



CCD Formula “A” Protocol for Controlled Study

Polycil Health has developed a proprietary formulation consisting of a combination of refined fulvic and humic acids to be used in the treatment of bees suffering from the effects of Colony Collapse Disorder (CCD). We have been working with Beekeeper Bill in San Diego, CA since July, 2007 to obtain some initial results of the product’s effectiveness. Bill has been using the product in a liquid form, spraying it on the top bars of the hive so the bees have access to it. The bees readily drink up the product, and 4 of 5 hives he’s tested showed visible improvement in the first few weeks. We’re now expanding our research efforts by including more beekeepers and using a controlled study protocol in order to measure and report on the results.

What is Humic and Fulvic Acid and how will it help my bees?

Humic and fulvic acids are two of the major components of substances (collectively known as humic substances) that were formed from ancient decomposed plant material millions of years ago. Recent scientific research indicates that these humic substances are a key compound used by organisms in a myriad of metabolic processes necessary to maintain health. One series of laboratory and animal studies conducted under the auspices of the National Institutes of Health (NIH) on 9 different influenza viruses demonstrated that humic and fulvic acids have anti-viral properties.¹

A press release dated September 7, 2007 disclosed that bee researchers have identified the Israeli Acute Paralysis Virus (IVAP) as a likely culprit responsible for Colony Collapse Disorder.² In another report, researchers found “High levels of bacteria, viruses, and fungi have been found in the guts of the recoverable dead bees.”³

Our product, which contains humic substances, may be helpful in restoring the bees’ health and protecting them from viruses.

Sources

1. “Humate Materials, National Institutes of Health (NIH): Broad-Spectrum Antiviral Efficacy of Natural-Product and Synthetic Humates”, Aug. 2001 – Jan. 2002, Laub Biochemicals Corporation, 1401 Quail St. Ste. 121, Newport Beach, CA.
2. “Bee researchers close in on Colony Collapse Disorder”, Penn State University, University Park, PA. <http://live.psu.edu/story/25747>
3. “CRS Report for Congress, Recent Honey Bee Colony Declines”, June 20, 2007 <http://www.fas.org/sgp/crs/misc/RL33938.pdf>

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Testing Procedure / Protocol

For identification purposes during these tests we will refer to the product as **Formula “A”**. The proposed test will consist of supplemental feeding of the bees over a 6-week period. Preliminary testing by Beekeeper Bill indicates that beneficial results should be noticed within that time-frame. Feeding shall be done in a manner that ensures the colony has exclusive access to the food supply and that the supply does not run out during the testing period. The beekeeper shall begin by identifying one colony as the control colony and a second colony as the test colony.

It is our intent to encourage the beekeeper to use food supplements with which they are familiar and comfortable using. Use the liquid Formula “A” in combination with dry supplements to form a moist cake or patty, or combine Formula “A” with syrup. The mixtures given below are intended to provide about a 6% ratio (by weight) of product to food supplement. If you have any questions about the amount of product mix required for your preferred method of feeding, please contact us and we’ll be happy to assist.

The control colony will be given a supplemental feeding of the beekeepers choosing as noted above (without Formula “A” added). The study colony shall be given the same supplement with Formula “A” added in the proportions noted below. Supplements shall be maintained in each of the colonies to insure that the food supply is always available to the bees.

Test proportions shall be given to the bees as follows:

Combine 8 oz. of Formula “A” per gallon of syrup supplement.
Combine 1 oz. of Formula “A” with one pound of dry supplement.

(If additional moisture is required to obtain the desired consistency add water to make up the difference).

We are providing you with one gallon of Formula “A”. That should provide enough product to test up to 4 colonies, or you may choose to test one colony and save the extra product to conduct further testing on that same colony following the winter months. Please fill out a separate questionnaire for each colony tested. Also note that Formula “A” does not kill mites. Proper mite control may still be required to insure the survival of the colonies.

At the end of the 6-week period, please complete the questionnaire provided and return the results to our office. We will share the results of our study as data becomes available. Please take a moment to review the questionnaire prior to testing in order to watch for changes in behavior patterns during the 6-week period.

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Feel free to contact us at any time to discuss the study. Please send completed questionnaires to:

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We at Policy Health thank you for participating in this study.

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Questionnaire

1. Indicate starting date of test: _____
2. Indicate ending date of test: _____
3. Describe the environmental conditions during testing (e.g. sunny, hot, rainy, cold, etc. include approximate temperature.)

4. Briefly describe the food supplement products used and the method of feeding.

5. How would you characterize the population and general health of the colonies *before* testing?

Control Colony	√		Test Colony	√
Severely Depleted			Severely Depleted	
Very Poor			Very Poor	
Below Average			Below Average	
Average			Average	
Above Average			Above Average	
Very Good			Very Good	
Thriving			Thriving	



6. How would you characterize the population and general health of the colonies *after* testing?

Control Colony	√		Test Colony	√
Severely Depleted			Severely Depleted	
Very Poor			Very Poor	
Below Average			Below Average	
Average			Average	
Above Average			Above Average	
Very Good			Very Good	
Thriving			Thriving	

7. Indicate how many gallons of syrup and/or pounds of dry supplement were consumed by the colony during the 6-week period.

Control Colony	No.		Test Colony	No.
Gallons of syrup			Gallons of syrup	
Pounds of dry supplement			Pounds of dry supplement	

8. Describe any observed change in brood development behavior patterns including any changes in the queen's behavior?

9. Describe any observed change in the behavior of the adult bees.



10. Have you noticed any change in productivity such as increased honey production? If so, please add any comments.

11. Add any additional comments below.