

CHALKBROOD DISEASE OF THE HONEY BEE

Cause: *Ascospaera apis*, a fungus.

Effect: Chalkbrood disease affects only the brood. The diseased larvae are usually found on the outer edges of the brood nest. Workers, drones, and queens are all susceptible to the disease.

Symptoms: The affected larvae are usually found on the outer fringes of the brood area. Brood cells can either be sealed or unsealed. Diseased larvae are stretched out in their cells in an upright condition. Typically, larvae dead from chalkbrood disease are chalk white, hence the name chalkbrood. Sometimes the diseased larvae can be mottled with brown or black spots, especially on the ventral sides. The color variation is from the brown to black color of the fruiting bodies (spore cysts).

Transmission: The spores of *Ascospaera apis* are ingested with the brood food provided by the nurse bees. The germination of the spores and proliferation of the fungus covers the larva with a white mycelium. Spores of *Ascospaera apis* remain viable for years. Consequently, the infection source could be present in the cells used to rear brood. Chalkbrood appears to be most prevalent in the spring when the brood area is increasing. Chalkbrood normally does not destroy a colony. However, it can prevent normal population build-up when the disease is serious. No treatment is presently available for the control of chalkbrood. The disease usually disappears or is reduced as the air temperature increases in the summer.

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