

BEEKEEPING IN TRINIDAD AND TOBAGO: MILESTONES AND SURVIVAL STRATEGIES

by

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Honey bees have been managed in Trinidad and Tobago from the beginning of the twentieth century. The first government apiary was established in Port of Spain, in 1902 and a private apiary is known to have existed in Scarborough, in 1918. Beekeeping grew into a thriving business since its early pioneering days. Honey was exported between 1914 and 1958, with exports reaching a high of 71,177 lbs in 1947. However, beekeepers have faced many challenges related to the arrival of Africanised bees, pests and diseases, and diminishing institutional support. This article describes the milestones that have influenced beekeeping in T&T and highlights some survival strategies.

The impact of legislative and governmental frameworks

Beekeeping was perhaps the earliest agricultural subsector to be regulated in Trinidad and Tobago. The Beekeeping and Bee Products Act, 1935, amended in 1949, is the main policy statement on the subsector and was the first major landmark in the subsector's history. That such an Act was passed by the Legislative Council is indicative of the status of the subsector at that time, and the recognition afforded it by the colonial administration. The Act sought to control beekeeping through the appointment of an Inspector of Apiaries, the registration of apiaries, provisions for the extraction, preparation and packing of honey and other bee products, and restrictions on the importation of bees, bee supplies and bee products. Under this Act, the first Trinidad apiary was registered on January 30, 1937, and by May 31, 2010, 1,534 apiaries were registered in Trinidad and Tobago.

Such welcome foresight was lacking when, in the process of decentralising the Ministry of Agriculture in 1988, the Ministry's Apiaries Unit was dismantled and beekeeping extension services were reduced. Although the post of Inspector of Apiaries is retained, the incumbent has other public service duties to perform and has been unable to function to the extent required by the Act. Beekeeping in Tobago was not impacted by this move to the same extent, because the Tobago House of Assembly has had responsibility for beekeeping since 1980. There is

consensus in the beekeeping community that no other government policy has impacted beekeeping in the country so negatively, and this reduction of governmental support is viewed as a major challenge to the subsector's development.

Africanised Bees

The first established colonies of Africanised honey bees were found in south Trinidad in July 1979. All honey bees in Trinidad became Africanised in a few years, and beekeeping in Trinidad as it was previously known, was irreversibly changed. By August 1992, over 28,107 swarms had been removed by the Ministry's Bee Abatement Unit, and more than 5,300 persons and over 800 animals had been stung by these bees. Up to May 2010, 21 people have died as a result of being stung by Africanised bees.

There was a serious decline in the number of beekeepers and colonies, in the aftermath of the arrival of Africanised bees. More than half of the beekeepers on Trinidad in 1978 had given up beekeeping by 1984 because of the high swarm frequency and extreme defensive nature of Africanised bees. This decline of beekeeping in Trinidad was exacerbated by the subsequent dismantling of the Apiaries Unit and the consequent reduction in governmental support. The steady reduction in the number of beekeepers continued from 1978 to 2008. There was also a steady decline in the number of new apiaries registered over the period, from 263 in the 1970s, to 229 in the 1980s, to 154 in the 1990s, and 78 in the first decade of this century.

Up to 1979, the subsector's development in both islands paralleled each other. However, the arrival of Africanised bees marked the turning point in that parallel development. To date Tobago remains free of Africanised colonies, perhaps surprisingly so, given the proximity of the islands, the extent of inter-island sea traffic, the period of time since these bees arrived in Trinidad, and their innate migratory tendencies.

Pests and Diseases

An outbreak of Sac Brood disease in 1989, and several outbreaks of European Foul Brood disease during the 1990s in Trinidad are the only documented instances of honey bee disease occurrences in Trinidad and Tobago prior to the identification of the parasitic honey bee mite, *Varroa destructor* in Trinidad in July 1996, and August 2000, in Tobago.

The mite has been the major problem experienced by beekeepers in on both islands, but moreso by beekeepers in Tobago, where the European bees seem more susceptible to its exploits. There have been mixed reports on the impact of the mite on Africanised bees in Trinidad, where it would seem that after the initial fall-out following the mite's arrival, the impact has leveled out. The impact of the mite's arrival in Tobago was decisively pronounced. An estimated 35.0% of the island's 649 colonies were lost within three months of the mite's identification. Three years later, Tobago beekeepers had to treat with the disease complex; 'parasitic mite syndrome' associated with the Varroa mite, the net impact of which was a 52.0% reduction in the number of colonies on Tobago between November 2003 and November 2004.

The overall impact of Varroa and PMS on Tobago's beekeeping is also reflected in apiary registration data and the number of active beekeepers. While there had been a marked upsurge in the number of registered apiaries in Tobago during the 1980s, when 33 new apiaries were registered compared to four in the 1970s, and in the 1990s when an additional 25 apiaries were registered, only seven apiaries were registered during the first decade of this century, and the number of beekeeper has fallen from an all time high of 40 in 2000, to 16 in 2010. Given its impact, the identification of Varroa in Trinidad and Tobago represented another turning point in the subsector's history.

Other Subsector Developments

Between 1987 and 2000, Trinidad and Tobago beekeepers won 58 awards (Trinidad, 26; Tobago 32) at the prestigious National Honey Show, London. This participation ended in 2001 when European Union (EU) regulations requiring the submission of a Residue Monitoring Plan for honey entering the EU from non-EU countries, 'kicked in'. Trinidad and Tobago was not able to comply and entries already packaged for the Show had to be returned to beekeepers.

The staging of the First Caribbean Beekeeping Congress in Tobago in November, 1998, marked the beginning of a series of regional beekeeping congresses and led to the institutionalisation of the Caribbean beekeeping community. Four subsequent congresses were held in the region. A sixth congress, scheduled for Grenada in November 2010, had to be postponed. The Association of Caribbean Beekeepers' Organisations, a regional representative body, was formed at the third congress, held in Jamaica.

Since 2000, Trinidad and Tobago beekeepers have been involved in hosting beekeepers from Europe on 'Beekeepers' Safaris': personalised, exotic, beekeeping holiday/study tours. Forty-six 'safarians' participated in eight safaris to date. A ninth safari is planned for January 2011. These safaris have proven to be a unique offering. They are the only known exclusive beekeepers' tour to the Caribbean and have added a new dimension to the regional tourism product, and possibly a new word to the tourism lexicon: 'api-tourism'.

Looking Ahead

Available data indicates that in 2008 there were an estimated 300 beekeepers and 6,000 colonies in Trinidad, while there are currently 16 beekeepers and approximately 450 colonies in Tobago. The extended decline in beekeeping in both islands clearly suggests that new strategies must be urgently found to secure the subsector's future and to ensure that it realises its full potential.

Since 1997, the government agreed to beekeepers using designated areas of forest reserve lands for beekeeping activities, but to date the agreement remains unfilled. This potentially fruitful policy decision could, if implemented, impact the subsector's viability to the extent that it warrants classification as a positive milestone in the subsector's history, since beekeepers on both islands identified 'suitable apiary sites' as their major constraint to enterprise development, in a subsector survey earlier this year. The current government's policy, as reflected in statements by Food Production Minister, Vasant Bharath, is one of support for the resurgence of the beekeeping subsector. Local beekeepers are hopeful that the Minister will recognise that unless a structured, institutional mechanism for support of beekeeping that is appropriately resourced, mobilised and mandated to implement a sustainable development plan, is put in place, attempts at developing the subsector are likely to be short lived.

Due consideration must also be given to the fragility of the national beekeeping environment, which is threatened by new and exotic pests and diseases, subjected to denudation by untamed bush fires, slash and burn agriculture, creeping urbanisation, 'fogging' for mosquitoes, and the establishment of large-scale industrial sites in rural communities.

There is also a complementarity between beekeeping on the two islands that can be explored. A significant market exists for European queen bees in Trinidad, which could be satisfied by

developing commercial queen rearing capacity in Tobago. Of course there is the concomitant need to ensure that Tobago remains Africanised bees free. Given the probability that Africanised bees will eventually arrive in Tobago, action must be taken, both to forestall that eventuality and to treat with the reality.

Moreover, beekeepers must embrace and exploit to the fullest, their collective potential as a 'cluster' of socio-economic interests, and the benefits of cooperating rather than competing within their community. Further, there is significant scope to expand and diversify the production and marketing of hive products. The bottom line is that 'api-culture' must be tweaked to place emphasis on its 'api-business' component.

Finally, and of critical importance is the need to recognise that 21st century beekeeping is not a simplistic vocation. The perception by aspiring beekeepers, investors, advisors, policy analysts, and planners, that there is 'money in honey' and that the transformation process is as figuratively straightforward as changing the 'h' in honey to the 'm' in money, must give way to the reality that sustainable beekeeping is as complicated an activity as the life form it treats with.