

**April 10, 2014 . . . . . BEEKEEPER**  
**NEWSLETTER**

**2015 Almond Pollination**

Next year's almond pollination starts now. Kindly let us know by return mail how many colonies you will be able to bring for 2015 almonds. At this time it is hard to evaluate 2015 almond acreage, since much depends on how many acres will be removed after this year's harvest. We hope to have our 2015 bee needs determined by August and should be able to give you a pretty good idea of how many colonies we will need from you at that time. Advise other beekeepers that they will benefit from signing up growers early for 2015. Some waited way too long this year and were forced to take a lower price for their bees.

**The Drought - and the Future of Almonds in California**

California's drought has grabbed nation-wide headlines. Most of the early press was devoted to drastic cutbacks in surface water allocations. With increased pumping of ground water from lower and lower depths, the current concern is how long this ground water will last. It costs around \$1 million to drill a new well; up to several hundred thousand to deepen an existing well. In the past 10 to 20 years, thousands of acres of non-irrigated pasture has been converted to permanent crops, mainly almonds and grapes and this conversion has put a tremendous strain on ground water reserves, reserves that are finite (it would be of interest to compare current irrigated crop acreage in CA with the acreage 10 or 20 years ago). Well-drilling companies have put some growers on a 2-year waiting list, with payment in advance. If it comes to an almond grower spending \$ on water vs. paying for bees, you can guess what he will choose. Look for tougher times ahead collecting almond pollination income. A possible solution to the impending crisis is the development of GM crops that use less water - Monsanto to the rescue?!

**Spray Losses in Almonds**

Spray losses in almonds this year were above average. Many appeared when petal-fall or post-bloom fungicide sprays were applied. It's easy to blame fungicides, and/or the IGRs that might have been added to the mix, however another phenomenon occurred at the same time: wide-spread spraying of alfalfa with lorsban or dimethoate (both potent bee killers); probably every alfalfa field in CA was sprayed, some more than once. Once bloom is over in

almonds, honey bees expand their foraging radius dramatically, making 1 mile pesticide notifications meaningless. Losses to our beekeepers were less than most, and it is likely that some were caused by alfalfa sprays over 2 miles from the colonies. Post-bloom bee losses were significantly lower on orchards that were isolated from alfalfa (mainly on the east side of the Valley). One beekeeper that had considerable post-bloom losses says he has experienced similar losses in other dry years – a dry year means more bugs migrating from the foothills to alfalfa, and more bees investigating alfalfa fields for meager forage. Dry years also mean less fungicide sprays in almonds. Be careful about insinuating to an almond grower that his fungicide (or IGR) spray killed your bees when there could be another cause – you could get blowback (as I have learned).

Getting almond growers to release their bees when no pollen remains in the orchard (even though there is significant bloom) is difficult but we continually work on this. Gordon Wardell (Paramount Farming) has been a major help to beekeepers in getting growers to cut back on sprays and to spray fungicides at night. Dr. Wardell gave talks to both almond growers and PCAs in December and January and several of our growers have told me they took Dr. Wardell's (O.K., Gordy's) message to heart.

### **NMP, The *Grim Reaper* .... and NMB?**

Eric Mussen forwarded me a January PLOS article by the Penn State group on pesticides and bees. The standout piece in the article (will e-mail to you on request) is that a solvent (possibly a new one) used in many ag sprays is highly toxic to bee larvae – N-methyl-2-pyrrolidone (NMP): *“Even the lowest concentration at 0.01% (100 mg/l) the estimated time to cause 50% larval mortality was 4 days.”* The toxicity to bees (or bee larvae) does not have to be listed on the label for NMP (or any other solvent or adjuvant that might be added to a spray tank). And, as you probably know, the label on many Insect Growth Regulators (IGRs) states *Non-toxic to Honey Bees*, although these materials can do a number on bee larvae. It's in the works to update labels, but you probably won't see any changes until next year.

Thumbing through PNW 591 recently, I had to chuckle at the name of one of the pesticides: *Grim Reaper*. Although I'd never heard of it before, it is, as you might imagine, highly toxic to bees (and bees might fail to see anything amusing about the name). There is a rumor that a large chemical company is working on a product they have tentatively named NMB (No More Bees). Paranoia reigns in the bee world.

### **Fluvalinate, the Silent Bee Killer?**

If you've followed the articles on pesticides found in bee hives (by Judy Wu, Penn State, et al) you've noticed that Fluvalinate tops the list in many (maybe all) of these studies. Fluvalinate has a synergistic effect (makes other chemicals nastier) in combination with some pesticides (including fungicides). One of our beekeepers had complete chemical tests run on a dead-bee sample after they were kicked out upon returning from the almonds; the highest level found (albeit in ppbs) was for fluvalinate, even though he hadn't used it (as Apistan) for years. Perhaps someday, the "?" in the above heading will be replaced by a "!". Fluvalinate can likely be found in every commercial hive (including yours) since it can be found in commercial foundation - a good reason to rotate your comb, as some of the best beekeepers do. There should be a ppm (or ppb) level for fluvalinate (and maybe there is) above which the comb should be discarded. Same for coumaphos.

### **Bee Feeds**

Randy Oliver is completing tests comparing different bee feeds. Look for a summary in the June or July ABJ. Mega Bee which didn't show up well in past USDA tests (published in Mann Lake's March catalog) may show better in Randy's tests. Unfortunately, Nutra-Bee, a widely praised product used by some of our beekeepers, was not included in Randy's tests (the maker opted out). I usually don't put a lot of faith in testimonials but the ones I've heard on Nutra Bee come from dependable sources. (Check out the on-line Nutra Bee video, if interested).

### **Shafter Station on a Roll**

I attended a meeting at the Shafter Station last week with Station manager, Greg Palla, his assistant, Luis Thompson, Mike Mulligan (beekeeper/broker, and a good one), Gordon Wardell and Paramount's' bee guy, Gerard Loaiza and my helper, Jeff Jones. We met to discuss establishing a bee presence at the Station, and Mike and Gordy felt they could come up with 24 to 48 colonies between them and their beekeeper contacts (anyone here that wants to donate a few colonies, let me know).

I hadn't visited the Station in over a year and couldn't believe how it has gone from a ghost town to a bustling enterprise. 20 of the 80 Station acres are devoted to buildings, the remaining 60 acres are available for other ag work. Cotton trials take up some of the space, but currently most of the 60 acres is now planted to grape cuttings and grape vines. These are from *Vintage Nursery* of Wasco, recently taken over by the Roll Corporation (the parent company of Paramount Farming) probably to stock their recently purchased wine grape acreage near Santa Maria. The grape acreage

currently at the Station leaves little room for bee projects (such as forage) or tree projects (almond/cherry trials) however the cuttings will be removed for planting after they develop roots. There should be room in one or more of the Station buildings for a bee lab and for Tech Team people to run tests. Hopefully, the new Roll players at the Station will play well with other tenants.

Gordon Wardell made a number of good suggestions at the meeting. Probably the most irritating thing about Gordy is that he invariably has a pleasant demeanor, no matter the circumstances. Gordy oversees the 90,000+ colonies Paramount uses + the 3,000 or so they recently purchased + the BOBs and associated forage + being Pres. of the So. Valley Bee Club *and* Project ApisM. Gordy lives in Paso Robles (surrounded by vineyards and a dropping water table) and must commute to Paramount's vast holdings which could lead to early burn-out. Prior to the meeting last week, Gordy attended lengthy bee hearings in Sacramento yet was as bright and cheerful as ever. Very irritating.

### **Question**

Now that the Resnicks own 3,000 bee colonies, when will they get in the honey business?

### **Miller Scores Again**

If you haven't already seen/heard it, check out [\*John Miller Ted Talk\*](#) and pass it on to others. Four-star rating (\*\*\*\*). Lately John has been the go-to person when a media outlet looks for a bee story, and John has done a terrific job representing the bee industry and explaining current problems. John's efforts here have been time consuming and he gets no compensation (although word is that he's hiring an agent for future appearances/presentations).

### **Winter Storage in California**

A Washington beekeeper (thanks, Gib) recently told me about how Eric Olson used controlled-atmosphere storage buildings used for apples to store his bees this past winter. I talked with Eric last week and he was very enthusiastic. His loads (over 10,000 colonies, total) averaged about 5% winter loss (the highest was 14%) and this was the first year he saw his bees swarm in the almonds. Eric feels that a major advantage of cold-building-

storage is that the colonies go broodless, so that a softer material like Hopguard (some use Oxalic acid) can be effective when applied immediately after the bees are removed from the building – any mites remaining in the hives are exposed to the treatment, rather than hiding in brood cells.

There are a number of cold-storage facilities for grapes in the Delano area and I contacted a grape grower who said he thought he could find a place for bees (I believe Eric pays around \$3/hive in storage rent). If interested, I can put you in contact with the grape grower (or maybe Gordy can put you in touch with Paramount Citrus people to use their storage facilities). There's still lots to learn on winter-storage of bees, and you need to be close by to minimize potential problems. Eric will be making a presentation at the CSBA Convention in Valencia in November; if you're interested in winter storage, don't miss it. Eric, like most beekeepers, is generous in sharing his information.

### **Apple Pollination - What a Difference 50 Years Makes**

As an old-timer (I'm closer to 70 than I am to 60) I can remember when PNW apple pollination fees were twice that of almond pollination fees (\$10 vs. \$5/colony) and California beekeepers dreamed of getting the big bucks that Washington beekeepers were raking in. Today, the situation is completely reversed, with apple rental fees in the \$50/colony range and with some beekeepers driving the price down even further in order to get their bees placed. On top of the lower fees, apple growers want the bees removed from their orchards pronto if they get a few days of good weather during the king (early) bloom, as happened this year and in other recent years (thinning is a major expense for apple growers and a king-bloom set gives an excellent crop). So, just when the bees are going gang-busters in apples, beekeepers must move them out if they want to keep the contract for another year. PNW apple pollination is a losing proposition for most, if not all, beekeepers.

### **Neonicotinoids**

----- *THIS SPACE AVAILABLE*  
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### **Science Trivia**

From the April 11, *The Week* magazine, citing *Smithsonian.com*: "About 1.8 million scholarly articles and scientific papers are published each year in 28,000 journals. As many as half of these articles are not read by anyone beyond the author and the journal's editor, and 90% are not cited in other papers."

### **Stock Tip**

Monsanto

### **Eric Mussen**

No word on whether Eric will be going on a Farewell Tour, ala Cher and others, before he retires (or steps back a bit) later this year, when his status may go to *Emeritus* – a euphemism for *You're getting old, pal*. Eric has received many, many well-deserved tributes/accolades in recent months, so I hesitate to add another, but will anyway – ***Great Job, Eric!!!***

### **2<sup>nd</sup> Annual Nut Festival**

June 7, Bakersfield.

### **Stay in Touch**

Best wishes for a bountiful honey year. Call anytime to let us know how your bees are doing (hopefully, how great they're doing) and for an update on our end. And get your "fall" mite treatment on August, or, as some now do, in July.

*Joe Traynor*