



**METADATA FOR
NATIONAL AGRICULTURAL STATISTICS**

FIJI

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List of Acronyms

ASF	Area Sample Frame
FIBOS	The Fiji Islands Bureau of Statistics
HS	Harmonized System Classification
MIS	Management Information System
NPO	National Planning Office
SITC	Standard International Trade Classification.

CHAPTER 1. NATIONAL SYSTEM OF AGRICULTURAL STATISTICS

1.1 Legal Framework and Statistical Advisory Bodies

The Fiji Islands Bureau of Statistics (FIBOS) is the national institution responsible for the coordination of statistical activities in the public sector. The institution is the main agency for the collection and collation of a wide range of areas such as agriculture, social, economics and other interests to meet the need of the government and users of statistics. The Government Statistician is the head of the institution and is directly under and responsible to the Minister of Finance and National Planning in the Republic of the Fiji Islands. The legality of all activities in FIBOS is covered under the Laws of Fiji and states:

- i) CAP 71 – Statistics Act which provides for:
- Appointment of the Government Statistician who shall have and exercise powers and functions as conferred by the government;
 - Collection, compilation, analysis and publication of statistical information relating to the commercial, industrial, agricultural, social, economic and general activities and condition of the people of Fiji;
 - Collaboration with departments of the Government in the collection, compilation, analysis of statistical records of administration; and
 - Organization of a coordinated scheme of social and economic statistics relating to Fiji.

There is an organized Statistical Advisory Committee which comprises of government ministries, private sector and other users of statistics. This Committee is tasked to advise on all statistical activities including surveys, to strengthen linkages of various institutions in a coordinated & collaborative approach and to ensure maximum usage of information through a harmonized and reliable statistical system.

To date, the Committee is still in operation, however, not much activities have taken place to further assist the development of statistics in the country.

1.2 Structure and Organization of Major Agricultural Statistical Agencies

The Ministry of Agriculture under the Government of Fiji is one of the largest public office in the country. It has eight (8) divisions and has offices spread geographically in fourteen (14) provinces with major offices located in the four (4) administrative regions of the country. The Economic Planning & Statistics Division of the Ministry

is headed by the Chief Economist, has five (5) sections namely Fiji Agrtrade, Budget & Projects, International Relations, Agriculture Statistics and Administration. The Agriculture Statistics section is headed by a Senior Economic Planning Officer whose responsibilities include:

- Providing Management and stakeholders with commodity production data and trade statistics at national level;
- Dissemination of agricultural production data, forecasts to line Ministries, Reserve Bank and international organizations;
- Implementation of the current Management Information System (MIS) database;
- Formulation of agriculture sector policies in appropriate strategies in accordance with the government strategic plan;
- Undertaking of economic research on specific economic issues relating to the agricultural sector;
- Conduct of agriculture surveys/census including tikina profile survey on selected districts or tikinas

The section comprises of Senior Economic Planning Offices and assisted by two (2) Economic Planning Officers and eight (8) project staff contracted on annual basis. Government has made provisions within the vicinity of FJ\$150,000.00 to facilitate statistical activities.

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1.3 Outputs and Dissemination of Agricultural Statistics

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Title of Publication	Periodicity/ Frequency	Release Calendar
Annual Reports	Yearly	March of every year
Quarterly Reports	Quarterly	End of each quarter

Quarterly publications are internally used as part of the management information system to provide production figures of various commodities/ programs to ministry management.

Weekly market prices is one of the activities undertaken by the ministry to take stock of current commodities sold at various major municipal markets. Publications of these prices are done fortnightly and release as part of ministry's internal newsletter.

Marketing of agricultural statistical products is still at infant stage.

1.4 Dialogue with Data Users and Cooperation with International Organizations

The Ministry has been involved in collaborative discussion with other public offices and other organizations through forums, meetings, etc in an effort to promote maximum utilization of agriculture statistics. It is an on going exercise as part of its initiative to improve linkages with stakeholders and data users as well as provide platform for future improvements in the areas of data capture and exchange, project proposals and other assistance needed for the betterment of agriculture statistics. Representatives of other government ministries which include National Planning Office (NPO), Fiji Islands Bureau of Statistics, Corporate Bodies of the Ministry are members of this forum who are tasked with issues concerning the agriculture sector and corresponding statistics.

1.5 Strategic Framework

Agriculture statistics is an essential component of decision makers of the country. Ministry of Agriculture has a Strategic Development Plan which provide action plans for the development of the agriculture sector.

The Strategic Development Plan for 2006-2008 includes the following:

- i. Strengthening linkages with various organizations including government ministries, UN bodies, regional organizations, non government institutions and data users;
- ii. Develop better data capture technologies/methodology, good quality database management practices;
- iii. Develop good quality personnel through education and techniques including training in statistical activities; and
- iv. Provide statistics at district levels.

CHAPTER 2. MAJOR DOMAINS AND SELECTED INDICATORS OF AGRICULTURAL STATISTICS

2.1 List of Major Domains and Selected Statistics and Indicators

- Volume of root crop production by region and national level
- Volume of Vegetables and Fruit Crop Production by region and national level
- Area of crop planted by region and national level
- Number of animals slaughtered
- Number of livestock by region and national level

2.2 Metadata for Each of the Major Domains

2.2.1 Production

2.2.1.1 Concepts, Definitions and Classifications

The standards which used to harmonized data include HS (Harmonized System Classification) and SITC (Standard International Trade Classification). At this stage, the uniformity of data is not a problem given the coverage of information however It must be noted that the Ministry has been relating all its statistical programs using proper sources e.g. FAO etc. No methodology has been put into practice to assist in the process, however, plans are underway for a collaborative effort within government stakeholders on the improvement of the issue.

Common definitions used are:

- Area Planted
refers to the area of crops that is planted
- Area Harvested
refers to area of crops which are harvested after its maturity
- Agriculture land
Land that is suitable for farming purposes
- Seasonal Crops
Crops that are planted and harvested on specific time e.g. vegetables

2.2.1.2 Coverage, Availability, Data Source and Responsible Agencies

Domain	Statistics/ Indicators	Coverage	Availability	Data Source	Responsible Agencies
Production	Volume of root crops production	National	1995 - 2005	Field visits & locality surveys	
	Volume of vegetables & fruits production	National	1995 – 2005	Field visits & locality surveys	
	Number of livestock	National	1995 – 2005	Field visits & locality surveys	Animal Health and Production Division
	Number of animals slaughtered meat production	National	1995 – 2005	Field visits & locality surveys	Animal Health and Production Division

2.2.1.3 Data Processing, Estimation and Revision Methodology

All crop production data are collected by Extension Officers using a summary format with the volume calculated by multiplying the area harvested by the yield. Data are collected on quarterly basis throughout the country. Statutory bodies like the Coconut Development Authority under the responsibility of the Minister of Agriculture provide their data directly to the Statistics Section on quarterly basis.

Data processing is done using simple spreadsheets in Excel Format. To date, there is no scientific methodology for data collection as this exercise is based on eye estimation and administrative reports using standard reporting formats. Reporting formats are used by Locality Officers whilst undertaking field visits in respective localities around the country. This process is not simultaneous in all parts of the country however it is a norm that the activity needs to be undertaken in order to provide the government on the current capacity of farming systems available in the country including major problems encountered in the farming process. Estimation is normally done at the beginning of the year using time series data for 3 years

CHAPTER 3. MAJOR DATA SOURCES FOR AGRICULTURAL STATISTICS

3.1 List of Major Agricultural Censuses, Surveys & Registers

Census: 1991 National Agriculture Census

Surveys: 1999 National Agriculture Survey

3.2 Metadata for Each of the Major Agricultural Censuses

3.2.1 National Agriculture Census

3.2.1.1 Overview

Fiji has already conducted three agriculture censuses in 1968, 1978 and 1991. The 1991 census was the most comprehensive using for the first time the Area Sample Frame methodology. However, the aim of establishing a functional agriculture statistics system within the ministry proved futile due to unforeseen circumstances, time, resource and financial constraints.

3.3 Metadata for Each of the Agricultural Surveys

3.3.1 National Agriculture Survey

3.3.1.1 Overview

In 1999, a National Agriculture Survey was conducted using for the first time the Multiple Sample Frame methodology. Estimates provided were only at national level not at lower level i.e. divisional, provincial and district/regions due to the small sample size used in the survey. The scope, definitions and concepts used were in accordance with the guidelines of the FAO program for the World Census of Agriculture

A Pilot Survey was conducted in 1998. The project became operational in 1998 with the arrival of the first technical mission. A pilot survey was conducted in the year to test the applicability of the methodology, scope, concepts and their operational definitions, data collection instruments (questionnaires, manuals etc) field, processing and analysis procedures. A subsample of 75 segments was selected from the 1991 Agriculture Census sample, in six districts representing different agricultural systems in the country. Data collection involved 4 supervisors and 9 enumerator for a period of 4 weeks. The ministry also contracted 10 project staff to assist in the activities of the project which included manual editing, coding and data entry.

The 1998 experiences were used to adjust methodologies, data collection instruments and other procedures to prepare the final ones to be used in the 1999 Agriculture Survey.

3.3.1.2 Survey Design

SAMPLING FRAME: Area Sample Frame and Multiple Sample Frame

Primary sampling unit is the Enumeration Area drawn out using the Population Census Enumeration Area boundaries.

SAMPLING DESIGN: Two stage sampling and cluster

- i) Stratification of the EA by using current land use practices
- ii) Within the stratified EA, A sample is selected using a systematic random selection of segments.

MAIN DATA ITEMS AND VARIABLES FOR OPERATIONAL PURPOSES: These include farmer identification, questionnaire control, farmer general information, crops, livestock, machinery, gender, employments etc.

REFERENCE PERIOD: Calendar year

GEOGRAPHICAL SCOPE: National/Province/District

Following are the details of the survey design of the Agricultural Survey:

- i) **Area Sample Frame [ASF] Updating**
 - Reviewing the 1991 Agriculture sample frame
 - Trained staff on the procedures and updated frame using special procedures set by the Consultant with the assistance of Land use staff
- ii) **LSF Construction**

Listing of major agriculture holdings was facilitated by major industries like the Fiji Sugar Corporation, Coconut Industry Authority, and Dairy Corporation.
- iii) **Subsample Design and selection from ASF**

A subsample of 200 segments was fixed and selected out of the 1294 segments in the sample of the 1991 agriculture census. This size was determined taking in consideration of three basic factors: financial resources available, national counterparts capabilities to manage and handle large number of questionnaires in data collection, processing and analysis and the precision required for the estimations
- iv) **Sample Design and selection of the LSF**

The LSF cut off determined was 50 hectares and more of total land under farm. After reviewing the quality of the lists and eliminating the duplications of the prepared list, a total of 284 farms were included in the LSF for 100% enumeration in the field.
- v) **Photography and Cartography**

The 200 photo enlargements scale 1: 4000, 1: 6000 and 1: 11000 used in the 1991 agriculture census were revised and prepared for data collection. A set

of topographic maps scale 1:50 000 showing the relative position of the selected segment, was also setup to assist the enumerators to identify and reach the assigned segment in the field.

3.3.1.3 Conduct, Operations, Data Quality Control

Questionnaires, Instruction Manuals, Tabulation Plan. The main farm Questionnaire NAS – 2 and auxiliary Segment Questionnaire NAS-1 which were both tested in the 1998 Pilot Survey were redesigned and adjusted for rigorous application of the MSF methodology. All lands belonging to a farm inside and outside the selected segment are carefully accounted for in order to minimize coverage error.

The Field Team Manual (106 pages each), Editing and Coding Manual (29 pages), Data Entry Manual, Manual for Consistency and Statistical Analysis containing specific instructions for field staff were prepared.

Training for Data Collection and Other Activities. Elaborate training programs were organized at various levels in order to train national staff in all aspects of agricultural survey procedures, including ASF updating, LSF construction, data collection, processing and analysis. Training for the 1999 Agricultural Survey was conducted for supervisors and enumerators from Extension Division for two weeks, one week of classroom training regarding the Field Team Manual and the second week involved three days of field practice (using cartography, aerial photography, farm segment questionnaire) and two days in the classroom discussing field errors and problems.

A training course was organized for data processing, one for data editing and coding and the other for data entry and computer validation using SPSS.

Field Data Collection. Enumerators formed 12 teams for the exercise which was arranged by administrative regions taking in to consideration on the total number of selected segments per region. A team comprises of a supervisor, three enumerators, a vehicle and driver. The head of Regional Agriculture offices provided administrative coordination and financial support.

Data Processing. SPSS Data Entry Builder and Data Entry Station (several user licenses) were adopted and used for data entry and the module Base+Trebles for automatic validation, tabulation and statistical analysis. Data entry conducted I two shifts with a supervisor responsible for each shift.

Validation, Tabulation and Analysis. Data validation is an integral aspect of any survey whereby all data captured during the survey are analysed, cleaned and tabulated. The 1999 Agriculture Survey provided on the job training to staff in the Consistency and Statistical Analysis with the assistance of data processing experts.

The organization of the agriculture census in the country is initiated by the Ministry of Agriculture. Economic Planning & Statistics Division is the main executing agency with the Chief Economist as the National Project Coordinator with assistance provided by the Statistics personnel.

All administrative and technical instructions are given by the NPO to all the heads of Regional Agriculture Office [Principal Agriculture Officer] around the country.

In order to maintain a smooth coordination of all activities, the regional agriculture heads nominates Supervisors from his regions based on provincial boundaries. Supervisors will then select his enumerators in accordance to the instructions given by the NPO.

NPO is also responsible for the nomination of Consistency Analysis Teams from headquarters whom shall be moving into various regions in the first two weeks of the operation in trying to assist Supervisors and Enumerators in identification of errors incurred and solved in the field during the process. Again key instructions of the team is provided by the NPO as part of consistency checks.

The NPO together with the Technical Assistance shall be responsible for the sampling errors, estimates of coefficient of variations and non response errors in the process. Together with headquarters project team, instructions will be given to the team for perusal and facilitation in a coordinated manner.

NPO shall also be providing instruction on unexpected events that may affect data quality including limitations, specific exclusions and exceptions to all regional agriculture heads for their facilitation and advice to the Supervisors.

3.4 Metadata for Each of the Major Administrative Registers

Administrative Records on land ownership are not used in the planning and drawing up of sample frames for the census or survey. This information is used as background information to provide clear understanding on the situation within the country.

Consistency checks are undertaken before the publication of statistics. NSO on the other end only provides advice on the type of information published and what type of improvements that could be done to improve the quality.

Again consistency checks with time series data are undertaken as part of data quality assurance procedures in the process.

ANNEXES

RESUME OF INFORMATION FOR FOOD AND AGRICULTURE STATISTICS

NO	MODULE, INFORMANT UNIT AND INFORMATION ITEM	SOURCE/INSTRUMENT OF INFORMATION			
		Census	Survey	Admin Records	Other
1	FARM MODULE/FARMS & FARMERS				
1.1	IDENTIFICATION	X	X	X	X
1.2	GENERAL CHARACTERISTICS: juridical condition, organization, principal economic activity	X			
1.3	DEMOGRAPHIC CHARACTERISTICS: number, sex, age, occupation, education	X	X		
1.4	EMPLOYMENT: number, sex, age, type, salaries, time	X	X		
1.5	LAND & WATER: land use (crops, fallow, pastures, forestry, others) land tenure (owned, leased, etc.)	X	X		
1.6	CROPS: planted and harvested areas, production, yields, losses, destination, fertilizers, other inputs	X	X		
1.7	LIVESTOCK: number, sex, age, born, deaths, buys, sales, Management, feed, services	X	X		
1.8	MACHINERY & EQUIPMEN	X	X		
1.9	BUILDINGS & OTHER CONSTRUCTIONS	X	X		
1.1	ANCILLARY ACTIVITIES: farm forestry and fishing activities		X		
1.1	STOCKS, MARKETING & CREDIT		X	X	
1.1	PRICES: received and paid at farm gate, wholesale/retail, export/import		X	X	
1.1	POST HARVEST LOSSES		X		
1.1	INCOME & EXPENDITURES		X		
1.1	OTHERS: international trade, national accounts, National Budgets, weather, soils, research, agricultural extension & education, etc.		X	X	X

RESUME OF INFORMATION IN FIJI'S FOOD AND AGRICULTURE STATISTICS

NO	MODULE, INFORMANT UNIT AND INFORMATION ITEM	SOURCE/INSTRUMENT OF INFORMATION			
		Census	Survey	Admin Records	Other
2	AGRO-INDUSTRIAL ESTABLISHMENT MODULE				
2.1	AGRICULTURE: production, prices, inputs, stocks, employment		X	X	
2.2	LIVESTOCK: production, prices, inputs, stocks, employment		X	X	
2.3	CHICKEN: production, prices, inputs, stocks, employment		X	X	
2.4	OTHERS: production, prices, inputs, stocks, employment		X	X	
3	TRADE MODULE/TRADERS (wholesale/retail)				
3.1	WHOLESALE: quantity, price, transport, stocks		X	X	
3.2	RETAIL: quantity, price, transport, stocks		X	X	
3.3	EXPORT/IMPORT: quantity, price, transport, stocks		X	X	
4	RURAL HOUSEHOLD MODULE				
4.1	FOOD CONSUMPTION (NUTRITION)		X		
4.2	INCOME & EXPENDITURES		X		

*OTHERS: Include local & international information, research, publications, etc.

The above mentioned table represent in details the type of information that is collected and collated in the country using the various mechanism of collection i.e. census, survey, administrative records and others.

FIJI CURRENT AGRICULTURAL STATISTICAL SYSTEM

Information Item	Actual Source	Potential Source	Desegregation (lowest level)	Reliability	Frequency*	Coverage
Crops:						
Dalo	Agriculture (Crop Ext Div)	FS	L	S	W, M, Q, A	N
Cassava Kumala	"		"	"	"	"
Yaqona	"	"	"	"	"	"
Yams			"	"	"	"
Vegetables &						"
Fruits	"	"	"	"	"	"
Ginger	"	"	"	"	"	CE
Root Crops	"	"	"	"	"	
Coconuts	"	"	M/M	"	"	N
Copra	Mi	-	Mi	IE	Q, A	N
Sugar Cane	Mi	FS	L	AR	Q, A	Sugarcane Belt
Livestock:						
Beef & Dairy Non-Commercial Farms	Agriculture [Livestock]	FS	L	S	M, Q, A	N
Beef & Dairy Commercial Farms	CF & CC	"	CC	Lists & IE	M, Q, A	N
Commercial Poultry	CF & CC	"	L	Lists & IE	BA	N
Sheep	Agriculture [Livestock]	"	"	S	M, Q, A	N
Goats	Agriculture [Livestock]	"	"	"	"	"
Bees	Agriculture [Livestock]	"	"	"	"	"
Pastures	Agriculture [Livestock]	"	"	"	"	"

FIJI CURRENT AGRICULTURAL STATISTICAL SYSTEM

Information Item	Actual Source	Potential Source	Desegregation (lowest level)	Reliability	Frequency*	Coverage
Fisheries:						
Inshore Fin	Fis	"	MS, RS	S	M, Q, A	N
Inshore Non-fin	Fis	"	Ex	"		"
Off-shore (Tuna)	"	Ex/Vs	"	"		"
N.E.M.P	"	"	"	"		"
Forestry:						
Indigenous	For/TPT	"	"	"	"	"
Exotic	For/TPT	"	"	"	"	"
Log Removal	For/TPT	"	"	"	"	"
Sawmilling	For/TPT	"	"	"	"	"
Research	For	D	"	"	"	"

*W = Weekly; M = Monthly; Q = Quarterly; BA = Bi Annual, A = Annual

TPT = Timber Production & Trade

IE = Industrial Establishment

AR = Administrative Records

MS = Market Survey

RS = Road Stall survey

CF = Commercial Farms

CC = Commercial Company

L = Locality

N = National

C = Central Region

E = Eastern Region

S = Subjective

D = Divisional

LS & SR = Locality Survey & Sawmill Record

Fi = Fisheries

For = Forestry

Ex/VS = Exports/Vessels

Ex = Exports

FS = Farm Surveys

Mi = Mills

M/M = Municipal Markets

SCOPE, PERIOD OF REFERENCE FOR FIJI AGRICULTURE CENSUS

NO	SCOPE; INFORMATION ITEM	PERIOD OF REFERENCE	STARTING YEAR				
			1	2	3	4	5
1	FARM IDENTIFICATION	Enumeration Day	X	X	X	X	X
1.1	Geographical: province, division, district, village settlement						
1.2	Sampling: questionnaire, stratum, EA, SM. Subdivision, Farm						
1.3	Farm: farm name, farmer's name, informant's name, head of household name						
2	QUESTIONNAIRE CONTROL	Enumeration Day	X	X	X	X	X
2.1	Field Staff: name, date, signature						
2.2	Data Processing: name, date, signature						
3	FARMER'S GENERAL INFORMATION	Enumeration Day	X	X	X	X	X
3.1	Farmer: sex, age, race						
3.2	Farm: subsistence and commercial						
4	ACTUAL LANDUSE	Enumeration Day	X	X	X	X	X
4.1	Measurement Unit: hectare/acre/other (dimensions)						
4.2	Farm Total Land Area						
4.3	Temporary crops						
4.4	Fallow one year and less						
4.5	Fallow one year to three years						
4.6	Permanent crops (no pastures)						
4.7	Coconut with pastures						
4.8	Pastures and grazing lands						
4.9	Natural Forests						
4.1	Planted Forests						
4.11	Non-agricultural land						

SCOPE, PERIOD OF REFERENCE FOR FIJI AGRICULTURE CENSUS

NO	SCOPE; INFORMATION ITEM	PERIOD OF REFERENCE	STARTING YEAR				
			1	2	3	4	5
5	TEMPORARY CROPS IN PURE, MIXED AND INTERPLANTED STANDS						
5.1	Crop name	Last Year	X	X	X	X	X
5.2	Planting and Harvesting dates	Last Year	X	X	X	X	X
5.3	Planted, irrigated and harvested areas	Last Year	X	X	X	X	X
5.4	Planted number of plants & spacing if farmer does know the crop areas	Last Year	X	X	X	X	X
5.5	Produce: quantity, local unit, equivalence in KG	Last Year	X	X	X	X	X
5.6	Produce final destination: seeds, farm, consumption, farm processing, sales, losses, worker payments in kind	Last Year	X	X	X	X	X
5.7	Prices received: farm gate/first transaction point					X	X
6	PERMANENT CROPS IN PURE, MIXED, INTERPLANTED & ASSOCIATED STAND						
6.1	Crop name	Enumeration Day	X	X	X	X	X
6.2	Planting year	Enumeration Day	X	X	X	X	X
6.3	Planted, irrigated and bearing areas	Enumeration Day	X	X	X	X	X
6.4	Number of planted and bearing trees (if the farmer know the crop areas)	Enumeration Day	X	X	X	X	X
6.5	Produce: quantity, local unit, Kg. Equivalent	Last Year	X	X	X	X	X
6.6	Produce final destination: seeds, farm consumption, farm processing, sales, losses, worker payments in kind	Last Year				X	X
6.7	Prices received: farm gate/first transaction point	Last Year				X	X
7	DAIRY AND BEEF CATTLE						
7.1	Initial Stock	Enumeration Day	X	X	X	X	X
7.2	Actual stock: sex, age, type	Enumeration Day	X	X	X	X	X
7.3	Births, deaths, live sales, butcher/abattoir sales purchases, losses	Last Year				X	X
7.4	Farm Disposal: home consumption, religious/mataqali	Last Year				X	X
7.5	Milk Produce: milking cows, quantity produced in local units and its equivalence in litres	Last Year	X	X	X	X	X

SCOPE, PERIOD OF REFERENCE FOR FIJI AGRICULTURE CENSUS

NO	SCOPE; INFORMATION ITEM	PERIOD OF REFERENCE	STARTING YEAR				
			1	2	3	4	5
7.6	Milk destination: home consumption, calve feeding, farm processing, sales, losses, worker payments in kind	Last Day	X	X	X	X	X
7.7	Prices received: gate/first transaction point	Last Day	X	X	X	X	X
8	PIGS						
8.1	Number, sex, age	Enumeration Day	X	X	X	X	X
8.2	Live sales, butcher	Last Year				X	X
8.3	Farm Disposal: farm consumption, religious	Last Year				X	X
9	SHEEP						
9.1	Number, sex, age	Enumeration Day	X	X	X	X	X
9.2	Live sales, home consumption	Last Year				X	X
10	GOATS						
10.1	Number, sex, age	Enumeration Day	X	X	X	X	X
10.2	Live sales, home consumption	Last Year				X	X
11	POULTRY						
11.1	Industrial: number (layers & broilers), produce	Last Year				X	X
11.2	Farm poultry: number	Enumeration Day	X	X	X	X	X
12	EMPLOYMENT						
12.1	Farmer & Farmers relatives without payment: number, age, sex	Last Week: Monday - Sunday	X	X	X	X	X
12.2	Permanent and casual paid (cash & kind) Workers: numbers, age, sex	Last Week: Monday	X	X	X	X	X
12.3	Farmers relatives: working hours	Last Week: Monday				X	X
12.4	Paid workers: working hours	Last Week: Monday				X	X
13	GENDER ISSUES						

Definitions in Agriculture Census

1. **Area Sampling Frame (ASF)**:- The ASF is a statistical method of selecting an agricultural sample of area segments of appropriate size from homogeneous strata to be constituted on the basis of intensity of land use.
2. **Enumeration Area (EA)**:- It is a piece of land of different size (ranging from 0.5km² to 200 or more km²) defined by the Bureau of Statistics to conduct the 1976 and 1986 population censuses. Most of the times these EAs have physically observable land marks (boundaries), such as roads, streams, rivers, ditches etc on the topographic maps scale 1:50,000. Each EA is identified by a permanently assigned identification.
3. **Segment (SM)**:- A segment is a piece of land usually smaller than an enumeration area (EA) with boundaries delineated on a map. In ASF, the total area of population to be sampled is divided into segments. These segments are assigned a permanent number and outlined in red on aerial photo enlargements (scales around 1:10,000, 1:6000 and 1:4000). In fact each EA has been divided in to SMs of different sizes. Definition of the stratification by actual land use, used in 1991 National Agricultural Census 'Table 1' (enclosed) will also be used in this survey.
4. **Closed Segment**:- A method of associating area frame survey data with a segment that includes only the agricultural activities that are within the segment boundaries. This means to collect information only from the tracts located inside the boundaries of the selected SM. For example, if information on land use is required, data are collected on the use of all land within the boundaries of each sample segment or, if information about cattle is required, the goal is to get information about all cattle within the boundaries of the selected SM at the time of interview
5. **Open Segment**:- The general ideal of the open-segment method is to formulate practical rules that associate every farm in the population with one and only one segment. To do this, a unique reference point, called Headquarters, is defined and located for each farm. A farm then belongs to the SM in which its headquarters is defined through the farmers' household. But, when there is not a household in the farm, the definition and location of the headquarters is more difficult.
6. **Weighted – Segment Method**:- It calls for the collection of data from every farm that is within or partly within, a selected SM. The data for each farm are then weighted by the proportion of the entire farm that is within the SM.

The figure 1 (Annexure – I) shows how the three methods work.

The closed – segment of the figure 1 (Annexure I) is composed of eight tracts. The information MUST be collected only for tracts A, B, C (even if it is a nonfarm tract), D, D, E, F and G.

With reference to this figure, farms numbered 1 (A), 3 (CC'), 4 (DD') and 7 (GG') will be assigned by the open – segment method, when the headquarters is the household.

In figure 1 (Annexure I), information MUST be collected tract by tract for all farms numbered 1 (A), 2 (B), 3 (CC'), 4 (DD'), 5 (EE'), 6 (FF') and 7 (GG') in 7 Questionnaires.

Description of Figure

Tract	Farm	Description
A	1	Tract A is an entire farm. The farmer lives on his farm.
B	2	Tract B is a farm, but the farmer does not live on his farm or inside the SM. He lives in the city of Suava, where the enumerator will not go.
CC'	3	Tract C is nonfarm tract. That is, no agricultural operations are performed within it. But, agricultural activities are conducted in tract C'. Two brothers work the land of this farm No. 3. One brother lives on the tract C and the other lives outside this SM (in other SM). According to previously defined rules that designate one person as the "farmer" of a farm, the brother living in tract C is the farmer of farm number 3, rather than the brother who helps operate the farm and lives outside the farm in another SM.
DD'	4	Tracts D and D' are composed of parcels of land at two locations within the SM. It is operated by one person who lives in the SM and has no land outside the SM.
EE' example of	5	Tracts E and E' is composed of farm number 5. This is an example of a SM boundary crossing a farm and dividing the farm into two tracts. The farmer lives in tract E.
FF' tract F'	6	Tract F is part of farm number 6. The remainder of the farm is located a few kilometers away from this SM. The farmer lives outside the SM in F'.
GG'	7	Tracts G and G' are part of the farm number 7. The farmer lives inside the SM and in tract G.

7. **Tract:-** It is a portion or sub-Division of a SM under one management. It is either an entire farm, part (s) of a farm, or a non-farm area of land. That is, the tract is determined by the definition of a farm and the boundaries of a SM. A tract may also be defined as any piece of land entirely surrounded by other land, water, road, forest etc. not forming part of this farm. A farm is composed of one or more tracts. The segment boundaries divide a continuous farm that is overlapping the SM boundaries in two or more tracts (Fig – 1) (Annexure I).

8. **Farm:-** It is an "Economic Unit" of agricultural production under single management comprising all livestock kept and all land used wholly or partly for agricultural production purposes, without regard to title, legal form, or size. Single management may be exercised by an individual or household, jointly by two or more individuals or households, by a clan, village, or by a juridical person such as a corporation, cooperative or government agency. The farm's land may consist of one or more tracts, located inside or outside the SM, in one or more separate areas or districts, but inside the same

province, provided the tracts share the same “ PRODUCTION MEANS” utilized by the farm, such as labour, farm buildings, machinery or draught animals.

Characteristics for identifying a farm

- a) Any piece of land to be considered as an agricultural farm MUST have at least 50 m² (approximately 0.01 has) with at least one of the following land uses on the enumeration day:
 - Temporary and permanent crops (pure and mixed stands) and forages;
 - Fallow one year or less;
 - Fallow more than one year, but less than three;
 - Improved (planted exotic and native) and unimproved pastures.
- b) Any piece of land without any of the conditions mentioned above, but has any of the livestock on the enumeration day, MUST be considered as a farm:
 - At least one cattle head;
 - At least one goat, or one pig, or one horse, or one sheep;
 - At least one poultry.
- c) Any livestock or poultry belonging to managers, administrators, workers, or relatives, that graze or stay in lands of farms where these persons are working or staying. In this case, the managers, administrators, etc. are the farmers and the livestock and poultry the farms. This situation is known as "FARM WITHOUT LAND". Also in this category is any piece of land of less than 50 m², but it has livestock or poultry.
- d) Any land assigned to managers, administrators, workers relatives for their own utilization for service payments, MUST be considered as an independent farm from the main one that is assigning the land.
- e) If a land is operated independently by a household member for agricultural production, it MUST be considered as a farm different from the farms operated by other household members.
- f) Any land operated by persons who do not have any rights for agricultural use of the land on which the crops, tress or pastures are grown, MUST be considered as a farm.
- g) Various economic agricultural production units under the same ownership, or under the same general direction, are considered separate farms if they are operated by different persons.
- h) If a member of a cooperative, religious organization, government agency, clan or village (mataqali), is assigned a separate land for agricultural production (including livestock and poultry) that is operated under the member's management, and for which he/she has general technical economic responsibility, then this land must be considered as a farm.
- i) If a cooperative, religious organization, government agency, clan or village (mataqali) has a specified communal land delimited by fencing, or any other form of boundary demarcation, and if its use for agricultural production and specially for grazing purposes is supervised, then this land MUST be considered as a farm.
- j) There are many farms operated by farmers having other occupation (s) in addition to being a farmer.

- k) The farm definition does not consider its land tenure. This means that the land conforming the farm could be total or partially owned, leased, mataqali or under other form, see figures 2 and 3 (Annexure II).
9. **Field:-** A field is a continuous piece of land inside a tract devoted to one crop of pure or mixed stand or any other land use. A tract may consist of one or more fields adjacent to each other. If a tract has several crops (or mixed crops), the area of each crop is a field. If the crop has been planted on different dates, or on lands with different land tenures then each of these situations is a field. If the crop has been planted on different dates, or on lands with different land tenures then each of these situations is a field. The most common cases in the identification of field are depicted in Figures 4 to 8 (Annexures III to VII).
10. **Cartography:-** It is the science of map making and therefore includes geodesy, photogrametry, compilation and map reproduction. It is very important that all the field workers especially the enumerators involved in the ASF based surveys must have well knowledge of cartography.
11. **Map:-** It is a reduced (for example 100 times) simplified projection onto a horizontal reference plane of parts of the earth's surface. Its map should give an accurate description of the terrain and within limitations of scale, should aim to give as faithful representation of the terrain as possible. In cartography two types of maps are generally distinguished topographic maps and thematic maps.
12. **Topographic maps:-** It shows the "Natural and Artificial Features" of the terrain, such as hills, rivers, roads, path roads, bridges, canals, power lines etc. Each topographic map has a 'legend' of symbols representing these features of terrain. One important symbol is called the "contour lines" representing the elevations or inequalities of the land surface.
13. **Thematic maps:-** It shows one or more Theme[s] or subject[s] such as the distribution of the population over the country or the concentration of energy sources in an area or the composition of the soil of a region of the total land use of a province. Topographic maps are used frequently as a base for Thematic mapping.
14. **Aerial Photography:-** A contact print is a photography made directly from the aerial photographer's negative without enlargement or reduction. The scale of a contact print is only approximate and varies from the center of the print outwards due to distortion in the image. Thus, we can see what the land looks like with a contact print, but we cannot use it for precise measurement of land area. Topographic maps fill the need for cartographic material that covers entire region and countries in a standard scale.
15. **Interpretation of Aerial Photography:-** Photo interpretation can be defined as the study of the image of photographed objects and the deduction of their significance. Any information on the photograph can be obtained on the ground. Differences recorded on the air photos reflect, differences on the ground.
16. **Appearance of Specific Features:-**
- a) **Relief** – This is weakly represented on single air photos. Its essential outlines can only be inferred from cuttings embankments, terraces and

similar features. Under the stereoscope and photos of good scale quite small relief features can be seen e.g. overflow channels or river terraces.

- b) Rock and Soil – Both bare Rock and Soil would appear to be lighter than expected from their normal appearance. Freshly turned soil may be medium to dark grey in tone but as it dries out it can change to nearly white. Beaches and sand dunes show the sand characteristic of whiteness.
- c) Water – Because of its high absorbing properties, water may appear very dark, nearly black on air photos. In the same way, moist or marshy ground will appear darker than dry areas. Muddy or salty water gives a rather lighter tone. Ripple or wave making may give a texture to the surface. Shallow water is often inconspicuous, being penetrated by light and allowing bottom details, such as channels and sand banks to show through. This is important to river and harbour authorities.
- d) Vegetation – Woods: The rough and chlorophyll rich woods surface cause them to appear dark. Size, tone and texture differences are related to variations in ages/ and species of trees. Height can be deduced from shadows. These properties are widely used in forest surveys and inventories.
- e) Grassland – The better the quality of the grass the darker or more even tone will appear. A good lawn map show an even, medium grey tone, poorer pasture appears lighter in tone and more mottled in texture due to mixed species and lower chlorophyll content.
- f) Crops – Enormous variety exists here. The most useful asset for specific identification is a detailed knowledge of agricultural techniques and the cropping calendar for the area.
- g) Communication – Roads: a conspicuous light tone exhibited by a road indicates only the nature of its surface not its importance. Main roads appear darker because of metalling, oil drip, tyre marks. Railways are much less conspicuous but associated features such as cuttings, tunnels, under and overhead bridges, smooth curves etc. render them quite unmistakable.
- h) Town and Built Up Areas – Buildings are easy to see but cannot be specified. In cases factories with long chimneys wasteponds, rail access are suggestive. Schools can be guessed by their size and adjacent playing fields. Ports can be recognized by docks and berth of ships.
- i) Archaeological and Historic sites – This could be striking as visible remains of former banks, ditches, mounds, walls, buildings, even old tree lines.

17. **Measuring (estimating) Distances:-** Sometimes the farmers or non farmers do not know the total area of their farms or non farms and/or the magnitude of the areas under crops. Then the field staff need to calculate the areas using simple methods, utilizing the length and breadth of the field and measuring distances through pacing. Each enumerator must calibrate his step by pacing following these procedures:

- a) Walk 20 steps and measure the distance and divide it by 20; for example, if the distance is 16 meters, divide it by 20. This will be equal to 0.80 meters per step.

- b) Repeat the above procedure two times more. Assume that the second distance is 16.40 meters. Dividing it by 20 it comes to be 0.82 meters per step. The third one is 16.20 meters dividing by 20 it comes to be 0.81 meters per step.
- c) Calculate the calibrated step by taking average of the above three distances.

$$\frac{0.80+0.82+0.81}{3} = 0.81 \text{ ms/step}$$

Example = if the enumerator has a calibrated step of 0.81 meteres, calculate the area of a rectangular field planted with maize, having length 60 steps and breadth 40 steps.

$$\begin{aligned} \text{Length} &= 60 \text{ steps} \times 0.81 \text{ ms} \\ &= 48.6 \text{ md} \\ \text{Breadth} &= 40 \text{ steps} \times 0.81 \text{ ms} = 32.4 \text{ ms} \\ \text{Area} &= \text{Length} \times \text{Breadth} \\ &= 48.6 \times 32.4 \\ &= 1574.64 \text{ m}^2 \\ &= 0.1575 \text{ has} \end{aligned}$$

18. **Calculating the area with Plastic Acetate Grid:-** The field staff will have a 'plastic acetate grid' containing small squares of 1 cm² each (1cm a side) to measure the areas of farms or non farms, placing it on the photo-enlargement.

The squares are counted, either by numerating each one or ticking them one by one and numbering every tenth square and numbering the last whole square. Fractional squares are estimated by eye to be equivalent to so many complete squares or fractional squares are counted and the total number of fractional squares divided by two will give an estimation of the number of whole squares obtained from incomplete squares. The total number of squares counted (complete squares plus incomplete squares divided by two) is then multiplied by the area represented by oen square written on the photo-enlargement in red colour.

Example: The scale of photo-enlargement is 1:6,000. It means that 1 cm² = 60 x 60 ms = 3600 m² = 0.36 has. The enumerators count 20 complete squares and 10 incomplete squares using the plastic acetate grid, placing it on a farm total land. Find the farm area.

			∞	∫	ℝ	∂		
		1	2	3	4	5		
	∩	10	9	8	7	6	⊗	
	∪	11	12	13	14	15	⊕	
		20	10	18	17	16		
					∩	∅		

No. of squares	=	20 complete squares + 10 incomplete squares
	=	20 + 5 complete squares
	=	25 squares
Farm Area	=	25 squares x 0.36 has
	=	9 has

19. **Biological Yield**:- The gross or total amount of crop produced by the plants expressed as a rate per unit, for example, bushels per acre and pounds per tree.
20. **Net Harvested Yields**:- The portion of total crop production harvested and recovered, expressed as a quantity unit of area, derived by deducting harvesting and other losses from the biological yield.
21. **Confidentiality**:- The specific status and degree of protection that must be provided for data about individuals or organizations.
22. **Stratification**:- Dividing the whole country into homogenous land areas is called stratification. An are frame is stratified according to landuse such as intensity of crop land, forests, waste land, urban areas etc.
23. **Enlargement**:- Enlarged aerial photo depicting land truth of the particular site embodying segment area delineated in red ink for conducting field surveys.
24. **Operator/Farmer**:- The person either owner or tenant in charge of the day to day decisions regarding the operation of the holding or farm may be called the operator for survey purposes.
25. **Strata**:- It is a homogenous grouping of land areas classified by actual land use characteristics.
26. **Strata Block**:- It contains land from only one strata. However, strata blocks are never pure because they always contain small areas of other strata too small to make a strata block. A strata block is always completely surrounded by other strata blocks, or the District population boundaries and its maximum size is limited only by the size of the population. The maximum size is equivalent to two segments. Exception to the minimum size rule are allowable.
27. **Enumeration**:- In a sample survey collection and recording of statistical information for all selected sampling units is called enumeration.
28. **Enumerative Survey**:- A survey that obtains statistical information for the selected sampling units by personal interview with the respondents.
29. **Enumerator**:- A person employed specifically to obtain information on sampling units by personal interviews with the respondents. Also, a person employed specifically to make counts, measurements and observations in sample plots of field crops or on count limbs of tree crops for objective yield surveys.

30. **Multiple Frame Survey**:- A survey in which the sample is selected from two or more sampling frames (usually an area frame and a list frame).
31. **Household**:- It means a person or a group of persons living together and eating from the same kitchen whether or not related to each other. Hospitals, hostels, jails and hotels are not considered as household.
32. **Head of Household**:- A person in the household accepted as such by other members of the household. He has the primary authority and responsibility towards household affairs.
33. **Ratoon**:- The practice of harvesting a second crop from the original seedling usually in sugarcane.
34. **Due Date**:- The date assigned material must be received in the Head Quarters.
35. **Survey Period**:- The time period during which survey data collection can occur. It is primarily determined by the survey's reference date and due date.
36. **Units of Measurement** -
- | | | |
|---------|---|----------------------|
| 1 ha | = | 100m x 100m |
| | = | 10,000m ² |
| 1 ha | = | 2.5 acres |
| 1 ha | = | 25 chains |
| 1 chain | = | 20m x 20m |
| | = | 400m ² |
37. **Area of Circle** -
- | | |
|---|--------------|
| = | πr^2 |
| = | $(\pi=22/7)$ |
38. **Circumference of a circle** -
- | | |
|---|-----------|
| = | $2 \pi r$ |
|---|-----------|
39. **Sampling Unit**:- It is the unit selected in the sample random. For Annual Agricultural surveys the segment is the sampling unit.
40. **Reporting Unit**:- The farm is the reporting unit and one questionnaire for each farm will be fitted in.
41. **Universe**:- All farms (reporting units) constitute the universe.
42. **Livestock**:- It refers to all animals kept or reared in captivity on the farm for agricultural purposes.
43. **Dairy Cattle**:- It refers to animals kept or reared on the farms mainly for milking

purpose.

44. **Pure Stand**:- A single crop cultivated alone in a field is called in pure stand. A pure stand may be either temporary or permanent.
45. **Area Under Temporary Crops & Forages**:- All land used for crops with a growing cycle of under one year and it must be newly sown or planted for further production after harvest. Crops remaining in the field more than one year should also be considered temporary crops if harvesting destroys the plants (for example cassava and yams). Crops grown in rotation and destroyed when the land is ploughed should be considered as temporary crops (for example alfalfa, clover, grasses). The forages are considered temporary crops when the plant is destroyed after harvest.

Vegetables, flowers, bulbs and kitchen and market gardens should also be included in this category. Land under trees and shrubs producing flowers, such as roses and jasmine should not be included in the land under temporary crops.

Asparagus, strawberries, pineapples, vanilla, passion fruit, bananas, sugarcane and similar crops, were considered as permanent crops in the 1991 NAC. Hence, these crops will also be considered as permanent crops for the ongoing annual surveys and will not be covered under temporary crops.

46. **Permanent Crops (No pastures)**:- Land cultivated with long term crops which do not have to be replanted for several years after each harvest (sugarcane, coconut, cocoa, citrus etc.) is included. Land under trees and shrubs producing flowers, such as roses and jasmine and nurseries (except those for forest, trees which should be classified under planned forests) is also included.
47. **Nursery**:- It is a piece of land where growing plants are cultivated for transplanting and/or sale.

Asparagus, strawberries, pineapples, vanilla, passion fruit, bananas are also included. Be careful to include in this category the permanent crops (for example coconut interplanted with cocoa and associated with cassava and yaqona; sugarcane associated with beans).

Exclude the permanent pastures and meadows and the coconuts mixed with pastures.

48. **Coconut with pastures**:- This includes land cultivated with coconuts mixed with pastures for grazing purposes.
49. **Pastures (include grazing)**:- This includes land used permanently (for one year or more) to grow herbaceous forage crops, through cultivation or naturally for mowing or grazing (wild prairie or grazing land). Permanent pastures on which trees and shrubs are grown should be recorded under this heading only if the growing of forage crops is the most important use of that area.

Do not include temporary forages if harvesting destroys the plant; include them under temporary crops.

50. **Natural Forests**:- This includes natural woodlots or timber tracts, constituting part of the farm which have or will have value as wood, timber, other forest products or for protection. Rows, belts, and small clumps of natural trees, bamboo and other woody natural vegetation should be included in natural forest. Natural woodland or natural forest used only for recreation purposes should be excluded and reported under the farm "NONAGRICULTURAL LAND".
51. **Planted Forests**:- This includes natural woodlots or timber tracts, constituting part of the farm which have or will have value as wood, timber, other forest products or for protection. Rows, belts, and small clumps of planted trees, bamboo and other woody planted vegetation should be included in planted forest. Planted woodland or planted forest used only for recreation purposes should be excluded and reported under the farm "NONAGRICULTURAL LAND".
52. **Mixed Crop**:- Mixed crops are two or more different temporary OR permanent crops (but not temporary AND permanent crops) grown simultaneously in the same field. The number, kind and proportions of crops in the mixture will generally vary according to prevailing practices or other factors such as meteorological conditions.

Temporary crops, particularly grains, are grown and harvested as mixtures sometimes. Individual crops in the mixture should be specified and the most important constituent crop or crops names. Mixed cereal grain crops, other mixed grain crops and mixed grasses grown for hay are examples. The area of the individual crop in the mixture may be worked out according to the defacto position of the crops grown in consultation with the farmer.

53. **Interplanted Crops**:- Interplanted crops are crops planted between rows of another crop (examples; between maize rows, cocoa between rows of coconuts). Interplanted crops may be temporary OR permanent crops (but not temporary AND permanent crops).

Yields of some mixed and interplanted crops may be as large as when grown alone, and even when favourable interactions, in the case of special mixtures, may result in increased yields. The same procedure (as for the mixed crops) may be used for working out the area.

54. **Associated Crops**:- When both temporary and permanent crops are grown simultaneously in the same field (examples: sugar cane and beans; coconuts with cassava dalo and yaqona), these are called associated crops. Distinction should be made between crop mixtures and interplanted crops defined above.
55. **Successive Crops**:- If the same or different crops are grown and harvested successively on the same land several times during the reference period then these are called successive crops. The field or part of it may be left fallow during one or more cropping seasons, or sown or planted and harvested during each crop season in the same period of reference. The successive crop area should

be reported for each crop separately each time the area is sown or planted during the reference period. Thus, if two crops are grown successively on the same field, the field area will appear twice or sometimes more if the farmer is having more than two crop seasons in the same period of reference. In these cases total planted or sown or harvested area for the reference period is larger than the total physical land reported under temporary crops and/or fallow of one year and less of Section IV.

Successive harvests from the same standing crops should not be confused with successive cropping. Area for the farmer should be reported once, unless the same crop is sown or planted and harvested more than once during the reference period.

56. **Fallow One Year & Less**:- It is the land lying fallow where a crop was harvested during last season, that has been prepared or being prepared (ploughed for example), for putting under crops soon afterwards.

It could be another land use, like pastures or bush, under that land prepared or being prepared, to be put under crops during next season.

57. **Fallow One to Three Years**:- This is a land at prolonged rest from more than one year to three years before recultivation. This land could be used for grazing purposes.

Land remaining fallow for more than three years may acquire characteristics requiring it to be reclassified, such as "PASTURES" (if used for grazing) or "FOREST" (if overgrown with trees that could be used for timber, firewood, etc.), or "NONAGRICULTURAL LAND" (if it becomes wasteland).

Land fallow one year and less or fallow from one year to three years, should be distinguished from land abandoned by "SHIFTING CULTIVATION"; the former is part of the farm whereas the latter is not.

58. **Shifting Cultivation**:- Is a land utilization method; a particular piece of land is cultivated for some years and then abandoned for a period sufficient for it to restore its fertility by natural vegetative growth; It is then recultivated. The distinguishing characteristic of shifting cultivation is that neither organic fertilizers nor manure are used to retain soil fertility. As a result cultivated land productivity steadily decreases and it becomes economically preferable to open up a new piece of land and abandon the existing one. Abandoned land usually takes a long time to regain fertility by natural processes.

59. **Productive age of permanent crops**:- This includes permanent crops already bearing fruits or otherwise productive. Most tree crops and other permanent crops become productive after a certain age. Crops at that state should be enumerated as "OF PRODUCTIVE AGE" even if due to meteorological conditions or other reasons, they have not yielded a harvest during the period of reference. Senile or other trees of productive age but no longer productive, should not be enumerated if it is possible to identify them.

60. **Compact Plantation**:- This includes plants, trees and shrubs planted in a regular and systematic manner, plants, trees and shrubs forming an irregular pattern but dense enough to permit data collection of area planted, are also considered "COMPACT PLANTATION".
61. **Scattered Plants, Trees and Vines**:- This includes plants, trees, vines and shrubs scattered or isolated to prevent adequate determination of the aggregate area occupied.
62. **Non agricultural Land**:- This includes all other land of the farm, not elsewhere specified, whether or not potentially productive. It covers two land classes:
- Unused and undeveloped land potentially productive for agriculture or forestry, but not net developed;
 - Land in the farm not elsewhere specified.
63. **Unused and Undeveloped Potentially Productive Land**:- This includes uncultivated land, comprising part of the farm but not included under the preceding headings, producing some kind of utilizable vegetable product, such are reeds or rushes for matting and bedding for livestock, wild berries, plants and fruits (bread trees). Or land could be brought into crop production with little more effort in addition to that required in common cultivation practices.
64. **Land in the Farm not Elsewhere Specified**:- This includes land occupied by buildings, parks and ornamental gardens, roads or lanes, irrigation canals, open spaces needed for storing equipment and products, wasteland, land under water, mangrove, and any other land not reported under previous classes.
65. **Irrigation**:- It refers to providing water to the land other than rain.
66. **Total Land of Tract**:- The total land of each tract should be equal to total land area under various use classes.
67. **Total Farm Area**:- Total farm area is the combined area of all the farm's tracts. Land owned by the farmer but rented to others should not be included in the total farm area. The farm area includes farmyard and land occupied by farm buildings. Land area of the farmer's house is also included in total farm area if the house is not located off the farm (for example, in a residential area of a city), and is not used solely for residential purposes. The total area of a farm practicing shifting cultivation should include area under crops during the reference period and area prepared for cultivation but not sown or planted at the time of enumeration; it should exclude land abandoned prior the reference period. Farmers having access to communal grazing land should not include their estimated share of such land in their total farm area. Total farm area should be equal to total land area under various tracts and use classes.
68. **Economically active**:- A person of 10 years of age and above of either sex working at a job or seeking work for pay or profit is an economically active person. It includes persons employed and unemployed during the reference period.

69. **Employed**:- It comprises all persons including unpaid family workers, who worked during the reference period, or who had a job in which they previously worked, but from which they were temporarily absent because of illness or injury, industrial disputes, vacation or other leave or temporary interruption of work for such reasons as bad weather, mechanical breakdown or production requirements.
70. **Permanent worker**:- A person working for pay and profit for 20 hours or more during a week is defined as permanent worker.
71. **Casual worker**:- A person working for pay and profit during a week for less than 20 hours is defined as a casual worker.
72. **Looking for work**:- It includes all persons not working during the reference period, but seeking work for pay or profit including those who have never worked before.
73. **Unemployed**:- It comprises all persons not working during the reference period, but seeking work for pay or profit including those who have never worked before. Persons not seeking work during the reference period because of temporary illness, previous arrangements to start a new job subsequent to the reference period, or on temporary or indefinite lay off without pay, are also included.
74. **Unpaid family workers**:- An unpaid family worker is defined as “usually a person who works, without pay”, in an economic enterprise operated by a related person living in the same household for at least seven hours per week.
75. **Payment in cash**:- It refers to the payment in cash only for labour performed.
76. **Payment in kind**:- It refers to any form of payment for labour performed which does not involve payment in cash.
77. **Payment in cash and kind**:- It refers to the mixed form of payment in cash and kind for labour performed.
78. **Commercial**:- When more than 50% of produce is for sale it is referred to as commercial.
79. **Subsistence**:- When more than 50% of the produce is for home consumption it is referred to as subsistence.