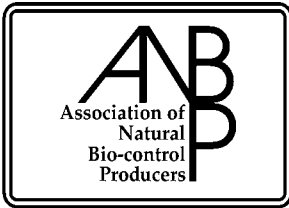


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Bio-control Matters

President's Corner:

By Richard Ward, President, ANBP

It is hard to believe that over two months have passed since our historic meeting and conference, "Beneficials Without Borders", was held in Guadalajara, Mexico. I say historic for more than one reason. Firstly, it was the first time the ANBP has held a meeting outside of the US or Canada, secondly, we had delegates from Mexico attending edge, is a first, and spouses were present meeting and a fantas-

most if not all who are a proud race of their country off at that with pride and Distribuciones IMEX, of ANBP's newest dis- went above and be- helping me to organize honestly say that I have been able to it Not only did they of- needed prior to the ing to organize the tors, the hotel and

also very generously sponsored the dinner and entertainment on the Friday night. That was a dinner party that will be remembered for a long, long time!! What else can I say, but Thank You IMEX! A very special thanks must also be conveyed to Rosa Varela, Martha Seade, and Anahi Gonzalez for tirelessly ferrying around to all the local attractions any and all who were not busy attending the conference.



2006 ANBP Board of Directors

(L to R): Tom MacDonald, Eda Reinot, Kim Gallagher, Dan Cahn, President Richard Ward, Andrea Davenport, Angela Hale, Brian Spencer, Carol Glenister

which, to my knowl- thirdly, I think more than at any other tic time was had by attended. Mexicans people and like to show its best. They did just dignity.

from Guadalajara, one tributor members, yond the call of duty in the conference. I can don't think I would without their help. fer me help when conference, with try- bus tour, the transla- the meals, but they

ANBP's Mission is to address key issues of the biological control industry through advocacy, education. and quality assurance.

ANBP Board:

- Richard Ward, President (Biobest Canada Ltd)
- Kimberly Gallagher, Vice President (Sterling Insectary)
 - Eda Reinot, Secretary (Becker Underwood)
 - Dan Cahn Treasurer (Syngenta Bio-line, Inc.)
 - Andrea Davenport (Koppert Canada Ltd.)
 - Carol Glenister (IPM Laboratories)
 - Tom MacDonald (MGS Horticultural Inc.)
 - Angela Hale (Bug Factory)
- Brian Spencer (Applied Bio-nomics Ltd)

Contributing Members:

ANBP is pleased to recognize the following members for their interest in biocontrol and their generous support of ANBP's programs and goals.

- **California Avocado Commission**
 - Donald L. Flaherty
- **The Morning Star Packing Company**

Committees 2005:

- **Regulatory:** Cahn (Chair), Glenister, Spencer, Ward
- **Research Liaison:** Hale (Chair), Cahn, Davenport, MacDonald, Reinot
- **Liaison and Education:** Gallagher (Chair), Glenister, Luczynski, Spencer
- **Nominating:** Hale (Chair), all Board members
- **Audit:** Spencer, all Board members
- **Conference:** Glenister (Lead), Hale and Ward Advisors (Program): Board Team
- **Quality Control:** Glenister (Chair), ASTM Working Group members

“Bio-Control Matters” is published by the Association of Natural Bio-control Producers four times per year to provide members with information, thought and opinion on biological control affairs. ***Bio-Control Matters*** advocates the interests of commercial biological control and the public interest of quality agricultural production and environmental protection. ***Bio-Control Matters*** welcomes contributions of comment and opinion, as well as articles of general interest. All contributions must be signed by the contributor. Send contributions for consideration to Maclay Burt, ANBP Executive Director, 2230 Martin Drive, Tustin Ranch CA 92782. Phone/fax (714) 544-8295. (E-mail execdir@anbp.org). Published contributions may not necessarily reflect the views or policy of ANBP.

ANBP was formed in 1990 by commercial insectaries to provide a united voice in regulatory issues facing the industry. ***ANBP*** is also dedicated to quality standards and educating the agricultural and academic communities about the importance of biological pest controls for pest management. ***ANBP*** membership exceeds 100, including 46 producers and/or suppliers. Through its efforts, ***ANBP*** is recognized as ***THE*** spokesman for the commercial biological control industry.

Angela Hale will fill you in on the details of the speaker program, but we were very fortunate to have representatives from the regulatory boards of Canada, the US and Mexico, as well as a representative from the US Department of Homeland Security. As we strengthen our relationship with these various departments, it is becoming clear that for the most part, they wish to trust our organization and work with us to try to find solutions to the ongoing problems arising out of the events of 911. A good example of this is the fact that the USDA through Dr. Robert Flanders is trying to put together a pilot example using Biobest Canada as a test for their new "E Permit" program. Two years ago, it was difficult for Biobest to have a conversation with the USDA because it was considered to be a foreign company and not the permit holder for its products in the US. We have come a long way since then, but still have a long way to go. Some members of ANBP also attended an "E Permit" seminar held in Maryland earlier this year, as well as a NAPPO meeting in Riverside California, at which various ideas were discussed as to how to improve the situation regarding border crossing issues. Brian Spencer will fill us in more on this in his article as he sits on the biological control panel of NAPPO as this industry's representative.

Finally, I would like to thank Angela Hale for putting together an excellent, informative and entertaining group of speakers for this year's conference and also thank those of you (who are too many to mention) who also helped in some way to make "Beneficials Without Borders" one of our most successful and entertaining conferences to date.

As we look forward to 2006, let us also reflect on the accomplishments we made during 2005 and continue to build on them in an effort to further strengthen our industry.

In closing, I would like to take this opportunity to thank the ANBP Board, as well as our Executive Director Maclay Burt for their help throughout 2005 and to wish you, and all ANBP members the very best for the season and the coming year.

News from Canada:

Applied Bio-nomics' Brian Spencer reports

Not much happening in Canada. 20 hours of darkness and lots of ice and snow. At least the pests have stopped coming in.

The NAPPO Guideline has taken a giant leap forward, because of the "Prosperity and Security" initiative taken by our fearless leaders. NAPPO was asked to select 5 guidelines that were appropriate and do-able before June 2006, and ours was one of them. This will mean that a final draft should be completed during our meeting in Mexico in February. It will then go out for Country consultation and should be a NAPPO Guideline (#26) by this June. The way it is going, it will require a significant change in the USDA regulations and probably the same for Canada and Mexico, but at least it is happening. Regulations take about 3 years

(historically) to change so we may be a ways from seeing a change.

Let's all pray for a good cold winter to start us off on the right foot.

Brian

ASTM Review

(ASTM Chair Carol Glenister reports)

ASTM in Guadalajara, Mexico October 13, 2005

Another eventful meeting! International transit was our first order of business. The group agreed that North American Plant Protection Organization would be the best organization to work through for border crossing protocols. However, ANBP members have a very high stake in some of the criteria for phytosanitary certificates. Brian Spencer volunteered to work on methods for purity and identity certifications that will probably be required for phytosanitary certificates.

Discussion centered next around a method to alert entomological researchers to the existence of ASTM QA test methods. The general opinion was that we needed to publish a paper in a scientific journal. Also, we should get scientific researchers more involved in methods development. Norm Leppla suggested that we consider the journal Bio-control and Carol, Angela and Norm committed to having an outline ready for the February meeting.

A brainstorming session centered on the meaning of the words User Test. The consensus appeared to be that it must be simple, quick and dirty. A user test can not include grams scales and microscopes but a hand lens is acceptable. A user test was not adequate for rejection of product, because it was not precise enough. An important note was that precision is obviously unnecessary if all the product is dead.

Carol presented the IPM Labs method for assessing the quality of fly parasites. Currently the fly parasite industry is completely un-standardized, some producers sell parasitized fly pupae without specifying how many of them are likely to have live fly parasites inside.

Anna Luczynski presented the latest round on the Encarsia standard. This method combines the test for flight with the number escaping from the card, so that there is only one set of numbers to compare. A few suggestions were made for changes in language.

Anna continued with an in-depth look at the proportion of commercial *Persimilis* that can actually lay eggs. A great term for fecund females appears to be "functional adults." The proportion of functional adults seems to be very poor industry-wide, presumably because the females are a little old when they are harvested. Anna suggested a research project might be undertaken at one of the universities to create a chemical test for *Persimilis* fecundity that would help the industry select more fecund populations. She will help a scientist write up a letter of intent on this subject.

The meeting finished with Guy Boivin presenting a very interesting set of research trials that demonstrate that a tiny *Mymarid* parasite of weevil eggs learns to process potential host eggs more and more quickly, at first needing to

probe every egg with her ovipositor. With experience, however, she can determine if the host egg is "acceptable" for egg-laying merely by tapping it with her antennae. As a result, older females can parasitize eggs much faster than very young ones. The stunning part of this research from a quality control viewpoint is that females lose the ability to learn if they have been stored too long (6 weeks).

The next meeting will be in Oxnard at the Embassy Suites Mandalay Beach Resort from 1 to 5 PM on Tuesday, February 7, 2006

Conference 2005—Guadalajara!!

(Reported by Program Chair Angela Hale)

I would like to once again thank all the speakers for contributing to an excellent program. It was exciting to have our first-ever bilingual conference and the translators did an amazing job handling the technical terms. Many session topics are covered elsewhere in this newsletter, so I have copied the following abstracts for the interest of our members who couldn't travel to Guadalajara.

The role of basic and operational research in the development of entomopathogenic nematodes for control of insect pests

Lawrence A. Lacey

USDA-ARS, Yakima Agricultural Research Laboratory, Wapato, WA 98951, USA

Entomopathogenic nematodes (EPNs) provide effective control of a wide variety of insect pests in a multitude of crops and other habitats. In order to use the best possible candidate nematode for a given pest insect and environmental situation, a broad array of information regarding the host insect's biology, ecology, and susceptibility to EPNs, as well as the environmental tolerances of the candidate nematodes must be known before operational control is possible. Some or most of the needed information may have already been generated through basic and applied research conducted over the past several decades. For example, the search strategies (ambusher, cruiser, intermediate cruiser-ambusher) and optimal temperature ranges for several EPN species have been studied in detail. Knowing temperature and moisture ranges of the host insect's habitat will enable selection or elimination of EPNs for control of a targeted pest insect. Unless there is a well documented history of control of the particular pest insect by certain EPN species in a specific habitat under the same environmental conditions that will be encountered, some operational research will be required in order provide the most effective control. For example, parameters that could affect EPN efficacy for control of codling moth in apple orchards in Washington State include type and age of orchard, irrigation system, species and formulation of EPN, method of nematode application, time of year, presence or absence of mulch and compatibility with other control methods including biological control agents.

Trichogramma sibericum - from discovery to commercialization with international co-operation - Local wasp goes south for the winter

Deborah Henderson

ES Cropconsult

Fireworm, a lepidopteran pest in cranberries presented a challenge to adequately manage with insecticides. The concept of a system for biocontrol was developed using three control tools - one tool for reducing mating adults ability to deposit eggs (mating disruption), one for reducing survival of eggs (*Trichogramma*) and one to act as a larvicide (Bt) when the other two failed to keep the pest below threshold. A search was made for native *Trichogramma* species in British Columbia Canada and *T. sibericum* was found. It was well adapted to fireworm eggs, which are laid singly and which, late in summer, diapause until the following spring. After several years of work to elucidate biological "parameters" of *T. sibericum*, rearing trials, and developing field application protocols, we looked at the costs of producing this species in Canada for a relatively small market and decided it was not viable. We found a partner in Cuba where *Trichogramma* production is well established and biocontrol in food production is well used. Since 2002 we have worked together to obtain appropriate permits, test the shipping system and finally will be building a high containment facility to produce them in Cuba where they are not native. Commercial production will begin in 2006 or 2007.

Insects And The Retailer

Presented at Conference 2005

By Jessica Dawe dba The Bug Lady

For years our efforts of producing and implementing biological controls has focused on commercial agriculture, nursery and forestry with not much effort devoted to the home consumer. Supporting commercial growers is only one half of the equation. Establishing products and support for the other half of the equation - the consumer - will give us a new outlet and drive the demand up for the commercial producer as the homeowner makes conscious purchasing decisions. This segment of the market is the driving force behind the removal of many pesticides from the shelf and why the organic food industry has grown leaps and bounds over the last decade.

Since direct access to biological controls has been relatively limited and with most information being passed onto the public by word of mouth and/or limited advertising we have experienced much confusion about the use of and access to the products. What I would like to cover today may be familiar to you but often overlooked.

I would like to address those topics that, in my opinion, would inform the public about the advantages of biotechnology in the home and help improve accessibility to the products.

- 1) We need to improve public education and awareness.
- 2) We need to address the specific needs of a home consumer
- 3) We need to develop products accordingly

Over the last 6 years, The Bug Lady has positioned herself as the source for biological controls for the home consumer and acts as a liaison between you - the producer- and the public . My experience has been that the general consumer needs more than a fact sheet to convince them of the benefits of biological controls. They need a combination of supporting materials and systems that will provide a foundation for their choices. Education is paramount for us to sell products and we work hard to ensure that what we deliver is accurate and user friendly. At this point there is too much contradiction regarding the appropriateness of certain products and the rates at which they are used. Because the technology is new to the consumer, the inconsistency of informa-

(Continued from page 6)

tion for one product can affect the entire trade.

Nematodes are a prime example. Here we have a beneficial that can provide excellent results on a few key pests when used at the correct rates. Yet there is content out there that suggests the nematodes will work on most grubs at rates that vary in the extreme.

The producer/seller risks losing a potential long term customer if the product is used incorrectly and fails to live up to the promise. It is essential that we work together to disseminate consistent, accurate information and maintain a continuity throughout the industry. We cannot put the onus on the consumer to research the specifics of a product. What we can do is translate our own proven research into something that is more comprehensive for the average individual. The way you choose to deliver the product will vary for individual businesses.

Traditional media

Educational resources

Or Public Outreach

For our business we find that various news media outlets are very interested in using our unique industry as a good news story. This introduces the consumer to our product and directs them to our hotline and website. The website provides them the opportunity to learn and access bugs but it also serves as a training tool for our retailers. Having a complimentary e-based hotline allows us to interact with our visitors and help them address their needs.

The needs of the retail market do not vary too far from that of a grower. These people are gardeners of one degree or another. With huge landscapes or a houseful of tropical plants. They encounter scale, whitefly, leaf miner, aphids and spider mites, the same as any commercial grower might. But they are also desperate to manage carrot rust fly, wire worm, slugs and ants - the amounts of pesticides sold for these applications is reflective of their desperation. We have a window of opportunity here to meet their demands.



When we are preparing products for the home consumer, we need to package products that are of suitable size for their infestation - The high numbers of predators we employ for IPM can intimidate the homeowner.

Break it down: The homeowner does not need 25000 hypoaspis , 2 or 3000 is more than enough for a few potted plants.

Our business was able to break into this market by just such an advantage. Where as other suppliers were offering a minimum of 1000 aphidoletes we were able to offer 250. Just enough to cover a few roses in the garden . The size will make the products more inviting and help reduce the end cost. Giving access to everybody not an elite few. We need to be competitive with the chemical market. Having a product that is natural is not enough of a selling point on its own. Very very few people will spend \$50 on Crypts if the Jade plant that is infested is only worth \$100. Too often I have seen people cringe at the cost of bugs only to replace their choice with something more toxic. Everyone's bottom line is price. Biological controls receive very little allowance here so we need to do our best to make the product inviting. If the sales of Carbaryl as a blanket control are any indication then there is a huge opportunity for us. Indeed the development of such products will take time and money but with more and more chemicals being eliminated there is space for our industry to take over. We need to present them the alternative specific to their problem in a manner in which they are comfortable using

So the way we package our products is of paramount importance. Curbside appeal is everything if we want people to pick up our product from the shelf rather than someone else's.

We know people want to reconnect with the environment. So lets present them a package that reflects the beauty nature has to offer. When I present my products to a person I want to stir happy emotions not fear or guilt. I also want to make the use of the product as easy as possible because I am not going to be there to hold hands with every individual. The steps required to perform an application should be as easy to read and understand. It is of paramount importance that if you are using a retailer that they have taken the time to become comfortable with product use as well

Consumers want to be able to visit a garden center and leave with a solution. Access via a nursery retailer provides for an immediate audience **and** staff who can be educated about the products to do the sales for you. We need to make access to our products as simple as possible. Let's consider storage options. If we are able to give a retailer a shelf life, even if it is only 2 weeks we are more apt to have a store carrying a line of products and giving us notable presence. Retailers are already interested - they need to be able to meet the demand of the client walking through the door saying ...and I quote. "**I want something that will kill the pest but is safe for my dog/kids/environment etc.**" The heightened awareness created by the organic movement has snowballed into a demand from the consumer for access to the same tools.

The movement to a safer planet now has great momentum. Everything needed to make this segment of the industry skyrocket is in place. to chemical pesticides and of those products. The prod-record in the agriculture sec-the public market with some public by translating the effi-and customizing our products the needs of the consumer. gether they are making the



Consumers are looking for alternatives local governments are restricting use ucts we can offer have a proven track tor and can be easily transferred to effort. Let's work on educating the cacy data we have already collected to suit their needs better. Listen to As one they may seem small but to-difference.

Regulatory Report

At Conference 2005, featured presentations and a panel discussion focused on **Regulated Movement of Biological Control Organisms Between Canada, United States and Mexico: Which Procedures Make Sense for Commercial Goods?** Presenters and Panelists included Robert Flanders, USDA-APHIS PPQ, M.C. Hugo Cesar Arrendondo Bernal, Subdirector, Centro Nacional de Referencia de Control Biologico. Roger West, Director of Ag Inspection Operations Policy, CPB/DHS, Doug Parker, CFIA, Brian Spencer, NAPPO : *Expediting International Shipment of Biological Controls*.

A keynote regulatory session was developed with the following format: Each panel member gave a 15 minute presentation on his role in protecting his country from insect threats and ideas for future changes, then participated in an open forum.

Much of the panel discussion revolved around entry into the United States and trade barriers existing as a result of compliance with current policy. Consensus was that it is easier to import BCAs into USA from Europe than from Canada or Mexico. It was suggested that there should be an American representative on the EPPO panel and that member countries should pool their technical expertise. Mexico regulates nematodes under pesticide rules and Canada is somewhat concerned with formulants in nematode packaging. Although the development of NAPPO guidelines and their tri-lateral acceptance (followed by policy development and implementation) could and probably will take several years, attendees seemed optimistic that the NAPPO biological control panel is the vehicle to make it a reality.





Robert Flanders, Roger West, Brian Spencer,
Hugo Cesar Arrendondo Bernal, Doug Parker

ANBP Website:

(Website Chair Kim Gallagher reports)

The following link is for the updated ANBP website **preview**: www.willisdesign.com/anbp. If you have any suggestions, feel free to email them to me at kim@sterlinginsectary.com. I will be collecting the revisions needed for the site on a monthly basis.

ANBP Award of Excellence

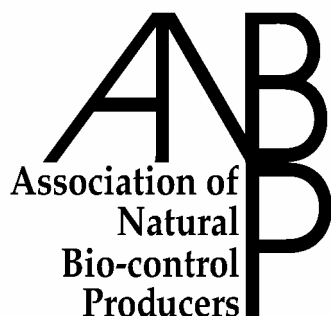
At the Guadalajara Conference, the 2005 award was given to Rincon-Vitova Insectaries' founder, **Everett Dietrick**. As he was unable to attend, It was accepted by Maclay Burt, a longtime friend.



Upcoming Meetings, Workshops and Events

(Revised 01/09/06)

Date	Title	Location	Contact info
Jan 19-21, 2006	Tropical Plant Industry Exhibition (TPIE)	Ft. Lauderdale	www.tpie.org
Feb 5-7, 2006	Association of Applied IPM Ecologists (AAIE) '40 Years of Making a difference'	Oxnard, CA	www.aaie.net
Feb 7, 2006	ASTM Subcommittee E35.30	Oxnard, CA	www.astm.org
Feb 8, 2006	ANBP Board Meeting	Oxnard, CA	www.anbp.org
July 25-27, 2006	CCBC V-'Biological Control Programs in California-Citrus to Urban'	Riverside, CA	http://nature.berkeley.edu/biocon/
Aug 21-26, 2006	XIIth International Congress of Acarology	Amsterdam, NL	www.science.uva.nl/ibed/ica2006
Oct 23-24, 2006	Lucerne.06 'Inaugural Annual Biocontrol Industry Meeting (ABIM)	Lucerne, SWITZ	www.abim-lucerne.ch
Oct31-Nov3 2006	Horti-Fair 2006 (NTV)	Amsterdam, NL	www.hortifair.com



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