Gene Brandi Apiaries

15346 S. Johnson Road
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RESUME OF GENE BRANDI

Occupation: Commercial Beekeeper since 1977

Education: Bachelor of Science Degree – Cal Poly, San Luis Obispo – 1974

California State Beekeepers Association –
- Board of Directors 1978 --- present
- President 1987
- Legislative Chairman 1992 --- present

California Honey Advisory Board
- Chairman 1982-86

California Apiary Board
- Chairman 1992-95

American Beekeeping Federation
- Board of Directors 1988-92
- Executive Committee 1992-96
- Chairman Research and Technical Committee 1992-96

National Honey Board
- Member Representing Region I 1998-2004
- Chairman 2001 – 2004
- Ex-Officio Member 2004 – present

California Almond Board Bee Task Force
- Member 2004 – present

Carl Hayden Bee Research Center (USDA Tucson)
- Member – Industry Liaison Committee 2002 - present

Committee on Agriculture
U.S. House of Representatives
Required Witness Disclosure Form

House Rules* require nongovernmental witnesses to disclose the amount and source of Federal grants received since October 1, 2004.

Name: Gene Brandi

Address: 15346 S. Johnson Road, Los Banos, CA 93635

Telephone: 209-826-2881

Organization you represent (if any): California State Beekeepers Association

1. **Please list any federal grants or contracts (including subgrants and subcontracts) you have received since October 1, 2004, as well as the source and the amount of each grant or contract. House Rules do NOT require disclosure of federal payments to individuals, such as Social Security or Medicare benefits, farm program payments, or assistance to agricultural producers:**

Source: _____ **Amount:** _____

Source: _____ **Amount:** _____

2. **If you are appearing on behalf of an organization, please list any federal grants or contracts (including subgrants and subcontracts) the organization has received since October 1, 2004, as well as the source and the amount of each grant or contract:**

Source: _____ **Amount:** _____

Source: _____ **Amount:** _____

Please check here if this form is NOT applicable to you: **Not Applicable**

Signature: Gene Brandi

* Rule XI, clause 2(g)(4) of the U.S. House of Representatives provides: *Each committee shall, to the greatest extent practicable, require witnesses who appear before it to submit in advance written statements of proposed testimony and to limit their initial presentations to the committee to brief summaries thereof. In the case of a witness appearing in a nongovernmental capacity, a written statement of proposed testimony shall include a curriculum vitae and a disclosure of the amount and source (by agency and program) of each Federal grant (or subgrant thereof) or contract (or subcontract thereof) received during the current fiscal year or either of the two previous fiscal years by the witness or by any entity represented by the witness.*

PLEASE ATTACH DISCLOSURE FORM TO EACH COPY OF TESTIMONY.

California State Beekeepers Association Inc.

Gene Brandi
Legislative Chairman
15346 South Johnson Road
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March 29, 2007

The Honorable Dennis Cardoza, Chairman
Subcommittee on Horticulture and Organic Agriculture
435 Cannon House Office Building
Washington, DC 20515

Re: Colony Collapse Disorder

Chairman Cardoza and Members of the Subcommittee:

My name is Gene Brandi, and I have owned and operated a commercial beekeeping business headquartered in Los Banos, California, for thirty years. I serve as the Legislative Chairman of the California State Beekeepers Association and appreciate this opportunity to inform the subcommittee of some severe difficulties facing the beekeeping industry and the effect these problems have on the ability of honey bees to adequately pollinate the nation's crops.

Honey bees are a critical component of the nation's agricultural economy. The pollination work of honey bees increases the yield and quality of United States crops by approximately $15 billion annually, including over $6 billion in California. The California almond crop alone is worth over $2 billion and is dependent on nearly 1.4 million honey bee colonies from across the nation to set this crop. Alfalfa seed, apple, avocado, blueberry, cherry, cranberry, cucumber, kiwi, melons, pear, plum, safflower, sunflower, vegetable seeds, zucchini, and many other crops grown throughout the nation also must have an adequate number of healthy bee colonies for pollination in order to set commercially viable crops.

According to the National Agricultural Statistics Service the number of commercially managed honey producing colonies in the U.S. has declined from approximately 3.4 million in 1989 to less than 2.5 million in 2005. These are "peak season" (late spring or early summer) colony numbers and do not reflect the severe winter losses (dead bee colonies) incurred in recent years.

When I started working with bees in the 1970's it was not uncommon for winter losses to be 5% or less. Since the mid to late 1980's our nation's bee industry has been experiencing an increase in winter colony mortality and in recent years the problem has become severe. This winter beekeepers throughout much of the country are experiencing from 25% to more than 75% colony mortality.

Approximately 40% of my 2,000 colonies are currently dead and this is the greatest winter colony mortality I have ever experienced in my 30 years of beekeeping. I have already lost nearly $60,000 in almond pollination income compared to last year when I had a more tolerable, but still costly 20% winter loss. I will also lose at least $20,000 income from the sale of bulk bees this spring in addition to an unknown quantity in lost honey production. The cost to restock my 800 dead out colonies this year will be approximately $48,000. We are just beginning to restock our dead hives with bees from our surviving colonies, thus weakening our surviving colonies for a few weeks until they can rebuild their populations. I will purchase new queen bees and it should take about two months for the newly restocked colonies to build up adequate bee populations to be considered commercially viable colonies again.

Even though my loss is substantial, other beekeepers throughout the country have suffered much greater losses. Beekeepers who lost over 50% of their colonies will have difficulty making up their losses from their own colonies as I plan to do.

The California almond industry is the largest user of bees for pollination anywhere in the world, and there were barely enough colonies available to pollinate the recently concluded bloom this year. Given that the almond industry requires approximately 1.4 million colonies of honey bees, and there are a little less than half a million colonies in California (during peak season), the remainder of the required bees have been brought in from many other states throughout the nation for a number of years. Were it not for the greater number bee colonies brought in by beekeepers from other states, and the tens of thousands of packaged bees imported from Australia, there would have been a definite shortage of bees for almond pollination this year. With almond acreage increasing every year, the need for an ever larger bee supply is critical.

Unfortunately bees are needed for almond pollination in late winter which is the exact time of year when colony populations are at their lowest and winter bee losses are at their highest.

What is causing Colony Collapse Disorder? There are many problems facing the bee industry today that make it difficult to keep honey bees healthy and CCD may very well be caused by a combination of these and perhaps other factors. Poor nutrition, mites, diseases (viral, bacterial, fungal), and exposure to certain pesticides are serious issues that affect the ability of honey bees to survive and thrive. There is also concern that some genetically modified crops may be producing pollen and/or nectar that is problematic for the bees.

Good nutrition is critical to overall colony health. An adequate supply of nutritious natural pollen and nectar for as much of the year as possible is the best way to keep bees nutritionally healthy. California in particular is a difficult place to find good locations where bees can safely and successfully be placed when they are not needed for crop pollination, given the shrinking availability of bee pasture due to urbanization and other issues. This year the lack of rainfall in California will make it especially difficult since the available sources of natural food will be greatly reduced. Bees that are nutritionally stressed are more susceptible to diseases, parasites, and other problems.

It has been known for many years that exposure to certain pesticides can kill adult bees. Lesser known is the fact that some pesticides can also kill or deform immature bees (brood), adversely affect queen and drone viability, or may cause bees to lose their memory which prevents them from flying back to their hive. The U.S. Environmental Protection Agency currently requires that pesticides be assessed only for adult bee toxicity. It would be very beneficial in trying to resolve the CCD problem if pesticides were also assessed for their ability to cause any additional adverse effects on bees. Additionally, it is important that EPA require enforceable label language on those products that are known to be harmful to honey bees so that they are not applied to blooming plants that are visited by bees.

It would be very beneficial for USDA-ARS to have a honey bee toxicologist who could independently test pesticides for acute and residual bee toxicity, the ability to damage brood, effect on queen and drone viability, potential for causing memory disorders or other sub-lethal adverse effects on honey bees.

The University of California, Davis campus used to be home to one of the premier honey bee research facilities in the nation, with three Professors of Apiculture conducting studies in honey bee behavior, honey bee physiology, and honey bee genetics. The UC Extension Apiculturist, based in Davis, continues to serve the industry well (and conducts some research periodically), but he is the only honey bee person remaining on the campus. Other than that, the UC Davis facility is not currently being used for honey bee research as there are no longer any active professors of apiculture on the campus. This facility is strategically located in the heart of California's Central Valley, the area of our nation that uses the most bees for crop pollination. It is also located at the southern end of the nation's largest bee breeding area which produces nearly one million queen bees annually. If a USDA-ARS honey bee research scientist (or scientists) could be stationed at UC Davis to establish a research partnership at this facility, it would be a great asset to the beekeeping industry and to the growers who need strong, healthy bee colonies to pollinate their crops.

The need for additional bee research is obvious. There are just too many unanswered questions that need to be addressed if the bee industry is to survive and perhaps thrive again. USDA-ARS honey bee research facilities in Beltsville, Baton Rouge, Weslaco, and Tucson are conducting some good research at this point, but they need to do much more. These labs could all use additional funding in order to find solutions to our industry's many problems.

I appreciate the opportunity to present this information to you today and I thank you for your interest and concern about the general welfare of the beekeeping industry and those who depend upon strong, healthy bee colonies to pollinate their crops.

Sincerely,

Gene Brandi