

BENEFITS OF HONEY BEES

CYBER SCIENCE CAMP

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PROTECTING HONEY BEES – GOOD FOR NATURE & AGRICULTURE

- Honey bees pollinate a wide range of native & naturalized plants providing food for wildlife.
- Few if any organism plays a more vital role in worldwide agriculture than the honey bee.
- Honey bees are essential pollinators of a diverse range of crops.
- Honey bees are considered as “bio-health” indicators of agroecosystems.
 - Quigley TP, Amdam G, Harwood GH (2019) Honey Bees as Bioindicators of Changing Global Agricultural Landscapes. *Curr Opin Insect Sci* 35:132-137

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HONEY BEE SERVICES & PRODUCTS

- Pollination Services
 - Beekeepers rent hives to agriculture to assist in pollinating over 400 crops!
 - More information on the role honey bees play in pollination services & the top 95 crops: <https://www.worldatlas.com/articles/which-crops-plants-are-pollinated-by-honey-bees.html>
- Honey bees – Queens & Colonies
 - Bees are sold annually from commercial Apiaries as colonies with a mated queen & workers, as single queens, or as fully assembled hives.
- Honey
 - Bee Uses: Nectar from plants transformed by evaporation & enzymatic processes into honey.
 - Human Uses: Medicinal & culinary uses as food & oldest form of human fermentation (into mead) <https://en.wikipedia.org/wiki/Honey>

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HONEY BEE PRODUCTS

- Propolis
 - Bee Uses: Resin collected from buds of trees, used by bees to seal walls, strengthen combs & mummify dead invaders.
 - Human Uses: Medicinal uses are antimicrobial and ancient civilizations used for wound healing.
 - <https://www.drugs.com/npc/propolis.html>
- Wax
 - Bee Uses: Excreted from glands on the underside of the bee abdomen, used to build honeycomb structure.
 - Human Uses: Many uses from candles, waterproofing, medicinal surgical, paint, cosmetics, polish, etc.
 - <https://en.wikipedia.org/wiki/Beeswax>
- Pollen
 - Bee Uses: Collected from many different plants to feed their young.
 - Human Uses: Food supplementation, forensic science identification, food supplements for Bumble bee livestock
 - <https://en.wikipedia.org/wiki/Pollen>

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