

MINERAL OIL FOR BEE MITES TREATMENT PHASE II

Tuesday, August 26, 1997

Mineral Oil for Bee Mites Treatment: Phase II

Method of Application of Mineral Oil

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On Sunday, August 24, 1997, a new method of application of mineral for the treatment of bee mites was initiated in twenty four (24) colonies previously treated with mineral oil as described in the file posted to Bee-L as E:\infinet\mineral oil for bee mites treatment. This method of application continues the use of food grade mineral oil now denominated as white mineral oil. Mineral oil is bottled into pint bottles, which have been previously prepared as follows.

Materials:

- pint bottles
- bottle cap drilled with a 1/8th (*) inch bit in center of cap.
(*) this measurement has been changed to 1/16th inch to lessen the amount of oil dispensed.
- 1-1/2" x 1-1/2" x 1 inch piece of Douglas fir wood, drilled in center with a 1-1/4 inch hole; a 1/4 inch slit is cut onto this, opening the previously drilled hole on one side.
- Tobacco pipe cleaning wire (serves as a wick).
- 5" x 1-1/2" x 1/4 inch pieces of Luan wood (base of stand for bottle)
- 1-1/2" x 1-1/2" x 1/4 inch pieces of Luan wood (creates bee space under stand).
- White mineral oil to fill bottles.

Description: (See Diagram: Mineral Oil for Bee Mites Treatment Phase 2/B)

Staple 1-1/2" x 1-1/2" x 1 inch drilled piece of wood on one surface of the 5" x 1-1/2" x 1/4 inch piece of Luan wood and the 1-1/2" x 1-1/2" x 1/4 inch piece of Luan wood under the other side of the 5 inch board directly below the 1-1/2 inch drilled piece of Douglas fir wood (effectively creating a "bee space"). The combination of these wood pieces makes an effective stand for the oil bottle and a platform for the bees to walk.

Place two staples evenly distributed on the upper surface of the 5 inch piece of Luan wood creating loops to weave the tobacco pipe cleaning wire through the loops.

Run one end of the tobacco pipe cleaner through the hole on the bottle cap and bend the end of the wire inside the cap. Fill bottle with white mineral oil and replace cap.

Place full bottle (cap down) with the tobacco pipe cleaning wire on the hole of the previously assembled pieces of wood described above and weave the wire through the two staple loops on the 5 inch piece of Luan wood. The pint bottle serves as a dispenser for the oil that will flow through the tobacco pipe cleaning wire (serves the function of a wick).

This bottle can be placed on the landing platform of the hive. Or it can be inserted into the lower brood chamber in the same way as are feeding bottles. For my testing period, I removed one frame and placed the bottle in its stand over the top bars of the first brood chamber to prevent spilling by predators and diluting by rain. Bees were observed to be in contact with the oil as they walked on the surface of the stand or under it through the bee space.

Advantages of this method:

Bees are not exposed to excessive amounts of oil; hence there are no dead bees due to soaking. Follow up inspection has revealed a maximum of three dead bees on one board.

A single operator can apply thousands of dispensers in one day, hence making the system applicable for commercial beekeepers.

Dispensers are easily manufactured and can be standardized and produced in large volumes.

No need for utilization of costly foggers.

A. Foggers are expensive (not suitable for hobbyists).

B. Eliminates a wet environment (from fog) inside colony and around the cluster during winter months.

C. Eliminates possibility of explosions of oil fog when exposed to butane flames or other types of combustible mixtures.

D. Apparatus reduces handling and application time, hence becoming cost effective for small operators and commercial beekeepers. Cost per unit is minimal and effect is long lasting.

E. Ingredients remain non-contaminating to the colony, bee products and environment. Mechanism dispenses a smaller quantity of mineral oil than previously used, hence reducing the inherent fears of the oil being found in honey.

P.S. I would like to make an additional suggestion regarding the oil dispenser. I found that it needs to be modified because the bees soon learn to avoid it. In the mean time I have found that placing paper towels of newspapers soaked with oil on top of the frames does a good job. The only thing that you must be watchful for is that oil does not drip on the combs below. Also, I am now working on a cost effective mode of application of the oil in order to make the procedure easy to apply by commercial bee- keepers as well as the hobbyists.

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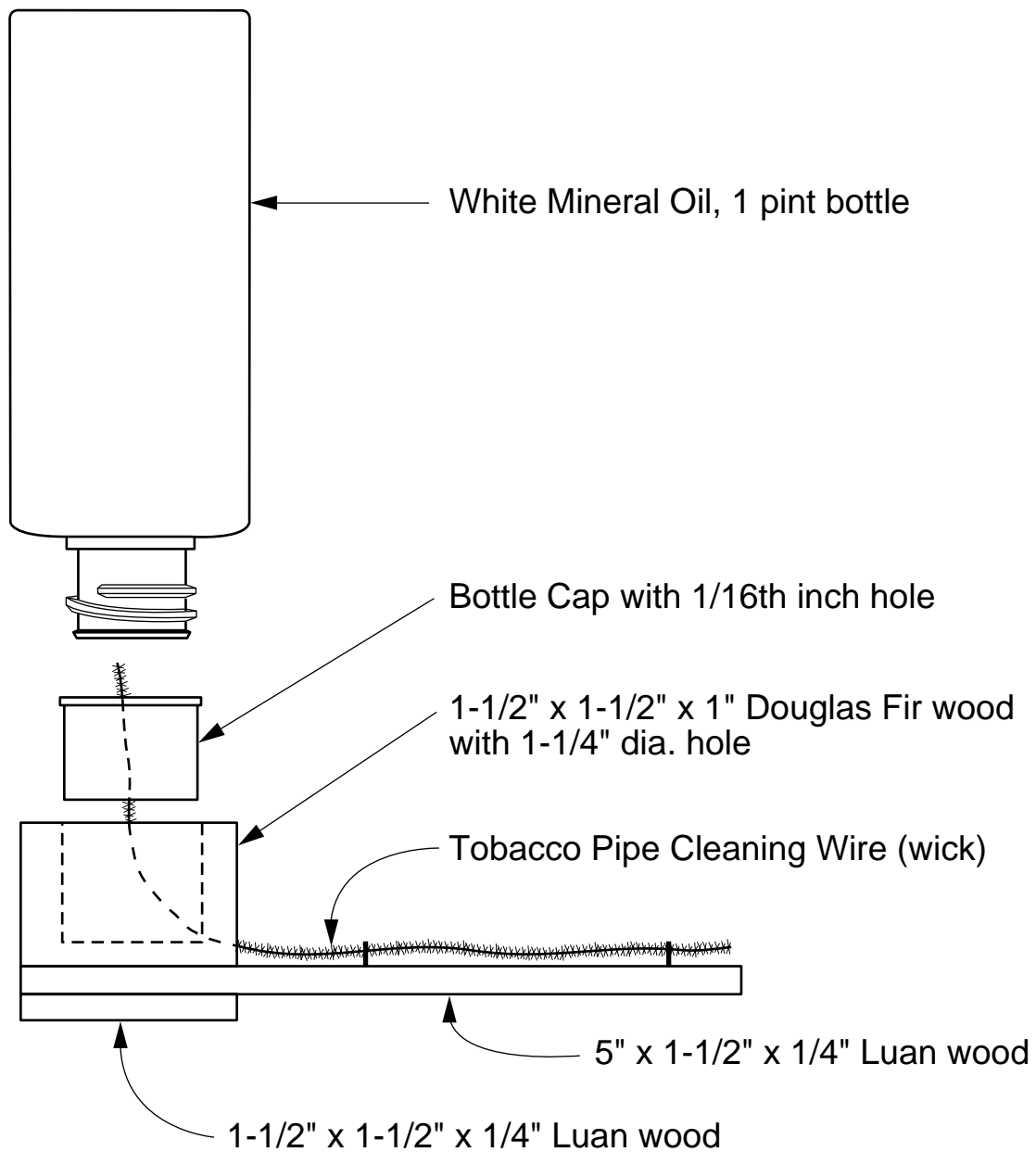


Diagram: Mineral Oil for Bee Mites Treatment Phase II