

DEPARTMENT OF AGRICULTURE

ST. KITTS

2008 ANNUAL REVIEW

BY

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DIRECTOR OF AGRICULTURE

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INTRODUCTION

The Department of Agriculture's objective is defined in its mission statement, which is "*to be a high quality provider of leadership and support in non-sugar agriculture and forestry; to secure food self-sufficiency and satisfy export markets towards sustainable development in St. Kitts and Nevis*". The Department of Agriculture also plays a major role in the implementation of several programmes for former sugar industry workers and has been intimately involved in accelerating the agricultural diversification activities. No forestry programme is carried out by the Department.

The Department is headed by a Director and operates with specific programmes for crops and livestock development. The programmes are guided by a Strategic Plan and implemented through the Annual Work Programme. The Annual Work Programme is implemented in collaboration with allied institutions including CARDI, FAO, IICA and ROC Technical Mission. The Annual Review and Planning Meeting is a major management tool being used and this is now the fourteenth annual meeting.

The outstanding achievements for 2008 included increased agricultural output for several crops and beef with regards to livestock production, Eat Local Day, and Ceremonial Settlement of farmers in the Belmont area who have been related from the Kittitian Hill Project. Other achievements were the construction of water catchments at Con Phipps and Godwin, National Agricultural Exhibition, commencement of the removal of animals from the South East Peninsula, implementation of the of the FAO Project Initiative on Special Food Prices. The successful hosting of the FAO World Food Day celebrations as well as the Farmers' and Fishers' competition and prize giving ceremony were also outstanding activities.

The 2008 Annual Review highlights the main activities of the Department's programme areas for crops and livestock, priority areas, allied institutions collaboration, operation food security and the opportunity gaps (Table 12).

CROPS PROGRAMME

FOOD CROP PRODUCTION

During 2008, there was Hurricane Omar in the third quarter and flash flooding in the last quarter, which adversely affected vegetable production. This inclement weather condition in the latter part of the year contributed to the decrease in production of cabbage (24 %), sweet pepper (15 %), tomato (17%), peanut (50%) and watermelon (36%) (Table 1). However, despite the adverse environmental conditions during the latter part of the year, increases in production were observed for carrot (115%), onion (131%), white potato (190%), pineapple (16%) and yam (20%). There was also a marginal increase in sweet potato production by 2%. This increase in production could be attributed to improved agronomic practices thus resulting in increased yield and farmers cultivating larger acreages as a result of some of the former sugar lands been made available for crop production.

Table 1. Est. Annual Production of Major Food Crops for St Kitts ('000 kg)

Crop	2000	2001	2002	2003	2004	2005	2006	2007	2008
Cabbage	54	44	49	82	87	60	54	81	61
Carrot	55	64	101	104	82	67	71	80	172
Onion	50	5	17	28	17	9	19	22	51
S. Pepper	32	18	40	33	40	22	30	32	27
Tomato	50	73	94	119	114	85	132	141	117
W. Potato	160	130	111	100	120	88	110	126	239
Peanut	59	25	38	30	32	25	56	86	43
Pineapple	17	20	5	10	15	14	53	60	69
Watermelon	59	70	70	101	90	83	127	100	64
Yam	3	11	22	21	16	20	14	15	18
S. Potato								192.7	197

OUTREACH CENTRES

There are two outreach centres located at Tabernacle (TOC) and Fahies (FOC) to provide extension service to farmers in the rural communities and to demonstrate continuous vegetable production under irrigated and rainfed conditions, respectively.

During the year in review, the TOC experienced a number of challenges; nonetheless, several plots of semi-commercial vegetables were established. The plots established included Sorrel, Cucumbers, Sweet Peppers, Water Melon, Honey Dew Melon, Cantaloupe, Cabbage and Onions. Two sweep pepper plots, one cucumber and one tomato plot were affected by heavy rain and high wind, which led to early termination of the plants. When compared to 2007 production fell primarily because the number of plots established were less in 2008 and late planting which targeted the National Agricultural Exhibition since during this period crop production is generally low. The seedling shed at the TOC was expanded due to the high demand for seedling in that area.

During the year successive planting of semi-commercial varieties of onions were evaluated namely h-7, h-9, h-60, h-202, Ha-1367 and Ps. The yields estimated ranged from 4,000 – 24,000 lbs/ac. In addition, the station also evaluated three cucurbits. There was the establishment of two plots of cucumber and one plot of cantaloupe, sun melon and watermelon. The yields estimated from the

cucumber plots were 13,766 and 30,050 lbs/ac while the sun melon and cantaloupe estimated yields were 10,000 and 31,114 lbs/ac, respectively. Two new varieties of watermelon were evaluated resulting in low marketable yields of 7,000 to 22,000 lbs/ac due to the dying back of the plants.

In 2008, the FOC evaluated semi-commercial plots of sweet pepper, tomato, cabbage, watermelon, broccoli, cauliflower, onion, squash and sorrel and favourable yields were obtained. The Centre carried on result demonstration to demonstrate the use of plastic mulch during the dry season. Farmers were convinced of the effects and possibilities of using the plastic mulch to enhance their production. Ten farmers attended the demonstration exercise and have started to use the plastic mulch on their own plots.

LA GUERITE EXPERIMENTAL STATION

Evaluation and introduction of new pesticides and different varieties of vegetables are done at the La Guerite Experimental Station before being introduced to farmers. The Station also propagates seedling for supply to farmers and householders. During 2008, varieties of tomato, broccoli, cauliflower, onion and squash were evaluated. Three cultivars of tomato were evaluated namely TX 62, Adonis, and TX 54 and resulted in estimated yields of 17, 640, 18, 980, 24, 565 lbs/ac respectively. Two cultivars of Broccoli were grown for production namely F66-20 and Packman where estimated yields were 4,400 and 4,900 lbs/ac respectively. The cauliflower that was evaluated is 45 days Taiwan produced an estimated 6,400 lbs/ac. Six cultivars of onion were evaluated namely Hy-Ha 1367, H 202, PS 7410232, H 7, H 9 and H 60 where estimated yields ranged from 7,500 – 10,550 lbs/ac. The early butter nut squash was also evaluated and yielded an estimated 9,400 lbs/ac.

FRUIT AND TREE CROP

During 2008, monitoring of fruit and tree cop farms was a major activity. The main pests observed were Pine Apple Mealy Bug, Nematode infestation in guava, West Indian Fruit Fly Infestation in mango, wax apple, carambola and golden apple. The sub-programme assisted in the planting of 120 Persian Limes among two farmers and increased pineapple production by 3 acres between two farmers. Several householders and schools were also assisted with the provision and planting of a variety of fruit trees in an effort to expand the availability of fruits (table 2). The Department of Agriculture is trying to increase the number the number of traditional fruit trees hence an initiative was taken to donate fruit trees. A total of 455 fruits tress were donated to this initiative. The sub-programme also collaborated in finalizing arrangements with the NHC and the ROC-ATM to provide a fruit tree to every house that would be allocated by government.

Table 2 No of fruit trees donated in 2008

	C. Apple	S. Apple	S. Sop	Star Fruit	Tamarind	Mango	M. Apple	B. Nut	Indian Jujube	Pear	Citrus	Cashew	Moroco
D. Bay Primary	1	2	2		1	1							
Estridge Primary	4	4	4	4	2	2	1	1	1	1			
S. P Primary	2	2	2	2	2	2						2	2
S.P Nursery	1	1											
St. Paul	2	2	2	2	2	2							

Primary													
C. H.S	7	5	5	5	2			1		2			
NEMA	2	2	2	2	2	3				2			
K. Sutton							12			71			
S.Morton	4	4	4	4	2		2	2		2			
Guishard											50		
Brothers Estate	8	8	8	8	8	8	2	2	2	4	8	2	2
Belmont Estate	10	10	10	10	10	10	4	4	2	2	2	2	2
Leonard Herbert	5		5	5	5			5	5		5		
SKNDF	2	2	2	2	2	2							
TOTAL	48	42	46	44	38	30	21	15	10	84	65	6	6

Planting materials to support the Fruit and Tree Crop sub-programme are primarily produced in the Propagation Unit. Data in table 3 shows that the greatest demand for fruit trees was grafted mango trees and Persian Lime where 107 and 103 respectively, were sold in 2008. However, there was a 44.5 % reduction of sales of fruit trees from the Propagation Unit when compared to sales of 2007.

Table 3 Annual sales of selected fruit trees from the Propagation Unit

Fruit tree	2003	2004	2005	2006	2007	2008
Avocado grafted	1	19	13	7	2	2
Breadnut	0	0	44	8	14	12
Carambola grafted	80	20	42	48	21	16
Cashew	10	3	33	15	6	3
Custard Apple	34	5	50	32	13	9
Dwarf Golden Apple	37	1	11	0	11	-
Governor Plum	0	12	34	15	1	-
Grapefruit white	0	6	0	0	48	20
Guava grafted	8	0	2	14	6	-
Lime Persian	43	132	59	181	167	103
Madeira Fig	0	0	27	5	17	6
Mango grafted	14	112	130	163	219	107
Orange Valencia	12	16	32	98	89	23
Pomerac	2	0	28	9	1	6
Soursop	38	23	84	21	9	41
Sugar Apple	38	0	37	24	15	10
Surinamese Cherry	38	0	37	38	5	8
Tamarind sweet	1	5	6	11	4	12
Wax Apple	9	5	20	17	15	3

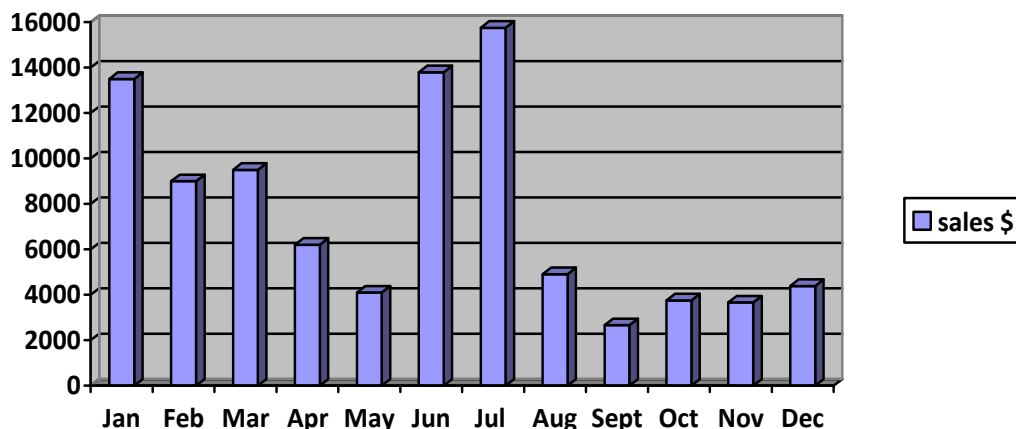
MARKETING

The highlights for the Marketing Unit for 2008 included the Eat Local Day, emergence of an Agro processors group in St. Kitts, the continued relationship with the Marriott and the St. Kitts farmers Cooperative, and the adoption of the Kittitian Fruit Plate by local entrepreneurs.

The contractual arrangement between the Marriott and The St. Kitts Farmer Cooperative Society continued for entire year. The arrangement is still not yet ideal but to date the Department has given

tremendous support to the farmers in providing them with storage facilities, the part time services of an Extension Officer and marketing staff, grading and packing, training as well as transport and record keeping. Figure 1 shows the value of monthly sales throughout the year between Marriot and the SKFCS. The pattern could be best describe as erratic with peaks in the typical slow “off season” and low volume of sales in the peak season

Figure 1. Graph showing value of monthly sales between Marriot and SKFCS (EC\$)



The overall value of sales for the year stood at \$91,218.00 EC. This represented a 9 % fall off in the value of business done with Marriot in 2007 when the figure stood at \$105,157.00 EC. Given the fact that the farmers embarked on a costly produce insurance policy it was hoped that this volume would have doubled. Obviously, that was not the case. The top commodities bought by the Marriot are listed as follows: - watermelon, pineapple, pumpkin, tomato, okra and sweet potato. Some amount of hot sauce was purchased from the SKFCS as well. The SKFCS is in the process of seeking other markets to supply and have started with one supermarket trading produce at a value of \$1,600.00 in the latter part of the year.

In terms of fruit promotion, a new private entrepreneur has decided to produce fruit bowls on a daily basis. With the closure of CEMACO, one of the employees there used the protocol of the Kittitian Fruit Plate for the basis of an individual enterprise.

During 2008, several farmers were encouraged and were facilitated in exporting several commodities to the Northern Leeward Islands. The hardier commodities like sweet potato and pumpkin found their way using the existing transport methods (Dominica Boats) to BVI –Tortola, St. Marten and Anguilla. A small window of opportunity was also exploited in relation to supplying Antigua with vegetables. The Dutch Islands of Saba and Statia also received a consistent supply of vegetables via power 14 - 16 foot vessels that travelled between the islands as well as via the regular excursions organized for consumer shopping in those islands.

In an effort to bring more attention to the commodity chain and to find new commodities for the existing market, the Marketing Unit along with IICA placed some emphasis at revitalizing the Agro Processor on St. Kitts during the year. With some prompting, a group was formed and immediately began making positive changes. They have given confirmation that they are willing to be formalized into a Cooperative Society in 2009. During 2008, they attended for the very first time the Agricultural Exhibition and the Kittitian Expo as a group. Several training sessions were also organized for the group in areas of soap making in collaboration with IICA, Sanitation in the Cottage Industry with Department of Cooperatives

PLANT QUARANTINE

During 2008, the Quarantine Unit was faced with numerous challenges as it attempted to prevent the entry, establishment and spread of exotic pests and diseases. The Unit's efforts were assisted through the collaborative effort of the USDA/APHIS, CARDI, Customs, Port Authority and the Private Sector.

Of major concern was the coconut/palm complex, which was characterized by the deaths of numerous coconuts and palms. Coupled with this was the introduction of the Red Palm Mite. Coconuts and other Palm samples were taken and sent to Jamaica to be analyzed for Lethal Yellowing and the samples, all were found to be negative. However, it was observed that the major cause of death was due to Bud Rot (*Phytophthora palmivora*). The Red Palm mite was observed first in August 2008 and identified by Cardi's Entomologist. Samples then were sent for positive identification. With the assistance of USDA/APHIS the Unit was able to host a workshop to train Extension Officers, Landscapers and Nursery Operators on the identification and control of the Red Palm Mite.

The Unit was also involved in a Caricom initiative to address Plant Health concerns in the region using a network approach. Some of the pests identified for regional attention included Fruit Flies, the Giant African Snail and the Red Palm Mite. The Unit also collaborated with Cardi to carry out monitoring and surveillance activities for the Mango Seed Weevil, the Giant African Snail, Fruit Fly, Sweet Potato Weevil and Lethal Yellowing.

The Unit remained somewhat handicapped in the absence of the updated Plant Protection Legislation, which would be compatible with International, Sanitary and Phytosanitary Standards. The Unit was involved in the inspection of plants and plant products for export and import, issued 201 Phytosanitary Certificates and issued 30 import licenses and responded to house calls for various pests and diseases. It was recognized with the many new and emerging diseases there is need for laboratory space and human resource to support the Unit and its increased activities.

COMMUNICATION UNIT

The Communication Unit continued to be the primary tool used by the Department to relay information to the general public and promote activities of the Department of Agriculture. Hence, members of staff use it as an effective instrument to assist them in the transfer of information to the farming community. Agriscope Radio Programme continued to feature weekly on ZIZ on Sunday mornings and repeated on Thursday evenings. The 30-minute television programme, Agriculture in Context is also a major activity of the Unit, which is televised on Sunday evenings and on Thursday evenings on ZIZ the local TV station. During 2008, 32 new Agriscope programmes were aired while 25 new Agriculture in Context programmes were televised. The Unit also worked with the Allied agencies and collaborated with other media both print and digital in an effort to bring information to the public

LIVESTOCK PROGRAMME

ANIMAL HEALTH

The Animal Health Unit successfully prevented the introduction of foreign animal diseases such as Foot and Mouth Disease, New Castle and Avian Influenza into the Federation of St. Kitts and Nevis. This was achieved through the collaborative effort of the Department of Agriculture and Customs. During 2008, emphasis was placed on regulatory and quarantine measures, ambulatory, surveillance, inspection activities and transfer of technology through training workshops.

During the year, the Animal Health Unit procured a database. This software was designed to support the National Animal Identification Scheme, animal health and import and export data management, which would lend itself to rapid retrieval and analysis. In reference to the Animal Disease and Prevention Legislation Harmonised draft, legislation was prepared by CARICOM and circulated to for review and comments, which were submitted.

REGULATORY AND QUARANTINE

During 2008, a total of 7700 baby chicks were imported of which 40% were broilers destined for Nevis. All of the baby chicks were imported from Miami reportedly due to difficulty of obtaining chicks from the supplier in Barbados. Seventy-eight companion animals were imported for the year. The majority of these animals arrived from the U.S.A and Canada, while others arrived from South Africa, Aruba, St. Martin and a few Caribbean Islands. In addition, five seals were imported from Uruguay for entertainment purposes and 60 K-9 cadavers were imported for teaching purposes by Ross University.

AMBULATORY SERVICE

Veterinary Services continued to provide animal health care at cost recovery cost. Response was made to 235 farmers or animal owners, which corresponded to 715 cases table 4.

Table 4. Annual number of ambulatory cases reported by species

Year	Bovine	Ovine	Caprine	Porcine	Equine	Total
2001	156	214	193	319	08	890
2002	184	214	284	669	18	1369
2003	120	236	260	281	12	909
2004	66	339	240	240	10	895
2005	110	279	205	369	09	966
2006	188	209	163	321	14	915
2007	159	114	168	433	09	883
2008	94	101	130	375	00	715

The castration of pigs was the most frequently reported case, representing 25% of the total cases but an 11% decrease when compared to 2007 (table 5). The incidence of dog attacks on small stocks remained high. Dog attacks represented 17% (126) of the total cases. Over the past nine years, there have been 1,508 reported cases of dog attacks. There were 63 reported cases of Dermatophilosis, 35%

less when compared to 2007. With respect to tick fevers (Anaplasmosis/Babesiosis) there was a significant reduction in the number of these cases. There was one reported cases in 2008 compared to eleven cases in 2007.

Table 5. Major activities and cases seen by the Animal Health Unit

Cases Seen	2003	2004	2005	2006	2007	2008
Castration	214	159	233	186	206	183
Dog bites	158	322	173	203	134	126
Tick fever	7	7	15	1	11	1
GIT parasitism	32	12	25	15	65	na
Dermatophilosis	12	10	31	165	98	63
Total Cases Seen	909	895	966	915	883	715

VETERINARY –EPIDEMIOLOGY – PAR-EPIDEMIOLOGY PROJECT (V.E.P)

The Caribbean Amblyomma Programme (CAP) lasted thirteenth years with primary objectives for tick surveillance and treatment. The programme officially ended in 2008 and the islands that were involved in the programme have resorted to the control of Dermatophilosis in the absence of the provision of Bayticol for tick treatment. In the absence of CAP, there is a new surveillance programme known as V.E.P, which is still in a stage of infancy. The goals of V.E.P are surveillance in priority diseases for each particular island, develop control measures to prevent the introduction of diseases and eradicate these diseases if they are discovered. The programme is funded by the U.S.D.A and incorporates the former C.A.P territories. The Project will provide vehicles, computers and field materials. In addition, linked communications and data for and between territories and technical advice regarding these operations, will be provided. In terms of planned activities, St. Kitts/Nevis will continue to work on the control of the Amblyomma tick and Dermatophilosis and surveillance for two priority diseases in birds namely New-castle Disease and Avian Influenza. Each country has a V.E.P representative who should be assisted by two field personnel. Some work has commenced with respect to demonstration of what should be done about Avian Influenza and New Castle Diseases to get workers to familiarize themselves with the activities.

LIVESTOCK PRODUCTION

LARGE RUMINANT

Beef production during 2008 increased by 19.5% from 90,400 kg in 2007 to 108,000 kg in 2008 (Table 6). The increased production during 2008 was achieved mainly by increased purchases by supermarkets where they purchase local beef at a competitive price and the efforts to remove the animals from the South East Peninsula.

The Department facilitated the sale of 51,427 kg of boneless beef to supermarkets and other processors, which were supplied by 64 farmers and recovered from 395 cattle. The number of cattle that went into the boneless beef programme accounted for 58 % of the total number of cattle slaughtered for 2008. In addition, 7,103 kg of bone-in beef were sold to the school feeding programme and was supplied by 18 farmers and produced from 52 cattle.

During the reporting period, two water catchments were constructed on two cattle farm at Con Phipps and Godwin Estates. The estimated capacity of each is 50,000 gallons and was constructed at an approximated cost of \$30,000.00

Table 6. Annual production of livestock products – St. Kitts ('000 kg)

Commodity	2000	2001	2002	2003	2004	2005	2006	2007	2008
Pork	27.0	37.8	54.9	66.6	61.9	68.8	73.9	74.6	71.7
Mutton	10.6	11.2	10.2	11.9	9.6	8.9	9.7	8.6	11.0
Goat	8.5	8.7	8.6	12.7	13.6	11.3	12.1	14.6	12.6
Beef	32.8	57.7	67.5	83.2	121.7	85.6	60.2	90.4	108.0

SMALL RUMINANT PRODUCTION

Small ruminant (sheep and goats) production recorded a 2.0 % increase for 2008 over 2007. In 2007, 23,200 kg of sheep and goat meat were produced while 23,600 kg were produced in 2008 (table 6). The production of sheep meat increased by 28 % while goat meat decreased by 14%. During the year the small ruminant sub-programme focused on the development of forage banks, improved fencing of farms and water harvesting.

BOURKES BREEDING UNIT

Bourkes Breeding Unit has the responsibility for the conservation, multiplication and sale of pure breeding stock of sheep primarily Barbados Black Belly. In June 2008, 15 heads of 8-12 month old animals were stolen from the Unit. This affected the sale of animals to farmers however, there was an increase in flock size where the total number of animals moved from 42 – 56 (Table 7). Despite the loss due to praedial larceny, four breeding rams were sold to farmers but much of the plans for 2008 had to be postponed.

Table 7. Bourkes Breeding Unit sheep flock movement for 2008

Flock Composition	Opening Stock	Birth	Stolen	Mortality	Sale	Closing Stock
Ewes > 1 year	22			1		23
Ewes 8 – 12 mths	0		10		2	0
Rams > 1 year	1					1
Rams 8 – 12 mths	5		5			6
Weaners						
Ewes < 8 mths	5			1		4
Rams < 8 mths	11			1		4
Lambs						
Ewes < 3 mths	5	16				10
Rams < 3 mths	7	16				8
Total	56	32	15	3	2	56

PIG PRODUCTION

The goal of the pigs sub-programme is to “increase the production of pork under improved systems of feeding and housing to enhance food safety requirements with an aim to penetrate the supermarket and hospitality sectors”. During 2008, an estimated 71,700 kg of pork was produced from 2,632 pigs (Table 8). There is still a strong demand for local pork in the marketplace as is evident by the continued large number of pigs slaughtered despite the many challenges pork producers face particularly in relation to the high cost of imported concentrate feeds.

The Department also facilitated the sale of 3,236 kg of pork from 81 pigs to supermarkets in an effort to guarantee consumer satisfaction. Penetration of supermarkets with local pork continued to be a major objective of the pork sub-programme. During October 2008, a volunteer pig production Specialist was attached to the Department from the ROC –ATM. The priority areas for collaboration include working on the development of proper breeding systems with a possibility of using artificial inseminations to improve the national gene pool. In addition, efforts will be made to use available local materials to blend into a complete feed as an alternative to the costly imported feeds.

Table 8. Estimated annual pork production ('000 kg) and number of pigs slaughtered

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Pork	27.0	37.8	54.9	66.6	61.9	68.8	73.9	74.6	71.7
Pigs	920	1,418	1,988	2,414	2,270	2,520	2,693	2,737	2,632

POULTRY PRODUCTION

There is no significant broiler production in St. Kitts. The Department’s role as it relates to poultry production is data collection from egg producers. During the current year, three farmers got permission to import eggs. This was necessary to compensate for egg shortages caused by unavailability resulting in low production. The importation was also necessary to meet the high demand for eggs at Easter and during the Christmas season. Estimated egg production has shown marginal increase in 2008 when compared to 2007 (Table 9). In, 2008 egg production was estimated at 3,354,000 which is a slight increased over 2007 when the production was estimated at 3,321,000.

Table 9. Estimated Annual Egg Production

Year	Eggs ('000)
2000	2,241
2001	3,675
2002	2,721
2003	2,902
2004	2,715
2005	3,222
2006	3,269
2007	3,321
2008	3,354

BASSETERRE ABATTOIR

The number of animals slaughtered at the Basseterre Abattoir decreased marginally by 0.7% from 5,361 in 2007 to 5,326 in 2008 (Table 10). This has been the second highest annual total of animals slaughtered for the past 18 years of the abattoir's operation. Pigs continued to be the dominant species in terms of the number of animals slaughtered and the 2,632 slaughtered in 2008 is the second highest annual total ever recorded. The number of cattle slaughtered increased by 19% where 568 were slaughtered in 2007 and 678 in 2008 which is the second highest number to be slaughtered at the abattoir. The number of goats slaughtered decreased by 14% while the number of sheep slaughtered increased 28% when compared to 2007.

Table 10 Number of animals slaughtered annually at the Basseterre Abattoir

Year	Cattle	Pig	Goat	Sheep	Total
1994	147	1,257	716	1,084	3,204
1995	187	1,356	679	1,008	3,230
1996	166	1,543	764	1,041	3,514
1997	172	1,273	788	1,208	3,441
1998	194	1,335	696	1,202	3,427
1999	210	1,452	782	1,110	3,554
2000	186	920	684	855	2,645
2001	365	1,418	723	941	3,447
2002	421	1,988	714	848	3,971
2003	523	2,414	1,118	1,049	5,104
2004	723	2,217	1,079	907	4,926
2005	522	2,371	984	736	4,613
2006	384	2,631	1,040	754	4,809
2007	568	2,737	1,281	775	5,361
2008	678	2,632	1,077	939	5,326

COLLABORATION WITH ALLIED AGENCIES

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS - FAO

During the period under review the US \$393,000 emergency support for agricultural enterprise development for workers displaced through the closure of the sugar industry was completed. As part of this project, a Specialist in post-harvest management and fresh cut processing met with 13 farmers and technical staff and provided theoretical and hands-on training in the harvesting and post-harvest handling (including packing and packaging) of vegetables, root crops and tropical fruits. Local supermarkets and fresh produce markets were visited to assess the packaging and quality of fresh-cut produce. In addition, another expert provided technical advice and recommendations with regards to quality, presentation and shelf – life improvement of the fresh fruit plate. Training was received in good practice to assure the safety, quality and shelf – life of fresh – cut produce. Also, as part of this project, another Specialist provided technical training in postharvest handling and processing of peanuts and met with 15 farmers and technical staff and highlighted specific measures required to prevent mycotoxin contamination. Farmers and staff of the Department of Agriculture were also trained in the operation and maintenance of peanut processing equipment. The following outputs were achieved as a result of the emergency support for former SSMC workers

- ❖ Agricultural inputs distributed and as a result, 100 crop production enterprises and 46 livestock enterprises were supported
- ❖ One hundred and forty six of the workers displaced through the closure of the sugar industry trained in the practical aspects of crop and livestock production
- ❖ Abattoir improved to facilitate the off-take of animals produced under the project
- ❖ A peanut drying facility established so as to facilitate the post-harvest handling of the output generated from the project and which provided support to other producers
- ❖ Extension staff and beneficiaries trained in harvesting and post-harvesting practices as well as in farm management, business development and marketing

In June 2008, the \$US 250,000.00 input supplies to vulnerable population under the theme Initiative on Soaring Food Prices commenced. The main objective of this project is to provide inputs to increase food production and avoid disruption in the livelihoods of the most vulnerable groups in the community. To fulfil the objective of the project farmers have started to receive the following inputs provided under the project.

- Pineapple suckers
- Land preparation
- Vegetable seeds
- Peanut seeds
- Vegetable bags
- Drying trays
- Protective clothing
- Fertilizer
- Animal Feed and medication
- Baby chicks and rabbits

In 2008, the Fruit and Tree Crop sub-programme continued to benefit from a Fruit and Tree Crop Specialist from the Republic Cuba for an 18-month contract, which commenced in 2007 under the umbrella of the South Cooperation sponsored by the FAO. Over the period, he was able to achieve the following objectives.

- Demonstrate appropriate fruit and tree crop nursery development and management
- Demonstrate all aspects of orchard establishment and management including pruning, fertilization and irrigation
- Coordinated two training workshops for tree crop farmers and Extension Officers and these were held separately in St. Kitts and Nevis

- Introduced appropriate integrated pest management techniques adapted to the agro-ecological conditions specific to fruit and tree crops

The FAO/CARICOM/CARIFORUM/Government of Italy Food Security Project phase 1 was initiated during December 2004. The project involved the establishment of irrigated vegetable demonstration plots on both St. Kitts and Nevis. Farmers received a variety of inputs and training. The total sum of money provided under this project was US\$48,000.00 however, it concluded in 2007. The most significant impact of the project was the introduction of plastic mulch that is now being used by an increasing number of farmers under irrigated and rainfed conditions.

During 2008, a second phase was initiated and the Departments of Agriculture of St. Kitts and Nevis received laboratory equipment and computers with various peripherals for the Veterinary and Entomology labs to the value of US\$ 50,000.00. The second phase is being implemented in an attempt to address certain food safety and sanitation concerns with an objective to develop the Animal and Plant Health Units of the Departments of Agriculture of both St. Kitts and Nevis.

The Organization also assisted the farmers who provided attachment for the project for the temporary employment of former SSMC workers. Assistance was received to prepare 60 acres of land, purchase and distribute 30 bags of peanut seeds and 100 bags of fertilizer to the farmers who provided the attachment.

INTER-AMERICAN INSTITUTE FOR COOPERATION ON AGRICULTURE (IICA)

The 2008 Technical Cooperation Agenda for the IICA St. Kitts and Nevis Office, focused on enhancing competitiveness and repositioning of the Agri-Food sector through activities aimed at strengthening the value chain from farm to table. Activities included strengthening the capacity of the productive sector to meet the production, food security and quality specification of the tourism and other local markets, partnering of farmers and processors with buyers in the tourism and hospitality sector; and strengthening of the farmers' groups through capacity building and infrastructural development.

Ministry personnel were involved in various activities to improve their leadership skills and interact with regional stakeholders. The Director of Agriculture and one member of staff attended a one-week Forum for Young Leaders in Costa Rica and 20 persons from different government ministries participated in a Codex Alimentarius Workshop and are better informed of the standard setting process and the functioning of the local committee. In addition, senior officials of the Ministry of Agriculture participated in the Caribbean Week of Agriculture (CWA) and were able to dialogue with other stakeholders in the region, share successful experiences and jointly promote the importance of agriculture.

Crop improvement was achieved through various activities including the procurement of equipment and package material for one small entrepreneur thereby developing the cassava food chain on St. Kitts and the enhancement of the management programme for the coconut Lethal Yellowing Disease, which utilized planting material valuing EC\$5000. The Project Strong Beekeeping programme, which was initiated by IICA, has continued to be a source of revenue for the school. An additional hive and protective clothing were donated. Greater linkages between the tourism and agricultural sectors have been fostered as a result the implementation of OAS/ IICA sponsored project

The securing of Grant Funds of EC\$49,000.00 to assist the St. Kitts Farmers' Cooperative in capacity building and infrastructural development and the strengthening of the Agro-Processors' Cooperatives on both islands, which secured an additional Grant Fund of EC\$56,000.00 for training and organizational development on St. Kitts and to assist in capacity building, HAACP and infrastructural development on Nevis. Sixty-eight agri-producers have a clearer understanding and appreciation of the current global issues, which affect their enterprises as a result of seminars and consultations, which were conducted. Forty-three persons were trained in entrepreneurship and agri-business management and have shown signs of improvement in the management of their enterprises. There is greater awareness and implementation of the principles of Good Agricultural Practices by a group of selected farmers. Twenty-eight members of the St. Kitts Farmers' Cooperative and the Fahies Women Producers' Association were taken on an educational visit to Nevis and have been networking with each other since meeting.

The development of strategies to improve the performance of the veterinary, food safety and phytosanitary protection services was achieved at a visioning seminar, conducted for private and public sector personnel. Three veterinarians have enhanced their capacity to improve the surveillance of targeted animal health diseases through the regional Veterinary Epidemiology Project (VEP) being implemented by IICA.

CARIBBEAN AGRICULTURE AND DEVELOPMENT INSTITUTE - CARDI

The Unit provided technical assistance to farmers, homeowners, and landscapers on the management of various pests and diseases, fruit trees, vegetables and ornamentals. Specifically, services and support were provided to the hot pepper production and marketing farming industry to evaluate, assess and advise farmers on local production and management of pepper seedlings. A marketing workshop was organized and attracted about 20 participants including technicians, farmers and exporters. In addition, a local agri-entrepreneur was assisted in sourcing a grinder for the production of hot pepper mash. However, the non-availability of suitable packing facilities is a major constraint to expanded export marketing of the crop. The sweet potato production and marketing industry was assisted by conducting field trials to evaluate bio-pesticides for the control of sweet potato weevil and soil grubs. Together with this, a list of pests was compiled which are comparable to pests in Guyana, Jamaica, St. Lucia and Dominica. Regarding small ruminant production, the small ruminant sector was surveyed to determine its characteristics. At least five formal meetings of the Plant Health / Alien Invasive Species Group were held this year to examine the spread of Giant African Snail (GAS) in the Caribbean and put a contingency plan in place. Further, in response to widespread debilitation and death of coconuts and other palms in St Kitts, a survey was conducted to determine their plant health status and a informal relationship established with the Jamaica Coconut Industry Board for the analysis of samples and other technical assistance. Close examination showed the presence of mites identified as Red Palm Mite, which affected Coconut, Royal and Foxtail palms. Studies have commenced on the use of various predators for the control of the scale insect. Members facilitated, organized and attended several workshops, meeting and conferences including marketing and investing, crop management, integrated pest management, food and nutrition conference and a visioning workshop.

REPUBLIC OF TAIWAN – AGRICULTURAL TECHNICAL MISSION (ROC-ATM)

During 2008, strong collaboration with the ROC – ATM continued. Meetings were held with the technical staff and targeted farmers to discuss possible assistance to the development of commercial farms particularly in the areas of fruit and tree crop and vegetable production. The Mission also hosted

field days for peanut and sweet potato. These demonstrations were a means to bring to all stakeholders and interest groups the results of research work carried out to evaluate these crops as local varieties were compared with some imported from Taiwan. A field day was organized also, at the La Guerite Station of the Mission to observe the work being carried out on Anthuriums and Orchids. In addition, a pig production volunteered pig production Specialist has been provided by the Mission and assigned to the Department to assist with the development of the pig industry. During the last quarter, Dr. Chen was transferred to another location and a new Chief, Mr. Shuie was assigned. I take this opportunity to thank Chief Chen for a strong show of collaboration during his tenure and wish him all the best in his new assignment. I would also like to challenge the new Chief to double, at least, Dr. Chen's performance in light of global food insecurity and our local production and the many challenges faced by our farmers.

PRIORITY AREAS FOR 2008

During the beginning of 2008, the Department was asked by the Ministry to submit a list of priority areas for the year 2008. The following activities were submitted and were accepted by the Ministry which were then implemented by the Department.

CEREMONIAL SETTLEMENT OF FARMERS AT BELMOT

During the year 2008, forty-four farmers who previously operated in the area of the Kittitian Hill Development Area were completely settled at the Fahies Agricultural Belt on approximately 80 acres of former sugar lands. In order to recognize the official settlement of these farmers a ceremony was organized. Several prominent persons addressed the farmers. These included the Prime Minister – Parliamentary Representative for the area, Minister of Agriculture, Permanent Secretary and a Representative from the White Gate Corporation. The main objective of the ceremony was to distribute rental agreements to the farmers for the use of the lands, which gave them a sense of ownership, or belonging to the new plots they were allocated. The plots were allocated at an average of two acres per farmer. The specific conditions of the rental agreement were that the farmers would occupy the plots for two years rent-free. In addition, the agreement stipulates that each farm be fitted with one breadfruit, one breadnut and one ackee tree, which are being facilitated by the Department of Agriculture. The planting of these trees in addition to adding benefit to the physical and fertility status of the soil is expected also to contribute to our pursuit to national food security particularly the breadfruit tree.

TEMPORARY EMPLOYMENT OF FORMER SSMC WORKERS

Cabinet approved a project for the temporary employment of former SSMC workers on October 23, 2007 following a concept paper that was prepared by the Department of Agriculture. Initially the project was to be implemented over a three-month period. However, at the end of that period many of the workers still did not find alternative employment and the government decided to extend the assistance in two phases. In the first phase, the workers continued to receive a stipend of \$250.00 per week. In the second phase the government paid \$125.00 per week and the owner of the farms to which these workers were attached were to pay an equal amount of \$125.00. Regrettably, some of the farm owners did not keep their part of the bargain to assist these workers in that regard. The Department collaborated with the Department of Community and Gender Affairs to provide training in life skills for these workers and a ceremony was organized mainly by the Department of Community and Gender

Affairs to mark the successful completion of the training and to recognize the participants. In addition, they received an awareness talk from Social Security Officials, which reportedly enlightened them on several issues relating to the Social Security Scheme. The Department also facilitated the Health Department with the names of these workers, which enabled these workers to have received vaccinations with regards to a number of occupational diseases/infections such as tetanus. The programme ended on 31st December 2008 with 100 listed workers. Over the year, the list of workers was dynamic in that when a worker found suitable employment they left the programme and the opportunity was extended to another individual. The total sum of money spent on the programme was **\$1,250,301.00**

EAT LOCAL DAY

In May 2008, the Department hosted an Eat Local Day. The event, though not initially planned to be associated with the National Agricultural Exhibition (NAE) turned out to be one of the sensitizing activities leading up to the NAE. The original intention for this activity was to get the entire nation to eat a meal preferable lunch prepared from all local ingredients. The main carbohydrate was supplied by breadfruit while the main animal protein was supplied by pork. The Department saw this fitting since the breadfruit has been identified as an item for food security while pork is viewed as animal production for which production can be easily accelerated tending towards self-sufficiency in this commodity. It was also felt that a large number of our population particularly the youths have lost the taste of locally produced foods. It was expected that from the many sumptuous dishes prepared and presented from our local foods that this will bring back a liking of these foods to the pallets of our locals. By extension, the overall expectation was to encourage the sale of local produce and reduce the large amounts of food that is being imported.

NATIONAL AGRICULTURAL EXHIBITION

The year 2008, marked the celebration of the 25th Anniversary of Independence. In light of this, it was decided that the Annual Open Day put on by the Department of Agriculture would not be done at the usual time but instead it should be incorporated into the celebrations of the activities for the 25th Anniversary of Independence as was advised by the Minister. Dr. Jerome Thomas was appointed as Chairperson and a steering committee was formed. The strategic approach for the selection of committee members was to select representative from the keys areas who could have coordinated that particular area. The activity was held over a three-day period from September 11 – 13, 2008. The main objective of the exhibition was to showcase Agriculture over the past 25 years and to highlight opportunities for the future. As part of the displays, there were a number of activities put on to attract the public. These included the opening ceremony, which featured calypso, folklore and dance. In addition, there was a 25/25 cricket match between St. Kitts and Nevis, which St. Kitts undoubtedly won. There was also a dog show. The event has been a National event where the participation of the Department of Agriculture on Nevis has been commended for their strong show of support. Highlighted were the processed meats, the Nevis agro-processors and other entities who took the time to come across the narrows to join in the celebrations on this landmark and well deserving 25 years of nationhood. In addition, all the participants and persons who helped in making the NAE 2008 a reality have been commended for a job well done.

REMOVAL OF ANIMALS FROM THE SOUTH EAST PENINSUAL

There is an urgent need to remove all livestock from the South East Peninsula (SEP) which is private property and is a problem to the ongoing developments and other factors such as environmental concerns. Numerous meetings were held with the farmer, the developers at the SEP, staff of the Ministry and Department of Agriculture and other interest groups to discuss the relocation process. Several efforts over the year have proved difficult left alone without government's direct intervention. Due to the urgency and serious nature of this activity, government took control of the relocation process and the Ministry directed a member of staff to supervise the operations. In order for the relocation to be successful, it was necessary for a number of provisions to be made prior to animal movement. The government allocated approximately 150 acres of lands in Con Phipps, Godwin and Stone Fort to this activity for the creation of a new farm and expanding two others and facilitated water connection at Con Phipps and Stone Fort. In addition, government also supported in the cutting and transport of forage to the farm in Con Phipps and the cutting and transport of fence posts to any of the locations where they were needed. Further, the slaughter fee is waived from all animals moved from the SEP to the abattoir for slaughter. The Department has also been instrumental in the facilitations of meats from this activity. It is also noteworthy to mention that the developers have financially contributed significantly to this activity in the areas of fencing materials and labour and transport of animals to the various sites. Reportedly, there still exist an estimated 2,500 small ruminants and 500 cattle at the SEP. The relocation process initially was to be completed by 31st December 2008 but the current projection is by the end of February 2009. Table 11 below gives a summary of the achievement of the various activities since government direct intervention in the last quarter of 2008.

Table 11 Results of activities for the movement of animals from the South East Peninsular

Activity	Results
Rolls of wire used	19
Holes dug	2,650
Posts cut	1,200
Host planted	1,200
cattle moved to farm	54
Sheep and goats moved to farm	970
Cattle moved to abattoir	34
Sheep and goat moved to abattoir	205
Carts of forage cut and transported to farm	99

OPERATION FOOD SECURITY

SCHOOL GARDENS

The Department of Agriculture is collaborating with the Ministry of Education with regards to the redevelopment of school farms. The school garden activity targets mainly students of the primary schools of grades 4 – 6. To date ten schools have commenced farming activities using organoponics and conventional techniques. Each school was assigned an Officer to lend technical assistance to this activity. Reportedly, some of the major challenges encountered included fencing of the garden area, stray animals, and availability of water, praedial larceny and difficulty in site preparation. The schools have benefitted not only educationally but also financially. The proceeds received can be used by the schools to purchase well-needed supplies. The Cayon Primary School entered the SCIMATECH science fair with two entries from their garden and won the School Best Project and

Runner-up Best Project in their respective categories, which were a great boost for their gardening experience.

HOME GARDENS/ORGANOPONICS

With regards to the soaring food prices that threatened the country at the beginning of 2008 the Department immediately embarked on a programme for the development of kitchen or home gardens, which is also dubbed urban gardening in the city area. The programme began with collaboration from the Republic of Cuba through the assignment of two Specialists in organoponics. The programme is being continued and an Officer from the department is assigned to it. To date, approximately one hundred householders and five community groups have benefitted from this activity.

RABBIT PRODUCTION

Food security has become a household word in the Federation of St. Kitts and Nevis especially post 9/11 and more recently after the closure of the sugar industry. Recently, this issue has been exacerbated by the upward spiral in food prices and energy cost. There is therefore a need to explore initiatives from within that will seek to address this concern of food security. Indeed, there needs to be a source of animal protein that can be produced easily and inexpensively. The Department of Agriculture focuses on specific livestock species (cattle, sheep, goats, pigs and poultry) with respect to the support given to livestock farmers. These species require large acreages of land (ruminants) while others depend heavily on imported feeds (pigs and poultry). In addition, frequent outbreaks of disease in the international exporting countries have affected the availability of meat and meat products. The development of micro livestock such as the rabbit into a recognized industry can help to address food security issues. The Department has identified the rabbit as a as an alternative viable livestock for national development and to address food security issues. During 2008, one meeting was convened primarily to determine who has interest in rabbit production. Based on the information received over 30 persons have indicated an interest in rabbit production at the commercial level. Persons currently involved in rabbit production have being receiving inputs such as feed and young rabbits as part of the FAO project which is providing assistance to vulnerable households.

OPPORTUNITY GAPS

While huge gaps/deficits in production exist for several crops and livestock commodities, there has been an increase in production of some commodities, from 2007 to 2008, to meet more closely the national demand (Table 12). Though white potato production almost doubled from 126,000 kg in 2007 to 239,000 kg in 2008, production only met 40% of the national demand for the crop. Based on this, farmers should be aware that there is an opportunity to produce another 361,000 kg to meet the national demand. Egg production continues to increase and carrot production doubled to meet the national demand. However, with the decreasing production of some crop and livestock commodities, measures must be implemented to increase production and meet the national demand.

Table 12 Showing quantity / % produced for selected commodities, national demand and opportunity gaps (kg)

Items	2007 Production	2008 Production	National Demand	2008 % Produced	Opportunity Gaps
Cabbage	81,000	61,000	156,000	39	95,000

Carrot	80,000	172,000	174,000	99	2,000
S. Pepper	32,000	27,000	96,000	28	69,000
Tomato	141,000	117,000	156,000	75	39,000
Onion	22,000	51,000	324,000	16	273,000
Peanuts	56,000	43,000	90,000	48	47,000
S. Potato	193,000	197,000	492,000	40	295,000
W. Potato	126,000	239,000	600,000	40	361,000
Watermelon	100,000	64,000	300,000	21	236,000
Yam	15,000	18,000	72,000	25	54,000
Pork	75,000	71,800	454,000	16	382,200
Beef	90,400	108,000	155,000	70	47,000
Sheep and goat meat	23,200	23,600	201,000	12	177,400
<i>Eggs</i>	<i>3,321,000</i>	<i>3,354,000</i>	<i>3,269,000</i>	103	-85,000

CONCLUSION

The achievements of the year under review met with challenges of various kinds. These included the increased high cost of agricultural inputs and unfavourable weather conditions (dry spell and storms) to name a few. Like crop production the pigs and poultry industries have been threatened by the high cost of imported feed. The implementation of the temporary employment of former SSMC workers project by the government brought some measure of relief to 100 unemployed former SSMC workers. The successes achieved in 2008 were by a large measure due to the strong support and collaboration with our allied institutions. Though the data with respect to opportunity gaps is significant in many instances there are periods of the year when there were surplus in production. There needs to be in the first instance a mechanism to move excess production either to overseas markets or into further processing. In the case where shortages exist systems must be developed to expand the growing period and the necessary and appropriate infrastructure such as water for supplemental irrigation must be part and parcel of the identified necessities if the opportunity gaps are to be significantly reduced.