Food and Agriculture Organization of the United Nations

2014 Census of Agriculture

TCP/MAR/3403 – Support to Census of Agriculture

Crop Analysis Report

By

V. Dreepaul-Dabee (Mrs)

(FAO National Consultant)

December 2017

Contents

ACKNOWLEDGEMENTS

This report was prepared under project TCP/MAR/3403 – Support to the Census of Agriculture, funded by the Food and Agriculture Organization of the United Nations (FAO).

I would like to express my gratitude to Mr. D. Marshall (FAO lead consultant), Mr. E. Ouedraogo, FAO Regional Statistician and Mr. B. Unmar (Senior Statistician and National Project Coordinator) for their valuable advice and support throughout the conduct of this assignment.

My sincere thanks and appreciation also go to Mr. D. Bahadoor (Ag. Director of Statistics) and his staff of CA2014 Unit for their support and timely submission of tables and other information requested for this report. My heartfelt thanks also go to my colleague Mr. M. Poovathal posted at APAU for his support.

Finally, a word of appreciation to my husband for his support, especially to look after our little baby, during the conduct of this assignment.

ACRONYMS

AMB	Agricultural Marketing Board
APAU	Agricultural Policy Analysis Unit
CA2014	2014 Census of Agriculture
FAO	Food and Agricultural Organization of the United Nations
FAREI	Food and Agricultural Research and Extension Institute
GDP	Gross Domestic Product
MAIFS	Ministry of Agro Industry and Food Security
NFIDC	Net-Food Importing Developing Country
NPPO	National Plant Protection Office
ROM	Republic Of Mauritius
SDGs	Sustainable Development Goals
SFWF	Small Farmers Welfare Fund
SM	Statistics Mauritius

EXECUTIVE SUMMARY

Agriculture is considered as the backbone of the Mauritian economy and plays an important role in the national economy. Although no more the largest contributor to national production and wealth, the sector still makes a stable contribution to the economy.

Traditionally, the non-sugar sector has contributed particularly to food production and has ensured some measure of food security. Its forestry and biodiversity components are now playing vital roles in the management of natural resources, and are recognized as significant contributors to sustainable development and to the mitigation of climate change impacts. In order to effectively plan for higher production, precise and accurate facts and figures reflecting the true conditions and status of our agricultural sector have to be compiled on a regular basis to enable informed decisions to be taken and appropriate strategies to be put in place.

The 2014 Census of Agriculture is at the heart of the national system of food and agricultural statistics. Whilst the current system of agricultural statistics is well developed, no census of agriculture has been conducted in Mauritius for more than 70 years and structural data on the agricultural sector is completely lacking. Structural data is critical for long-term sector planning as it identifies the number of farmers engaged in each agricultural activity by demographic profile, size of land, land tenure, land use, agricultural inputs, crop area harvested for temporary crops and land under permanent crops. While some of these data are available from the on-going surveys, the completeness of the frames used and the absence of data on the household sector make the current picture incomplete.

The 2014 Census of Agriculture provides structural data on the agricultural sector to small administrative units for informed planning, policy and decision-making and a benchmark for the system of current agricultural statistics. It also makes provision for a frame for agricultural surveys and data to help monitor progress towards global development targets.

It reveals important information such as there are more male than female farmers in Mauritius and for majority of the small scale farmers farming is an occupation. Land under agricultural use is decreasing and most of the crop production is being done in open fields except for lettuce, cucumber, sweet pepper and tomatoes are being done by both hydroponic culture and in open fields. It also highlights the high dependence on rain fed agriculture and the major constraints that farmers are facing include theft, pests and diseases as well as high production cost.

LIST OF TABLES

LIST OF FIGURES

1. INTRODUCTION

The Mauritian economy has been successfully transformed from a pure mono-crop agricultural sector (conventionally sugar-dominated) to a manufacturing and service based economy. In the early 1970's, the agricultural sector was contributing more than 30% to Gross Domestic Product (GDP) but this share has been constantly declining to reach 3% in 2014. Nonetheless, the sector still plays a vital as well as a multi-functional role within the economy and contributes significantly to GDP in absolute terms, and has significant economic, social and environmental impacts.

The sugar sector was considered as the engine of economic development as Mauritius obtained the largest export quota, more than a third of the entire quota, and high preferential prices under the EU Sugar Protocol. The proceeds from the sugar industry have been used to develop other sectors of the economy. However, with the introduction of the World Trade Organisation, Mauritius lost its preferential access and has to compete on equal footing with other low cost countries and is no longer competitive hence the contribution of this sector has been declining.

Due to its geographic location and the variety of micro-climates, Mauritius can produce a wide range of crops and livestock although its agriculture is dominated by sugarcane cultivation. The Island of Rodrigues forms part of the Republic of Mauritius and is situated almost 650 km north-east from the Island of Mauritius (main island), with a total land surface area of 108 km² (18 km long and 6 km wide) and a coast line of 80 km. Island of Rodrigues has a long tradition in the production of basic food commodities of both crops and livestock and agriculture is its main economic activity.

Mauritius is considered to be a Net-Food Importing Developing Country (NFIDC) where it imports around 77% of its food requirements. Agricultural production consists mainly of sugarcane and non-sugar crop sector and is undertaken mainly by the corporate sector and a large number of small farmers. The gap between local food production and consumption continued to widen during the past 5 years resulting in increasing dependency on imported food. The food import bill amounts to Rs38 billion in 2014.

The first Census of Agriculture was carried out in 1930 and this was followed by a similar exercise in 1940. Since then, there has not been any complete census, although data on agricultural statistics are collected on a regular basis by several organisations including Statistics Mauritius through surveys and also through established administrative reporting systems. The current Census of Agriculture was carried out in 2014 with the support of the Food and Agricultural Organisation (FAO). The objectives of the 2014 Census of Agriculture 2014 were:

a. To provide important information on the organisational structure of farms at geographic level for better and informed decision making (e.g. farm size, land use, land tenure, crop area harvested, presence of irrigation, livestock numbers, farm labour as well as the number of holdings with each crop and livestock type);
b. To improve estimates on the contribution of agriculture for the economy;
c. To provide information on the household sector including subsistence farming which is important for food security; and
d. To improve the completeness of existing sampling frame that will be used as the base for sample selection for future agricultural surveys.

The 2014 Census of Agriculture defines a unit of enquiry as an agricultural production unit (farm or agricultural holding) producing primarily for sale. In addition, all agricultural production units producing mainly for own consumption with at least 5 perches of land for garden crops and/or with a minimum number fruit trees in the backyard of private households, were considered as farms. The following thresholds were used for crops:

(i) Any household cultivating a piece of land, on own account, and for commercial production (at least 5 perches)

(ii) Any housing unit having a kitchen garden (at least 5 perches)

(iii) Any housing unit having fruit trees on the premises with a certain cut-off:

- Breadfruit, lychee, mango (at least 5 trees)
- Lemon, mandarin, coconut, guava, other citrus, mixed fruit trees (at least 10 trees)
- Banana, pawpaw (at least 20 trees)
- Pineapple, lychee, vegetables, fruits-other, crops-other (at least 5 perches)

The CA2014 was conducted in three phases namely:

- Phase I covered a complete census of 113 agricultural businesses of the non-household sector, which were mostly corporations, non-governmental organisations, Government institutions and they were surveyed during the period July to December 2014
- Phase II consisted of a sample 10,339 household farms from July to September 2014 and
- Phase III had a sample of 8,778 private households from October to November 2014.

This report provides an in-depth analysis of the crop sector using the CA2014 data with reference period as July 2013 to June 2014 for crop production. Moreover, a comparative analysis was also carried out with the existing data sources from relevant institutions involved in data collection for current agricultural statistics namely Food and Agricultural Research and Extension Institute (FAREI), Agricultural Services of the Ministry of Agro Industry and Food Security, Agricultural Marketing Board (AMB) and Statistics Mauritius. Additionally, the analysis of farmers registered at Small Farmers Welfare Fund (SFWF) was done.

For the purpose of this analysis, the agricultural activities were grouped into crop, livestock and mixed farming.

2. FARMS BY TYPE AND SECTOR

Table 1 shows the major activities that are being undertaken by the household and non-household sector, it can be observed that the household sector have more holdings than the non-household and most of them are engaged in crop production, excluding growing of sugarcane and tea.

Table 1: Distribution of farms by type and sector, July 2013-July 2014, ROM

Farming type	IOM		IOR		ROM	
	Household sector	Non-Household sector	Household sector	Non-Household sector	Household sector	Non-Household sector
Growing of crops	10,014	27	547	10	10,561	37
Raising of livestock & poultry	5,313	23	595	6	5,908	29
Growing of crops and raising of livestock & poultry (Mixed farming)	2,933	40	3,941	7	6,874	47
All types	**18,260**	**90**	**5,083**	**23**	**23,343**	**113**

Source: 2014 Census of Agriculture

3. FARMERS' PROFILE OF HOUSEHOLD FARMS

3.1 Gender

Farmers are one of the key stakeholders in the agricultural sector and this report starts by depicting the farmer's profile in the Republic of Mauritius. The CA2014 defines a **farmer** as someone who breeds livestock or poultry and/or grows crops (including fruits and flowers).

There were 19,234 and 5,888 farmers in the household sector in the Islands of Mauritius and Rodrigues respectively. They were mostly males in both Islands (77% and 57% respectively) as shown in Table 2.

Table 2: Estimated number of farmers (household sector) by sex, July 2013 - June 2014, ROM

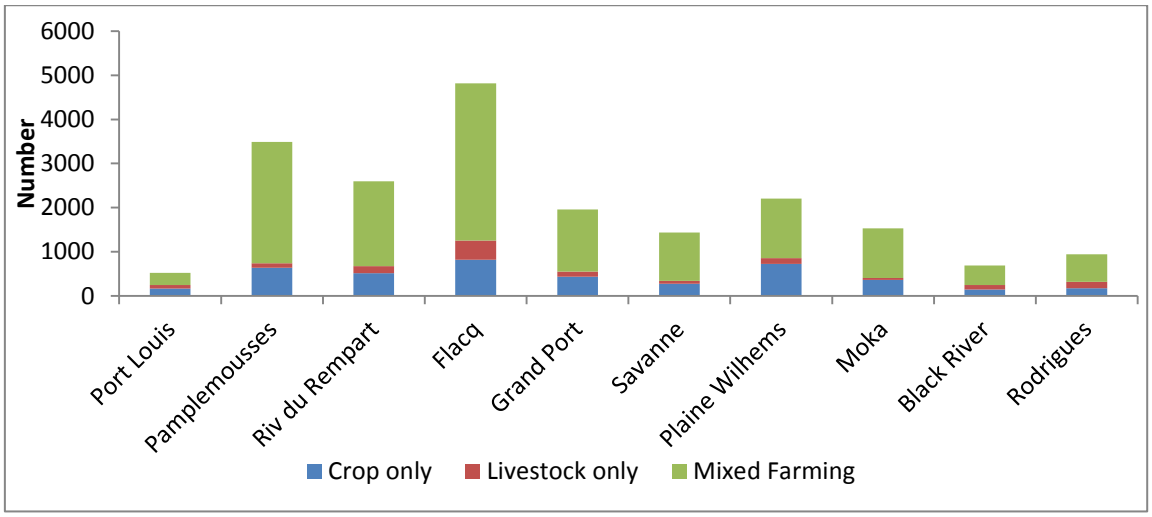
	IOM			IOR			ROM		
	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes
Number	14,770	4,464	19,234	3,379	2,509	5,888	18,149	6,973	25,122
%	*76.8*	*23.2*	*100.0*	*57.4*	*42.6*	*100.0*	*72.2*	*27.8*	*100.0*

Source: 2014 Census of Agriculture

3.2 Farmers by district

An analysis of farmers by district shows that they were scattered around the nine districts on the Island of Mauritius with 25%, 18% and 13.5% of them residing in the districts of Flacq, Pamplemousses and Riviere du Rempart respectively. It is also observed that the majority of farmers were involved in mixed farming across all districts as shown in Figure 1a.

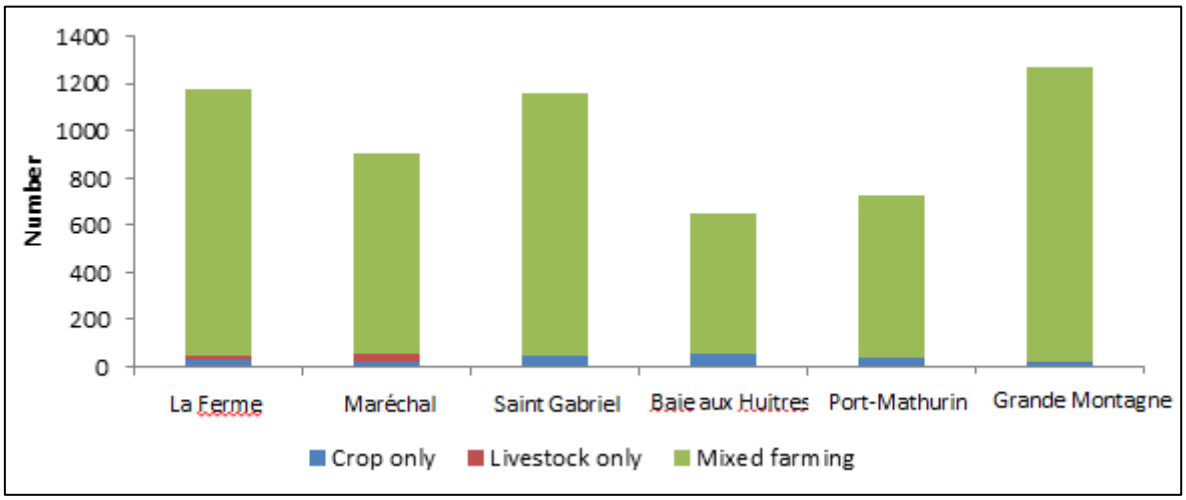
Figure 1a: Distribution of farmers (household sector) by farming type and district, July 2013 - June 2014, IOM



Source: 2014 Census of Agriculture

Similarly, on the Island of Rodrigues (Figure 1b), the farmers were scattered around the six regions and the majority of them were involved in mixed farming across all regions and the highest proportion of them resided in the region of Grande Montagne.

Figure 1b: Distribution of farmers (household sector) by farming type and district, July 2013 - June 2014, IOR



Source: 2014 Census of Agriculture

3.3 Farmers by age

Table 3 provides information on the farmers profile while taking into consideration their age and gender. It shows that in every age group there were more male farmers than female farmers and there were only 22 farmers are aged below 19 hence representing 0.1% of the total farmers and in Rodrigues only 17 people are involved in the agricultural sector. In the Island of Mauritius, most of the farmers were aged between 50 and 59 years representing 28.3% of the farming community and out of which 4,231 were males and the remaining females; hence reflecting the ageing farming community in the agricultural sector. However, in Rodrigues, it is observed that most of the farmers fell into the age group of 40-49 years but still more men than women.

Table 3: Distribution of farmers (household sector) by age group and sex, July 2013-July 2014, IOM and IOR

Age Group (in years)	IOM			IOR		
	Male	Female	Both Sexes	Male	Female	Both Sexes
12 – 19	20	2	22	11	6	17
20 – 29	355	35	390	147	125	272
30 – 39	1,833	429	2,262	619	458	1,077
40 – 49	3,583	887	4,470	**854**	**661**	**1,515**
50 – 59	**4,231**	**1,211**	**5,442**	812	618	1,430
60 – 69	3,390	1,459	4,849	530	355	885
70 – 79	1,139	383	1,522	328	233	561
80 – 89	211	53	264	76	53	129
90 – 99	8	5	13	2	-	2
All ages	**14,770**	**4,464**	**19,234**	**3,379**	**2,509**	**5,888**

Source: 2014 Census of Agriculture

Comparing the CA2014 data with those of the SFWF in the Island of Mauritius shows that the majority of farmers fell in the age group of 50-59 years which is consistent with the CA2014 data and similarly most of them were males as shown in Table 4.

Table 4: Percentage distribution of farmers by age group, CA2014 & SFWF, IOM

Age group (in years)	CA2014		SFWF, 2014	
	Male	Female	Male	Female
12 – 19	0.1	-	-	-
20 – 29	1.9	0.2	2.9	0.6
30 – 39	9.5	2.2	10.8	2.8
40 – 49	18.7	4.6	18.9	5.1
50 – 59	22.0	6.3	23.2	5.6
60 – 69	17.6	7.6	18.0	4.4
70 – 79	5.9	2.0	5.6	1.1
80 – 89	1.1	0.3	0.8	0.2
90 – 99	-	-	-	-
All ages	**76.8**	**23.2**	**80.2**	**19.8**

Percentages are row percentages

3.4 Activity and gender

Table 5 presents the number of farmers of the household sector and shows that around 94% and 99% of the farmers were involved in crop production (combination of crops only and mixed farming) in the Islands of Mauritius and Rodrigues respectively.

Table 5: Estimated number of farmers (household sector) by farming type, July 2013 - June 2014, ROM

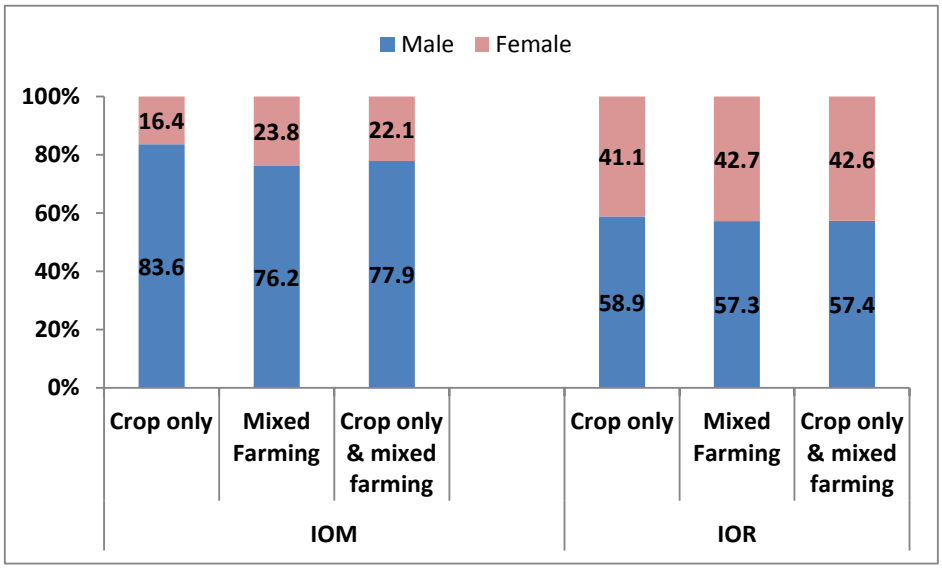
Farming type	IOM		IOR		ROM	
	Number	%	Number	%	Number	%
Crop only	4,063	*21.1*	209	*3.5*	4,233	*17.0*
Livestock only	1,241	*6.5*	52	*0.9*	1,281	*5.1*
Mixed Farming	13,930	*72.4*	5,627	*95.6*	19,608	*77.9*
Total	**19,234**	***100.0***	**5,888**	***100.0***	**25,122**	***100.0***

Source: 2014 Census of Agriculture

Among the farmers involved in crop production, the majority of them were from mixed farming in the Island of Mauritius (77%) and Island of Rodrigues (96%).

An analysis of farmers by farming activity and gender shows that male farmers represented 77% and 57% of the farmer's population involved in crop production in the Islands of Mauritius and Rodrigues (Figure 2).

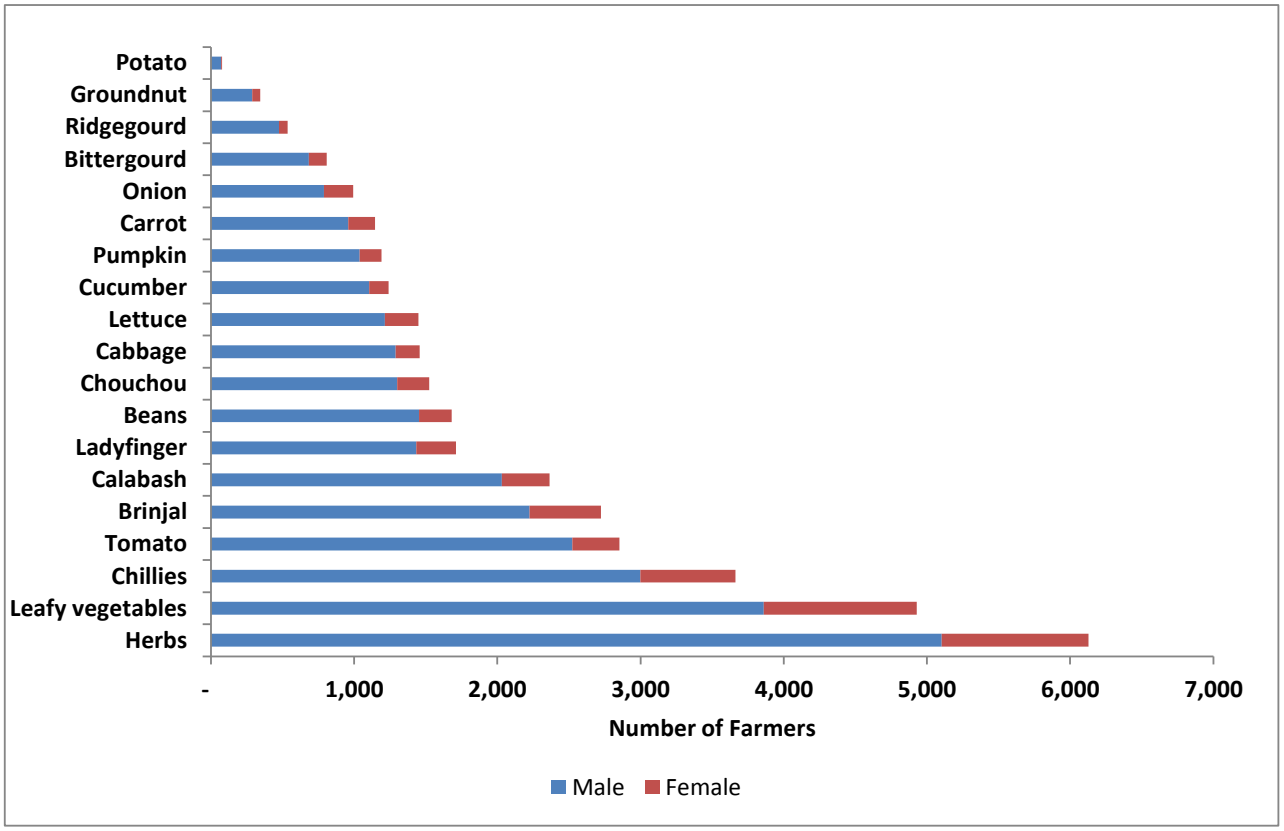
Figure 2: Percentage distribution of farmers (household sector) involved in crop production by farming type and sex, July 2013 - June 2014, IOM and IOR



Source: 2014 Census of Agriculture

Further breakdown of the number of famers involved in crop production shows that the majority of them (6,129) were involved in herb production (namely coriander, shallots, thyme, mint, kimchoy, parsley etc) as depicted in Figure 3a. There were more male than female famers in all major crops grown in the Island of Mauritius.

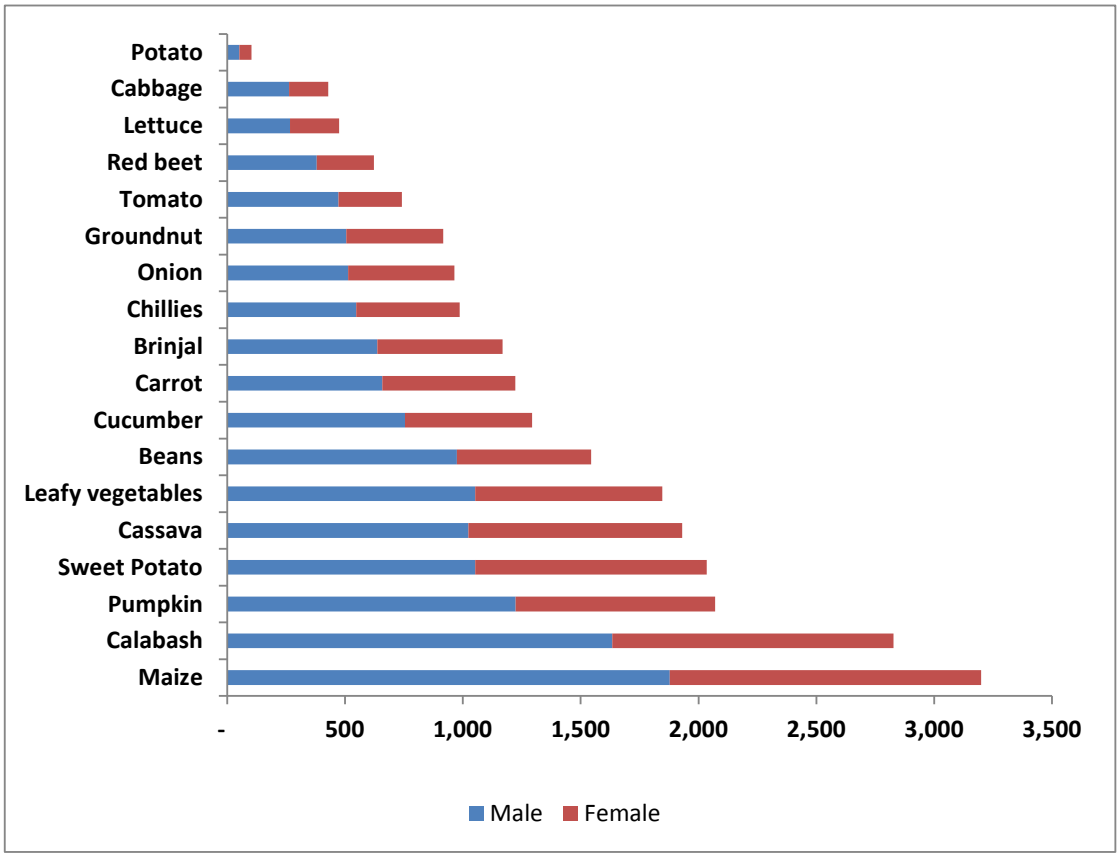
Figure 3a: Number of farmers by main crop and sex of farmer, July 2013 - June 2014, IOM



Source: 2014 Census of Agriculture

Similarly, in the Island of Rodrigues there were more male famers involved in crop production than female farmers. However, 3,199 and 2,827 farmers were involved in maize and calabash production as shown in Figure 3b.

Figure 3b: Number of farmers by main crop and sex of farmer, July 2013 - June 2014, IOR



Source: 2014 Census of Agriculture

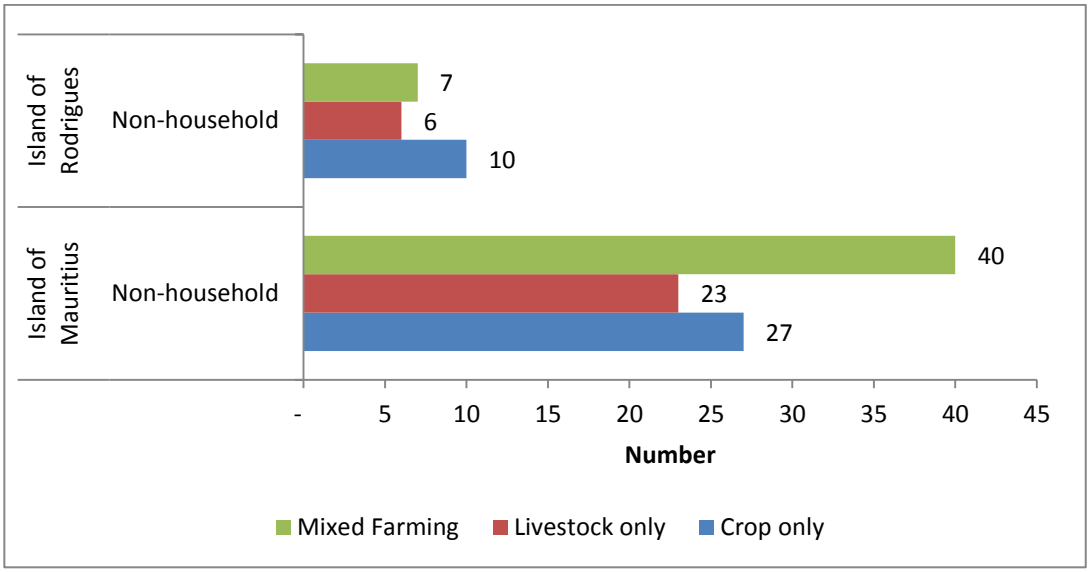
4. PROFILE OF NON-HOUSEHOLD FARMS

The non-household farms consist of commercial organisations, corporations, non-governmental organizations and Government institutions.

4.1 Activity

Figure 4 illustrates the activities that are being undertaken by the non-household sector and shows that most of the non-households are involved in mixed farming. Mixed farming is preferred rather than growing crops only and livestock only because risk is reduced through diversification and spreading labour and re-utilizing resources.

Figure 4: Distribution of holdings (Non-household sector) by Activity, July 2013 - June 2014, IOM and IOR



Source: 2014 Census of Agriculture

5. LAND

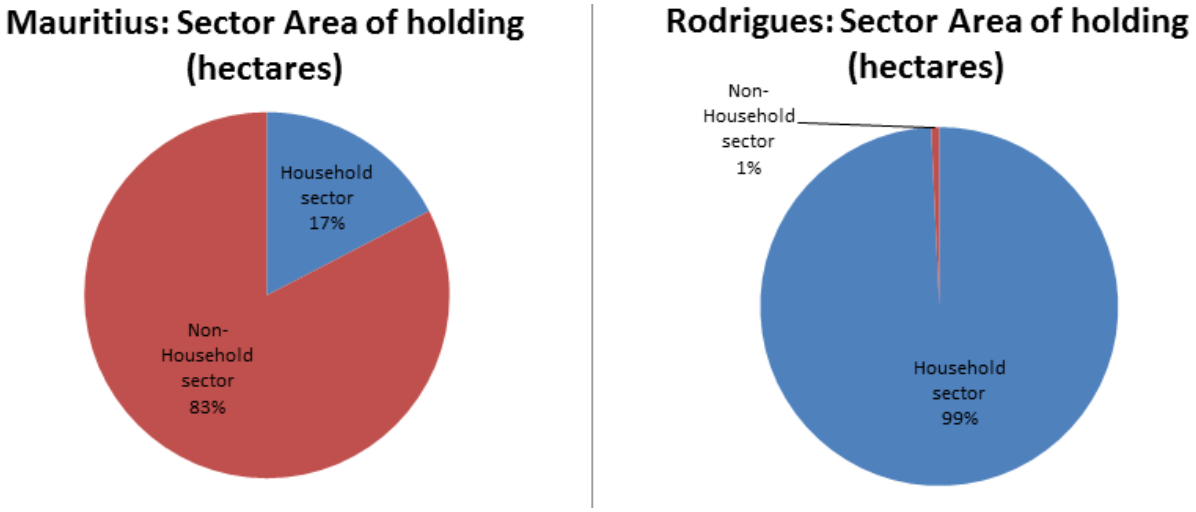
Land is a scarce resource in Mauritius given the small size of the island. The high population density of 618 persons per km^2 in 2014 coupled with the spatial impact of multiple economic activities put pressure on land availability for agricultural activities. This section analyses the land extents and land use for the agricultural sector.

5.1 Land extents

In the Island of Mauritius out of a total area of 64,682 ha occupied by all the holdings, 53,428 ha (83%) were used by non-household sector, out of which some 36,000 ha were under sugarcane. The remaining 11,254 ha (17%) were used by household farms as shown in Figure 5.

However, on the Island of Rodrigues, the opposite was observed with the household sector occupying around 99 per cent of the total land extents and only 1% by the non-household sector.

Figure 5: Area of holdings by sector, July 2013 - June 2014, IOM and IOR

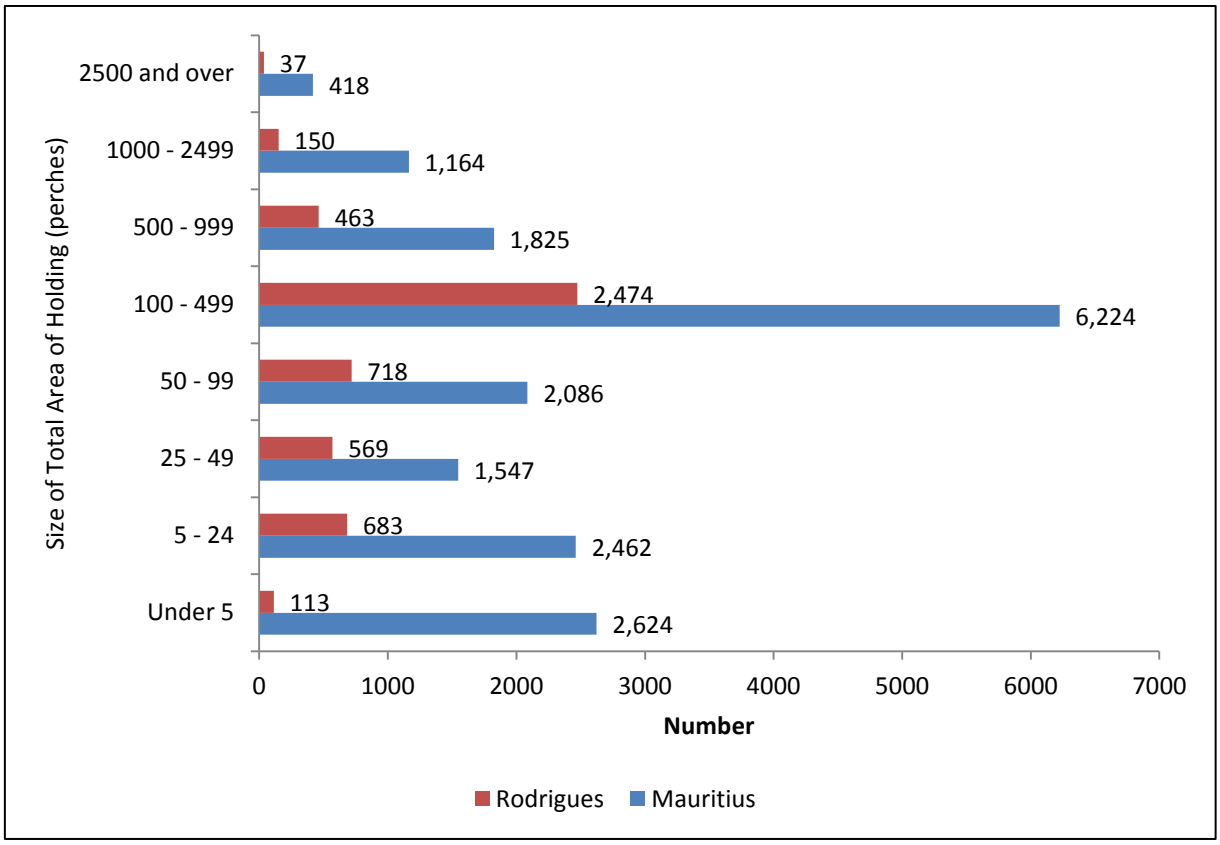


Source: 2014 Census of Agriculture

5.2 Land extent by size

Figure 6 shows the distribution of holdings by size for household and non-household in Mauritius and Rodrigues and it is observed that in both island, most of the farmers occupy about 100 to 499 perches of land. Moreover the holdings in Mauritius are bigger than that in Rodrigues (compute and insert the average size of land for both household and non-household sector farmers). The average size of holdings for household farmers were 0.62 ha and 0.34 ha in the Islands of Mauritius and Rodrigues respectively. Likewise, the average size of non-household is 593.6 ha in the Island of Mauritius but in the Island of Rodrigues the average size for non-household was very much smaller with only 0.56 ha.

Figure 6: Distribution of holdings by size, July 2013 - June 2014, IOM and IOR



Source: 2014 Census of Agriculture

Table 6 shows the distribution of holdings involved in crop production in the Island of Mauritius. It can be concluded that vegetables, fruits and flowers as well as crops of mixed farming were carried out mostly in holdings of size 100-499 perches.

Table 6a: Distribution of Holdings (Crop Sector) by size, July 2013-July 2014, IOM

Size of holdings (perches)	Vegetables only	Fruits only	Flowers only	Crops of Mixed farming
0 - 4	18	457	9	3,187
5 - 24	293	576	6	4,695
25 - 49	214	204	12	2,467
50 - 99	391	222	2	3,731
100 - 499	1,175	586	23	9,560
500 - 999	147	59	-	1,237
1000 - 2,499	56	52	-	407
above 2,499	9	17	-	66
All sizes	**2,303**	**2,173**	**52**	**25,350**

Source: 2014 Census of Agriculture

Similarly, in the Island of Rodrigues the majority of the farms involved in crop production had holdings of size 100-499 perches as shown in Table 8.

Table 6b: Distribution of Holdings (Crop Sector) by size, July 2013-July 2014, IOR

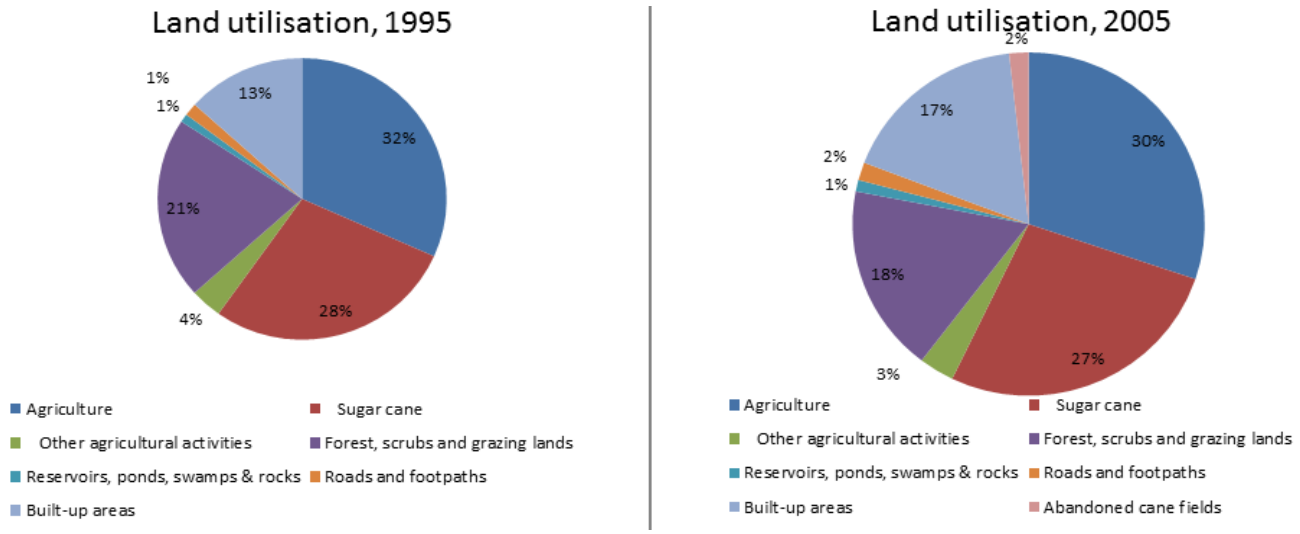
Size of holdings (perches)	Vegetables only	Fruits only	Flowers only	Crops of Mixed farming
0 - 4	3	63	1	466
5 - 24	8	50	-	1,618
25 - 49	14	21	-	1,109
50 - 99	36	20	-	2,058
100 - 499	24	11	-	3,418
500 - 999	-	-	-	54
1,000 - 2,499	-	-	-	-
Above 2,499	-	-	-	-
All sizes	85	165	1	8,723

Source: 2014 Census of Agriculture

5.3 Land Use

Land use has been constantly changing over time due to the internal and external forces such as increasing population, changes in income and lifestyles, technology advancement, education. There is also a need to ensure that all segments of the population, including the lower economic groups benefit from the development process. In this respect, access of the lower economic groups to land is necessary to ensure that the social dimension is fully taken into account in the land sector, on an equal footing with the environmental and development perspective.

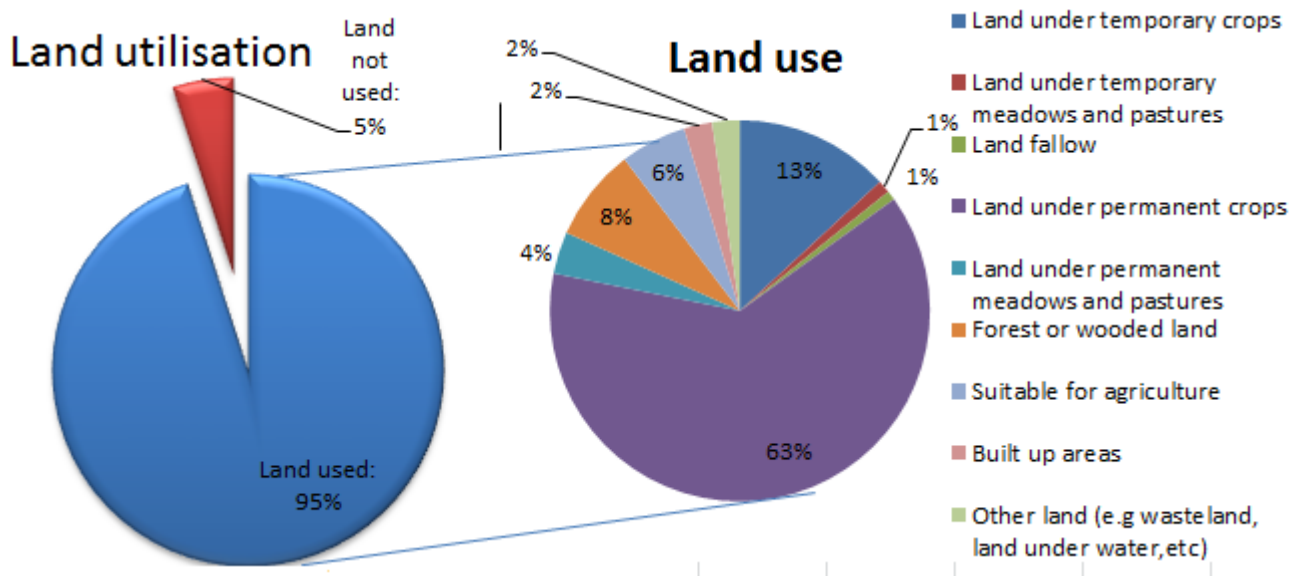
Figure 7: Land Utilization, 1995 and 2005, IOM



Source: Digest of Agricultural Statistics, 2000 and 2014

Figure 7 compares land utilisation on the Island of Mauritius from 1995 to 2005. The pie chart shows that areas under agriculture, sugar cane, other agricultural activities, forest area have decreased. Likewise, the area under reservoirs, ponds and swaps was still the same from 1995 to 2005 whereas the area under road and footpaths has increased from 1% in 1995 to 2% in 2005.

Figure 8: Land use, July 2013-June 2014, IOM



Source: 2014 Census of Agriculture

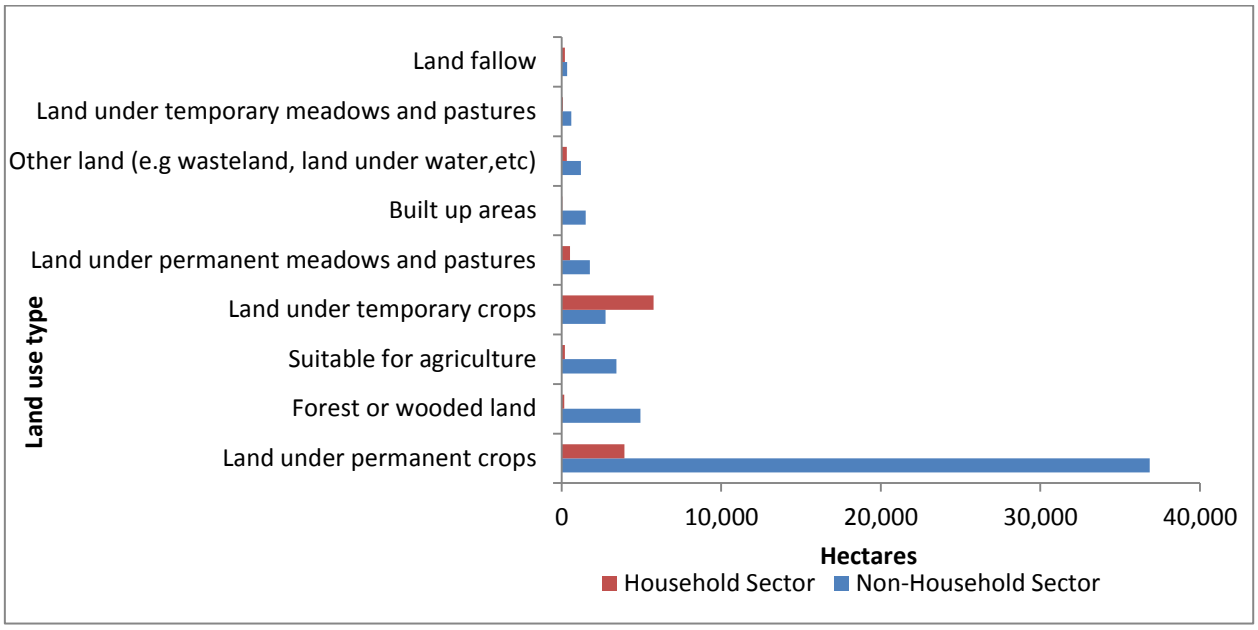
Based on the CA2014 results, 95% of land on the Island of Mauritius were utilised and only 5% was not utilised during the period July 2013 to June 2014. An analysis of land use by type shows that cultivation of permanent crops (crops which occupy it for a year or longer such as trees and shrubs producing crops, fruits and flowers) had the greatest share (63%). Area under temporary crops (crops with less than one year crop cycle) occupied 13% as depicted in Figure 8.

Further analysis of the utilised land by sector shows that household sector occupied a greater proportion compared to the non-household sector for the growing of temporary crops while the opposite was observed for permanent crops.

5.3.1. Land use by Sector

Figure 9a illustrates the land use by type and sector. It shows that non-household sector occupied a greater proportion of all the different types of land except for land under temporary crops. Land under permanent crops amounted 36,860 ha for the non-household sector and 3,931 for the household sector. It is to be noted that 95% of the area of permanent crops were under sugar cane and tea. Some 5,769 ha of land under temporary crops were occupied by the household sector and 2,748 ha were occupied by the non-household sector.

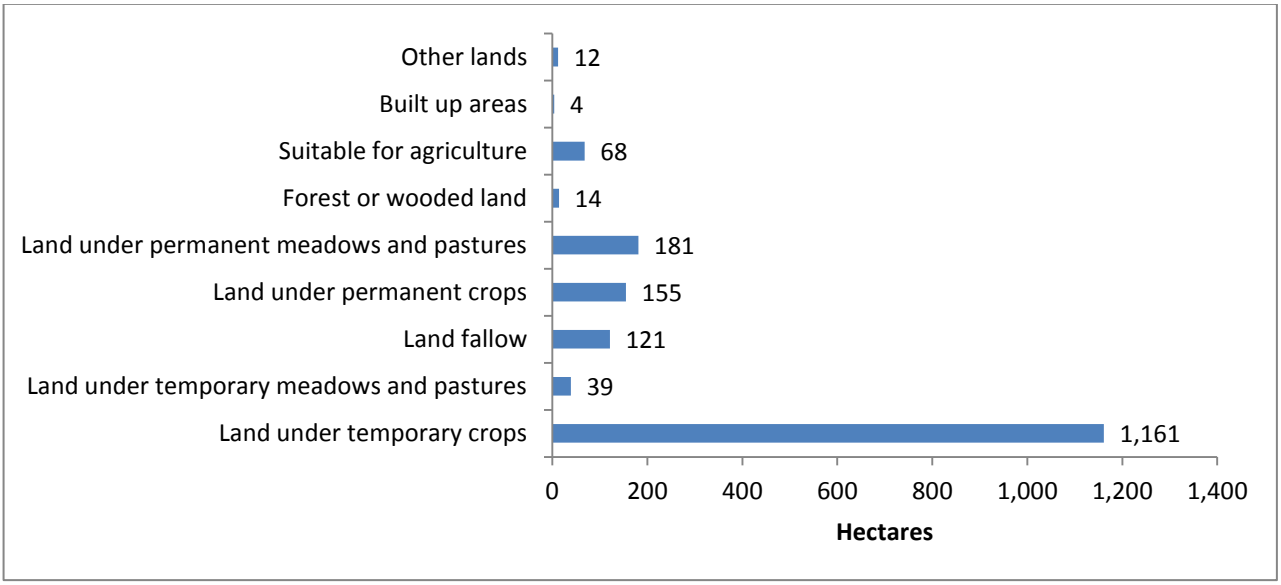
Figure 9a: Land use by sector, July 2013 - June 2014, IOM



Source: 2014 Census of Agriculture

In the Island of Rodrigues, the non-household sector occupied only 12 ha of land. In the household sector, area under temporary crops was 1,161 ha followed by land under permanent meadows and pastures with 181 ha (Figure 9b).

Figure 9b: Land use of household sector, July 2013 - June 2014, IOR

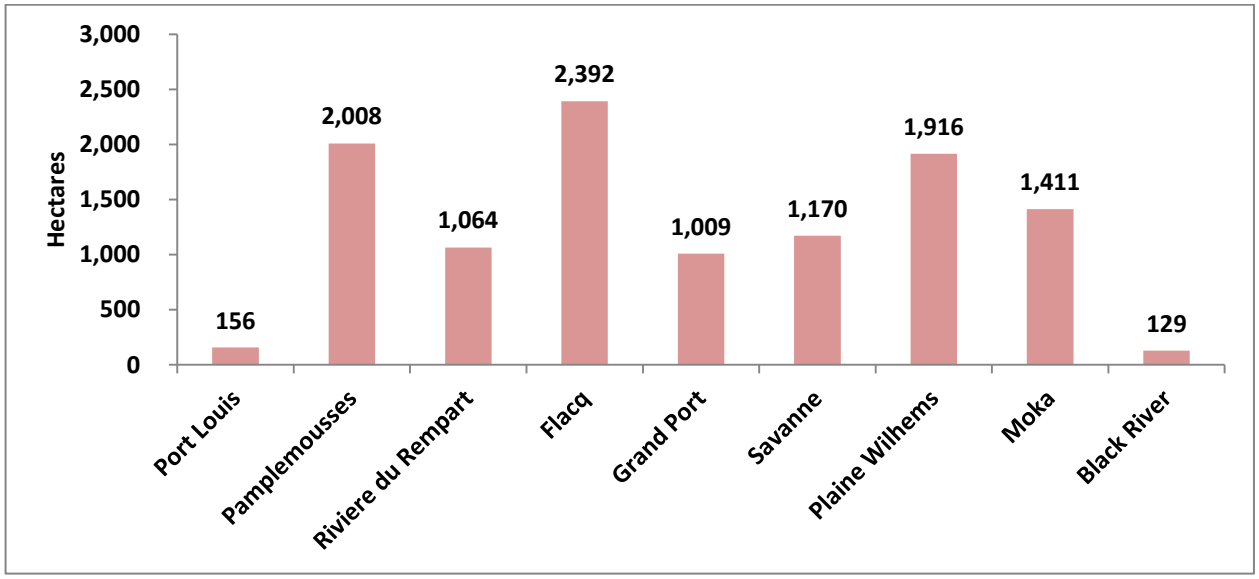


Source: 2014 Census of Agriculture

5.3.2. Land use by district/region

Figure 10a shows land use by district in the Island of Mauritius and the majority of the lands for agricultural purposes was from the district of Flacq (2,392 ha), followed by Pamplemousses (2,008 ha) and Plaines Wilhems (1,916 ha).

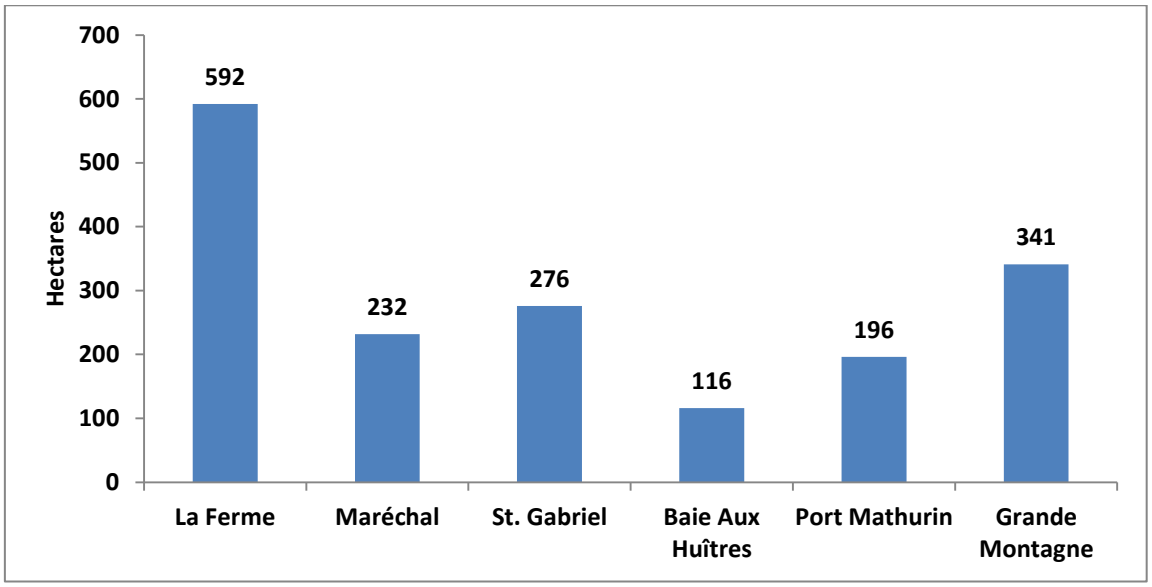
Figure 10a: Extent of lands occupied by household farms by district, July 2013 – June 2014, IOM



Source: 2014 Census of Agriculture

In the Island of Rodrigues, it was observed that the region of La Ferme had the highest land use with 592 ha followed by Grande Montagne (341 ha) and St Gabriel (276 ha) as shown in Figure 10b.

Figure 10b: Extent of lands occupied by household farms by region, July 2013 – June 2014, IOR



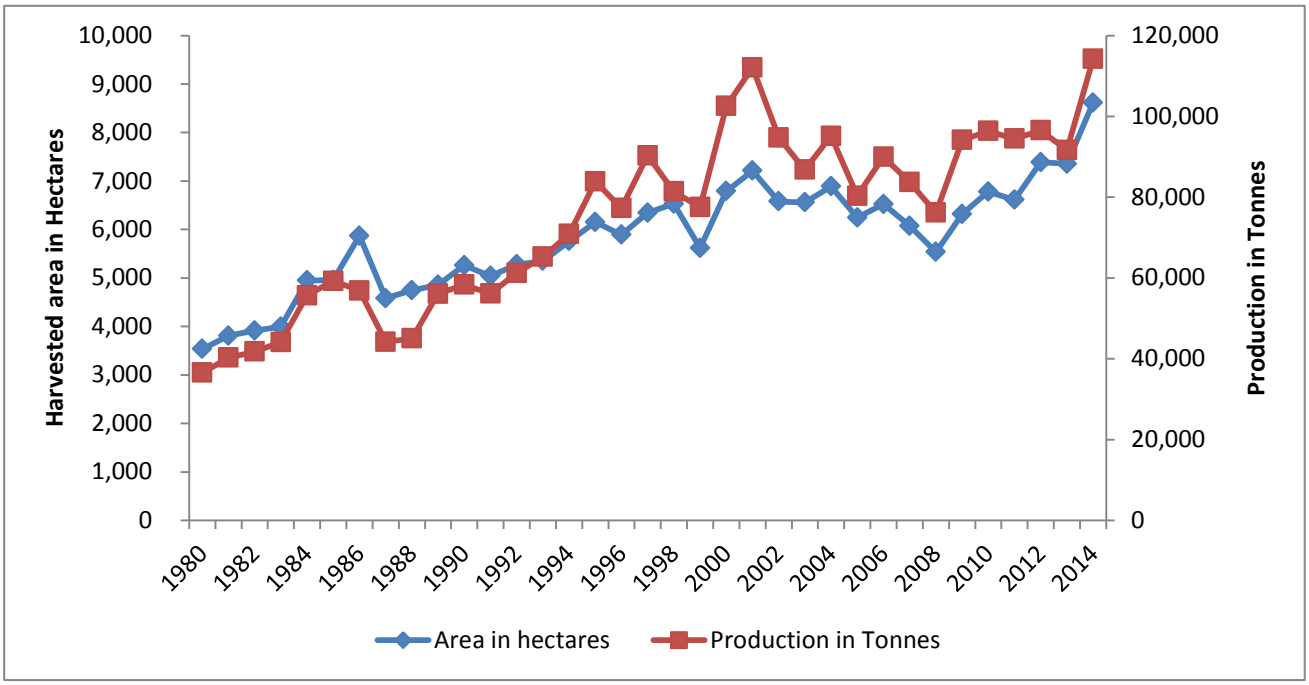
Source: 2014 Census of Agriculture

6. HARVESTED AREA AND PRODUCTION

6.1 Historical data (1980-2014)

Food crop production is dominated by the household sector. Figure 11 shows the upward trend in vegetable production from 1980 to 2014 and has recognised an increase of 212.44 per cent over the same period. Similarly, the area under vegetable production has also followed an upward trend. The area under vegetable production has increased from 3,534 hectares in 1980 to 8,615 hectares in 2014 (See Appendix 2). Generally, there is no shortage of fresh vegetables as such on the local market except in cases unfavourable climatic conditions (cyclones, drought, and heavy rains).

Figure 11: Harvested area and Production of food crops, 1980-2014, IOM



Source: Historical Series, Statistics Mauritius

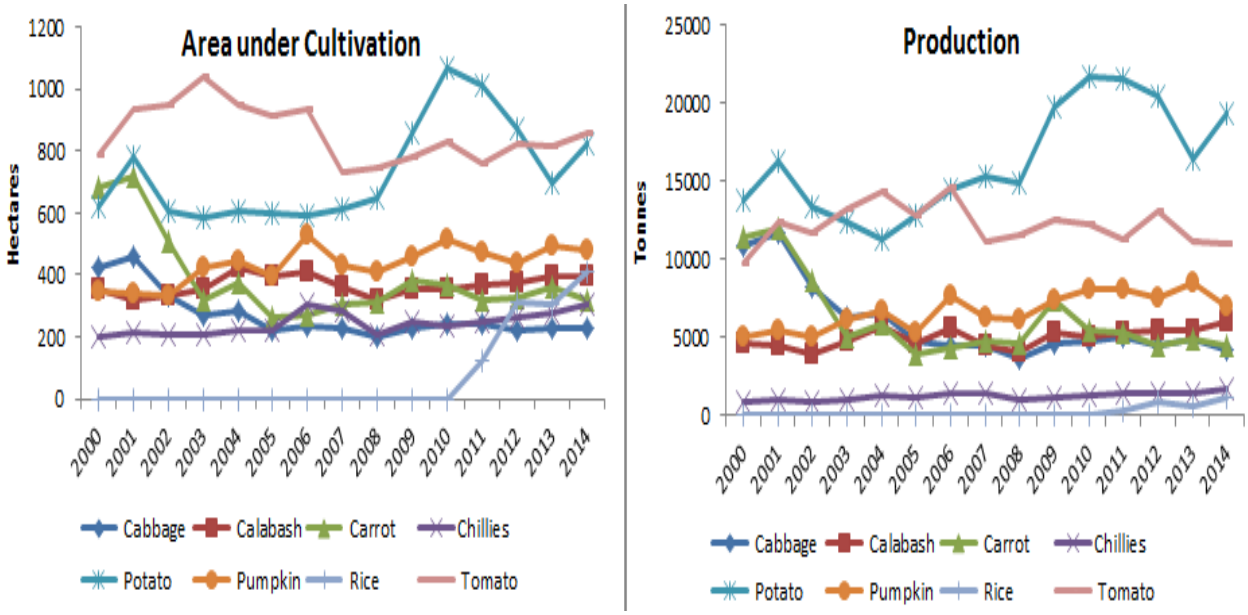
Figure 12 shows the trend in harvested area and production of selected crops. The harvested area of cabbage decreased from 2000 to 2014 and its production also dropped by 60.5% from 10,823 tonnes to 4,279 tonnes during the same period. Similarly, the harvested area of carrots was subject to a drastic reduction of 53% during the same period and its production declined by 61% from 11,461 tonnes to 4,429 tonnes.

On the other hand, the harvested area of potato increased from 622 ha in 2000 to 820 ha in 2014 (even peaked to 1,066 hectares in 2010). This trend was reflected in the production of potatoes which rose from 13,843 tonnes to 19,404 tonnes during the same period (peaking to 21,000 tonnes in 2010).

However, the harvested area and production of calabash, chillies, tomato and pumpkin were rather stable during same period.

At first, it was difficult to imagine that Mauritius could produce rice but this has now become a reality. Rice production started in 2010 and has followed an upward trend.

Figure 12: Production of selected crops, 2000-2014

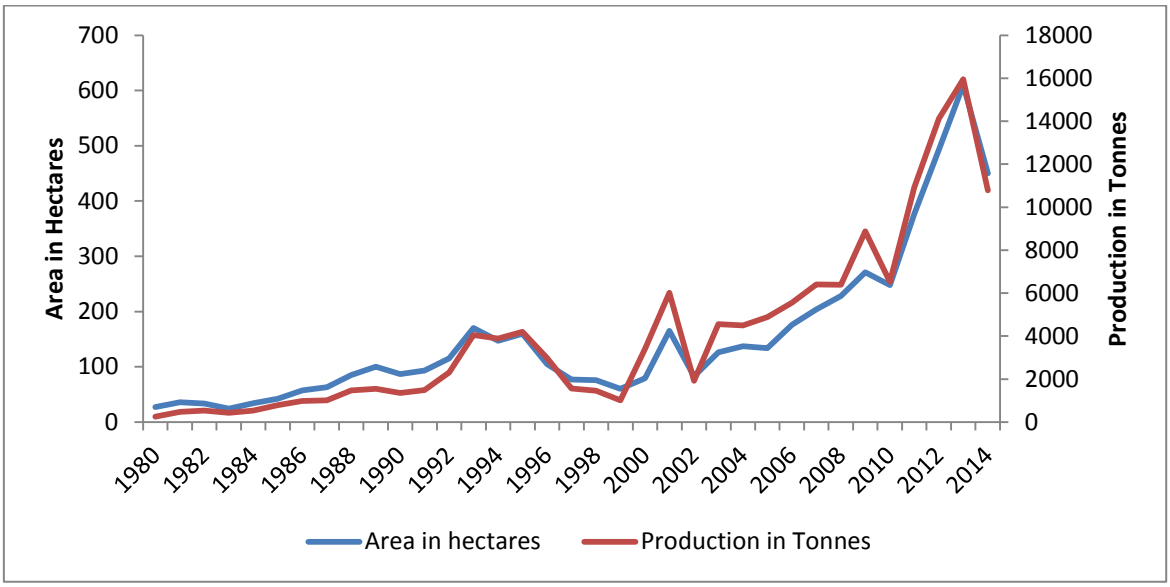


Source: Historical Series, Statistics Mauritius

6.1.1 Pineapple production

Figure 13 shows the trend in pineapple production and the harvested area increased by more than 16 fold from 27 ha in 1980 to 450 ha in 2014. On the other hand, production of pineapple has increased by 42 fold from 258 tonnes to 10,788 tonnes during the same period.

Figure 13: Pineapple production, 1980- 2014, IOM

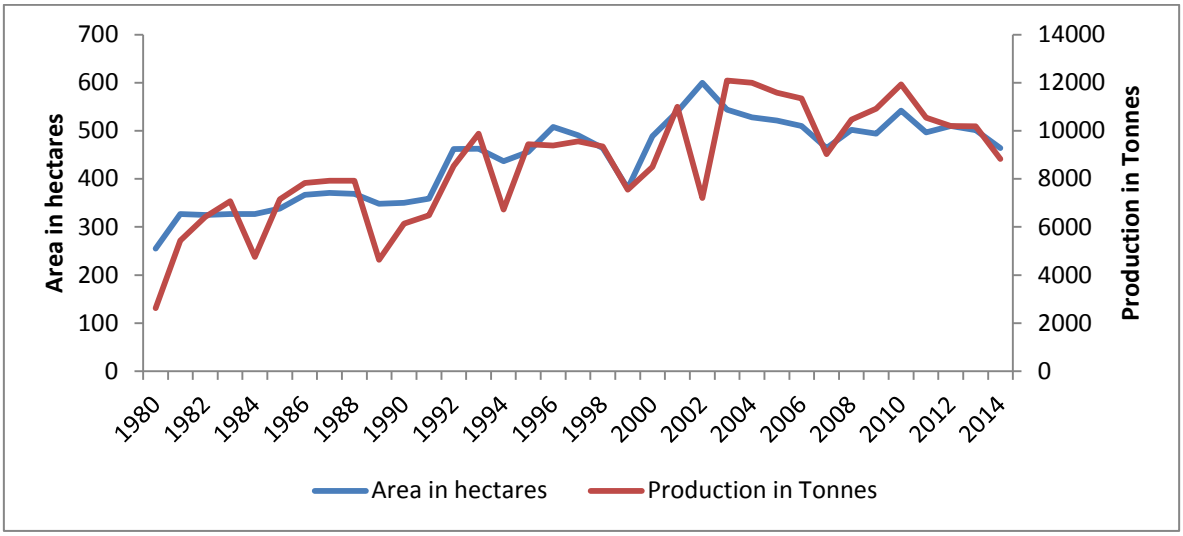


Source: Historical Series, Statistics Mauritius

6.1.2 Banana production

Banana is one of the most consumed fresh fruit in Mauritius and its production has followed an upward trend since 1980. During the year 2013 and 2014 there has been a decrease of 13% as reflected in Figure 14. This was due to the banana freckle disease which dries the leaves and darkens the skin of the fruit.

Figure 14: Banana production, 1980-2014, IOM

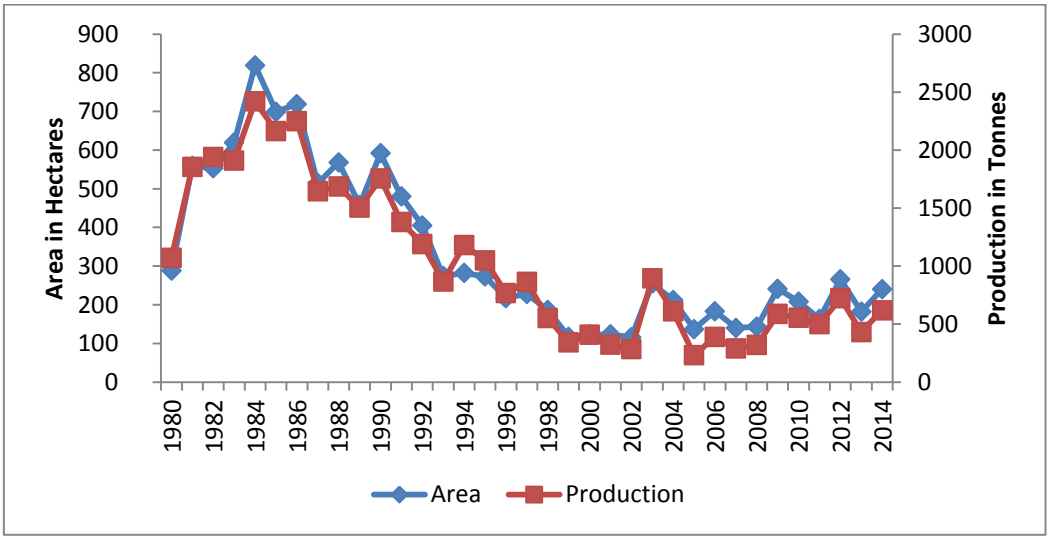


Source: Historical Series, Statistics Mauritius

6.1.3 Groundnut production

Groundnut production has followed a downward trend since 1984 after peaking to 1,980 tonnes in 1983 as reflected in Figure 15. Most of the current production of ground nut is sold as the fresh nut and very little as the dry nut. Many planters are not interested in groundnut plantation because the revenue from it, especially dry groundnut, is too low.

Figure 15: Groundnut production, 1980-2014, IOM



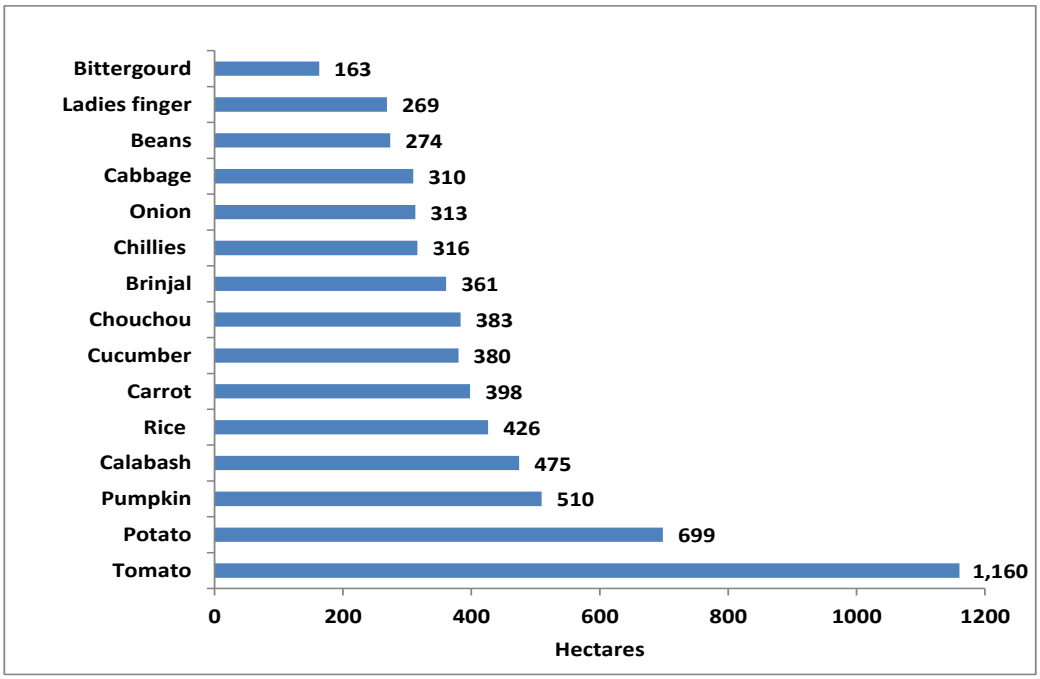
Source: Historical Series, Statistics Mauritius

6.2 CA2014 Results

6.2.1. Harvested area of vegetables and cereals in open fields

Figure 16 illustrates the harvested area of main vegetables and cereals in open fields in the Island of Mauritius and tomato occupied the largest area with 1,160 ha followed by potato (698.5 ha). More details on harvested area are found at Appendix 1.

Figure 16: Harvested area of main vegetables and cereals in open fields, July 2013-July 2014, IOM

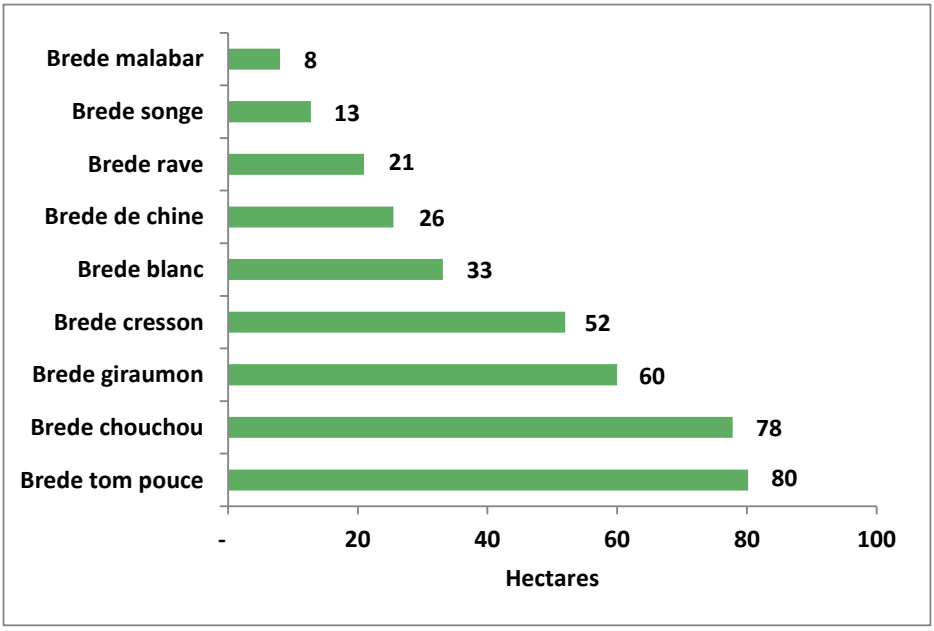


Source: 2014 Census of Agriculture

Figure 17 shows the harvested area of main leafy vegetables (commonly known as "brede") in the Island of Mauritius. "Brede tom pouce", "brede chouchou" and "brede cresson (water cress)" were the most common ones in terms of harvested area.

More details on harvested area of leafy vegetables are found at Appendix 1.

Figure 17: Harvested area of main leafy vegetables in open fields, July 2013-July 2014, IOM

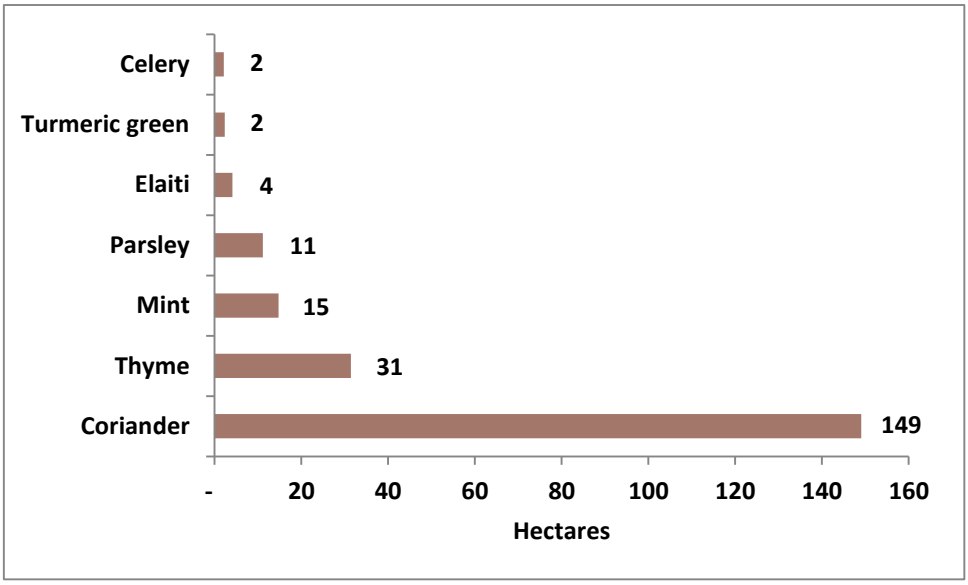


Source: 2014 Census of Agriculture

Regarding herbs, coriander was the most common one in the Island of Mauritius with a harvested area of 149 hectares, followed by thyme with 31 hectares (Figure 18).

More details on harvested area of herbs are found at Appendix 1.

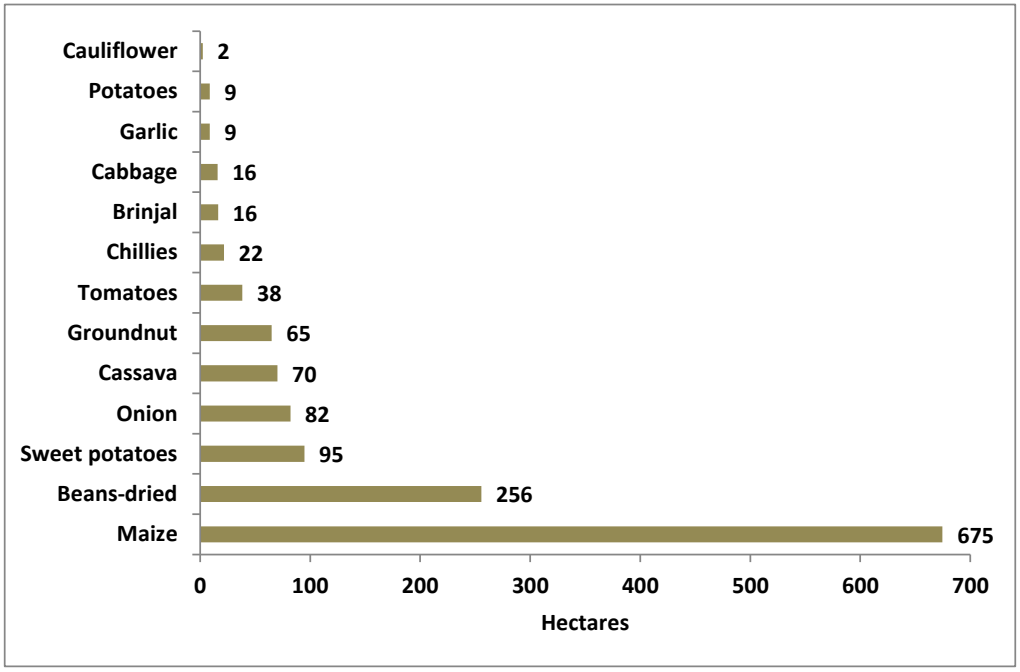
Figure 18: Harvested area of main herbs in open fields, July 2013 - June 2014, IOM



Source: 2014 Census of Agriculture

The main vegetables and cereals in open fields cultivated in the Island of Rodrigues were maize and sweet potato with harvested areas of 675 and 256 hectares respectively (Figure 19). More details on harvested area are found at Appendix 1.

Figure 19: Harvested area of main vegetables and cereals in open fields, July 2013-July 2014, IOR

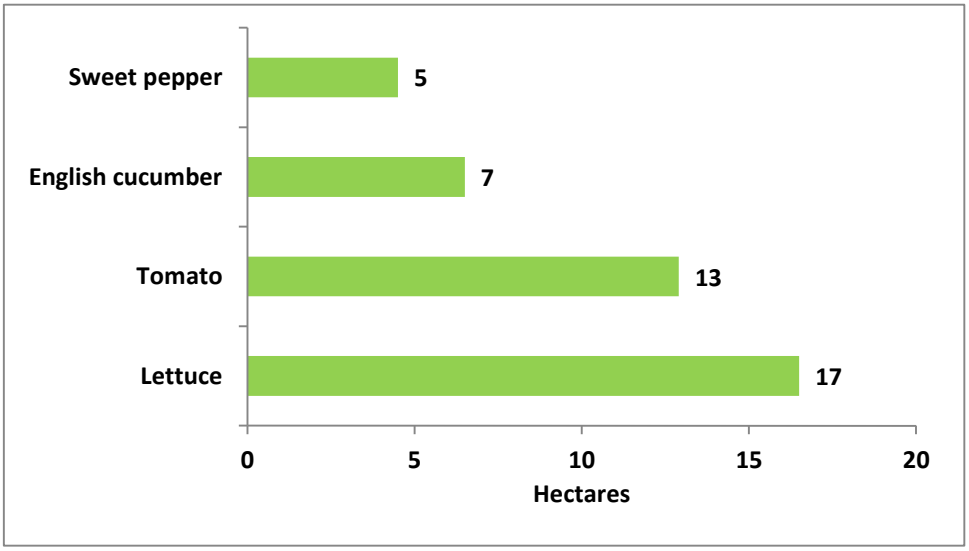


Source: 2014 Census of Agriculture

6.2.2. Harvested area of vegetables using hydroponic culture

Four vegetables namely lettuce, tomato, English cucumber and sweet pepper were cultivated under cover using hydroponic culture in the Island of Mauritius. The harvested areas of these crops are shown in Figure 20 and lettuce had the highest area with 17 ha.

Figure 20: Harvested area of vegetables using hydroponic culture, July 2013-July 2014, IOM

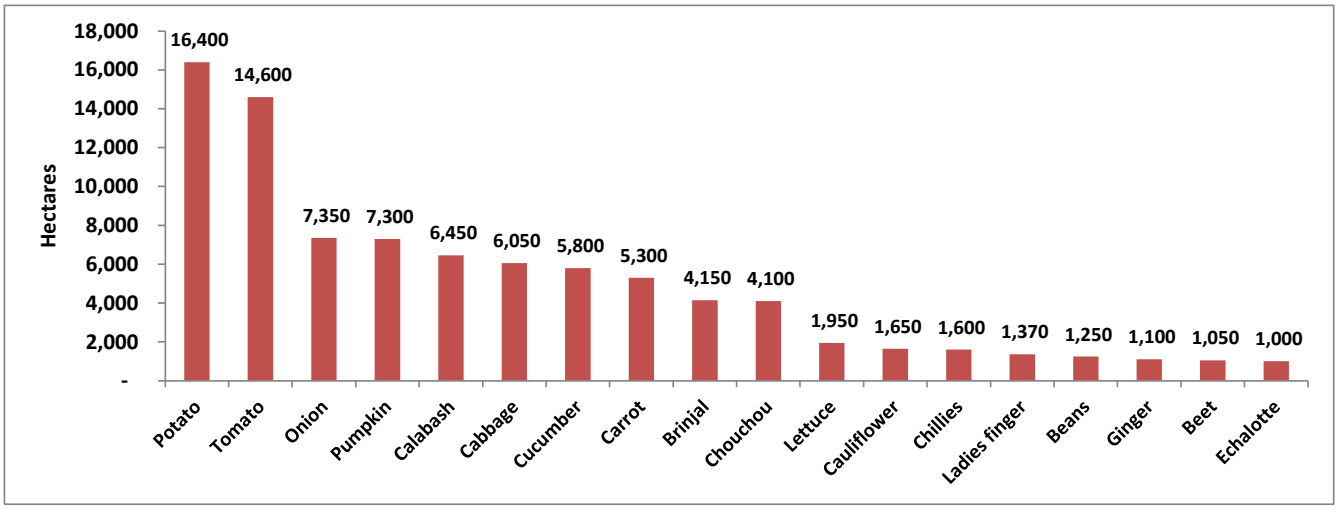


Source: 2014 Census of Agriculture

6.2.3. Production of vegetables and cereals in open fields

A wide range of vegetable crops were cultivated in open fields in the Island of Mauritius. Figure 21a shows the main vegetables were. The CA2014 revealed that production of potatoes was highest with a production of 16,400 tonnes, followed by tomatoes with 14,600 tonnes (see Appendix 1 for more details).

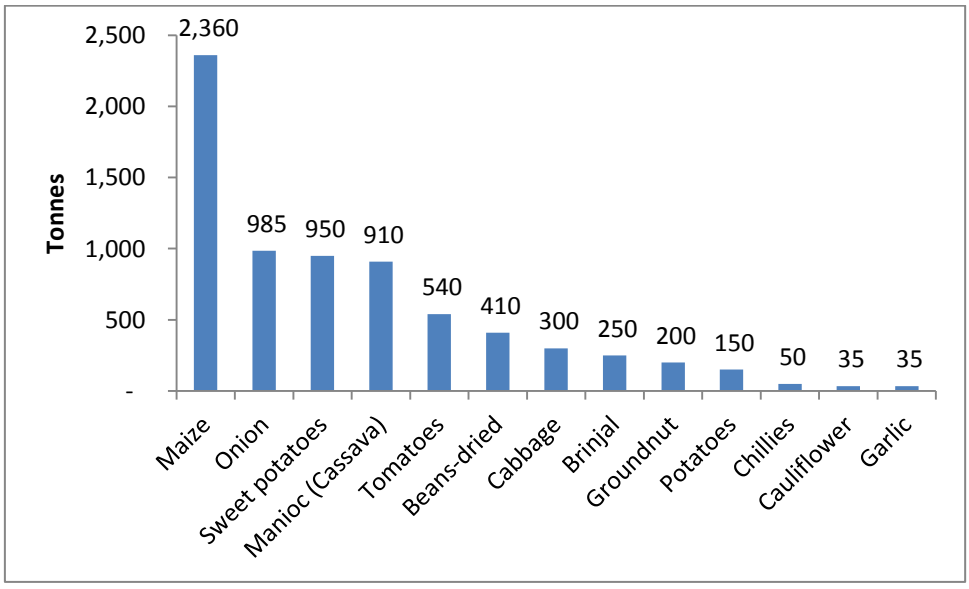
Figure 21a: Production of major vegetables and cereals in open fields, July 2013-June 2014, IOM



Source: 2014 Census of Agriculture

In the Island of Rodrigues, maize production was the highest one with 2,360 tonnes, followed by onion with 985 tonnes (Figure 21b).

Figure 21b: Production of major vegetables and cereals in open fields, July 2013-June 2014, IOR

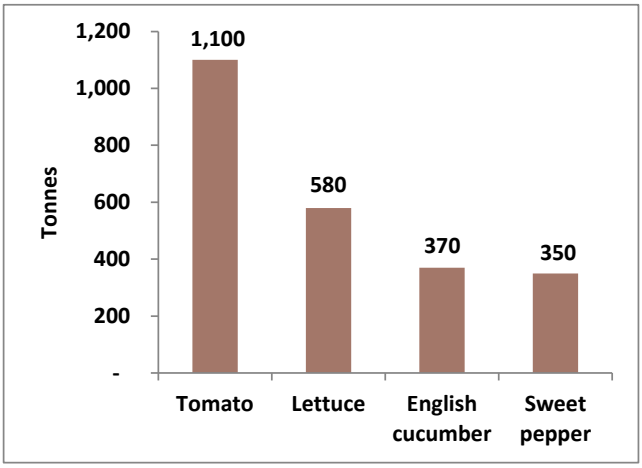


Source: 2014 Census of Agriculture

6.2.4. Production of vegetables using hydroponic culture

Figure 22 shows the production of vegetables using hydroponic culture in the Island of Mauritius and some 1,100 and 580 tonnes of tomatoes and lettuce were produced.

Figure 22: Production of vegetables using hydroponic culture, July 2013-June 2014, IOM

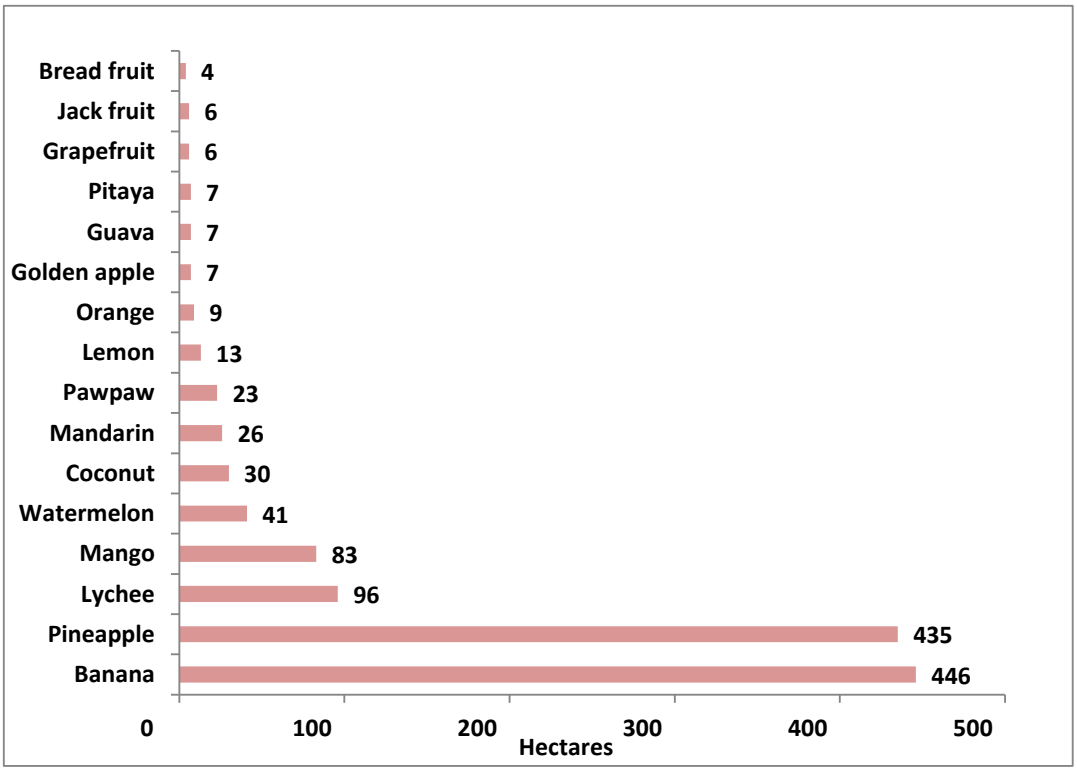


Source: 2014 Census of Agriculture

6.2.5. Harvested area of fruits and nuts

The CA2014 revealed that banana, pineapple and lychee were the main fruits harvested in the Island of Mauritius. Some 446 hectares of land under banana were harvested, followed by pineapple with 435 hectares (Figure 23a).

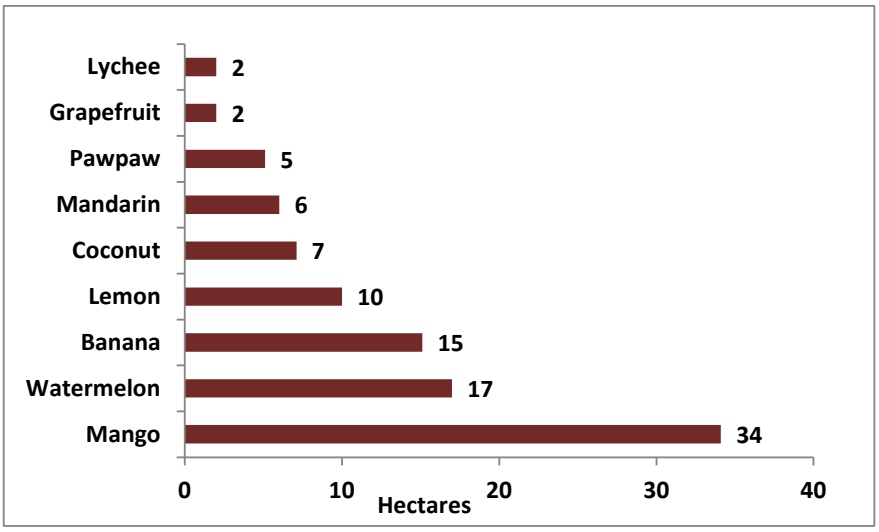
Figure 23a: Harvested area of main fruits and nuts, July 2013-June 2014, IOM



Source: 2014 Census of Agriculture

Figure 23b shows the harvested area of main fruits in the Island of Rodrigues and mango was the major fruit with 34 ha, followed by watermelon (17 ha) and banana (15 ha).

Figure 23b: Harvested area of main fruits and nuts, July 2013-June 2014, IOR

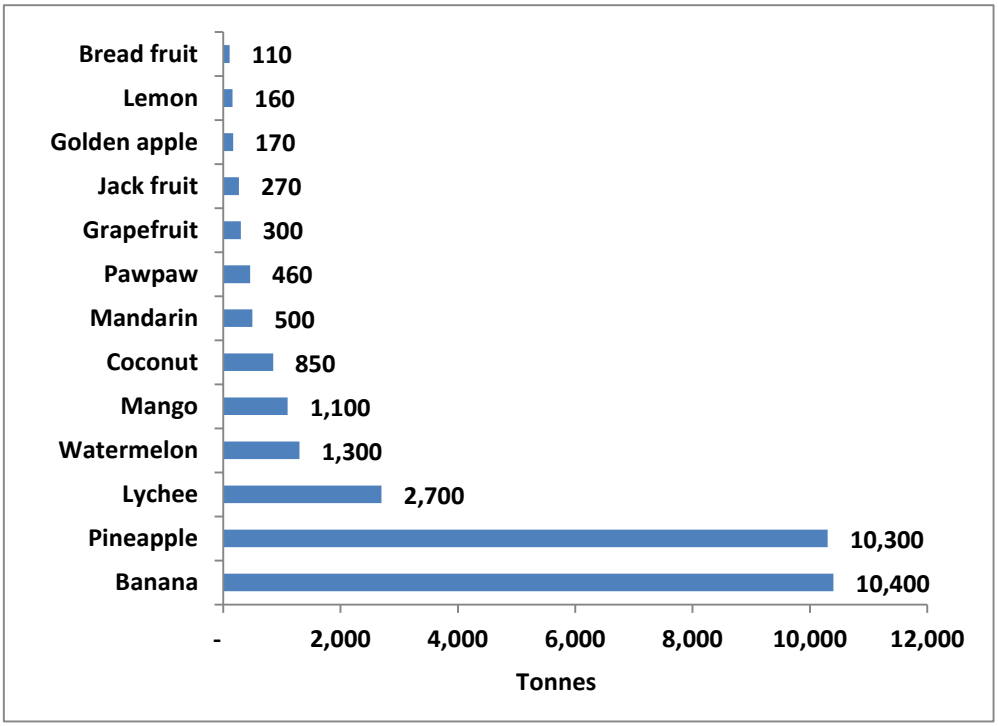


Source: 2014 Census of Agriculture

6.2.6. Production of fruits and nuts

Figure 24a shows the production of fruits and nuts in the Island of Mauritius. Banana, pineapple and lychee were the three main fruits. More details on fruits and nuts are found at Appendix 1.

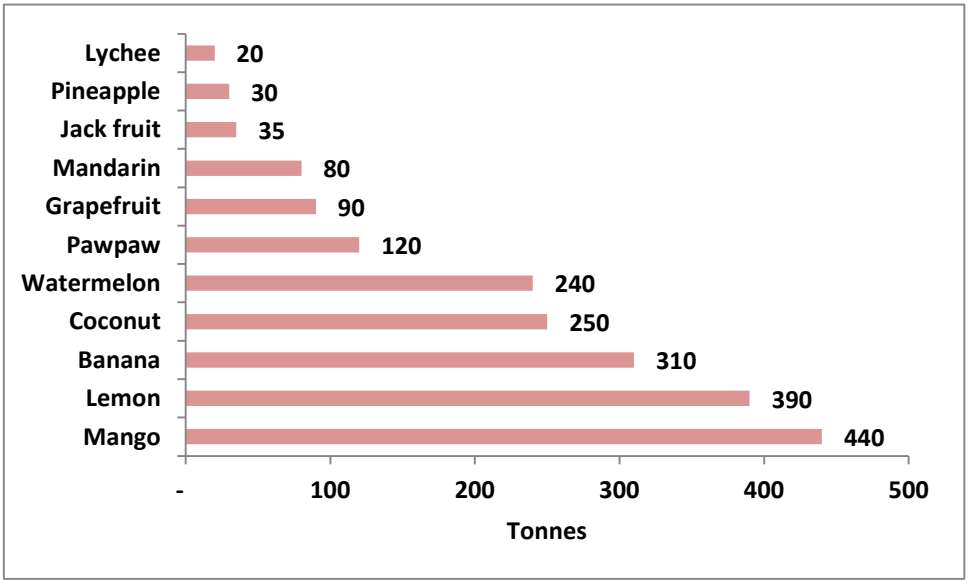
Figure 24a: Production of major fruits and nuts, July 2013-June 2014, IOM



Source: 2014 Census of Agriculture

Figure 24b shows the main fruits and nuts produced in the Island of Rodrigues and the three most common ones were mango, lemon and banana.

Figure 24b: Production of major fruits and nuts, July 2013-June 2014, IOR



Source: 2014 Census of Agriculture

6.3 Horticulture (Flowers and decorative leaves)

The floriculture industry exists since 1960 in Mauritius and has been largely dominated by anthurium flower and Mauritius was the second largest exporter of anthurium on the world market as at 1999, following Netherlands. However, during the last few years, the Mauritian anthurium industry has had difficulties in competing with new countries emerging in the export market due to the unavailability of new varieties (new colours) resulting from the ban imposed by the National Plant Protection Office as from 1996 on the importation of new mature varieties from foreign nurseries. This ban was required to prevent entry and outbreak of the devastating bacterial blight disease.

On the other hand, the industry has been gaining importance and momentum over the past 10 years. Interest on cut flowers, potted plants and landscaping has increased. Nowadays production and commercialization of flowers have been diversified with a lot of emphasis on the local market and the tourism industry.

The major varieties of flowers being cultivated are anthurium, rose, gerbera, chrysanthemum and orchids. As shown in Table 7a, anthurium dominated the production followed by rose and gerbera. It is also worthy to note that ornamental supply has been focussed on rose production for the local market in recent years.

Table 7a: Percentage distribution of harvested area of selected flowers by agricultural practice, July 2013 - June 2014, IOM

Crop Name	Harvested area (Hectares)			Quantity produced (Mn units)
	Open field	Under cover	Both practices	
Anthurium	9	36	45	41
Gerbera	1	8	9	37
Rose	3	29	32	12
Other flowers and decorative leaves	29	21	50	43

Source: 2014 Census of Agriculture

As observed from Table 7b, the floriculture sector is underdeveloped in the Island of Rodrigues and flowers production was very low. Rose occupied the first position followed by gerbera.

Table 7b: Distribution of harvested area of selected flowers by agricultural practice, July 2013 - June 2014, IOR

Crop Name	Harvested area (Hectares)			Quantity produced ('000 units)
	Open field	Under cover	Both practices	
Rose	-	0.05	0.05	182.4
Gerbera	0.01	0.03	0.04	65.1
Anthurium	0.02	0.04	0.06	26.9
Couronne d'épine	0.05	-	0.05	1.4
Croton	0.04	-	0.04	0.9
Other flowers	0.04	0.02	0.06	5.3
Decorative leaves	0.03	0.01	0.04	4.3

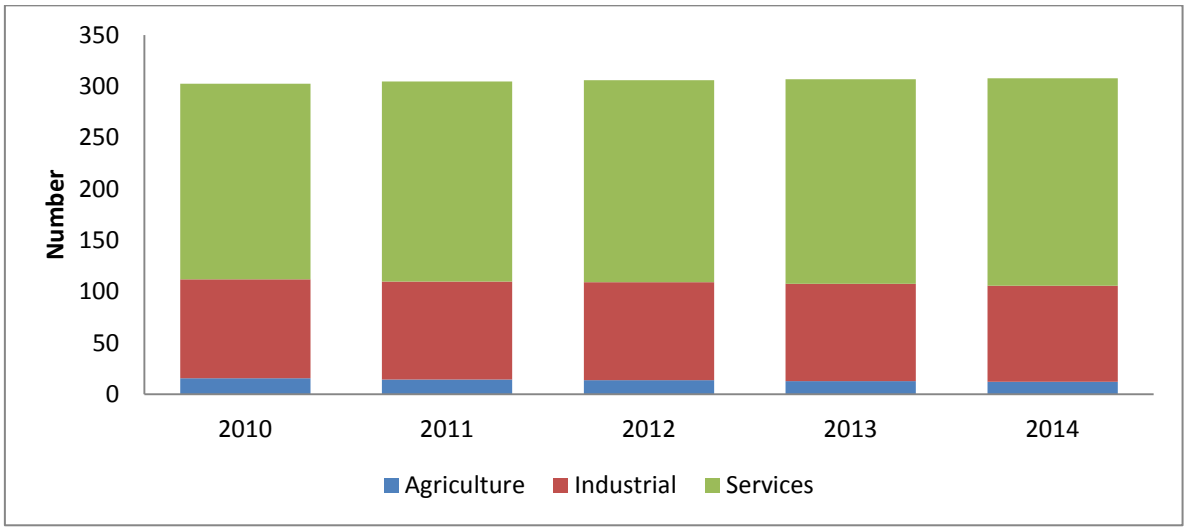
Source: 2014 Census of Agriculture

7. EMPLOYMENT

From a situation of mere frictional unemployment a few years ago, the country is beginning to experience the first sign of real unemployment. In 2014, the total number of employed persons, including foreign workers, was estimated at 559,200 out of a labour force of 604,000. Among the 351,700 were males and the remaining 207,500 were females. Figure 25 shows the employment patterns in the Republic of Mauritius from 2010 to 2014 and the overall labour force increased by 1.7% from 2010 to 2014. As shown in Figure 20, the number of people employed in the services sector has followed an upward trend while that in industrial and agriculture has followed a downward trend.

Moreover, the agricultural sector employs the least number of people and employment in this sector decreased by 1.7% from 2010 to 2014. However, this does not necessarily imply that production levels are decreasing as reduction of the work force is being substituted by mechanisation and rationalisation of production processes.

Figure 25: Employment in agricultural, industrial and services sector, 2010-2014, ROM



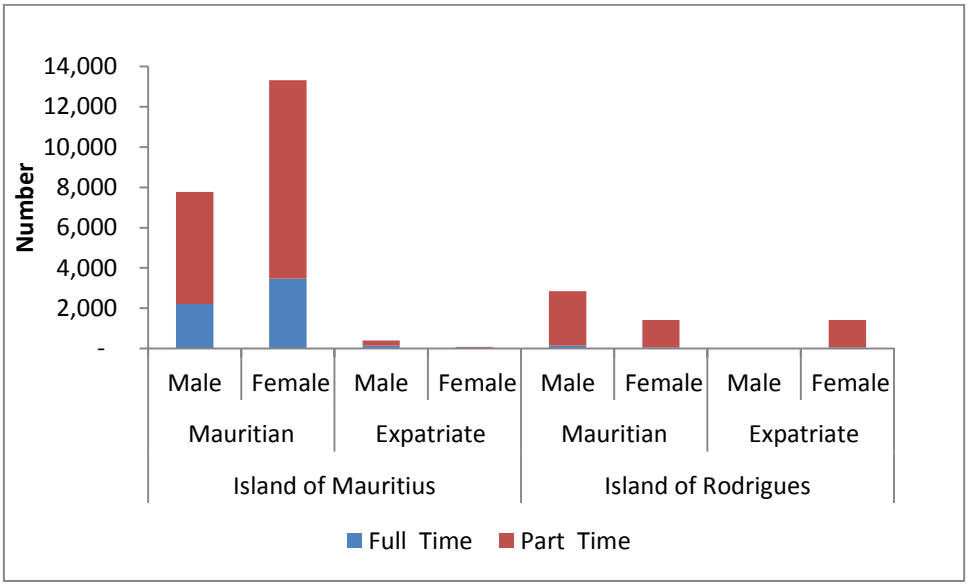
Source: Digest of Agricultural Statistics 2014

7.1 Analysis of household members working on farm

7.1.1 Household Sector

Agriculture represents a source of income for many families and some people are engaged in agricultural activity on a full time basis or part-time basis. About 18,260 household farms were involved in agriculture on the Island of Mauritius and 5,083 household farms on the Island of Rodrigues. The CA2014 has revealed interesting results by indicating that there were expatriates working on farms in both Islands of Mauritius and Rodrigues. Moreover, there were more part-time workers on the field compared to full-time ones and the majority of them were female workers in both islands as observed in Figure 26.

Figure 26: Distribution of paid employees (household sector) by type of employment and sex, July 2013 - June 2014, IOM and IOR



Source: 2014 Census of Agriculture

Further breakdown of the crop sector into the different subsectors such as (vegetables, fruits, flowers and mixed cropping) shows that there were more female Mauritian full-time and part-time workers compared to expatriates in the Island of Mauritius. More precisely, female full-time Mauritian workers accounted for 73.9% of the total full-time workers in the vegetable subsector and part-time females represented 80.6% of the total part-time workers. The analysis also highlights the fact that there were some female expatriates working on the fields on a part-time basis.

In the Island of Rodrigues, it is worth noting that there were only 2 male full-time workers in the vegetable subsector (Table 8a).

Table 8a: Paid employees in vegetable subsector, July 2013-July 2014, IOM and IOR

	IOM						IOR					
	Full-Time			Part-Time			Full-Time			Part-Time		
	M	F	Both Sexes	M	F	Both Sexes	M	F	Both Sexes	M	F	Both Sexes
Nationals	42	119	161	587	2,439	3,026	2	-	2	8	64	72
Expatriate	-	-	-	17	13	30	-	-	-	-	-	-

Source: 2014 Census of Agriculture

Table 8b compares the employment in fruit subsector in the Islands of Mauritius and Rodrigues and most workers were part-timers in both countries. Among the part-time workers, 64.5% were females in the Island of Mauritius whereas in the Island of Rodrigues there were no female workers involved in fruit production.

Table 8b: Paid employees in fruit subsector, July 2013-July 2014, IOM and IOR

	IOM						IOR					
	Full-Time			Part-Time			Full-Time			Part-Time		
	M	F	Both Sexes	M	F	Both Sexes	M	F	Both Sexes	M	F	Both Sexes
Nationals	5	1	6	287	523	810	-	-	-	4	-	4
Expatriate	25	-	25	-	-	-	-	-	-	-	-	-

Source: 2014 Census of Agriculture

The flower subsector employed the least number of workers with 12 full-timers and 40 part-timers in the Island of Mauritius. In the Island of Rodrigues there were no paid workers involved in this sector (Table 8c).

Table 8c: Paid employees in flower subsector, July 2013-July 2014, IOM and IOR

	IOM						IOR					
	Full-Time			Part-Time			Full-Time			Part-Time		
	M	F	Both Sexes	M	F	Both Sexes	M	F	Both Sexes	M	F	Both Sexes
Nationals	6	6	12	14	26	40	-	-	-	-	-	-
Expatriate	-	-	-	-	-	-	-	-	-	-	-	-

Source: 2014 Census of Agriculture

Table 8d shows that the mixed farming subsector employed the greatest number of workers in the agricultural sector in both islands. More precisely, most of the workers were part-timers and were female workers.

Table 8d: Paid employees in mixed farming subsector, July 2013-July 2014, IOM and IOR

	IOM						IOR					
	Full-Time			Part-Time			Full-Time			Part-Time		
	M	F	Both Sexes	M	F	Both Sexes	M	F	Both Sexes	M	F	Both Sexes
Nationals	254	313	567	3,179	9,847	13,026	25	2	27	852	1,361	2,213
Expatriate	29	-	29	55	47	102	-	-	-	-	-	-

Source: 2014 Census of Agriculture

8. AGRICULTURAL PRACTICES

In order to have a good harvest various agricultural practices are being used such as irrigation, fertilizers, pesticides and herbicides. Table 9 shows the main agricultural practices that were used in the Islands of Mauritius and Rodrigues during the period July 2013 to June 2014.

Table 9: Distribution of farms by agricultural practices, July 2013 - June 2014, IOM and IOR

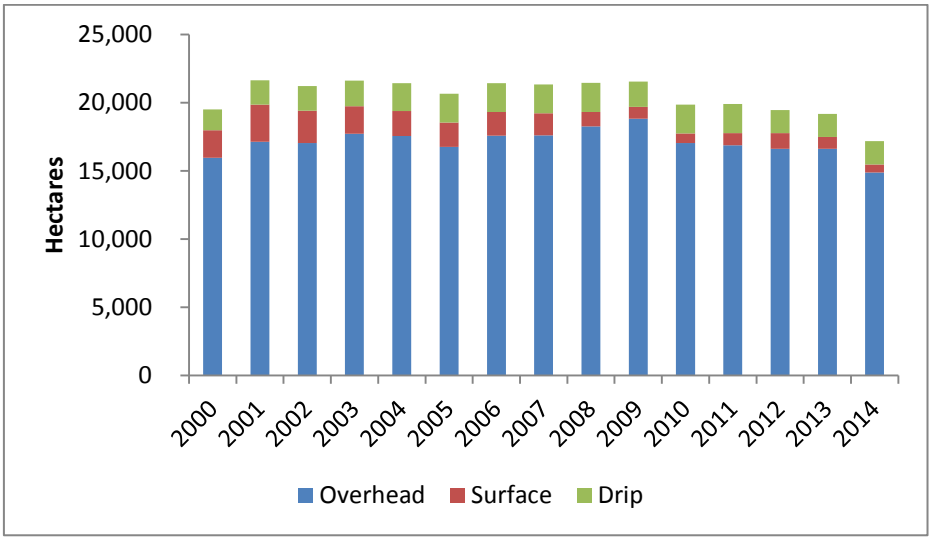
Agricultural Practice	Island of Mauritius	Island of Rodrigues
Irrigation	21.8	9.0
Mechanisation	27.6	18.1
Chemical fertilisers	64.0	21.9
Organic fertilisers	56.5	81.1
Pesticides	61.9	55.3
Herbicides	61.7	48.8
Seeds	48.3	49.1

Source: 2014 Census of Agriculture

8.1 Irrigation

The Island of Mauritius is considered to be a well-watered island, with an annual average of 2,000 mm of rainfall and the agriculture system is mainly rain-fed. Figure 27 depicts the area under irrigation by type of irrigation system. Most of the farmers used overhead irrigation. In 2000 and 2001, there were serious droughts leading to an increase in irrigated area. In 2014, area under irrigation amounted to 17,183 hectares of which sugar cane (75%) and vegetables (25%) (Appendix 1).

Figure 27: Area under irrigation, 2000-2014, IOM

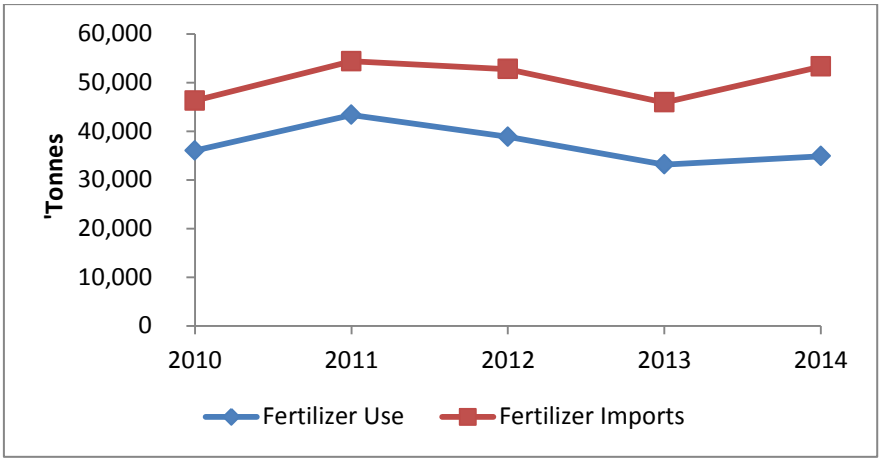


Source: Historical Series, Digest of Agricultural Statistics

8.2 Fertilizers

Fertilizers are nutrients applied to agricultural fields to supplement required elements found naturally in the soil and hence having a better crop production. However, indiscriminate use and high applications of inorganic fertiliser unaccompanied by appropriate cultural operations limit yield and quality, and can lead to health and environmental problems. Figure 28 shows the trend in fertilizer use in the Island of Mauritius and the average annual use of fertilizers amounted to 37,236 tonnes.

Figure 28: Fertilizer Use and Imports, 2010-2014, IOM



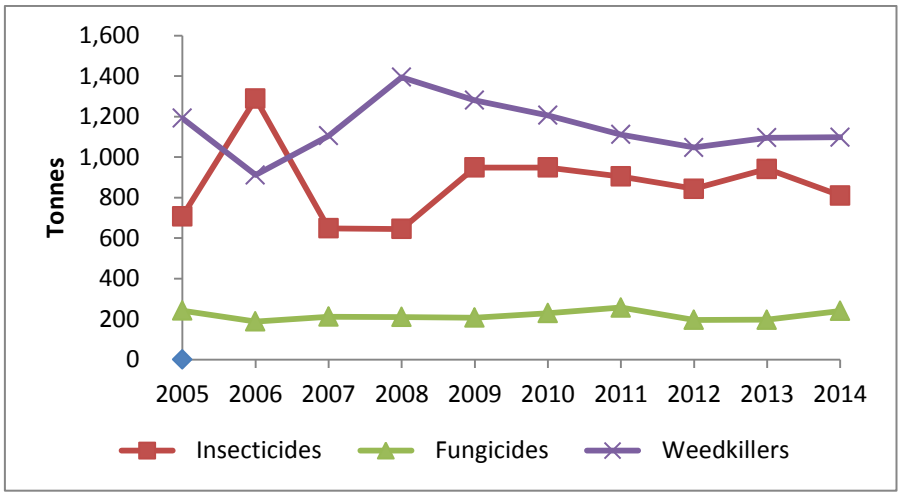
Source: Digest of Agricultural Statistics

8.3 Chemicals

Chemicals are commonly used in the agricultural sector in the form of herbicides, insecticides, fungicides, with a view to protect crops from pests. Most chemicals used in the country are imported. Figure 29 shows the trend in the quantity of imports chemicals namely; insecticides, fungicides and weed killers.

The heavy use of synthetic pesticides and fertilizers has been a matter of concern among policy makers, scientists and the general public for some years now. Furthermore, heavy use of pesticides for pest control leads to high cost of production while simultaneously lowering food quality and safety. The recent trend in developed countries in favour of pesticide-free agriculture, along with the increasingly stringent regulations regarding pesticide residues in imported food, can pose severe impediments to the future of our horticultural exports to these countries.

Figure 29: Quantity of imported chemicals, 2005-2014, IOM



Source: Historical Series, Statistics Mauritius

9. MARKETING PRACTICES OF SELECTED AGRICULTURAL PRODUCTS

Fresh produce is traditionally marketed by small growers through an auction system and the produce moves on to municipal markets and village fairs. The conditions obtaining the auction system are ill-adapted and unacceptable from the sanitary viewpoint, especially in Port Louis. In fairs especially, there is some direct sales by retailers to consumers, and sometimes by farmers themselves to consumers much like in a farmer's market. Given that more supermarkets and hypermarkets are in operation, these are fast becoming an alternative channel for consumers. Present marketing conditions at the national level of fruits and vegetables are considered as unsatisfactory by almost all operators of the production and marketing chain.

Some controlled products, namely onions, potatoes and garlic, are marketed through the Agricultural Marketing Board (AMB) which offers services like marketing, storage and price stabilization.

The CA2014 reveals that the main channel used to market some selected agricultural products in the crop sector in the Island of Mauritius were as follows:

- Vegetables through Wholesalers (66%)
- Fruits through Wholesalers (48%)
- Flowers through Retailers (52%)

However, it is worth to note that the present marketing structure, involving auctioneers and middlemen, is under review. Furthermore, growers have difficulties in obtaining adequate space at auction markets and also in securing good and profitable prices due to their inability to efficiently plan production according to market demand.

10. MAIN CONSTRAINTS OF HOUSEHOLD FARMS

The crop sector is facing major constraints and the census reveals the five main constraints reported by farmers of the household sector in Mauritius were:

- Pests/Diseases (69%)
- Natural disaster (44%)
- Theft (34%)
- Unavailability of water (27%)
- High price of inputs (24%)

The other constraints which are hindering food crop production in Mauritius include availability of land; labour scarcity; low investment and problems of marketing, unavailability or shortage of raw materials locally, high cost of imported raw materials, small size of local market, which does not allow economies of scale, and stiff competition from imported products.

11. SUPPORT FROM GOVERNMENT

A number of schemes were implemented for the non-sugar crop sector in order to boost up the level of local food production. The schemes are as follows:

(i) Rain Water Harvesting Scheme

This scheme encouraged crop/livestock farmers to harvest rainwater to optimize use of water resources. It provided partial funding as grant for the acquisition of appropriate equipment to collect, store and supply rainwater on-farm for agricultural production solely, and light structures for collection of rain-water.

(ii) Sheltered Farming Scheme

It encouraged farmers to shift from traditional open-field cultivation to sheltered farming so as to help them mitigate the effect of adverse climatic conditions as well as to improve their production capacity and the quality of farm produce.

(iii) Crop Nursery (Curing Scheme)

This scheme aimed at assisting vegetable growers to improve their capacity for production of planting materials and to enhance the quality of harvested produce by providing partial funding as grant for the construction of nursery-cum-curing units.

(iv) Purchase of Agricultural/ Processing Equipment

The Purchase of Agricultural/ Processing Equipment encouraged planters to acquire farm machinery/ equipment to mechanise their production systems and also to venture in food-processing or other activities for value-addition.

(v) Seed Potato/ Onion/Garlic Purchase Scheme

The seed purchase scheme was meant for small planters to help them meet the significant, high financial cost involved in the purchase of seeds for potato, onion and garlic.

(vi)Agricultural Calamities Solidarity Scheme (ACASS)

This scheme ensured the sustainability of small farmers by mitigating the effects of crop losses/death of animals caused due to natural calamities

(vii) Compost Subsidy Scheme

The scheme helped small farmers to shift from use of chemical fertiliser inputs to organic ones in order to promote sustainable agriculture.

(viii) Freight Rebate Scheme

The objective was to promote the export of various agricultural products grown in Mauritius and increase local production of specific fruits, vegetables and flowers.

(ix) Fruit Protection Scheme

This scheme aims at addressing the bat problem and to ensure adequate protection of harvests for seasonal fruits.

(x) Family Farming Micro-Project Scheme (Crop Sector)

This scheme encourages families/households to develop and sustain production of vegetable, fruit and other horticultural products with minimal processing.

12. FOOD SECURITY, IMPORTS AND EXPORTS

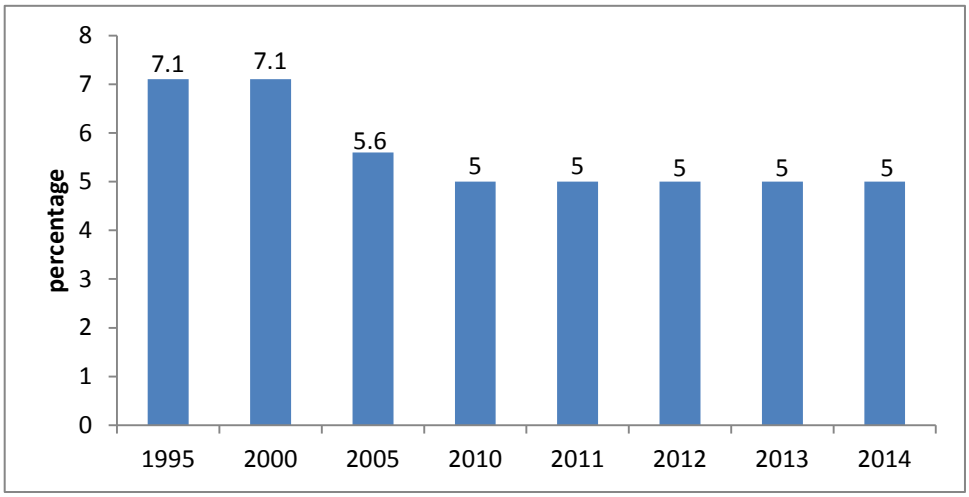
12.1 Food security

Food security is a growing concern of all governments as both a foundation for economic development and the cornerstone of political stability. According to the FAO (1996), food security is defined as "when all people, at all times, have physical and economical access to sufficient, safe and nutritious food for a healthy and active life". It is important to raise the national food security level by maintaining self-sufficiency in those agricultural products wherever possible and by generating a significant, concomitant increase in local production of others. Mauritius is self-sufficient in most fresh vegetables and local fruits. In 2014, self-sufficiency has been around 40%, 88% and 18% in in onion, potato and garlic respectively.

In Mauritius, there is no hunger problem. Malnutrition among children remains very low and has considerably diminished over the last years. With increasing per capita income, the quality of life of the Mauritian population, including that of children**,** has significantly improved over the years. As reflected

in Figure 30, there has been significant improvement in the prevalence of undernourishment in the Island of Mauritius and it has significantly decreased from 7.1% in 1995 to 5% in 2014.

Figure 30: Prevalence of undernourishment in total population, IOM



Source: Millennium Development Goals Report, 2015

12.2 Exports

In the year 2014, the exports of agricultural product amounted to Rs 21,344 million. The exports of fruits and vegetables, cut foliage and flowers as well as other food products amounted to Rs 2,603 million, representing about 12% of domestic exports.

12.3 Imports

Food security in Mauritius is ensured through both local production and imports. Mauritius is considered to be a Net-Food Importing Developing Country (NFIDC) as it imports most of its staple food. During the year 2014, the food import bill amounted to Rs 38 billion representing 22% of total imports. Table 10 shows the trend in the quantity of selected items relating to the crop sector which were imported.

Mauritius imports its staple food such as rice and flour. However, between 2010 and 2014, imports of rice, maize and pulses decreased by 29%, 4.6% and 4.8% respectively. On the other hand, import of fruits and nuts rose by 16.9%.

Table 10: Imports of selected items, 2010 - 2014, IOM

(Tonnes)

Item	2010	2011	2012	2013	2014
Rice	80,630	58,173	55,793	60,237	57,093
Maize	94,617	92,777	93,367	99,741	90,225
Wheat Flour	26	23,508	1,981	4,334	2,728
Pulses	13,489	12,201	12,355	13,594	12,845
Fruits and nuts (fresh & dried)	20,737	20,409	22,744	23,691	24,239
Coffee	499	572	581	645	671
Cocoa/Chocolate	1,886	2,010	2,210	2,358	2,486
Vegetable oils & fats	34,284	41,610	40,014	40,495	50,535

Source: Digest of Agricultural Statistics 2014

13. CONCLUSIONS AND RECOMMENDATIONS

13.1 Conclusions

Despite its small contribution to GDP, agriculture still plays an important role in the national economy in terms of food production and employment. The 2014 Census of Agriculture provides benchmarks to the current agricultural statistics. It also makes provision for a frame for agricultural surveys and helps to work out some of the indicators of the SDGs staring in 2016.

The census took into consideration the various type of production method such as hydroponics and backyard garderning which has not yet been captured by the existing agricultural statistics. The CA 2014 reveals important information such as there are more female farmers than male in Mauritius and for majority of the small scale farmers farming is an occupation not a business. Land under agricultural use is decreasing and most of the crop production are being undertaken in open field except for lettuce, cucumber, sweet pepper and tomato are being produced by hydroponic culture also.

It also highlights the major problem the the agricultural sector is facing such as ageing labour force, thefts , pest and disease as well as high production cost. It shows that the current production system relies heavily on rain fed agriculture and there is no formal marketing system in both island.

13.2 Recommendations

The overall agricultural development goal is to raise the national food security level by maintaining self-sufficiency in those agricultural products whenever possible and by generating a significant, concomitant increase in local production of other vegetables and fruits. This should be achieved through a shift to sustainable agricultural practices and eco-friendly methods of production and protection conducive to safer and better human nutrition. There is also need to develop a transparent state land distribution procedure in order to increase food production and to develop a formal marketing system to match demand and supply.

In the field of data collection, additional yield surveys for major vegetables and fruits need to carry out to provide updated and reliable inputs to current agricultural statistics. In addition, a complete census including all sectors such as sugar cane and is highly recommended for the next census of agriculture to provide better benchmarks for structural data.

14. REFERENCES

1. Food and Agriculture Organization of The United Nations (2005), *World Programme for the Census of Agriculture, 2010, A system of integrated agricultural censuses and surveys*

2. Food and Agricultural Research Council (FARC). 1996. *Proceedings of the First Annual Meeting of Agricultural Scientists*. 12 - 13 July 1995, Réduit, University of Mauritius. Editedby Robert Antoine. Réduit, Mauritius, FARC. 1996. 123 p.

3. Koenig M. (1930), *Agricultural Census in Mauritus 1930,* Deparment Of Agriculture, Chamber of Agriculture, Mauritius

4. Koenig M. (1940), *Report on the Census Of Agriculture*, Deparment Of Agriculture, Chamber of Agriculture, Mauritius

5. Le Defi Media, 2015. *Mobilisation contre le banana freckle disease* (online), available from http://defimedia.info/mobilisation-contre-la-banana-freckle-disease-9648/, (accessed on 9 Decmber 2015)

6. Ministry of Agro Industry and Food Security (2013), *Food Security Fund, Strategic Plan (2013-2015),* Port Louis:

7. Republic Of Mauritius. (2015), *Millenium Development Goals Report (2015),* Port Louis,Maurtius

8. Statistics Mauritius. (2015), *Digest of Agricultural Statistics (2014),* Port Louis: Statistics Mauritius.

9. Statistics Mauritius. (2015), *Digest of Labour Statistics (2014),* Port Louis: Statistics Mauritius.

10. Statistics Mauritius. (2015), Historical Series (Online), available from http://statsmauritius.govmu.org/English/Pages/Historical-Series.aspx, (accesssed on 12 November 2015)

11. STATISTICS MAURITIUS (2015), Economic and Social Indicators, "*2014 Census Of Agriculture, Main Results*" Port Louis: Statistics Mauritius.

Appendix 1: Harvested Area and Production, CA2014

Table A1.1: Harvested area of main crops, July 2013 - July 2014, IOM

(Hectares)

Crop	Open field	Under cover		**All practices**
		Hydroponic	Non-Hydroponic	
Beans	273.8			273.8
Beet	80.0			80.0
Bittergourd	162.9			162.9
Brinjal	360.9			360.9
Broccoli	11.3			11.3
Cabbage	309.7			309.7
Calabash	474.6			474.6
Carrot	398.2			398.2
Cauliflower	91.7			91.7
Chillies	316.2			316.2
Chillies (small)	89.7			89.7
Chouchou	383.4			383.4
Cucumber	380.0	6.5		386.5
Echalotte	115.9			115.9
Eddoes (violet)	39.7			39.7
Eddoes (curry)	58.3			58.3
Garlic	19.6			19.6
Ginger	82.1			82.1
Gourgette	50.8			50.8
Green peas	3.6			3.6
Groundnut	149.5			149.5
Leek	6.6			6.6
Ladies finger	268.7			268.7
Lettuce	142.4	16.5		159.0
Maize	91.5			91.5
Manioc	78.7			78.7
Onion	312.8			312.8
Palm heart	38.0			38.0
Patole	70.6			70.6
Petsai (Brede)	39.0			39.0
Pipengaille	109.2			109.2
Potato	698.5			698.5
Rice (paddy)	426.3			426.3
Pumpkin	509.7			509.7
Squash	93.6			93.6
Sweet pepper	2.5	4.5	0.2	7.2
Sweet potato	61.8			61.8
Tomato	1,160.2	12.9	1.0	1,174.1
Voehm	97.0			97.0

Source: 2014 Census of Agriculture

Table A1.2: Production of main crops, July 2013 - July 2014, IOM

(Tonnes)

Crop	Open field	Under cover		**All practices**
		Hydroponic	Non-Hydroponic	
Beans	1,232			1,232
Beet	1,032			1,032
Bittergourd	815			815
Brinjal	4,150			4,150
Broccoli	112			112
Cabbage	6,039			6,039
Calabash	6,455			6,455
Carrot	5,296			5,296
Cauliflower	1,651			1,651
Chillies	1,613			1,613
Chillies (small)	233			233
Chouchou	4,141			4,141
Cucumber	5472	366		5,838
Echalotte	1,032			1,032
Eddoes (violet)	433			433
Eddoes (curry)	542			542
Garlic	106			106
Ginger	1,117			1,117
Gourgette	411			411
Green peas	7			7
Groundnut	374			374
Leek	59			59
Ladies finger	1,370			1,370
Lettuce	1,367	578	5	1,950
Maize	714			714
Manioc	921			921
Onion	7,351			7,351
Palm heart	36			36
Patole	508			508
Petsai (Brede)	527			527
Pipengaille	873			873
Potato	16,415			16,415
Rice (paddy)	1,449			1,449
Pumpkin	7,289			7,289
Squash	599			599
Sweet pepper	9	349	8	366
Sweet potato	705			705
Tomato	13,458	1,118	21	14,597
Voehm	698			698

Source: 2014 Census of Agriculture

Table A1.3: Harvested area and production of leafy vegetables, July 2013 - July 2014, IOM

	Open field: Harvested Area (Hectares)	Open field: Production (Tonnes)
Brede basmati	0.4	3
Brede blanc	29.9	334
Brede chouchou	56.3	1,002
Brede cresson	51.9	701
Brede de chine	24.1	313
Brede giraumon	46.0	681
Brede gondol	0.1	3
Brede malabar	7.8	59
Brede mouroum	0.9	…
Brede songe	8.9	157
Brede soufflette	0.5	5
Brede tom pouce	78.2	1,392
Epinards	0.6	3
Brede rave	19.9	516

Source: 2014 Census of Agriculture

Table A1.4: Harvested area and production of herbs, July 2013 - June 2014, IOM

	Open field (Hectares)	Open field (Tonnes)
Basil	0.2	…
"Carri poulet"'	1.7	…
Celery	1.5	14
Coriander	144.2	1845
Elaiti	4.1	4.9
Mint	12.5	141
Parsley	10.5	57
Rosemary	0.1	…
Turmeric (green)	2.3	23
Thyme	28.6	263
Vanilla	0.3	…

Source: 2014 Census of Agriculture

Table A1.5: Harvested area of main crops, July 2013 - July 2014, IOR

Foodcrop	Area (Hectares)	Production (Tonnes)
Maize	674.7	2,360
Beans-dried	255.6	410
Sweet potatoes	94.7	950
Onion	82.1	985
Cassava	70.2	910
Groundnut	65.1	200
Tomatoes	38.4	540
Chillies	21.8	50
Brinjal	16.3	250
Cabbage	15.9	300
Potatoes	8.7	150
Garlic	8.7	35
Cauliflower	2.4	35

Table A1.6: Area under main fruits, July 2013 - June 2014, IOM

Fruit	Area under fruit and nut trees (Hectares)
Banana	446
Pineapple	435
Lychee	96
Mango	83
Watermelon	41
Coconut	30
Mandarin	26
Pawpaw	23
Lemon	13
Orange	9
Golden apple	7
Guava	7
Pitaya	7
Grapefruit	6
Jack fruit	6
Bread fruit	4
Longane	4
Avocado	2
Bilimbi	2

Table A1.7: Harvested area of main fruits and nuts, July 2013 - June 2014, IOR

Fruit	Harvested area (Hectares)
Longane	0
Mango	34
Watermelon	17
Banana	15
Lemon	10
Coconut	7
Mandarin	6
Pawpaw	5
Grapefruit	2
Lychee	2
Pineapple	1
Jack fruit	1
Bread fruit	1
Guava	1
Bilimbi	1
Golden apple	1
Avocado	1

Table A1.8: Production of major crops under open fields, July 2013 - June 2014, IOR

Crop	Production (tonnes)
Maize	2,360
Onion	985
Sweet potatoes	950
Cassava	910
Tomatoes	540
Beans-dried	410
Cabbage	300
Brinjal	250
Groundnut	200
Potatoes	150
Chillies	50
Cauliflower	35
Garlic	35

Table A1.9: Production of major crops under hydroponic culture, July 2013 - June 2014, IOM

Crop	Production (Tonnes)
Lettuce	578
English cucumber	366
Tomato	1,118
Sweet pepper	349

Table A1.10: Production of major fruits under open fields, July 2013-June 2014, IOM

Fruit	Production (tonnes)
Banana	10,384
Pineapple	10,316
Lychee	2,663
Mango	1,137
Watermelon	1,291
Coconut	827
Mandarin	500
Pawpaw	464
Lemon	158
Orange	60
Golden apple	170
Guava	54
Pitaya	50
Grapefruit	307
Jack fruit	272
Bread fruit	108
Longane	76
Avocado	18
Bilimbi	17
Jujube/Masson	19

Source: 2014 Census of Agriculture

Table A1.11: Production of major fruits under open fields, July 2013 - June 2014, IOR

Fruit	Production (tonnes)
Mango	443
Lemon	390
Banana	312
Coconut	255
Watermelon	245
Pawpaw	123
Grapefruit	88
Mandarin	84
Jack fruit	35
Pineapple	31
Lychee	18
Bread fruit	14
Guava	12
Bilimbi	9
Golden apple	9
Avocado	3
Longane	1

Source: 2014 Census of Agriculture

Appendix 2: Historical time series data

Table A2.1: Production of major crops, 1980-2014, IOM

(Harvested area in hectares; Production in tonnes)

Year	Harvested Area	Production	Year	Harvested Area	Production
1980	3,534	36,567	1998	6,529	81,410
1981	3,809	40,286	1999	5,619	77,519
1982	3,916	41,785	2000	6,789	102,568
1983	3,994	44,135	2001	7,213	112,103
1984	4,948	55,670	2002	6,579	94,759
1985	4,959	59,255	2003	6,558	86,803
1986	5,870	56,890	2004	6,888	95,143
1987	4,581	44,195	2005	6,246	80,317
1988	4,746	45,015	2006	6,521	90,001
1989	4,855	56,100	2007	6,072	83,706
1990	5,262	58,350	2008	5,536	76,164
1991	5,041	56,120	2009	6,318	94,143
1992	5,279	61,240	2010	6,780	96,379
1993	5,351	65,246	2011	6,610	94,468
1994	5,758	70,854	2012	7,388	96,528
1995	6,153	83,897	2013	7,355	91,668
1996	5,891	77,269	2014	8,615	114,244
1997	6,345	90,326			

Source: Historical Series, Statistics Mauritius

Table A2.2: Harvested area (hectares) of selected crops, 2000-2014, IOM

Crop	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Cabbage	422	459	330	267	287	224	236	226	202	225	239	245	220	229	229
Calabash	357	322	331	356	423	399	412	358	321	351	353	366	377	398	397
Carrot	680	719	509	320	377	262	271	304	310	384	370	322	325	358	319
Chillies	202	213	210	204	220	224	305	282	208	246	238	246	264	275	306
Potato	622	779	606	588	607	599	589	610	648	858	1066	1019	876	697	821
Pumpkin	349	338	331	421	445	395	529	433	409	460	512	476	441	497	477
Rice	-	-	-	-	-	-	-	-	-	-	-	120	309	304	412
Tomato	788	934	947	1044	953	918	935	734	744	781	830	761	827	816	857

Source: Historical Series, Statistics Mauritius

Table A2.3: Production (tonnes) of selected crops, 2000-2014, IOM

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	**2013**	**2014**
Cabbage	10,823	11,663	8,252	6,279	6,522	4,766	4,547	4,430	3,732	4,644	4,782	5,119	4,539	4,863	4,279
Calabash	4,586	4,513	3,990	4,800	5,754	4,602	5,672	4,502	4,137	5,286	5,122	5,301	5,487	5,401	5,957
Carrot	11,461	12,030	8,650	5,048	5,841	3,934	4,316	4,844	4,683	7,442	5,439	5,291	4,504	4,972	4,430
Chillies	905	1,031	826	1,056	1,322	1,161	1,512	1,421	969	1,227	1,324	1,383	1,466	1,488	1,670
Potato	13,843	16,350	13,339	12,359	11,246	12,777	14,522	15,367	14,868	19,828	21,709	21,561	20,442	16,451	19,404
Pumpkin	5,113	5,439	4,997	6,151	6,685	5,299	7,759	6,367	6,167	7,426	8,074	8,115	7,573	8,471	6,980
Rice	-	-	-	-	-	-	-	-	-	-	-	316	831	646	1,186
Tomato	9,719	12,395	11,738	13,247	14,400	12,840	14,671	11,117	11,518	12,586	12,338	11,354	13,150	11,201	10,997

Source: Historical, Statistics Mauritius

Table A2.4: Harvested area and production of pineapple, 1980-2014, IOM

Year	Area (Hectares)	Production (Tonnes)	Year	Area (Hectares)	Production (Tonnes)
1980	27	258	1998	76	1,462
1981	36	476	1999	60	1,014
1982	34	535	2000	79	3,416
1983	24	425	2001	165	6,016
1984	34	535	2002	83	1,917
1985	42	790	2003	126	4,562
1986	57	980	2004	137	4,490
1987	63	1,015	2005	134	4,885
1988	85	1,465	2006	176	5,554
1989	100	1,540	2007	204	6,398
1990	87	1,355	2008	228	6,394
1991	93	1,480	2009	271	8,880
1992	115	2,300	2010	248	6,529
1993	170	4,048	2011	377	10,922
1994	147	3,887	2012	493	14,120
1995	160	4,199	2013	610	15,957
1996	105	2,973	2014	450	10,788
1997	77	1,559			

Source: Historical Series, Statistics Mauritius

Table A2.5: Harvested area and production of banana, 1980-2014, IOM

Year	Area (Hectares)	Production (Tonnes)	Year	Area (Hectares)	Production (Tonnes)
1980	255	2,625	1998	464	9,343
1981	327	5,430	1999	380	7,550
1982	325	6,415	2000	489	8,500
1983	327	7,075	2001	540	11,000
1984	327	4,750	2002	600	7,200
1985	338	7,150	2003	544	12,090
1986	367	7,830	2004	528	12,000
1987	371	7,920	2005	521	11,580
1988	369	7,920	2006	510	11,347
1989	348	4,640	2007	464	9,026
1990	350	6,135	2008	502	10,463
1991	359	6,490	2009	494	10,920
1992	462	8,530	2010	542	11,936
1993	463	9,880	2011	497	10,544
1994	437	6,725	2012	510	10,196
1995	456	9,437	2013	501	10,181
1996	508	9,387	2014	464	8,833
1997	491	9,557			

Source: Historical Series, Statistics Mauritius

Table A2.6: Harvested area and production of groundnut, 1980-2014, IOM

Year	Area (Hectares)	Production (Tonnes)	Year	Area (Hectares)	Production (Tonnes)
1980	288	1,071	1998	186	551
1981	559	1,854	1999	117	341
1982	553	1,940	2000	123	408
1983	620	1,910	2001	123	323
1984	819	2,420	2002	116	284
1985	699	2,165	2003	255	893
1986	719	2,250	2004	212	610
1987	514	1,645	2005	137	231
1988	568	1,685	2006	183	390
1989	458	1,505	2007	140	290
1990	592	1,755	2008	143	320
1991	480	1,380	2009	241	587
1992	405	1,190	2010	208	556
1993	274	868	2011	163	499
1994	282	1,181	2012	266	723
1995	273	1,049	2013	182	431
1996	217	767	2014	240	618
1997	228	863			

Source: Historical Series, Statistics Mauritius

Table A2.7: Area (hectares) under Irrigation, 2000-2014, IOM

Year	Overhead	Surface	Drip
2000	15,951	2,020	1,535
2001	17,119	2,723	1,789
2002	17,028	2,372	1,822
2003	17,706	2,032	1,881
2004	17,548	1,837	2,032
2005	16,761	1,768	2,129
2006	17,576	1,738	2,109
2007	17,602	1,618	2,101
2008	18,264	1,053	2,140
2009	18,818	875	1,850
2010	17,023	714	2,110
2011	16,864	889	2,133
2012	16,611	1,141	1,707
2013	16,619	867	1,684
2014	14,884	569	1,730

Source: Historical Series, Statistics Mauritius