



Preliminary Report  
AGRICULTURE  
CENSUS

2007



## Preface

This ***Preliminary Report 2007 Census of Agriculture*** summarizes the key findings of the census and survey which was conducted between 21<sup>st</sup> August to 21<sup>st</sup> October, 2007. The report presents brief information on the census methodology, some of the main findings, and the basic tables.

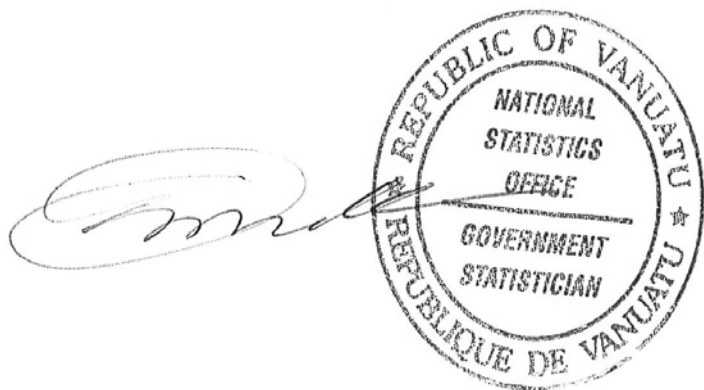
Many people contributed to the census in so many ways. I would like to express my gratitude to the Food and Agriculture Organization (FAO), and in particular Mr. David Marshall, Senior Statistician, Ms. Josie Perez, FAO TCDC Expert in Agriculture Census and Surveys and Mr. Gene Lorica, TCDC Expert in Data Processing and Mr. Cecil Ipalawatte, Data Analysis Consultant, Nirmana Pty Ltd.

I would like to convey my sincere thanks to the members of the Vanuatu Agriculture Census Steering Committee for their guidance and valuable advice during the entire implementation period of the project. Their recommendations and advice have ensured the successful implementation of the project.

I would also like to express my sincere gratitude to Mr. Pioni Willie, National Project Coordinator for his leadership and guidance during the implementation of the project. Furthermore, may I acknowledge the contributions made by the Vanuatu National Statistics Office staff and the Project staff.

A number of Government departments and agencies in Vanuatu contributed in one way or another towards the success of the census and survey. I wish to express my sincere thanks to the staff and officials of the Ministry of Finance and Economic Management, the Ministry of Agriculture, Quarantine, Forestry and Fisheries, the Departments of Agriculture, Quarantine & Livestock, Forestry and Fisheries, the Department of Land Surveys, and the Department of Provincial Affairs. I am grateful to the Provincial Secretary Generals for providing office spaces for use by Provincial Census Coordinators in their office headquarters.

I am very happy to see this preliminary report published in a timely manner.



Simil Johnson  
Acting Government Statistician

## Foreward

The Census of Agriculture is a large scale undertaking to collect and disaggregate statistical data at provincial level needed for planning, establish benchmark data on the structure of agriculture in order to evaluate the progress of agricultural, forestry and fisheries sectors in Vanuatu. The census of Agriculture 2007 is the latest in the series of Censuses.

I would like to sincerely thank the Vanuatu Government for taking the initiative in securing the necessary funds for the project. My sincere thanks goes to the following agencies and organization: New Zealand High Commission (NZAID), and Australian High Commission (AusAID) for co-financing the Vanuatu Agriculture Census. I would also like to thank the Food and Agricultural Organization (FAO) for providing technical assistance and support to the project.

I would like to express my sincere thanks to Pioni Willie, National Project Coordinator, for his dedication and hard work in the census of agriculture. I would like to convey my sincere thanks to the provincial census coordinators, supervisors and enumerators for working hard in the field collecting the required data; also not forgetting the general public for their fullest cooperation in providing relevant information.


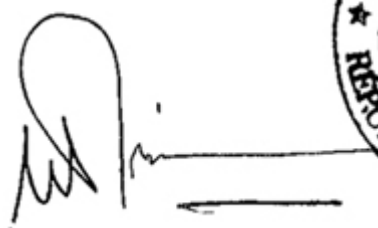
I would like also to express my sincere thanks to Ms. Alice Sami, Deputy National Project Coordinator and Mrs. Aspinold Amos, Administration and Finance Officer to the project for their assistance and support to the implementation of the project; without which the project would have not come this far.

Furthermore, my sincere thanks goes to the departments under the Ministry of Agriculture, Quarantine, Forestry and Fisheries (MAOFF) namely: Agriculture, Quarantine & Livestock, Forestry and Fisheries for their logistical support and assistance during the planning, preparation and data collection. In particular, I would like to express my sincere thanks to Mrs. Gwenneth Natu-Tari from the Department of Agriculture for her assistance during the data analysis of this report.

I wish to express my sincere thanks to the following people: Ms. Josie Perez, FAO TCDC Expert in Agriculture Census and Surveys, Mr. Gene Lorica, TCDC Expert in Data Processing and Mr. Cecil Ipalawatte from Nirmana Pty Ltd, a short-term Data Analysis Consultant for their tireless efforts during the data processing and analysis period. Their guidance and support in publishing this preliminary report must be acknowledged without which this report would have not been successfully published.

Lastly but not the least, I would like to convey my sincere thanks to Mr. David Marshall, Senior Statistician, FAO for his technical support and guidance right from the beginning of the project to this stage. His technical input and advice during the entire life of the project is to be acknowledged without which the project would not have come this far.

Honourable Willie Jimmy Tapangararua (MP)  
Minister of Finance and Economic Management



## Vanuatu

Located in the South West Pacific Ocean, Vanuatu is an archipelago of islands stretching about 850 kilometres from the Torres to Mathews and Hunter islands. The total land area is about 12 930 square kilometres with the eight largest islands contributing 87 per cent of the land area.

Vanuatu has an exceptional mixture of natural beauty, ranging from dense tropical forests on the islands of Santo, Malekula and Efate to the grass-covered plateau on Tanna Island and green, fertile coastal plains sloping into the blue sea. About 75 per cent of the country is covered by natural vegetation including grasslands, secondary forest growth and rainforest.

There is archaeological evidence that people first came to these islands some 4000 years ago. Pottery fragments have been discovered dating back to 1300 B.C. The people who came to Vanuatu were skilled gardeners and their systems were typically horticultural, with gardening predominant over agriculture. The traditional multi-crop food garden was inter-planted with a variety of root crops. There was a hierarchical importance assigned to the different plants based on prestige accorded them.

The crops brought by the early settlers to Vanuatu included yams, taro, bananas, island cabbage, breadfruit, naviso and a variety of edible nuts. European settlers introduced cattle, horses and a number of new crops such as coffee, vanilla and pepper.

### Agriculture in Vanuatu

In 1969, aerial photographs were used to estimate the land area under coconuts on each island. A cattle census was conducted in 1971 limited to counting herds of cattle classified as either European or local. More statistics were collected from villages and plantations by the Department of Agriculture in 1976.

The first attempt to conduct a broad agricultural census in the country took place in 1983 with a complete enumeration of agricultural households in both rural and urban areas. A second census of agriculture was carried out in 1993, but it did not cover agricultural production in sufficient detail, and was conducted only on five main islands. The Census of Agriculture that was scheduled for 2003, was not conducted due to lack of resources. Therefore, the Census of Agriculture 2007 was conducted after a lapse of 14 years.



## Objectives of the agriculture census

The census of agriculture is a government-sponsored operation to derive quantitative statistical information on the structure of agriculture using agricultural sub-holding as the unit of enumeration.

The specific objectives of the census were:

- to provide data on the structure and characteristics of agricultural activities as well as forestry and fisheries in Vanuatu;
- to provide benchmark data for use in national accounts estimates; and
- to provide a sampling frame for future surveys of agriculture including livestock, fisheries and forestry.

## Census organisation

The Senior Social Statistician and the Assistant Social Statistician of the National Statistics Office (NSO) were seconded to the project as the National Project Coordinator and the Deputy National Census Project Coordinator. Six provincial census coordinators were appointed and they were assisted by provincial agricultural officers who were based at the provincial headquarters to supervise the enumerators at the island level.

## Steering committee

An eight-member national agriculture census steering committee was formed, headed by the Director General, Ministry of Agriculture, Quarantine, Forestry and Fisheries. They included representatives from the departments of Economic and Sector Planning, Finance and Economic management, Agriculture, National Statistics Office, Lands, Survey and Natural Resources, Reserve Bank of Vanuatu, and Malvatumauri Council of Chiefs.

## Organisation of training

Two levels of training programs were conducted: the first was the training of trainers and the participants were the NSO staff, six provincial officers of the Department of Agriculture and the provincial coordinators. Training was then conducted for the supervisors and enumerators. Provincial coordinators and island supervisors were trained in manual editing and checking of completed forms to ensure all questionnaires were filled in correctly before dispatch to the Census Head Office in Port Vila.

## Reference period

The Agriculture Census covered the period June 1, 2006 to May 31, 2007. Data gathering took place from August 21<sup>st</sup> to September 21<sup>st</sup>, 2007. A further one-month period, from September 21<sup>st</sup> to October 21<sup>st</sup>, 2007, was allocated especially for difficult areas in the country.

## Sampling methodology

The number of households interviewed was based on the sampling methodology that is used in the census. The 15 major islands were classified as:

***small islands*** – if the number of households engaged in agricultural activities is less than 500; Torres, Paama and Erromango are in this category. A complete enumeration was conducted of agriculture (crop gardens and cattle sub-holdings), forestry and fishing activities and a complete census of cash crop sub-holdings (kava/coconut/ cocoa/vanilla/pepper) with ten or more trees.

***medium islands*** – if the number of households engaged in agricultural activities is between 500 - 1,999; Banks, Malo, Maewo, Ambrym, Epi and Shepherds belong to this group. A one-third of the enumeration areas (EAs) were randomly selected and then all households in the selected EAs that engaged in agricultural activities (including forestry and fisheries) were interviewed. The cut-off for cash crop sub-holdings (kava /coconut /cocoa /vanilla/pepper) was set at ten trees or more.

***large islands*** – if the number of households operating agricultural activities is 2,000 or more; Santo, Efate, Malekula, Ambae, Pentecost and Tanna were considered to be large islands. In large islands, after listing all households in the sample EAs (a one-third sample as above), sub-sampling was undertaken. One-third of total households engaged in crop gardening and/or kava sub-holding and/or coconut sub-holding were chosen using systematic sampling. In addition to these, all households listed and found to have engaged in other sub-holdings like cattle and cash crop sub-holdings (cocoa, coffee, vanilla, pepper) were completely enumerated. The cut-off of ten or more trees was utilized as for other islands sizes.



## Concepts and definitions

*A household* is defined as an individual or a group of persons with a common arrangement for providing themselves with food. A household may be either one-person household or a multi-person household.

*An agricultural activity* is an economic activity covering the growing of crops, horticulture or rearing animals. This also includes household fishing and forestry activities.

*An agricultural holding* is any economic unit of agricultural production (like a garden or temporary and/or permanent crops or cattle rearing, cocoa/coffee/kava/vanilla/pepper/plantation) under single management, without regard to title, legal form or size. Management may be exercised by an individual member of the household or by the entire household.

*A sub-holding* is defined as a single agricultural activity or group of activities managed by a particular person or group of persons in the household. A sub-holding could comprise one single plot or a whole garden/parcel. It could also be a livestock operation such as cattle rearing associated with a plot, field or parcel, or it could be solely a crop production activity like a coconut or cocoa plantation.

*A crop garden* is a piece of land used wholly or partly for crop production purposes under one form of tenure. It may consist of one or more fields adjacent to each other. A crop garden may also be termed a parcel. It may comprise one agricultural holding or just part of an agricultural holding.

*Tenure* refers to the arrangements or right under which the farmer operates the garden.

*Temporary crops* are those with less than a one-year growing cycle.

*Permanent crops* are crops with more than a one-year growing cycle. These may be grown in a compact plantation or garden or as scattered trees/plants.

*Paddock* is a place used for keeping cattle, with permanent water supply, improved pastures and fences.



## Some key results<sup>1</sup>

Data presented in this report are preliminary because the comprehensive census review of all items at the country level is continuing. These data may be subject to significant change when final results are released.

The number of households in the 1983 agriculture census was 21 401 in rural areas which has now increased to 33 879 in 2007 giving an average annual increase of about 3.2 per cent. The Malampa province had the highest number of rural households (7 430), followed by Tafia province (6 615), Penama province (6 517), Sanma province (5 991) and Shefa province (5 517).

The total number of rural agricultural households with garden crops in 2007 was 33 690. Nearly 31 300 of these households (93 per cent) were headed by a male member.

Almost 96 per cent of the household gardens in Vanuatu are less than a hectare in size, three per cent are 1 to 3 hectares, and only one per cent is more than four hectares.

Tafea province has the highest number of household gardens in Vanuatu with 22 419 gardens (22.9 per cent). Malampa and Penama provinces follow in second and third places with 19 824 (20.2 per cent) and 19 066 (19.5 per cent) gardens, respectively. Sanma province ranks a close fourth with 17 333 (17.7 per cent) gardens.

Nearly 88 per cent of the gardens are owned by the households and 13 per cent are used free. Seven per cent of gardens are on custom land, while only one per cent are tenanted.

Nearly four out of five (79.4 per cent) of all rural farm household members are less than 40 years of age.

Nearly half (47.9 per cent) of all rural farm household members had primary education only while 7.6 per cent had no education. However, 8.6 per cent of female members had no education, compared to only 6.7 per cent of male members.

Almost nine out of ten (88.4 per cent) female farm household members worked about forty hours a week in the crop gardens compared to 86.8 per cent of male household members. Nine per cent of all rural farm household members worked more than 40 hours in their crop garden.

Province	Total	Male	Female
VANUATU (rural sector)	175,051	90,398	84,653
TORBA	9,347	4,748	4,600
SANMA	31,087	16,533	14,554
PENAMA	33,360	17,470	15,890
MALAMPA	35,981	18,319	17,662
SHEFA	29,056	15,161	13,895
TAFEA	36,220	18,167	18,053

Source: Agriculture Census 2007, National Statistics Office, Vanuatu

Note: All data presented includes all households engaged in agriculture activities as well as forestry and fisheries activities. Figures are based on preliminary tabulation and may be different in the final report.

<sup>1</sup> The quality of the enumeration was considered inadequate for some islands.



	Both Sexes	Male	Female
VANUATU (rural sector)			
All ages	175,051	90,398	84,653
Less than 10 years old	44,777	23,285	21,492
10 - 19 years old	40,332	20,764	19,568
20 - 29 years old	30,962	15,474	15,488
30 - 39 years old	22,858	11,545	11,313
40 - 49 years old	13,754	6,996	6,758
50 - 59 years old	9,437	4,981	4,456
60 years old and over	10,447	6,137	4,310
Not Stated	2,483	1,217	1,266

Source: Agriculture Census 2007, National Statistics Office, Vanuatu

Note: Data presented includes all households engaged in agriculture activities as well as forestry and fisheries activities. Figures are based on preliminary tabulation and may be different in the final report.



Province	Total	Male	Female
VANUATU (rural sector)	111,117	57,427	53,690
TORBA	6,021	3,063	2,958
SANMA	19,392	10,273	9,119
PENAMA	21,773	11,576	10,197
MALAMPA	23,281	11,935	11,346
SHEFA	18,459	9,571	8,888
TAFEA	22,191	11,008	11,183

Source: Agriculture Census 2007, National Statistics Office, Vanuatu

Note: Data presented includes all households engaged in agriculture activities as well as forestry and fisheries activities. Figures are based on preliminary tabulation and may be different in the final report.

**Table 4** Number of household members engaged in household agricultural activities by sex and average hours worked: August 2007

Average Hours Worked	Both Sexes	Male	Female
VANUATU (rural sector)			
Total	111,117	57,427	53,690
Less than 10 hours	40,760	20,677	20,082
10 - 19 hours	25,355	12,432	12,923
20 - 39 hours	31,226	16,743	14,483
40 hours and over	10,471	5,944	4,528
Not Stated	3,305	1,630	1,675

Source: Agriculture Census 2007, National Statistics Office, Vanuatu

Note: Data presented includes all households engaged in agriculture activities as well as forestry and fisheries activities. Figures are based on preliminary tabulation and may be different in the final report.

**Table 5** Number of non-household members hired to work in household agricultural activities in the last 12 months by sex and by province: August 2007

Province	Total	Male	Female
VANUATU (rural sector)	6,883	4,287	2,596
TORBA	51	31	20
SANMA	1,910	1,452	457
PENAMA	624	331	293
MALAMPA	867	515	352
SHEFA	130	101	29
TAFEA	3,301	1,857	1,444

Source: Agriculture Census 2007, National Statistics Office, Vanuatu

Note: Data presented includes all households engaged in agriculture activities as well as forestry and fisheries activities. Figures are based on preliminary tabulation and may be different in the final report.

**Table 6** Number of land parcels in coconut sub-holdings by area and by province: August 2007

Province	Area of parcel (hectares)							
	Total*	<1	1 - 2	3 - 4	5 - 9	10 - 49	50 - 99	100 and over
VANUATU (rural sector)	38,618	11,847	20,953	2,870	1,903	838	86	122
TORBA	2,309	413	1,679	157	34	7	0	20
SANMA	6,686	907	4,440	781	432	84	41	0
PENAMA	6,581	2,352	3,265	394	334	236	0	0
MALAMPA	12,423	4,327	6,896	719	400	12	0	67
SHEFA	5,291	1,873	2,491	432	313	129	18	34
TAFEA	5,327	1,974	2,181	387	390	369	26	0

\* Excludes not stated

Source: Agriculture Census 2007, National Statistics Office, Vanuatu

Note: Data includes only those parcels of the coconut sub-holdings with bearing trees. Figures are based on preliminary tabulation and may be different in the final report.

## Coconuts

It is likely that coconuts were growing in Vanuatu at least several thousand years before the arrivals of the first people. Following the arrival and settlement of communities in Vanuatu, movement of coconuts between the island became commonplace.

In 1921, the Annual Colonial Report estimated the areas under coconuts in Vanuatu as 23 118 hectares, and in 1927 smallholders produced about 2 500 tons of copra, or 25 per cent of the record 10 204 tons of copra exported. A 1969 study of aerial photographs estimated that the total area under coconuts was about 60 500 hectares, of which 40 000 hectares were smallholdings.

It was estimated that there were about 9 million bearing coconut trees in 2007. A large number of assumptions were made to estimate the total number of coconuts production, taking into account the nuts used for home consumption, animal feed and copra making. With the total number of nuts per tree per year varying from 86 (Rennell tall) to 90 (Vanuatu tall), it is estimated that approximately 290 million coconuts were produced in Vanuatu in 2007.



**Table 7** Number of bearing coconut trees by age and by province: August 2007

Province	Age in years					
	Total	0 - 4	5 - 19	20 - 29	30 - 49	50 & over
Number of trees (000)						
VANUATU (rural sector)	8,743	54	1,910	2,916	2,261	1,603
TORBA	517	12	176	205	65	58
SANMA	1,878	13	539	917	351	59
PENAMA	2,020	19	326	844	629	202
MALAMPA	2,381	2	619	630	582	546
SHEFA	1,402	4	122	184	490	603
TAFEA	544	4	128	134	144	135

Source: Agriculture Census 2007, National Statistics Office, Vanuatu

Note: Data presented includes only those parcels of coconut sub-holdings with reported bearing trees. Figures are based on preliminary tabulation and may be different in the final report.

## Kava

Kava is widely cultivated in Vanuatu and other Pacific countries such as Samoa, Tonga, Fiji and Micronesia. There appears to be a greater diversity in kava cultivars within Vanuatu suggesting kava might have been in the islands longer than in other Pacific countries. For example, kava in Vanuatu goes by a very great number of names, twenty-five in Tanna alone, compared, for example, with only five in Fiji.

The Agriculture Census in 1983 reported that just six (Ambae, Maewo, Pentacost, Epi, Tongoa and Tanna) of the twenty one kava-growing islands accounted for 95 per cent of national production, with Tanna and Pentacost alone producing 64 per cent. Another survey in 1984 - the Kava Survey - estimated that there were three million kava plants occupying some three thousand hectares of land.

Taking into account the number of households with kava plants and the average number of plants per households, it is estimated that there were 18 million kava plants in Vanuatu in 2007.



**Table 8** Number of kava plants by age and by Province: August 2007

Province	Age of plants (years)			
	Total	1 - 4	5 - 9	10 & over
		('000)		
VANUATU (rural sector)	18,016	15,387	2,247	380
TORBA	356	321	23	11
SANMA	5,250	4,702	542	6
PENAMA	8,905	7,606	997	302
MALAMPA	1,664	1,188	444	31
SHEFA	1,011	844	152	16
TAFEA	830	727	88	14

Source: Agriculture Census 2007, National Statistics Office, Vanuatu

Note: Data includes only those households that reported number and age of kava plants. Figures are based on preliminary tabulation and may be different in the final report.

## Cocoa

The first cocoa was brought from Ceylon as just a few plants in 1881. The first commercial planting of cocoa appears to have been on the Aore plantation in Santo. The earliest cocoa in Vila was on Chevillard's plantation in Vila, where he was reported to have 1 000 plants in bearing in 1900<sup>2</sup>. By 1910 Vanuatu had 302 hectares of coca, comprising 181 000 trees, and that year exported cocoa beans for the first time, just two tons. In 1921, there were over 2 700 hectares planted to cocoa and exports topped 1000 tons for the first time the following year.

In 1983, Metenesel Estate Limited, a joint venture company involving the Vanuatu Government, landowners and the Commonwealth Development Corporation, was established to develop cocoa. The Government also committed considerable resources through establishing the Veleteruru research station, and staffing the Department of Agriculture for cocoa extension, inspection and grading.

In 2007, Vanuatu had about 11,273 cocoa sub-holdings and produced approximately 1 200 tons of cocoa. Nearly two thirds of the production was in the Malampa province.



**Table 9** Number of cocoa sub-holdings and total number of plants by age, by province: August 2007

Province		Total	Age of the cocoa tree (years)				
			0 - 4	5 - 19	20 - 29	30 - 49	50 and over
VANUATU (rural sector)	Sub-holding	11,273	1,002	5,018	3,278	1,546	429
	Number of plants ('000)	3,042	250	1,123	1,077	465	127
TORBA	Sub-holding	32	0	18	7	7	0
	Number of plants ('000)	6	0	6	0	0	0
SANMA	Sub-holding	1,600	233	645	390	293	39
	Number of plants ('000)	395	78	152	84	70	10
PENAMA	Sub-holding	1,872	134	869	543	225	101
	Number of plants ('000)	422	26	173	142	54	27
MALAMPA	Sub-holding	7,370	597	3,342	2,172	980	280
	Number of plants ('000)	2,145	130	777	813	336	90
SHEFA	Sub-holding	394	39	140	166	40	8
	Number of plants ('000)	73	16	14	37	4	2
TAFEA	Sub-holding	5	0	5	0	0	0
	Number of plants ('000)	6	0	6	0	0	0

Source: Agriculture Census 2007, National Statistics Office, Vanuatu

Note: Data includes only those households that reported number and age of cocoa plants. Figures are based on preliminary tabulation and may be different in the final report.

<sup>2</sup> Weightman, Barry, 1989, Agriculture in Vanuatu: A Historical Review, Grosvenor Press: Portsmouth.

## Coffee

In 1852, Captain James Paddon brought arabica coffee to Vanuatu, probably to Tanna where it was first recorded being grown. By the mid 1890s, there were a few coffee plantations in Efate with nearly every variety grown. During the 1910s there was a great expansion of coffee planting on Efate, Epi, Malakula and Santo with a more than 2000 hectares planted with 2 135 000 coffee plants. Over the next ten years, as in Ceylon, coffee disease destroyed the majority of arabica plantations. However, interest in arabica coffee has been maintained in Tanna over the years both among smallholders and some small traders who established small coffee plantations.

The First National Development Plan, 1982-86, proposed to establish 400 hectares of coffee holdings on Tanna. The program was initiated through the formation of a company, Tanna Coffee Development Company in 1983. The Vanuatu Government managed the project as a joint venture with landowners and their co-operatives as shareholders.

Nearly all the coffee grown in Vanuatu is on Tanna. In 2007, it was estimated that there were more than 1 500 holdings with 584 000 coffee bushes. On the basis of the yield calculated by farmers the total estimated coffee production was 60 000 kg of which 15,000 kg was dried coffee.



Province	Age of coffee bushes (years)				
	Total	0 - 4	5 - 19	20 - 29	30 - 49
<b>VANUATU (rural sector)</b>					
Number of holdings	1,588	1,178	395	9	6
Number of bushes	584,211	385,742	192,567	174	5,728
<b>TAFEA</b>					
Number of holdings	1,588	1,178	395	9	6
Number of bushes	584,211	385,742	192,567	174	5,728

Source: Agriculture Census 2007, National Statistics Office, Vanuatu

Note: The data presented here includes only those parcels of the coffee sub-holdings with report on the total number and age of coffee bushes. Figures are based on preliminary tabulation and may be different in the final report.

## Pepper

In 1960, 150 pepper cuttings were imported from Fiji and these were planted at Tagabe Agriculture Station. Apart from another plot at Lakataro Agriculture Station in 1970 and a few vines at other agricultural stations, there was little further interest taken in pepper development until 1982. In the last fifty years since pepper was introduced to the country, the growth in production has progressed at a very slow rate. In 2007, pepper production was nearly two tons, just enough for only four months' sale on the Vanuatu domestic market.



**Table 11** Number of pepper sub-holding and total number of plants of different ages by province: August 2007

Province		Age of the pepper plant (years)				
		Total	0 - 4	5 - 19	20 - 29	30 - 49
VANUATU (rural sector)	Number of sub-holdings	592	475	98	13	7
	Number of pepper plants	42,430	37,889	3,985	338	218
TORBA	Number of sub-holdings	20	5	4	5	7
	Number of pepper plants	1,032	704	63	47	218
SANMA	Number of sub-holdings	166	129	37	0	0
	Number of pepper plants	12,523	11,473	1,050	0	0
PENAMA	Number of sub-holdings	190	151	35	5	0
	Number of pepper plants	8,308	6,177	1,903	229	0
MALAMPA	Number of sub-holdings	166	152	13	0	0
	Number of pepper plants	17,765	17,186	579	0	0
SHEFA	Number of sub-holdings	4	0	4	0	0
	Number of pepper plants	53	0	53	0	0
TAFEA	Number of sub-holdings	46	38	5	4	0
	Number of pepper plants	2,748	2,350	336	62	0

Source: Agriculture Census 2007, National Statistics Office, Vanuatu

Note: The data presented here includes only those households that reported number of holdings and number and age of pepper plants. Figures are based on preliminary tabulation and may be different in the final report.

## Vanilla

For more than hundred years from mid-1870 vanilla growing in Vanuatu remained the fancy of a few individuals, who never developed it as a plantation crop. It couldn't be developed as a smallholder crop mainly for reason that the need for daily pollination during the flowering season would not easily be accommodated within village work patterns.

The first commercial plantation of vanilla was started in 1983 on the west bank of the Teouma River with 25 hectares of vanilla.



**Table 12** Number of vanilla plants sub-holding and total number of vanilla plant by age and by province: August 2007

Province		Age of the Vanilla plant (years)				
		Total	0 - 4	5 - 19	20 - 29	30 - 49
VANUATU (rural sector)	Number of sub-holdings	10,393	8 938	1 337	69	17
	Number of Vanilla plants	805,822	665,727	132,266	4,899	1,514
TORBA	Number of sub-holdings	233	175	44	14	0
	Number of Vanilla plants	12,057	8,134	3,336	586	0
SANMA	Number of sub-holdings	3,724	3,360	329	20	6
	Number of Vanilla plants	404,296	347,379	53,932	1,623	1,164
PENAMA	Number of sub-holdings	2,706	2,282	400	9	6
	Number of Vanilla plants	183,538	147,692	34,142	894	263
MALAMPA	Number of sub-holdings	2,079	1,734	320	20	4
	Number of Vanilla plants	117,152	90,596	24,886	1,583	87
SHEFA	Number of sub-holdings	690	590	87	0	0
	Number of Vanilla plants	29,663	25,561	3,430	0	0
TAFEA	Number of sub-holdings	962	798	158	6	0
	Number of Vanilla plants	59,115	46,365	12,539	212	0

Source: Agriculture Census 2007, National Statistics Office, Vanuatu

Note: The data presented here includes only those households that reported number of holdings and number and age of pepper plants. Figures are based on preliminary tabulation and may be different in the final report.



## Cattle

In 1845, in addition to passengers and provisions, fifty cattle and three tons of hay came in a ship to Aneityum. The cattle brought were mainly to supply milk and beef to the European settlers. The fifty cattle thrived in their new situation. By 1894, the newly arrived French planters included a few cattle among their activities, and the herd grew as they extended their area of coconut plantations.

Until the 1960s there were no significant numbers of smallholder cattle and all plantation cattle were grazed under coconuts subservient to the copra industry. However, for the last few decades, the extension activities of the Department of Agriculture, and in particular its Livestock Services, have significantly raised cattle and pasture management in the smallholder sector.

With regard to the size of the national herd, in 1940 the total number of cattle in Vanuatu was around 25,000, and in 1965 it was estimated that the number has increased to 47,000. The first census of cattle was carried out by the Department of Agriculture in 1971 when the cattle herd was recorded as 83,555. The next count made in the 1983 census recorded a total of 98 430 cattle, including 31,918 in the smallholder sector.

In 2007, there were some 174,137 cattle in the smallholder/subsistence sector of Vanuatu. Sanma province had the largest heard (91 830) followed by Penama Province (22,284), Shefa province (21,868) and Tafea (19,344).



**Table 13** Number of cattle by kind of cattle, by province: August 2007

Province	Kind of cattle (age in years)						
	Total	Calves <1	Bulls >1	Steers >1	Heifers < 2.5	Cows > 2.5 with calf	Cows > 2.5 without calf
VANUATU (rural sector)	174,137	28,433	22,817	26,529	27,258	61,712	7,389
TORBA	2,729	586	512	342	171	1,060	59
SANMA	91,830	12,522	8,473	20,932	13,395	32,918	3,591
PENAMA	22,284	5,068	3,716	1,229	4,422	7,010	839
MALAMPA	16,082	2,976	2,946	1,278	2,695	5 624	562
SHEFA	21,868	3,071	5,253	644	3,041	8,704	1,154
TAFEA	19,344	4,210	1,917	2,103	3,534	6,395	1,185

Source: Agriculture Census 2007, National Statistics Office, Vanuatu

Note: The data presented here includes only households that reported cattle kept as of census day. The data includes all cattle irrespective of whether they are in paddocks or on open land. Figures are based on preliminary tabulation and may be different in the final report.

## Pigs

The pure native pigs were brought to Vanuatu by early settlers in ancient times. Pigs are important in Vanuatu as the embodiment of prestige and power, and only tusked male or intersex pigs have value in the nimangki, grade-taking ceremony. Other places in Vanuatu where there was no nimangki, pigs were indispensable for feasting and food exchanges including for the payment for women in marriage.

Captain James Paddon was the first to introduce the European breed of pigs to Vanuatu and the local people were impressed by their greater size. These large pigs became a major item of trade to exchange for sandalwood. In 1860, twenty tons of sandalwood purchased on Santo was said to have cost Henry Burns & Co seven hundred pigs.<sup>3</sup>

Nearly all householders keep pigs, however, given the difficulty of access to urban market from other islands, there is little scope for commercial production. A sample survey carried out in 1983 as part of the Agriculture Census, estimated the total number of pigs in the rural sector at more than 70 000.

The estimated number of pigs in 2007 was 88,694.



**Table 14** Number of pigs, goats and poultry kept by kind of livestock by province August 2007

Province	Breeding boars	Breeding sows	Other types of pigs	Goats	Chickens
VANUATU (rural sector)	24,430	36,137	28,127	8,792	368,251
TORBA	1,128	1,367	439	19	12,606
SANMA	3,507	3,849	2,289	1,348	75,182
PENAMA	6,413	9,066	8,730	85	87,252
MALAMPA	4,407	6,422	4,934	976	71,502
SHEFA	2,972	6,110	5,683	2,104	54,593
TAFEA	6,003	9,323	6,053	4,260	67,116

Source: Agriculture Census 2007, National Statistics Office, Vanuatu

Note: Figures presented here excludes sheep and ducks. Figures are based on preliminary tabulation and may be different in the final report.

<sup>3</sup> Weightman, Barry, 1989, Agriculture in Vanuatu: A Historical Review, Grosvenor Press: Portsmouth.

## Poultry

The bush fowl, the ancestor of the domestic chickens, would have been brought to Vanuatu by some of the first settlers of the islands. All rural families keep a few fowls for subsistence purposes and eggs are left to hatch. The traditional system of subsistence poultry production, with its small fowls, is well suited to the resources of the village. See Table 14.



**Table 15** Number of households engaged in catching/gathering fish and other marine species in the last 12 Months, by main purpose, by province: August 2007

Province	Total Households	Main purpose		
		Mainly for consumption	Consumption with occasional selling	Mainly for sale
VANUATU (rural sector)	15,758	11,557	4,127	74
TORBA	1,300	720	575	6
SANMA	2,189	1,908	281	0
PENAMA	2,742	2,015	714	12
MALAMPA	4,413	3,699	691	23
SHEFA	2,927	1,715	1,179	33
TAFEA	2,188	1,500	688	0

Source: Agriculture Census 2007, National Statistics Office, Vanuatu

Note: Figures presented here excludes sheep and ducks. Figures are based on preliminary tabulation and may be different in the final report.

## Fishing

In contrast to other Pacific countries, Vanuatu has limited shallow and inshore fishing areas. As many of the inhabitants of Vanuatu live close to the sea, the subsistence fishing generally covers the inter-tidal zone and lagoon resources. Subsistence fishing falls into two categories: fish that are caught for home consumption and for domestic sale and those primarily for export.

The Census of Agriculture 2007 estimates that 72% of the households possess fishing gear and engaged in fishing activities. Information regarding recent subsistence production is not known, however, a combined production was estimated about 2,400 tons.



**Table 16** Number of fishing boats owned, by type of fishing boat, by Province: August 2007

Province	Number of Fishing Boats Owned				Weekly average fishing trips
	Total	Canoe	Boat without Engine	Boat with Engine	
VANUATU (rural sector)	3,957	3,533	84	340	2.83
TORBA	734	718	0	16	2.67
SANMA	303	303	0	0	4.84
PENAMA	634	634	0	0	2.25
MALAMPA	733	703	15	15	1.92
SHEFA	659	406	59	194	2.24
TAFEA	894	768	10	115	4.78

Source: Agriculture Census 2007, National Statistics Office, Vanuatu  
 Note: The data presented here includes only households that reported having fishing boats. Figures are based on preliminary tabulation and may be different in the final report.

<b>Table 17</b> Area of the crop gardens by province: August 2007						
Province	Area of crop garden (hectares)					
	Total Area of the Crop Gardens	> 1	1 - 2	3 - 4	5 - 9	
VANUATU (rural sector)	7,511	6,668	545	109	188	
TORBA	240	231	9	0	0	
SANMA	1,545	1,457	88	0	0	
PENAMA	2,062	1,708	182	0	173	
MALAMPA	1,236	1,057	136	44	0	
SHEFA	1,463	1,261	129	57	16	
TAFEA	966	957	1	8	0	

Source: Agriculture Census 2007, National Statistics Office, Vanuatu

Note: The data presented here includes only households that reported having fishing boats. Figures are based on preliminary tabulation and may be different in the final report.

<b>Table 18</b> Area of crop garden by tenure and province: August 2007					
Province	Area of Crop Gardens by Tenure (hectares)				
	Total	Owned	Rented	Custom used	Used for free
VANUATU (rural sector)	7,511	5,789	59	384	1,277
TORBA	240	235	1	1	3
SANMA	1,545	639	46	129	732
PENAMA	2,062	1,734	1	74	254
MALAMPA	1,236	1,122	0	44	68
SHEFA	1,463	1,352	10	656	44
TAFEA	966	709	1	80	176

Source: Agriculture Census 2007, National Statistics Office, Vanuatu

Note: The data presented here includes only households that reported having fishing boats. Figures are based on preliminary tabulation and may be different in the final report.

<b>Table 19</b> Number of selected plants in gardens by province: August 2007							
Selected plants	Province and number of plants ('000)						
	Vanuatu	Torba	Sanma	Penama	Malampa	Shefa	Tafea
Banana	1,579	154	253	244	458	238	233
Banana - Plantain	1,358	90	197	205	355	286	226
Cabbage - Island	2,033	122	490	259	388	374	400
Cassava/Manioc	2,819	155	164	258	510	575	1,157
Corn	1,473	61	517	148	167	202	377
Kava	6,405	122	3,571	255	1,033	694	730
Kumala	1,310	105	263	151	236	222	333
Pawpaw	559	34	90	80	105	143	107
Peanut	4,539	22	2,539	21	89	1,312	556
Pineapple	965	80	209	165	190	183	137
Spring Onion	641	13	119	84	68	314	43
Sugarcane	568	24	89	105	100	67	183
Taro - Fiji	2,249	83	533	322	386	352	573
Taro - Island	6,917	130	1,356	3,492	514	247	1,178
Yam	3,525	346	433	1,103	535	509	599

Source: Agriculture Census 2007, National Statistics Office, Vanuatu

Note: The data presented here includes only households that reported having fishing boats. Figures are based on preliminary tabulation and may be different in the final report.

**Table 20** Number of permanent fruit and nut trees belonging to the households, by kind of tree by province: August 2007

Kind of tree	Province and number of tree ('000)						
	Vanuatu	Torba	Sanma	Penama	Malampa	Shefa	Tafea
Avocado	101	3	17	20	26	19	15
Breadfruit	219	35	31	40	57	29	28
Chestnuts	228	17	20	30	62	19	81
Citrus - Lime	61	3	13	10	12	15	8
Citrus - Mandarin	163	5	27	27	38	30	35
Citrus - Orange	172	5	38	25	39	29	37
Citrus - Pomplémousse	130	9	30	25	29	20	17
Mango	169	8	16	26	49	25	46
Nangae	145	12	19	43	45	20	5
Natapoa	84	2	8	17	18	13	28
Nause	72	5	15	17	16	15	4
Navele	334	24	41	83	74	35	78

Source: Agriculture Census 2007, National Statistics Office, Vanuatu

Note: The data presented here includes only households that reported having fishing boats. Figures are based on preliminary tabulation and may be different in the final report.

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## National Statistics Office

The Vanuatu Statistics Office is a Government department and is Vanuatu's official statistical agency. Its roles and functions are governed by the Statistics Act of 1983. The Department is headed by the Government Statistician whose responsibilities are also detailed in the Statistics Act.

Prior to the Comprehensive Reform Program, which started in 1996, the Statistics Office was part of the National Planning Office, under the direction of the Prime Minister's Office. As a result of the Reform Program, the Statistics Office is now a separate Department under the Ministry of Finance and Economic Management (MFEM).

## Functions and Responsibilities

The function of the Department is to produce timely and accurate statistics about the economic and social characteristics of Vanuatu, for use by government departments, private institutions, businesses, overseas organisations, researchers, students and the general public.

Statistics produced by the department play an important role in the formulation, implementation and monitoring of government policies. This has become increasingly important as the Government is evaluating stage of the Comprehensive Reform Program.

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