

The 10th Caribbean Beekeeping Congress, Castries, Saint Lucia

Theme: Apiculture, a Bio Economy for the Caribbean

Topic: Bio Economy

Title: Apiculture, impacting the Caribbean through social behaviour changes.

Author Affiliation:

Hugh Miller | BSc. Sociology | Sole Proprietor of Miller's A.P.I.A.R.I | locally and internationally trained bee Keeper

Contact Information:

43 Baldwin Crescent | Duhaney Park | Kingston 20 | Jamaica |

hughmiller10@hotmail.com | 876.449.6103 | www.millersapiari.com

Abstract

This paper presents social behaviour change through honey bee educational tours for primary to tertiary students, as a critical stabilizer for apiculture as a super bio economy for the Caribbean. This practice of generational bee keeping for sustainable results, rely on the sharing of knowledge and the impact of change for the long term. The writer will take you on a journey exploring aspects of Apiculture specifically geared for the implementing and impact of behaviour change strategies towards using biological resources for sustainable development.

Introduction

Bee Keeping became a part of my life in November 2014, more directly that is, for honey bees contribute to our daily existence even if we are unaware of it. A very short time with lots learnt and much more to uncover in apiculture. It started when, Lecturer, Dr. Jahlani Niaah suggested I consider bee keeping and invited me to a weekly meeting held at the University of the West Indies, Mona as an outreach project for at risk youths. This project was an initiative out of the Rastafari Studies Centre that was being developed at the time.

Rastafarian in Jamaica is seen as a naturalistic lifestyle of a group of people that appreciates a simple way of life. This group is commonly recognized by several factors such as, but not exclusive to; food, culture and aesthetics. Bee keeping and Rastafari is arguably almost synonymous and can be captured in the cultural aspect of this way of life. Generally, bee keeping across the board is the same everywhere, with a few adjustments to climate, culture and practices. There are more standards than

The 10th Caribbean Beekeeping Congress, Castries, Saint Lucia

differences, which is why I was able to expand my experience through international training, out of the bee keeping outreach project group at the Rastafari Studies Centre. After spending six (6) months in Wolf point, Montana, USA, I was motivated to make a significant impact; I formed Miller's Agricultural Programmes, Internships and Research Institute (A.P.I.A.R.I), Jamaica's first bee keeping Institute.

<https://www.youtube.com/watch?v=B07cF-Nx0Dw>

The Bee keeping Institute developed out of several needs that were identified from personal experiences such as but not limited to; a need for international exposure for students in agriculture, more information to be shared among local bee keepers and too many unanswered questions in bee keeping health and technology. Miller's APIARI developed a honey bee interactive tour to start its journey to contribute to creating awareness of the importance of bees. When people become knowledgeable of apiculture they can change their behavior to impact our bio economy.

<https://www.youtube.com/watch?v=7ldhMQLk36I>

The Caribbean

The title of this paper incorporates the Caribbean but will mostly speak specifically to the third largest in the Caribbean Sea, Jamaica. The Caribbean can be described a chain of islands stretching from The Bahamas in the North, to Trinidad in the South, plus the islands of Bermuda and the South American countries of Guyana and Suriname. Countries in the Caribbean all have different cultural practices with similar climatic conditions and landscape. Already being naturally equipped with a tropical climate and forestry to facilitate and compliment apiculture to almost perfection

(give and take climate change). With the Caribbean possessing 50% of the world's known biodiversity, 57% of its primary forests, and considered the region with the greatest availability of land for farming; it is only left for us to design projects or programmes to utilize these resources to impact our bio economy.

Apiculture

Apiculture, the practice of raising and keeping bees is an invaluable skill and regarding its history, bee keeping has not been given its true appreciation of importance. In light of the significant contributions honey bees add to our daily existence, it is actually shameful that so many of us are unaware of their true value, needless to mention apiculture as a bio economy for the Caribbean. However, this is changing, for there are and have been many programmes and activities that have now began to share more about bees and their importance and will eventually change how people behave towards them.

Social Behaviour Change

Social behaviour change refers to the implementing of effective communication strategies and activities towards altering behaviour to encourage desirable human practices. The growth of any economy is dependent on the education, skills and talents of its people with designed cultural programmes. Unfortunately, it is not that simple as information and advice alone is not sufficient to impact behavior change. Behaviour is the product of an individual or collective action to do or not to do something. There are several theories of behavior change, but for the purpose of apiculture the challenge is

somewhat easier. The change we seek is to get people more involve in how they interact with nature and honey bees. Therefore, the strategies been suggested include both information and activity.

This new age of technology widens the scope to communicate and give information through several mediums. Whether it is to simply provide knowledge or to send invitation for an in-person activity, the behaviour change in this case is to influence social and economical good. The greater benefit is for society, not for the organization or entity sharing the information. Once those impacted understand the importance and have some personal experience with the effects then will apiculture be a powerful bio-economy for the Caribbean

Bio Economy

According to a 2019-2020 new edition report for agriculture and rural development “the bio economy is the knowledge-based intensive use of biological resources, processes, technologies and principles, for sustainable provision of goods and services across all sectors of the economy.”

Let us break down that definition, **knowledge-based**, in order for us to use any product or device or in this case apiculture as a bio economic force we must equip ourselves and others with the knowledge of what this is and how it works. I learnt about this bee keeping congress via ‘whatsapp’ messages one year ago. To be honest I never thought of Apiculture and our bio-economy before this congress. I know the value bees have and what they contribute to our daily existence, but I never thought externally to make the connection through discussion. Next in the definition, **Intensive use** speaks to

focusing solely on the area being looked at, in this case apiculture. How then will we use apiculture intensively to impact our economy and give us all better standard of living? Once one become aware and gain knowledge, then one will be able to focus on how one can use effectively all that is to be derived from apiculture. That is, the resources from this skill, processes towards the results, technologies to be used to assist and what I consider most important the principles to be gained, for sustainable provision of goods and services.

Apiculture; a bio economy for the Caribbean then is indeed a real case. For we can now begin to dig into the many aspect of this reality, let us take for example my international training experience where I saw my host use the waste from the rendered wax as fuel for a heater during the winter time. The planting of 100 cotton trees was an activity for us as trainees. Our forestry department in the Caribbean can team up with bee keepers to keep or forests booming with tree planting activities. Let us establish a bee keeper tree planting day. All of which is critically for us to continue life on this earth.

So much can be said and written about of how we are going make the impact powerful, but we must join forces in helping to teach and make the Caribbean the number one producer of all the by-products of bee keeping by assisting to grow and maintain the landscape for honey bees.

Linking Social Behavior Changes and Bio-Economy

Miller's APIARI Honey Bee Tour, started out of a relationship with a client who owned bee hives and wanted structure and management. We worked together for a few years and continued to stay in touch even after the business contract ended. I received

a phone call from the client in 2017 about giving a talk to primary school children about bees. The client was asked to do it but was too busy, so I agreed.

Miss Thompson who I met at the institution further asked if I had somewhere for students to visit an actual bee farm as they were teaching the students about insect and honey bees was the focus at the time. ***Marcus Garvey, Jamaica's first National Hero said this, "We must make use of every opportunity that we have, and where there is none we must create it for ourselves"***. Even though I had nothing in place to accommodate a tour for the students, I told Miss Thompson that I will prepare to accommodate her students as soon as she is ready. The rest is now history; I developed a team which included clients with land space, other bee keepers to assist with information sharing, role play activities, complimentary sweets (honey bags), multimedia educational videos, equipment review, vegetable garden and a live bee hive demonstration. The honey bee tour was a massive success. Every year since its conception, a tour has happened and the feedback is consistently positive.

Imperative to say Miller's APIARI is not the first to host an event of this nature as there have been honey bee tours that are used for tourism. A term now being called 'Api-tourism' has been around for some time now, According to an online article by Jewel Frazer, Guyana, Grenada, Trinidad and Tobago all have tapped into the apiculture tourism market. Coincidentally, in the same article Richard Matthias, president of the Iyanola Apiculture Collective in St. Lucia, asserts that for the region's beekeepers, tapping into tourism makes sense. He is quoted as saying, "When you are in a Caribbean island ... if you are not in tourism, you are not in business."

While Miller's APIARI focus right now is not an international market, the locally driven honey bee tour can position apiculture as a long term plan towards being a bio-economy for the Caribbean. Education is the greatest earner for any industry and teaching one to fish adds more value than if you try to catch all the fish by yourself. Sustainability, which can also be seen as continuity, this is the main factor for stability and growth. Our economy is best continued through generations and that's why teaching our younger generation is critical. We must teach them the importance of bees, how to help bees through planting trees, planting specific flowers in our gardens, farming without the use of pesticides. We must teach and show them in order to impact changes in their behavior.

Think about it, how many Caribbean bee keepers are on YouTube sharing and teaching. Do we have our local television and radio stations providing knowledge on honey bees and their importance through weekly aired programmes? All, I believe will give Caribbean bee keepers solid and better understanding of their unique environment. Every Apicultural Division in the Government of our Caribbean should have collaboration with the Forestry Department of that same government to capitalize on the resources of merging forest development and beekeeping. Forestry department can help to identify locations that are best suited for bee keeping, Guyana's Department of Tourism Director General; Donald Sinclair is quoted as saying "It is only natural to see how we can use agriculture as a base for providing satisfactory tourism experiences." That experience can be advanced if the bees are in the best locations the islands can provide.

Conclusion

When I entered beekeeping, it was and possibly for many still is a 'hush hush' industry. Established beekeepers were not so readily willing to share information and train others to learn, and they had good reasons as some mentioned that there were individuals who wanted to learn how to manage bees so they could steal bee hive and resell them, but that's another paper.

Miller's APIARI wants more information to be shared among bee keepers where they feel safe and productive and hence developed a bee tour to teach various aspect of apiculture. Our bio-economy will be impacted when more of our nations people and equipped to manage the resources, processes, technologies and principles, for sustainable provision of goods and services across all sectors of the economy. This will be achieved through better decision making in what trees to plant, not to directly kill a bee and through frequent information sharing.

Apiculture, a bio-economy for the Caribbean is a powerful concept that must be managed carefully, as our climate change, bad bee keeping practices and lack of sharing will slow the benefits of the blessings due to the Caribbean.

Online References

Miller, H. L. (2018, February 14). *Millers APIARI, In Honey Bee Tour at the University of the West Indies, Mona. Rastafari Studies Centre, Retrieved from <https://www.youtube.com/watch?v=7ldhMQLk36I>*

Solomon, G. (2005). *In Challenges and Opportunities for Sustainable Be keeping in the Caribbean. Retrieved from <http://www.beesfordevelopment.org/media/2742/chapter-15.pdf>*

Behaviour Change Models and Strategies (2014, July 14). In Healthy Living. Retrieved from <https://www.eufic.org/en/healthy-living/article/motivating-behaviour-change>

Arias, J. (2019). *BIOECONOMY, A KEY TO RURAL DEVELOPMENT IN LATIN AMERICA AND THE CARIBBEAN. Retrieved from <https://iica.int/en/press/news/bioeconomy-key-rural-development-latin-america-and-caribbean>*

Frazer, J. (2019, December 7). *CAN BEES ADD A FRESH BUZZ TO THE CARIBBEAN'S \$56 BILLION TOURISM MARKET?. In OZY. Retrieved from <https://www.ozy.com/around-the-world/can-bees-add-a-fresh-buzz-to-the-caribbeans-56-billion-tourism-market/247812/>*