ENY116

UNIVERSITY OF FLORIDA

IFAS EXTENSION

Chalkbrood Recommendations[1]

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Chalkbrood, although considered historically to be a relatively minor disease of honey bees, appears to be on the rise in much of the United States, and some areas have reported specific instances of large infestations (up to thirty or more percent). Florida is no exception and its subtropical climate may contribute to a greater incidence of the disease than more temperate areas. The disease is characterized by infected brood, called "mummies," which when removed from the comb, appear to be solid clumps, reminiscent of chalk pieces. The mummies can vary in color from white to dark gray or black. The latter color means fungal fruiting bodies have formed and reproduction is underway.

It has been suggested that importation of pollen from abroad is correlated with the increase in incidence of chalkbrood, a fungal disease. Growth of the causative organism, *Ascophaera apis*, appears to be enhanced by a number of factors, including high moisture content (colonies not well ventilated in high humidity situations), cool temperatures and colony stress.

There is no recommended chemical treatment for chalkbrood; often symptoms seem to clear up by themselves. Good hygenic behavior by a colony, that is, quick removal of the mummies, appears to aid in clearing up the symptoms. Although it remains an enigma, some generalizations are to be in order concerning chalkbrood: (1)It occurs mostly in colonies expanding during the summer.

(2)It rarely kills a colony, but will weaken it, leading to a reduction in honey surplus.

(3)It is promoted by certain conditions; dampness, susceptibility of bee stock, inadequate nutrition, other diseases or conditions (queenlessness, laying workers, chilled brood).

(4)It is spread mainly by beekeepers.

(5)It appears that requeening with resistant bee stock is the most likely way to clear up the symptoms.

Because there is no chemical control for chalkbrood, the beekeeper must employ as much cultural control as possible. This means stress on the colony should be reduced as much as possible and good quality queens, the offspring of which appear to resist symptoms, should be used to requeen colonies which are diseased.

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Another contributory factor may be the use of old brood combs. There is evidence that older brood combs may be a resevoir for the fungus. Routinely replacing brood comb with foundation, therefore, may be another technique at the beekeeper's disposal to aid in controlling this disease.