

GRENADA

Brief History

It is believed that the honey bee was brought to Grenada in the year 1688. The German bee (*Apis mellifera*), referred to locally as Black Bees, was the species first introduced. The Italian variety was introduced in the 1940's by beekeeper Aubrey Blackman of Sauteurs, St. Patrick, who imported bees from the Walter T. Kelley Company of the USA. Since then, beekeepers have been steadily importing queen bees, earlier from the USA mainland and lately from Hawaii. Most of these imports have been Italian varieties, but there have also been instances of other varieties (Starline, for example) being imported. One beneficial result of the importation of different varieties is that inter-breeding of bees in Grenada has occurred, resulting in hybrids which have proved to be highly productive.

Initially, information on beekeeping was obtained through and from expatriates, particularly Roman Catholic priests serving in Grenada. Over the years more Grenadians got involved in beekeeping (Apiculture): some as commercial beekeepers, but the majority as hobbyists. As a result, the supply of local honey was on an intermittent basis. Of course, there were always persons who hunted bees in the wild and sold the honey collected. During that time, the industry grew very slowly as was to be expected.

In the 1990s, organisations such as the Agency for Rural Transformation (ART), the National Development Foundation (NDF) and, the Inter-American Institute for Co-operation on Agriculture (IICA) were very instrumental in transforming the industry and converting it into a more organised and business oriented operation. This is not in any way to be interpreted as a denigration of the role played by earlier beekeepers who over the years were responsible for the preservation of the skills involved in, and the existence of a bee industry.

Local Honeybee Products

Besides pollination and production of honey, local beekeepers contribute to other important primary (as well as secondary) products which include beeswax, pollen, propolis, wine (Mead), vinegar, candles, cosmetics and medicines. Beekeeping and the various products of beekeeping have created a significant linkage between Agriculture and Agri-business and the other major economic sectors, especially Health and Tourism.

Over the years, Grenada has won top prizes at the annual London Honey Show resulting in strong demand (local and international) for Grenada's honey and other bee products. While all local beekeepers are engaged in producing honey, relatively few are involved in producing the more lucrative primary bee products such as pollen, propolis, and royal jelly. However, secondary bee products (e.g. beeswax, mead, and vinegar) are produced by a number of local

beekeepers. Some of these beekeepers have also acquired the capability to produce other secondary bee products such as wax candles, soaps, skin lotion, lip balm, and so on.

Challenges and Need for Appropriate Laws

The local Apiculture Industry is encountering some major challenges such as deforestation, injudicious pesticides usage, bee predators, and pests and diseases. The absence of a Land Use Policy has allowed for the destruction of forests and prime agriculture lands in favour of residential and commercial enterprises. This has resulted in less forage for bees and a serious threat to Grenada's food security. The continuous loss of dry forest trees such as Campeche or log wood (*Haematoxylon campechianum*), Cutlet and Gliricida is a major concern. Like most developed countries, Grenada must enact laws regarding the cutting and destruction of certain trees.

Indiscriminate use of pesticides, especially in close proximity to apiaries, is another of the major concerns to the local beekeeping industry. There has been, over the years, an increase in the use of pesticides in Grenada. Moreover, no research activities have been conducted to determine the extent to which the local beekeeping industry is affected by pesticides usage, locally.

Apiaries of beekeepers have been affected, to varying degrees, by three main predators and two major pests of bees, namely: birds, frogs and ants (predators); and Wax Moth and Varroa Mite (pests). Location of hives, the weather and hive management were the main factors which determined the extent to which the bees were affected by these predators and pests. Varroa Mite has been the more destructive pest. It is believed to have been introduced, in the late 1990s, through the importation of bees from the USA. It feeds on the haemolymph (circulatory fluid) of the adult and pupae bees, which is believed to be the main cause of deformed wing virus carried by bees, and has resulted in symptoms which include – as the name suggests – deformed wings which prevent the bees from flying. Such affected bees became easy prey to predators and, consequently, the population of affected colonies declined and were eventually destroyed in situations where there was a lack of appropriate action to contain or kill the mites. As a consequence of heavy mite infestation, many hives experience severe reduction in bee population. Such weakened hives eventually become vulnerable to attacks by wax moth, a secondary pest which often caused the total destruction of affected hives. Local beekeepers were encouraged to use natural methods (e.g. icing sugar and thyme oil) to fight the Varroa mite.

Notwithstanding the many challenges, the beekeeping industry in Grenada is still considered one of the strongest in the OECS. Over the period 2002 to 2008, the number of registered

beekeepers increased from twenty-seven to fifty-seven; the number of hives in use increased from 810 to 1710 units; and honey production increased from 13,324lb to 28,129lb. (These figures can be verified from official statistics.) Present estimates indicate that the number of hives has dropped to 1400, but the yield per colony has increased because of better beekeeping practices. This is mainly due to the efforts of GAB to improve the ability of beekeepers and to have beekeeping equipment and materials available at most times, and at reasonable costs to beekeepers.

Apiculture diversification

New as well as experienced beekeepers are being encouraged by GAB and the Ministry of Agriculture to get involved in other areas of Apiculture such as Queen Rearing, provision of pollination services, and development of secondary hive products. This would be a much more sensible approach than having all beekeepers on the island involved only in honey production.

Although a few beekeepers are currently involved in constructing their own bee boxes (brood chambers and supers) and producing their own requirements of wax foundation sheets, the majority are using imported boxes and foundation sheets. Herein lies a great potential for the development of a thriving bee related enterprise, thus creating much needed employment and saving much foreign exchange for the country.

There are several career opportunities in Apiculture, especially in the areas of Research and Development, Agri-business and Manufacturing.

Change of Policy on Queen Bee Importation

For as long as can be recalled, production queen bees were imported to Grenada from Hawaii. However, in mid 2010, local beekeepers became aware of the occurrence of a very dangerous bee pest (Small Hive Beetle) in Hawaii. This was immediately brought to the attention of the MoA and GAB, and a joint decision was taken to ban importation of bees from Hawaii. This decision has hindered recent efforts by a few enterprising local beekeepers to import "breeder queens" to Grenada, from the United States of America.