



Beekeeping as an Enterprise

Introduction

- **Beekeeping** (or **apiculture**) is the rearing of bee colonies for honey production, commonly in man-made hives.
- Most such bee species belong to genus *Apis*, family Apidae and order Hymenoptera.
- The place where bees are kept is known as "**apiary**" or "**bee yard**".



- Four species of honeybees are found in Pakistan.
- Three are local and one is imported and established in Pakistan.
- The local species are *Apis dorsata*, *Apis cerana*, and *Apis florea*.
- The occidental species is *Apis mellifera* (also known as European Bee). *Apis mellifera* are red/brown in color and have black bands and orange yellow rings on abdomen.

Apis dorsata



Apis cerana



Apis florea



Apis mellifera



Advantages and Products of Beekeeping as Business

1. Honey Bees

- Honey bees are one of the important products for beekeepers.
- In spring season they can be purchased as nucleus colonies.



2. Honey

- From economic point of view honey is also an important product of beekeeping.
- In ancient times, it was the first product which is used by humans.
- Honey is the natural sweet substance which is made up of pollens and nectars by honeybees.
- Honey also has specific antibacterial activity towards different bacterial infections.



3. Bee Wax

- On the abdomen of worker bees the glands are present which secrete wax.
- There are many uses of bee wax.
- It's used for making beautiful candles, hair care products, soaps, wood polishes and lip balms.
- Wax is often added to creams because it makes skin soft and has antibiotic properties.



4. Bee Bread

- In pollen basket bees collect pollens and then carry back into hive, after fermentation it turns into bee bread which is a protein source for brood rearing.
- Extra pollens can be collected from hive which is sometime used as dietary supplement by humans.



5. Bee Brood

- The eggs, larvae, or pupae are the bee brood of honey bees, which is edible and highly nutritious.
- Bee brood contains the same amount of protein that beef or poultry does.
- Bee broods are harvested when there is no need of honey bees more.



6. Propolis

- Propolis is collected by the honeybee which is a mixture of various amounts of beeswax and resins.
- These resins are employed by worker bees to repair combs, seal small cracks within hive and reduce the area of hive entrance.
- Propolis is also used in wood finishes.



7. Royal Jelly

- Royal jelly is a substance which is secreted by honey bee through hypopharageal glands and fed to larvae and queen bee.
- Royal jelly is employed for asthma, hay fever, pancreatitis, sleep troubles (insomnia), stomach ulcers, renal disorder, bone fractures, menopausal symptoms, skin disorders and high cholesterol.



8. Bee Venom

- Honeybee venom is produced by two glands related to the sting apparatus of worker bees.
- This is the poison that creates bee stings painful.
- Bee venom is used to make medicine.



9. Pollination

- An important benefit of beekeeping is pollination. Bees pollinate the plants to reproduce.
- This occurs naturally when bees are foraging for pollen and nectar. Basically, pollen from the plant's stamen gets stuck on the bee.
- When she goes to another flower the pollen falls off onto the plant's stigma.
- This is what needs to happen for fruits and vegetables to develop. Honey bees perform above 80 percent of all pollination of cultivated crops. Honey bees pollinate more than 100 important crops



How to establish beekeeping and what are its basic requirements?

- In Pakistan beekeeping is profitable business.
- In modern bee hives, about 7,000 beekeepers rearing *Apis mellifera* species.
- Annually there are about 300,000 colonies producing 7,500 metric ton honey.
- Climate conditions and bee flora play important role in expansion of beekeeping

Income and Expenditures of 25 *Apis mellifera* colonies

- **A) NON RECURRING ITEMS (Things that we buy once in the start of business)**

Sr. #	EQUIPMENTS	QUANTITY	PRICE PER UNIT	PRICE * TOTAL	SUB TOTAL
1	Bee hive	25	7500 Rs	7500 * 25	187,500 Rs
2	Hive stands	25	250 Rs	250 * 25	6250 Rs
3	Honey extractor	1	4000 Rs	4000 * 1	4000 Rs
4	Smoker	2	220 Rs	220 * 2	440 Rs
5	Veil	3	450 Rs	450 * 3	1350 Rs
6	Frame knife	2	120 Rs	120 * 2	240 Rs
7	Feeder	5	350 Rs	350 * 5	1750 Rs
8	Camel hair brush	3	80 Rs	80 * 3	240 Rs
TOTAL					201,770 Rs

- **B) RECURRING ITEMS (Things that we should have to buy every year)**

1	Wax frames	10	400 Rs	400 * 10	4000 Rs
2	Sugar	150 kg	80 Rs	80 * 150	12000 Rs
3	Medicines				4000 Rs
TOTAL					20,000 Rs

Total expenditures = Non -recurring items + recurring items
= 201,770 + 20,000
T.E = 221,770 PKR

GROSS INCOME FROM HONEY (for 1st year)

Honey produced in one hive = 30/kg approximately

Price of one kg honey = 1200 PKR

Total quantity of honey from 25 hives = 30×25

= 750 kg

Total income from 25 hives = 1200×750

= 900000 PKR

Profit From Honey Excluding Expenditures
expenditures = Total income – Total

= $900,000 - 221,770$

= **678,230 PKR for 1st year.**

GROSS INCOME FROM HONEY FOR NEXT YEARS/ SEASONS

For the next years expenditures will minimize because we have only buy the recurring items(wax, sugar, medicines etc.) and profit is increased.

Such as,

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Price of one kg honey	= 1200 PKR
Total quantity of honey from 25 hives	= $30 * 25$
	= 750 kg
Total income from 25 hives	= $1200 * 750$
	= 900000 PKR

- **PROFIT FROM HONEY EXCLUDING EXPENDITURES=**

$$\begin{aligned} \text{Total income} - \text{Total expenditures} &= 900,000 - 20,000 \\ &= \mathbf{880,000 \text{ PKR}} \end{aligned}$$

- **Net profit for 1st year of business = 678,230 PKR**
- **Net profit for next onward seasons = 880,000 PKR**
- **Net profit after 5 years of business= 4,198,230 PKR**
- **Net profit for 1 month = 70,000 PKR Approx.**

How Can Beekeepers Earn Income From Keeping Bees?

- You may have a firm idea already of ways beekeeping is going to earn earnings for you, however it is also worth seeking to support outdoor the box, and look at presenting a multiple variety of products, for you to build your profits across the seasons.
- However, whether you make a decision to focus on being a honey producer business, or selling a wider variety of product and services, you'll want to estimate your ability earnings, and add those to your commercial enterprise plan.



Here are some ideas of what your enterprise might include

- Selling honey
- Selling other bee products (mentioned above)
- Selling services, such as pollination. Note, promoting pollination services can be a tricky business these days.
- Selling beekeeping courses at your apiary or online, CDs and books you've got written yourself.
- If you have land, could you be interested about walking a nursery or cut flower enterprise alongside your beekeeping commercial enterprise.
- Selling beekeeping equipment, which includes bee hives.

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