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Agricultural Diversification in St. Kitts – Opportunities and Challenges

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Abstract

Up until fairly recently the economy of St. Kitts was dominated by sugar production. Sugarcane has been cultivated on St. Kitts for over 300 years on the best agricultural lands while in the past non-sugar agriculture only occupied marginal lands. However within recent years the sugar industry has accumulated significant annual deficits and alternatives for economic development are being examined. Agricultural diversification away from sugar is one option that is currently being considered. St. Kitts is a significant net importer of food and increasing non-sugar agriculture production appears to be an option for examination. There also appears to be opportunities for enhancing linkages with the growing tourism market. Markets for agricultural produce also appear to exist in the nearby islands. However diversification of the agricultural sector is faced with a number of challenges including trade liberalization, limited water access, weak farm management practices, insecure land tenure and competition from other economic activities for the limited available land. The opportunities and challenges for agricultural diversification in St. Kitts are examined in this paper.

INTRODUCTION

St. Kitts and Nevis is a twin island Federation located in the Eastern Caribbean that attained its independence from the United Kingdom in 1983. The Federation comprises two semi-autonomous islands that are separated by a strait of about 3.2 km. St. Kitts has a total land area of about 176 sq. km and an estimated population of 32,000 while Nevis covers an area of about

93 sq. km and has an estimated population of 10,000. The island of St. Kitts consists of a main mountain range in the middle of the island with a peak of about 1,155 m above sea level. The upper part of the island is steeply sloping volcanic cones with slopes that exceed 30 percent. The lower slopes are more gentle being less than 10 percent below the 500 ft contour and up to 15 percent between 500 ft and 1000 ft. Most of the soils are loamy sands and sandy loams

that have a low water holding capacity and are prone to erosion.

ECONOMY

St. Kitts and Nevis is an upper-middle income country with GDP per capita estimated at US\$6,993 in 2001 (Statistical Review, 2001). During the early- to mid-1990s, the economy of St. Kitts and Nevis was able to record real GDP growth of about 5.5 percent annually but this was interrupted in 1998 by Hurricane Georges, followed by Hurricanes Lenny and Jose in 1999 (IMF, 2003). The annual GDP growth was 7.33 percent in 1997 but declined to 1.02 percent the following year due mainly to the adverse effect of Hurricane Georges. However there was a temporary resumption of growth in 2000 with a GDP of 6.2 percent due mainly to post-hurricane reconstruction. Real GDP growth decelerated to 0.8 percent in 2002 from 2.3 percent in 2001 owing to the effects of September 11, 2001 and significant declines in tourism, manufacturing and construction.

The economy of St. Kitts and Nevis was traditionally dominated by sugar production. In 1982 sugarcane production contributed 8.69 percent of GDP while sugar manufacturing contributed 6.16 percent (Table 1). However sugarcane contribution to GDP has declined with time to 2.21 percent in 2002 while the contribution of sugar manufacturing has also declined to 1.42 percent. The total agriculture contribution to GDP in 1982 was 15.17 percent but this has declined to 5.52 percent in 2002. Non-sugar agriculture contribution to GDP has also shown a similar trend

declining from 6.48 percent in 1982 to 3.31 percent in 2002. The contribution of sugarcane production to agriculture has however declined from 57 percent in 1982 to 40 percent in 2002. Since the mid-1970s there has been a gradual economic diversification towards light manufacturing, services, construction and tourism. Tourism has now become the engine of growth for the economy of St. Kitts and Nevis.

SUGAR INDUSTRY

For 300 years agriculture on St. Kitts was dominated by sugarcane production. Historically sugarcane had been cultivated on the fertile and flat lands while food crops were cultivated on marginal and less fertile lands. Sugarcane was cultivated to be processed for the export market while food crops and livestock were produced for the domestic market. Sugar production peaked in the 1950s at 53,000 mt and was cultivated on about 6,000 ha of land (Kelly, 2004). From the mid 1980s the sugar industry began facing difficulties and marked declines in yields and area cultivated have been observed. In the year 2004, sugar production declined to about 14,000 mt and the area cultivated had been reduced to 3,328 ha. The land available for sugarcane cultivation is rapidly being lost to other activities and has declined from 4,100 ha in 1999 to 3,328 ha in 2003. During the years 2002 and 2003, an estimated 685 ha were lost to housing, tourism (including a golf course), recreational and non-sugar agricultural activities.

The sugar industry is State owned and is managed by a Government Corporation.

The industry has had annual financial losses exceeding US\$11m since 2000. The current overdraft is about US\$11m and the interest and finance charges for 2004 is estimated at 33.5 percent of total expenditure (Kelly, 2004). The loss for 2004 is estimated at US\$13m.

DIVERSIFICATION PROJECT

Agricultural diversification has been on going for several years. However a five-year agricultural diversification project was launched by the Minister of Agriculture on October 16, 2002. The project proposes to diversify agricultural production away from the main cropping of sugarcane by intensifying the development of non-sugar agriculture. It aims at increasing non-sugar agricultural production, both crops and livestock, and raising incomes of producers through the provision of improved production technology and other support services to include suitable inputs, irrigation water and the development of feed resources. The project is expected to increase the supply of local fresh produce including vegetables, roots and tubers, fruits and meat products, the bulk of which are now imported. The activities together with a programme of support to the private sector is expected to address marketing difficulties through the development of a marketing unit that is expected to coordinate the sale of increased high quality produce.

The project is expected to include all agricultural areas of the island and would cover the existing non-sugar agriculture rainfed areas as well as some sugarcane areas that would be converted for irrigated

and rainfed food and tree crop as well as livestock production. The project has five main components including promotion of agricultural development; development of marketing support; soil conservation; strengthening of the Departments of Agriculture and Water Services; and support to the private sector. The main objective of the agricultural development component is to improve and modernize the existing production system of non-sugar agriculture and expand it further to accelerate the process of diversification from sugar production through increased involvement of the private sector. A secondary objective would be to significantly reduce the large food import bill by the production of high quality products that are competitive.

The second objective would be the creation of a competitive farming sector driven largely by market demands of the local tourism sector and sub-regional islands. Thus the project would aim to improve the cropping systems and animal husbandry practices on the existing rainfed farms through the transfer of technology under an improved extension system.

DOMESTIC PRODUCTION

Crop production on St. Kitts is mainly rainfed with very limited access to water for supplemental irrigation. As a result, vegetable production is mainly during the first five months of the year resulting in surplus production for two to three months. There is minimal production during the second half of the year when virtually all the vegetables for domestic consumption are imported. The initial diversification thrust

during the early 1990s focused on vegetable production and appear to have peaked in 1994 when attempts were made to export onion and white potato. However the introduction of Pink Hibiscus Mealybug during that year resulted in the loss of the export market and annual production declined markedly. Since then production has varied with time but appear to have increased for some crops including cabbage, carrot, sweet pepper and tomato (Table 2). The annual production of some vegetables during 2003 including cabbage, carrot and tomato was at least 70 percent of the estimated annual demand. However, due to the limited period of production, the produce was only available for five to six months of the year.

Livestock production has in the past been mainly of a subsistent nature and operated by part-time farmers who utilized poor animal husbandry practices. An exception to this was egg production that was dominated by two commercial producers. There is currently no commercial broiler production on St. Kitts or Nevis. Beef production was also adversely affected by the tick borne disease, dermatophilosis, that almost eliminated cattle production on the island. Within recent years, however, significant increases in pork and beef production have been observed (Table 3). Pork production has almost doubled since 1997 while beef production has increased by 300 percent during that time. The increase in pork production has resulted from reduced feed prices, improved breeds, improved husbandry practices and a strong demand for the local produce. It is important to note that local pork has not yet significantly penetrated the supermarket outlets. On the

other hand, local beef has been able to penetrate the boneless beef market and this has resulted in a significant reduction of imports. Mutton and goat meat production remains low although a strong demand exists. The low production level appears to be mainly as a result of the high incidence of dog attacks on small ruminants that has made small ruminant production a very risky venture.

Increase in fish landings have also been observed. This appears to have resulted from increased targeting of pelagic species and the introduction of fish aggregating devices.

OPPORTUNITIES

Domestic Market. St. Kitts and Nevis is a significant net importer of food. The import data from the trade statistics indicate that the value of food imported during 2003 was US\$26,762,200 (Table 4). A review of the commodity groups shows that meat and meat preparations was 21 percent of the total value of food imported while the vegetables and fruits group was similar at 20 percent. Meat and meat preparations was dominated by poultry meat, pork, mutton and choice beef cuts. There currently appears to be minimal opportunity for broiler production due to its high dependence on imported feed. Previous attempts at commercial broiler production only survived with significant Government support. On the other hand pork production has been increasing over the past several years. Opportunities exist for penetration of the supermarkets as the current production is mainly sold directly to the consumers.

Opportunities also exist for processing as a significant proportion of the imported pork is in the processed form. There is also a strong demand for local mutton particularly for use in a popular local dish.

Vegetable and Fruit production. Vegetable and fruit development would appear to be areas of significant potential for expanded production. The country does not have a history of fruit production due apparently to limited access to land and insecure land tenure. However with increasing health consciousness there is a high demand for fruits. Although a high proportion of the fruits imported are temperate ones, increased production of tropical fruits can partially displace the demand for temperate fruits. Increased vegetable production particularly during the second half of the year is another area of opportunity. Vegetable production during the second half of the year is very marginal and importation to meet the domestic requirement is almost 100 percent during that time.

Fishery Development. Enhancing fishery development to include targeting of the pelagic species provides opportunities for the domestic and export markets. Fish harvesting is still dominated by over fishing of the inshore areas by fishers who only fish for a few hours at any one time. There is a need to modernize the fishing industry by the introduction and use of modern fishing methods.

Agro-Processing. A high proportion of the food imported is in the processed form. There is currently minimal agro-processing capacity and where it exists its primarily at

the cottage level. Opportunities exist for agro-processing for the domestic and export markets.

Tourism Linkage. Tourism has been identified as the engine of growth for St. Kitts and Nevis and significant emphasis is being placed by the Government on the development of that sector. The recent opening of a 600 plus room hotel has almost doubled the number of hotel rooms and markedly increased the airlift into the country. The increased number of stay over visitors will result in increased food consumption and thereby improving the opportunities for the marketing of local agricultural produce to the hospitality sector. This sector also has a strong demand for cut flowers a significant portion of which is currently imported.

Export Market. Opportunities also exist for expanding production to supply markets in the nearby islands. Up until the invasion of the Pink Hibiscus Mealybug, the production of white potato and onion had been expanded to meet export opportunities in the nearby islands. St. Kitts has also exported hot pepper to North America and small volumes of fruits and vegetables to the Dutch and Virgin Islands. Agricultural produce from St. Kitts has also received good responses during agricultural exhibitions in the US and Virgin Islands.

CHALLENGES

Trade Liberalization. Agricultural diversification faces several challenges not least of which is the effect of trade

liberalization on the open market that exists in St. Kitts. The importation of relatively cheap agricultural products from either highly subsidized producers or low cost producing countries makes it extremely difficult for farmers to compete on the domestic and export markets. This is particularly so for livestock products including poultry, mutton, pork and beef. As a result there is an oversupply of local beef despite significant levels of importation and a failed broiler industry although large volumes of poultry meat are imported.

Import Preferences. There also appears to be a preference by importers and consumers for imported produce and this is particularly so for livestock products. Apparently importers enjoy a higher markup on imported produce compared with when purchased locally and consumers generally pay a lower price. There is also a preference in the hospitality sector for imported produce and penetration of some markets is extremely challenging.

Water. Limited access to water for supplemental irrigation is a major limiting factor to increasing agricultural diversification on St. Kitts. There are no surface catchments due primarily to the sandy nature of the soil and the water harvested is mainly used for domestic, tourism and industrial activities. As a result agricultural production is mainly rainfed and the period of harvest is generally restricted to the first half of the year.

Weak Management. Agricultural production is dominated by part-time farmers who generally exhibit weak farm management

practices. There appears to be limited understanding of the management practices that are required to optimize production through the rational and timely use of inputs. As a result products are generally not competitive and access to the market becomes very difficult.

Land Tenure. The insecurity of land tenure has been a major factor particularly for the production of fruit trees and the raising of livestock. This has mainly resulted from the plantation system that existed on St. Kitts where the majority of the land was owned by a few families and only marginal lands were available for agricultural production. Insecurity of land tenure has also restricted farmers access to credit and adversely affected medium to long term planning.

Access to Land. In St. Kitts land available for agriculture is constantly being lost to other economic activities. Agricultural development appears to have lost its prominence as the main activity, sugar production, is no longer financially viable and economic diversification is a major focus of the Government. The competition from other sectors is not only reducing the access to land but is also adversely affecting the availability and cost of farm labour. Farming as a business also appears to be a last choice for many persons and as a result very few good entrepreneurs are being attracted to agriculture.

CONCLUSION

Agricultural development in St. Kitts is at a critical stage with the apparent demise of the

sugar industry and the many challenges facing non-sugar agriculture development. A major challenge for the agricultural sector is to determine its role in the economic diversification by identifying and developing the opportunities that exist. The sector needs public support to address many of the challenges if its potential is to be developed. However the sector would also have to strive to become competitive if the domestic and export markets are to be penetrated.

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Table 1: St. Kitts and Nevis annual percentage contribution of selected commodities to GDP

Economic Activity	1982	1987	1992	1997	2002
Sugarcane	8.69	4.78	2.90	3.40	2.21
Crops (Other)	2.35	1.49	1.22	1.16	1.12
Livestock	1.84	1.03	0.97	0.57	0.58
Forestry	0.07	0.07	0.08	0.08	0.08
Fishing	2.22	2.15	1.82	1.63	1.53
Total Agriculture	15.17	9.52	6.99	6.84	5.52
Sugar (Manufacturing)	6.16	3.21	2.01	2.36	1.42

Source: St. Kitts Statistical Division/ECCB 2002 Provisional Data

Table 2. Estimated annual production of major food crops for St. Kitts and estimated annual demand for St. Kitts & Nevis ('000 kg)

Crop	Est. Annual Demand	1994	1998	2000	2001	2002	2003
Cabbage	110	114	68	54	44	49	82
Carrot	110	52	80	55	64	101	104
Onion	275	115	55	50	5	17	28
S. Pepper	45	23	23	32	18	40	33
Tomato	110	100	48	50	73	94	119
W. Potato	550	219	173	160	130	111	100
Peanut	100	15	30	59	25	38	30
Pineapple	70	na	40	17	20	5	10
Watermelon	150	73	35	59	70	70	101

Source: Department of Agriculture – St. Kitts 2003 Annual Report

Table 3. Estimated annual production of livestock products and fish landings in St. Kitts ('000 kg)

Commodity	1997	1998	1999	2000	2001	2002	2003
Pork	36.3	34.8	37.5	27.0	37.8	54.9	66.6
Mutton	13.9	14.2	12.7	10.6	11.2	10.2	11.9
Goat	9.3	7.8	7.8	8.5	8.7	8.6	12.7
Beef	27.5	30.2	35.4	32.8	57.7	67.5	83.2
Eggs ('000)	3643	3719	4218	2241	3675	2721	2902
Fish	165.2	281.7	264. 3	235.6	255.9	256.0	304.0

Source: Department of Agriculture – St. Kitts 2003 Annual Report

Table 4. Value of food imported into St. Kitts & Nevis for 2003

Commodity	US \$
Meat and meat preparation	5,746,800
Dairy products & birds eggs	3,010,000
Fish	1,865,900
Cereals and cereal preparations	4,219,900
Vegetables and fruit	5,346,600
Sugars, sugar preparations and honey	940,000
Coffee, tea, cocoa, spices	689,300
Misc. edible products & preparations	4,943,700
Total	US\$ 26,762,200

Source: St. Kitts Statistical Division