



I. Introduction

Funded by the Walmart Foundation and Heifer International, the *Rural Entrepreneurs: Connecting Field to Table* project supported 6,269 entrepreneurs between 2018 and 2019 in Chiapas, Oaxaca, Puebla and Yucatán to increase and diversify their incomes from beef, cage and stress-free eggs and honey. Entrepreneurs scaled their businesses using environmentally-friendly practices, meeting demand for food in urban areas in a sustainable way. With support from Heifer Mexico, the farmers increased production and productivity, strengthened their businesses and management skills, and built connections to food companies, accessing new markets for their products.

This document outlines a series of key learnings from Heifer Mexico's work with producers in the honey value chain through the *Rural Entrepreneurs* project.

II. Context

According to the Ministry of Agriculture and Rural Development (SADER, 2017), beekeeping activity in Mexico provides a source of income source for 45,000 families concentrated in 600 associations.

Nationwide, in 2017, 51,067 tons of honey were produced with a market value \$110,977,044. An average profit of \$2,178 per producer was reported for the last harvest in 2016. The average consumption per capita was half a pound of honey.

Mexico's main honey producing states are Jalisco with 6,409 tons, Chiapas with 5,868 tons, Yucatán with 4,796 tons, Oaxaca with 4,078 tons, and Puebla with 2,684 tons. The states where the Rural Entrepreneurs project was located are among the top 10 honey producing states in the country. Production levels fluctuated due to Africanized bees, climate change, diseases and insufficient training and organization. Honey prices were impacted by commercialization through intermediaries and market competition as the

market was flooded with cheap honey from other places.

More than 75% of beekeepers are low income producers with limited resources to scale up their production. Each producer typically has less than 100 hives. Poor business practices such as the absence or limited use of record-keeping tools to track production, expenses and income has impacted producers' profits. Few producers and companies have invested in product diversification and marketing.

Since 2017, the price of honey has fallen by 50%, making it difficult for producers to improve their incomes. To address this, the project focused on scaling up production units (apiaries), developing centers to produce and sell queen bees, and encourage local honey sales.

III. Intervention Methodologies

Heifer International's community development model builds a platform for other partnerships that support farmers to grow their businesses. These include the deployment of different technologies and innovations in support of farmers, targeted financial support through Heifer International's impact investing program and broader values-based partnerships with corporations. Drawing on this, the *Rural Entrepreneurs* intervention model incorporated the following four strategies to improve productivity and increase incomes:

1. An **Initial Beekeeper Assessment** established three different categories of producers and interventions designed to improve income levels of each group:

- Family members worked together to diversify incomes, managing a maximum of 15 beehives. They benefited from interventions designed to grow and optimize hives, improving production, quality and yields of honey through training, technical assistance and resources from Passing on the Gift®
- Producers were set up to manage 10 to 25 beehives. The project aimed to increase the number of hives they managed, improve production as well as support producers as they transitioned from selling conventional honey to selling high quality organic honey by implementing internal control systems and support for certification. These producers received hives, beekeeping equipment and supplies as well as training and technical assistance
- Producers were set up with more than 40 beehives, with honey providing their main source of income. The project focused on helping them maintain their production, reinforce the quality and safety of their products, internal control systems, and compliance with recommendations or improvements proposed by the certification entity

2. The **Productive and Technical Competencies** and **Business and Financial Skills** models equipped entrepreneurs with knowledge that they further developed during the project. As they improved production, farmers developed additional business management skills and built stronger relationships with other producers.

3. **Value chain Mapping** was undertaken to visualize key actors, their functions and product and information flows from production to end consumer (Annex 1).

III. Intervention Methodologies, continued

4. **Establishing Strategic Alliances** were established, as part of a market systems approach to increase impact and sustainability.

Key alliances in the project were:

- Certification agencies that provided technical advice to achieve certification
- ECOSUR (El Colegio de la Frontera Sur), which provided farmer to farmer training that ensured the knowledge of how to improve beekeeping practices was passed on to other groups of beekeepers

IV. Project Highlights (December 2019)

The resources provided through the project enabled beekeepers to improve their productive and technical competencies as well as implement practices that will help them build sustainable businesses. By the end of the project, the following activities were accomplished:

- 35% percent of project participants worked in the honey value chain
- 96.6% of producers implemented at least two sustainable production techniques in 2019 compared to 77.09% in 2018. These climate-smart practices included preserving genetic resources, integrating and diversifying food and energy systems as well as resource and production management
- 97% of producers know and used the division technique to multiply beehives
- 73.7% of the entrepreneurs replaced the queen bee annually
- The average enterprise increased the number of nuclei they had from seven to 11.50 between 2018 and 2019. They improved the health and productivity of their hives although the number of hives they had decreased from 52 to 41 and apiaries decreased from three to 1.75 during this time
- Beekeepers reported that the number of disease outbreaks decreased by 50% between 2018 and 2019. These included diseases such as varroasis, acariosis and others (ants/beetles). Varroasis was the most common disease reported by 65% of beekeepers, with apiaries exhibiting a 14.6% infection rate
- The honey industry faced challenges such as low demand due to significant growth in production in eastern European countries such as Hungary and Poland, Romania and Bulgaria, resulting in a significant decrease in demand from the European Union. Producers were hit with further setbacks as they faced a phytosanitary problem brought on by the presence of varroa, and the lack of flowering due to climate change. Honey production decreased from 219.76 tons to 123.7 tons due to factors such as lower than average production rates for each enterprise in 2019 (2,273 pounds of honey) compared to 2018 (2,707 pounds of honey). Only 78.3% of total beekeepers in the sample reported honey production in 2019, which was a notable decrease from 96.64% in 2018

IV. Project Highlights, continued

- About 90% of honey production in 2018 and 2019 was sold wholesale. Local collection and sale of bulk honey increased significantly during this time, with the participation of local aggregators reportedly increasing from 52.4% in 2018 to 71% in 2019. As marketing channels diversified, the collection of local non-bulk honey decreased from 25.30% in 2018 to 24.64% in 2019
- Three honey cooperative brands were also registered: Tumben Caab, SC de RL de CV; Productores Chun Jabín, SC de RL de CV; Soolen-AAC, SC de RL de CV before the INP
- In 2019, a majority of survey respondents worked in the honey value chain, 72.5% of which were individual operations and 27.5% of which were collective operations. The number of collective operations has increased significantly since it was determined to be 5% at baseline
- The project strengthened the social organization of 29 organizations actively supporting 1,345 beekeepers, representing 91% of the population served in the value chain

V. Lessons Learned

The *Rural Entrepreneurs* project utilized a sustainable honey production model to support rural families and link them to markets, enabling them to improve their incomes while using climate-smart practices to protect the environment. The project promoted the integration of hive management, genetic improvement, pest and disease control and improved nutrition.

In the first phase of the project, the project identified that one of the main bottlenecks in the supply chain was rural entrepreneurs' access to formal markets. The lack of certification and marketing to intermediaries forced producers to rely on the project to obtain the certification. To receive certification, producers must belong to a legal organization, have a minimum of 25 contaminant-free hives per producers, brood chambers without paint, have a pesticide-free pecking area, only feed hives with honey and integrate self-produced wax. Certification also requires established and standardized processes that guarantee a harmless local product that can be commercialized on a large scale.

Despite the price of honey falling internationally from \$2.45 to \$0.92 for two pounds of organic honey in 2018, beekeepers have sold the product in bulk locally or nearby locations, enabling them to continue production and support their families. The final project evaluation showed that the last semester extremely critical for production. Producers knew they had to provide their apiaries with energy and food sources such as honey, sugar, pollen or pollen substitutes, since flora and natural food was scarce in their territory.

VI. Success Story

Founded in 1996 in Chiapas, Mexico, the Society of Beekeeping Producers of Zapaluta has 30 members who are focused on improving the livelihoods of honey producers. The first time they certified honey, they sold 302 tons of honey to “Mieles del Mayab”, negotiating a price 46% higher than average (from \$1.79 to \$2.62), in 2019.

Elías Samorano-Méndez, the group’s president, has been a member of the society for 23 years. His goal is to improve his group’s honey production education.

“Our society needed someone to help us, and Heifer has given us a hand,” Elías said. “They have helped us so much, training us. Now we are about to achieve our organic certification. Until now, Heifer has helped us improve honey production – now we have beehives that are organic.”

Isabel Pérez-Díaz has been working with the beekeeping society for seven years and is committed to the project. “With Heifer’s mentorship, my neighbors now understand that we have to continue moving forward together to get the best results,” Isabel said. “We were educated to understand legal documents, the importance of certification to identify a farmer better so it yields a higher price.”

Isabel noted there is a sense of individuality in some communities, but Heifer International’s training has helped them counter this.

Fredy Pérez-Calvo, another group member, studied through high school and is treasurer of the beekeeping society. As a child, he spent time with the group.

“I have been part of the organization since I was very little – 5 or 6 years old. I would go with my father [the founder of the society] to check our beehives and attend meetings, and be his proxy when he could not attend,” Fredy said. He noted that the organization needed significant changes to consolidate production. The group was using very rudimentary tools and facilities that didn’t meet market requirements. However, Fredy and the group used the training and inputs they received to upgrade their production line.

“Now we have 15 extractors with 10 workbenches,” Fredy said. “Our members take turns, and everyone gets their work done.”

Farmers say courses they participated in taught them better strategies for collective technical work – before they previously just had practical experience, but needed more theory.

“My family has changed, and I value this knowledge,” Isabel said. “My husband understands better, and that is important because we work and develop together better.”

In the future, the society will focus on unity to continue future development for the people, for their families, avoiding individualism moving forward.

“We understand that the project’s support has been so good for us personally and as a society, and that we have to carry this on. This society can be a model and example for other societies and honey producers,” Fredy said.

ALLIES NETWORK – HONEY VALUE CHAIN

ANNEX 1



Training
Technical
Assistance,
Inputs and
Equipment

LOCAL LIVESTOCK
ASSOCIATION
SPECIALIZED IN
BEEKEEPING

ABELINO MORALES
MALDONADO

ORQUIDEA GROUP

APICOLA SANTA ROSA

IYEM
Instituto Yucateco
de Emprendedores
Comprometido con la bienestar
2012 - 2018

inifap
Instituto Nacional de Investigaciones
Forestales, Agrícolas y Pecuarias

UTP
Universidad Tecnológica del Poniente

nacional financiera
Banca de Desarrollo

ECOSUR

Fomento Social
Banamex

nuup

PN
UD

fmam

MDE
MEXICO

FUNDACION
IDO

root capital

W.K. KELLOGG
FOUNDATION

SVX.MX
Invest for impact

alterfin

*Entrepreneurships

*Queen bee
instrumental
insemination

Bee
keeping
stores

APICLA DE LAS
MONTANAS DE
LOS ALTOS

KIATNUUT

Tumben Caab

EDUCE

NUBES
DE ORO

CAFE GOURMET
SIERRA AZUL SC

FLOR DE PUTLA

FLOR DE COPAL

FLOR DE COPALITO

MIELES DE SAN
FRANCISCO

SHAA CUE

CIPAC

USAEC
BEEKEEPERS

APICOLA DE
ZAPALUTA

JLUMALTIK DE
CHALCHUIITAN

APICOLA MIRAMAR
2DA GENERACION

LAS ABEJAS DE
SANTA RITA

AGROSUR

FLOR DE
TAJONAL

U LOOL CHE

GRUPO CONSULTOR
AGROPECUARIO
(GRUCOAP)

LOL SOOLEN A'AC
DE CHUCHUB

MARKETING

Honey
powder

Chum Jabin
producers

Tumben
Llaj Caab

Lool Cha-kaa
producers

Flor de Xtabentun

END CONSUMER

EDUCE

MIELES DE
LA CUMBRE

Lol de
Dzidzilche
de Nenela

