

“EXPLORING OUR BIODIVERSITY FOR FOOD SECURITY”

Part One

The Convention on Biological Diversity defines Biological Diversity as “the variability among living organisms from all sources, including inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part. This includes diversity within species, between species and of ecosystems”. According to the Food and Agriculture Organisation (FAO), “food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet the dietary needs and food preferences for an active and healthy life”.

If we combine the definitions of these two terms together, keeping our title in mind, we see that the variety of living organisms from all sources that exist on this island (whether it be within species, between species and of ecosystems) should be so explored as to ensure physical and economic access to sufficient, safe and nutritious food for all people, at all times, to meet their dietary needs and food preferences for an active and healthy life. Nutritious food generally means food that contains all the necessary and balanced components of carbohydrates, fats, proteins, water, vitamins and trace elements.

St. Lucia’s biodiversity in the marine, terrestrial and river ecosystems contain all the necessary components for a nutritious diet. Carbohydrates can be found in abundance in our root tubers and other ground provisions like dasheen, yam, sweet potato, eddoes, and tania. Some of our tree crops such as breadfruit also contain carbohydrates. They can also be found in our main crop, banana, both ripe and green. Fats can be found in meat and vegetables such as avocado pear, nuts such as cashew and peanut. Proteins can be found in peas and beans such as red beans, and pigeon peas. Meat provides protein whether as fish or livestock such as beef, lamb or pork. Vitamins can be found in fruits such as tamarind, golden apple, watermelon, pawpaw, mangoes and green leafy vegetables like spinach, callaloo and cabbage.

In exploring our biodiversity for food security, we have to ensure that people can get physical and economic access to safe and nutritious food. This means that people must either be able to grow their own food or be able to purchase what they need to consume. Exploring our biodiversity can assist people to obtain income to purchase such safe and nutritious food. This is facilitated because our biodiversity is the basis of many of the essential goods and services necessary to life. The basis of food is agriculture and the basis of agriculture is biodiversity. Our farmers must be able to obtain maximum revenue for their production and sale of crops. In this age of globalization and trade liberalisation, they must be seen to be practicing good agricultural practices where environmental management principles are closely followed. Such practices include no tillage agriculture, reduced use of pesticides, integrated pest management, mulching, terracing, grass barriers and tree crops on steep slopes. Certified farmers can fetch high prices on the external market for their produce with such programs as Fair Trade.

The use of traditional knowledge can help some farmers obtain income through exploiting the markets for medicinal herbs in this era of alternative medicine. Aunt Linda's and Eden Herbs are working assiduously with the Caribbean Agribusiness Association (CABA)-the St. Lucia Chapter, at providing ready markets for the sale of these herbs by interested farmers. Exploring our biodiversity for income to purchase safe nutritious food, can also mean the sustainable production of latanye brooms and mauby plants. The Forestry Department is working with farmers to help with these developments as the mauby plant also makes a delicious drink that can be sold. The production of cassava bread and farine using the cassava plant is another way that the use of traditional related biodiversity knowledge can help provide income. Developing nature trails from forests on private lands and nurturing cut flower industries under these forests and using other agroforestry methods, are some other ways that biodiversity can be exploited for income for purchase of safe nutritious food. The development of other nature sites for visitation by tourists also earn revenue that can be used for food security. The Desbarras Seaturtle Enterprise comes readily to mind in that regard as the community seeks to provide an adventurous experience for visitors at the same time providing an opportunity for revenue earning for the inhabitants of that locality.

The practice of growing kitchen gardens in home backyards should be encouraged vigorously as it would save money in purchasing food and make more money available to buy what one cannot plant. Persons living in urban areas should be urged to grow such kitchen gardens in tires and other reusable containers, thus recycling them and reducing on solid and kitchen waste at the national landfill.

Production and sale of art and crafts from our biodiversity can also produce income that will result in the purchasing of safe, nutritious food.

In order for our biodiversity to be further explored, we need to ensure that there is ready access to credit by interested persons who can show a good business plan to creditors. The Small Enterprise Development Unit and the National Research and Development Foundation should continue working with persons who have ideas for income generation so as to help them develop credible business plans to be able to access credit. The Basic Needs Fund and the James Belgrave Fund are two agencies which endeavour to assist individuals with seed money for good small business plans. Persons who are interested in farming but are not in possession of farming land, should be rented such lands at reasonable rates and should be monitored and assisted by the Agricultural Extension Officers to ensure that the land is developed for agriculture in a businesslike and sustainable manner.

The hotels should invest in the education of their chefs in local biodiversity which is no longer exploited today. Such fruits like Fat Pork, Meeweese, Caimete, Bwee, Pois doux should be cultivated as delicacies to be served to the tourists and also as alternative fruits. Chef Harry who has obtained worldwide acclaim for his culinary abilities should continue to be used to train hotel chefs and students of the Hospitality Studies Department of the Sir Arthur Lewis Community College in the use of our local biodiversity for food. Funding should be sought such that Television Programs like

Tropical Lifestyles and Cooking with Kouly would continue to educate the general public in cooking using local cuisine. The Propagation Station at Union should be further developed to produce plants of these local biodiversity for sale and there should also be an orchard displaying their growth in nature.

Part Two “Exploring our Biodiversity for Food Security”

Some of our wildlife is now endangered. The Soufriere Marine Management Area (SMMA) is ensuring that fish is harvested in a sustainable manner. Since the establishment of the SMMA, increased fish stocks are observed in that area. Uncommon animals such as the iguana, agouti and opossum can be ranched for food and sold to hotels and other persons interested in the delicacies. Such ranching activities are presently taking place with seamoss farmers who cultivate seaweed not originally found in the country and which produce a better seamoss for human consumption. Aquaculture also engages in ranching of fish such as tilapia and shrimp in homegrown ponds on farmers' properties. These enterprises earn income for their owners and assist them in being able to increase their economic access to food.

Agroprocessing or value added products should also be encouraged where our biodiversity is concerned. Such enhancement applies to fish and livestock as well as fruits and vegetables.

Ready markets are essential for our efforts to explore our biodiversity for food security to be successful. The banana plant has been shown to be able to produce a multitude of products. Arrangements have already been entered into with Cuba where such technology has been developed to exploit this plant. The markets for purchase of these products should be sourced and made available. Market intelligence has to be seen as an essential component of our exploration of our biodiversity for food security.

In the dry season, arrangements must be made for farmers to be able to access water for their crops. Irrigation methods have been attempted for the banana crop in St. Lucia. Further developments along this line should be encouraged and reasonably priced irrigation systems should be experimented with in this regard with the full support of the farmers involved. Better management of our forests especially on private lands would also result in a decreased shortage of water. With the observed changes in climate occurring in St. Lucia, research and development in this area should ensue, so as to help the agriculture industry adapt to the changing climate.

Cooperatives are an important aspect of exploring our biodiversity for food security as farmers and fishers with similar production lines can collaborate and purchase equipment, technology, technical assistance, market access and market intelligence together. This is proving very successful for some farmers such as the Black Bay Farmers who cooperate to supply food to the ready market of the Sandals Chain of Hotels.

The youth of the country must also be engaged in this thrust to explore our local biodiversity for food security. Youth at school and unemployed and other interested youth should be introduced to technological agriculture. This should start from an early age at school. The Grande Riviere Combined School at Gros Islet is one school that readily comes to mind as being able to create interest among the students from kindergarten to the older children in the science of Agriculture. Studies should be carried out in determining the factors contributing to such a successful teaching program in Agriculture. This should be replicated around the country in pilot projects.

The school feeding program by the Ministry of Education should continue its collaborative program with the Ministry of Agriculture where rural schools are encouraged to produce food for sale to the feeding program. In this way, students will continue to be provided with safe nutritious food and one component of food security for the country would have been achieved. Home Economic Classes at schools should also incorporate the use of local biodiversity in the preparation of safe, nutritious meals. Home Economic Food Fairs and competitions highlighting local foods should be a regular item on the schools agenda. The private sector should be integrally involved in this development.

Exploring our biodiversity for food security demands a multifaceted approach and necessitates networking with several local, regional and international partners. The Ministry of Agriculture is in the process of finalizing St. Lucia's agricultural policy which includes that goal, formulated through broad consultations with stakeholders, and is developing further programs to help the country achieve that noble objective.