

MINISTRY OF A GRICULTURE FORESTRY AND FISHERIES

2007 ST. LUCIA CENSUS OF AGRICULTURE



Prepared for the Dissemination Seminar Castries, St Lucia October 18, 2007

FOREWARD

The 2007 St. Lucia Census of Agriculture has captured vital statistics as regards the changes in the structure and scope of agriculture in the country. Such data is indispensable to the process of realizing the full potential of the agricultural sector's limited resource base and competitive markets. The up-to-date information now available within the agricultural data management system will undoubtedly serve to guide the process of further research, policy formulation and action geared towards the sustainability of rural and agricultural livelihood systems.

In spite of the imperative of globalization and notwithstanding the sharp reduction in the overall number and area of holdings, small holdings continue to dominate the agricultural landscape. The persistence of the small holdings in the era of trade liberalization signals the need for official recognition of the social and human development dimensions of development and the implications for poverty alleviation as well as food security. In this regard the scope of the census has been expanded to include an analysis of gender issues emerging from the results of the census and gender considerations that are indispensable to the processes of agricultural transformation, poverty alleviation, food security and the sustainability of rural livelihoods.

The transition to a tourism and services based economy is resulting in the net transfer of resources from agriculture and rural households to the se emerging sectors, primarily tourism. In recognition of the need to track the shifts in the resource endowments of the agricultural sector, the results of the census has been further analysed to explore emerging issues in respect of crops, livestock, land use, employment and income.

The Government of St. Lucia, through the Ministry of Agriculture, Forestry and Fisheries has undertaken this agricultural census with the technical backing of the Food and Agriculture Organization (FAO). Special mention must be made of the efforts of the Corporate Planning Division and the Census Advisory Committee, as well as other supporting public and private sector institutions. The enumerators, supervisors, field co-ordinators, data entry clerks, editors, coders and other census staff must be commended for a job well done.

Methodological Note

The 2007 St Lucia Census of Agriculture was conducted by visiting all households in the country. Those meeting minimal specifications were enumerated through the census questionnaire. The rest of the households were enumerated by means of the screening form. The cut off limits established for enumeration via the main census questionnaire are:

- ✓ One/eight of an acre of any temporary crop or
- \checkmark 10 bearing trees of any tree crop or
- ✓ 100 mats of banana and/or plantain or
- \checkmark One head of cattle or
- \checkmark 2 pigs or 2 goats or 2 sheep or one head of any two or
- \checkmark 12 poultry or 12 rabbit or 12 head of poultry and rabbits together.

These minimum size limits are the same as those used in the previous censuses. So, results are comparable. The present document refers to **HOLDINGS ABOVE ANY OF THE MINIMAL QUALIFICATIONS**.

1. MAIN CENSAL RESULTS

Table 1 depicts a general outlook of the agricultural sector in St Lucia in 2007 according to the censal results.

TABLE I	
Total Household members in holdings	32,919
Average Size of Holder's Household	3.30
Number of Holdings (Landless included)	9,972
Number of Holdings with Land	9,448
Total Holding Area	30,204.33
Average Size of Holdings (acres)	3.20
Number of Individual Female Holders	2,906
Number of Individual Male Holders	6,894
Median Age of Individual Female Holders	51
Median Age of Individual Male Holders	50
Number of Parcels	11,503
Average Number of Parcels per Holding	1.23

TABLE 1

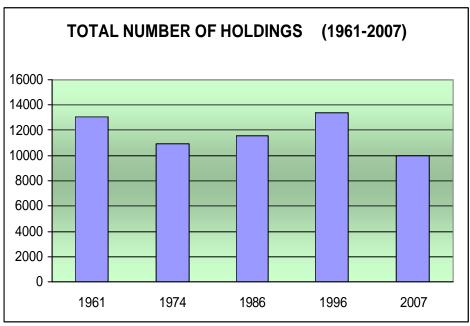
2. EVOLUTION OF AGRICULTURE IN ST LUCIA

St Lucia undertook Agricultural Censuses in 1946, 1961, 1973/74, 1986, 1996 and 2007. This long tradition in measuring the sector allows several intercensal comparisons to track the evolution of the agricultural sector in the country.

The most significant finding of the 2007 Census of Agriculture is the decline in number and area of agricultural holdings. Such an occurrence is reflective of the net transfer of resources from agriculture and the impact of trade liberalization. The dismantling of preferential trading arrangements has resulted in the sharp decline in banana production and significant reductions in agricultural export earnings.

2.1 Number of holdings

Chart 1 depicts the changes in the total number of agricultural holdings since 1961 compared with the last four agricultural censuses:

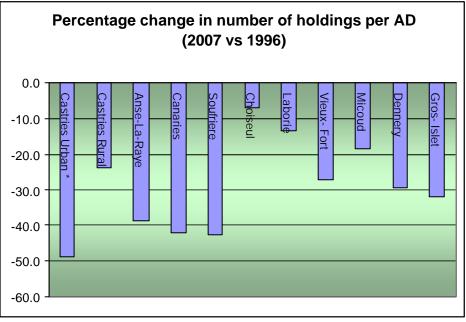




It is noted that the number of holdings in 2007 are the lowest of the 46-year period analyzed. While all Administrative Districts have experienced a reduction in number of holdings since the last agricultural census (1996), they contribute in a quite different manner to this decrease.

Chart 2 shows the percentage change in number of holdings since the last census by Administrative District.

CHART 2



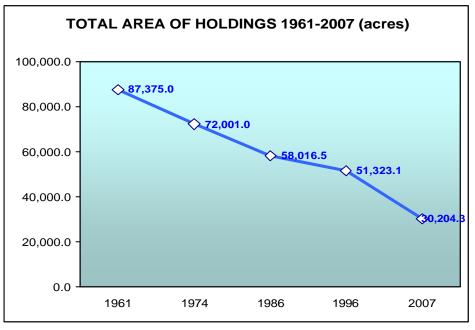
* Includes the metropolitan area

From the above chart it is noted that the greatest decrease in the number of holdings (-48.8%) occurred in the urban part of Castries followed by Soufriere (-42.6%) and Canaries (-42.1%). Choiseul experienced the least decrease in number of agricultural holdings: -7%.

2.2 Land area in agriculture

Looking at the total area in agricultural holdings, the 51,328 acres recorded in the 1996 Agricultural Census dropped to 30,204 acres in 2007. This represents a decrease of 41.1% following the trend observed since 1961 as shown in Chart 3:





With respect to the change observed at the level of each Administrative District during the 1996-2007 intercensal period, Canaries lost almost three-fourth of its 1996 agricultural area, followed by Castries Urban (-63.4) and Soufriere (-60.6) as shown in Chart 4.

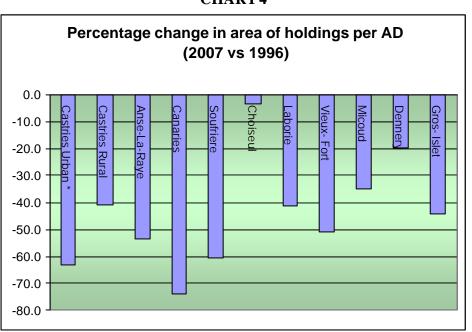


CHART 4

* Includes the metropolitan area

2.3 Changes in land concentration

The greatest loss in number of holdings and area since the last census was observed in largest farms: more than 70% of the farms operating more than 100 acres in 1996 disappeared in 2007. On the other hand, a small increase in the number of farms (with land) under 1 acre is observed (+0.5%). See Chart 5.

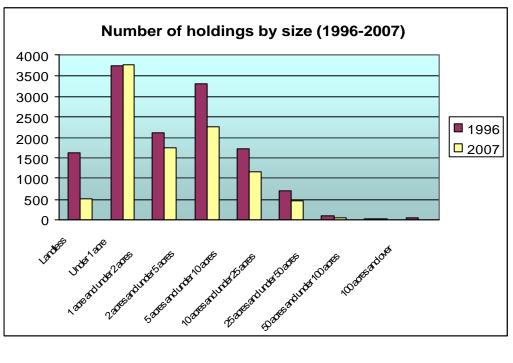


CHART 5

Looking at the area in holdings, all the size categories experienced losses and again, the greater the size category, the greater the loss of agricultural area as seen in Chart 6.

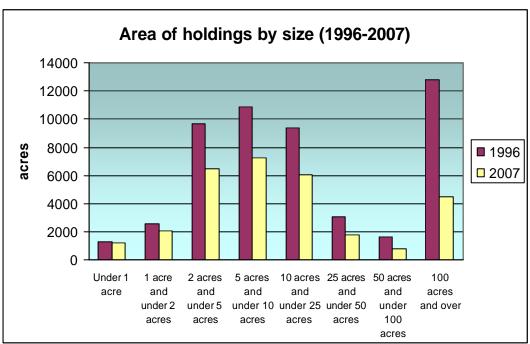
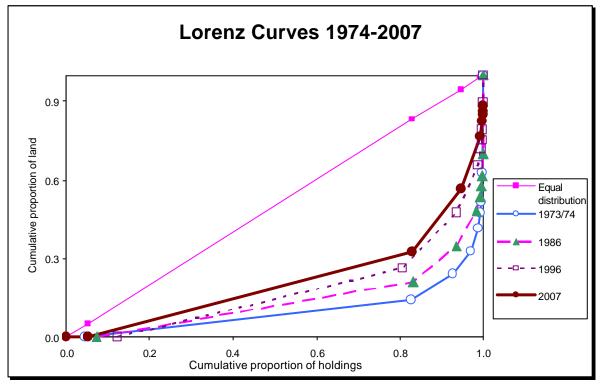


CHART 6

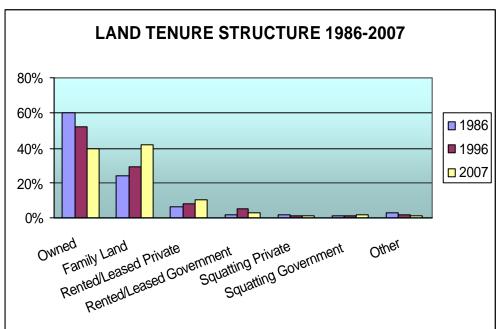
The Lorenz curves for the last four censuses show a trend towards a better distribution of land. In fact, while in 1974, 82% of holdings (those with less than 5 acres) held 14% of the total land and 0.2% of the larger holdings operated 37.3% of the land; in 2007, the same 82% of smaller holdings accumulate 33% of the land and 0.25% of the larger holdings held 18% of the total area. Chart 7 shows this evolution in land concentration through de Lorenz curves.





2.4 Land tenure.

As evident from Chart 8, the share of owned and in total holding land has been decreasing during the last 20 years (from 60% to 40%). At the same time, family land increased (from 24% in 1986 to 42% in 2007).

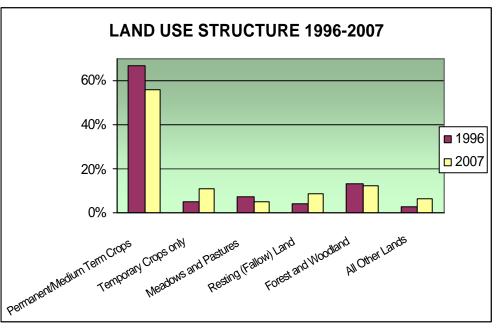




2.5 Land use

Changes in the use of the land in St Lucia during the last decade are clearly shown by analyzing the structure of the different uses of land investigated through the census. The apparent abandonment of banana plots has contributed to the decrease in land used for permanent/medium term crops in total land on holdings: from 67.1% to 56.3%. At the same time, land use for temporary crops increase from 4.9% to 10.8% in the last 10 years. (See Chart 9). For a correct interpretation of Chart 9 it must be taken into consideration that "Resting (fallow) land" is the land that has been (or is expected to be) kept at rest for at least one agricultural year and less than five years. So, abandoned land was included either here or in "All other land" (in case that it is expected to be at rest for more than five years).

CHART 9



The FAO World Programme for the Census of Agriculture 2010 suggests the following classification of the different uses of land:

- Agricultural land
 - Cropland
 - > Arable land
 - Land under temp. crops
 - Land under temp. meadows
 - Land temp. fallow
 - Land under permanent crops

Permanent meadows and pastures

- Forest and woodland
- Other land

In order to compare the area under the different uses in the last four censuses it is necessary to re-classify the uses of the land according to the new classification. This is presented in the following table:

	Table 1			
CLASSES OF LAND USE	CENSUS YEAR			
(Reclassified)	1974	1986	1996	2007
Total	72,001	58,925	51,328	30,204
1. Agricultural land	49,028	48,849	42,880	24,530
1.1. Cropland and permanent meadows and pastures	20,492	9,680	8,447	7,525
1.2. Permanent/medium term crops	28,635	39,169	34,433	17,005
2. Forest and woodland	19,002	8,322	6,810	3,713
3. Other land	3,971	1,754	1,638	1,961

It is interesting to note a shift to the cultivation of temporary crops in recent times. Arable land which means, land dedicated to temporary crops (inclusive of fallow land) was 13,146 acres in 1974 representing 18.3% of the total area, 8,156 acres in 1986 (13.8% of the area), 4,570 acres in 1996 (8.9% of the total area) and 6,017 acres in 2007 accounting for 20% of the total area. At the same time, area with permanent/medium term crops dropped from 39,169 acres in 1986 (66.4% of total area) to 17,004 acres in 2007 (56% of total holding area, as indicated in Chart 10.

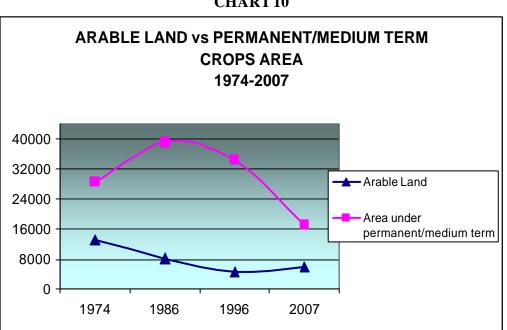
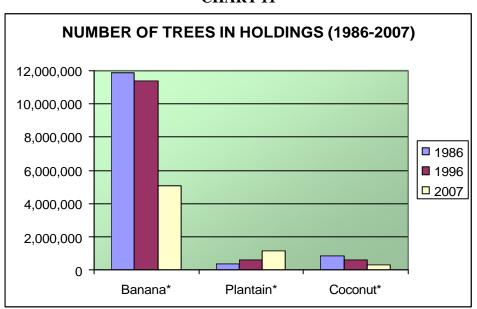


CHART 10

It is highly illustrative to see the evolution of the main permanent/ medium term crops as shown in Chart 11. The significant decrease in the number of banana trees is contrast by an increase of plantain trees over the twenty- year period.



For temporary crops, the census only investigated the number of holdings growing them. An increase in the number of holdings growing specific temporary crops (tomato, sweet pepper, peas, etc.) and in the percentage of holdings growing all the main temporary crops appearing in the census was observed during the last intercensal period as shown in Chart 12.



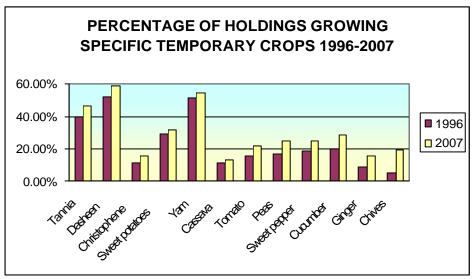


CHART 11

2.6 Livestock

As seen before, lands under meadows and pastures have decreased their share of the total use of land (from 7.5 to 5 % between 1996 and 2007). This is compatible with the decrease observed in livestock. In fact all species with the exception of pigs and poultry has decreased their total stock number since 1996 as shown in Chart 13.

On the other hand, the decrease in number of animals was proportionally less than the decrease in number of holdings with each animal species. Therefore, the number of heads per holding with each type of animal increased in all categories. See Chart 14.

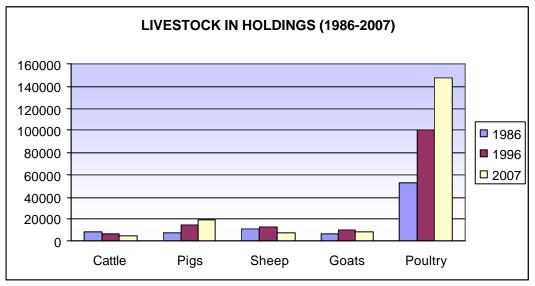
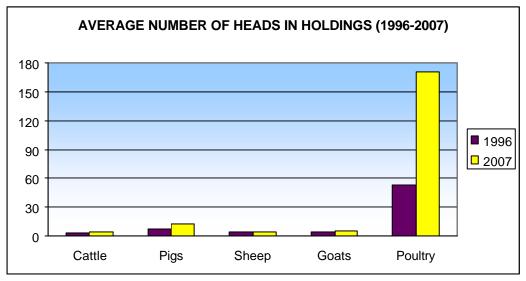


CHART 13



2.7 Machinery and equipment

The sharp decline in banana production also produced a severe change in type of machinery and equipment used on holdings. It must be taken into consideration that in the 1996 census the machinery and equipment "used" on holding was reported; however, 2007, the number refers to the machinery and equipment "owned and used" on holding. Since the renting of machinery is not a usual practice in St Lucia, figures from both censuses are roughly comparable, as indicated in Chart 15.

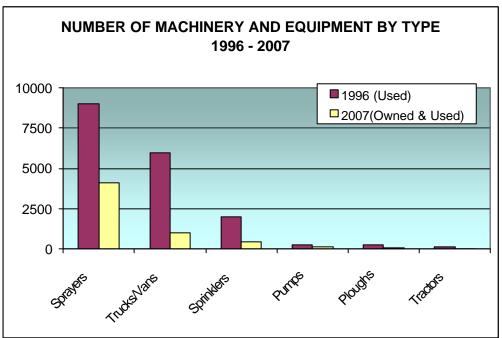
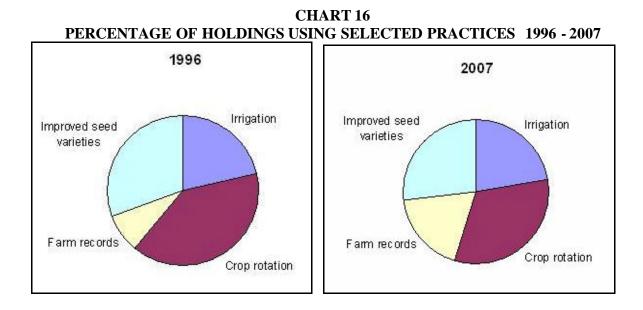


CHART 15

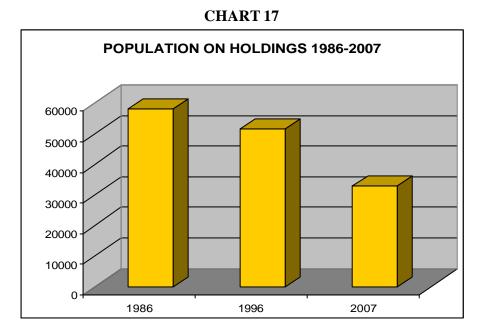
2.8 Selected agricultural practices

Chart 16 shows the percentage of holdings using selected practices investigated in the last two agricultural censuses. It is clear the increasing proportion of holdings using farm records in the country, from 4.9 in 1996 to 12 % in 2007. On the other hand, crop rotation decreases its participation in the total from 22.7 % to 21.1 % in the period.



2.9 Population and employment

The total holding household population has been decreasing since 1986 as can be seen in Chart 17. The decrease was both in absolute and relative terms. In fact, in 1986 population living on holdings (58,000) represented approximately 47% of the total population. In 1996 that percentage went to 37% of the national population. Finally in 2007 the 32,919 members of holding households represent about 21% of the national population. The global trend to increasing urbanization is not strange to St Lucia.



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Interesting structural changes in employment in agriculture have occurred in the last twenty years. In fact, the characteristics of permanent workers non-household members show several changes over the period 1986-2007.

A decrease in the proportion of unpaid permanent workers (mainly female workers) along with an important decrease in the proportion of child and young workers (less than 15 years old) and female workers is observed.

The following charts depict the evolution of structures of permanent workers non-household members, by sex (Chart 18), by age (Chart 19), and by type (Chart 20) during the period 1986 to 2007.

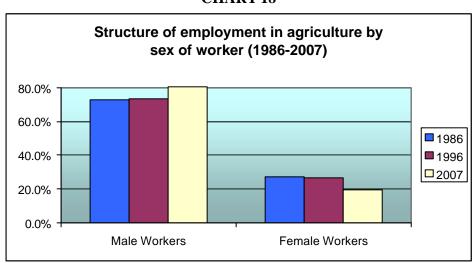




CHART 19

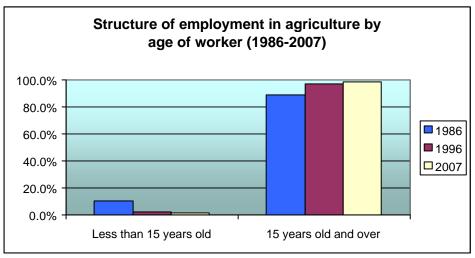
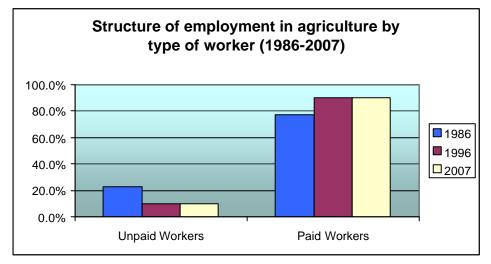


CHART 20



The following, Chart 21 and Chart 22 illustrates the structure of employment in agriculture by type of male and female workers respectively, during the period 1986 - 2007.



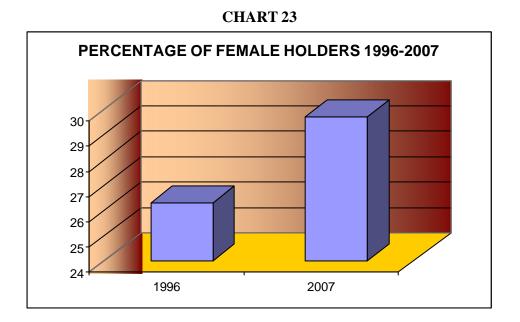
CHART 21

CHART 22

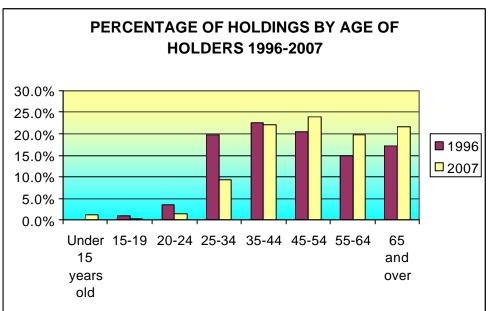


2.9 Main holders' characteristics

Looking at the structure of holders by sex, age and source of income, it is apparent that there is an increasing number of women operating agricultural holdings (both in number of holdings and area). See Chart 23.



Upon comparison of holders' age, an ageing of holders becomes evident as seen in Chart 24.



Finally, their dependence of income coming from agriculture has diminished since the last census. See Chart 25

CHART 25

HOLDINGS BY PERCENTAGE OF INCOME FROM AGRICULTURE 1996 - 2007

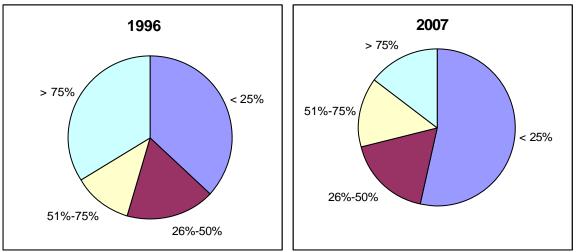


CHART 24

APPENDIX

SUPPORTING TABLES

TOTAL NUMBER OF HOLDINGS (1961-2007)					
Year	Year # of holdings				
1961	13,008				
1974	10,938				
1986 11,551					
1996 13,366					
2007	9,972				

TOTAL NUMBER OF HOLDINGS BY ADMINISTRATIVE DISTRICTS 1996-2007				
	1996	2007	% CHANGE	
TOTAL	13366	9972	-25.4	
Castries Urban *	244	125	-48.8	
Castries Rural	2916	2220	-23.9	
Anse-La-Raye	708	434	-38.7	
Canaries	140	81	-42.1	
Soufriere	792	455	-42.6	
Choiseul	913	849	-7.0	
Laborie	887	769	-13.3	
Vieux- Fort	1399	1021	-27.0	
Micoud	2462	2008	-18.4	
Dennery	1397	987	-29.3	
Gros- Islet	1508	1023	-32.2	

TOTAL AREA ON HOLDINGS 1961-2007		
Area of holdings Year (acres)		
1961	87,375.0	
1974	72,001.0	
1986	58,016.5	
1996	51,323.1	
2007	30,204.3	

AREA (acres) OF HOLDINGS BY AD (1996-2007)					
	1996	2007	% CHANGE		
TOTAL	51,323.1	30204.33	-41.1		
Castries Urban *	1,156.1	423.60	-63.4		
Castries Rural	10,260.08	6,054.53	-41.0		
Anse-La-Raye	3,674.49	1,701.59	-53.7		
Canaries	1,590.08	415.56	-73.9		
Soufriere	3,784.29	1,490.20	-60.6		
Choiseul	1,553.11	1,503.02	-3.2		
Laborie	3,089.31	1,820.48	-41.1		
Vieux- Fort	4,037.95	1,985.24	-50.8		
Micoud	10,810.68	7,047.18	-34.8		
Dennery	5,688.39	4,579.32	-19.5		
Gros- Islet	5,678.62	3,183.61	-43.9		

NUMBER OF HOLDINGS BY HOLDING SIZE (1996-2007)				
Size group	1996	2007	% CHANGE	
TOTAL	13,366	9,972	-25.4	
Landless	1,630	524	-67.9	
Under 1 acre	3,743	3,760	0.5	
1 acre and under 2 acres	2,117	1,749	-17.4	
2 acres and under 5 acres	3,306	2,254	-31.8	
5 acres and under 10 acres	1,713	1,156	-32.5	
10 acres and under 25 acres	700	454	-35.1	
25 acres and under 50 acres	92	51	-44.6	
50 acres and under 100 acres	27	13	-51.9	
100 acres and over	38	11	-71.1	
AREA (acres) OF H	OLDINGS BY	HOLDING	SIZE	
Size group	1996	2007	%CHANGE	
TOTAL	51,323.1	30,204.33	-41.1	
Under 1 acre	1,282.96	1,200.3	-6.4	
1 acre and under 2 acres	2,561.52	2,075.51	-19.0	
2 acres and under 5 acres	9,676.57	6,504.52	-32.8	
5 acres and under 10 acres	10,898.69	7,276.87	-33.2	
10 acres and under 25 acres	9,375.34	6,059.87	-35.4	
25 acres and under 50 acres	3,072.17	1,751.14	-43.0	
50 acres and under 100 acres	1,625.92	820	-49.6	
100 acres and over	12,829.93	4,516.12	-64.8	

LAND TENURE STRUCTURE (1986-2007)						
Forms of Tenure 1986 1996 2007						
Total Area of Holdings	100.0%	100.0%	100.0%			
Owned	60.2%	52.1%	39.7%			
Family Land	24.4%	29.8%	41.9%			
Rented/Leased Private	6.7%	8.6%	10.4%			
Rented/Leased Government	1.8%	4.9%	3.1%			
Squatting Private	2.0%	1.4%	1.5%			
Squatting Government	1.6%	1.5%	2.2%			
Other	3.3%	1.8%	1.1%			

5. Section 2.5

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PERCENTAGE AREA UNDER DIFERENT LAND USES (1996-2007) Land uses 1996 2007 DIFFERENCE				
Total Area of Holdings	100.0%	100.0%	0.0%	
Permanent/Medium Term Crops	67.1%	56.3%	-10.8%	
Temporary Crops only	4.9%	10.8%	5.9%	
Meadows and Pastures	7.5%	5.0%	-2.6%	
Resting (Fallow) Land	4.0%	9.1%	5.1%	
Forest and Woodland	13.3%	12.3%	-1.0%	
All Other Lands	3.2%	6.5%	3.3%	

NUMBER OF SELECTED TREES (1986-2007)					
	1986 1996 2007				
Banana	11,839,400	11,376,220	5,042,412		
Plantain	329,300	606,731	1,103,603		
Coconut	846,200	560,880	280,001		

PERCENTAGE OF HOLDINGS GROWING SPECIFIC TEMPORARY CROPS (1996-2007)				
Crop	1996	2007	% CHANGE	
Tannia	40.00%	46.30%	15.8	
Dasheen	51.70%	58.80%	13.7	
Christophene	11.50%	15.40%	33.7	
Sweet potatoes	28.80%	32.00%	11.3	
Yam	51.20%	54.30%	6.1	
Cassava	11.80%	13.10%	11.0	
Tomato	15.80%	22.20%	39.9	
Peas	17.00%	24.60%	44.5	
Sweet pepper	18.40%	24.70%	34.3	
Cucumber	20.20%	28.30%	40.1	
Ginger	8.60%	15.80%	83.7	
Chives	5.00%	19.20%	284.0	

LIVESTOCK ON HOLDINGS BY SPECIE (1986-2007)						
Specie 1986 1996 2007						
Cattle	8,500	7,064	5,323			
Pigs	7,500	14,658	19,507			
Sheep	10,900	12,480	7,734			
Goats	6,600	9,718	8,816			
Poultry	52,800	100,433	146,954			

AVERAGE LIVESTOCK PER HOLDING BY SPECIE (1996-2007)

Specie	1996	2007	% CHANGE
Cattle	3.7	4.3	18.5
Pigs	7.8	13.4	71.7
Sheep	4.5	5.0	10.2
Goats	4.3	5.4	24.3
Poultry	52.8	170.3	222.3

MACHINERY AND EQUIPMENT BY TYPE (1996-2007)				
Туре	1996 (Used)	2007(Owned & Used)		
Sprayers	9,011	4,090		
Trucks/Vans	5,932	1,015		
Sprinklers	1,998	444		
Pumps	250	154		
Ploughs	228	41		
Tractors	146	11		

8. Section 2.8

PERCENTAGE OF HOLDINGS USING SELECTED PRACTICES (1996-2007)					
Type of Practice 1996 2007 %CHANGE					
Irrigation	12.3%	14.7%	19.6		
Crop rotation	22.7%	21.1%	-6.7		
Farm records	4.9%	12.0%	144.9		
Improved seed varieties	17.7%	17.5%	-0.8		

POPULATION LIVING ON HOLDINGS					
(1986-2007)					
1986 1996 2007					
TOTAL 58,000 51,553 32,919					

EMPLOYMENT IN AGRICULTURE: TYPE OF PERMANENT WORKERS NON- HOUSEHOLD MEMBERS	1986	1996	2007	
TOTAL	8540	8204	7838	
Male unpaid < 15	238	32	15	
Male unpaid > 15	1030	497	654	
Male paid < 15	243	96	72	
Male paid > 15	4720	5404	5559	
Female unpaid < 15	216	30	0	
Female unpaid > 15	472	226	132	
Female paid < 15	205	45	11	
Female paid > 15	1416	1874	1395	

NUMBER OF INDIVIDUAL HOLDINGS BY SEX AND AGE OF HOLDER (1996-2007)				
1996 2007 % CHANGE				
TOTAL	13059	9800	-25.0	
MALE	9620	6894	-28.3	
Under 15 years old	7	85	1114.3	
15-19	130	36	-72.3	
20-24	403	126	-68.7	
25-34	2021	679	-66.4	
35-44	2173	1541	-29.1	
45-54	1888	1631	-13.6	
55-64	1394	1340	-3.9	
65 and over	1581	1456	-7.9	
No response	23			
FEMALE	3439	2906	-15.5	
Under 15 years old	0	37	N/A	
15-19	23	12	-47.8	
20-24	76	28	-63.2	
25-34	539	236	-56.2	
35-44	767	621	-19.0	
45-54	789	713	-9.6	
55-64	557	580	4.1	
65 and over	673	679	0.9	
No response	15			

PERCENTAGE OF INDIVIDUAL HOLDINGS BY PROPORTION OF INCOME FROM AGRICULTURE AND BY SEX OF HOLDER (1996-2007)						
% of income from agriculture	% of income from agriculture 1996 2007					
TOTAL	100.0%	100.0%	0.0			
< 25%	36.0%	52.7%	16.7%			
26% - 50%	16.9%	17.6%	0.7%			
51% - 75%	11.4%	14.1%	2.7%			
> 75%	32.9%	14.5%	-18.5%			
No response	2.8%	1.2%				
MALE	100.0%	100.0%	0.0			
< 25%	33.3%	48.8%	15.5%			
26% - 50%	17.3%	18.3%	1.0%			
51% - 75%	11.9%	15.4%	3.5%			
> 75%	36.3%	16.3%	-19.9%			
No response	1.2%	1.2%				
FEMALE	100.0%	100.0%	0.0			
< 25%	44.8%	61.8%	17.0%			
26% - 50%	16.5%	16.1%	-0.4%			
51% - 75%	10.4%	10.9%	0.6%			
> 75%	25.1%	10.0%	-15.0%			
No response	3.3%	1.1%				