

Gastronomy as a Key for Market Access and Value Chain Development for Honey- Case Study in the Dominican Republic

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ABSTRACT

This study shows how the use of honey in gastronomy can be a key factor for rural development, small beekeepers and growth of bee population. The aim of the study is to analyze the potential use of honey in restaurants and correlate it to how many beehives are needed to fulfill the rising use of honey in gastronomy. This can be projected also to estimate how many small beekeepers can be benefited by the use of honey in restaurants.

The study is based in the business case of “Nucayní” honey in Dominican Republic from January 2024 to July 2025. The data is based on a sample of 49 restaurants located in Santo Domingo that use honey as an ingredient. The methodology used consisted on identifying how much honey was used in each restaurant and how they used it.

The results show that the restaurants analyzed used an average of 420 kg of honey per year, which positions honey as a key ingredient for some preparations. The main uses of honey in restaurants are in sauces, dressings, marinades and glazes. Taking these considerations in account, we can see that in average, the use of honey in one restaurant can be fulfilled by one apiary with 25 beehives, which can impact directly at least one family in the rural areas of Dominican Republic. In conclusion, the increase of honey consumption in restaurants can lead to a significant increase in per capita usage, which promotes the growth of local beekeeping and bee population.

This study serves as a framework for future studies and projects that can be part of the “Strategic Plan for Sustainable Gastronomic Tourism of the Dominican Republic” and can be replicated in other countries with similar gastronomical scene.

Keywords: Gastronomy, Honey- Case Study, Market Access, Honey Consumption

Introduction

Beekeeping is a vital agricultural activity that promotes environmental, economic and social well-being. In Dominican Republic there are more than 3,000 beekeepers, producing approximately 750,000 kg per year of honey, as per 2023. According to Minis-

try of Agriculture, this production as well as exports have been decreasing for the past few years, while local consumption is steady, with a consumption rate of 0.04 kg of honey per person per year. To strengthen the value chain, one option is to promote local consumption of honey, given that the current numbers are very low compared to the global average of 0.2 kg per person per year.

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While honey is acknowledged for its diverse uses in health, cosmetics and in the food industry, this study focuses on the use of honey in gastronomy, as the culinary sector in the country is in constant growth.

Dominican Republic has a tropical climate with dry and humid forest, in which is harvested mostly multifloral honey. Because of its location and weather, the country has honey during all year, and production varies in each zone depending on each particular blooming season.

This case study explores how honey is used in restaurants in Santo Domingo, Dominican Republic, and relates the findings to its social impact in beekeepers and honey value chain.

Honey in Gastronomy

Dominican traditional cuisine is usually full of savory flavors, but honey is not commonly included in the recipes, which limits its use in gastronomy in the daily basis. But gastronomy offers and variety are often increasing, being a country with an economy based on tourism, and an important share of foreign investment. According to the Dominican Gastronomy Observatory, “gastronomy sector is consolidating as a strategic pillar of Dominican economy, transcending direct consumption to become a development and competitiveness engine”. The main uses of honey in culinary applications are in savory foods (in marinades, glazes, sauces and dressings), beverages including cold (alcoholic and non-alcoholic) and hot (coffee, tea and other infusions), bakery, confectionery and in direct use as complement of desserts, snacks, etc.

Honey is a very versatile ingredient which has functional characteristics because of its bioactive components. The most well-known functional properties of honey are its antioxidant and antimicrobial activities [1].

Apart of being a natural sweetener, honey serves as a flavor enhancer and helps balancing flavors; it retains moisture because of its hygroscopic nature and helps caramelization and Maillard reaction). Honey can even be added directly to food to maintain quality and prolong shelf life [2]. All these characteristics make honey an excellent ingredient in culinary preparations.

Methodology

This is a descriptive study based in the business case of Nucayní honey, a local brand of Dominican Republic owned by the company Innovacion Rural Desarrollo Sostenible SRL, which is part of the beekeeping value chain in the country since 2017 [3].

Data includes information of 49 medium sized restaurants in Santo Domingo, with capacity to seat from 50 to 100 clients that use honey as an ingredient. There are different kinds of restaurants included in the sample, for example, salad bars, barbecue grills, pizza parlors and international cuisine restaurants, among others [4-6].

The data was collected from sales reports, revision of restaurant menus and interviews with chefs and restaurant owners.

The results are limited to the data available in the company studied. All of the restaurants consulted use honey in one or more recipes [7].

The results collected with the use of honey in restaurants were then compared to honey production standards to calculate how many beehives must be in place to fulfill restaurant's needs.

Results

Honey usage Per Year

The sample analyzed shows a total use of honey of 20,602 kg per year, which results in an average of 420 kg per year per restaurant.

The table below shows the distribution of honey consumption in the restaurants, showing that 74% of honey was used in 10 restaurants, each one with a consumption of more than 1,000 kg/yr, and 75% of restaurants analyzed used less than 500 kg of honey/year.

Table 1: Average honey consumption per restaurant

Kg honey/yr	Kg honey/yr		# of restaurants	
	Total	%	Total	%
1500-2000	8,218	40%	5	10%
1000-1500	7,072	34%	5	10%
500-1000	1,686	8%	2	4%
200-500	2,864	14%	12	24%
Less than 200	763	4%	25	51%
total	20,602	100%	49	100%

This shows that while most of the restaurants analyzed use honey as a secondary ingredient, there are some of them in which honey is a key ingredient. Amongst the restaurants with more consumption are those dedicated to salads, barbecue and grill, and Italian restaurants.

One important factor of honey usage in gastronomy in this case is that all the restaurants in the sample prefer to use honey in liquid state and not crystallized. This means, there is a higher demand of honey from botanical sources that do not crystallize rapidly.

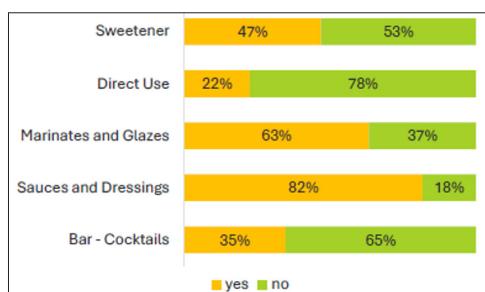
Other than the liquid state preferred, there is a high acceptance of most kinds of honey produced in the country.

Honey Uses in Restaurants

For the purpose of the study, uses of honey were divided into five categories, explained below.

- **Sweetener:** use as a sweetener in hot and cold beverages, and as a source of sugar in baked goods.
- **Direct use:** when used without mixing with other ingredients, for example as topping in pancakes or charcuterie boards.
- **Marinates and glazes:** when used with a mix of ingredients to marinate raw foods or glazes used while cooking.
- **Sauces and dressings:** when used with a mix of ingredients to be used on food ready to eat.
- **Bar – cocktails:** when used a sweetener in cocktail preparations.

Most of the restaurants in the sample use honey in sauces, dressings, marinates and glazes, which implies use in savory food. Of the 49 restaurants, 17 use honey in their bar, in the rest, only 6 of them do not serve cocktails.

**Figure 1:** Use of honey in restaurants

Common preparations include honey mustard, truffled honey vinaigrette, and honey bbq, among others, but there are other uses that can be promoted.

Beekeeping to Fulfill Restaurant Demand

With an average production of 20 kg of honey per hive, the beehives needed to fulfill restaurant needs vary between 10 and 75 depending on the level of usage of honey.

In the case of small beekeepers with an average of 25 hives per apiary, each mid-sized restaurant using honey can benefit up to 3 apiaries, contributing to rural development in the country.

This calculation considers a conservative amount of honey per hive, which can vary depending on weather conditions, botanical diversity on each zone, apiary infrastructure and beekeeping practices overall.

Table 2: Beehives needed per restaurant

Description	High Use	Medium Use	Low Use
Kg Honey/Yr	1,500	500	200
Kg/hive/Year	20	20	20
#hives/restaurant	75.0	25.0	10.0
Hives/apiary	25	25	25
#apiaries/restaurant	3.0	1.0	0.4

Conclusion

Honey is a versatile ingredient in gastronomy having many benefits in food's flavor and texture. This shows that it can be used in many kinds of preparations. From simple direct use as a sweetener to being a key ingredient, honey can be used broadly in the food industry.

There are many opportunities to increase the use of honey in gastronomy, taking into account its health benefits, as well as its direct social and environmental impact. As consumers are becoming more aware of their eating habits, honey is gaining popularity as a key ingredient.

Most of the restaurants use honey in savory foods to prepare marinades, glazes, sauces and dressings.

The study shows an opportunity in increasing the use of honey as sweetener either in hot or cold beverages, and even in drinks containing alcohol, replacing other popular products.

There are other natural alternatives to honey in the market including cane sugar, agave syrup, stevia and maple syrup. But there are also industrialized honey flavored products that cost less than raw honey resulting in one of the major limitations for market development.

Another key factor to consider is that restaurants develop their recipes to be replicated throughout weeks, months, or even years, so it is important for them to ensure the availability of ingredients. As honey is harvested in seasons, beekeepers need to assure the proper logistics to deliver the product to the restaurants.

The use of honey as a key ingredient in restaurants has the potential to increase per capita honey consumption in the country, which can strengthen the beekeeping value chain and therefore promote rural development.

More honey consumption means greater well-being in all aspects: more bees to pollinate our crops, activation of the beekeeping value chain, and healthier food habits of the population.

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