

# Life history of Honey bee

After fertilization the queen lays about 2000/egg/days.

→ One egg each brood cell. ⇒ 3 days egg hatches

After hatching a white larva (Grows) emerges which is feed by workers (Nurse bees)

⇒ From the 4 days all the worker bee provide food which consist pollen

⇒ 7<sup>th</sup> days Royal Jelly is secreted from the maxillary gland & honey to all baby bees.

larva, pupa, & queen of worker bees.

⇒ 12<sup>th</sup> and 18<sup>th</sup> secretion of wax from wax gland also starts. Jelly.

Eggs destined to become drones are unfertilized & are laid in cells of slightly greater diameter than those of workers

[Drone develop  $\Rightarrow$  parthenogenetically from unfertilized egg. (Arrhenotoky)] ABLES<sup>®</sup> KOTA

Time  $\Rightarrow$  The time required to produce a queen from egg to adult is about  $\Rightarrow$  15-16 days for a worker bees for a drone 24 days

4) Nectar collection & HONEY Preparation 2 1/2 day

disaccharide non-reducing sugar  
Sucrose of (nectar)  $\xrightarrow{\text{Invertase}}$  Glucose + fructose

A) Nectar is stored in the crop

B) Extra amount of water is evaporated by the farmers bees.

This concentrated product is called "Honey"

Composition of honey  $\Rightarrow$

- 1) Fructose  $\Rightarrow$  40-45%
- 2) Glucose  $\Rightarrow$  32-37%
- 3) Water ( $H_2O$ )  $\Rightarrow$  17-20%
- 4) Enzymes & pigments  $\Rightarrow$  2-21%
- 5) Vitamin  $\Rightarrow$  B<sub>1</sub>, B<sub>6</sub>, C & D
- 6) Minerals = 1%. Sucrose  $\Rightarrow$  1-2%

Honey ⇒ Honey is a food of high nutritive value and also finds used in the indigenous system of Medicine

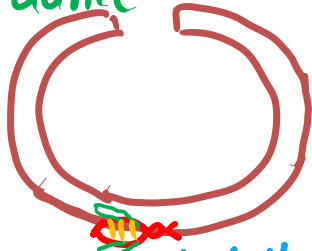
⇒ 'Secondary product of Apiculture'

It is an aromatic viscid sweet material consists of - 17% water, sugar protein, Minerals, vitamins

⇒ PH of honey ⇒ Slightly acidic [specific gravity ⇒ (1.45 - 1.48)]

Communication By DANCE ⇒ Karl von frish "1973" Noble prize

Round dance



Dance indicates that the food source is about ⇒ less than 75 m from a hive help of smell of flower

a) motion lower side

↳ food source will be in opposite direction of SUN

Tail wagging dance "दुमहिले वाला"



⇒ 'More than 75 m'

c) If the motion is in upper side of a straight line with wagging tail than food source will in the same direction of sun

Bee wax Honeybee also produces beeswax

⇒ Industry ⇒ cosmetics and polishes of various kinds

"Wax is the real and primary product of Apiculture"

It is obtained from bee hives

Secretion of abdominal gland (wax glands) of worker bee"

Propolis ⇒ plant substance (pollen) called propolis

⇒ wax a handy nature

⇒ Propolis is a gum like substance which is used by bees to repair the old & destructed parts of hive.

Q Which are fertile individuals in the colony of honeybee?

- 1) Queen 2) Drones 3) workers 4) Both 1 & 2

Q Composition of honey does not include

- 1) Fructose 2) Galactose 3) Glucose 4) vitamins