ECONOMICS AND MARKETING OF HONEY AND ITS VALUE ADDED PRODUCT

Honey:

Honey is the most important primary product of beekeeping both from a quantitative and an economic point of view. It was also the first bee product used by humankind in ancient times.

"Honey is the natural sweet substance produced by honeybees from the nectar of blossoms or from the secretion of living parts of plants or excretions of plant sucking insects on the living parts of plants, which honeybees collect, transform and combine with specific substances of their own, store and leave in the honey comb to ripen and mature.

-Codex Alimentarius (1989)

A display of various products in which honey is an ingredient.

Value added products:

The best known primary products of beekeeping are

honey and

wax.

Other Primary bee products:

1. Pollen
2. Propolis
3. Royal jelly
4. Venom
5. Queens
6. Bees and
7. their larvae

- While most of these products can be consumed or used in the state in which they were produced by the bees, there are many additional uses where these products form only a part of all the ingredients of another product.
- Because of the quality and sometimes almost mystical reputation and characteristics of most primary bee products, their addition to other products usually enhances the value or quality of these secondary products.

- For this reason, the secondary products, which partially, or wholly, can be made up of primary bee products, are referred to here as "value added" products from beekeeping.

Market outlook of honey:

- Data about world-wide honey production are published every year by FAO.
- In 2013, world production reached almost 43000 tonnes. The increased production in the last 20 years, despite fluctuations in individual regions and countries (both industrialized and non-industrialized) is accredited to an increase in the number of hives and production per colony.

- The major producers are

  Russia,

  China,

  USA,

  Mexico,

  Argentina,

  Canada,

  Brazil and

  Australia.

- The major exporters are China, Mexico and Argentina, but the highest colony yields are recorded in Australia and Canada which have a favourable environment as well as highly developed colony management.

- The major consumers and importers are the industrialized countries led by

  1. Germany,
  2. Japan,
  3. USA and
  4. UK.

- The increased consumption over the last few years can be attributed to the general increase in living standards and a higher interest in natural and health products.

- In general,

  Light-coloured honeys- highest price

  Dark ones are most frequently used for industrial production.
- Mild flavoured honeys are preferred, but characteristically flavoured honeys bring top prices in some countries.
- Large honey packers usually prefer honeys with a low tendency to crystallize.

- Some unifloral honeys such as Hungarian Black Locust honey bring twice the price of regular, multifloral honey.
- Local prices in most developing countries are higher than the international market prices and prices in neighbouring countries with less honey production or favourable exchange rates may sometimes be quite attractive.

Market outlook of Pollen:

- Dried pollen prices in the USA range from US$5 to 13 per kg wholesale and US$11 30 per kg retail (American Bee Journal, 1993).
- Encapsulated pollen or pollen tablets sell vials of 50 to 100 units and retail at prices of up to US$900/kg, at least in Italy
- The bulk pollen consumer market seems to be growing in industrialized countries, but pollen tablets are still a common feature of health food stores and command an excessively high price.

- Encapsulation and extraction of pollen lend themselves easily to small scale manufacturing and result in safer consumer products.
- Most of the buyers and large scale sellers of pollen are also honey traders
- The high nutritional value of pollen should find special consideration in rural communities. Though not a traditional food, the ease of mixing it with other foods should facilitate acceptance. Rural hospitals could be the first to promote the use of pollen.

Various commercial products containing bee-collected pollen in eithe a processed or unprocessed (from left to righ): liquid pollen extract, granola bar (musli), different coloured pollen pills and capsules and dried pollen.

Market outlook of Wax:

- Markets and prices for products made from beeswax vary widely from country to country.
- Generally, the best margin between raw material value and end product price may be obtained in cosmetic preparations and jewellery.
- Most other applications, including pharmaceuticals, except dermatological and traditional medicinal products, are part of a very different industry which requires much larger investments and higher technologies.
- In these industries beeswax forms only a minuscule part both of the manufacturing process and of the final product.

A display of homemade candles from West Africa (from left to right): stained candle moulded in PVC pipe, coloured wax with trimmed tip, candle still inside of bamboo mould, 2 candles rolled from wax foundation sheets, decorated candle from plastic cup mould, candle from bamboo mould (bottom).

Market outlook of Propolis:

- The market for raw material and secondary products containing propolis will probably continue to grow as they find more acceptance in medicinal uses and as more cosmetic manufacturers realize their benefits and marketing value.
- Improvements in the productionof water-soluble formulations of the active ingredients should further facilitate their wider use.
- Presently,, the demand is higher than supply in most countries

Various products containing propolis (from left to right): extracts of various concentrations, revitalizing cream, extracts with dropper, caramels, soap, shampoo and night cream

Market outlook of Royal jelly:

- No official market statistics are available, only estimates (Nardi, 1986).
- China is unanimously recognized as the world's largest producer and exporter of royal jelly.
- Its estimated annual production is in the order of 400 to 500 tons, nearly all exported to Japan, Europe and the USA.

- China accounts for approximately 60% of world production.
- Other countries in the Far East (Korea, Taiwan and Japan) are also important producers and/or exporters. In the rest of the world, royal jelly is produced mainly in Eastern Europe

- In its processed form as tablets, capsules or vials, the equivalent of 1 kg of royal jelly may cost the consumer of some products as much as US$ 3,300. The price margin is similar to that of dried and processed pollen.
- Japan has probably the highest domestic consumption of royal jelly (180 tons, Inoue, 1986) a large part of which is imported from other Asian countries.

- Outside Asia, the main markets for royal jelly are in the European and North American cosmetics industry and to a lesser extent, in the health food market.
- If therapeutic and other beneficial properties of royal jelly can be established scientifically, this market for royal jelly products

A variety of products containing royal jelly (from left to right): freeze-dried royal jelly with separate solvent in individual dosages, soap, individual liquid dosages, yoghurt, night and day cream, fresh royal jelly and shampoo with royal jelly.

Market outlook of Venom:

- Bee venom is a highly specialized product with only very few buyers
- The market volume is relatively small too, although there are no comprehensive surveys.
- The main venom producer in the USA has produced only about 3 kg of dry venom during the last 30 years (Mraz, 1982) but there is a large producer in Brazil and more or less significant amounts are produced in many other countries.

- Local manufacturing of the pure venom however, is relatively easy and within the means of many beekeepers;no expensive or high technology processing is required except refrigeration, but its economic feasibility depends on access to the few specialized buyers.
- In contrast, the venom in less controlled dosages is available almost everywhere, from a beekeeper or one's own hives, free or at very low cost. Often, the only price is the life of the bee.

Market outlook of larval and adult honey bees:

- The People's Republic of China, Taiwan and Japan have small local markets and there may be some trade between these countries (Crane, 1990).
- Cans of chocolate-covered honeybee drone larvae may be seen in some specialty Asian food stores in Europe and the USA, but according to recent enquiries they are rather difficult to find.
- The sale of fresh combs with brood for consumption may be possible in some areas.

Thank you