

AIA Business Meeting

The Meeting called to order Wednesday, January 7, 2004 by vice president, Phil Craft in the absence of President Bob Reiners.

The attendance of the AIA members was low due to budget problems.

Those present included:
AR, Ed Levi
Del, Jeff Brothers
FL, Jerry Hayes & Laurence Cutts
IN, Kathleen Prough
KY, Phil Craft
MD, Jerry Fischer
MN, Annemarie R Selness
MS, Harry Fulton
NC, Don Hopkins
PA, Dennis van Englesdorp
TX, Paul Jackson
VA, Keith Tignor
WA, Jim Bach

Mr. Craft read the President Reiner's address:

Greetings from fly over country! It was a brisk -5F this morning, so I am sure that you can appreciate my desire to be with you in San Antonio. I take refuge in the thought that Judy Carlson up in Bismarck is probably chillier than I am.

Since a significant amount of my time has now been dedicated to rodent control work, I had hoped that adequate funding existed in the apiary budget to allow for my attendance of the AIA meeting. In fact, we had a banner year in the bait business this year. We have manufactured approximately 137,000 pounds of 2% zinc phosphide prairie dog poison. It appears that someone has failed to remind the black tailed prairie dogs that they are supposed to be threatened or endangered. Actually, it is quite amazing how after two to three years of drought conditions that the little doggies have expanded their acreage. I guess that is good for job security.

In addition, life in a tyvec suit and a respirator does aid in weight loss. I had once contemplated a membership at the local YMCA. However, I have now discovered that tossing 137,000+ pounds of fifty pound bags of poison oats around delivers the same benefit as working out at the local gym and I get paid in the process.

Seriously, I do regret that I am unable to attend the meeting. There are a number of issues that concern me, which I had looked forward to discussing while at our meeting. Two of those concerns include continued development of coumaphos resistant varroa mites and TM tolerant AFB and lack of control compounds.

In closing, I hope that your meetings are productive and enjoyable. I have always enjoyed the AIA meetings and especially those times when we were able to meet with industry groups or researchers. I also regret that I will be unable to renew old acquaintances.

Secretaries Report

Ed Levi

The following items were completed since the December, 2002 meeting in Niagara Falls, Ontario.

1. Sent out thank you letters to the appropriate people involved in the Ontario conference.
2. Forwarded resolutions, passed at the Ontario conference, to the appropriate parties and carried on various communications relative to the same.
3. Published a state/provincial apiarist directory.
4. Conducted correspondence and miscellaneous duties.
5. Sent a state report questionnaire to all states and provinces.
6. Published the proceedings of the 2003 AIA Annual Conference held in Ontario.

Respectfully submitted on January 7, 2004.

Moved to accept by Jim Bach and seconded by Harry Fulton. Passed

Treasurer's Report

President Craft reported that the report would be abbreviated due to the loss of our Treasurer. The Auditing Committee's report would have to suffice.

COMMITTEE REPORTS

Resolutions Committee

Dennis van Englesdorp and Kathleen Prough presented no resolutions at this time but if any arise they will be presented to the full assembly later. It was decided that, whereas thank you letters are needed, resolutions for these are not necessary.

Auditing committee

P. Jackson reported that the books were in order as follows:

Starting 1/1/03	\$13,702.99
Deposits on 12/20/03	1,403.75
Balance, 8/31/03	\$13,805,78

Ed Levi moved to accept the report , Jim Bach seconded, Passed

Research Committee

Laurence Cutts had nothing to report but will work on the MUMS issue

Sites Committee

Don Hopkins reported the options:

- Marion Ellis' offer is still open at any time but best in summer
- AAPA is probably going to American Beekeeping Federation's conference in Reno
- Another lab

After some discussion, it was decided that we'd go with AAPA to ABF's meeting in Reno.

Nominations Committee

Report by Don Hopkins, as Chair nominated the following slate:

Officers:

Phil Craft - President
Harry Fulton - Vice President
Ed Levi - Secretary
Keith Tignor - Treasurer

Directors:

2003-2004 At large - Dennis van Englesdorp	2004-2005 South - Jimmy Dunkley
2003-2004 East - Jerry Fischer	2004-2005 West - Jim Bach
2003-2004 North - Blane White	2004-2005 Provinces - Medhat Nsar

Paul Jackson moved to accept slate the by acclamation and this was seconded by Kathleen Prough, Passed

Awards Committee Report

Paul Jackson, Chair

Patti Elzen- to receive research award.

Other Business

- Honorary Membership additions:
Laurence Cutts, Bob Cox.
Moved by Jerry Fletcher and 2nd by Harry Fulton, Passed
- Possibility of wavier of registration fees for conferences. To be decided on one to one basis and more probable in regard to those who are doing the work (ie Sec and VP)

Introduction to Open discussion
Regulatory Responsibilities Concerning AHB and Migratory Beekeeping

Ed Levi

- Purpose is to have an open discussion regarding risks and responsibilities
- I have some opening remarks and comments that I'd like to cover
- I have also invited Dr. DeGrande-Hoffman to help us to maintain a scientific basis for the policies we choose to promote.
 - I strongly believe in scientific basis BUT, at the same time, I've witnessed that, while scientists are usually making very practical recommendations for beekeepers, they often have difficulty in making the jump in internalizing the role of regulators.
- I think that this is a serious topic that needs to be consistently on the minds of regulators.
 - The mission statement of my agency and my department within my agency basically states that it is our responsibility to protect both the agriculture and the citizens of our state.
 - With this in mind, years ago I put together an Inter-agency AHB task force for dealing with this as an exotic pest.
 - My presentations to the members of the task force were based on scientific gleanings from talks and articles.

While these presentations spoke to the value of the Honey Bees it went into depth of the possible ways Africanization can happen. On their Own Volition, Hitch-hiking, and Migratory Beekeeping. Since this forum is concerning Migratory Beekeeping, I'm going to explain that aspect of my presentations: I called these

“Factors Contributing to Introduction of AHB Through Migratory Beekeeping & Genetic Transference”

Factor A

California needs pollinators badly

Their \$2.5 billion dollar almond crop depends on bees without regulatory slow downs.

Deregulated for the sake of the growers(?)

Bees can come from anywhere as long as they get there.

Factor B

Queen problems are becoming common.

This causes lots of supercedures.

Supercedures necessitates matings.

Factor C

During a mating flight, queens mate with several drones.

- 1 AHB of 10 matings = 10% AHB offspring.

• Due to the relative shorter development time, Subsequent Queen replacement will result in an AHB Queen.

(Loper & Schmit, ARS, Tucson)

Factor D

One-way Breeding Preferences

European queens will breed with any available drones;

Africanized colonies will produce abundant drones.

AHB queens will breed with only AHB drones, if available.

(C. Taylor, Kansas)

Factor E

Laying Worker Effect

European laying workers only produce drones;

AHB laying workers can produce females, which in turn, can become virgin queens.

(preliminary research)

Some discussion followed:

- Gloria DeGrande-Hoffmann concurred with what Ed said plus expounded on last factor in saying that the 10% factor is actually higher due to queen preference to use AHB sperm and the AHB sperms actually swim faster. Worked with Stan Snyder of UNC.
- Laurence Cutts said the reason for AHB drone preference is due to the smaller AHB drone can fly higher
- Paul Jackson said that the AHB queens and drones flew earlier
- Laurence says that they'll get bees into California even they have to get them from Mexico.
- Almond growers are supporting research in Tucson to the tune of \$90,000.
- Africanized colony found in Ohio, lots of small queens (inter-morph) it was an African colony that picked up a European genetics.

Some suggestions were made:

- Put up warning signs close to traps
- Put queen excluders on suspect hive entrances (after FABIS while waiting for lab)
- Paul says you've got to check them! 1) Public perception 2) to control the beekeepers. 3) Beekeeper liability.

Dr. DeGrande-Hoffman went on to give a presentation on AHB invasions and other challenges maintaining European colonies in Africanized habitats.

Colony Invasions and Other Challenges to Maintaining European Colonies in Africanized Habitats

Gloria DeGrandi-Hoffman, and David Gilley, Carl Hayden Research
Center, USDA-ARS, 2000 E. Allen Road, Tucson, AZ, 85719 and Judith
Hooper, Pima Research, Tucson, AZ

Overview

1. Research on European honey bee colony
invasions by swarms of African bees
 - Frequency in relation to colony condition and time of
year
2. Introducing European queens into Africanized
colonies
 - Success rates in relation to colony condition

Examining the influence of time of year and colony condition on invasion of European
honey bee colonies by African bees.

Experimental Procedure:

- 1) Establish an apiary with Golden Italian queens; mark all queens.
- 2) Examine the outside of colonies daily for invasion swarms.
- 3) Examine the colonies every 10-14 days for marked queen.
- 4) Sample workers in invasion swarm and check for ovary development.
- 5) Record all usurpation events and state of the colony at the time of the take over.

Combined monthly totals and mean (\pm SE) monthly usurpation rates.

The total number of usurpation events and monthly usurpation rates based upon colony condition

Condition	Usurpation Events	Usurpation rate (%)
Thriving	8	1.94 \pm 1.38
Weak	6	2.83 \pm 1.79
Queenless	8	16.43 \pm 7.82
Caged queen/ Re-queened	10	6.80 \pm 3.27

Usurpation rates in colonies of various conditions during different times of year.

Colony	Usurpation Rates (%)	
	Fall-Winter	Spring and Summer
Thriving	4.95 ± 4.48	1.00 ± 0.71
Weak	2.47 ± 2.04	4.17 ± 4.20
Queenless	50.0 ± 28.9	11.43 ± 5.95
Caged queen/ re-queened	16.7 ± 9.65	2.12 ± 1.68

How do Africanized swarms succeed in usurping European colonies?

1. Locate weak and queenless colonies
2. Settle near target colony without being attacked
3. Bypass nest defenses to enter next
4. Eliminate host queen
5. Bring swarm queen into host nest
6. Get host workers to accept swarm queen

Experiments were run to show efficacy rates of requeening Africanized colonies with European queens under various conditions and times.

Degree of ovarian development in workers from invasions swarms. Thirty workers from 10 invasion swarms were examined

Stage of ovarian development*					
0	I	II	III	IV	
0.35	0.50	0.07	0.03	0.05	

* Stages of ovarian development are according to Velthuis 1970: *Entomologia Experimentalis et Applicata* 13: 377-394.

Introduction Success from Trials

Trial	Colony	Success Rate
Honey flow	EHB	75%
	AHB	62%
July	EHB	100%
	AHB	50%
Fall	EHB	100%
	AHB	87%

Comparisons of Amounts of Compound-O Between Trials (Queens laying for 6 weeks)

Trial	Colony Type	Queens Sampled	Average Amount of Compound-O (k counts)
Honey flow	EHB	6	20.7 ± 6.4
	AHB	5	22.4 ± 10.4
July	EHB	8	9.6 ± 3.1
	AHB	4	10.5 ± 3.4
Fall flow	EHB	8	7.6 ± 1.2
	AHB	7	8.1 ± 3.1

Varroa Control research at Weslaco Bee Lab

Patti Elzen

Beekeepers should expect sub-lethal effects with pesticides both in and out of hives
 USDA doesn't test chemicals as that's the job of the states
 Weslaco is again a separate unit with Patti as Interim leader

Just set a 5 yr plan (Oscar Plan) has to be careful to not duplicate other programs
Weslaco has been assigned as the IPM lab.

In IPM it's best to have as many tools in the arsenal as possible.
They are doing a lot of screening of compounds to evaluate for Varroa control

Looking at a new formulation ApiLife Var and ApiGard
Are thymol compounds any good? ApiGard is easier to apply compared to Apilife Var.
The thymol compounds are good under right conditions. It's a good tool but to be
combined with others - not to be recommended on it's own. As in all essential oils, they
are temperature sensitive.

Statistics are showing an increased resistance to coumaphos.
For approvals, there needs to be a need! That's even more important than efficacy tests.
She will help getting section 18 especially if you can show resistance

Formic is also a good tool

Varroa is still a bigger problem than SHB
Bio control (Lambert) is done – fungal

An Overview of What's Going on in the Labs

Mark Felhauser

Beltsville is receiving approximately 2000 samples per year.

AHB Identification has been transferred to the Tucson lab as of May, 2004.

Packaging of Apicure

- New bag is Bob Steven still interested?(concerned about liability)
- There's a renewed interest of commercial beekeepers due to resistance of Apistan and CheckMite+.

Tylosin

- Hoping for registration in one more year unless pressure is brought to bear on EPA.
- Someone needs to take a lead on the MUMS (FDA) act to promote Minor species and Minor use Animal Health Act
- Contact John G. Babish jgb@cornell.edu to push.

Residues in brood comb

- Found plenty of residues of fluvalinate and coumaphos in combs even when proper use of strips were employed.
- Some were found as high as 2,693ppm
- Due to cocoons the ppm could be nearly doubled in the wax.
- Contaminated honey wasn't the issue but more the sub-lethal effects on queens

Can Vd transmit virus? Judy Chen

- Using Kashmir Bee virus
- As she added more virus infected mites to a virus free colony she found that more pupae gained virus
- Only found pupae that tested positive when at least one positive mite was present...without a positive mite there were no positive pupae.
- The percentage of infested mites increase when they shared cells with more infected mites

Apiguard; a Thymol preparation in control of Varroa

Frank Eischen

It's being promoted by Vita Ltd. (Europe) (Dr. Max Watkins)
In a food grade gel (patty)

3 trials at various times and venues:

Minnesota in early summer

70 degrees is the minimum temp
Showed high mites in control= 523
Oxalic acid was effective=155
But Apiguard was better =30
CheckMite+ = 8

Didn't show any difference in population or brood

Texas in July

Control =282
Apiguard =15
CheckMite+ = 12.5

Didn't show change in frames of bees or brood

Upper temps didn't seem to matter
Seems that contact action is equally important as volatility

Miscellaneous comments:

- The gel formulation is currently impeding the possibility of EPA approval.
- Not sure where that stands at this time.

- With ApiLife Var there is some propolisising
- With ApiGuard there doesn't seem to be any

Discussion on Pesticide Issues

HarryFulton

Illegal use of registered chemicals
Illegal use of unregistered chemicals
Illegal use of Antibiotics for AFB
Illegal residues
Harm to colonies
Harm to applicators

Chemicals involved

- For Mite control
 - Amitraz (tactic and Ovasyn)
 - Coumaphos (Co-ral)
 - Essential Oils
 - Formic Acid
 - Others as mentioned
- For SHB Control
 - Ant Bait stations (imidacloprid or fipronil)
- For Foulbrood control/prevention
 - Tylosin

AIA's role in registration process

Section 18

ApiLife Var
Mite a Way
CheckMite+

24 C's

Section 3 Registration Process

Apistan
Menthol Crystals

What is or should be AIA's involvement?

What is or should be the individual bee inspector's involvement?
Generally most have to report the misuse of pesticides.

Some Sharing of State's Program Situations

Tennessee has been in rough shape forever due to no income tax. Ray was laid off. Program isn't cut, just a laid off position. Maybe will re-open the position. Gray Haun is interested in the program and he is in a supervisory position. He acts as a part-time person in that area.

Ohio - Gordon leaves at the end January. There are still has 4 full time inspectors and most counties have county paid inspectors. (There are a few counties w/o beekeepers and a couple with beekeepers but w/o an inspector.

Alabama has reinstated the program with two partial time inspectors who were Nursery Inspectors with interest in bees.

Texas took a 10% cut. Lost one inspector by attrition.

Kentucky is operating on the same budget of 15 years ago

Washington is totally stripped of regulations except bee registration. \$15,000 comes in from registrations. Used to get \$75,000 from pollination fees. Jim is a pesticide investigator and keeps him available to watch pesticides in bees. He's to keep up with the newest pest controls in apiary area.

North Carolina got a new apiculturist at the university

How do we support our programs? The best support comes from the beekeepers and secondly from the growers needing pollination and other special situations like AHB, etc.

Residues in Queen Cups – Conclusions

Jeff Pettis

Residues may:

- Reduce completion of queen cells by cell builder colonies.
- Result in smaller, slower developing queens.
- Reduce number of acceptable queens.
- Result in queens that are poorly mated under stress conditions

Protocol For Testing Varroa Mite Resistance
to Apistan and CheckMite+

Jeff Pettis

Materials:

- Wide-mouth pint jars with screened tops
- 3 X 5” cards
- Checkmite+ or Apistan strips cuts into 3/8” pieces (new each time!)
- Stapler
- Soapy water or alcohol for wash
- Filter paper or white cloth

Procedure:

- Shake bees from 1-12 hives into a “catch” container
- Scoop approx. 150 bees, not more, into jar with either Checkmite+ or Apistan piece stapled to card
- Leave for 6 hours in room to warm temp (30c)
- After 6 hours, count the number of dead mites
- After counting the dead mites, wash the bees in the jar with either soapy water or alcohol
- Pour the wash through white cloth or filter paper
- Count total mites

Analysis:

- Count total mites and calculate percentage (6 hour mite count/total mites in jar X 100=percentage of acaricide effectiveness)