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# COMMUNITY BASED LIVELIHOOD DEVELOPMENT (CBLD) FOR WOMEN AND CHILDREN: HONEY MIDLINE SURVEY

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# COMMUNITY BASED LIVELIHOOD DEVELOPMENT (CBLD) FOR WOMEN AND CHILDREN: HONEY MIDLINE SURVEY

COOPERATIVE AGREEMENT NO. AID 674-A-12-00003



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## **ACRONYMS**

CBLD	Community Based Livelihood and Development
ECCD	Early Childhood Care and Development
HVC	Honey Value Chain
SBCC	Social Behavior Change Communication
SRH	Sexual Reproductive Health
TNS	TechnoServe

## INTRODUCTION

Community Based Livelihoods Development (CBLD) for Women and Children in Swaziland is a five-year cooperative agreement between USAID and FHI 360, which is supported through our implementing partner Techno Serve, Inc. CBLD integrates livelihoods, gender equality, and child protection interventions with community development approaches to achieve sustainable improvements in the social and economic well-being of women and children in communities in Swaziland. CBLD's youth program targets young men and women through a comprehensive program that integrates SBCC, Life skills and enterprise development.

CBLD aims to enhance awareness, acceptance and demonstration of positive behaviours and practices that protect and promote the well-being of women, youth, and children. SBCC emphasizes decision making and positive behaviours, addressing gender norms and GBV, child abuse and neglect, and SRH. Life Skills builds on decision making by discussing education, career, and livelihood opportunities, and basic financial literacy. Enterprise development provides practical skills and tools in enterprise and household financial management. Opportunities to form savings groups are also made available

## SURVEY RATIONALE

### **Specific objective:**

*To evaluate sustainability of the Honey Production with Ndzingeni Beekeeping farmers under the CBLD Program*

CBLD has been working in Ndzingeni since 2012 with an initial enrollment of 69 Lead Beekeepers. This number has grown in the 27 months in the community to 130 in the year 2014, with honey production occurring during the harvest season. Through technical and business skills training to increase the incomes of rural households through honey production and marketing. Honey production has low capital and time requirements, and CBLD supports construction of beehives through a partnership with the local Peak Timbers forestry company. Training activities follow a bee colony's life cycle, focusing on trapping bees and transferring them to hives, managing those hives, harvesting honey, and packaging this honey for sale to formal and informal markets.

In 2013 a baseline survey was conducted to a selected sample of the farmers during the initial mobilization of the farmers before the program's intervention. The baseline information was to be used to support an overall evaluation of the Honey Value Chain (HVC) intervention in Ndzingeni, comparing it against a program midline and endline survey. Conducted project determined at that time to conduct a midline, and will conduct an endline, survey. The midline will also support building the evidence base household economic strengthening programs potential impacts on the livelihoods and food security for vulnerable households. The survey was used to capture different strategies engaged, with a view towards applicability of our target populations, program objectives and to ensure sustainability of the Honey Value Chain initiative within Ndzingeni community. Upon completion of the midline and endline surveys these strategies will be evaluated for effectiveness and to provide CBLD with the information required to make programmatic adjustments to support the sustainability of this activity post this project.

## **METHODOLOGY**

### **Sampling**

CBLD determined there were sufficient funds to capture all value chain participants (n=130) for honey due to the manageable number and the expected benefits from capturing the household level information.

All value chain participants were eligible for the survey, however, each had to provide informed consent prior to taking part in the survey.

### **Survey Instrument**

A questionnaire was developed for all CBLD VC interventions. It was then adapted to the specific VC, irrelevant to community. Data were collected by CBLD trained enumerators and observations were made during data collection efforts.

The midline survey was modified to capture observations made during program implementation and to reflect programming recommendations made during the CBLD mid-term evaluation (Oct 2014).

These modifications included:

- Adding questions that request household members by sex and age, to be in position to know the dependants of each farmer.
- Comparing honey production for 2 beekeeping seasons.
- Use of the honey sales made by each farmer.
- Person making final decision on the use of profits made during sales

### **Survey Implementation**

Farmers were identified through the CBLD database, and were contacted prior to the survey to limit the rate of non-response. However the response rate was not 100% as the survey could not get responses of 53 farmers.

The CBLD Data collection team consisted of seven enumerators, with one identified as a lead enumerator and they conducted household visits. Mobile data collection was the main method to ensure smooth data collection.

### **Questionnaire Content**

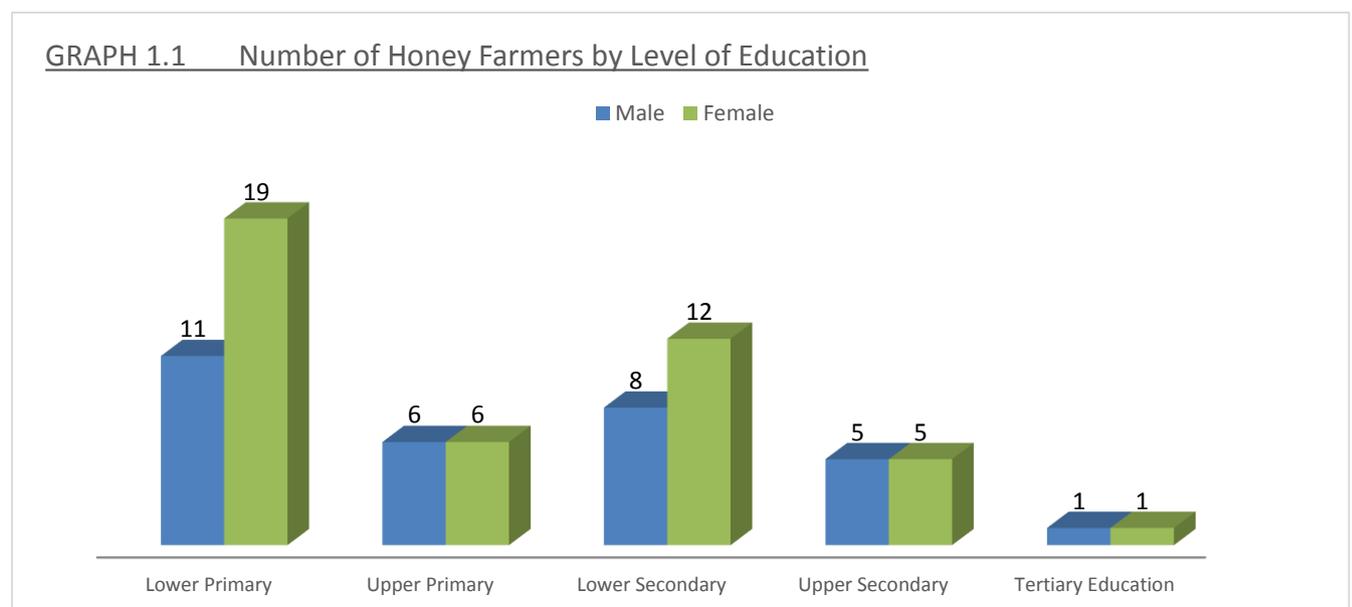
1. Demographics
  - Farmers name, sex, and contact details
  - Farmers education background
  - Current status of beekeeping production
2. 2014 Honey Production Season
  - Harvested and sold honey
  - Quantity of honey sold and comparison of product with previous season's harvest

- Amount received from sold honey
  - Honey markets: source and challenges
  - Production of beeswax
  - Decision Making on the profits made from the sales
  - Usage of the money received from sales
3. 2013 Honey Production Season
    - Same as above for the 2014 Honey Production Season
  4. Beekeeping Production
    - Source of forage
    - Challenges faced during production season
    - Use and ownership of protective clothing
    - Type and quantity of beehives owned and built

## DEMOGRAPHIC INFORMATION

A total of 77 farmers were reached during the survey out of the 130 farmers that CBLD has record of being beekeepers: 58% (45) being female farmers and 42% (32) male farmers. This means the midline survey managed to reach 59% of the farmers. CBLD tried to reach out to all 130 farmers but some noted they had never been Honey Value Chain participants and some could not be reached to participate in the survey. With this outcome then it means the 130 farmers recorded in program database are not all active farmers.

Almost all of the farmers have some form of education, but the majority (55%) did not reach the Secondary education stage, 56% (25) of those not reaching higher education were women.



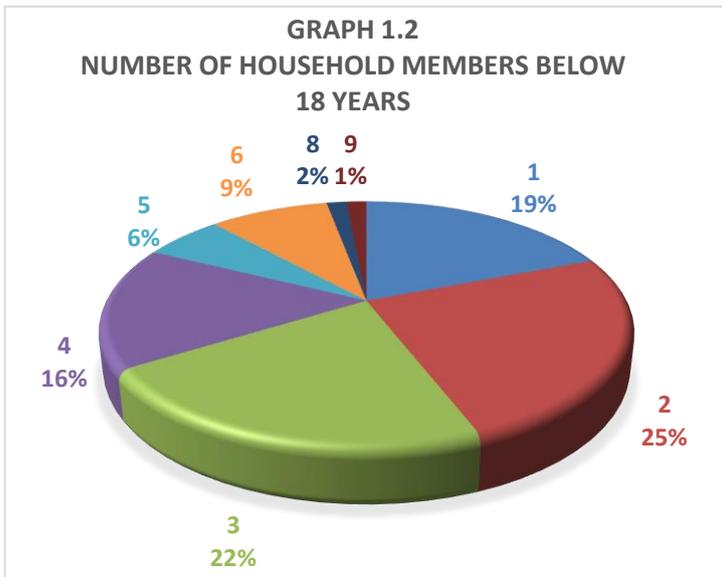
## Household

The 77 farmers surveyed care for approximately 460 members in their respective households, with 51% of those being male and more than half of the dependants in the households are

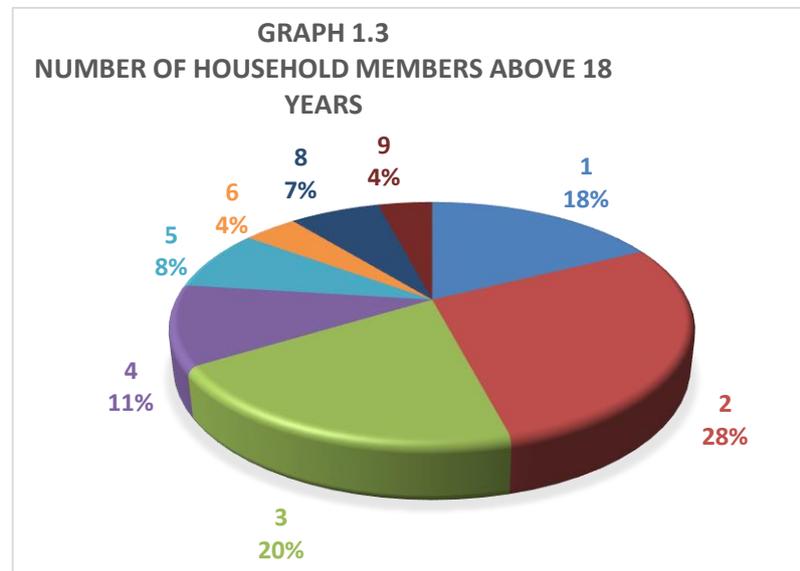
below the age 18 years. The largest household number is 16 members, with the minimum at only one household member.

### Household members living with farmer

A total of 56% of the farmers' households care for two to four household members below the age of 18 years. This means that these households have dependents that are within the school going age group thus increasing the household expenditures (education, food, and clothing).



Total of 27 (35%) honey farmers care for 7 – 16 household members: 1 household has 16 members and 12 farmer's household has 7 members.



### HONEY FARMING STATUS

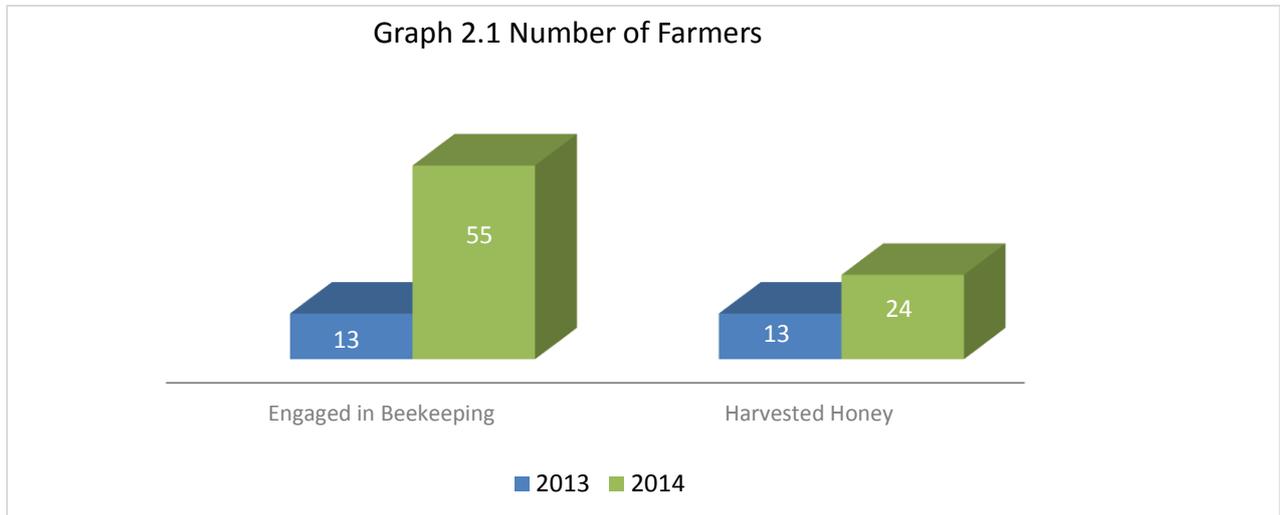
Of the total 77 farmers surveyed, 64% are still active, while 14 of the 28 non-active farmers are women. 40 farmers have had bees for at least or less than a year, five have had honey bees for more than 10+ years (they are all male farmers), and 12 just completed their first year.

The project engaged 14 lead beekeepers (14%), four of which were female. Lead beekeeping farmers assist the more novice beekeepers in their honey activities; providing mentorship; sharing equipment; helping to arrange markets; and provide training to the secondary bee farmers. And beekeeping is also based on experience, as all that have kept bees for 10+ years are males thus may not be surprising that there are only 4 female lead farmers.

## HONEY PRODUCTION SEASON

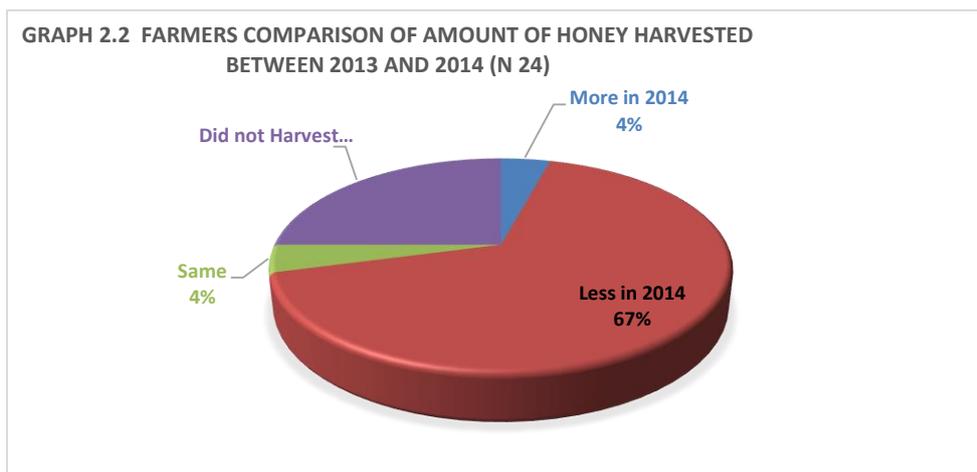
### Production and harvesting of honey

During the 2014 honey production season 71% (55) of the farmers engaged in beekeeping, with 24 of the farmers harvesting honey at the end of the 2014 production season. This is an increase in the number of the farmers that engaged in the farming during the 2013 production season, based on the comparison of the survey responses.



Farmers use different measuring unit for their honey production: some use Kg and others use Litres, there is no standard measuring tool used across farmers. Most farmers harvested honey ranging from 10-50 Kg and 20-60 Litres, and stated that they actually harvested less honey this season compared to 2013 honey production season.

In 2013 farmers that engaged in beekeeping all managed to harvest honey, however only three of the 13 farmers could not sell any of the honey they harvested and eight of 13 sold their harvest.



As much as 67% of the farmers stated that they harvested less honey, however 75% of them that managed to sell their harvest (meaning they managed to sell the harvest they consider to be less). The highest selling price that was recorded for the 2014 production season was E10,000.00 for the harvest of 240kg of unprocessed honey, and most of the honey sold was

purchased by local buyers with 2 farmers selling to major organizations (for example, Eswatini Kitchen).

Total of E35 955.00 was gained by 18 farmers after 2014 honey sales; of the 18 farmers that sold their honey 17 were females and they managed to get an amount of E8 160.00. The 10 out of 18 (56%) farmers that sold honey reported problems while selling their harvest which may be a factor contributing to lower income received after sales.

Table 1: Honey Production Sales for 2014 season

	<b>Harvest</b>	<b>Emalangeni</b>
Kilogram	10-20	2,580.00
	21-40	2,250.00
	40+	26,375.00
Litres	20-40	1,650.00
	41+	3,100.00
<b>Total Sales</b>		<b>35,955.00</b>

In 2013, 10 of the 13 (76.9%) farmers that harvested sold their honey and due to memory lapse and that there is no record keeping, farmers could not remember the amount they received from their sales.

Problems encountered by farmers when selling honey

- Knowledge on available markets
- Poor markets within reach
- Lack of knowledge on how to sell honey
- Not able to price honey, as a result some customers complain on the set prices
- No proper packaging materials
- Payment is received after a long time
- Lack of Business knowledge

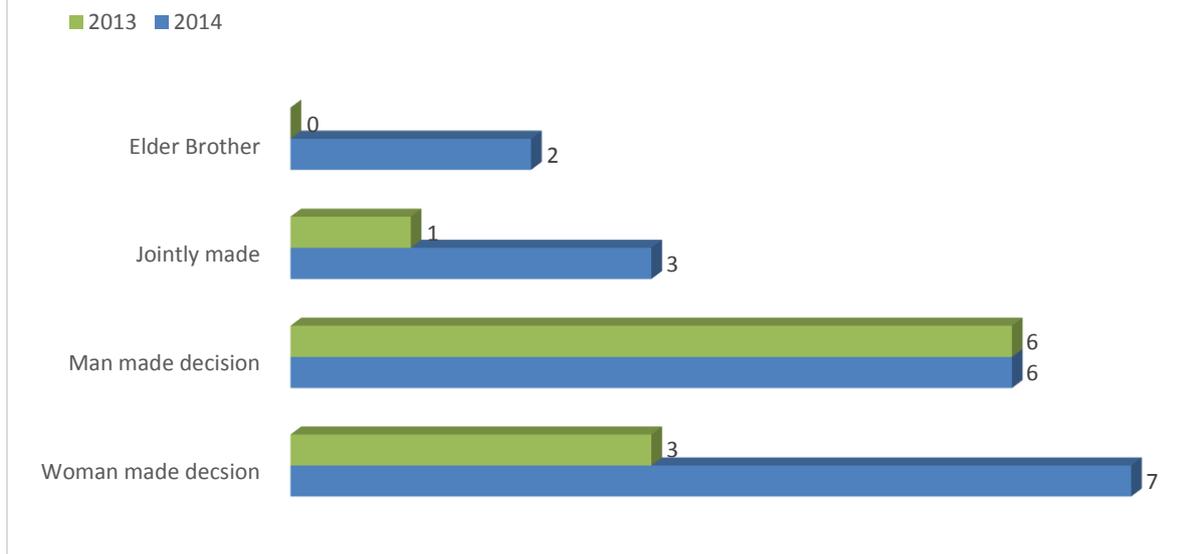
As much as farmers reported to have had challenges when selling their honey 10 of the 18 (56%) farmers stated that they got more money in 2014 compared to sales made during 2013 production season.

Farmers that harvested honey during the 2014 honey production season reported to have not sold their beeswax as they mostly sold their honey unprocessed, thus reason for not having beeswax to sell.

**Decision on use of profits gained from honey sales**

From both sales made in 2013 and 2014 most farmers have shared that the final decision on how to use profits made from honey sales are made by themselves, and it is worth noting that 17% of farmers that shared that decision making with their spouses (husband or wife).

Graph 2.3- Decision making on honey sales profits



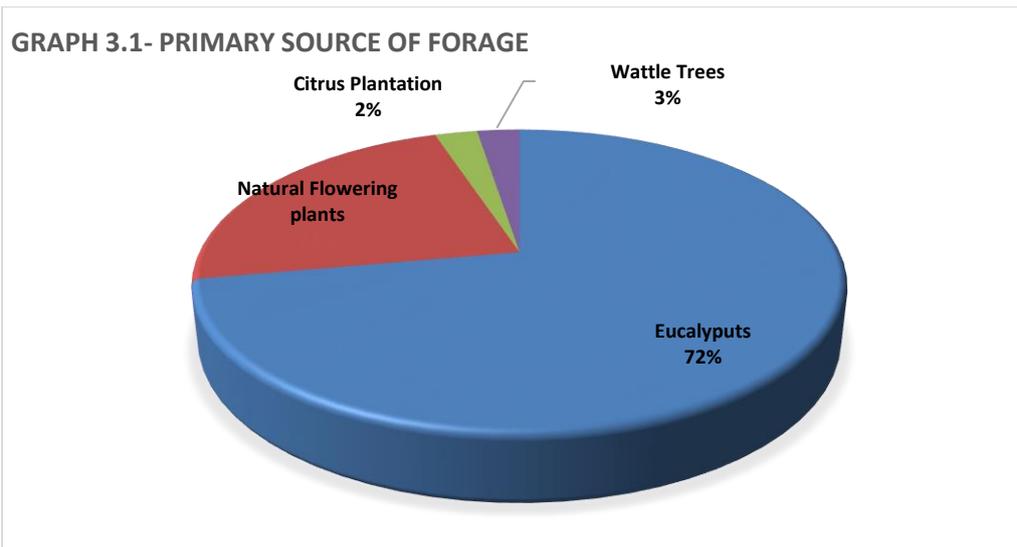
Another observation on the decision making for 2014 production, is that there is a male farmer who declared that decision of the sales are done by his wife and also have a female farmer who has decisions taken by her husband.

The main expenditures for profits received are used to purchase household food; pay for school fees; and clearing any existing family debts. Four farmers used their profits to improve their honey. No farmers used profits to care for the sick (purchasing medication or taking them health facilities) either from their household and/or relatives. Key highlight is that there are farmers (4) who used some of their profits in improving their honey production and none care for the sick using the profits gained.

## BEEKEEPING PRODUCTION

### Bee's primary source of forage

The Ndzingeni Honey farmers are supported through an engagement with Peak Timbers, who has a large Eucalyptus plantation. This survey confirmed that outside of the Eucalyptus, which is provided by Peak Timbers, natural flowering plants are used 23% of the time.



### Farmer’s challenges

Farmers have shared that there are number of challenges affecting their beekeeping production, which has a huge impact on the produce they harvest and the money they get after sales. The 5 most frequently expressed challenges: Theft; Animals; Lack of Equipment; Failure to catch swarms; and Bees absconds.

Close to half of the farmers 38 of 77 (49%) stated theft as one of challenges, though there was no clarification on if all their beehives were stolen during the farming season. And 20 of 77 (26%) farmers shared that their bees flew away thus leaving them with no bees for honey production. It is worth noting that some farmers cited more than one challenge encountered in the season.

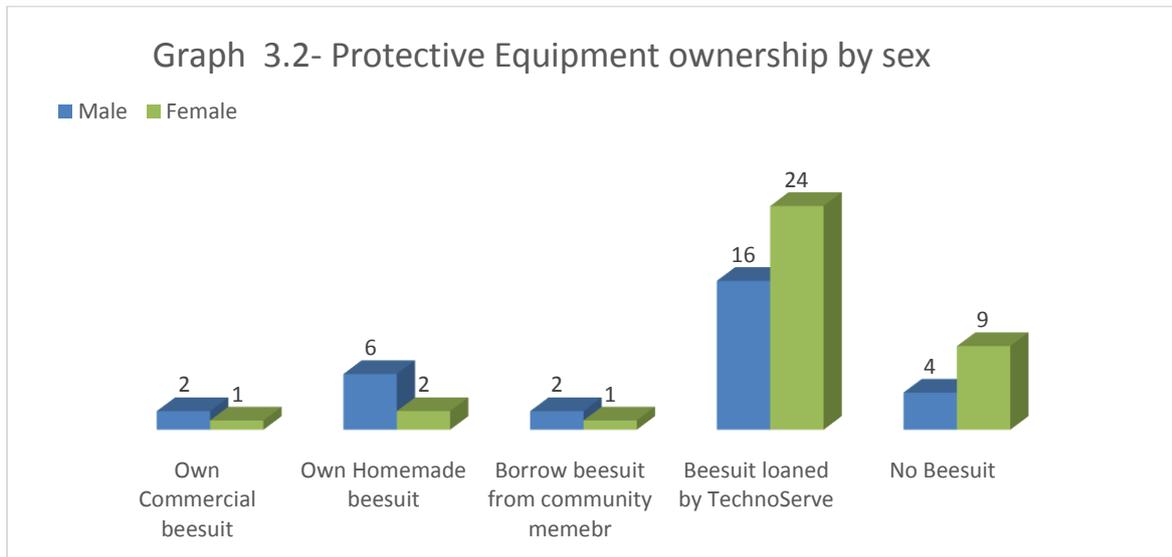
The farmers have noted that some of the challenges can be addressed and managed. It was shared that farmers have discussed joining and sourcing land to allow farmers to keep their hives in a protected space. They also mentioned that farming in one area may also assist in that they will share the resources (beekeeping equipment’s) and can easily assist each other.

Table 2

Challenges	Number of Farmers
Land Issues	4
Time consuming	5
Vandalism	6
Difficulty selling honey	6
Poor prices	9
Difficulty procuring beekeeping materials	9
Lack of Beekeeping equipment	13
Failure to catch swarms	14
Animal Invasion	16
Bees flew away	20
Theft	38

## Production materials

Farmers have shared that they do not have beekeeping equipment's and materials in which they even mentioned that this is also a challenge in their production, as such 40 of 77 (52%) of the farmers reported to be borrowing protective materials from TNS. Farmers denounce lack of funds as contribution to them not owning protective equipment for working with their beehives.



It is key for beekeeping farmers to use protective clothing when working with their hives, so if most of them rely on loaned suits then this may compromise sustainability of the activity past life of TechnoServe.

## Beehives ownership

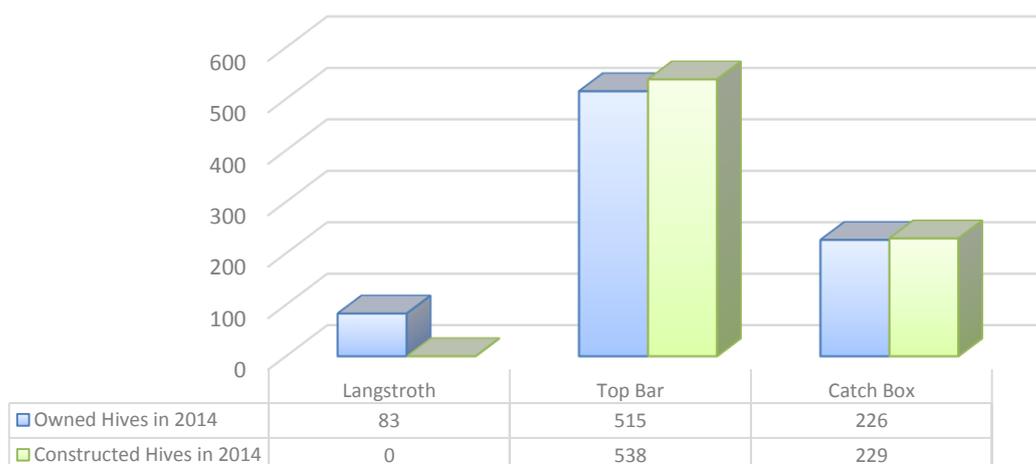
The beekeeping program currently implemented in Ndzingeni as of 2013 to date, CBLD (TNS) has a standing understanding (Memorandum of Understanding ) with Peak Timbers the company that has vast lands with the eucalyptus plantation where they provide the timber to the program and as part our beekeeping calendar we train beekeepers on how to construct bee hives. The hives have a life span of 10 years if kept and well placed as this prevent them from being damaged by the rain and humid.

During the 2014 honey production season beekeepers managed to construct 538 Top bar hives and 229 Catch boxes, using the timber received from Pick Timbers.

## TYPES OF BEEHIVES

A total of 1 591 hives are owned by the 77 farmers reached during the survey: 455 catch boxes, 1053 top bars and 83 langstroth.767 of the owned beehives were constructed during 2014 productive season.

Graph 3.3- Types of Beehives owned and constructed during 2014 production



### Program interventions

From the assistance farmers have received from CBLD 23 (8 males, 15 females) of 77 (30%) have shared that they are now recognized by the community, after being seen participating in honey production. About 18 (7 males, 11 females) of 77 (25%) of the farmers shared that they are economically independent, no longer rely on someone else all the time especially once they have harvested and sold their honey.

Mostly what farmers got from the CBLD program is knowledge on: how to keep bees; ECCD; Livelihood; and Business Plans, and they were also linked with Peak Timbers.

### RECOMMENDATIONS

- Improve beekeepers access to protective equipment when working with their beehive (beesuit);
- Assist farmers with marketing of their honey products: packaging, pricing and sourcing potential markets;
- Improve messaging and sensitization to ensure that household members make collective decisions;
- Capacitate honey farmers on record keeping: for monitoring and reference purposes it is important to keep track of all activities taking place in a business. Some of the farmers could not remember sales made previous production year, yet if the records were in-place they would have referred.
- Encourage farmers to grow forage: it is important for the bees to have food for their honey production, to avoid absconding of bees.

## Annex 1: Hive Materials

### TOP BAR HIVE

These are the traditional and standard hives use for keeping bees for honey production. Beekeepers are trained on how to construct top bar hive. Beekeepers are also able to source used clean pallets (those that are not painted) and use them to make top bar hives. Top bar hives are stationary and are heavy to lift. The honey combs hangs from the top bar with any support and if any movement then the honey comb easily break and this result in honey being spoiled. During the construction beekeepers are taught how to paint the hives outside to prevent them from sucking water during rains and moist which then spoil.

#### Advantages

- It is cheap to buy
- It can easily be constructed even by the least skilled person
- It is easy to manage and people can easily and quickly learn how to set them up and use them.
- Hive inspection and management can be done with ease.
- Even under the poorest management, one will harvest something.



#### Disadvantages

- It cannot be transported because the combs hang freely and are not supported by wire or frame. As a result, the combs will fall off.

### LANGSTROTH BEEHIVES

Langstroth bee hives are the latest technology for our bee keepers to use for proper honey production business. These could be transported from one area to another without the honey combs falling as they are support by the frame and wires.

#### Advantages

- Pure honey can be harvested from these hives
  - Honey can be extracted from the combs which can be returned to the bees for reuse. This honey is readily stored as the bees do not rebuild the combs.
  - The size of the hive can be increased in size as a second empty super can be placed on top if the first one is full. This will make the hive to accommodate large colonies for the bees to maximize production.



## **Disadvantages**

- The hive and its components are very costly to acquire.
- The hives require some skills and sophisticated machinery to build. It is not really feasible for village carpenters to make all frames and hive parts properly and to the exact specifications.