

APIS



Apicultural Information and Issues

From IFAS/University of Florida
Department of Entomology and Nematology

December 1998

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APIS Volume 16, Number 12

ISSN 0889-3764

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Taking Stock In 1998

IT'S AGAIN TIME TO STOP and consider this year's events as expressed in the pages of the *APIS* newsletter. This issue is the 191st to roll off the press, concluding its sixteenth year of service to beekeeping.

The *APIS* web site continues to expand in several ways. This year I put up a beginner's file because of popular demand¹. Other additions include the full text of most articles I have published elsewhere over the last few years². Many of these are also being integrated into the site as individual newsletter issues are published, which link related information. Full Uniform Resource Locators (URLs) continue to be shown as footnotes in the paper edition and are integrated into the electronic version.

The electronic mailing list (*APIS-L*), administered through listserv@lists.ufl.edu at the Northeast Regional Data Center on the University of Florida campus, exceeds 1,200 subscribers. Thus, for the first time the electronic distribution list is bigger than the printed version's mailing list. To my knowledge, this newsletter continues to be apiculture's first and only published on a preliminary basis to an electronic audience for feedback before being printed. It is "interactive" in the best tradition of the Internet and World Wide Web³. A review of the electronic metamorphosis of the newsletter was published in the December *Bee Culture* column, "Beekeeping in the Digital Age"⁴.

THE YEAR 1998 began with an update on the organic regulations promulgated by the United States Department of Agriculture⁵. So many comments were received about proposed rules in the Federal Register that the comment period was extended. In addition, the beekeeping industry responded that most bee products did not fit any of the criteria as advanced in the proposed regulations⁶. The January *APIS* issue also discussed the future of apicultural extension⁷, and continued the transgenic plant thread begun in 1997, when the author was in France⁸.

The transgenic plant issue, in fact, got more ink this year than almost any other topic. One recipient suggested adding this to the topical *Continued next page*

¹<http://www.ifas.ufl.edu/~mts/apishtm/beginner.htm>

²<http://www.ifas.ufl.edu/~mts/apishtm/papers/>

³<http://www.ifas.ufl.edu/~mts/apishtm/apis96/apdec96.htm#1>

⁴<http://www.airoot.com/beeculture/digital/Column%204.htm>

⁵<http://www.ifas.ufl.edu/~mts/apishtm/apis98/apjan98.htm#1>

⁶<http://www.ifas.ufl.edu/~mts/apishtm/apis98/apjun98.htm#3>

⁷<http://www.ifas.ufl.edu/~mts/apishtm/apis98/apjan98.htm#2>

⁸<http://www.ifas.ufl.edu/~mts/apishtm/apis98/apjan98.htm#3>

Pesticide Use: Florida Honey Bee Technical Council Deliberations

I HAVE in my possession letters written to Florida beekeepers by Agriculture Commissioner Bob Crawford citing them for pesticide misuse. One beekeeper was found to be using Apistan® inconsistent with the label. The bees were also found to have a detectable level of fluvalinate in their bodies. Another beekeeper was using Mavrik®, a material for which there is no labeled beekeeping use. Others were cited for improper use of MBC 98-2 Preplant Soil Fumigant, a methyl bromide product. Again, there is no labeled use for methyl bromide. In addition, it is a restricted use pesticide, which requires a suitable license. The letters warned that any further use of the materials inconsistent with Florida Statutes Chapter 487 could result in a fine of up to \$10,000 per violation.

At the latest Honey Bee Technical Council Meeting in Gainesville (December 22, 1998), Mr. Dale Dubberly, chief of compliance monitoring, Division of Agri. Env. Services, 3125 Conner Blvd. Me-1, Phone: 850-488-8731, referred to these letters along with about fourteen others that have been sent to Florida beekeepers. In summary, he said that violations were found in seventeen out of 23 beekeeping operations inspected. This makes the beekeeping industry one of the worst offenders in this arena, according to Mr. Dubberly, who stated that the label is the law, and must be followed to the letter. Any person found using a pesticide must use materials according to a published label and must have that label in hand or they will be cited for using the material inconsistent with the

law, Mr. Dubberly concluded. Because of the level of non-compliance with the label, Florida inspectors will be targeting beekeeping operations more closely in the coming year, as well as looking carefully for any pesticide residues in marketed honey.

Mr. Dubberly concluded that misuse is not just a beekeeping matter, but one that affects all of agriculture. For example, using methyl bromide inconsistent with the law could add fuel to the argument that the material be phased out sooner than scheduled. Loss of methyl bromide is expected to profoundly affect Florida's \$6 billion agriculture industry in many ways.

Detecting misuse of materials containing coumaphos could also jeopardize the Section 18 emergency label the Department of Agriculture has filed. If this label is not approved, Florida beekeepers will be left with no legal application for either fluvalinate-resistant Varroa or the small hive beetle. ■

Taking Stock continued

index on the website. The possible effect of these plants on honey bees and beekeeping was discussed in February⁹, June¹⁰, and October¹¹. The jury is still out on this issue, and no doubt there will be more and more interest in this topic in the future.

February included a veritable potpourri of subjects, including changes in Varroa certification in Florida, supplementary feeding recommendations due to warmer-than-normal weather, queen problems as perceived by both producers and consumers, and the effect of new forest husbandry practices on understory nectar plants¹².

March focused on what beekeepers and researchers want from each other and the different perceptions each group often brings to a discussion on this important topic. That issue also relayed information that special funding for the Weslaco Beneficial Insects Laboratory was in trouble, something that later would be of vital importance to Florida, when the small hive beetle was detected. Finally, it discussed the possibilities of using geographic information systems in beekeeping¹³. The April issue analyzed resistance by Varroa to fluvalinate. It also described a diagnostic tool developed at the Beltsville Bee Laboratory to determine mite resistance to Apistan®¹⁴. Resistance in Florida was definitely confirmed in the August issue¹⁵.

May described parallels found in pest management. It contrasted the situation

concerning American chestnut blight with that of the Varroa-honey bee relationship. The apparently contradictory scenario where seedless watermelons actually need more pollination than those that have seeds was also analyzed. Finally, that issue suggested that the newest apicultural tool for many beekeepers may be the sticky board, which keeps Varroa mites from climbing back into the colony after tumbling off adults and brood¹⁶. June brought a description of mosquito control efforts in Florida and the perennial fight to control Medflies in the state¹⁷.

The July issue described a phenomenon that could be of most importance to the Sunshine State for a long time to come. It provided an in-depth analysis on the recently detected South African small hive beetle, *Aethina tumida*. That same month featured an article on the future course of the National Honey Board as it sets its sights on facilitating beekeeping industry

growth to the 400 million-pound benchmark¹⁸. August described new regulations regarding movement of bees with reference to the small hive beetle¹⁹. September provided an in-depth analysis of hygienic behavior in honey bees and what this could mean to the industry, along with evidence of increased behavior of this type found in Africanized honey bees. Finally, Argentina was characterized as a huge force to be reckoned with in the future of world honey marketing²⁰.

October analyzed the possible role of pollen bees and described pollination as the forgotten agricultural input. It also told the story of the threatened African honey bee (*Apis mellifera scutellata*), under siege by its cousin *Apis mellifera capensis* in South Africa²¹. Finally, the November issue reported that foulbrood bacteria were developing resistance to antibiotics, forcing a reexamination by beekeepers of routine use of oxytetracycline²². ■

⁹ <http://www.ifas.ufl.edu/~mts/apishtm/apis98/apfeb98.htm#7>

¹⁰ <http://www.ifas.ufl.edu/~mts/apishtm/apis98/apjun98.htm#5>

¹¹ <http://www.ifas.ufl.edu/~mts/apishtm/apis98/apoct98.htm#2>

¹² <http://www.ifas.ufl.edu/~mts/apishtm/apis98/apfeb98.htm>

¹³ <http://www.ifas.ufl.edu/~mts/apishtm/apis98/apmar98.htm>

¹⁴ <http://www.ifas.ufl.edu/~mts/apishtm/apis98/apapr98.htm>

¹⁵ <http://www.ifas.ufl.edu/~mts/apishtm/apis98/apaug98.htm#4>

¹⁶ <http://www.ifas.ufl.edu/~mts/apishtm/apis98/apmay98.htm>

¹⁷ <http://www.ifas.ufl.edu/~mts/apishtm/apis98/apjun98.htm>

¹⁸ <http://www.ifas.ufl.edu/~mts/apishtm/apis98/apjul98.htm>

¹⁹ <http://www.ifas.ufl.edu/~mts/apishtm/apis98/apaug98.htm>

²⁰ <http://www.ifas.ufl.edu/~mts/apishtm/apis98/apsep98.htm>

²¹ <http://www.ifas.ufl.edu/~mts/apishtm/apis98/apoct98.htm>

²² <http://www.ifas.ufl.edu/~mts/apishtm/apis98/apnov98.htm>

²³ <http://www.abfnet.org>

²⁴ <http://www.sugarindia.com>

Small Hive Beetle: Research Funding Possibilities

AT THE Honey Bee Technical Council meeting, those attending estimated some 5,000 Florida bee colonies had been eliminated by the small hive beetle (*Aethina tumida*) since its first detection last summer, and perhaps many times that number were infested and at risk. Although considerable research has been done by USDA in Florida, more is required. Reports about the beetle's activities are quite variable. Some colonies appear to support adult beetle populations with impunity, while others collapse quickly. The geographic

pattern of infestation is also poorly understood, as is the climatic range of the insect. Reports on effectiveness of nematodes, traps, soil conditioners and other control methods are not conclusive. All this leads to extreme nervousness in the beekeeping community.

The Honey Bee Technical Council has therefore recommended that the Agriculture Commissioner ask for \$200,000 for small hive beetle research in the next state budget. Another \$100,000 will also be solicited by a legislative group in Lake

County. The money has been requested, but is not assured. Deliberations in the legislature will begin next session, which begins in January and so time is of the essence. Beekeepers interested in ensuring that this funding is appropriated should contact their representatives now. Questions about whom to contact can be directed to Ms. Charlotte Randall, Randall's Wax Works, Umatilla (352-669-2441) or Earl Russell, president, Florida State Beekeepers Association, Port Charlotte, (813-743-2302). ■

1999 4-H Essay Contest

IT'S TIME AGAIN for active 4-H'ers to sharpen their minds and enter the American Beekeeping Federation's 1999 essay contest. As in past years, there are three top prizes: 1st place, \$250; 2nd place, \$100; and 3rd place, \$50. Each state winner also receives an appropriate book about honey bees, beekeeping or honey. This year's assignment is to report on the beekeeping activities in your community and/or state. In doing so investigate as many aspects of the beekeeping and honey industry as you can identify in your area. Do not overlook the less obvious portions of the industry, for example, pollination of crops, honey processing, manufacturers of bee supplies, and beekeeping research facilities.

RULES:

1. Contest is open to active 4-H Club members only. Those who have previously placed first, second or third at the national level are not eligible. Other state winners are eligible to reenter.
2. Requirements (failure to meet any one disqualifies): Length is 750 to 1,000 words. Write on the designated subject

only. All factual statements must be referenced with bibliographical-style endnotes. A brief biographical sketch of the essayist, including date of birth, gender, complete mailing address and telephone number, must accompany the essay. (The word limit does not include the references or the essayist's biographical sketch.)

3. Essays will be judged on (a) scope of research, 40 percent; (b) accuracy, 30 percent; (c) creativity, 10 percent; (d) conciseness, 10 percent; and (e) logical development of topic, 10 percent.
4. Essayists **should not** forward essays directly to the American Beekeeping Federation office. In Florida, essays must be sent to Dr. M.T. Sanford, Bldg. 970, Box 110620, Gainesville, FL 32611-0620 by **February 15, 1999**. Furthermore, they must be forwarded by a 4-H agent in the state to be eligible; there should be a suitable agent at any of Florida's 67 county Cooperative Extension offices.
5. The national winner will be announced by May 1, 1999.

6. All national entries become the property of the American Beekeeping Federation, Inc., and may be published or used as it sees fit. No essay will be returned.

SOURCES OF INFORMATION:

Good leads for your research include your county Extension agent, your local or state beekeepers association, your state's Department of Agriculture, the Crop Reporting Service, and the beekeeping professor at your state's agricultural college. The scope of the research is an essential judging criterion, accounting for 40 percent of your score.

The number of sources consulted, the authority of the sources, and the variety of the sources are all evaluated. Personal interviews with beekeepers and others familiar with bees and beekeeping activities are valued sources of information and should be documented. Sources that are not cited in the endnotes should be listed in a Resources or Bibliography list. Last year's top essays may be reviewed at the ABF website²³. ■

Large-scale Adulteration: Honey Analog?

AN OUTFIT named Dhampur Invertos, Ltd., is contacting many beekeepers by letter and over the Internet to market a product it calls honey analog. Dhampur Sugar Mills, Ltd., claims to be a large firm with extensive cane-crushing facilities in India, Vietnam and Nepal. Besides refining cane sugar, the company also says it can make honey analogs, which are currently being supplied to various honey processors in Russia, Mexico, the Middle East and

Canada for blending with natural honey. The honey analog is enzymatically processed the same way the bees make honey. It meets a growing demand for honey, as well as makes its processing more cost effective. The product passes all chemical tests for natural honey, and generally processors blend it with honey on a one-to-one ratio.

The referenced World Wide Web site²⁴ goes even further *Continued next page*

“

The honey analog is enzymatically processed the same way bees make honey.

”

Varroa Bottom Boards: Doing the Sticky Board One Better

IN THE MAY *APIS*, I suggested that the sticky board might be a new beekeeping tool to be explored in the search for ways to rid colonies of *Varroa mites*²⁶. Now comes information from the French beekeeping discussion list, *Abeilles*, that beekeepers can go one better by provisioning their colonies with anti-Varroa boards. This

was first brought to my attention by Kerry Clarke, Apiculture Specialist for British Columbia, Canada, who received the information via the Apitherapy discussion list from Dr. Stefan Stangaciu. Mr. Clarke was kind enough to translate the original text in French as posted by Jean-Pierre Le Pabic:

Honey Analog continued

than the letter. It states in part: "Product is absolutely pure and chemical-free. Product can also be used for honey bee feeding. It is in compliance with BIS specifications for natural honey. Applications: Honey Analog can be used for making various preserves of vegetables or fruits. It can also be used for honey bee feeding and blending with natural honey as described above. Benefits: DIL Honey Analog combines all the positive features of natural honey while eliminating the negative aspects. The Honey Analog is chemical-free, as it is developed through enzymatic process only. Natural honey has a wax content, which has a harmful effect in large quantities on the human body. This is eliminated in the analog. Further, absence of impurities in the form of pollen makes the Honey Analog a healthier, clearer replacement of natural honey."

As one can well imagine, this information has received a lot of attention. If honey analog meets stated specifications, potentially this would be a way to economically adulterate honey on a very large scale. There are some statements in the letter that

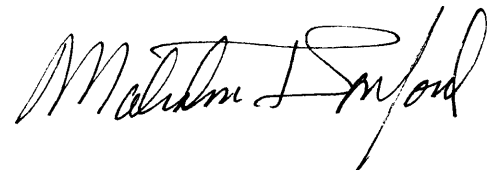
cause pause, however. Most glaring is the sentence that reads: "After extensive research and development, we could develop a product which had same physical and chemical composition and properties as natural honey." Using the word "could" confuses. Does this mean the product is yet to be developed? If so, this conflicts with previous information that the material is already in the marketplace.

The last two sentences from the website also provide pause. Are we really to believe the wax content is so high in honey that it is harmful to consumers or that absence of pollen makes honey analog healthier? I have been informed that samples of this have been collected and will be analyzed using the SCIRA technique discussed in the September *APIS*²⁵. It seems doubtful that the product will be able to pass this strict test, but only time will tell. More bothersome, however, is the attitude taken by this company in its publicity that economically adulterating honey is somehow desirable, and will make the product more healthful and desirable than the real thing. ■

"For several years, I have used the anti-varroa bottom board of M. Legris (see *L'abeille de France* no. 784, July 1993, p 309). The principle used results from the following observation: One finds wild swarms free of Varroa, even in areas of strong infestation. The assumption being that many varroa fall from the colony and are thus eliminated because they are not able to return to the bees. In regular box hives, on the contrary, the mites on the bottom board have no difficulty to return to the bee cluster. The anti-varroa bottom board consists of transparent tubes 34 mm in diameter, separated by 3.5 mm. Parallel tubes are located in a framework, positioned in a regular way with an interval of $(34 + 3,5 =) 37,5$ mm. (see photo and diagram on web page). The unit is maintained by a wooden frame, which also serves as a hive stand. I quickly realized that it was necessary to treat only once per year and last year, I got by without any additional. I treated only four hives out of six."

Mr. Le-Pabic describes his experiments in some detail and suggests his results be confirmed by others using a larger number of colonies. Mr. Clarke is currently running his own tests. More details on this device are found on the Apiservices website²⁷. ■

Sincerely,



²⁵ <http://www.ifas.ufl.edu/~mts/apishtm/apis98/apsep98.htm#5>

²⁶ <http://www.ifas.ufl.edu/~mts/apishtm/apis98/apmay98.htm#3>

²⁷ <http://www.apiculture.com/plateau-anti-varroas/>

APIS, a monthly newsletter, is celebrating its 16th year of service to beekeepers. For subscription or other information, please write, phone, fax or e-mail.

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