



## Improved Beekeeping in Liberia

### Cost - Benefit analysis (in USD)

#### Forest & Farm Family Unit

The cost-benefit facts presented here are based on the results of the pilot implementation of beekeeping income generation activities with 30 Liberian families in Nimba, Grand Gedee and River Gee Counties with the support of the Non-Legally binding instrument (NLBI) project during 2012-2013.

#### Unit

One Forest & Farm family. To start beekeeping activities one Family needs 25 Kenyan top bar beehives.

#### I. Potential and benefits

The availability of flowering trees, honey bees, seasonal rain fall and water is a clear indication that Liberia has great potentials for sustainable, profitable and healthy beekeeping ventures. However, improved beekeeping activity is new in Liberia. To establish a sustainable beekeeping business, training is essential and technical support and follow up during at least the 1<sup>st</sup> year is highly recommended.

**Economic Benefits:** Beekeeping is an activity with low production cost, it is not labor intensive and can generate high incomes. Beekeeping can be easily integrated with other farm activities to add sources of income for a sustainable livelihood. There are also positive externalities from beekeeping namely the pollination services which result in increased crop and improved product quality, and that fact that bees also produce wax which can be transformed into candles, skin creams, wood polish and others and generate extra income.

**Nutritional Benefits:** Honey contains plenty of essential vitamins and minerals and can also be used as a medicine to treat for example sore throat.

**Environmental Benefits:** Avoid bush fire and massive killing of bees, multiply and sustain bees population, improve vegetation, improve crops yield and protect the forest.

#### II. Cost analysis

- a. **Construction cost of 25 Kenyan top bar beehives**, as starter kit for a farmer family to start improved beekeeping as a business activity

Number of beehives	Cost per beehive (depreciation/4years) USD	Total (USD)
25	7.5	187.5

- b. **Production activities/ labor cost**

The activities are: beehives management, colonization, harvesting and processing. These activities will be undertaken by the farmer family.

Number of months	Cost per month (USD)	Total (USD)
12	10	120

### c. Harvesting and processing equipment

Equipment	Cost per set (depreciation/3years) USD	Total (USD)
Harvesting suit	50	50
Processing equipment	150	150
<b>Total</b>		<b>200</b>

### d. Training facilitation and monitoring cost

Number of days	Facilitator fee per day	Total (USD)
50	5	250

### e. Summary of Costs

Equipment/services	Cost (USD)
25 beehives construction	187
25 beehives management (labor)	120
Harvesting and processing equipment	200
Facilitator fees	250
<b>Total Costs</b>	<b>757</b>

## III. Benefits

Production period /cycle of 12 months, beehive durability of 4 years

### Projection (yield and cash value) per family

Number of beehives	No. beehives Absconded or not colonized	Average yield per beehive, per production cycle	Volume of honey per production cycle	Sell price per gallon, at farm level (USD)	Total income per production cycle (USD)	Total income in four years (USD)
25	5	3 gallons	60 gallons	20	1,200	4,800

## IV. Conclusion of the cost benefit analysis

A Liberian Forest & Farm family that owns 25 beehives, with total investment of 757 USD will generate a total revenue of 1,200 USD, annually for 4 years. It means 100 USD per month, which is equivalent to a monthly salary of a civil servant. In addition to that it was calculated 120 USD which is for the farmer's own services provided.

