



Applied insect ecology 2017 – 8

Včelařství // Apidology

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a

oddělení ekofyziologie

Entomologický ústav BC AV ČR



Včela medonosná

- *Apis mellifera*: honey bee
- Apidology, apiology, apiculture, melittology, apiculture, beekeeping
- Pollination
- Honey
- Wax
- Propolis
- Pollen
- Royal jelly



Včela medonosná

- *Apis mellifera*: honey bee
- Colony: queen, workers, drones
- 100 000 ind.
 - Hybrids, strains
 - disease and parasite resistance
 - good honey production
 - swarming behaviour reduction
 - prolific breeding
 - mild disposition



Apidology

- Sources:

- Nectar, honeydew, other sugars
- Pollen
- Water
- Resins



- Wax

- Product of gland
- Combs
- Bee space 5-8 mm
- Eggs, larvae, pupae
- Honey, pollen
- Drone and queen cells bigger
- Queen excluder
- Removable bottom tray

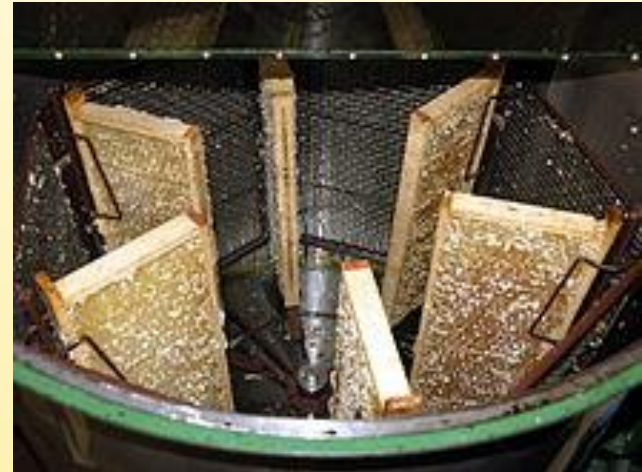


Apidology

- Honey

- Centrifugation: spinner
- Long term storage
- Sugars, aminoacids, enzymes
- Fermentation: mead

- Upper frames
- Feeding sugar



- Protective clothing

- Smoker



Apidology

- Fertilization:
 - Drone haploid
 - Mating outside hive, far, high
 - Several matings (12+)
 - Back to hive
 - Swarming (old queen+wax secret.)
 - 1500 eggs / day
 - Larval development 15 d
 - 6 weeks life
 - Labour ontogeny:
 - cleaning empty brood cells, removing debris and other housekeeping tasks, making wax for building or repairing comb, and feeding larvae. Later, they may ventilate the hive or guard the entrance. Older workers leave the hive daily, weather permitting, to forage for nectar, pollen, water, and propolis.



Apidology

- Orientation
 - Bee hive entrance
 - Dances



Apidology

- Enemies

- Fungi
- Bacteria
- Protozoa
- Viruses
- Parasites
- Poisons
- Colony Colaps Disorder

- Hornet *Vespa*
- Mite *Varroa*

- Wax moth *Galleria*

