

# Honey Production

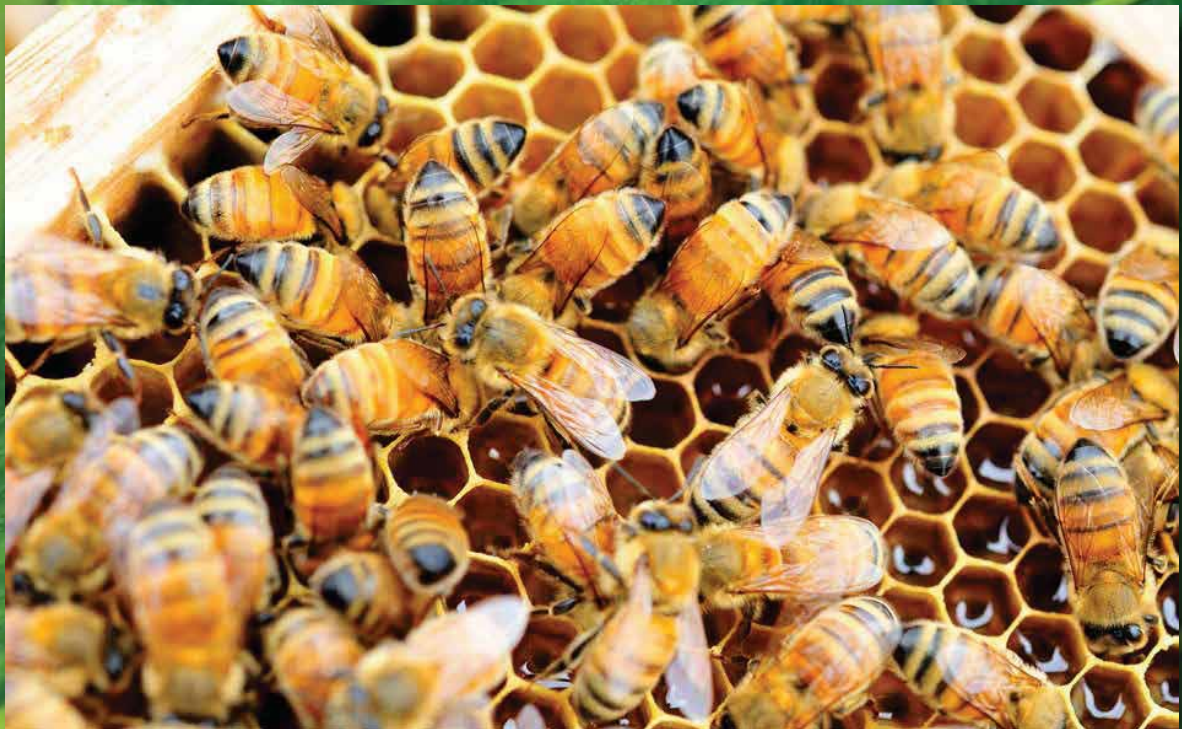


Image source: <https://blog.csiro.au/voting-in-swarms-is-all-the-buzz/>

May 2019



GREEN  
CLIMATE  
FUND



# Why should I consider this option?

## CURRENT MARKET SITUATION

The Samoan National Market is estimated at 4 metric tonnes per annum. Honey in Samoa can only be sourced nationally. Even though no centralised data on honey production is currently available, there is a clear shortage of honey for the national market. This shortage is characterised by sporadic availability of honey throughout the year and high retail prices (about SAT\$25 - \$30 for 250ml).

## POTENTIAL CUSTOMERS

Bottled honey can be sold either directly to supermarkets, restaurants or online (via Facebook).

Honey in buckets can be sold to Sale'imoa Apiary or CCK for bottling.

### 01 > NON-TIMBER USE

I live in an area where timber use is restricted or forbidden.  
*i.e. area near river path, mangroves or woodlands.*

### 02 > ALREADY ESTABLISHED

I want to upscale my existing honey production.

### 03 > PREVIOUS EXPERIENCE

I used to successfully produce honey in previously vulnerable sites.

### 04 > ENHANCE CROP PRODUCTION

FAO estimates that pollinators can increase crop production by about 25% if farmers do not overuse chemicals such as fungicides, insecticides and herbicide.

### 05 > EXTRA SOURCE OF INCOME

5 Hives



Minimum Exploitation Size

10 Hives per site



Ideal Exploitation Size

12 - 18 Months



First Harvest

\$14,000



Setup Cost

\$1,300 min  
\$6,400 max



Net Annual Revenue



### Expected Harvest Time

J | F | M | A | M | J | J | A | S | O | N | D

There is a 6-week time gap between nectar foraging by the bees and the production of mature (sealed) honey.



### Production & Revenue

**10 Hives** in the lower catchment will produce about **80 litres (112kg)** of honey per year in three harvests.

Based on a gate price at the farm of **SAT\$16 per kg** or **\$22.40 per litre**, minimum turnover has been estimated at **SAT\$1,730 per year**.

Based on retail prices of **SAT\$100-120 per litre**, maximum turnover has been estimated at **SAT\$6,400 per year** (if 70% of honey produced is being sold).

Honey production is dependent of site locations. Sites located in lower elevation and therefore receiving lower rainfalls



### Minimum Exploitation Size

It is recommended to start with a minimum of 5 hives even though the set-up cost is similar between 5 and 10 hives (due to the cost of the shelter). Experience is required to harvest honey in a timely manner to prevent honey bees from other hives to steal/rob from and eventually kill the colony being harvested.



### Where can I find Expertise

Beekeepers' Association of Samoa  
CBO

Women in Business Development Inc.  
NGO



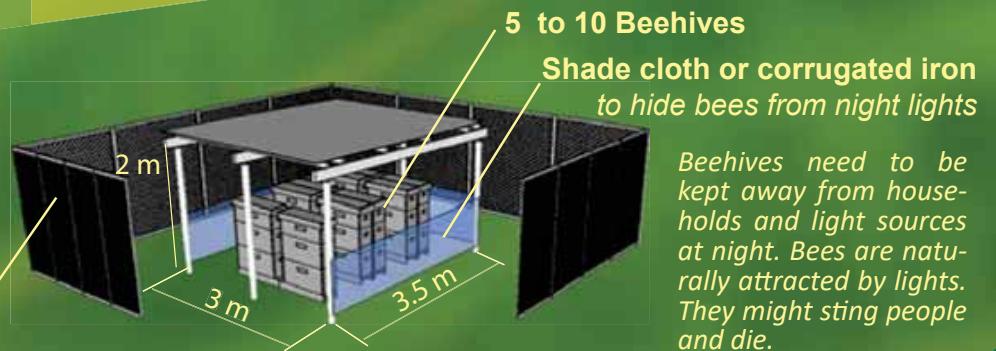
### In-Kind Contribution & Maintenance

A **3.5x3x2m shelter & fencing** need to be built to protect beehives from the weather.

**Weekly visual checks on the hive exterior condition and entrance by owner:** Less activity is a sign of a problem. Dead bees on the ground is a sign that the hive had been robbed out. Disturbed hive box configuration is a sign of animal intrusion/vandalism.

**Monthly monitoring visits by third party (CBO or NGO).** Field visits include first harvest, hands-on training and beehive interior checks.

An agreement ranging between **30 and 50 % of the honey produced** can be signed between beehives owner and third party for the monitoring and harvesting activities.



Beehives need to be kept away from households and light sources at night. Bees are naturally attracted by lights. They might sting people and die.



## SETUP COST Estimated

Description	Quantity	Unit Price	Total
<b>(1) Shelter (3x3x2m)</b>			
Pipe HD Gal (80x3.25mmx5.8m)		\$189.00	} ≈ \$4,000
Timber (2 x 6 x 20)		\$65.60	
Timber-Purlin (2 x 3 x 16)		\$28.50	
Roofing Iron (8x20ft)		\$12.90/m	
Roofing Nails (25nails/kg)		\$36.00/kg	
Cement Bags 40kg		\$44.00	
Nuts/Bolts Cup head M12x150		\$3.70	
Nuts/Bolts Cup head M12x100		\$2.80	
<b>(2) Fencing</b>			
<i>For isolated locations only</i>			
Pipe HD Gal (80x3.25mmx5.8)		\$189.00	}
Chainlink Fence (3.2mmx6ftx15m)		\$350.00	
Padlock		\$20.00	
<b>(3) Honey production</b>			
Double beehive	10	\$668	\$6,680
Bee colony	10	\$200	\$2,000
<b>(4) Tools and Equipment</b>			
Pollination suite	1	\$690	\$690
Gloves	1	\$30	\$30
Hive tools	1	\$51	\$51
Smoker	1	\$200	\$200
SAT\$			<b>\$13,651</b>



## RUNNING COST Estimated

Description	Quantity	Unit Price	Total
<b>(1) Membership</b>			
Association One Off Fee	1	\$50	\$50
Association Annual membership	1	\$20	\$20
<b>(2) Harvest and Marketing</b>			
Transportation	80	\$0.50	\$40
Extraction cost	80	\$1.40	\$112
Bottle plastic C/W top	80	\$0.95	\$76
Filling bottle	80	\$0.70	\$56
Label	80	\$0.47	\$38
Delivery			
SAT\$			<b>\$392</b>



**Bee foraging range:**

3 kilometres

**Mangroves**

Good Potential Sites

**Faatoialemanu**

50 Hives  
Destroyed in  
2012 Flood

**Vinifou**

14 Hives  
1 Site  
Since 1998

**Malifa**

10 Hives  
Destroyed in  
2012 Flood

**Lelata**

8 Hives  
Destroyed in  
2012 Flood

**Vaoala**

8 Hives  
Vandalized  
in 2019

**Avele**

2 Hives  
1 Site  
Since 2019

**Vaoala**

7 Hives  
2 Sites  
Since 2018

**Letava**

6 Hives  
1 Site  
Since 1997

**Tiapapata**

5 Hives  
2 Sites  
Since 1997

**Afiamalu East**

6 Hives  
2 Sites  
Since 2017

**Woodlands**

Other Potential Sites

Honey Production Gradient

1 0 1 2 3 4 km

Indicative Map of Existing and Potential Sites for Honey Production



## Source of Nectar & Pollen Site Evaluation

### THROUGHOUT THE YEAR Examples

Samoan Name	English Name	Latin Name
Fuesaina	Vine / Mile a minute	<i>Mikania micrantha</i>
Mautofu	Common wireweed	<i>Sida acuta</i>
Niu	Coconut trees	<i>Cocos nucifera</i>
Nonu	Noni	<i>Morinda citrifolia</i>
O mautofu eseese	Blue rat's tail weed	<i>Stachytarpheta cayennensis</i>
O Niu teufale eseese	Ornamental palms	
Poumuli	Poumuli	<i>Securinega samoana</i>
Togo	Mangroves	<i>Rhizophora samoensis</i>
Vao fefe	Sensitive grasses	<i>Mimosa diplotricha</i>
	Physic nut	<i>Jatropha pandurifolia</i> Togo

### SEASONAL Examples

Samoan Name	English Name	Latin Name
Apiu	Abiu	<i>Pouteria caimito</i>
Fuga ole kumoa o le fa'i pulukamu	Banana	<i>Musa species</i>
Kofe	Coffee	<i>Coffea species</i>
Kukama	Cucumber	<i>Cucumis sativus</i>
Laichi/Lole	Rambutan	<i>Nephelium lappaceum</i>
Laulili'i fai keu	Mock orange	<i>Philadelphus microphyllus</i>
Maukeni	Pumpkins	<i>Cucurbita species</i>
Meleni	Melon	<i>Cucumis species</i>
O kuava eseese	Guava	<i>Psidium guajava</i>
O mago eseese	Mangoes	<i>Mangifera indica</i>
O moli ma tipolo eseese	Citrus trees	<i>Citrus species</i>
O pasio eseese	Passion fruits	<i>Passiflora edulis</i>
Tamaligi fai sua	Horse radish tree / Drumstick tree	<i>Moringa oleifena</i>
Vigeka	Starfruit	<i>Averrhoa carambola</i>
Vi	Vi	<i>Spondias dulcia</i>
	Mangosteen	<i>Garcinia mangostana</i>



Even though honey bees visit most crop flowers, they do not necessarily pollinate them efficiently. Examples of these crops include passion fruits, solanaceous crops (e.g. capsicum, tomatoes and eggplant), legumes (e.g. beans, cowpeas, alfalfa and grams), nut trees (e.g. macadamia and cashew nuts) and some fruit trees such as Banana, Cocoa or Breadfruit.

The GCF team would like to sincerely thanks M Leicester Dean and M Raymond Voigt from the Beekeeper's Association of Samoa for their valuable inputs for the production of this brochure.