

Ministry of Agriculture, Forestry and Fisheries



2007 St. Lucia Census of Agriculture Livestock Thematic Analysis

by

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1.0 A brief historical Perspective of Livestock Development in St. Lucia

During the era 1973/74 to 1986, banana production was predominantly the agricultural activity practiced on small, medium and large farms island-wide. Banana producers capitalized on a guaranteed and preferential market in the UK for their produce, which was not the same for other sectors of the crop and livestock industries. The need for diversification of the agricultural industry had always been recognized by policy makers in the Ministry of Agriculture. To some extent, diversification into crops took precedence over diversification into livestock production. Generally, livestock production was practiced on small holdings primarily as a means of providing animal protein for home consumption as a means of providing a livelihood for the small-scale producer. Many producers were not strictly livestock producers but complemented their crop production with some livestock; mainly small ruminants, cattle and pigs and poultry. Cattle were produced mainly on the large estates island-wide and the communal pastures in Beane Field, Vieux Fort. A significant feature of cattle and small ruminant production systems was that of low input/low output.

In preparation for the diversification thrust toward livestock production, the Ministry of Agriculture through its Livestock and Veterinary Divisions, took new initiatives which included:

- the training of animal productionists and technicians, including meat and dairy technicians, veterinarians and animal health assistants who would interface with the farmers in an effort to boost production and productivity at the farm level.
- the importation of new bloodlines of pigs, sheep, goats and cattle and the establishment of an efficient Artificial Insemination Service
- The establishment of laboratory and diagnostic facilities to perform disease surveillance work.
- The establishment of the St. Lucia Livestock Development Company, a nucleus dairy farm at Beausejour in Vieux Fort in 1979, which would facilitate the collection and processing of milk produced on satellite farms within its proximity.
- Support to the establishment of STAFCo-op in 1982, an umbrella organization which would cater to the production and marketing needs of pig and poultry (egg and broiler) and honey producers nationally.
- Support toward the establishment of a national feed mill managed by the Cooperative, which would ensure a reliable supply of affordable formulated rations to pig and poultry farmers.
- Development of policies in support of production and marketing of poultry and pigs which included market protection from imported meats.
- Establishment of livestock monitoring committees which monitored the production, imports and demand for pork, eggs, broiler meats and other livestock commodities.

- Institutional support provided to the Communal pastures cattle farmers to ensure beef cattle production remained viable and continue to serve as a means of food security and foreign exchange savings .
- Capacity building of livestock farmers through training seminars, workshops and on-farm demonstrations.
- Support to livestock meat processors including ham, bacon and sausage producers provided the impetus for improved marketability via increased value-added potential of pork and pork products

As per the institutional support and capital investments to catalyze growth in the livestock sector, the sector generally experienced favourable production trends until the collapse of the S.T.A.F.CO-OP in 1992 and the Beausejour Dairy Farm in 2000.

The era 1986 to 1996 saw a general increase in pork and broiler production. This was due, in part, to the availability of a reliable local market for the commodity which was enjoyed by producers during the existence of the Cooperative. Realizing the impact of the collapse of the main livestock farmers' organization the Ministry of Agriculture sought new initiatives to modernize the sector geared toward sustained and improved production and productivity in an effort to rebuild farmer confidence in the industry. Support to egg, broiler and honey producers continued, while efforts were made to revitalize the pork production and marketing sub-sector.

2.0 Overview of the Livestock Industry Development Plan

Toward the improvement in livestock production, production efficiency and product marketability a “*Diagnostic Study of the Livestock Industry in St. Lucia*” was initiated and funded by the European Union in 1999. The output of this study was a “**Livestock Industry Development Plan**” for revitalization. The study identified the limiting factors to the development of the industry as being mainly structural, economical and technological in nature.

The following were the main constraints identified:

- *Absence of quality standards of production, processing and marketing;*
- *Competition with cheap imported livestock products ;*
- *High costs of production;*
- *Absence of appropriate slaughtering, processing and marketing facilities;*
- *Fragmented and disorganized production systems;*
- *Lack of clear sector policies and livestock development plans;*
- *The absence of organized and efficient livestock production and marketing systems;*
- *The absence of organized livestock producer groups;*

- *The absence of an organized and programmed livestock extension service and regular technical support;*
- ***Inadequate access to lands and the prevalence of part-time farmers ;***
- *Inadequate management and husbandry practices among farmers;*
- *Poor adoption of improved production systems by livestock farmers;*

The **Livestock Industry Development Plan** proposed the following actions for implementation:

- ***Restructuring and Strengthening of Institutions*** - Key components being: the creation of the Livestock Industry Development Committee (LIDC), the merging of the Animal Production and Veterinary Divisions ; foster the creation of Livestock producer organizations and the enhancement of credit accessibility of livestock farmers.
- ***Review of supporting legislation*** - This includes the modernization of a legislative framework to address key issues related to food safety, meat/fish inspection based on slaughtering and processing quality standards, stray animal control, dog management control, praedial larceny, veterinary drug usage and supply management, solid waste and effluent management, strengthening of quarantine and agricultural health and livestock farm location regulations.
- ***Adoption of quality and hygienic standards*** – It includes the creation of food quality committees, standards and systems.
- ***Implementation of supporting policies***- Agricultural diversification and land use policies.
- ***Improvement of physical infrastructure*** – The proposed abattoir facility, improvement of laboratory facilities and the upgrading of meat channel distribution infrastructure.
- ***Improvement of livestock farm productivity*** – the implementation of sector development programmes based on specie-specific benchmarks and production/productivity targets including farmer-based production action plans; institution of farmer and farm certification initiatives; information of livestock systems management; integrated crop-livestock production systems; technology transfer and enhancement of animal health services.
- ***Implementation of marketing initiatives.***
- ***Implementation of information and educational campaign*** – training and capacity building interventions.

It is important to note that while this analysis was done in late 1999, the fundamental characteristics of the situation still exists today, as many of the initiatives proposed by the plan have either not yet been completed or have not yet had a significant impact, due to delays in

implementation of complementary initiatives. The industry has been faced with the unavailability of funds to effectively and efficiently pursue these priorities. All of the above actions are being pursued at various levels with the participation of stakeholders with varying degrees of success. The strategic integration of the various key components of the livestock industry development process is required to facilitate the strategic repositioning and provide for competitiveness and sustainable growth of the sector.

The following initiatives undertaken by the Ministry of Agriculture Fisheries and Forestry are consistent with the Livestock Industry Development Plan as an output of the diagnostic study:

- ❖ **The unification of the Veterinary and Livestock Divisions into the Veterinary and Livestock Services Division (VLSD)**, implementing integrated animal health and production programmes, including collaborative productivity-focused research and public health programmes.
- ❖ **The completion of necessary legislative framework either enacted (e.g. Praedial Larceny Act; Sale of Produce Act; Animal's Act) in some cases or going through the final stages of enactment (Animal Health Act; Food Safety Act).**
- ❖ **The establishment of various livestock commodity-based producer organizations and the Livestock Development Committee (LDC).** The Pig Farmers Producers Cooperative represents the more developed one with an active membership of over 180 swine producers.
- ❖ **The introduction of productivity-focused Animal Health and Livestock Extension Services and the transformation of the Government Livestock Breeding Station into a “Best Practice Learning Centre”.**
- ❖ **The endorsement of a draft Agricultural Policy Strategy for sector development by Cabinet Ministers.**
- ❖ **The establishment of an incentive regime to stimulate sector growth.**

3.0 Scope of the report

This report seeks to provide a comparative statistical analysis of parameters and data covered in the Agricultural censuses conducted in 1973/74, 1986, 1996 and 2007 in an attempt to measure the impact these changes may pose on the livestock development plan and strategy for the country. It analyses or attempts to describe, wherever possible, the following:

1. Impact of changes in number, size, and distribution of holdings on livestock production
2. The impact of certain changes in land use and land tenure on the livestock industry.
3. The changes in livestock population by holdings, by administrative district and age of persons responsible for the production of various species of livestock

4. The varying agricultural practices employed on farms
5. The role of farmer groups in the production and marketing of livestock commodities
6. The use of record keeping to improve production
7. Local production 2006 and the trends in meat imports from 1996 to the current period.
8. Conclusions and recommendations

4.0 Findings

4.1 Impact of changes in number, size, and distribution of holdings on livestock production

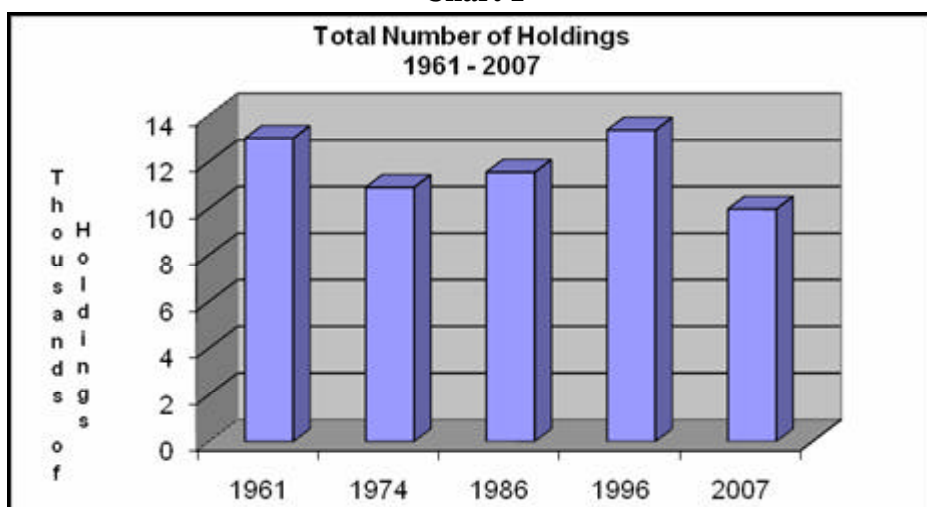
4.1.1 Number of holdings

The 2007 Census of Agriculture has identified 9972 holdings after screening a total of 41,257 households. This figure shows a decline of 25.4% in the number of holdings in the ten year period.

Table 1

Total Number of Holdings	
1961	13008
1974	10938
1986	11551
1996	13366
2007	9972

Chart 1



Over the last decade there has been a general decrease in the number of holdings both in total number and by administrative district. In the 2007 census, the Castries area represents the highest percentage (23.5%) in the number of holdings. This percentage, however, declined by 0.1% since the last census of 1996. Micoud represents the second highest (20.1%) in 2006.

Table 2

Administrative Districts	1973/74		1986		1996		2007	
	# of Holdings	%	# of Holdings	%	# of Holdings	%	# of Holdings	%
St. Lucia	10938	100.0	11551	100.0	13366	100.0	9972	100.0
Castries	2399	21.9	2611	22.6	3160	23.6	2345	23.5
Anse La Raye	618	5.7	406	3.5	708	5.3	434	4.4
Canaries	363	3.3	189	1.6	140	1.0	81	0.8
Soufriere	999	9.1	855	7.4	792	5.9	455	4.6
Choiseul	1004	9.2	994	8.6	913	6.8	849	8.5
Laborie	787	7.2	819	7.1	887	6.6	769	7.7
Vieux Fort	915	8.4	1332	11.5	1399	10.5	1021	10.2
Micoud	1086	9.9	1693	14.7	2462	18.4	2008	20.1
Dennery	1586	14.5	1389	12.0	1397	10.5	987	9.9
Gros Islet	1181	10.8	1263	10.9	1508	11.3	1023	10.3

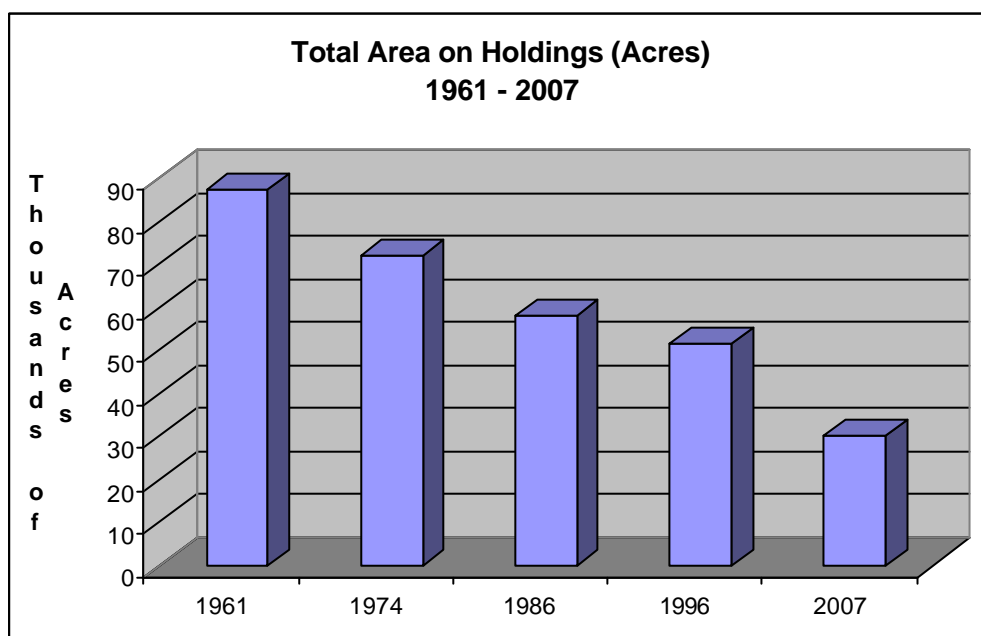
4.1.2 Total Area on holdings

With respect to the total area on holdings, the 2007 Census of Agriculture reported a total of 30204.3 acres. This figure reflects a significant decrease of 2118.8 acres or 41.2% as compared to the 1996 census figures. Table 3 and Chart 2 show the evolution of the total area in the last five agricultural censuses. For livestock production, this declining trend in the area on holdings, given that the majority of farms on the island practice mixed farming, signals the need for policy makers to examine closely the intensification needs of livestock production and to put systems in place which will address this diminishing input.

TABLE 3

Total Area of Holdings (Acres)	
1961	87375.0
1974	72001.0
1986	58016.5
1996	51323.1
2007	30204.33

CHART 2

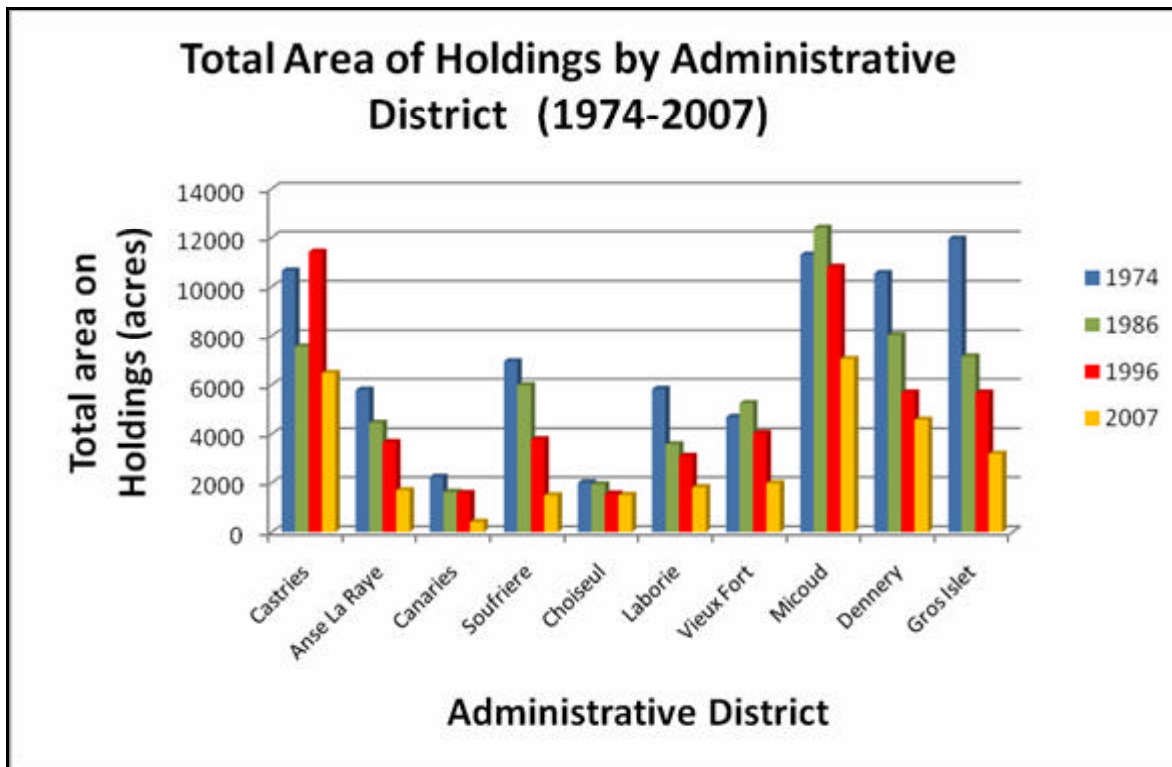


The evolution of total area on holdings by Administrative District since 1973/74 is shown in Table 4 and Chart 3. It must be noted that Micoud leads with 23.3% of the total area in 2007 compared with a 21.1% figure in 1996. Castries accounts for 21.4% of the total area in 2007 compared to a 22.2% in 1996. Generally, the Administrative districts showed a declining trend in the participation of the total area dedicated to agricultural production with the exception of Dennery (15.2%), Micoud (23.3%) and Choiseul (5.0%). It must be noted that Laborie has remained relatively constant since the census period 1986.

TABLE 4

Administrative Districts	1973/74		1986		1996		2007	
	Total area on Holdings (acres)	%	Total area on Holdings (acres)	%	Total area on Holdings (acres)	%	Total area on Holdings (acres)	%
St. Lucia	72001	100.0	58016.4	100.0	51323.1	100.0	30204.3	100.0
Castries	10659	14.8	7553.9	13.0	11416.2	22.2	6478.1	21.4
Anse La Raye	5796	8.0	4454.0	7.7	3674.5	7.2	1701.6	5.6
Canaries	2248	3.1	1630.4	2.8	1590.1	3.1	415.6	1.4
Soufriere	6953	9.7	5988.2	10.3	3784.3	7.4	1490.2	4.9
Choiseul	2016	2.8	1941.3	3.3	1553.1	3.0	1503.0	5.0
Laborie	5832	8.1	3588.0	6.2	3089.3	6.0	1820.5	6.0
Vieux Fort	4692	6.5	5251.8	9.1	4033.7	7.9	1985.2	6.6
Micoud	11301	15.7	12416.4	21.4	10810.7	21.1	7047.2	23.3
Dennery	10552	14.7	8037.9	13.9	5688.4	11.1	4579.3	15.2
Gros Islet	11952	16.6	7154.5	12.3	5682.8	11.1	3183.6	10.5

Chart 3



4.2 The impact of changes in land concentration, land use and land tenure on the livestock industry

4.2.1 Land concentration

The declining agricultural area and the decreasing number of holdings have resulted in an evolution in the size structure of holdings. There is an increased concentration in small holdings up to 5 acres (68.6% in 1996 as opposed to 77.8% in 2007) as shown in Table 5. It is interesting to note that the number of landless holdings have decreased significantly since the 1996 census. A trend showing a decrease in the number of holdings with more than 25 acres over the last three decades is clearly demonstrated. This decrease seems to be compensated by an increase in the less-than-5-acre size groups. It is evident that the planning of agricultural projects, generally and livestock projects, in particular should pay particular attention to the latter size group.

Examining the distribution of the holdings by size, it must be noted that a decreasing trend in the participation of holdings in the less-than-25-acre category is evident. Therefore, a more even land distribution pattern, as demonstrated by changes in the number of holdings (see Table 6) and the agricultural area can be seen.

TABLE 5

Size Group (in acres)	1973/74		1986		1996		2007	
	No. of Holdings	%	No. of Holdings	%	No. of Holdings	%	No. of Holdings	%
TOTAL	10938	100.0	11551	100.0	13366	100.0	9972	100.0
Landless	502	4.6	850	7.4	1630	12.2	524	5.3
Up to 5	8558	78.2	8770	75.9	9166	68.6	7763	77.8
5 to 9.9	1082	9.9	1191	10.3	1713	12.8	1156	11.6
10 to 24.9	475	4.3	560	4.8	700	5.2	454	4.6
25 to 49.99	199	1.8	98	0.8	92	0.7	51	0.5
50 to 99.9	58	0.5	35	0.3	27	0.2	13	0.1
100 to 199.9	19	0.2	17	0.1	15	0.1	3	0.0
200 to 499.9	26	0.2	17	0.1	16	0.1	3	0.0
500 and over	19	0.2	13	0.1	7	0.1	5	0.1

TABLE 6

Size Group (in acres)	1973/74		1986		1996		2007	
	Total (acres)	%	Total (acres)	%	Total (acres)	%	Total (acres)	%
TOTAL	72001	100.0	58016.6	100.0	51323.1	100.0	30204.3	100.0
Up to 5	10204	14.2	12350.0	21.3	13521.1	26.3	9780.3	32.4
5 to 9.9	7068	9.8	7802.4	13.4	10898.7	21.2	7276.9	24.1
10 to 24.9	6396	8.9	7763.1	13.4	9375.3	18.3	6059.9	20.1
25 to 49.99	6299	8.7	3218.6	5.5	3072.2	6.0	1751.1	5.8
50 to 99.9	4282	5.9	2338.0	4.0	1625.9	3.2	820.0	2.7
100 to 199.9	2690	3.7	2233.5	3.8	2076.0	4.0	335.0	1.1
200 to 499.9	8160	11.3	4881.0	8.4	5250.3	10.2	668.1	2.2
500 and over	26902	37.4	17430.0	30.0	5503.6	10.7	3513.0	11.6

4.2.2 Land use

Table 7 shows a comparative use of land from 1974 to 2006. For the purpose of livestock production, the focus is on land under permanent meadows and pastures. Comparing the use of land reported in the last four agricultural censuses, it can be seen that the agricultural land decreased its participation in the total. This decrease of 2.3% compared to the 1996 figure is due to a strong decrease of land under pastures and permanent meadows (2965 acres less than in 1996), a decrease in participation in land under permanent and medium term crops, and a strong increase in participation of arable lands. It must be noted that there was a strong increase in land under pastures in 1996 as compared with the 1986 census period. Table 7 and Charts 4 and 5 illustrate the main uses of land in the four censuses, both in terms of area and in participation in total land.

TABLE 7

LAND USE	1974		1986		1996		2006	
	Area (acres)	%	Area (acres)	%	Area (acres)	%	Area (acres)	%
TOTAL	72001.0	100.0	58925.3	100.0	51323.1	100.0	30203.3	100.0
1. PRODUCTIVE LAND	68030.0	94.5	57171.2	97.0	49683.3	96.8	28241.9	93.5
1.1. AGRICULTURAL LAND	49028.0	68.1	48849.1	82.9	42872.4	83.5	24529.5	81.2
1.1.1. Cultivated Land	41682.0	57.9	47324.7	80.3	38998.6	76.0	23021.4	76.2
1.1.1.1. Arable Land	13146.0	18.3	8155.7	13.8	4570.3	8.9	6017.4	19.9
1.1.1.2. Land under permanent or medium term crops	28536.0	39.6	39169.0	66.5	34428.3	67.1	17004.4	56.3
1.1.2. Land under permanent meadows and pastures	7346.0	10.2	1524.4	2.6	3874.8	7.5	909.8	3.0
1.2. FOREST AND WOODLAND*	19002.0	26.4	8322.1	14.1	6809.9	13.3	3712.4	12.3
2. ALL OTHER LANDS	3971.0	5.5	1754.2	3.0	1639.8	3.2	1961.4	6.5

* It comprises only forest and woodlands in agricultural holdings. Government Forest Reserve is not included

CHART 4

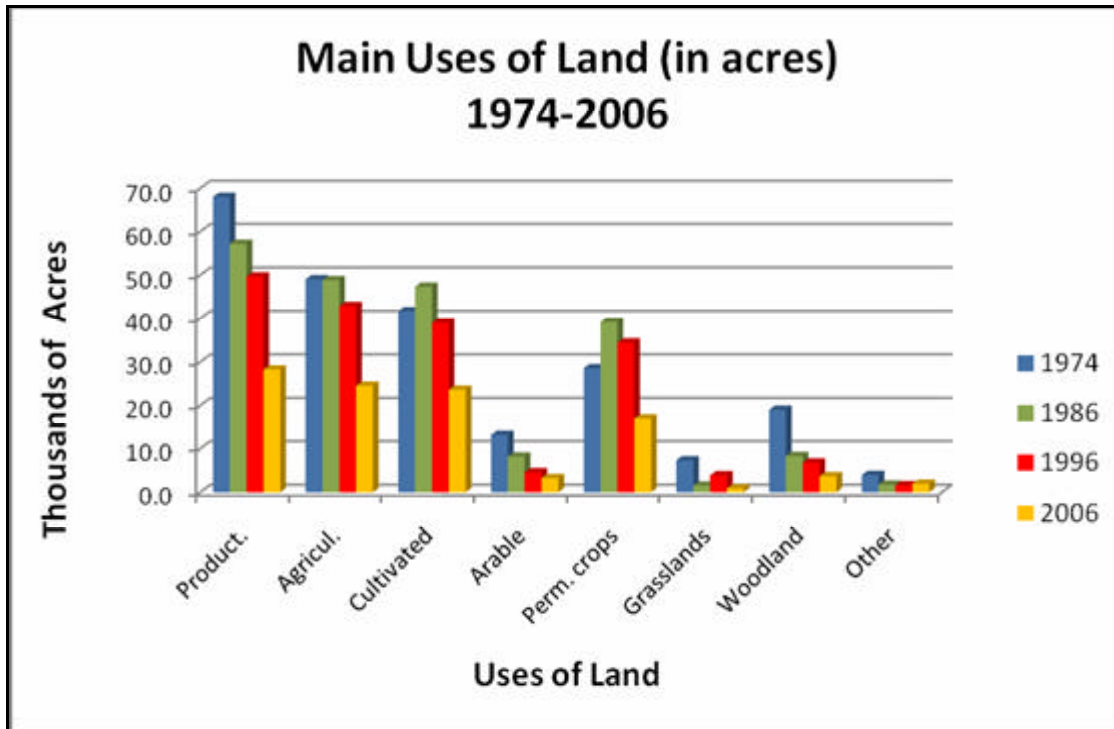
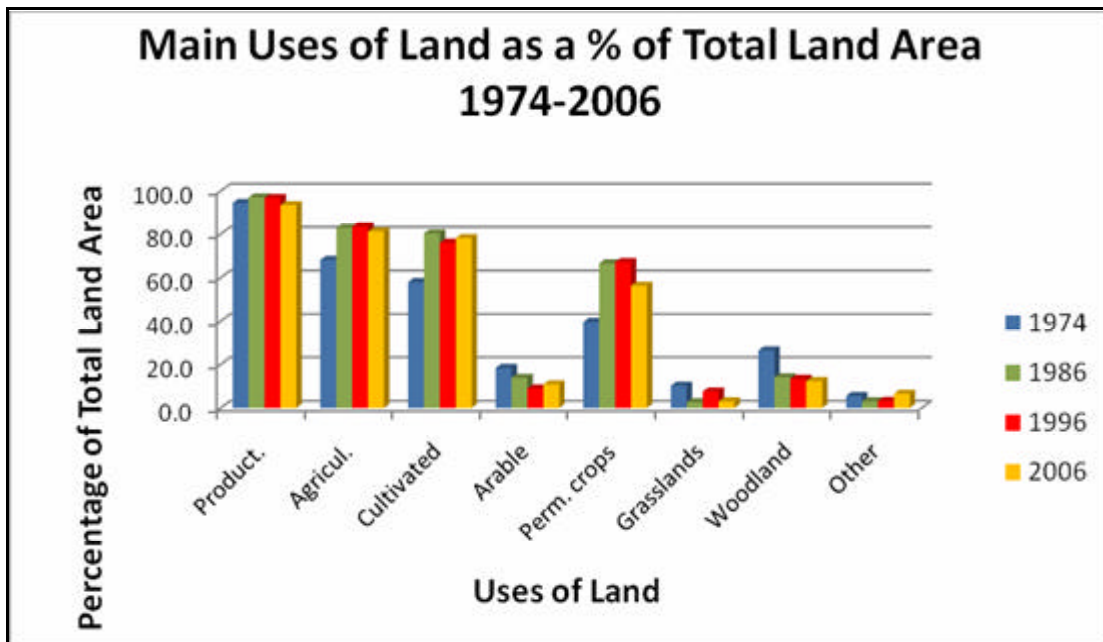


CHART 5



The significant decrease both in terms of area and in the participation of land with pastures, generally designated to the grazing of small ruminants and cattle signals the need to intensify the production of grasses and leguminous plants on small farms for cut-and-carry production systems or for the intensive production of fodder for sale to ruminant producers.

4.2.3 Land tenure

The structure of land tenure as illustrated in Table 8 shows that relatively small changes have occurred since the last three censuses. Recent and current data and observed trends in agricultural land tenure indicate that family land continues to be a dominant form of agricultural land tenure accounting for over 45% (46.6% in the most recent census). A decline in the number of parcels under private ownership from 4701 in 1996 to 3889 in 2007 (a reduction by 812 parcels in relative terms and a 3.4% increase in participation in total) is noted. Rented private and government lands have both decreased in terms of number of parcels and in participation in total in the 2007 census. Squatting on government lands has increased slightly, while squatting on private lands has shown a marginal decrease by 0.6% since 1996.

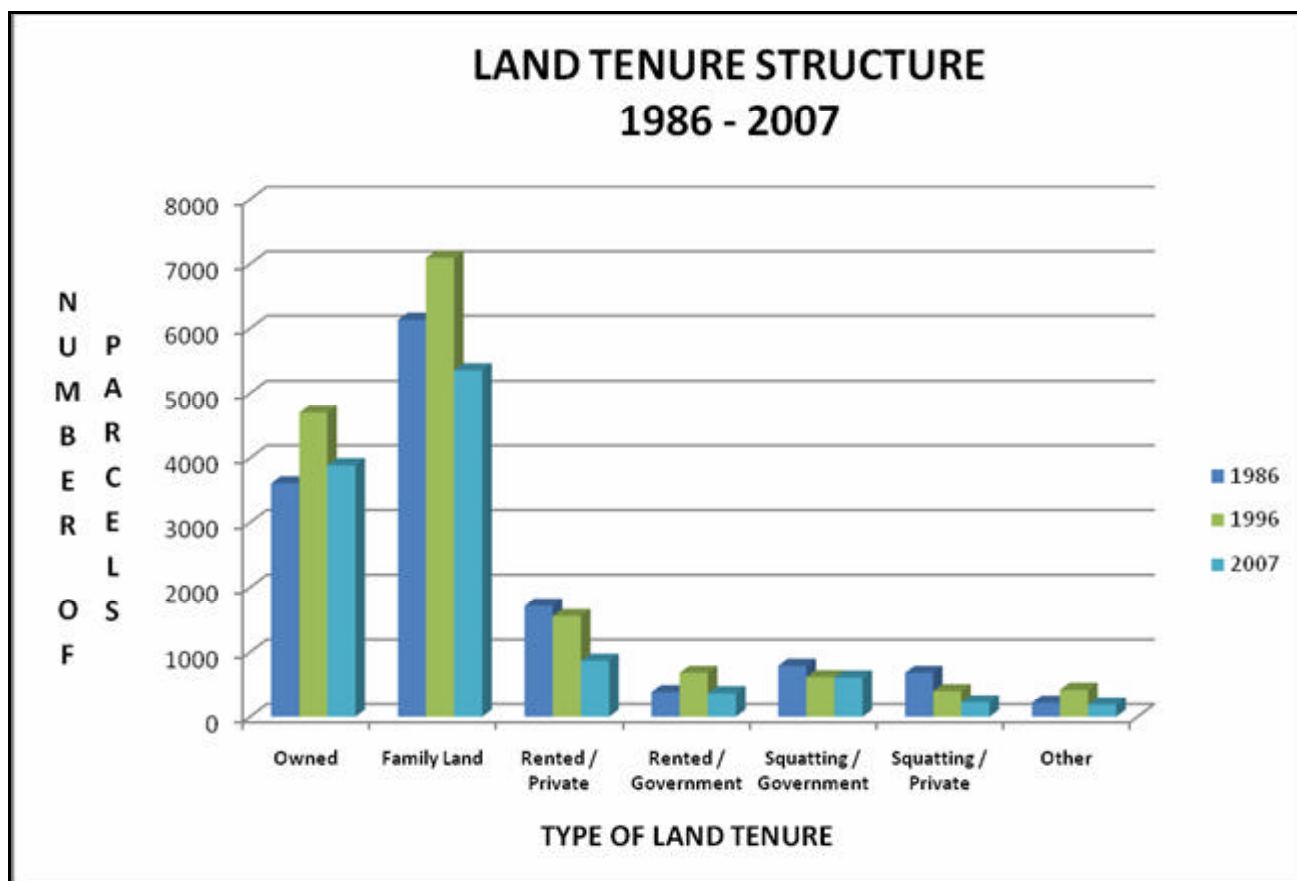
The importance of family lands is highly significant. It represents a form of communal land ownership among members of a family and thus presents many advantages and benefits. While family land tenure offers some benefits it also creates constraints and problems, particularly in cases of disputes or when land is need as collateral for access to credit, particularly for agricultural development of which livestock production forms part. Family land tenure can therefore, be seen as an obstacle to social mobility and economic empowerment in rural areas.

TABLE 8

LAND TENURE	1986		1996		2007	
	No. of Parcels	%	No. of Parcels	%	No. of Parcels	%
TOTAL	13530	100.0	15468	100.0	11503	100.0
Owned	3611	26.7	4701	30.4	3889	33.8
Family Land	6132	45.3	7094	45.9	5357	46.6
Rented / Private	1717	12.7	1558	10.1	867	7.5
Rented / Government	383	2.8	682	4.4	366	3.2
Squatting / Government	790	5.8	614	4.0	609	5.3
Squatting / Private	680	5.0	399	2.6	225	2.0
Other	217	1.6	420	2.7	190	1.7

The predominance of this form of land tenure can pose serious hurdles to agricultural diversification of which livestock production forms part. Private land ownership provides a higher level of flexibility, security and access to credit for increased livestock production and productivity.

CHART 6



4.3 Analysis of trends in the Livestock Production Sector

4.3.1 Changes in livestock population

The table and chart below shows a comparison in population of various livestock classes for the census periods 1986, 1996 and most recently, 2007. Clearly, some changes in the number of animals on holdings occurred. Some decreases in the numbers of cattle and small ruminants (sheep and goats), were compensated with a very significant increase in the numbers of pigs and poultry. A 24.6% decrease in cattle, a 38% decrease in sheep and a

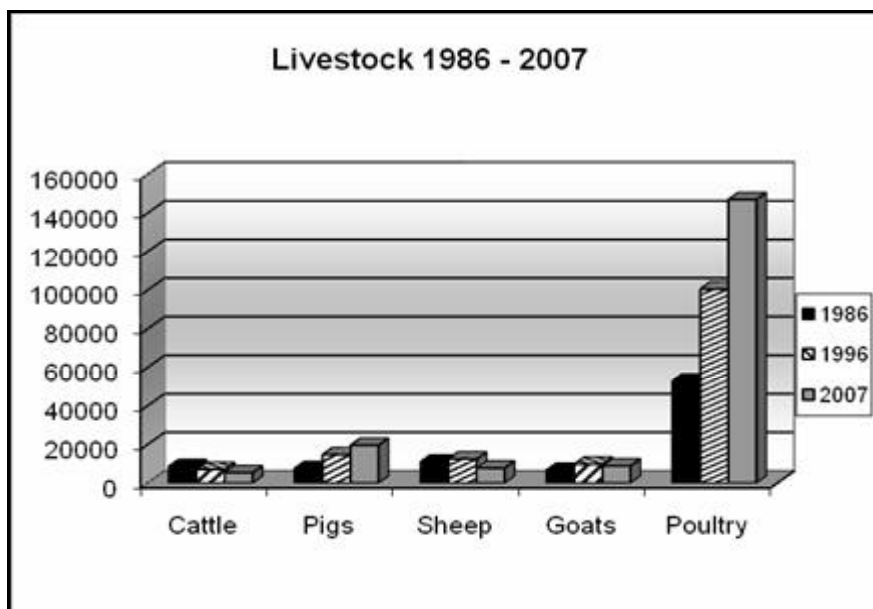
decrease of 9.3% in goats from 1996 to the 2007 period can be seen. It is evident that these changes are compatible with the change in trend of land use (Table 7), where the quantity of available land for meadows and pastures of the total available agricultural land decreased from 7.5% in 1996 to 3.0% in the recent census year, 2007.

The most significant increases in livestock population were recorded for poultry, 146,910 birds in 2007 as against 100,436 in 1996, a 46.1% increase. This figure was followed by pigs which exhibited a total of 19520 heads in 2007 against 14658 in 1996, an increase of 40.0%.

Table 9

Livestock	1986	1996	2007
Cattle	8500	7064	5345
Pigs	7500	14658	19520
Sheep	10900	12480	7736
Goats	6600	9718	8816
Poultry	52800	100436	146910
- <i>Broilers</i>	--	18342	75156
- <i>Layers</i>	--	69004	52792
Beehives	--	1326	218

CHART 7



4.3.1a Type of Livestock by Total Holding Area Group

Table 12 shows the types of livestock by total holding area group. It must be noted that the majority of livestock (cattle, sheep, goats, pigs and broilers) surveyed in the 2007 census were kept on holdings in the 2 to 5 acre category with the exception of layers and bees (on 5 to 10 acre holdings), rabbits (on holdings below 0.5 acres) and horses (on 10 to 25 acre holdings).

4.3.1b Livestock distribution

Tables 10 and 11 show the number of livestock and beehives by type of livestock and by administrative district and the number of reporting holdings by type of livestock and by administrative district, respectively. Table 13 summarizes the number of reporting holdings reporting livestock by species. It must be noted that the highest number of reporting holdings was for goats (1724) followed by sheep and then rabbits and finally, the lowest number for beehives (15).

Examining the distribution of livestock, Table 13 (summarized from Table 10), it is seen that with the exception of Poultry, the highest percent distribution of livestock was in the southern regions (Micoud, Vieux Fort, Laborie, Choiseul and Soufriere). The highest percent distribution for poultry was in the northern regions (Castries including urban and Gros Islet). With the exception of bees, very little livestock was distributed in the central regions.

Table 13- Number of holdings and distribution of livestock by geographical Region

Species of livestock	Total	Number of reporting holdings	% Distribution		
			Northern Regions	Central Regions	Southern Regions
Cattle	5345	1276	38.2	10.2	51.5
Pigs	19520	1537	42.7	8.6	48.8
Poultry	146910	946	67.3	4.7	28.0
- <i>Broilers</i>	75156	356	81.4	8.2	10.4
- <i>Layers</i>	52792	439	53.2	0.7	46.1
Goats	8816	1724	25.1	14.7	60.2
Sheep	7736	1618	24.4	5.0	70.6
Rabbits	2910	239	34.4	7.0	58.6
Beehives	218	15	9.2	45.0	45.9

4.3.1.1 The poultry Industry

Poultry population and distribution

In the census period 2007, the poultry population was estimated at 146,910 birds, including chicks. In 1996 the poultry population was estimated at 100,433 birds. This shows an increase of 46,577 birds, (a 46.3% increase) compared with the 1996 figures and 47,633 birds (a 90.2% increase) compared with 1986 census figures.

The total number of holdings surveyed keeping poultry was 863 (comprising 439, 356, 200, 64, 2 and 81 households rearing layers, broilers, chicks, ducks, turkeys and yard fowls, respectively) as compared to the 1996 figure of 1091 (a 26% decrease over the previous census figure). Of these, an estimated 92 percent were commercial layers and broilers producers.

In the 1996 census, poultry kept on landless holdings represented 10.1% of the total production, while 62% were raised on holdings with a land surface area of up to 2 acres. The layer population during this period showed the following distribution: 59.12% in the northern regions, 3.49% in the central regions and 37.39% in the southern regions. The broiler population was distributed as follows: 43.07% in the northern regions, 4.11% in the central regions and 52.82% in the southern regions. Of the total number of poultry reported for 2007, the majority, 55,393 birds were kept on holdings in the size group of 2 to 5 acres (Table 12).

The main problems facing the poultry industry which impede its future development and sustainability includes:

- Competition from cheaper lower quality imported products. Producers in St Lucia are faced with low production volume and hence higher cost of production, therefore, these producers have to compete with cheaper products from the US. The development of effective policies and strategies to lower production cost.
- Producers as well as processors have also expressed their difficulties in obtaining finance to increase their capacity and new comers to start production. Those who access finance from the commercial institutions, are faced with high interest rates and short payback periods, because of the institution perception of the industry as high risk and plagued with delinquent payers.
- There is not enough promotion of the local fresh, safe, chilled or frozen poultry product. Marketing presentation strategies are required. Producers and processors alike are concerned about the future availability of a guaranteed market, in light of the new and evolving international trading environment.

- Although St. Lucia has been self sufficient in table egg production over the years, sufficient work has to be done in the terms of production efficiency, product quality, safety and marketability.
- Inadequate food safety standards. There is no processing facility on the island that meets international standards for poultry processing. The severity hinders the capacity of the local product to compete in the new trading arrangements and consumer driven environment. There is also a dire need for local standards to be adapted and enforced. The Bureau of Standards had drafted standards for process poultry and is looking at adopting the CARICOM Standards for table eggs. However, much work has to be done at the processing plants in terms of them meeting international standards such as the implementation of HACCP methodology.
- Fragmentation of poultry producers. The need to unite and form producer associations is most important for effective production and marketing. The broiler producers have formed **The Broiler Producers Association (St. Lucia) Inc** and their first board of directors elected. The layer producers are currently in the process of organizing themselves to form **The St. Lucia Table Egg Producers Cooperative**.

4.3.1.1.1 *The broiler industry*

In 2007 the broiler population was reported to be 75156 birds with the following distribution: 81.4% in the northern region, 8.2% in the central region and 10.4% in the southern region.

Four (4) broilers processing plants operate in St. Lucia at present. The capacity of these processing plants ranges from 500 – 8000 birds per day, and at present function well below capacity. While government has issued a 20% protection on the broiler meat industry, less than 10% of the market demand is being met locally. The typical commercial capacity ranges from 1000 broilers to 12000 broilers, with an average capacity of 3000 birds per cycle.

There is currently one (1) functioning hatchery with a capacity to produce 12,960 broiler birds. These hatcheries are faced with the unavailability of hatching eggs during the course of the year, since St. Lucia does not possess breeder farms and hence, the reliance on importation of hatching eggs and day old chicks.

There is an existing Broiler Producers Association (Broiler Producers Association (St. Lucia) Inc.). This association was founded in late 2002, but still struggles on. All broiler producers form part of the Association. This organization is not functional.

This broiler industry appears to be facing some serious challenges since many producers are becoming frustrated with their financial situation and their lack of a workable contractual arrangement with the processors. The processors, on the other hand, also face

many challenges especially with the financial constraints and the under-utilization of their facilities which result in cash flow problems.

The broiler industry has tremendous potential and if the finances, technical know how and given the will power, it can contribute meaningfully to the overall economy.

4.3.1.1.2 The egg industry

The egg production industry benefits from full protection from imports and the country is self-sufficient in eggs. In the years 1985 to 1991 and in 1994, particularly during the festive seasons, St. Lucia experienced significant shortages in its local egg supply which had to be offset by imports. The St. Lucia Marketing Board is the authorized institution for table egg importation in St. Lucia. In 1999 there was a marked increase in production (1,156,000 dozens from a laying flock of 56,000 birds). This sharp increase in production resulted as a consequence of relaxed controls in the activities of the St. Lucia Egg Producers Co-operative and the Regulatory body, the Livestock Monitoring Committee.

In the 2007 census, a total of 52,792 layers were reported, a reduction by 16,212 over the 1996 census figure of 69,004 layers. The distribution of the national laying flock is as follows: 53.2% in the northern region, 0.7% in the central region and 46.1% in the southern region. Vieux Fort recorded the highest flock size (19,328 layers) followed by Gros Islet (15,527) and Castries (12,543).

The major commercial producers on the island are as follows:

1. Fresh Eggs with a capacity of 16 thousands birds (battery system)
2. Williams with a capacity of 5000 (deep litter system)
3. Bertie Joseph capacity 6000 (deep litter system)
4. Roger St. Claire capacity of 12000 (deep litter system)

In 2007, the number of holdings on which layers were kept was reported at 439 with the highest number of holdings in Castries (115), followed by Choiseul (82) and Gros Islet (71). The average production figures 2002-2006 was 67.4% from an average laying flock of 41,830 layers (adapted from Veterinary and Livestock Services Division data, 2007).

The table egg producers no longer have their cooperative. This organization has since been dissolved by the department of cooperatives. There are a group of individual farmers who, with the help of the Veterinary and Livestock Services Division and that of the Department of Cooperatives and SEDU, have been meeting with farmers to try to reorganize the table egg organization. They form the interim body of the St. Lucia Table Egg Cooperative. The organization is not registered as yet, but their bylaws have been drawn up and are currently trying to organize a meeting with SEDU to erect a business plan. Their main objectives are as follows:

- The securing of a market for their members especially in light of the up coming standards which will be implemented soon, the farmers recognize the fact that as individuals it will be too costly to meet those standards whereas as an organization grading, candling and other equipment can be bought and use to grade pack and market their eggs. With this common market (the cooperative will seek to market eggs on behalf of the farmers). There will be a stable price and not much competition among farmers.
- Providing inputs at a reasonable cost to farmers etc. since cost of production is very high and has the effect of forcing the farmers out of production.

Reasons for decrease in flock sizes

- **Lack of effective production and market demand scheduling.** The farmers need to schedule their production activities. For some portions of the year a glut on the market is experienced and because of this farmers cut down production, which inadvertently leads to a shortage or scarcity, this then works out as a vicious cycle through out the year; **birds are not allowed to attain peak production resulting in under-utilization of their true production potential, thus resulting in decreased farm income.**
- Due to financial set backs and competition on the markets some farmers have reduced their flock sizes while others have actually gone out of production.
- Lack of a unified approach. The farmers have not organized themselves to form an efficient Egg producers Association to lobby for their interests.
- Competition from imported powdered eggs.

4.3.1.1.3 Other Poultry – Population and distribution

In 2007, the duck population in St. Lucia was reported to be 969 birds (a 64.2% increase over the 1996 figures). The distribution was as follows: 30% in the northern regions, 4% in the central regions and 66% in the southern regions. These numbers were derived from a total of 64 reporting holdings.

In 2007 the population of yard fowls was reported to be 1913 birds with a distribution as follows: 20% in the northern regions, 1% in the central regions and 79% in the southern regions.

4.3.1.2 The swine Industry

Swine population and distribution

In 2007, the swine population was 19,520 heads comprising various classes, with a 40% increase since 1996.

The justification for this increase in population is as follows:

- Many displaced banana farmers shifted to pig production
- A well-organized swine producers group
- An increase in local market outlets for sale of pork
- Self-sufficiency level in fresh pork was attained

In 1996, the swine population was estimated at 14,658 heads comprising a national herd of 3,533 sows, 1,689 boars, 4567 fatteners and 5,002 piglet, which represented an increase of about 95.5% from 1986 census figures. It would appear that the number of sows and boars were overestimated when compared with the output of fatteners and piglets. It is likely that the population of gilts and young boars may have been included among the sow and boar populations during the farm data collection.

It must be noted that after a period of rapid expansion coinciding with the period of existence of the S.T.A.F.Co-op, the swine population had been declining over the last few years, mainly resulting from a gradual saturation of the fresh pork market.

In 2007, the swine population distribution is estimated as follows: 42.7% in the northern regions (Castries, Castries Rural, Gros Islet); 8.6% in the central regions (Anse La Raye, Canaries, Dennery) and 48.6% in the southern regions (Soufriere, Choiseul, Laborie, Vieux Fort and Micoud). Of the total swine herd of 19,520 reported, the highest number, (3872) were kept on holdings in the size group of 2 to 5 acres (Table 12).

In the 1996 census, 1,877 holdings were reported to have been rearing pigs compared with 1,455 in 2007, indicating a reduction by 422 holdings. Based on the current census figures, the district of Micoud was recorded as having the highest number of holdings (336) rearing pigs, followed by Vieux Fort (228 holdings) and Castries (210 holdings). Anse La Raye (41 holdings) followed by Canaries (11 holdings) reported the lowest number of holdings of the total, keeping pigs.

It must be noted that despite the decrease in number of reporting holdings in 2007 by 422, the swine population increased by 4849 heads.

4.3.1.3 The Small Ruminant Industry

Small ruminant population and distribution

The small ruminant population comprises both sheep and goats. The 2007 figures reveal 7736 sheep comprising 1919 rams, 3930 ewes and 1236 lambs. This figure reflects a decrease by 4746 heads (-38%) compared with the 1996 figure. The majority of these animals were reared on holdings in the 2 to 5 acre size group (Table 12).

The sheep population distribution in 2007 is estimated as follows: 24.4% in the northern regions; 5.0% in the central regions and 70.6% in the southern regions. In 2007 the number of holdings on which sheep were kept was reported at 1618.

The 2007 figures show 8816 goats comprising 2130 bucks, 4224 does and 1651 lambs. This figure reflects a decrease by 902 heads (- 9.3%) compared with the figure reported in the last census, 1996. The goat population distribution in 2007 is estimated as follows: 25.1% in the northern region; 14.7% in the central region and 60.2% in the southern region. In 2007, there were 1724 holdings reporting the rearing of goats either commercially or for subsistence farming. Of the total number reported, the majority, 2062 were kept on holdings in the 2 to 5 acre size group (Table 12).

There exists tremendous genetic diversity within the small ruminant population with the introduction of sheep breeds such as the Barbados Blackbelly, Virgin Island White, the West African, Kathadin, Wiltshire and Shropshire. These breeds have undergone two- and three-way crosses and have been crossed with the creole sheep in upgrading programs in an effort to increase production and on-farm productivity. The same can be said of goats regarding genetic diversity. Over the last decade, and even before, new bloodlines have been introduced, which include the Anglo-Nubian, Saanen, Boer, Toggenberg and Alpine. These breeds have all been crossed with creole stock which are of Alpine and Toggenberg types originating from earlier imported breeds from Europe. Plans are currently afoot to the importation of new bloodlines in an effort to reduce possible effects of inbreeding and further multiplication of previously introduced breeds.

Production and Marketing

The live animal selling price is EC\$3.50 per pound. The average slaughter weight has been estimated at 100 lbs (at about 18 months on average) and an estimated dressing percentage of 50% has been established. The local production based on 1,000 to 1200 animals slaughtered per year is in the region of 55 to 60 thousand pounds valued at approximately EC\$400,000. Based on the ex-farm price of EC\$7.00 and a cost of production of EC\$6.97 the gross margin and returns are relatively low. This explains why small ruminant production has not been attractive to many farmers. Despite this somewhat gloomy picture, the commodity still has potential for development within the agricultural diversification sphere, since it is comparatively underdeveloped and presents tremendous opportunity for development. With the current new thrust in livestock production the outlook seems encouraging for the sub-sector.

If the industry intends to make significant strides and attract potential farmers the trend of selling mostly whole or half carcasses should shift to that of selling primal and retail cuts and value-added products. The construction of a new national abattoir with appropriate facilities is expected to address these marketing issues.

The present small ruminant production and marketing systems are still somewhat disorganized with substantive variation in animal availability, body weight and condition at slaughter and variability in carcass characteristics. There is also a lack of standardized processing techniques and an inadequately developed product distribution system. If future demand is to be met and if all players in the marketing channel are to receive reasonable equity in terms of returns, it is necessary to rationalize production and marketing of the commodity.

Small ruminant producers have organized themselves to form a Small Ruminant Producers Association which assists in addressing their production and marketing concerns, including concessionary feed supplies and other production inputs. Currently, the group comprises 35 registered members from districts all over the island.

Among the reasons cited in the national small ruminant population are:

- The absence of sufficient production incentives, foremost of which is the lack of organized slaughtering and marketing infrastructure;
- The high cost of accessing capital (high interest rates) to allow small ruminant producers to operate at the profit maximization level. In order to realize sustained economic returns from small ruminant production, a serious capital outlay to cover improved pasture/feed resources, proper housing and improved stock is required. Many of these farmers prefer to give the priority to pig and /or banana production which yields quicker returns from their limited funds for investment;
- The pressures of urbanization which has led to declining available lands for small ruminant production and this resulted in the displacement of that group in some areas;
- The incidence of praedial larceny and stray dog attacks (to a much lesser) which have discouraged farmers and driven some of them out of production;
- The lack of a collective approach by small ruminant producers to proactively address critical issues such as input cost reduction, capacity building, joint marketing and lobbying for investment incentives from government.

4.3.1.4 The Cattle Industry

Cattle population and distribution

In 2007, the cattle population was estimated at 5345 heads comprising both beef and dairy type animals. The figure comprises 2309 cows, 1039 bulls, 783 female calves, 288 male calves and 926 unclassified heads. Exact information on beef or dairy type animals cannot be determined from the census data collected.

The cattle population distribution in 2007 is estimated as follows: 38.2 % in the northern regions; 10.2% in the central regions and 51.5% in the southern regions. Gros Islet reported the highest cattle population (1159 heads), followed by Castries, Micoud and Vieux Fort with 884, 871 and

773 heads, respectively. In 2006, the number of holdings on which cattle were kept was reported at 1276 with the highest number of holdings in Micoud (231) followed by Castries (226) and Choiseul (182). Of the total cattle reported island-wide, the majority, 1,335 heads were reared on holdings in the size group of 2 to 5 acres.

Among the reasons cited for the dwindling cattle numbers island-wide are:

- The displacement of cattle farmers due to shifts in land use from pasture lands to lands used for housing and industrial development;
- The relatively low price paid by local butchers to the cattle farmer. Although there is a suggested live-weight price established for cattle on hoof, local butchers have continued to play the role of price taker and have adopted the take it or leave it attitude regarding price offers to cattle farmers;
- To some extent, the Amblyoma tick infestation and its related disease Dermatophilosis have contributed to the dwindling cattle populations nationally;
- The “Red Meat Phobia”- belief that beef contributes significantly to Hypertension. The increased health consciousness has resulted in decreased beef consumption. Butchers capitalize on this to offer low price to cattle farmers;
- The lack of an organized farmers’ group.

It must be noted that there is tremendous breed diversity among the cattle population on the island with the introduction of a number of beef, dairy and dual purpose breeds over the years through the importation of live animals and a once, very efficient Artificial Insemination service. The Ministry of Agriculture plans to revitalize the sub-sector by way of supporting the organization of a Cattle Farmers Association, reintroduction of a viable Artificial Insemination Service and improving the marketing channels by the construction of a National Abattoir.

4.3.1.4.1 Dairy Industry

The Beausejour Dairy Farm, in Vieux Fort, was the only established commercial dairy farm on the island, producing fresh pasteurized milk to hotels, restaurants supermarkets and the two main hospitals on the island. The Farm was established in 1979 under an EEC grant of EC\$1.0 million and managed by the St. Lucia Livestock Development Company (S.L.L.D.C.) .The Company was incorporated in 1981 as a wholly owned subsidiary of the National Development Corporation (N.D.C.), with the mandate to own, upgrade and commercialize the operations of the Beausejour farm.

The Beausejour Farm was intended to serve as a nucleus farm to selected satellite farm within a ten mile radius of its operation. The satellite farms never materialized. The company, based on local production figures from MAFF showed an increasing trend in milk production from 120,468 liters (Value of EC\$313,217) in 1986 to 288,676 litres (Value of EC\$851,594) in 1998.

The company performed quite well but experienced significant cash flow problems by the year 2000 due to insurmountable receivables which forced it into bankruptcy.

Steps are being taken to revitalize the local dairy industry with the reintroduction of semen of more efficient breeds by way of Artificial Insemination to serve the needs of the small dairy producer, provision of capital funds for the establishment of small dairy units, training of potential farmers in milking and milk handling techniques and an efficient milk distribution system.

4.3.1.4.2 Beef Industry

Many local farmers have complained of the lack of a reliable and structured market for the sale of their cattle. The system of marketing has been crude where the butchers make an offer to farmers based on their estimation of the value of the animal on foot. Meat is sold to the public at a price of \$6.00/lb. The value added potential of the carcass is not maximized, whereby carcass differentiation could be effected to increase the returns from the sale of local beef. Farmers can then realize increased value from the sale of their live animals.

It is intended that the construction of a multi-species abattoir along with improved feeding systems, improved support systems such as veterinary and livestock extension services and adherence to initiatives outlined in the Livestock Industry Development Plan will go a long way toward improving beef cattle production and productivity at the farm level. The overall impact will be a reduction in imports of beef and foreign exchange savings to the country.

4.3.1.5 The Rabbit Industry

The rearing of rabbits was in the last decade and before was practiced, primarily to supplement rural households with a cheap and dependable source of protein. The manure was used as an organic fertilizer in vegetable gardens in the rural communities. This trend has shifted significantly to the rearing of rabbits as a commercial venture. The meat has become increasingly acceptable throughout the island and has recently been purchased by supermarket chains, restaurants and hotels. There is no current record of importation of rabbit meat.

The cost of production is estimated at EC\$7.00 to 7.50 per pound. This is attributed to the high feed cost which represents 70% of the production cost. Rabbit feed is classified, based on the current customs tariffs as pet feed and is subjected to higher import duties than other livestock feeds, hence the resultant high cost to the farmer.

The application of duty free concessions on rabbit feed has caused a reduction in feed cost. However, this reduction has not been passed on to the farmer and hence, has not resulted in a subsequent reduction in the production cost and the market price. Alternatively, the use of

blended and tested, locally available feeds have been shown to significantly reduce production costs.

In 1996, rabbit production was estimated at 1552 animals on 235 reported holdings and this population was distributed as follows: 28.5% in the northern regions, 5.2% in the central regions and 66.2% in the southern regions.

In 2007, the rabbit population was reported as being 2910 animals comprising 630 bucks, 1131 does, 870 bunnies and 247 unclassified animals from 239 reporting holdings. The population distribution was as follows: 34.4% in the northern regions, 7.0% in the central regions and 58.6% in the southern regions.

It can be seen, therefore, that the rabbit population in 2007 increased by 87.5% over the 1996 census figures. These figures were estimated from a total of only 5 more reporting holdings than that reported in 1996.

The justification for this increase is as follows:

- Good niche market available;
- Relative ease of rearing

Constraints to further growth and development are:

- High feed costs
- Producers not well organized
- Producers group need revitalization

As the cost of inorganic fertilizers increase and organic vegetable farming shows an increasing trend, Rabbit manure represents a complimentary source of income to the rabbit producer. Under an efficient production system it has been documented that twenty-five does, two bucks and their litters could yield approximately one ton of manure per annum. Rabbit pelts can also be used in the pelt industry for making a number of by-products which can be sold to the tourism industry.

Based on the foregoing production trends, there exists tremendous potential in rabbit production. However, the subsector requires organization which can best be achieved through a structured and functional Rabbit Producers Association, a reliable marketing channel, dependable and affordable supply of inputs including feeds and continued support from the Ministry of Agriculture's diversification initiatives as outlined in the Livestock Industry Development Plan.

4.3.2 Changes in Population of other Livestock Classes

4.3.2.1 Bee population and distribution

The number of beehives reported in 1996 was 1326 distributed as follows: 47.7% in the northern regions, 21.3% in the central regions and 30.9% in the southern regions.

In 2007, this figure was reduced to 218 beehives. This figure represents a significant decrease (1108 less beehives) and an 83.6% decrease over the 1996 census period.

The distribution of beehives in 2007 was as follows: 9.2% in the northern regions, 45.0% in the central regions and 45.9% in the southern regions. This population of beehives was reported from a total of 15 reporting holdings. A significant shift in distribution of beehives was noted particularly for the northern regions which exhibited a 38.5% decrease. The majority of beehives reported were kept on holdings in the size group 5 to 10 acres (table 12).

Two (2) bee associations have been identified in the bee industry, namely: – Mille Fleur and National Bee Keepers Association. The largest bee keepers have over 160 hives. These comprise a small percentage of bee keepers. The majority of other bee keepers have fewer than 100 hives. Some technical support and information dissemination is undertaken by the Ministry of Agriculture through the associations which provide the linkage to the producers. The Inter-American Institute for Cooperation on Agriculture (IICA) has been assisting with providing specialist from time to time to conduct workshops and seminars to address existing or emerging problems.

The major problems contributing to the national decline in beehives and number of holdings are:

- The implementation of the International Standards of the European Union (ISO/EU) requirements has resulted in the inability of St. Lucia to export honey to Martinique which was the principal market;
- The *Varroa jacobsoni* mite outbreak has brought about a reduction in the number of apiculturist and beehives;
- Retail prices of honey have been reported as being high and not readily affordable to consumers. The wide wholesale/retail price spread has contributed to this;
- The lack of business acumen among many honey producers have resulted in the poor marketability of the commodity. There is an abundance of honey in storage in bottles which need to be marketed;
- There appears to be fragmentation among honey producers which leads to erosion in their lobbying power.

4.3.2.2 Equine population and distribution

Equine species included donkeys, mules and horses. During the years of the plantocracy, these animals were mainly used as draft animals on the banana and sugar estates, human transport and for transportation of farm produce.

In 1996, the number of horses reported was 246, from a total of 65 holdings. The distribution was as follows: 26.4% in the northern regions, .01% in the central regions and 73.2% in the southern regions. Vieux Fort reported the highest number (85) followed by Gros Islet (52) and Micoud (50).

In 2007, the number of horses reported increased to 353 animals from a total of 58 reporting holdings and were distributed as follows: 53% in the northern regions, 4.5% in the central regions and 42.5% in the southern regions.

A total of 29 donkeys were reported for 2007, with the animals distributed as follows: 58.6% in the northern regions (16 in Gros Islet), 3.4% in the central regions and 37.9% in the southern regions.

4.4 Trends in Livestock Imports versus local production

Table 13 shows imports of chilled and or frozen meats into St. Lucia by type, quantity and value from the last two census periods 1986 to 2007. The general trend has been an increase in imports of all the commodities identified. A phenomenal sum is being expended on meat imports which can be saved by initiatives geared toward boosting local production of all the mentioned commodities.

Chart 8 – Trends in Livestock meat imports (1986-2006)

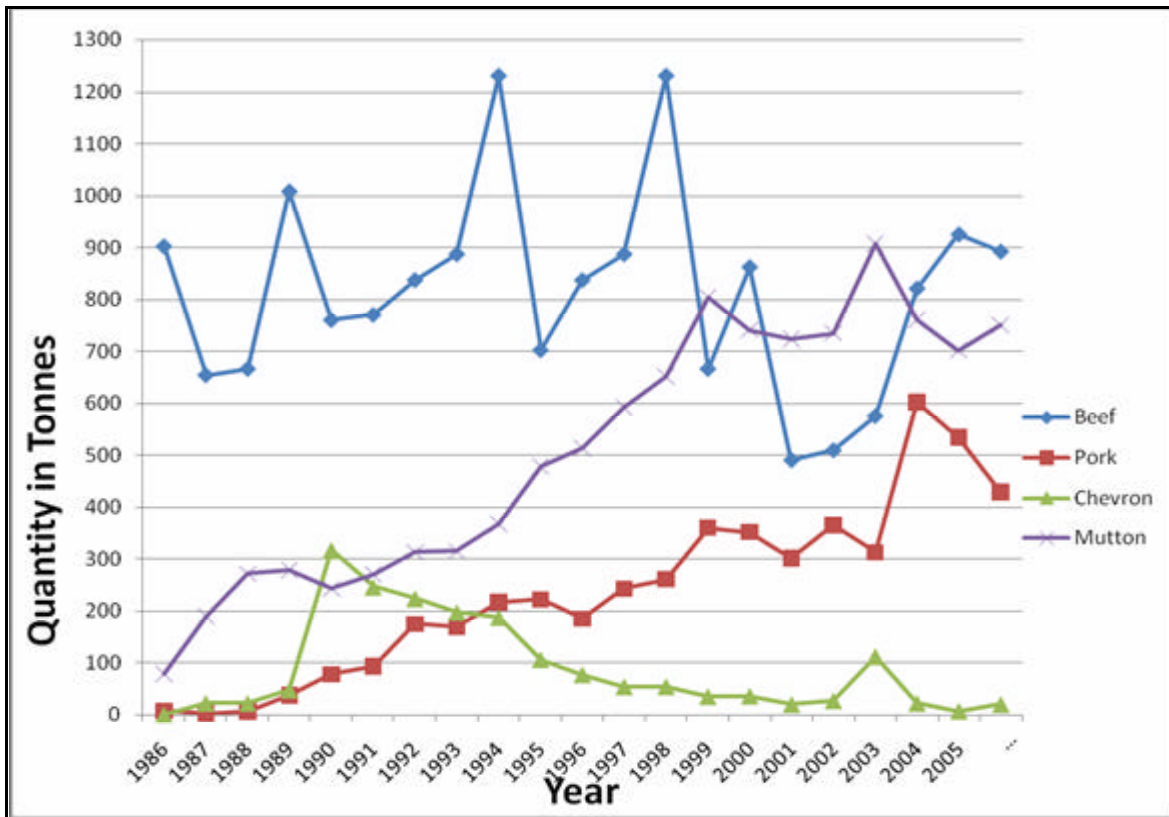


Table 14 - Meat Imports 1/ by Type, Quantity and Value 1986 - 2006

Year	Beef		Pork		Mutton		Chevron	
	Tonnes	EC\$'000	Tonnes	EC\$'000	Tonnes	EC\$'000	Tonnes	EC\$'000
1986	902	5,191	8	73	79	473	N/A	N/A
1987	654	5,439	2	20	191	910	22	23
1988	666	5,767	7	41	272	1,361	22	80
1989	1,008	7,936	38	318	279	1,427	47	263
1990	760	7,251	78	572	243	1,459	317	1,825
1991	770	7,225	93	796	271	1,823	246	1,504
1992	837	8,217	175	1,003	313	2,074	224	1,679
1993	887	7,536	170	1,354	315	2,022	197	1,172
1994	1,231	7,960	217	1,852	367	2,381	187	1,134
1995	702	7,731	222	1,972	478	2,888	106	669
1996	837	6,096	185	1,541	514	3,327	77	538
1997	887	6,049	243	1,907	592	3,538	54	425
1998	1231	5,899	261	1,678	652	3,381	54	410
1999	666	7,007	360	1,979	804	3,723	35	255
2000	862	9,660	352	2,361	741	3,543	36	278
2001	490	5,727	302	2,297	723	3,389	20	142
2002	509	5,821	365	2,171	735	3,496	27	187
2003	575	7,164	313	1,922	907	4,881	112	224
2004	821	8,443	603	3,058	761	5,235	22	151
2005	925	8,386	534	2,965	702	4,478	7	43
2006 P/	892	9,806	429	2,715	750	5,240	20	128

Source: Foreign Trade Report

1/ Frozen and/or Chilled

P/ Provisional

4.4.1 Beef Imports

In 2006, St. Lucia imported 892 Tonnes of beef at a value of EC\$9,806,000 representing 8.6% of the total meat imports and 23% of the total value.

It must be noted that imports of beef have fluctuated in terms of quantity from 1986 to 2006, with a noticeable peak of 1231 Tonnes in 1994 followed by a constant decline until it increased to 862 Tonnes in 2000 and a further decline in 2001 to 490 Tonnes.

From 2001 to 2006 a steady increase to a provisional figure of 892 Tonnes can be seen. The negative impact of the detection of Bovine Spongiform Encephalitis (BSE) in cattle in the UK and changes in consumer pattern could explain such a decline.

4.4.2 Pork Imports

In 2006, St. Lucia imported 429 Tonnes of pork (provisional figure) at a value of EC\$2,715,000. This represents approximately 4.1% of the total meat imports and 6.3% of the total foreign exchange expended on meats. It must be noted that the import figures for pork from 1986 to 1991 were remarkably low, ranging from 2 to 93 Tonnes.

The impact of the St. Lucia Pig Producers Cooperative on reducing imports of pork is clear, since the co-operative, during its existence, was able to negotiate with the GOSL for full protection of locally produced fresh pork. The ready market created by the co-operative for local pork producers led to increased production. With the collapse of S.T.A.F.CO-OP in 1992, the protection system was not policed and pork imports began to rise. A 40% protection was reintroduced in 1995 in an attempt to reverse the soaring import figures, but with only moderate effects.

The revitalized Pig Producers Association, the improved structure and functioning of the Livestock and Veterinary Division and the establishment of an efficient multi-species abattoir is expected to go a long toward increasing local production and marketability of locally produced pork. The end result is expected to significantly reduce imports of that commodity and, thereby, save foreign exchange.

4.4.3 Mutton and Chevron Imports

Mutton has increased from 79 Tonnes in 1996 to 750 Tonnes in 2006, while chevron has fluctuated, but with an increasing trend from 22 Tonnes in 1997 to 246 Tonnes in 1991 and fluctuating again to reach a provisional figure of 20 Tonnes in 2006.

Table 15 - Poultry Imports by Species, Quantity and Value, 2000 - 2006

Year	POULTRY							
	Total		Whole		Necks, Backs, Wings		Other Parts	
	Tonnes	EC\$'000	Tonnes	EC\$'000	Tonnes	EC\$'000	Tonnes	EC\$'000
1999	8,371	22,527	100	627	3,938	9,024	4,333	12,876
Chicken	7,243	19,470	15	140	3,173	7,283	4,055	12,047
Turkey	1,069	2,732	56	322	745	1,717	268	693
Other	59	325	29	165	20	24	10	136
2000	7,827	20,579	83	570	4,130	8,848	3,614	11,161
Chicken	6,751	17,453	19	134	3,364	7,009	3,368	10,310
Turkey	1,056	2,848	51	313	766	1,839	239	696
Other	20	278	13	123	---	---	7	155
2001	7,741	20,779	92	568	4,057	8,612	3,592	11,599
Chicken	6,521	17,529	9	75	3,196	6,722	3,316	10,732
Turkey	1,202	3,035	69	388	861	1,890	272	757
Other	18	215	14	105	---	---	4	110
2002	8,616	20,234	95	489	4,250	9,364	4,271	10,381
Chicken	7,532	17,270	7	50	3,544	7,613	3,981	9,607
Turkey	1,056	2,680	70	299	705	1,751	281	630
Other	27	285	18	141	---	---	10	144
2003	8,406	19,975	94	513	4,642	9,012	3,670	10,450
Chicken	7,192	17,079	3	31	3,785	7,458	3,404	9,590
Turkey	1,188	2,532	72	362	857	1,554	259	616
Other	26	364	19	120	---	---	7	244
2004	8,701	26,273	162	695	4,674	12,579	3,865	12,999
Chicken	6,506	19,251	4	36	3,869	10,299	2,633	8,916
Turkey	1,192	3,459	90	315	805	2,280	297	864
Other	1,003	3,563	68	344	---	---	935	3,219
2005	8,533	25,776	361	1,850	14,116	36,052	10,637	37,736
Chicken	7,241	21,321	93	183	3,725	8,749	3,423	12,389
Turkey	1,090	3,681	84	486	740	2,133	266	1,063
Other	202	774	38	165	---	---	164	609
2006	8,291	24,931	73	508	4,826	12,585	3,392	11,838
Chicken	7,052	20,825	2	16	4,008	10,168	3,042	10,641
Turkey	1,205	3,674	48	307	818	2,417	339	950
Other	34	432	23	185	---	---	11	247

Source : Foreign Trade Report

1/ Frozen and/or Chilled

4.4.4 Poultry Imports

Table 14 shows that imports of poultry meat have remained relatively stable in the region of 8000+ Tonnes between 1999 and 2006. The import figures for chicken account for the most significant component of this figure (6-7000 Tonnes) for the same period. The Broiler farmers are guaranteed a 20% of the market share. However, they have been able to fill less than 10% of that share. The imports of whole chicken and whole turkey accounted for 2 to 93 Tonnes and 48 to 90 Tonnes respectively, between the years 1999 and 2006. The most significant component of poultry imports are reflected in chicken and turkey necks, wings, backs and other parts. There is evidently a good niche market for whole chicken to begin with and with expansion of the broiler industry where further processing into parts can be accomplished, the marketability of the commodity can be significantly increased. The potential for broiler production and marketing is tremendous, given the optimum marketing channels, sector support and costs of production for the commodity.

Table16- Summary of Imports of livestock meats by Quantity and Value (2006)

Meat Type	Tonnes	% of Total Tonnes	EC \$ (000)	% Total \$ Value
Poultry	8291	79.9	24931	58.2
- <i>chicken</i>	7241	69.7	21321	49.8
Beef	892	8.6	9806	22.9
Pork	429	4.1	2715	6.3
Mutton	750	7.2	5240	12.2
Chevron	20	0.2	128	0.3
Total	10382	100.0	42820	100

Table adapted from Tables 14 and 15. / Statistical Unit MAFF, St. Lucia.

Table 16 provides a summary of the imports of livestock meats by quantity and value. A total of 10382 Tonnes of meat with an EC\$ value of \$42,820,000 was imported into St. Lucia in 2006. It must be noted that poultry meats rank the highest (79.9%) of all imported meats. Of all imported poultry meats, chicken contributes the highest in terms of quantity (7241 Tonnes) and value (EC\$21, 321,000) to the meat import bill. This was followed by imports of beef (8.6%), mutton, 7.2%), pork (4.1%) and chevron (0.2%).

4.5 Local Production of Major Livestock commodities

The following is a list of some main livestock commodities produced locally for the period ending December 2006 (Sources: Livestock and Veterinary Division and MAFF Marketing Unit):

Broiler production 2006:

- 301,017 birds slaughtered, yielding 1,160,096.8 pounds meat. (avg. weight : 3.85 pounds)

Pork production 2006:

- 255,157 pounds with EC\$ value \$1,262,063
- Production was reported from approx. 3000 sows and 320 farms island-wide.

Egg production 2006:

- Total average 734,842.5 dozens (industry is at 63.5% production)

Based on the massive meat import bill identified in Table 16, it is clear that locally produced broiler meat and pork create very little impact on the national food import bill. Import figures for eggs were not obtained at the time of preparation of this document.

4.6 The impact of changes in other Census Variables on the Livestock Industry

4.6.1 Changes in other Agricultural practices employed on holdings

Table 17 shows the type of agricultural practices used on farms in 1996 and 2006. Of direct relevance to livestock production are the use of animal feed and farm records. In 1996, 1646 holders used animal feed. This figure was unavailable for the 2006 period.

In 1996, 654 holders (including livestock farmers) kept farm records. In 2006, this figure increased to 1195 (an increase of 82.7%). This signifies an increase in the use of one of the key parameters used to increase production efficiency on farms.

Table 17

Type of Agricultural Practice	1996	2006
Use of Animal Feed	1646	2038
Irrigation	1639	1463
Crop Rotation	3029	2108
Keep farm Records	654	1195
Use of Improved Seed Varieties	2362	1749
Use of Insecticides	5919	2614
Use of Weedicides	7706	5586
Use of Nematicides	4691	1206
Use of Fungicides	4681	1164
Use of Rodenticides	1639	1215

Table 18 shows the number of single-holding households reporting specified agricultural practices by type and age of holder. The practice which is of significance to livestock production among the practices listed in the table is “Kept Farm Records”. The highest number of single-holding households recorded (363) for that practice, were for holders in the 45 to 54 age range. This was followed by 295 single-holding households with holders in the 35 to 44 years age range and then 263 single-holding householders with holders in the 55 to 64 years age range. In the under 15 to 24 age group only 44 holders participated in record keeping practices on the holdings. This raises serious issues regarding the active involvement and participation of young people in farming.

Table 18 - Number of Single-Holding Households Reporting Specified Agricultural Practices by Type and Age of Holder

Agricultural Practices	St. Lucia	Age of Holder							
		Under 15 Years	15 to 19 Years	20 to 24 Years	25 to 34 Years	35 to 44 Years	45 to 54 Years	55 to 64 Years	65 Years and Over
Used Irrigation	1,428	11	8	19	136	331	360	290	273
Practiced Crop Rotation	2,066	16	8	24	189	484	535	429	381
Kept Farm Records	1,166	10	1	13	101	295	336	263	147
Used Improved Variety of Seed Plant	1,715	14	5	25	176	402	444	349	300
Credit for Farming	369	3	3	4	29	93	104	84	49

4.6.1 Impact of changes in use of Fertilizers on holdings on livestock production

Table 19 shows the use of fertilizers by type. The use of organic manure as shown in the table is of some significance to livestock production. In 2006, there was an increase in the use of organic manure by a total of 1495 holdings, (a 96% increase over the previous census period, 1996). The revelation of this substantial increase in use of organic manure poses a very good marketing potential particularly for manure produced on farms which keep livestock intensively.

Table 19

Type of Fertilizer	Number of Holdings		
	1986	1996	2006
Lime	35	1638	369
N.P.K	6215	7875	5569
Sulphate of Ammonia	1385	2424	839
Urea	.....	479	1210
Organic Manure	.....	1558	2163
Plant Material	.....	.....	726
Foliar	.....	.....	778

CONCLUSIONS

Changes in trends in land use, land concentration and land tenure have been identified in the most recent census which impact either directly or indirectly on the production of livestock in St. Lucia. The significant increase in concentration in small holdings up to 5 acres addresses the need for increased intensification of livestock production. A strong shift in concentration from large holdings (greater than 25 acres) has been recognized. The lands under permanent pasture and meadows have been significantly reduced both in terms of participation of total agricultural land and area. This significant decrease of available pasture lands signals the need to either, intensify forage production on small holdings for cut-and-carry production systems, and/or identify suitable lands for intensifying forage production and harvesting for sale to cattle and small ruminant producers.

The predominance of the family land form of land tenure can, and has been, an impediment to agricultural diversification of which livestock production forms a part. Private land ownership which ranks lower on the priority of land tenure provides a higher level of flexibility, security and access to credit for increased and sustainable livestock production and productivity.

The limiting factors for the development of the local meat and poultry industry in St. Lucia are mainly structural and economical, and to a lesser extent technological. Most of the existing animal systems are rather inefficient and need to operate on business principles. The mediocre processing and marketing systems are not able to supply local demand on a continuous basis at the anticipated quality and competitive prices. This scenario has to be urgently corrected if the industry is to grow and develop, thus making a meaningful contribution to the Gross Domestic Product (GDP).

Consistent with the market led approach to production, as has been exhibited by the banana crop and other agricultural commodities, the production and marketing of livestock is no exception. The success stories in the production and marketing of the more established livestock commodities, eggs, broilers, honey and fresh pork during the existence of S.T.A.F.Co-op bear testimony to the organized market led approach to livestock production and the role of efficient producer organizations in the sustainable production and marketing of these commodities. The commodities which are supported by strong producer organizations have been shown to take the lead in production and marketing initiatives. The construction of an efficiently managed national abattoir is a prerequisite to increased and sustainable livestock production in St. Lucia. The Pig Producers Association is currently in the most organized stage compared with the other livestock producer organizations. The Small Ruminant Producers Association has been established, but requires some strengthening. Cattle producers and to a lesser extent, broiler, layer and bee producers have yet to organize themselves into vibrant and efficient lobbying institutions.

A number of initiatives which are prerequisite to sustained growth and development of the livestock industry, as outlined in the Livestock Industry Development Plan, have been

implemented, while others have been drafted and submitted for approval to the Cabinet of Ministers.

The current national sow herd has the potential to sustain the output required for self-sufficiency and with a national abattoir this population is expected to grow significantly to meet the some of the demands for processed pork and retail cuts. The challenge lies in keeping costs of production at a relatively stable level to allow new entrants and further expansion of the swine industry.

The current small ruminant population has declined, however, given the importation of new bloodlines, an improved marketing channel, available credit to small ruminant producers and continued support from the Veterinary and Livestock Services Division as it relates to the initiatives outlined in the Livestock Industry Development Plan, the sub-sector is expected to perform and meet the challenges which lie ahead. The incentive or driving force for small ruminant production hinges on a reliable marketing channel and the injection of sufficient capital for housing and improved feeding arrangements, which include optimum forage utilization.

The extremely high meat import bill signifies that there is a wide void between local consumption and production of the livestock commodities which need to be filled.

The broiler meat industry requires a serious injection of capital from an investor or investment group to revitalize the industry and provide efficient contract arrangements to producers for sustained production and marketing.

Holders in the older age ranges are involved in activities such as farm record keeping. Although livestock farm record keeping is not specified it is of great concern that the younger holders are not interested in this sort of activity.

RECOMMENDATIONS

The declining trend in area on holdings signals the need for policy makers to closely examine the pressures toward intensification of livestock production and to put systems in place to address this diminishing production input. It is also necessary to examine, or re-examine in some cases, the zoning of lands for sustainable livestock production since many livestock farmers have succumbed to the pressures of urbanization and have been forced to cease production.

Generally, all livestock producers are advised to unite to form associations with the objectives of standing in solidarity in addressing issues which impede production and levels of productivity. Of paramount importance are: collectively, seeking concession on the high cost of inputs such as imported feed, building materials equipment, medications, etc. This will definitely assist in reducing costs of production and sustaining high levels of production at the national level.

It is vital that the Veterinary and Livestock Services Division closely examines its human resource base (specialist staff requirement, in particular) for the efficient implementation of the sector programmes, given the new production thrust anticipated with the advent of a proposed new abattoir.

Adherence to the implementation of initiatives outlined in the Livestock Industry Development Plan is necessary if the sector has to achieve the growth and development expected.

To curb the high food import bill, initiatives should continue to focus on buy local campaigns and the importance of growing what we eat in an attempt to encourage local production and consumption of locally produced livestock commodities.

Egg producers should collectively take the initiative to seek methods of packaging liquid egg for sale on the local market, particularly to the hospitality industry.

Beekeepers should be assisted in building business acumen so as to diversify and add value to the product rather than being complacent and struggle to sell the primary product. The value-added potential of honey, such as adding lime or lemon for medicinal purposes should be explored. Other innovative ways of marketing the commodity and its by-products should be fully exploited.

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Local farmers, animal health assistants, processors and feed importers and other persons involved in livestock production and marketing were consulted in the preparation of this document.