Registers

1. Land records (DSLRL)
2. Agricultural Trade Statistics - Bhutan Trade Statistics (DRC,MoF), FCB, AMS
3. Agricultural Inputs (DSC, AMC, and NPPC)
4. Rural Infrastructures (PPD, DoA)
5. Rural Credits (Financial Institutions)
6. Rural Income (NSB)
7. Agricultural Exports and Imports (FCB, BAFRA, AMS, Bhutan Trade Statistics)

3.2 Metadata for the Major Census

3.2.1 RNR Census

3.2.1 Overview

The RNR Census is conducted to establish a reliable database for the planning and monitoring of development policies and programmes. The RNR Census, which was the first of its kind in the country, was conducted in 2000 covering the fields of agriculture, livestock and forestry. Although it has been planned to be conducted every 5 years, it was not done for some reasons.

Households served as the ultimate unit from whom data were collected by administering a set of structured questionnaire. The data obtained have been processed, analyzed and presented at sub-district, district and national levels. The publication features area, production and yield of principle crops of food-grains, oil seeds, pulses and spices, and horticultural crops including data on livestock and livestock products, forest resources, and marketable surpluses. Further, the publication also provides information on food security levels, farm constraints and accessibility of communities to motor roads.

3.2.1.2 Census Design

The census was a complete enumeration with no stratification adopted. Households served as the ultimate unit from whom data were collected by administering a set of structured questionnaires. All enumerators were placed in several groups by their abilities to speak local dialects.

3.2.1.3 Conduct, Operations, Data Quality Control

An Agricultural Census Steering Committee (ACSC) was established to guide the implementation of the RNR Census. The committee comprised of the heads of the department and divisions of the Ministry, the Central Statistical Organization (CSO) the representatives of the Ministry of Home and Cultural Affairs (MoHCA) and the Ministry of Trade and Industry (MTI). The committee provided necessary guidance in terms of policy directives, financing as well as in the development and approval of the census questionnaire used in data collection.

A Census Management Unit (CMU) was created which served as an implementing arm of the committee. The Head of the Statistics Unit, PPD along with four other Information Officers who represented the three technical departments and the Information and Communication Services (ICS) formed the core group. The group worked closely with the districts and sub-districts extension agents who assisted the management with coordination and supervision of the enumerators during census implementation.

Before the fieldwork, all enumerators comprising of agricultural extension agents and college students were trained for a period of 8 days. They were taught on the methods and usage of field questionnaire based on a manual provided to each enumerator. Further, they were also taught about ethical issues, which every enumerator was to observe. Preparation for data entry began soon after enumerators left for the field. Twenty five (25) officials from district RNR sectors and temporary computer operators were trained on database operation.

Field supervisors were deployed to check the filled up questionnaires during data collection. The questionnaires were further studied for wrong recordings and inconsistencies by a group of officials before they were punch into the database. The designing of questionnaire had provided certain level of validation where enumerators have to in most cases, just tick or select the appropriate answers. The validation exercises have also been carried out during data processing.

3.3 Metadata for Each of the Major Surveys

3.3.1 RNR Surveys

3.3.1.1 Overview

The objective of the surveys was to develop time series agricultural statistics covering land use, crop production, livestock population and production, forest products and utilization, agricultural inputs, infrastructure, farming constraints and marketing.

The 10 percent sample survey, the first of its kind in the country, was conducted in 1999 in two splits. The first survey in September 1999 captured the data on the crops harvested between January and August. The second survey in February 2000 covered the crops harvested between September and December. The justification for splitting the annual survey into two was to gather the data on the crops as soon as they were harvested. The other two surveys carried out in 2002 and 2003 adopted the same sampling rate and methodologies but were done in one go without splitting the survey periods.

3.3.1.2 Survey Design

The surveys adopted a systematic random sampling to select the rural farming households. A 10 percent sample was applied uniformly to all sub-districts irrespective of the sizes and economic activities undertaken. No further stratification was adopted. All the sub-districts were included in the sample survey to cover different ecological resources endowment and development stages. A household is the lowest sampling unit. The households list for each sub-district serve as the sampling frame from which a 10 percent sample was selected for interview.

3.3.1.3 Conduct, Operations, Data Quality Control

PPD took the lead in the conceptualization, preparing and implementing the sample survey. PPD conducted national level workshops and technical discussions with other central and field staff in finalizing the areas on which data are to be collected, preparation of the questionnaire, mobilization of data enumerators and conduct of training, planning and implementation of the survey, validation of the data at district level, analysis and compilation of the data, and the final publication of the data. The Central Statistical Organization (CSO) participated actively in these workshops and discussions and provided guidance on the sampling techniques and other important issues related to national statistics.

The extension staff collected the data by using the questionnaire provided to them. They submitted the data to their districts where the data were entered into the RNR

database. The data then were brought to the PPD. The PPD further validated, compiled and analysed the data.

There were three data validation steps. The first step was the process of eliminating the double entry of data. These double entries were removed by going through the entire database. The second validation was the process of deleting the data that did not make any sense. The third validation was to do with the commodity conversion rates

3.3.2 Annual Agriculture Survey

3.3.2.1 Overview

In 2004, the field data collection mandates have been decentralized to respective departments from the PPD. The Department of Agriculture carried out its first annual agriculture survey early 2005 for the production year 2004. The objective of the annual agriculture survey is to maintain agricultural production and land use time series data. The annual survey data for 2005 are being compiled and processed. The surveys covered mainly land use and crop productions and marketing of surplus products.

3.3.2.2 Survey Design

Unlike RNR surveys, the annual agriculture survey 2004 enumerated all the agriculture-farming households. A 10 percent households sample was applied uniformly to all sub-districts for annual agriculture survey 2005. A household is the lowest sampling unit. The households list for each sub-district serve as the sampling frame from which a 10 percent sample was selected for interview.

3.3.2.3 Conduct, Operations, Data Quality Control

The DoA takes the lead in planning and designing the survey. The department holds training workshops for the districts and sub-sub-districts agriculture staff on the use of the questionnaires. If required, the department also collaborates with other agencies both within and outside the ministry. The PPD renders technical assistance and as well as financial supports.

The extension staffs collect the data by using the questionnaire provided to them. They submit the data to their districts where the data are entered into the database. The data then are brought to the department for compilation.

3.4 Metadata for Each of the Major Administrative Registers

Certain administrative records are used mainly to supplement or cross - check the authenticity of the census and survey results. The administrative data are also used for the purpose of economic analysis.

3.4.1 Animals Slaughtered for Consumption

The BAFRA records and conducts postmortem on the animals slaughtered across the country for consumers' safety reasons. By doing so, the BAFRA has become a reliable source of information for this product. This information gives us the amount of meat produced in the country for that particular period of time. The BAFRA submits the information to the ministry on weekly basis to be used as and when required.

3.4.2 Timber and Non-Timber Forest Products

The Department of Forests is responsible for this information. The information is captured administratively as, by the forestry rule, the royalty has to be paid and obtain permits for harvesting timber for construction or other purposes. Similarly, the same procedure has to be followed for collection of non-timber forest products. The forest related data is used to determine quantity of wood being harvested for various purposes and income generated by the farmers from non-wood forest products.

3.4.3 Trade

FCB facilitates auctioning of the domestic products of mainly horticulture crops. The FCB also procures all kinds of food commodities from India and distributes to consumers across the country. Most of the horticulture crop products including edible non-wood forest products go to neighboring states of India. Apart from India, a considerable quantity of apples, oranges, potatoes, mushroom, lemon grass oil and cordyceps are exported every year to Bangladesh, Bangkok, Singapore and even to Japan and China.

The Department of Revenue and Customs (DRC) under the Ministry of Finance (MoF) also maintains records and publishes bulletins every year on the trading of domestic products and purchases from across the border along with prices.

BAFRA also captures the information on the exports and imports of agricultural products including forest products which are required to be checked to see if the products are free of diseases and contaminations for safety of the consumers.

The AMS collects data on market prices of commodities on regular basis and prepares periodic bulletins.

The Ministry of Agriculture gathers data from those responsible agencies concerning trading of agricultural commodities both within and outside the country to determine the food security status in the country.

3.4.4 Inputs Supply

The concerned agencies (DSC, AMC, NPPC) for various inputs keep the records on the sale and distribution of inputs to farmers. The information on various inputs can be obtained from the concerned agencies. The information helps in accessing the productivity of agricultural crops due to application of certain inputs such as improved seeds, fertilizers and chemicals and use of machineries. It also includes information on extension services being provided to farmers.

3.4.5 Land Use

The RNR census and surveys capture landholding data. However, the administrative records maintained by DSLR are sometimes found useful for authentication of the data.

3.4.6 Infrastructure

The agricultural infrastructure such as extension service delivery centers, farm roads, power tiller trails, irrigation channels, inputs supply centers are the core necessities for the success of the agricultural farming activities. The infrastructure data is maintained administratively on regular basis by the agencies concerned. For instance, agriculture infrastructure is recorded by agriculture department and livestock infrastructure by livestock department and so on.

3.4.7 Agricultural Credit

The financial institutions such as BDFC, BNB, RICB and BoB involved in the disbursement of agricultural loans to farmers maintain the records. The concerned agencies in the MoA also keep the records for the purpose of monitoring the implementation and providing guidance in repaying loans. The loan is mainly availed by the farmers for the purpose of buying seeds, fertilizers, chemicals, farm machineries and tools and setting up backyard piggery, dairy and poultry farms. The information on the agricultural credits also helps determine agricultural productivity and food security status in the country.