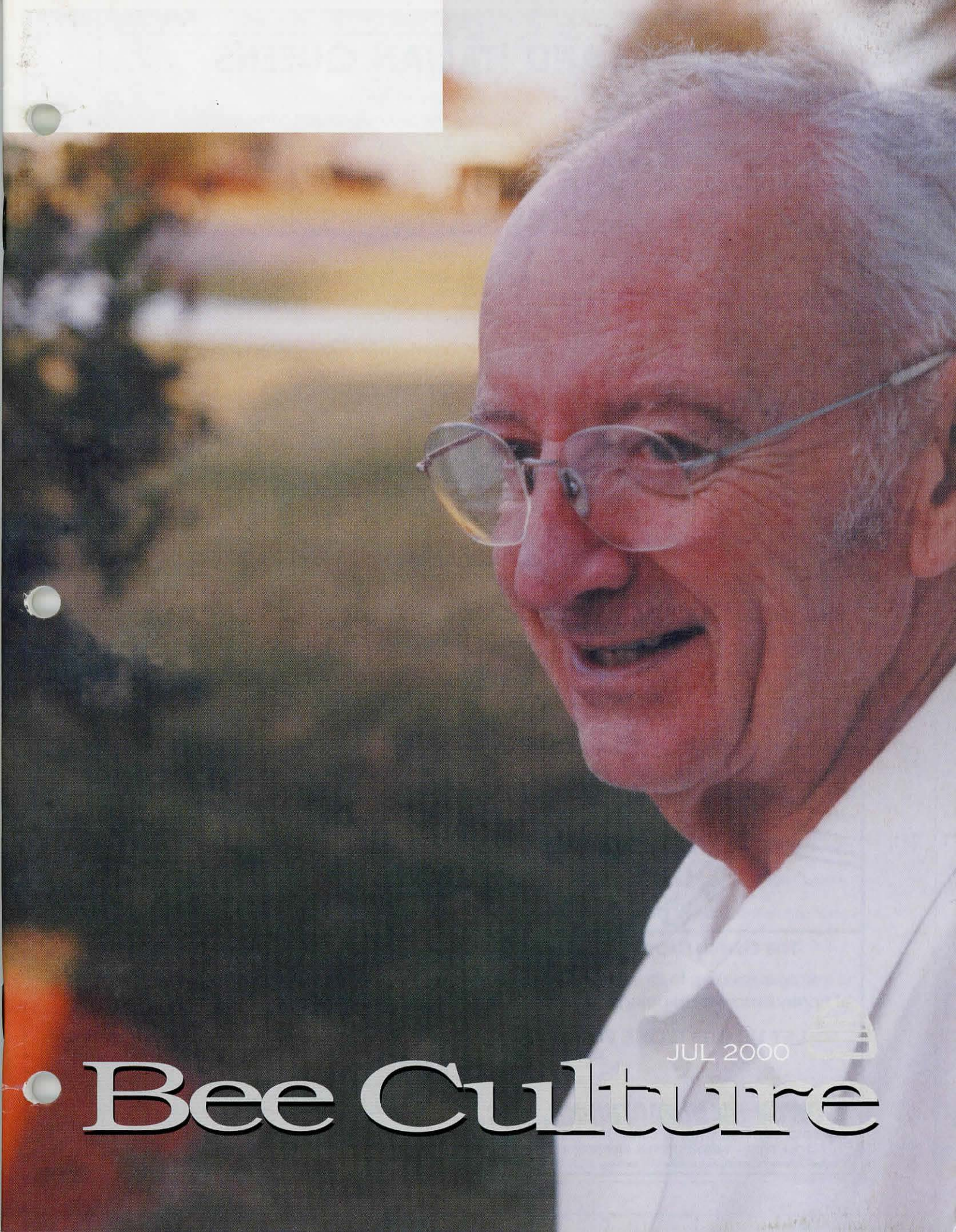

JUL 2000

Bee Culture

Bee Culture

THE MAGAZINE OF AMERICAN BEEKEEPING

JULY 2000 VOLUME 128 NUMBER 7

Roger Morse
1927-2000

FEATURES

DEPARTMENTS & COLUMNS

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MAILBOX

Almost Time To Vote

This Fall, hopefully, our industry will have the opportunity to vote on the proposed changes to the National Honey Board. A diverse group of leaders in our industry was given the task of suggesting improvements to the existing Honey Board. *"With diversity comes compromise."* The resulting document is not perfect to any segment of our industry. I feel, however, that it represents a balanced approach to making our industry better.

My priority is research. In a haphazard way, we have managed to fund some important research, but with the changes proposed to our Honey Board, we can now *all share* in sponsoring more significant research projects. If we put together several hundred thousand dollars, that money can be leveraged into even larger sums by partnering with other groups and commodities. It can also attract more scientists, or our current scientists, with more significant and meaningful projects. It also offers us the opportunity to give direction to those involved in the science. *We* get to assign the priority.

If new technology can be developed to find adulteration in honey, the consumer, honest packers, honest beekeepers and honest importers should all benefit.

I just returned from a trip to Washington D.C. We asked various politicians and government folks for help. We requested more international honey reports, more careful scrutiny of imported bees, a honey loan program, some type of deficiency payment program, and more research funds for the USDA labs and Universities. We were able to show them, through the Honey Board, in its current and proposed forms, that we were working to help ourselves.

If I see someone trying to better themselves, I'm much more inclined to offer needed assistance.

Please try to dismiss the naysayers who would have you afraid, resentful, and distrusting. Please disregard the pollyannaish idea that this document is perfect. Please give serious thought to whether our industry would be improved through these proposed changes. Vote your well considered opinion.

Pat Heitkam
Vice President
American Beekeeping Federation

Goodbye!

I believe a large majority of beekeepers know that we need a promotion program. I believe a large majority of beekeepers know that we can't get into everything for nothing. I believe a large majority of beekeepers know the government does not owe them a living. I believe the editorial slant of *Bee Culture* magazine is that of divisive camps of enemies, as the Clintonistas demonstrate daily. I do not subscribe to that value. I believe this industry can grow from the mistakes of small thinkers, both old and young. I believe a large market for honey and honey products is waiting to be developed, if only this industry demonstrates the will to stop bickering and start promoting. I believe examples set by other groups can serve the beekeeping industry.

I do not believe in endlessly carping about mostly imagined issues. If any of the loud mouths that so dominate your editorial slant had ever once attended a single meeting; had ever once worked to build consensus instead of division, had ever asked 'how could we do this better' instead of focusing on destruction; I might stay. I won't. And I urge the advertisers who also disagree with the editorial slant to pull your advertising. And I urge the subscribers who also disbelieve the divisors to cancel their subscriptions.

This industry has problems, no doubt. Mostly from within, not without. Goodbye, *Bee Culture.*

John Miller
Gackle, ND

Benefits of Apicure

One of our small yards is enclosed in a 12-foot high welded wire fence, in part attached to a large oak tree. This fence, in conjunction with some other deterrents has served us well over many years in an area often visited by bears. Any overflow located outside is at peril of being torn apart.

This Spring however, a bear scampered up the oak tree, and then over the fence. He knocked over five hives and tore the covers from the rest but never touched a single frame. He left without the taste of honey or brood, tearing down part of the fence on the way out. There was not the usual trail of broken frames scattered up the hillside. This left me puzzled until I remembered the jelpacks of Apicure that had recently been placed atop the frames. I guess they were too much for his sensitive nose. (Even I could smell it as I picked up the inner covers.)

The fence has been repaired and now there is a cute little birdhouse hanging from the oak and in it are the used packages of Apicure.

Paul Niemeyer
Asbury Apiary
Saugerties, NY

An Alternative View

I hope that you have the courage to print an alternative view to the Wise Guy. This letter is written in response to the lunacy of the Wise Guy in the March 2000 issue, and expanded to cover his newer rantings.

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I grow increasingly disgusted with the self-titled "Wise Guy" (hereafter WG). Perhaps I am jealous of this man. I wish that I was such an infallible soul that I could sit on a pedestal and judge everyone's opinion that was not in lock-step with my own selfish interests – turn every political and economic discussion into an attack on the other person's motives and character. Or, that I could believe my own motives and interests were beyond reproach, so that clearly anyone disagreeing must be evil to the core. I do not know Mr. Stoller, but I commend him for attempting a positive and hopeful conversation for our industry – in spite of the insipid, spiteful, derisive response made by the cowardly anonymous WG. I commend him for stepping up to the plate; for preparing to pay higher assessments; for trying to get his business through a difficult cycle; for **Signing His Name** to his comments, even though he knew it would make him a target of poorly thought out venom.

I would love to know what WG has done for our industry, besides divide us. Has he ever gone to a company and convinced them to try honey on their oat cereal, or cough drops? Has he ever offered to subsidize, or donate equipment to, a research project on honey usage in breads? How about bread machine mixes? Pastries? Candies? Ice Cream? We have. As far as I can tell he spends his time making honey and then whining if he can't get what he wants for it. Does he really believe that packers get what they *want* for their honey and service? Is he really so dull and self absorbed that he thinks packers are plotting ways to screw him. Here's a clue – you are not the center of the Universe! We have other worries – like being under bid by co-ops that don't pay for honey up front, or care about their members long-term well being; or beekeepers that contract their honey and then decide they don't want to ship if the market changes (reputable packers don't renege on contracts); or end users that want the honey name and the corn syrup price. Yet he sits there talking about what's good for the industry! It is WG that needs the mirror. He makes no pretense at understanding the market – he just lies down and kicks like a child if things aren't going his way. Does he believe that the world is great for everyone, except little old him? Please! He's complaining about not making enough money – guess what – I don't know of any packers, except Sioux, that aren't losing money right now, just to hold onto business. Does he believe that a market crash is good for packers? If it's a panacea, then please give us a lesson WG . . . If a packer buys raw honey in July at $.75/lb for delivery in September, and in September the market falls to $.55/lb (raw) and $.65 (processed) how does a packer make money (the beekeeper will still expect the $.75)? As the steward of what's best for the industry, perhaps he can enlighten us.

WG all but calls Mr. Stoller a liar for saying that he supported the ½ cent assessment – after all he didn't pay it early . . . tell me WG, do you like Medicare? Is it worth saving? Then how come you're not voluntarily paying more taxes to save it? Why are you waiting for the Federal Government to assess you? Here's reality – packers look at where the market is, and determine what they have to land honey on their door for, and pay their bills. In the end, who pays the NHB assessment? Consumers. Beekeepers pass it to packers in their sell price, and packers roll the penny into their sell price. That's elementary marketing and economics. And, if he really thinks that packers should tax themselves voluntarily, then let's start with Sioux – the U.S. producer co-op that *imports significant* volumes, and delivers processed honey cheaper than private packers can buy raw honey. I just had a conversation with a packer that lost an account to Sioux, on which he quoted a break-even price (honey+bears+lids+boxes+direct labor), and was under bid by Sioux by $3/case. Another is looking at losing a *white* honey customer to Sioux at $.56/lb (processed and delivered), when they bid $.63. What will Sioux return to the beekeepers on that? Who is undermining the market? We can only pay you what our customers pay us, and Sioux is setting that price.

Most recently WG has been on a tirade about the proposed changes to the NHB. Apparently he thinks packers are so evil, short sighted and malicious that they don't merit any representation. His egocentricity is incredible. Packers won't survive if beekeepers fail. Beekeepers won't survive if packers fail. He seems to understand this when it comes to pollination, but doesn't see the same symbiotic relationship with honey. We have different strengths and weaknesses and, like it or not, we need each other. If the NHB can function, without riots, then that's a good sign – we're working together for the industry's best interest. Why does he insist that someone else has to lose for WG to win?

Sadly, WG probably won't consider a word of this. He looked first to see the signature on this and decided that everything I wrote would be a lie. It is for that reason that I won't sign my name. My hat is off to Mr. Stoller, but I have no interest in being tarred and feathered as a liar and cheat – by a Wise Guy that refuses to identify himself. I won't surrender my integrity, honor or self-respect to this vindictive man.

With hopes for a kinder future,

A small packer

Thanks *Bee Culture*

Thank you in appreciation for the excellence of *Bee Culture*, to the editorial staff and the fine group of regular contributors.

Aside from the full length features, essays and editorials an occasional filler catches my eye. One in the May issue (page 66) about "Lots of people, enough food" caught my attention.

Having been raised on a family farm, more or less a subsistence arrangement and having worked in agriculture and agri-business for some 45 years, I feel entitled to express an opinion.

The Biotech Report, as quoted, ends with the statement "Family

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planning could yield more immediate benefits (than, presumably, advancing technology).

I cannot disagree with this assessment of our future population-food supply prospects but neither can we disregard the possibilities of advancing technology, bio-genetics, for example.

Ultimately, perhaps, the world population must forcefully be brought under control by some means. There are beliefs imbedded in our socio-economic and political institutions that oppose such measures and perhaps rightly so. Such beliefs may be contributing, but not exclusively, to our population explosion, apparently without regard for the consequences. One of the consequences may be food shortages, but others may be of a more subtle and far more threatening nature.

Larry Goltz
Redding, CA

Who Laid The Egg?

Roger Morse wrote a lot about queens laying eggs in queen cups in the May, 2000 issue (pg. 29). There is absolutely only one way to know it was the queen which laid the egg there and that is to see her do it. Otherwise how would you know that the workers had not moved the egg there from a worker cell? That means you must be watching her during the 30 seconds or so she is in the act and that almost certainly means seeing it in an observation hive. I have never read a single account where the author stated that he had watched such an event transpire.

I chanced to have an experience which demonstrated that workers move eggs. I had two queen cells develop above a queen excluder in a super of foundation without a single drawn cell (except the queen cells). Roy Thurber in *Bee Chats, Tips and Gadgets* stated that he had seen workers moving eggs.

I have read, and I find it believable, that queens do not lay fertilized eggs in drone cells because they measure the cell size with their forelegs and do not put a sperm in those eggs. If this is so, why would she put a sperm in an egg to be laid in a cell even larger?

Dan Hendricks
Mercer Island, WA

Secrecy For Cowards!

Let's get one thing straight – the concept of using a government organization to force every beekeeper in this country to account for the number of hives they keep, and the amount of honey they produce each year, is an EVIL CONCEPT! Further, the threat of the use of government force to require everyone in this country to pay either a monetary assessment to a governmental organization, or prove they are exempt, IS EVIL, and contrary to the freedoms that have historically belonged to each individual person. Yet this is exactly what will be forced on us all, if the voters in the upcoming referendum approve the assessment increase for the National Honey Board (NHB), which vote will be conducted by the United States Department of Agriculture (USDA), Agricultural marketing Service (AMS) in the near future.

It is past the time for everyone in the beekeeping and honey industry to cease hiding under cover of a secret ballot, and to let us know who it is that is voting in favor of the National Honey Board (NHB). This is what I am proposing: Everyone who receives a ballot to vote in the upcoming referendum, and chooses to vote against the honey board's assessment increase, is hereby being asked by me to photocopy their ballot after they have filled it in and voted, and then send a copy of the ballot to my address below, where I will tally the results to check on the USDA and we will be able to make public any discrepancy in the vote counts! IF YOU DO NOT SEND ME A COPY OF YOUR COMPLETED BALLOT, IT WILL BE ASSUMED YOU VOTED IN FAVOR OF THE ASSESSMENT INCREASE, and all that goes along with it. Further, I plan on wearing my ballot on my shirt at future bee association meetings, so everyone can see how I voted.

For those of you who believe the honey board is desirable, you have every right to start you own board, composed of others who wish to VOLUNTARILY join and pay any amount of money you all decide upon. However, I and other smaller operators, do not need or want the Honey Board in order to sell all of our honey at decent prices, and many of us certainly do not need the additional paperwork and governmental intrusion into our private lives that accompanies the passage of this assessment increase. PLEASE VOTE AGAINST THE ASSESSMENT INCREASE!

Leon Moyer
220 Scissortail Rd.
Rogersville, MO 65742

Yes For NHB Changes

U.S. honey industry members should soon have opportunity to vote on proposed changes to the National Honey Board. Industry leaders have invested an incredible amount of time and energy in arriving at the current proposal through negotiations within the industry, with legislators and with USDA. It's very important that the vital advantages of these changes are well understood by all industry members. When you understand the true value, you'll vote "yes" for these improvements.

Let's start with assessments. The end result is a 50% increase in funds while reducing the cost to the producer. Producer assessments will be reduced from 1 to ¾ cents per pound. Packers will be new contributors, paying ¾ cents per pound, as well. All honey, both domestic and imported, will be equally assessed a total of 1.5 cents per pound by the time it enters the channels of commerce. Producer-packers will pay 1.5 cents since they are, in effect, both producers and packers of the honey. All imported honey assessments will be collected by US Customs at the 1.5 cent rate, ¾ cent for the importer and ¾ cent for the handlers. This was necessary due to the fact that honey imports occur in numerous forms (raw and finished goods) and move directly to customers outside of the honey industry (wholesalers and ingredient manufacturers) as

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well as to honey packers.

Why do we need more money for the National Honey Board? Over three years ago leaders of industry trade associations met and determined that the two greatest additional industry needs were for honey production research and honey quality assurance. Since that meeting the need for these two program elements has continued to grow. Funding these two additional programs would have crippled the National Honey Board honey promotion efforts unless we increased the total assessment pool.

Other people are more qualified than I am to speak on the honey bee research portion of the changes. I'd like to focus on the Quality Assurance element.

This is not a NHB plan to police honey producers' extracting facilities. It is also not a plan by larger packers to create requirements or specifications that can't be met by smaller packers to put them out of business. It's a plan to help all industry members supply what honey buyers and consumers are and will be demanding. Larger packers are more familiar with customers' rising expectations for purity and food safety because their larger customers are more technically advanced and more tuned in to emerging issues. Smaller packers stand to benefit from the perceptions of the larger packers, like an "early warning" system. If you don't see it now, just give it a little time and you probably will.

The language in the enabling legislation and the Order are purposely vague when it comes to the Quality Assurance plan. This gives the Board the most flexibility to modify the program as needed. The makeup of the Board is going to prevent any segment of the industry from being able to "railroad" anything that is going to be unfair or lacks common sense. Also consider that USDA has the responsibility of oversight to prevent this from happening, as well.

The focus of the Quality Assurance program begins with our improvement of honey science. We need to improve our ability to detect honey adulterants at lower concentration levels. There are also some sweeteners for which we currently have no ability to detect. We want to stop willful adulteration. We also want no witch hunts or false accusation. Better honey science is foundational to both. Other possible projects are the search for lower cost tests that could be used by both producers and packers for detection of chemical contaminants in honey.

What would a monitoring program look like? Again, the board, with USDA oversight, would determine what makes the most sense and it could change with time. The drafters of the legislation and Order had no intent of doing producer honey house inspections. Monitoring could involve a random sampling of retail packed honey for purity testing. It could involve sampling and testing of bulk honey at a packer or customer's facility. Who would do sampling? It could be done by USDA. It could be contracted to an independent organization. One thing is certain, just like Board members have always had no access to individual industry member information, the same thing would hold true for any Quality Assurance work.

What about enforcement? If there's a legitimate adulteration case, USDA has full authority to cooperate with other governmental agencies for enforcement. In my own conversations with FDA in the past few years they welcomed the thought of our industry helping provide them with better tools, such as better adulteration detection technology. If our work can help identify the "smoke" they can be more effective using their resources dealing with the "fire".

There's another very important potential dimension to the Quality Assurance program. Within the past year, Mr. Peter Martin from the United Kingdom conducted a survey project where he gathered information from the honey industry around the world. The results identified Quality Assurance as the most often mentioned priority for the honey industry ... around the world. At Apimondia in Vancouver this past year it was evident that the U.S. National Honey Board has great respect in other nations. A NHB Quality Assurance program would provide leadership that the rest of the world is looking for and would be the catalyst for global cooperation. It's clearer all the time that we are part of a global honey market. U.S. producers only know that too clearly right now. Adulterated honey anywhere in the world inflates the total supply and artificially deflates prices. We have opportunity, with a Quality Assurance program to not only assure a pure honey supply in the U.S., but to significantly impact the same around the world.

Money for honey bee research, a quality assurance program, packers sharing the cost and lower assessments for producers. Clearly understand the value of these changes and you'll vote "yes" in the upcoming referendum.

Dwight Stoller, President
W. Stoller's Honey, Inc.

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PENDELL APIARIES

INNER COVER

"Roger here." Thus began every one of the hundreds of phone conversations I have had with Roger Morse in 15 years. It made no difference who called, or who answered.

It wasn't quite an announcement – *Roger Here!* No, not quite. But almost. He was accustomed to being announced. To being introduced as the resident expert to hand out solutions or to share what was known about a topic and then qualify it by announcing that not enough was known yet to solve the current crisis. He was good at both.

Nor was it a cordial greeting – *Roger here . . .* – not quite. Roger didn't suffer fools at all, let alone gladly, and this bit of formality would put you on notice that you had been granted an audience and had better be prepared.

Even after 15 years I felt twinges of both every time I heard it. Which means, I suppose, I never took Roger for granted. I doubt anybody ever did, really.

Not that he was perfect. Close maybe. Closer by his definition than by others perhaps. But always close. In a career spanning a half-century you're bound to make an off call now and again. Especially when you're in the business of making calls.

And to the beekeeping community, the global beekeeping community, few if any of Roger's contemporaries were as visible. Or as accessible. His monthly column in this magazine was a pipeline to the everyday beekeeper, a fact he never once took lightly. His job, or part of his job, was to extend beekeeping science in a useable fashion to all the beekeepers of New York, and his column here did that, but reached a far greater audience in the process. He so valued that connection that he made it mandatory for his grad students to do the same while still under his wing. Pity so few practice that to the degree Roger did.

Roger always felt strongly about playing a role in beekeeping associations. The New York Honey Producers Association was the beneficiary for years of his input as program chairman. He didn't lead or make policy, but used his office to make good programs, which he felt would make good beekeepers. His students have carried on that tradition in many parts of the world.

EAS, too, benefited from his work in its early years, as he was instrumental in the formation of the EAS Master Beekeeper Program, which thrives today little changed from his first design.

But Roger wasn't immune to grander adventures and spent time in many countries, extending what he knew to those who could use the information, and soaking in whatever he could from his hosts. He knew of *Varroa* and Africanized bees long before they were here, from those who had been dealing with them for decades before we did.

That trait has been passed on to his students, certainly, as many have traveled the world giving what they know, bringing home what they've learned. Beekeepers everywhere are better for that gift.

Roger's legacy, if you will, lies with those he influenced as a teacher (he taught thousands in his beekeeping classes), in his generations of grad students now influencing even more students, and to those of us who have and will continue to just enjoy and learn from his articles, his books and his company when we could.

Roger's wife, Mary Lou, and his children, Joseph, Susan and Mary Ann, were part of his extraordinary life. They traveled with him to the far corners of the world, spent time in his Florida hideaway and were exposed to the exotic and the rare parts and people of the life of a famous husband and father. Our thoughts are with you all now, along with our thanks for sharing a part of your life with us.

But for me, well, I'll miss forever those conversations that traveled from the project at hand to whatever flights of fancy we came up with. And because of all that he gave us there's no doubt that for a long, long time . . . Roger's still here.

•

I do some work with the Ohio State Beekeeper's Association and at a recent Board meeting I was at something quite extraordinary happened. We had a visitor.

Not that visitors aren't encouraged to attend and take part in the proceeding of this group. After all, the Directors in this, and any group for that matter, set the direction and philosophy of the members they were elected to represent, and the voice of the electorate needs to be heard. It's an open invitation in Ohio and always had been. It's just that nobody has taken us up on it in several years. So our visitor was an event.

He came with his wife and their

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Roger Here . . .

What's New

Berlin Packaging, LLC, a Chicago-based supplier of plastic, glass and metal containers and closures, introduces its new Hexagonal Sauce Bottle to the world.

This strong, glass container has six wide sides for a unique look. The wide mouths make for both easy filling and pouring. The sides angle up at beautiful angles, creating a truly different bottle in the marketplace to make products stand apart from the competition.

The container is perfect for many food products – barbecue sauces, salad dressings, basting sauces, marinades . . . the possibilities are endless.

The Hexagonal Sauce Bottle comes in three useful sizes, five and 10 ounces and the largest 375ml size. Anyone can call Berlin Packaging today to request a sample of the Hexagonal Sauce Bottle. Berlin Packaging, 111 North Canal Street, Suite 300, Chicago, IL 60606, 312.876.9292, www.berlinpackaging.com

Apimondia's Commission on Apitherapy has created the first official CD-ROM on Apitherapy to be released this Fall. Readable by both the Macs and the PCs, it is in English, Spanish and French. The subject matter is presented on two levels, one for the general public and the other for those who want to study the issues presented in greater depth.

It can be ordered on the Net at www.apiservices.com/cd for the introductory price of 49 euros. Mastercard and American Express

cards are welcome.It can also be ordered by fax for the same price at the Belgian number + 32-2-345-1995.

Research has shown that 40 - 60% of *Varroa* mites fall to the bottomboard naturally or when you open your hive and smoke it. These mites just crawl back up and hop on to a host bee. With this trap these mites are trapped and die. You can check or reapply grease to tray without opening your hive.

This heavy galvanized screened trap allows mites to fall through and be trapped on the tray. The unique tray and trap design is much better than others that are available.

Simply rotate your bottomboard to face the opposite direction and place trap facing the original way.

Tray slips in the opening of the bottomboard which is now in the back. Simply pull tray out and regrease or put in new sticky board without disturbing or opening the hive.

For information contact B&B Honey Farm, 5917 Hop Hollow Road, Houston, MN 55943, 507.896.3955, bbhoney@means.net

Ag employers have increasingly come under the watchful eye of INS as a result of the Immigration Reform and Control Act (IRCA) of 1986. IRCA was intended to reduce the number of illegal employees in the U.S. The Act created the I-9 employment eligibility verification form, a requirement for all employers to have as part of personnel files for employees hired after Nov. 6, 1986. INS began identifying major industries known to employ illegal alien workers, including ag, and instituted tactics to audit these industries.

Often caught off guard, ag employers suddenly found themselves facing INS agents during work site "raids," I-9 audits, or other INS enforcement strategies. Compliance with INS rules and regulations became a challenge with limited resources available.

Steve Schlecht, president and CEO of Gemplers, Belleville, WI, became aware of the issue through his involvement with the National Council of Agricultural Employers.

As a result Gempler's developed "How to Avoid an INS Nightmare," the most current addition to its family of guides. Gempler's Editor Barb Mulhern wrote and edited the guide with the assistance of Attorney David C. Whitlock, a partner with the Atlanta-based firm of Fisher and Phillips LLP, whose practice has focused on immigration law and IRCA. The guide includes information on conducting an I-9 self-audit, completing the I-9 form, and being prepared for INS enforcement strategies used against ag employers.

According to Whitlock, "While INS has not instituted a specific program to audit ag compliance with IRCA, the ag industry continues to be part of a primary focus of law enforcement, along with the construction, landscaping, garment, hotel, and restaurant industries."

"Gempler's guide has practical, 'down and dirty' information that you can put to immediate use," Whitlock said. To order at $35 per guide, access www.gemplers.com by entering Item No. 10545 in the search box of the home page, or contact Gempler's, P.O. Box 270, Belleville, WI 53508; 800.382.8473; fax 800.551.1128.

JULY – REGIONAL HONEY PRICE REPORT

Region 1

Prices up just a bit across the board, but nothing to get excited about yet. Pest pressure not quite as bad as last year, with mites still the biggest problem. The weather has been difficult to deal with, causing low honey production. Low prices have hampered beekeeper's sales thus far this season.

Region 2

Retail prices up a bit, all the rest steady to up very little. Pest pressure this spring about normal for most colonies. Mites the biggest headache, but AFB and chalkbrood showing up too often. Swarming, low populations and the weather causing most management problems. Slow sales hampering marketing.

Region 3

Retail and wholesale prices up, bulk steady since last month. Pest pressure so far about the same as last season with mites and chalk causing the most problems. Swarming and bad weather high on everybody's list of management complaints, and slow sales and slow production causing sales problems.

Region 4

Wholesale prices up a bit, but bulk and retail slipping slowly since last month. Pest pressure about as expected with mites on the list. Swarming a big deal this year, causing poor production and not enough product to sell.

Region 5

Retail prices down, all the rest steady, so far. Pests about as expected, with no surprises as of early June. Slow sales and low priced competition the biggest obstacles to good sales.

Region 6

Prices up across the board, but bulk the biggest gainer. Retail strong though. AFB, and mites causing enough problems to be noticed, and swarming and the weather giving lots of problems too. This in turn led to low production and you can't sell what you don't have, which was the biggest concern early this spring.

Region 7

Prices steady to unchanged since last month, with competition from low priced imports hurting local producers. Pest pressure about as expected, but varroa big in the picture, with AFB showing up more than usual. Swarming, and with it the weather high on the list of management concerns, but low priced competition the biggest complaint.

Region 8

Prices steady across the board since last month. Mites, chalkbrood and some AFB showing up more than expected, but not bad so far. Swarming much more of a concern as it was much more frequent this year than last say reporters. Low prices the biggest complaint, with slow sales a result.

Region 9

Prices steady since last month with no big swings so far. Varroa big in the picture this season causing lots of problems, and fire ants in the news, causing their fair share of concern. AFB on the radar, swarming and not enough time to keep up cited as the biggest management problems. Low, low prices impeding sales.

Region 10

Prices steady and unchanged since last month. Varroa on the increase, and fire ants causing problems in the region. The high cost of doing business is cited as a problem (here and nearly everywhere), and low prices and slow sales to wholesale and bulk buyers not helping the picture.

Region 11

Prices up a bit at the bulk level but steady across all the rest. Mites, mites, mites the problem here, but the weather has slowed the flow and production is down. Pesticides showing up and causing problems and low prices slowing sales.

Region 12

Prices down across the board this month with no reason given as to why. Mites, mites, mites in the news, and in hives causing all manner of problems. The weather, coupled with swarming and not enough time to get the work done have added to the problem of low production. Of course low prices have slowed sales.

	Reporting Regions												Summary		History	
	1	2	3	4	5	6	7	8	9	10	11	12			Last	Last
Extracted honey sold bulk to Packers or Processors													**Range**	**Avg.**	**Month**	**Yr.**
Wholesale Bulk																
60# Light (retail)	70.07	69.83	74.00	70.80	75.00	63.00	60.75	68.00	84.00	62.00	93.67	65.00	42.00-142.00	70.73	71.78	71.03
60# Amber (retail)	66.73	61.15	68.00	69.80	78.55	58.50	63.17	60.67	74.20	62.00	84.33	57.50	45.00-123.00	67.65	68.89	67.76
55 gal. Light	0.61	0.65	0.66	0.60	0.66	0.68	0.63	0.66	0.66	0.60	0.65	0.63	0.59-0.75	0.64	0.63	0.61
55 gal. Amber	0.56	0.63	0.59	0.58	0.59	365.00	0.60	0.59	0.59	0.60	0.60	0.57	0.47-0.70	0.59	0.58	0.57
Wholesale - Case Lots																
1/2# 24's	28.89	26.84	30.78	31.71	30.78	27.83	30.80	30.78	30.00	30.78	24.00	34.00	20.40-42.00	29.95	29.26	29.91
1# 24's	42.11	38.53	48.00	44.17	44.40	42.50	43.52	42.24	44.33	38.40	42.00	47.88	32.40-54.00	43.07	42.45	43.04
2# 12's	38.26	36.36	45.60	43.07	39.00	38.30	38.78	40.80	41.90	31.89	34.00	40.00	29.40-52.58	39.17	38.51	38.74
12 oz. Plas. 24's	35.33	33.65	44.40	34.42	34.80	36.40	35.58	35.16	39.73	27.60	37.00	36.95	26.40-48.00	36.05	37.50	36.57
5# 6's	40.11	38.93	44.00	48.10	41.95	43.90	39.27	39.00	42.50	37.50	40.00	38.25	30.50-54.00	41.34	41.53	41.99
Retail Honey Prices																
1/2#	1.77	1.57	2.83	2.17	2.83	1.80	1.75	1.68	2.50	1.49	2.83	1.90	1.19-3.00	1.80	1.62	1.86
12 oz. Plastic	2.24	2.10	2.90	2.34	2.63	2.24	1.97	2.14	2.69	2.19	2.49	2.12	1.39-4.00	2.27	2.18	2.26
1 lb. Glass	2.68	2.50	3.00	3.10	3.00	3.08	2.38	2.63	3.17	2.39	3.00	2.84	1.58-4.00	2.74	3.43	2.69
2 lb. Glass	4.51	4.09	4.80	5.41	4.75	4.25	4.11	4.79	5.00	3.41	5.50	4.40	3.19-7.00	4.59	5.70	4.55
3 lb. Glass	6.23	6.47	7.80	7.01	6.00	6.50	5.82	6.24	6.71	4.79	5.77	5.82	4.70-10.00	6.33	7.45	6.32
4 lb. Glass	7.79	7.66	8.68	8.80	8.68	6.53	8.49	7.98	7.00	8.68	8.68	8.17	5.99-12.00	8.06	9.22	7.72
5 lb. Glass	9.04	8.90	11.00	10.75	10.00	8.00	8.18	10.97	9.00	7.90	11.55	8.62	6.50-16.00	9.30	10.83	9.37
1# Cream	3.15	3.05	3.63	3.61	3.63	3.20	2.67	3.17	4.50	2.29	4.50	2.87	2.19-5.50	3.21	3.05	3.25
1# Comb	4.24	4.08	3.62	4.29	4.53	4.17	4.06	4.42	6.00	4.53	7.25	4.50	1.95-7.25	4.38	4.01	4.23
Round Plastic	3.72	3.09	3.60	3.88	3.95	3.00	3.60	3.99	5.50	3.95	4.67	4.16	2.00-6.00	3.85	3.82	3.76
Wax (Light)	2.53	2.67	3.00	2.10	2.96	2.50	1.85	2.18	2.50	2.96	2.20	3.00	1.30-5.00	2.57	2.69	1.68
Wax (Dark)	2.26	2.15	2.75	1.91	2.61	2.50	1.99	1.45	2.00	2.61	1.93	2.17	1.00-4.50	2.32	2.39	1.77
Poll. Fee/Col.	37.88	40.29	31.50	36.60	40.00	38.00	39.36	41.00	20.00	37.99	50.00	40.00	20.00-55.00	38.96	37.91	37.16

THE WISE GUY

Communication is the lifeblood of business today. We have telephones and cell phones with voice mail, call forwarding and a zillion other features that are supposed to bring us closer together. We have the computers with e-mail and web pages so we can communicate worldwide with ease. We can send photos through the computer and view the sender, live, during computer discussions. We have fax machines, newspapers, magazines, personal letters, television, radio and heaven knows how many more.

It would seem if you have a question about something there should be an answer right at your fingertips, wouldn't you think? Well just start asking questions about the upcoming referendum vote concerning the National Honey Board and the quality assurance program and your answers will be all over the board. When you ask the National Honey Board for a copy of the new proposal "legislation" you get directed to a website showing the total "act." If you read the total "act" you have more questions than answers. It (the act) does not currently have rules or laws that the industry must follow. Those will be decided after the act is passed. Is this like signing a blank check? Do you think you should know what the rules and laws will be before you vote for this act? Who will write the laws or rules? That will be done by the honey board members. Are you comfortable with that? Are you happy with the other ideas the honey board has come us with? Do you think that the public would be happy with the auto makers setting the standards for safety in autos today? Do you think their interests lay with the consumer or with costs and profits?

The more I search for answers the more questions I find. I believe the people that will pay for this referendum know the least about it. The beekeepers are the least informed of all people involved. Some questions we have are – Who gets to vote in the process? Does every beekeeper get to vote? How is his vote counted? Part of the vote that is counted has to do with the pounds produced, or pounds imported. Who gets to vote the imported pounds? The importer, or the packer? Who receives the imported honey? How do co-ops vote – by individual producer or does the co-op vote as one large block? Do they do it based on pounds produced, plus what they import?

Who counts the votes and who checks their accuracy? AMS! No this is not a virus, or even a strange disease. It is a parasite based in Washington. They are the oversight people for check-off programs. They set the elections and referendums, and they count the votes. They are supposed to inform the public of upcoming referendums and gather information from all sides of issues and determine if the referendum will go to the vote as initially proposed! You can't find a handful of people that understand this whole referendum as written. (You can read the comments submitted so far and the act itself, on the NHB web page (communication!), to see what others are saying.)

But remember with confusion comes opportunity. If this referendum passes AMS will get more money as the beekeepers contribution goes from 1¢ per pound to 1½¢ per pound! Do you think AMS wants this defeated? Do you think their typical sub-par performance of educating the voters in this referendum was an oversight or a plan? Wouldn't an appearance at two or three national meetings have put out accurate information? Don't you think that expression in person far outweighs a half-filled out questionnaire?

I believe these folks are far removed from the people that will vote for their referendum. They have created a bureaucracy and are shielded from direct questions by an industry that pays their salary. This group (AMS) is the reason we are tired of Washington politics, and why the American people loose faith in government. Before you vote ask questions and get answers.

Wise Guy

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Mark Winston

Freedom Of Information

"There is absolutely NO reason for this information to be kept confidential."

All beekeeping meetings have traditions, and our Canadian meetings are no exception. Saskatchewan beekeepers have a particularly vibrant custom at their annual meeting, called the "Bear Pit Session." The morning after the banquet, when everyone is loose, they invite a few experts up to the podium, give them a subject and 10 minutes each to say something controversial, then open fire from the floor.

I've always enjoyed these sessions because I'm one of those perverse people who loves nothing more than to think on my feet. This year's Bear Pit lived up to its reputation, with the topic of Genetically Modified (GM) Crops and their impact on honey marketing and bee health. I had a blast, but it was the sequel to that session that really interested me.

Beekeepers have two concerns about GM crops. The first is that European consumers have become shy of anything genetically modified, and both Canadian and U.S. beekeepers export honey to Europe. Genetic engineering does not affect honey directly, but bioengineered crops such as canola are major sources of honey in North America, and so honey has been swept along in the general biotech hysteria. The second concern is that a protein resulting from genetic engineering of plants might get into pollen, which bees collect and feed to their young, and perhaps could have some unforeseen negative effects on colony populations or bee behavior.

There is no evidence to date that honey has been contaminated or bees in the field have suffered due to genetic modification of crops, but there is an intriguing study from France indicating that the proteins in genetically modified oilseed rape could induce behavioral abnormalities in adult bees (published in the *Journal of Economic Entomology*, 1997, 90:1710-1716). This study, conducted at a government research laboratory, reported that the doses required to induce an effect were considerably higher than bees would encounter in nature, but that continued testing of new GM products for effects on bees seems justifiable and warranted.

Nothing of immediate concern about GM crops affecting bees was revealed during the Bear Pit session, which included a honey packer, a representative from the canola industry, an official from the Canadian Food Inspection Agency (CFIA) and myself as the panelists. Nonetheless, I remain a hard-core scientist at heart, and when the CFIA spokesman said that pollen from GM crops did not harm bees, my data-sensitive antennae twitched, and I made a mental note to obtain the relevant studies.

Upon returning home, I followed contemporary scientific protocol and sent an e-mail message. I posed some specific questions asking him to substantiate the results alluded to in his talk. In my circles, providing data for fellow scientists to corroborate statements is akin to passing the salt at the dinner table. It's good manners, and if nothing else is considered proper etiquette.

I knew something was amiss when my e-mail message was immediately bumped up to a higher-level civil servant. The questions I asked were straightforward, seeking information needed to develop an informed opinion about an issue that could seriously affect beekeepers' livelihoods. The answers also were straightforward, although not in the way I expected:

- Have honey bee adults or larvae been examined in tests to evaluate effects of GM pollen on bees? Answer: Yes.
- What GM crops were tested? Answer: Can't tell you that; it's proprietary information.
- Where did the data originate, from industry or an independent source? Can't tell you that, its proprietary information.
- Can you provide me with the experimental protocols for these tests? Can't tell you that, its proprietary information.
- What were the results? Can't tell you that, its proprietary information.
- Why can't you reveal the protocols and results from these tests? We deem those to be confidential business details.

I'll be blunt. There is absolutely **NO** reason for this information to be kept confidential. I can understand a novel process, or even the nature of a particular gene product, being kept under intellectual property

Continued on Next Page

"Beekeepers have two concerns about GM crops. The first is that European consumers have become shy of anything genetically modified, and both Canadian and U.S. beekeepers export honey to Europe."

wraps. But feeding a bee pollen does not require revealing trade secrets, and in no way compromises industry. How could information like number of replicates, methods and experimental protocols used, what plants were tested and how many bees lived or died possibly be considered a threat to patent protection or industrial confidentiality?

If a GM crop is safe for bees and people, the public should be allowed to see the data that says it's safe. If it's not, we should have clear information about the danger. Period. Our governments need to be a trustworthy arbitrator of such issues, and their secrecy stance torpedoes credibility.

It's not just bee data, and it's not just GM crops that we should be concerned about. As one CFIA official put it, "Secrecy is business as usual as far as we're concerned." Our Canadian government policy on intellectual property matters in which food safety or human health is involved has always been overdone, and has resulted in the Canadian public distrusting public servants on issue after issue, whether justified or not.

The bee and pollen question is a small blip in the system; there are many larger issues. Our governments make decisions about biotechnology products, pesticides, antibiotics fed to livestock and myriad other health and safety matters based on copious data provided by industry. I don't happen to share the deep distrust expressed by many on the environmental left about industry-generated data, but I do share the opinion that such information should be publicly accessible when it relates to human and environmental health.

In spite of my deep concern about secrecy, I also don't have any particular reason to mistrust the quality or professionalism of the staff at the CFIA or other Canadian and American government agencies. I've worked with regulators on many issues, and found that the on-the-ground workers are dedicated, honest and as helpful as they are allowed to be. They often have told me stuff they are really not supposed to reveal because they, too, see the foolishness of overdone silence.

The problem lies in government policy that has handcuffed our civil servants into an untenable position. Sometimes stealth is necessary, perhaps for an undercover military spy, but can someone explain to me why the number of bees killed or not killed by GM canola pollen is a government secret? Or, if a pharmaceutical company develops a new antibiotic for livestock, why can't I see the data presented to the government on residues in meat, even without top-secret information on the identity of the antibiotic? How about the inert ingredients in which pesticides are dissolved before being sprayed; any reason I'm not allowed to see the numbers that prove their safety, even without the proprietary information revealing their chemical nature?

There is a process to obtain data the government doesn't want us to see. It's called Freedom of Information, and if I had months of time and a few lawyers on staff, I'd follow this up. However, there are a labyrinth of forms to fill out, committees to maneuver through and ultimately rejections and appeals to pursue. Only hyper-obsessed consumers with either nothing else on their plate or a professional lobby group on their side have the time or resources to extract what should be public information from our governments.

The underlying issue is trust. The consequence of secrecy is that we perceive conspiracy by shadowy government-industry cartels at every turn, whereas the opposing perspective, transparency, would reduce our anxieties about new and potentially beneficial technologies. I remain unabashedly startled that governments continue to put themselves in positions where citizens have to get red-hot mad before information is released to us. Wouldn't it make more sense to let us see the data on which important decisions are based?

Some aspects of industrial confidentiality are worth respecting, but anything less than full disclosure of information pertinent to human and environmental health is an affront to the public interest. How about it, Ottawa and Washington, D.C.? I await the data. BC

Mark Winston is a professor and researcher at Simon Fraser University, Burnaby, B.C. Canada.

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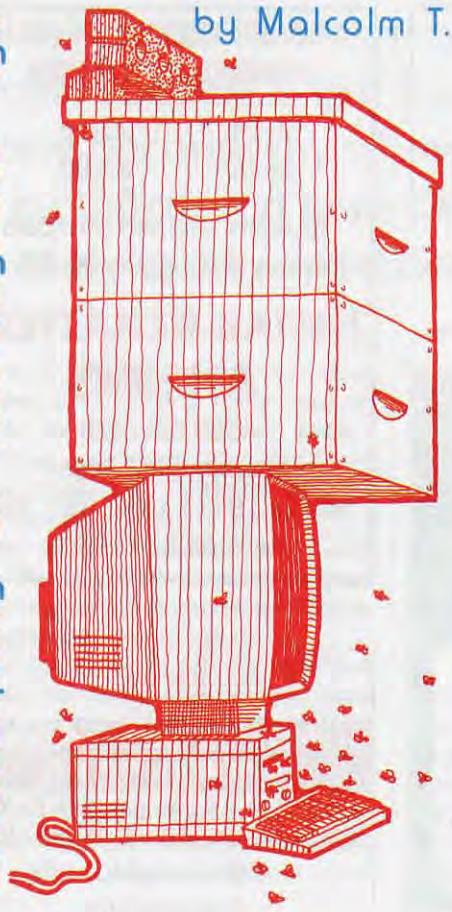
Beekeeping In The Digital Age

by Malcolm T. Sanford



Beesource.com

Last month I discussed several **examples of apicultural dot-coms** that have recently been proliferating on the World Wide Web. As the information revolution matures, there are sure to be many more. They will be limited only by the creativity of those who see the enormous possibilities presented by this new technology. Mr. Barry Birkey is one of a **team** of web designers outside Chicago involved in a host of projects involving multimedia and World Wide Web pages . He is also a beekeeper and launched a site early on with an apicultural focus. Here are some musings he sent me by e-mail late last year: "I'm just starting to implement a lot of new changes to my current web site that have been on the back burner for a couple of years. The most recent action was to acquire two new domains to begin building my new site around (beesource.com and bee-l.com). I then plan to develop some new features. One is to make Bee-l.com the browser based method for **bee-l**. I'll be implementing a discussion board with an array of forums moderated by individuals who have expertise in these areas. Different forums might be, beginning beekeeping, diseases and pests, pollination, queen production, products of the hive, etc. My goal is to not take away from bee-l but to be an added value especially in light of the many posts we moderators receive that don't fit the guidelines due to their elementary nature or redundancy. They might do better looking at a specific forum of interest. My other goal is to create a network of honey producers (mostly hobby) that would be willing to sell their honey or fulfill orders online. When you think about it, most "homegrown" honey is sold locally and never goes beyond that. I'd like to see a way for people wanting specialty honeys to be able to buy it over the internet. I've already talked with the owner of ChefTalk (**http://www.cheftalk.com**) about this."

Barry's site is now a realty at **http://beesource.com**. Accessing that home page, one finds the following: "There is a group of beekeepers that are studying the cell size of honeybee comb and what types of foundation are in use around the world. YOU can help us! What size is your foundation? Simply measure across 10 cells on your foundation and write us with the measurement, especially if it does not measure between 5.20 and 5.45 cm. (That's 2-1/16 and 2-1/8 inches). If you do not use foundation, what size is your worker comb? Please measure several worker combs and let us know the measurements. Also, let us know where you are (country, state) as well as, the race of bees, and latitude, longitude & altitude — if you know them. Please send results to: **cellsize@beesource.com**. This study comes out of the more recent work of the (Ed & Dee) Lusby's on cell sizing. Please take some time to read the **historical data** regarding cell size, and the **current work** of the Lusby's." Several graphics show how to do the measuring and the concept is another interesting example of how the World Wide Web can be used in innovative ways. This is a first effort in developing an online study based on a very large number of possible contributors from all over the globe. The results should be interesting and may be useful in a number of ways.

There is a **news section** at Beesource.com, which contains information on breaking events in the apicultural field. Of special interest are recent events on Varroa finds in **New Zealand**, information on the various governmental **organic initiatives**, and a discussion of **releasing Russian queens** to beekeepers. This page also contains present and past reports of the **National Honey Market News**, published in Yakima, Washington. This is the only place to my knowledge where this information exists, as it is not yet available electronically from the publisher. Also found here is the latest **sugar and sweetener outlook**. The last part of this section contains the dates of short courses, symposia and other events, such as the July 21-23 **queen rearing short course** at the University of Minnesota and the July 29-30 **University of Illinois** beekeepers' workshop.

The **point of view** section of Beesource.com contains controversial and provocative material. There is found the **back to biological beekeeping** ideas of the Lusby's, some of which have led to the online study mentioned earlier. "Ed and Dee are full-time commercial beekeepers in Tucson, AZ. Ed is a fourth generation beekeeper. Dee and Ed work side by side in all phases of their operation. Their non-chemical 'back to basics' approach to beekeeping leads them to spend much of their spare time in libraries where they search for obscure bits of information which, when assembled in logical order, yield insights into old problems such as bee kills due to the use of pesticides, and new prob-

lems like parasitic mites. Such has been their pursuit of an understanding of the importance of comb cell diameter, an issue emanating out of their bee breeding activities and search for non-chemical methods of resolving disease and mite problems."

Another no-less-controversial area is that surrounding the **controversy** of the bee language as put forth by Dr. Adrian Wenner. There is a **compilation** of pithy comments from the late **Andy Nachbaur**, including a philosophical exchange that Andy called a "**love letter**." He concludes in that document: "I have always included all beekeepers in my efforts and do not judge individuals by the number of bees they have or the reason they have them or even what they post to newsgroups or list mailers but I read them all as time permits and even the personal Love Letters from other readers." Other comments include those by Allen Dick on the **simplicity of beekeeping** and **Dave Green's** remarks on **using frozen honey bees as weapons**. "We (I was given a team of assistants) designed a gun that would rapid-fire a couple hundred (frozen) bees. If these were lobbed into a foxhole on a warm day, the bees would revive en route and the enemy (theoretically) would run screaming from the hiding spot, to be picked off by our snipers. It was beautiful, and I was so proud of our accomplishment. The first shipment of guns and ammo went in refrigerated containers. But lack of understanding and care by the personnel en route, combined with the steamy tropical heat,allowed the bees to warm up a bit. They were usually still frozen but often not hard, when they were used. There were a couple times when they worked in spectacular fashion, but most of the time, they turned to mush and jammed up the guns."

Also found on Beesource.com are **numerous plans**, most in Adobe Acrobat® format, which are usually more suitable for printing on paper than normal Web documents. These include tips on **making** your own beehives and how to build a **bee vacuum**, and the **apidictor**, a device that was patented by the late E.F. Woods and used sound to predict when a colony was likely to swarm. A very complete compilation of both **bee supply outfits and associations** is also provided on Beesource. com, including an advertisement for used and antiquarian books available from Joseph J. Bray, PO Box 203305, New Haven, CT 06520, 203-865-1594, **jbray@pcnet.com**. In keeping with the commercial context of Beesource.com, Barry has teamed with Barnes and Noble to advertise a range of **beekeeping books** from a number of publishers. Graphics of the covers are displayed along with some idea of the content of each volume.

A complete list of **electronic discussion groups** and how to subscribe to each is found at Beesource.com. Barry asks that the owner of a group that's not listed, and would like to be added, send a request to: **info@beesource.com**. Finally, the site contains numerous **fora** for beekeeping topics, including beginning beekeeping, queen rearing, pollination, food-grade mineral oil treatment, items for sale and posts by those wishing to purchase items. The number of contributions to each forum is noted and there is a facility, which tells a visitor whether there has been any new posts since the last visit. Barry has made a remarkable effort at providing useful information to the beekeeping world through his site and certainly one worth looking at frequently. BC

Dr. Sanford is Extension Specialist is Apiculture, University of Florida. He publishes the APIS Newsletter: ***http://www.ifas.ufl.edu/~mts/apishtm/apis.htm***

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Roger Morse

Research Review

"Reviewing A Great Researcher"

Roger Alfred Morse was born July 5, 1927 in Saugerties, New York to Margery and Grant Morse. Grant had grown up in the heart of the Catskill Mountains and as a child worked the fields, harvested hay, hoed potatoes and helped with the bees. Grant Morse attended a one-room school and worked on the school's magazines and newspapers. He earned his M.A. from Columbia University and his Ph.D. from New York University. For over 40 years Grant Morse served as an administrator in the public schools of New York State, 37 of them as a school superintendent. He was a prolific writer, making contributions to this and other magazines, and published two books of verse on Catskill Mountain philosophy and wisdom.

Roger's father remained a hobby beekeeper for years, and gave Roger, when he was about 10, a hive of his own. This was more bribe than gift though as the elder Morse's intent was to instill an interest in the hobby, and then enlist his son's help with the work the hobby required.

It was the perfect case of right place, right time for Roger. He, with his father's help and on his own, read and studied all he could on the honey bee, and by the time he was in his teens was operating nearly 200 colonies spread around the Hudson Valley and Catskill Mountain areas of New York.

Roger entered the Army in 1944 and served in Europe until early 1947. He was honorably discharged as a Staff Sargeant. In the Fall of 1947 he enrolled in Cornell and received his B.S. degree in 1950. He continued at Cornell and in 1951 was married to Mary Lou Smith. He received his M.S. degree in 1953, and still at Cornell, he received his Ph.D. studying mead making in 1955 under the tutelage of Dr. E.J. Dyce of creamed honey fame.

After graduation Roger and family moved to the Gainesville, Florida area where he took up the position of Apiculturist with the State Plant Board. While there he worked the fruit fly spray program, produced the booklet on Florida Beekeeping still in use today, and wrote another dozen or so articles on various aspects of beekeeping in that state.

There's no doubt this stint in the Sunshine state reinforced Roger's love of Florida, initially started by his father. As a result, Roger and his family spent part of almost every Winter in the warm south at the Archbold Biological Station near Lake Placid, Florida. This allowed Roger to extend his research season of course, and contributed much to his grad student's education.

Roger spent two years in Florida, then did a six-month stint in 1957 as Entomologist at the Waltham Field Station in Amherst, Massachusetts. But toward the end of 1957 Cornell once again called, Roger returned, and he never left.

"Roger Morse played a key role in making complex bee research understandable to the average beekeeper. His skill at turning out gifted graduate students has provided a legacy for solving our industry problems many years into the future. The discipline he had in getting up very early each morning to write, has left us with a library of his knowledge." - John Root

Grant Morse

"He sure hated bureaucratic 'nonsense,' as he called it, but understood university bureaucracy better than the administrators did. There was no way that I should have been able to get into grad school on such short notice. But Doc discovered a loophole in the regulations, and he used it. That was the first of numerous occasions that I saw Dr. Morse get department chairmen and other administrators nervous." - David DeJong

Although Roger's first contribution to *Gleanings in Bee Culture* was made in 1953, he started his regular Research Review column in the April issue of 1958, shortly after moving back to Cornell.

"Dr. Morse's task will be to keep our readers up to date on the latest research developments in the world of beekeeping," wrote Field Editor Walter Barth (and former classmate) when introducing Roger to the readers. John Root was managing Editor and M.J. Deyell was Editor.

Continued on Next Page

Mary Lou & Roger, Joseph & Mary Ann

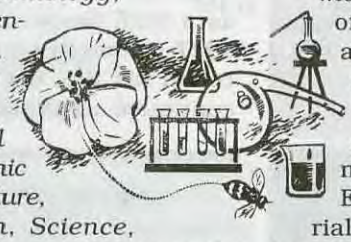
During the 40 plus years Roger's column ran here, he also wrote many, many other articles covering almost every area of beekeeping. By far the most were fundamental, how-to management articles – Wintering, feeding, harvesting and the like. But his travels and curiosity led him in some nontraditional directions too. Marketing, interviews, many on making mead, nearly a dozen book reviews, quite a few editorials, and the science of beekeeping were some areas explored. Other insects, beekeeping in New York and Florida, pollination, judging honey, Extension and running associations were also covered.

"Others have rightly noted that Roger trained an entire generation of bee scientists. But let us not forget that through his prolific writing he brought the joys of beekeeping to untold thousands across many generations." - Keith Delaplane

Much of the world's beekeeping was made available to *Gleanings* readers because when Roger traveled, his readers traveled with him. Egypt, China, Nepal, Burma, Brazil, Moscow, Poland, Africa, The Philippines, Italy, England, Europe, Asia and Costa Rica were all discovered on these pages through Roger's eyes.

Gleanings, however, wasn't the only place Roger, and his students, published in, and the nearly 40 grad students that worked with (or should it be for?) Roger came from, and have gone to all corners of the globe. And, fortunately for us, many of them, too, shared what they learned with our readers. Familiar voices include Gene Robinson, Kirk Visscher, Richard Nowogrodzki, Will Robinson, David DeJong, Rick Fell, John Ambrose, Mike Burgette, John Harbo, Dewey Caron, and Norm Gary, plus many more. The Scientific community learned of Roger and his students in *Insects Sociaux, Bee World, Journal of Apicultural Research, Environmental Entomology, Hortscience, Scientific American, Apatica, Journal Of Insect Physiology, Natural History, Economic Entomology, Nature, Farm Research, Science, Florida Entomologist, Proceedings Of The Royal Entomology Society Of London and The New York State Journal Of Medicine*, to name just some of the journals.

"What I will treasure most is not his encyclopedic knowledge of bees or his drive to write and publish, but something much simpler, his generosity to his students and his good humor." - Bill Connor



Travel, as already mentioned was a big part of Roger's life. And besides just travelling, he spent time as a visiting professor in 1968 at the University of Los Banõs in the Philippines, at the University of Säo Paulo in 1978 in Brazil, and the University of Helsinki, in Finland. He attended many Apimondia meetings, and also served as President of the International Bee Research Foundation. He received an Honorary Doctorate from Academy Rolnicza in Poland for his work there.

Sponsoring much of these activities, and some of the grad students, were grants from a variety of sources, including 13 NSF Research and travel grants, the NIH, EPA, USDA, and even the U.S. Army. The UN's FAO sponsored 25 or so trips abroad to consult on bee diseases, conduct research and survey beekeeping conditions.

Research from the off campus lab Roger called home, which was named after the Apiculture Department's Chief benefactor E.J. Dyce, was as varied as the journals it was published in. Mites, queen biology, bait hives, pesticides, yellow jackets, swarms, honey, mead, nest sites, pollen, chalkbrood, pheromones, pollination, African bees, other bees, bee venom, honey comb construction, AFB, and a host of other topics were investigated. The parallels of his work, and his Research Review articles should be noted, and as the Dyce Lab experienced and learned of a topic, so too did the readers of *Gleanings*.

Closer to home, Roger worked with the Entomological Society of America starting in 1959 and serving over the years as Secretary and Chairman of Apiculture Subsection, Program Committee Co-Chairman and Chair of the Program Evaluation Committee, Editorial Board for the Annals and President of the Eastern Branch. He was made a Fellow of the American Association for the Advancement of Science in 1975, and a Fellow of the Entomology Society of America in 1989.

He served Cornell University, too, as member or chair of several faculty committees, Library Advisory Board Chair, and, interestingly on the University Committee on . . .

"I clearly remember the day I started at Dyce Lab when he took me into his office, pointed to the collection of books and bound journal articles and suggested that I start in the upper left corner and work my way through all of the material. His point was simple, learn the history of the science as well as what is current." - Rick Fell

Committees. He served also as Chairman of the Entomology Department from 1986 to 1989.

Besides shepherding graduate students, sitting on committees and overseeing the Entomology Department, Roger was also responsible for teaching. He taught, for his whole career, Cornell's introductory beekeeping course, which, like beekeeping waxed and waned in popularity. It reached, in its heyday, a couple hundred students for the

"He laid down the gauntlet in his signature, no-nonsense way, stressing that to become a bee scientist required hard work; performing experiments that reflected a broad and deep knowledge of bees and publishing excellent and numerous scientific papers were the requirements for success." - Gene Robinson

semester long class. And it would fall to as few as 25 or 30 during the lean years. He also taught the Lab Course on practical beekeeping, which actually included bees, but this course was never quite as popular . . . but much more fun to teach.

His duties also included, and in fact were primarily directed toward the Extension side of his position. He was, as one Extension Apiculturist recently said, the last of the breed in Apiculture Extention in the U.S. His job was to take scientific information on bees and beekeeping, translate it into language beekeepers and others could use, and then make sure that information got into the hands of those intended. Meetings, short courses, bulletins, classes, teaching teachers, and this magazine all served that purpose.

"As head of my own honey bee lab in England and with numerous Ph.D. students and postdocs, I know that anything good I can achieve here had its seed in my days at Dyce lab and through the willingness of Dr. Morse to encourage a foreign student he had never met to come to his lab." - Francis Ratnieks

Notable among these were Roger's long-time service to the Empire Honey Producer's Association, serving primarily as program chair. He was also involved with the Eastern Apicultural Society in its early days. His Master Beekeepers course, developed at Cornell, was adopted by EAS and remains little changed today.

Not to be forgotten are the many books Roger Morse published during his career. *The Illustrated Encyclopedia Of Beekeeping* with Ted *Hooper*, Beeswax with W.C. Coggshall, *A Year In The Beeyard, Making Mead, Rearing Queen Honey Bees, Comb Honey Production, Bees and Beekeeping, The Complete Guide To Beekeeping, Judging Honey* with Mary Lou Morse and just completed in 2000, *Richard Archbold and The Archbold Biological Station*. Several of these books had two, three or four editions published as new information became available. As Editor, Roger was responsible for three edi-

"Doc instilled in his students not only a love for honey bees and a strong work ethic, but also an understanding and appreciation for how one's career fit into the bigger picture of one's life." - Scott Camazine

tions of *Honey Bee Pests, Predators and Diseases*, and for the 40th Edition of *The ABC & XYZ of Beekeeping*. He had several book chapters to his credit, and even a patent in mead making.

During his free time Roger was a member of Rotary; a member for 19 years of the Cayuga Heights Volunteer Fire Company serving as chief for two years; a member of the Tompkins County Fair Board for seven years and also served on the Tompkins County Board of Representatives for six months. He also spent time remodeling houses, gardening,

"He was very talented in 'bio-politics' ... how to organize outstanding scientists and professionals into effective teams for research, teaching, and public service." - Norm Gary

keeping his bees and Mary Lou's animals in good care.

Roger is survived by his wife Mary Lou, son Joseph, an entomology professor at UC Riverside, and daughters Mary Ann, a business executive in New York City, and Susan, a manager at Cornell University. He also has a sister and brother both living in New York.

When Walter Barth convinced Roger to begin writing here it is doubtful either thought it would be as successful or last as long as it has. And, although the concept and philosophy of this column will continue, the title, in Roger's honor, has been retired. Thank you Roger, for 42 years of Research Review. BC

$eason's End COMB HONEY

Lloyd Spear

Comb honey supers need to be put on your hives a few weeks before the major flow. The bees will first draw the combs in the super immediately on top of the brood nest and will fill the cells with nectar as fast as the combs are constructed. As the bees tend to first construct comb in the back of the hive and will often favor one side over the other, it is usually wise to rotate the super at least once. If you're producing cut comb or combs for chunk honey, it is also a good idea to exchange the end combs with those in the center. Do this when the center combs are fully drawn and partially capped.

When the super immediately over the brood nest has the comb in all the frames drawn and 50 percent or more capped, it is time to rotate supers. The procedure and rationale for doing this were explained in detail in the preceding article. On the next trip to the hive, in about a week, look carefully between the frames to see if the top cells are capped. If so, tip the super up and look at the bottom of the frames. If more than a few cells are still uncapped, leave the super for another week. If all the cells are capped or only a few cells are uncapped, the super is ready to take off the hive. It is important that this be done as soon as possible; otherwise the bees will discolor the cell cappings by walking on them with their dirty feet!

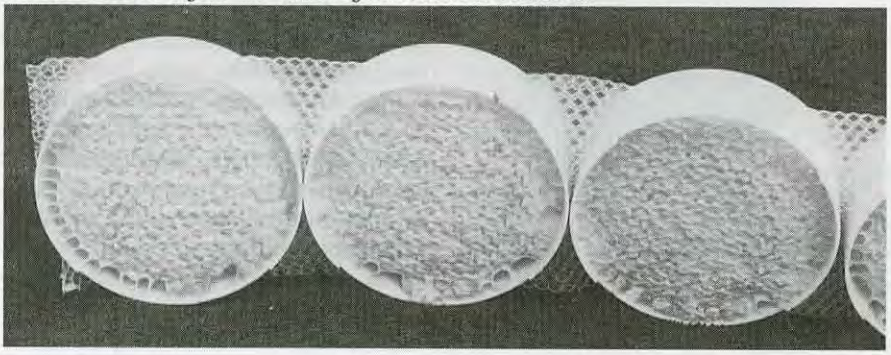
The next step depends on whether there is burr comb between the supers or between the super and the brood nest. If you see broken comb and honey on the bottom or top of the frames in the super to be harvested, you have burr comb. The bees build burr comb when they have excessive space (generally, more than 3/8-inch). The burr comb will be full of honey, which will drip on your car or truck, your clothes, the basement floor; in fact, nearly everywhere. To prevent this, when the super is ready for harvest, scrape all burr combs, discarding the wax into your wax melter or collecting it in a bucket for later processing. Put the super back on the hive. The bees will immediately set to work to clean up the spilled honey, and if you come back in two to three hours or the next morning you will be able to harvest a nice dry super as the bees will not have had time to rebuild and fill the burr comb.

While I do not believe bees guard their honey, as such, they certainly guard their hive, and it will be easiest to harvest and process the comb honey without the super being full of bees. There are four basic methods of getting the bees out of the super. Those methods, and the advantages and disadvantages of each are:

- Insert a bee escape device between the super to be harvested and the rest of the hive. There are many such devices, but the two most popular are a Porter escape, which fits into the hole in the inner cover, and a special board including a maze that lets the bees move into the super below but seems too confusing for them to negotiate re-entry. The advantages of these escape devices are that they are non-chemical and can be inserted without disturbing the bees or the bees disturbing you. The disadvantages are that at least 48 hours is normally required for the bees to leave the super, and on a hot day the devices can interfere with air movement to the extent that the combs will melt, ruining the product of all the bees' (and the beekeeper's) hard work!
- Remove each frame and brush the bees off with a bee brush or

Harvesting & Preparing Round Sections, and Good Colony Management

Round sections before the excess foundation is removed.



a handful of grass. This certainly works but is very time consuming and can make the bees very angry! Again, this is a non-chemical solution.

- Use an air blower to blow the bees out of the super. This non-chemical method will quickly remove bees and, for some unknown reason, does not make the bees angry. The only disadvantage is the cost of the blower. However, more and more homeowners are using leaf blowers, and with a little ingenuity they work fine for this purpose.
- Use a fume board and one of the chemicals that act as a bee repellent. The advantages are that this is very fast and does not make the bees angry. The disadvantage is that these chemicals smell terrible. Personally, I have never been able to detect any smell or taste effect on the honeycomb after using a fume board. When temperatures exceed 75°, when almost all comb honey is harvested, the fume board will need to be on the super for only one to two minutes to drive over 95 percent of the bees down. I have timed it; even two minutes is rarely necessary. I don't believe that taste or smell can be affected with such short exposure and I urge you to try fume boards and a repellent. Of course follow the instructions on the label.

Once the supers are off the hive, you have to decide when to treat them for wax moths. The supers almost certainly contain some wax moth eggs, hidden in crevices. If untreated, these eggs will hatch and the small larvae will go looking for food. While they are unlikely to find any (their principal food is the cocoon fragment left behind by hatching bees), they will make unsightly "tracks" across the cappings and may even grow enough to be visible! To kill the eggs, as well as any tiny larvae that might have already hatched, it is necessary to freeze the combs.

We have a chest freezer, and I usually find it easiest to freeze the entire super, but you can freeze individual frames or wait and freeze the finished packages. Regardless, put the material being frozen inside a plastic bag, and when thawing, leave it in the bag for at least 12 hours. When warm air meets the frozen material, moisture will condense. By leaving the comb in the bags, the moisture will be on the outside of the bag and not on the combs, where it is unsightly. Be certain your freezer can reach 0°F and freeze for at least 24 hours after 0° is reached.

Comb honey knife.

The freezer is one piece of equipment necessary for harvesting comb honey. Most people already have one in their home and can make room for a few days of freezing comb. The only other piece of equipment that is needed is a sharp knife.

Packaging Ross Rounds™ is much less labor-intensive than packaging either cut comb or chunk honey. The frames need to be individually removed from the super and a hive tool gently run down the dividing line on the top of the frame. The frame halves should separate. If they do not, repeat until the frame separates. When separated, lay both halves down on a table with the comb up. (Each comb is called a "section.") I generally keep separating frame halves until my table space is filled. Usually the combs will be in one half of the frame and will still be connected to one another by the beeswax foundation, which was in places inaccessible to the bees. Gently nick or cut the foundation in between the comb sections and grasp the exposed section ring with the fingers and thumb of one hand. *Do not squeeze* the comb, and gently pull it from the frame. Repeat for all the sections in the frame (four), and stand each section up on edge. Remove the frames. (Most beekeepers save room by immediately putting the frames back into the super they came from. Some immediately refill the frames with rings for the next season, saving the effort of putting the supers away and getting them out again.)

When you are ready to package the sections (either after removing all the sections from a single frame or after removing the sections from several frames), pick up each section and, with the paring knife, cut away the attached foundation. Gently holding the section, put a cover on one side. Notches on the ring enclosing the comb match cutouts in the cover. Gently twist the cover until the notches and cutouts match, and the cover 'seats' on the ring, then reverse and put a cover on the other side.

Package sections that are near to perfect, or better. All cells should be fully drawn, but a few may be unsealed. In our operation, we will market a section with no more than 10 unsealed cells on each side. Sections that do not meet these criteria are either crushed and the honey drained or cut up for chunk honey. If we sold retail, we would sell unfinished sections at a substantial discount, without labels. We do not sell any sections with pollen in cells. And unless a customer specifies otherwise, we put an opaque cover on the side with the most unsealed cells and a clear cover on the other side.

With covers on, tamper-evident labels are applied. These labels not only cover the area where the rings join but also serve to securely attach the covers. As the covers are solid, the sections can easily be packaged for shipment, and every year many thousands are shipped all over the United States and to Asia and Europe.

Before the comb honey is packaged, and perhaps before it is produced (we only produce cut comb to fill orders), you should have firm plans for selling this product. It is generally easy to sell up to several hundred packages of comb honey or jars of chunk honey to local retailers or from a roadside stand or one's home. Successful ways of selling are often printed in the bee magazines. Some ideas that have been successful include . . .

Continued on Next Page

A perfect round section.

- One beekeeper lives on a road well-traveled during the Summer and Fall as people go to their Summer camps on a nearby lake. He has a very small stand on his front lawn, but it is well-advertised by signs placed up and down the road. (Those signs are taken down when honey is not being sold.) While he only raises section comb honey, he "trades" with another beekeeper for liquid honey and sells both. Every year he sells several thousand sections and countless jars of honey. Repeat customers make up a substantial portion of the business. Signs at the stand provide prices, and customers are asked to leave payment and make change from a box on the counter. He almost never has any honey taken without payment.
- Another beekeeper provides "free" pollination to a truck farmer raising several acres of melons, squash and cucumbers. When the wild bees were lost to mites, the beekeeper approached the farmer and offered to put hives on the property in exchange for the farmer taking his honey to the Farmers Market. This is a "true" Farmers Market with produce sold only in commercial lots and a requirement that the farmer raise at least 50 percent of the products sold. This beekeeper sells approximately 24,000 sections a year through the farmer . . . all in cases of 54 sections.
- A variation on this is a beekeeper who provides hives to a pick-your-own operation to pollinate raspberries and blueberries. In exchange, the owner lets him stock section comb honey in his retail store where he sells produce and gifts. He sells 200 to 300 sections through the one store.
- Another variation is a beekeeper who lives near a reasonably large metropolitan area with several farmers' markets that cater to the retail trade. This metropolitan area has a reasonably large population of people with Middle East heritage. The beekeeper provides "consignment" sections (meaning that the farmer does not pay until the sections are sold) to as many farmers as will take them and provides the farmer with a 25 percent commission. There are never any unsold sections.
- For some reason, pick-your-own operations attract customers who are especially desirous of "natural" foods. A beekeeper living in an area of several pick-your-own apple orchards sells several thousand sections through their retail stores. In 1998 he sold the sections to the pick-your-own operations for $2.25 and guaranteed them that all unsold sections would be taken back at full credit. In five years, he has never taken back a single section. He also strains the honey from damaged or unfilled sections and wholesales it in jars as "local, unfiltered, unheated" honey to the same stores at $2 a pound. (The stores happily sell it for $3 a pound.) He can never produce enough of this.
- If you are fortunate enough to live in an area with a population of people with a Japanese or Middle East heritage, visit the stores that cater to those communities. These cultures consider comb honey a delicacy that is consumed as part of their family and religious traditions, and you should have no difficulty selling considerable amounts. You might even find yourself selling in reasonably large quantities for export.
- When selling comb honey, you will probably be asked, "What do I do with it?" Richard Taylor developed a label that he pastes on the bottom of every Ross Round™ container. (see box)

What Is Comb Honey?

It is the only sweet that is neither made nor processed by man. The bees build their delicate comb, and fill it with honey, in the very container you purchase.

Honey that has been extracted from the honeycomb and strained is not the same. Usually it has been heated, to retard granulation. If it is commercially packed, then it has been blended and filtered as well. It is good, but not as good as comb honey – the most exquisite delicacy to be found anyplace in nature.

Put comb honey on anything you wish to sweeten, or eat it as is. The wax won't hurt you; in fact, though it has little nutritional value, it is good for you in other ways. It is your guarantee that the honey mingled with it is the perfection of what honey should be.

To use: Remove label and covers (top and bottom), run a knife around inner edge of container to let honeycomb drop out onto a dish.

Richard has given permission for any beekeeper to use the above on his or her own label.

Regardless of whether you are a first-time hobbyist producing 100 circular sections or boxes of cut comb or a first-time commercial beekeeper producing 1,000, my best marketing advice is to be persistent. With effort and explanation, all sections can be sold and most customers will buy again the following year. Within two to three years you will have developed a reputation for producing qual-

ity comb honey and will find that new customers come to you. There are many beekeepers in the United States who produce over 1,000 circular sections a year, and I do not know of even one who does not have more demand than production.

Fall Management As production of comb honey requires strong, compared to gradual, flows, most comb honey production is over during August. This is an enormous advantage for comb honey producers because . . .

- the entire Fall flow from goldenrod and aster can be left with the bees for over-wintering.
- treatment for *Varroa* can be applied in mid-August, easily providing a full treatment period before really cold weather.

In most areas of the country, bees used for comb honey production will have ample time to collect a full super of honey from the Fall flow. This will provide food for overwintering, as well as stores for the following Spring's brood rearing.

Beekeepers who want the Fall honeys for extraction must keep supers on until first frost. Thereafter they pull supers and treat for *Varroa*, and sometimes have significant Winter losses because the treatment period was too short before the bees went into Winter clusters. Comb honey producers, who can remove all supers by mid- to late August, have plenty of time for a full treatment period.

In southern states bees need as little as 30 pounds of honey for the Winter. In most of the country, 60 pounds is sufficient, but in the far northern parts, 90 to 100 pounds is required. If there is not a bee club in your area, a call to your county extension service will give you the name of a local beekeeper you can call to ask how much stores are required in your area. Experienced beekeepers can walk behind their hives and approximate the weight by gently lifting the back with a hive tool. Until this level of experience is gained, a bathroom scale can easily be used.

Working from the back, prop up one side of a beehive with a piece of 2x4. Then lift the other side and slide an ordinary bathroom scale underneath. Read the weight and, since one side was supported on a 2x4 and not the scale, multiply by two. This is the weight of the hive. Subtract 20 pounds for ***each*** *hive body, and you have the approximate weight of the honey.*

Since the bees will not readily take feed after they form their Winter cluster, the weight needs to be checked after hard frost (when there will be little to no further amounts of nectar), but before daytime temperatures are constantly below 50°F. If you do not have the minimum amount of honey for overwintering in your area, feed sugar syrup. Fall syrup should be two parts sugar to one part water (by weight or volume). This mixture will weigh approximately 12 pounds to a gallon. Feed the required amount, using either a bucket or a hive top feeder. Remember, though, a 12-pound gallon has only eight to 10 pounds of sugar, the rest water. Make sure you feed enough sugar, not just sugar syrup.

While it is controversial, in the most northern parts of the country, wrapping hives will probably improve the chances your colonies will overwinter successfully. Again, inquiries should be made to your local bee club or experienced beekeepers in your area. In most of the country, wrapping is definitely not necessary and bees can easily withstand the cold while getting enough days of moderate temperature so that they can move their cluster to new frames of honey. What kills most bees during the Winter is excessive moisture.

During the Winter bees eat honey for its carbohydrate value and shiver their wing muscles to generate heat that is used to keep the cluster (including the queen and any small amounts of brood) warm. This warm air, of course, contains metabolic moisture and rises. Since the bees do not heat any part of the hive where they are not clustered, the rising warm air will meet cold air on the inner cover, where the moisture will immediately condense, "raining" cold water down on the bees (like breathing on a cold window in Winter). The bees cannot cope with this cold water, and it will (and does) kill them. Once the bees have sufficient stores for the Winter, the most important matter becomes a method for evacuating the moist warm air to prevent water condensing and wetting down the bee cluster.

Techniques for dealing with this moisture vary enormously, and the technique is less important than consistent practice. The techniques can be divided into two principal areas: (1) removing the moist air from the hive and, (2) capturing the moisture inside the hive so it cannot condense and drip down on the bees.

The moist air can be removed from the hive by:

- propping up one side of the outer cover by an inch with a stone or a piece of wood
- making one or two one-inch cuts in the outer rim of the inner cover
- drilling a one-inch hole in the top hive body, just above one of the handholds.

The ventilation can be captured within the hive by:

- a thick wad of cotton above the inner cover and the outer cover
- with a burlap bag partially filled with loose straw

Personally, I provide a means for the warm moist air to escape the hive. When considering how to prevent moisture within your hive; *do not be afraid of chilling your bees!* Cold does not kill bees; moisture will *always* kill them.

Producing comb honey with your bees will ensure that you become a real beekeeper and will minimize your equipment investment while maximizing your monetary return. By becoming a real beekeeper, you will observe and learn much of the complex behavior that makes bees so fascinating and essential and, by proxy, you'll learn much about nature's bounty in the area where you live. **BC**

Lloyd Spear is a sideline beekeeper and the owner/operator of Ross Rounds.

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James E. Tew

Bee Culture's Beeyard

Losing One (or Two) Of The Litter

What to say?

Having sat here for a few minutes looking at my nearly blank computer screen, I still am not certain what I should say to you. Bluntly-stated, an old familiar enemy, American Foulbrood (AFB), has made yet another appearance in the *Bee Culture* Yard and took out one of my prime colonies.

An Aside with a Purpose.

Several weeks ago, I sat though a seminar in which a USDA expert discussed the arrival and establishment of the Gypsy Moth in my Wooster, Ohio, area. As he spoke, he described a scenario that was completely unacceptable to me. Most hardwoods, such as oaks and ash, would occasionally be defoliated – some years worse than others – and short of aerial spray programs, there was little to nothing we could do about it. I was professionally shocked at the resigned hopelessness of the situation. Most trees could withstand the defoliation in most years, but yes, older stressed trees would be killed by the feeding behavior of the Gypsy moth. We asked all the routine questions and got well-used, memorized answers. Once the moths are in a area, there is no turning back. Learn to live with them.

Like a sharp slap, I was forced to realize that I, and many others like me, have done this to you in beekeeping ways for many years. We routinely give well-rehearsed pat answers to questions you consider to be shocking. "There's no hope of *Varroa* eradication. Learn to live with them." "Short of killing all the bees in the area, there is no way to keep Africanized honey bees out of your apiary area. Sorry." "American foulbrood is a way of beekeeping life. Learn to recognize this disease and treat with Terramycin. Not much else you can do." I didn't do anything wrong when I gave those answers. My information was correct, but I should have been more aware of the shock that the beekeeper was feeling upon hearing the news.

What am I feeling about this New AFB Problem?

Honestly? Nothing much. Am I shocked that I have found AFB in my yard? No. Was I shocked all those years ago, when I for the first time, found AFB in my colonies? I was devastated! I suspect that after piddling with bees for about twenty-seven years, I have seen hundreds of cases of AFB and I expect to see a great many more. AFB in general no longer surprises me, but I am surprised at how quickly this particular hive showed advanced symptoms. For those readers who have been following along during the past few months and have seen pictures of the yard, it was the first colony on the left. It was headed by a one-year old cordovan queen and was a good, productive colony – but obviously susceptible to AFB. You may also recall that another hive in the apiary had a low-

Bee Culture's *Beeyard*

This colony was infected with American Foulbrood

Continued on Next Page

BEEYARD ... Cont. From Pg. 27

level case and I had been treating it since I took on the yard as a project. AFB is still in that colony, but it's a small case and I have constantly monitored its development and provided Terramycin treatments. Is it the disease source for the larger colony? I don't know. Possibly. Was I wrong to leave the low-level case in the yard? Probably, but not necessarily dead wrong. The low level case didn't look serious when I found it and it doesn't look serious now.

However, I am disappointed that this happened to this colony and a bit embarrassed to tell you about it, but I did find it early on. Is that worth some redemption? What would I have done if I had caught it earlier? I would have moved such a serious case out of the yard and either destroyed it or treated it somewhere else. Under similar conditions, what should you have done? I'm not sure. Your personal course of action would depend on many things. We'll talk more about this later in this piece.

How I Disposed of the Hive.

I knocked the colony back down to a single deep with ten new frames of foundation and then shook the diseased bees back onto the foundation. Finally, the bees were put through a Terramycin cycle. Later this year, this hive will be requeened. The infected frames were burned.

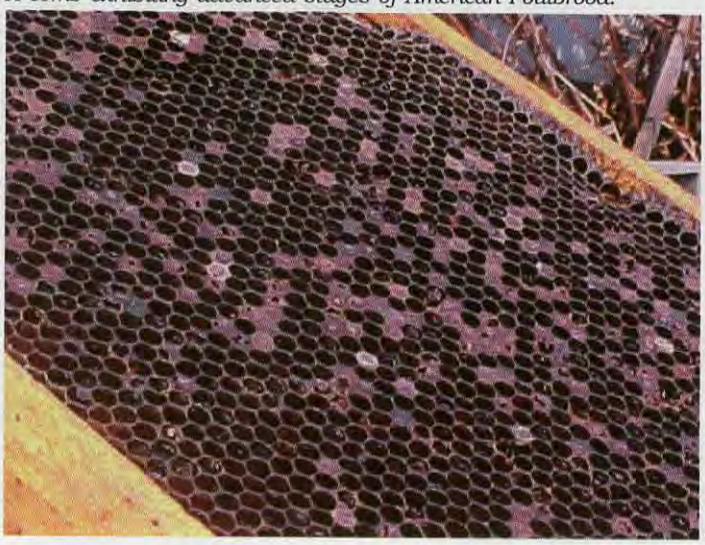
Oddly, I don't universally recommend this shaking procedure as a typical treatment. It will require frequent future observations on my part. The colony may not build up strong enough to survive the winter. The colony was already weakened having a low nurse bee population. Finally, when the disease occurs again, I will immediately suspect that particular colony – no matter where the newly infected colony is found. States have different bee disease laws so some of us would not have this option.

What Would You have Done?

American foulbrood is not always a death sentence for a colony, but it usually is. Suppose you have new equipment and find a few cells of AFB in a colony that you started from packages last April. Are you interested in burning up that new equipment without considering what few alternatives there may be? I can't answer that. People are all different. In order to guess what others should have done if they hypothetically had a case of AFB, I need to ask a few questions?

- *What is your level of beekeeping expertise?*
- *How advanced is the AFB infection?*
- *Are you philosophically opposed to using Terramycin?*
- *Do you have other colonies within the immediate area?*
- *Are your treatment options restricted by various state regulations?*
- *Are you committed to treating a diseased colony?*

A comb exhibiting advanced stages of American Foulbrood.



What is your level of beekeeping expertise? If you have only been keeping bees for one to three years, I would not take chances tinkering with AFB. However, if you have more experience and are confident that you can recognize the disease, (and your State allows it), you may consider other alternatives.

How Advanced is the Infection? If there are only a few cells, (5-20 or so), this case is very light and ***may*** clear up. You could destroy those few cells or simply destroy the entire frame. You should closely watch this colony. It is a likely candidate for continued infections.

Do you use Terramycin? Terramycin does not "cure" American Foulbrood, but only masks it. In light cases, it may give the house bees enough of a reprieve that they have a chance to clear up the disease, but that possibility depends on the hygienic nature of the particular bees. Terramycin is an effective tool to use, but it is an antibiotic and should not be used when honey for human consumption is being produced. Though Terramycin is widely used in the beekeeping industry, it should never be used to mask a serious case of AFB. Always follow label instructions.

Many people are opposed to using drugs such as Terramycin in the hive and choose to use the few alternative procedures available to them for AFB control. Such procedures usually require destroying the bees and much of the equipment and using disease-resistant queens. Though harsher on the bees, these procedures result in a honey crop produced by untreated bees and should have absolutely no drug residue. If you have controlled AFB without using Terramycin or rampant burning, would you contact me at the address at the end of this article telling me how you did it? Others want to know about your techniques.

Are There Other Colonies in the Yard? It is important to know how many other colonies are in the yard. AFB is contagious, but all colonies are not always infected. I certainly would not undertake major colony manipulations with a diseased hive in the presence of other colonies and never, never let a diseased colony

die and be robbed by its neighbors. However, if the case is light and Terramycin treatments are being made, leaving the convalescing colony is place may not be an unacceptable idea.

What are Your State Regulations? At all times, follow your state honey bee regulations. Some states have regulations more restrictive than others, but they are always the law. Changing state bee regulations is long and contorted, but it does happen occasionally.

Are You Committed to Treating a Diseased Colony? If you are not completely committed to long-term treatment and management of a diseased colony, don't even start the process. Failed best intentions only make you a bad beekeeper to your beekeeping neighbors.

The Best Control Agent

It seems wasteful. It requires that you take a loss. It's disappointing, but diseased colony destruction by fire is still the surest method of AFB control. Though I don't like to burn, when we find AFB anywhere in our university bees, there is a fire shortly thereafter. Sometimes it's a small fire while other times, the fire can be disconcertingly large. Burning does not mean you won't get AFB again, but it does mean that future infections should start small so you should be able control and manage the disease when it comes up again.

If You Could Choose Your Poison...

I'm not lethargic about AFB. I do respect it and I never leave it unattended, but I have long since been unable to fly into a raging panic every time it turns up. It's an old familiar enemy. I will never truly defeat it, but will always be one step in front or behind it.

The best thing that ever happened to American foulbrood was Varroa mites (Well, maybe briefly Tracheal mites.). We have never come close to conclusively defeating AFB, but the excitement and glamour of a vicious new pest – *Varroa* – left AFB in the shade. AFB is every bit the monster it ever was. Only Terramycin separates us from chronic AFB infections. With *Varroa*, you get a nasty, dramatic kill, but honey and equipment are readily reusable. Get AFB and you have a mess three tiers deep: (1) Dead and dying bees, (2) contaminated honey and (3) practically useless hive equipment. American foulbrood may be an old, familiar enemy, but that familiarity should not foster laxness while our concerns are directed toward Varroa. Be assured that American foulbrood will rise to fight another day. BC

Surefire American Foulbrood control.

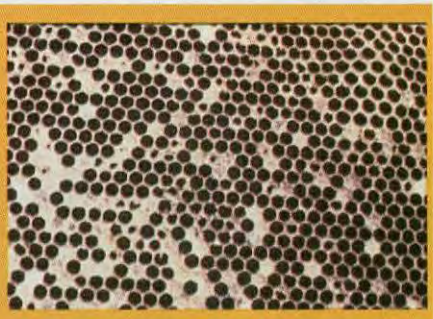
Dr. James E. Tew, State Specialist, Beekeeping, The Ohio State University, Wooster, OH 44691, 330.263.3684, Tew.1@osu.edu, http://www2.oardc.ohio-state.edu/agnic/bee/, http://www2.oardc.ohio-state.edu/beelab/

Before becoming adept at finding AFB in your colonies you should understand how the disease attacks a colony, and the symptoms that result.

AFB is a bacteria. Part of its life cycle is spent as a spore, which is dormant but alive (think of a seed from a plant). When the spore is moved to a hospitable environment it breaks dormancy and begins to grow, like that seed in warm moist earth. For AFB that environment is in the gut of a one to four-day-old honey bee larva.

If enough spores are in a larva's gut, the bacteria spread in that larva through the gut wall. The disease spreads within the larva which usually dies upright (rather than still coiled on the cell's bottom) and usually after the cell has been capped.

Typical pre-cap symptoms include the color of the larva which turns from its normal pearly white to dark brown. If the larva dies before capping, or you suspect a dead larva under a cap, the 'rope' test is a good field ID. Insert a wood match or twig into the cell and twist it several times. Slowly withdraw the stick and the now-adhering larval remains will 'rope out' about 2.5 cm (an inch), then snap back.



When larva die in capped cells the cell cap does not remain slightly convex, but sinks. Nurse bees often try to uncap and remove the larva, thus leaving a 'punctured' look to the cap. This is one very distinguishing feature to look for.

If the disease has progressed the dead larva will dry down and form a 'scale' along one side of the cell. The scale adheres tightly to the cell and bees cannot remove it. A single scale is loaded with millions of spores, 35 of which are needed to start the disease again.

$ELLING HONEY $UCCE$$FULLY

Ann Harman

"You get HOW much for your honey? Impossible . . ." I would not be able to sell one jar if I charged that much!" I hear those words so many times from beekeepers. Yet I know beekeepers who are very successful at selling their honey, not only covering their costs but making a nice profit – and their honey sells very well indeed.

Are you getting at least $3 per pound in a jar no matter where you sell it? Perhaps a bit lower – but not much – by the case. If not, do you have a reason? A good reason. Have you raised your price within the last three years? Or is your price the same as it was five years ago? Or even 10 years ago? Think back now and be honest. Special honeys, those available only in short supply or considered exotic, should bring a higher price than your local honey.

I keep hearing about how good the economy is and how low the unemployment rate is. Spending is at an all-time high. Beekeepers need to consider their price for honey in the context of today, not some years in the past. Certainly we all grumble at prices. I think that is in the same category as the army grumbling about food. Someone once said when the soldiers stop complaining about the food, watch out! (I never knew exactly what somebody should watch out for, but ...).

I was talking to a beekeeper just recently. He commented that he gets $3 per pound jar for his local honey and he has no trouble selling it. He also commented that another beekeeper was selling his honey at the same location, at the same time, at $2.50 per pound. This particular beekeeper, the one with the cheaper honey, has been complaining that his honey does not sell well. We will take a look at the problems with his presentation at the market at a later time.

Perhaps our concept of price is in how we view a situation. Our view as honey producers may be totally different from that of the customer. So first, let us look at how customers view our product, honey.

Research into the purchasers of honey has shown that honey consumers view honey as a wholesome, natural product. It tastes good. Honey is pure and healthy. Honey is a quality product. I am sure you have met customers who have said that honey is better for you than sugar. Many people like the flavor of honey and consider sugar tasteless. Consumers see honey as beneficial for various purposes. So it is easy to see that your customers consider honey as something special but useful. You probably have some customers who state that your honey tastes better than any other honey. Don't be surprised when someone tells you that he/she doesn't like honey. Those who dislike honey are in the minority, thank goodness.

In general, in people's minds, price reflects quality. The higher the price, the better the quality. After all, which do you think will give you better service – better quality –, a $2.98 T-shirt or a $12 one? There are even those who will spend $45 for a "designer name." They are also the ones who are looking for something really special, even with honey.

You are a consumer – not of honey – but of many other things. A good exercise for you is to think about your purchases for the next month and how you are viewing the cost of items. I am talking not only about food, but about other items you may be buying. How about some paint for the house? You are going to spend quite a bit of time scraping, sanding, patching and finally painting. What is your approach to buying the can of paint? Now your socks have holes in critical places and the only good one left has lost its mate. What to do? Think about your approach to buying socks. Have you ever chosen a store "because it has good quality" or avoided one "because the stuff there is cheap – doesn't last." Now you can better appreciate the customer who has come to buy your honey.

Maybe we should look briefly at what conveys the image of quality for your honey. In that way we can find places for improvement in presentation. We also need to investigate what sells in different situations. Having more than one type of container can work wonders as long as you are giving customers what they want.

I certainly hope that your honey is well-strained with no particles of wax floating on top and certainly no bee legs or other mystery items. Honey that is starting to crystallize or has crystallized and looks weird should not be presented to a customer. It might crystallize after it is bought, but educate the customer about the meaning of that – that is, it occurs naturally and it means that the honey has not been overheated in processing. The information can be presented to the customer with an appropriate label and, if possible, you can reinforce that information if you have a chance to speak with customers.

Are your containers and lids new and clean? The plastic lids are much better than the metal ones which show nicks and dings. Honey that has gotten on the outside threads of the container will slowly seep down the sides making the jar sticky and even staining the label. Write yourself a huge note to post in your honey house – NO STICKY! If there is one thing that conveys "messy" instead of "quality" it is sticky containers.

Now take a good, hard look at

Continued on Next Page

HONEY ... Cont. From Pg. 31

your label. Your label is the selling point second after quality honey. The label can be considered the "clothes" your honey wears. Therefore, the label needs to convey that the contents have quality. The label should be appropriate in size and shape to the container you are using, even if it means having two or more different shapes of labels. The label also needs to be an appropriate style for the year 2000. So make sure it is up-to-date, uncluttered and dignified.

What container to choose is going to take some work on your part. Today there is a wonderful wide choice in containers . . . glass, plastic, queenline style, round, hex, bears, cylinders, completely transparent, translucent, mugs and more plus size choices in all these styles. What works in one sales location may not be suitable for another. One beekeeper I know found that at one of his sales locations the one-pound glass jar was not selling as well as he hoped. He then started packing honey in pints, with an appropriate label. For reasons he has not figured out, the pints sell! He has a tough time keeping up with the demand. Furthermore, customers are willing to pay proportionally more for a pint than for a one-pound jar. His pints sell for $5. That works out to $3.55 per pound.

Wait, you may say, this must be in an affluent area. No, this particular market is frequented by ordinary people of average income. They happen to feel his honey is of good quality and therefore a good value. Could he ask $6 to $7 a pint for a specialty honey? Certainly, and it would sell. That price difference indicates to the customer that the more costly honey is unusual and desirable.

In farmer's markets and craft fairs, as well as at roadside stands, charging an even number of dollars helps sales. Customers are happy to hand you a $5 bill and not have to wait for change. So go up with your price, not down.

States have different regulations concerning sales tax. Some states have sales tax; some do not. In some states you have to specify the price and the tax separately; in others you do not. Some have tax on food; some do not. You will have to check on your state's sales tax rulings to see what you need to do. Keep the whole dollar amount in mind, however. Pennies are such a nuisance.

Now here is a curious piece of information. It came from a man who, for many years, owned an old-fashioned hardware store. His advice was if you wish to charge fractions of dollars, make that fraction 75 cents, that is, $3.75, $5.75. I suppose if the fraction is small the customer feels he has to find the change somewhere in his pockets. But if it is 75 cents he can give the whole dollar and get 25 cents change back. Try it. It seems to work. Besides, it saves having to cope with nickels and dimes.

There is another point about pricing for a profit. Who is actually paying for the jar, lid and label? Many beekeepers seem to feel they are paying for the container. No, the customer needs to pay for that. You buy a jar of mayonnaise at the grocery store. Who is paying for that jar, lid and label? You are. The mayonnaise company is smart enough to figure out the price for the contents and then adds the cost of the container. You do not see the breakdown for costs when you buy that jar of mayonnaise, but you go ahead and buy it. The mayonnaise company is not losing money.

Often beekeepers will look at the final retail price in a shop and then start figuring out what to charge based on that retail price. Somehow this is thinking backwards. For example, you might see a one-pound jar of honey selling for $9 in an upscale souvenir shop. Ha! you think, I'll ask $7 for my honey. Then you find the shop owner does not want your honey. A shopkeeper, such as for gift shop or souvenir shop, knows exactly what can be sold for what price. The markup can be very high. But that is what keeps certain types of shops in business.

Do not concern yourself with what your honey eventually sells for (retail) in certain shops. Let the shopkeeper calculate that out. Discuss (wholesale-by-the-case) your price – already decided – with the shopkeeper, but don't discuss the eventual retail price in that shop. And you need to discuss eventual sales on your part – will the shop need many cases, or few; frequently, or not so often? Be willing to adjust your price, but do not sell below your bottom line.

Hobby beekeepers generally figure their own labor cost as $0. This may be realistic, but some other costs are important to keep in mind. Sit down and start listing your costs: containers, lids and labels come to mind at first. Have you included delivery into your costs? There is a big difference between dropping off a couple of cases on your way to the hardware store and driving 150 miles round trip to deliver a couple of cases. That (now expensive) gasoline just reduced your price per jar. Miscellaneous expenses are frequently overlooked. You have the receipt for the containers you just bought. Are there delivery charges and sales tax? Suppose you picked up the containers. You need to figure your travel costs there, too. You may have a short drive to a farmer's market or craft fair. However, if there is a charge for table space, that needs to be added to your costs. Be picky – look for "hidden costs." They are hidden because you did not think of them. A few cents here and there can add up to the fact that you should be selling your honey for $3.75 a pound.

Customers are used to paying proportionately more for something in a smaller size. Let us say your one-pound jar sells for $3. If you keep the same cost per ounce, a 12-ounce bear would be $2.25 and an 8-ounce jar would be $1.50. No! Make that bear $2.50 or $2.75 and the 8-ounce jar at least $2. Take a walk through a supermarket where per-unit prices are posted. Compare different sizes of the same product. Be aware that there are some glitches in this comparison. Some products actually do not offer a bargain for bigger sizes. But your non-shopping trip will still be worthwhile.

Be confident that your honey is the best; its quality is unsurpassed; it is what the consumer wants. Then go ahead and charge a realistic price for that product. Remember, only the bees can make honey, and they don't get paid. You, the beekeeper, are the one who presents this delicacy to the consumer. You deserve to be paid for that service. BC

Ann Harman is a sideline beekeeper and international marketing consultant.

IN HOUSE HIVE

L. Dupuis

I know that glass-enclosed observation hives are no novelty, but I know that my son's adaptation is one of a kind. After giving the subject much thought, he designed his own observation hive to become part of the décor in his sunny dining room. This hive was not only for the pleasure and interest that it would engender, but it also provided a method for him to closely watch the activities of his apiary without making constant trips to his outside hives.

Even though he moved away from New England, he still possessed his entire supply of Yankee ingenuity – a quality known the world over, and so he proceeded to construct his own idea of an observation hive. Instead of a slim frame encased in two sheets of glass, he used a shallow super. In this, he placed frames in a vertical fashion. They were not inserted hanging from top to bottom, but laid one on top of the other. This created a lower chamber to contain a colony of bees, and the second frame fitted on top became the honey chamber. A hole drilled in one side of the super corresponded with a hole through the wall of the house. A piece of PVC pipe was slid into position from the hive to the outside world, providing a passageway for the bee colony, and the unit was placed on a shelf fastened to the wall of the dining room. A queen and bees were introduced into the structure and busily and happily went to work. The bees had access to the outside world and to an ample supply of pollen and water. They hurried about, serving their queen and raising their brood in true apiary employment. The second frame soon filled with honey and was capped over. Bees and their activities were easily observed and enjoyed. When the hive needed attention, a cap was used to cover the end of the PVC passageway and the entire unit moved to any location, inside or out. Because these bees were so happy and content, the second section of the observation hive was quickly filled with golden honey.

Proceeding to Step Two: The unit was removed to a working area, the honey frames removed, spun out and replaced, providing a yield of 10 pounds of honey. All this activity, as related to me, provided much interest and entertainment. I have been mother to this second-generation beekeeper for many years, and I should know him well enough to guard my tongue. Not so! When he informed me of the 10-pound harvest, I mused, "If you could only devise some way of leaving the unit in place and fitting it with a spigot you could have a constant supply of ready honey for use in the household."

Bite your tongue, mother! When he decides to act on this flight of fantasy, I'll inform you of the design. It is sure to be one of the great inventions of our new century. The day will come when this displaced Yankee son of mine will work out a plan, and the Kitchen Honey Unit will be an integral part of every well-ordered kitchen, taking its place beside the blender, mixer, bread machine and all the necessary implements in an efficient, functional cooking area.

DAVID MORRIS MUSES

As most of you know, if you put a group of beekeepers in a room, pretty soon you won't be able to conduct any business unless you keep a tight reign on things. At a recent business meeting at my house, the following, decidedly non-business, stories were told.

On one occasion, a couple came to buy a hive from one of the fellows. They were excited about "getting back to nature." Well, our Friend got the distinct impression that these folks had not considered the possibility that they might get stung. So he forthrightly asked, "Do you realize you're going to get stung doing this?" The husband responded, "Can you arrange it so that only she gets stung?"

Then there's the story about a fellow who claimed bees just did not bother him. He assisted in cutting down a bee tree. "No thanks, I don't need a veil" he said. "They won't bother me." Well, they cut down the tree and split it open with a chain saw. The bees never bothered him. Toward the end, he asked to borrow a hive tool. He began to gently tap the fallen tree. "I'm calling the bees," he explained. Sure enough, the bees began to march right up to where he was tapping. "Now I don't know if he was really doing something special, or if he just happened to see where the queen landed and was going to have some fun bamboozling us, but it was quite a show."

My favorite is Bill Miller's inauguration of his eight-year-old daughter as a REAL beekeeper. She had been helping him in his beekeeping, but finally she received her very own hive of bees. After they installed a package of bees into HER hive and closed the cover, she turned to Dad and said in her serious eight-year-old voice, "Daddy, now that I'm a beekeeper like you, when I get stung, can I talk like you, too?"

Stories like these make you just love being a beekeeper.

MIGNONETTE

B.A. Stringer

The fragrant flowers of Mignonette, *Reseda odorata*, are a source of both nectar and pollen for honey bees. Mignonette was a popular favorite for some years in the 1880s, during which time many plots were sown and it was much discussed in the bee magazines.

The garden mignonette, native to Egypt, was brought to America by way of Europe. The genus contains about 55 species, of which four have been introduced into the United States and grow in waste places. The plants are Summer annuals which grow best in rich soil with regular watering. The dense spikes of small greenish flowers become more open as the flowers mature, releasing the delightful scent associated with the flowers. Forms of the plant with longer, more colorful flower spikes are less fragrant than *Reseda odorata*. The botanical name of the plant is derived from the Latin *resedo*, to heal, as the plant was once used as a remedy for bruises. Mignonette, pronounced "minyonET," gets its common name from the French word for *dainty*, referring to the flowers.

Julius Hoffman, inventor of the Hoffman brood frame, kept a colony of bees on a shelf outside his bedroom window during the four years he was in London. He said that between 1862 and 1866, the bees "gathered considerable honey from mignonette, which grew in the small gardens of the city."

In 1866, Moses Quinby wrote in his book *Mysteries of Beekeeping Explained*, "It is true that the Hollyhock, Mallows, Mignonette and many others yield honey, but of small account. A person who expects to have his hives filled from such a source will be very likely to be disappointed, unless his number of stocks is very limited."

In 1868, J.M. Thorburg and Company of New York advertised mignonette and other bee plants for sale. One California bee man became so enthusiastic that he was certain "an acre would provide sufficient pasture for 100 colonies of bees."

In late 1878, *Gleanings in Bee Culture* published reports of mignonette "humming with bees for months; and, as they work on it all day, it will prove valuable for keeping them busy during the Fall months."

However, Professor Cook tested mignonette at his honey plant gardens at Michigan Agricultural College, with disappointing results. He reported, later in 1878, "I expected great things of this plant, as the bee papers were very high in their praise of its qualities . . . . (The bees) did not seem to take to it very readily, for on every occasion that I made observations, I found very few bees present. With us it proved a failure. Others have corroborated this statement . . . . It is rather a delicate plant for this climate."

Further detractors reported failures with mignonette, particularly with its poor germination. Mr. A. Fradenburg of Port Washington, Ohio, wrote to *Gleanings* in 1880 with his experiences in growing mignonette. "I became pretty thoroughly disgusted with mignonette last season. I planted a piece of the very finest of ground, about 150 square feet, but I had to plant it over three times . . . . I have found the seed the very hardest to germinate of anything I have ever tried . . . sometimes the bees seemed to work on it quite fairly, and at others scarcely at all." Mr. Fradenburg analyzed his costs with dissatisfaction: "My patch last season cost me, in ground, rent, seed and cultivation, at least $40, and I do not think I got $5 benefit from it."

The editors agreed with Mr. Fradenburg, commenting that their experience was similar. The plants did poorly except for some small patches on very deep, fine soil. One reader from New Jersey, who must have had such conditions for his planting, wrote in 1882 that his mignonette grew luxuriantly and yielded lots of honey.

Despite the disappointing reviews, in 1882 an enquiry from A. Montrevil of Walkerville, Ontario, seems to indicate that mignonette still had a popular following: "What can I plant in my yard that my bees can feed on? I want something that will bloom the same season sown and be ornamental at the same time." The editors suggested, "You can plant mammoth mignonette, sweet basil and many other annuals with good ornamental effect and remunerative profit."

In the 1901 *ABC of Bee Culture*, Mr. A.I. Root gave the following advice to beekeepers. "To beginners I would say: Plant and sow all you can that will be sure to pay aside from the honey crop . . . but beware of investing much in seeds that are for plants producing nothing of value except honey . . . . Catnip, Mignonette, etc., I would at present handle rather sparingly. It should be borne in mind that we can hardly test a plant unless we have one or more acres of it in bloom, and that small patches do little more than demonstrate that the blossoms contain some honey, giving us very little clue to either quantity or quality."

Referring to Mignonette, Harvey Lovell states in his book *Honey Plants of North America* (1926), "If more common they would be valuable." He noted that, in California, mignonette was reportedly "visited by thousands of bees . . . a valuable honey plant giving a great abundance of flowers and a very long period of bloom."

Frank Pellett, reviewing mignonette in 1938, stated "Since such yields as would justify the planting of mignonette for bee pasture failed to materialize, it remained only a subject of curiosity to the industry." Extravagant claims have been made for this plant, but Pellett says, "Perhaps it has never been given a fair test on a sufficiently large scale to demonstrate fully its value." BC

B.A. Stringer is a freelance writer who lives near Blodgett, Oregon.

REBAR HIVESTAND

Benny Miller

Having been a hobby beekeeper for many years, there is one piece of beekeeping equipment that has been a constant source of dissatisfaction for me, and that is the hive stand. And judging from the numerous articles in *Bee Culture* about hive stands, it appears that many beekeepers have the same problem.

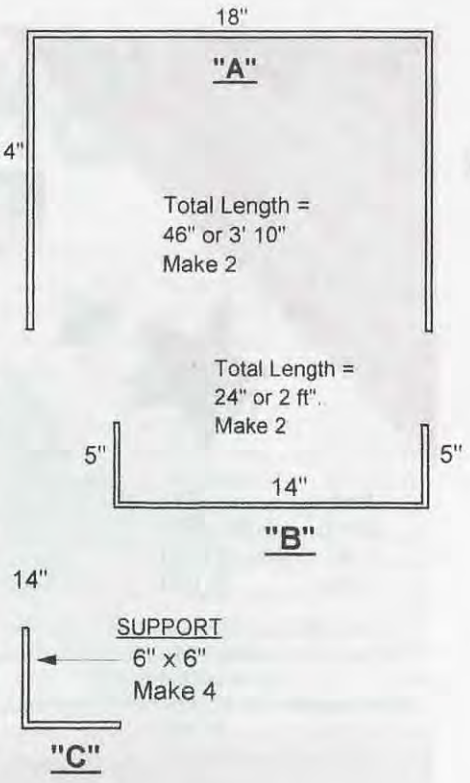
In designing this stand, I have tried to address most of the problems. It is cheap, light, easy to store and transport, makes grass control easy and virtually eliminates nonflying insects from entering the hive.

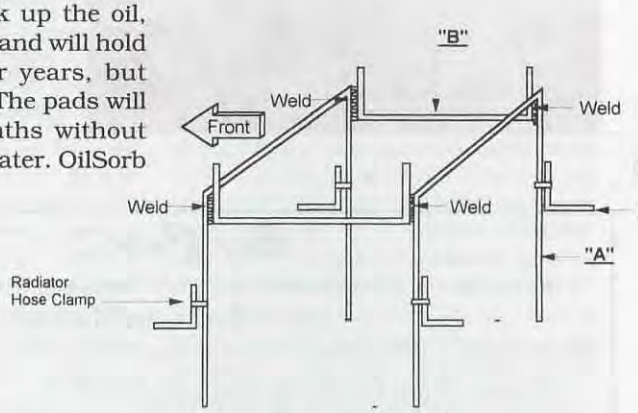
The stand is constructed entirely of ½-inch concrete reinforcement steel or "rebar." It requires 15 feet eight inches of rebar to build. You need an acetylene torch to bend the bar and a welding machine to do the welding. If you don't have this equipment, check your local VoTech welding instructor. Many times they will do projects such as this as a class project at no charge.

Construction is very simple, and the diagram should be self-explanatory. Cut the parts to length and heat to bend. I use a skill saw with a metal cutting blade to make the cuts. It makes a clean cut and is very quick. Square everything up, clamp together and weld. Note that parts B, the side pieces, protrude above the main legs, part A, about two inches. It's probably not necessary to do this, but I use this protrusion to hammer on when driving the rebar stand into the ground.

The rebar stand, as installed, will support a nuc or a single, full-sized hive body. If your soil is fairly soft, there is a limit to how much weight the rebar stand will take without additional support. When the hive begins to get heavy with honey, the legs may start sinking into the ground. Part C on the drawing will prevent this. It is simply a one-foot piece of rebar bent to a 90° angle. Clamp this support to the leg with a radiator hose clamp with the horizontal part of the support flat on the ground. The rebar stand will support 215 pounds. I have stood on the bottomboard and bounced up and down (I weigh 215 pounds) with absolutely no sinking of the legs. As an added bonus, with these adjustable supports, it's feasible to place your hives on a hillside or on uneven ground and still have everything level.

All sorts of insects used to invade my hives – fire ants, black sugar ants, roaches and many other types of crawling insects. Note the white objects secured to the legs of the stand. Therein lies the secret of insect control. This is a product called OilSorb. OilSorb was developed to pick up oil and petroleum products off of water such as in oil spills. When it comes in contact with oil, it will immediately soak up the oil, just as a sponge would, and will hold the oil in its fibers for years, but water will not touch it. The pads will float on water for months without absorbing one drop of water. OilSorb is manufactured in 18-inch by 18-inch pads about 1/8-inch thick. I cut strips three inches by six inches and secure these pieces to each leg of the rebar stand with plastic tie wraps. I then mix used motor oil 50-50 with diesel fuel and pour this mixture on the pads until they're completely saturated. Insects will not crawl over this barrier. BC





Rebar stand with hive installed. Note that in this view, the "ELL" shaped support legs are off of the ground. They should be resting on the ground for maximum support.

New Jersey Winner

Dewey Caron

Wolfgang Kuehn won the New Jersey "super bowl" again – the fourth consecutive year he garnered the Best of Show award at their annual Honey Show. This year, the competitive show was held at Trump Plaza, an Atlantic City hotel and casino. In previous years the show and display took place in the rotunda of the capitol building in Trenton, the state capital. Wolfgang and his friend and mentor Gerd Boehnke have their names on a permanent display plaque listing Best of Show winners – Wolfgang's name alone occurs the last four years.

Wolfgang Kuehn is a young (65) beekeeper. He immigrated to the United States from his native Germany in 1961 to work in the tool and die industry. His sponsor was former German neighbor Gerd Boehnke. Gerd, a beekeeper, convinced his friend Wolfgang to start bees ("he wore me down," according to Keuhn) when he turned 50. Wolfgang also credits his late wife for starting bees to "get out of the house" according to Wolfgang.

At the recent New Jersey show, Wolfgang's cremed honey entry was one of his Best of Division winners. His entry was a very smooth-textured and pleasant-tasting product. It was a popular item at the state beekeepers' auction of the prize winners. Wolfgang sells more cremed honey with fruit. He says the cinnamon-flavored cremed honey is the most popular. It sells well with Europeans, who are more familiar with this form of honey.

Like everything else Wolfgang prepares from his bees, his mead is top quality. He won Best of Division with his semi-sweet mead. He usually makes 30 to 50 gallons of mean each harvest, which he gives away. Although "everyone has a different taste" in wines, Wolfgang learned his wine savvy while co-managing a restaurant in Germany with a friend before he came to the United States. He prefers his mead with fruit additions. He uses an attractive mead label, and the distinctive label he affixes to his honey jars is of his own design.

He is the acknowledged New Jersey super champion of honey shows.

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MEAD

Mary & Bill Weaver

Honey wine, or mead, is an ancient alcoholic beverage that has never become widely popular. As a panel of taste testers at Cornell University put it, the taste of mead as it has been traditionally made is "harsh, bitter, and astringent." The harsh, unpleasant taste is the result of boiling the honey solution to remove the proteins that would otherwise make a cloudy, rather than clear, beverage.

Brother Adam, who experimented extensively with mead, advised mead makers to wait to taste their mead for one year, to wait to drink it for three years (the harshness from boiling goes away after three years, Bob Kime told us), and to wait to sell it for seven years. But who could afford to hold their mead for seven years before putting it up for sale?

Bob Kime with ceramic & hollow fiber ultrafiltration filters showing interiors.

All that has changed, as a result of a new process Robert Kime, a food scientist at the Food Science Department of NY State (Agriculture Experiment Station) Geneva, New York, developed, which produces mead with a far more pleasing taste. Only 10 percent of a panel of taste testers at Cornell University gave a "good" rating to mead made the traditional way. But 90 percent of the taste testers gave a "good" rating to mead made by Kime's process, describing its flavor as "clean" and "smooth."

In developing his process, Bob Kime was definitely the right man in the right place at the right time. He was the right man because, in his 20 years of beekeeping, he had developed a special interest in honey products and in the problems of beekeepers.

The timing was right because Bob in his work at Cornell, happened to be working on ultrafiltration as a method to produce crystal clear apple juice. The story begins at a meeting of New York beekeepers several years ago. Bob is a recognized wine expert, and a fellow commercial beekeeper and friend hunted him up at the meeting to ask some questions about mead making.

This beekeeper produced his mead by boiling, in the time-honored manner. He told Bob, "I have to boil my honey solution for nearly an hour. It takes 10 hours to get my 500 gallon mead tank to a boil. Then I boil it for an hour. Then it takes about 10 hours to cool it down. Is all this heat ruining the taste of my mead?"

"I almost fainted," said Bob. "Mead is diluted honey, and all that heat and boiling would ruin honey, so it would probably ruin mead."

So Bob told his friend to bring some of his honey solution to his lab at Cornell. "I have a flash heater," he told his friend. "I can take solutions from room temperature to 220°F and cool them back to 40° in less than a minute. Let's see how that affects the flavor."

The flash heater did make the taste more palatable than prolonged boiling did, but even with this brief heating to 220°, the honey solution emerged noticeably darker, and with that definite harsh, astringent taste.

Then Bob had a flash of insight. "I was working with ultrafiltration at the time, to remove proteins from apple juice that created a haze problem in the bottled juice. So I said, "Let's try to take the protein out of the mead with the same ultrafiltration machines." Ultrafiltration uses no heat at all. Throughout the process, the liquid stays at room temperature."

The resulting mead was given high marks for flavor by a panel of taste testers, and a new way of making mead was born. "It proved instantly, more or less, that boiling ruins the taste of honey wine," said Bob. "I have at least 10 companies using ultrafiltration now," he continued, "and will probably have 10 more in the next two years. I could have patented the process, but Cornell didn't realize the great potential, which is lucky for anyone who wants to use the process. I've already had requests for information from 50 foreign countries on this discovery, and on other honey research," he commented.

Mead makers have known for hundreds of years, Bob told us, that boiling was required to produce sparkling, clear honey wine. "Without boiling, you have terrible haze problems," he said. Then, because boiling produces a harsh, astringent taste, mead makers made their mead with about 20% sugar, to try to cover up the astringency. "You won't sell a lot of honey wine with 20% sugar," said Bob. "It's terribly, terribly sweet."

Even with boiling, there are some other problems in mead making. The boiled honey solution will ferment for from a month to a year. "I've had mead in my kitchen that fermented for a year," said Bob. Also some fermentations won't even start or sometimes just stop at a very low alcohol level.

"I suspect protein is a yeast inhibitor and inhibits fermentation," he continued. "Also, honey's natural hydrogen peroxide content may be slowing fermentation, along with low pH and high acid content."

If the honey solution is ultrafiltered, on the other hand, it can be finished fermenting in 10 days, and actually starts to self-clarify while still fermenting, Bob told us. The resulting mead can be sold immediately, and is superior in flavor, color, and stability to mead made using heat.

Just what does ultrafiltration do, and how does it work?

"Ultrafiltration," said Bob, "is just running the honey solution through a very, very fine filter that filters to .01 microns." Many honey packers run their honey through a diatomaceous earth filter, filtering to about one micron. This is not fine enough for mead making. Ultrafiltration is necessary to filter out and remove proteins in honey that cause the haze problems.

A protein is a big molecule, the largest compound in honey, and so it is relatively easy to filter out. There are actually about six different proteins in honey. Three come from the nectar, and three are added by the honey bee. These last three are enzymes, which change the plant starches and sucrose in the nectar to glucose.

The total amount of protein in honey is very small, only 0.2%. (Darker honey contains more protein than lighter honey.) But that small amount of protein is enough to create significant haze problems in honey wine, unless it is boiled and the protein-containing foam is scooped off, or unless the protein is removed by ultrafiltration.

The protein in honey is amazing, Bob told us, and the residual protein left after honey is ultrafiltered could have important industrial uses, as an antioxidant to prevent darkening in dried fruits, for example, and as a clarifying agent in fruit juices and wines.

Bob has patents on both uses. "When you ultrafilter honey," Bob said, "if you start with 100 gallons of honey solution, you'll end up with a couple gallons of sludge, which is the protein of honey." The meaderies Bob works with typically run 2,000 gallon batches, so they'll get quite a bit of leftover protein. Right now that protein is just getting thrown away. Research needs to be done on the subject, but that protein could be a valuable resource.

"If you would want to clarify fruit juice or wine, for example, but don't want to add sugar, the protein from ultrafiltering the honey, if added in the correct amounts, would do the trick," said Bob.

In Japan, about half the honey is ultrafiltered, for use in fruit drinks and bottle teas. The honey must be ultrafiltered for this purpose because, as with mead, if the honey were not ultrafiltered to remove the protein, the proteins would coagulate with the tannins while on the shelf and produce a haze problem.

The Japanese, however, take ultrafiltration far beyond what Bob has done in making mead. Using several more processes in addition to ultrafiltration, they also remove the calcium, magnesium, iron, and trace minerals, as well as the color. There is some debate over whether the resulting product should be referred to as honey.

Bob's method of ultrafiltration leaves the color of the honey, its minerals, and its original flavor intact. Bob had hoped to perhaps be able, with ultrafiltration, to remove the dark color and the harsher taste from baker's grade honey so it could be used for making mead.

The results were disappointing from that standpoint. Run through Bob's ultrafiltration machine, buckwheat honey still looked and tasted like buckwheat honey, and therefore would not produce a top-quality mead. (It is interesting to note, however, that 70% of taste testers like mead made with ultrafiltered buckwheat honey!)

The filter cartridge of the ultrafiltration machine looks like Styrofoam. "You'd swear it was made out of Styrofoam cups," Bob said. The machine circulates the honey solution through tiny tubes at 80 gallons per minute. The sugars can pass through the filter, but the larger protein molecules cannot.

The filter is self cleaning, and virtually lasts forever. Bob has to wash his out occasionally, but has been using the same filter for over a dozen 11 years, and it's still fine. The honey to be ultrafiltered must be in solution. Bob uses a solution of roughly three parts water to one part of honey. And raw honey that has not been previously filtered works best.

With the use of ultrafiltration, mead no longer needs to be a second-rate product, but can take its rightful place in the huge grape and fruit wine market – just think if Gallo started making it.

Bob currently supplies ultrafiltered honey to businesses not desiring to invest in an ultrafiltration machine of their own. (The units are quite pricey at $12,000 to $25,000.)

Since mead making methods have changed very little for thousands of years, Bob says, he feels this discovery will be known as "The Age of Modern Mead Making." BC

Mary & Bill Weaver are freelance writers from PA.

INNER ... Cont. From Pg. 8

small child and they waited patiently until the business at hand was over and the New Business line on the agenda came up. It was his turn.

His reason for attending was to bring to our attention a problem with American Foulbrood in his county. There were, it seems a few beekeepers that tended to ignore the problem and were serving as a continual reservoir for the disease. And it was spreading.

Now our visitor is still pretty new in the game and wasn't aware yet of all the rules, the regulations, and the resignation associated with AFB. Not only in Ohio, but in beekeeping.

Ohio Department of Ag people handle AFB here about as well as anywhere, but the law provides for treatment before burning when AFB is discovered, and burning is way, way down on the list.

Ohio's inspectors would rather work with a beekeeper and make all the options available known – treat, treat again, treat again, and then, only as a last resort . . . burn. It's not their choice, this plan, but it's the law here.

This procedure had been explained to our visitor before the meeting, and to him it is unacceptable. The probability of a careless beekeeper sharing this plague with any and all in the neighborhood was too big. And our visitor, like many beekeepers, is of the opinion that using drugs in a beehive, when other options are available, is absolutely inexcusable. A noble and wise decision. But is it realistic? Or, in this case is it realistic for American Foulbrood. More importantly, should it be realistic?

An exceptionally insightful comment made during the discussion that followed was that 1)the rules and regulations in question were made long enough ago that, 2) the world of beekeeping and honey bees had changed significantly since then. Specifically, when the rules in force now were drawn up one thing was different. Then, honey bees were plentiful and managed just fine on their own in the wild, providing about 50% of the pollination needed at the time. Now, however, honey bees are like milk cows . . . managed. A domestic cow without a dairyman and a barn is hamburger. A honey bee colony without a beekeeper and a manmade hive is just so much wax moth food.

So what are alternatives to medication? Burning, either entire or parts of a colony works. It works well. Irradiation works very well, when you can find it. Gas chambers work well, if you can find one. These last two techniques of course, are for dealing with contaminated equipment, rendering it useful again, without the destruction involved in the use of a match.

But there's an even better way, pretty much (but not completely, thank goodness) ignored by the people who produce the bees that get sick and die. Resistance. Let me repeat that . . . resistance.

Walter Rothenbuhler, here in Ohio, started this movement. It has several followers . . . Rob Page in California, Marla Spivak in Minnesota, Steve Taber in South Carolina and others. They've produced bees that deal with American Foulbrood. That don't die from it. And they've made the stock available to the industry, well, to those who produce queens in the industry.

The technology for selecting for disease resistance has been around for decades. And it has been reintroduced several times. Why then, in a recent issue of this magazine, do only 17% of those who sell queens promote that trait in their bees?

Why? Demand, that's why. If every beekeeper who bought a queen said, "Sure, I'll pay an extra $2 for a colony of bees I don't need to treat" every queen producer would have them. As sure as I sit here.

So. The technology and genetics exist. The production and distribution systems are in place. Foulbrood resistant to TM is running amok. Increasingly beekeepers are clamoring for alternatives to drugs . . . yet fewer than one in five producers are producing bees resistant to Foulbrood because beekeepers in the main, just don't care. And just don't want to pay that $2. No wonder researchers throw up their hands in disgust and despair. Why bother! they say.

The handwriting's on the wall. Users of queens: Now, this Summer, is the time to get smart and start asking for, demanding in fact, genetic stock resistant to American Foulbrood. So you'll need to treat less, or not at all next year.

As for the beekeepers in Ohio, and the Ohio State Beekeepers Association, I hope they're up to that visitor's challenge that night. Everything he wants exists . . . except, perhaps, the willingness to change. Let's hope they can.

•

Other notes of note. The Winter 1999/2000 issue of Apicultural Notes From WSU, put out by Walter Sheppard at Washington State mentions . . . Two new compounds for the control of tracheal mites registered for use in WA. "Protector®" is a mint oil product produced by J.P. Callison of Chehalis, WA. Dr. Sheppard says the material has been shown to be most effective when used in a patty that has mint oil mixed with vegetable oil and sugar. The other compound mentioned was the formic acid based Apicure®.

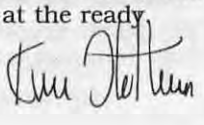
This is the first, I believe, mint oil product registered to control mites. I don't know how effective it is, but that somebody has finally chased this through to the end, and shown it to be effective to someone else's satisfaction is gratifying. We'll find out more when we can.

•

A few months ago we mentioned that congress was investigating the problems small businesses were having with slotting fees in large grocery chains. Some spectacular claims were made, and now the Federal Trade Commission plans to hold a public workshop on slotting. Government intervention, in any industry, is usually not good news. But if the grocery people can't run a clean operation maybe that's what it will take.

•

Now's the time to watch for *Varroa* buildup and get ready for the EAS meeting in Maryland at the end of the month. Until then, keep your smoker lit, your hive tool sharp and your match sticks at the ready.



Questions?

Foundation/Cut Comb

Do you need foundation to produce cut comb honey?

This question came up at a meeting I attended recently. The answer is: Not really, or at least, not much. A tiny strip of foundation, or even just a bead of beeswax, on the bottom of the top bar, will induce the bees to build their comb in the frame. Moreover, frames from which comb honey has been cut can be used again, with no foundation at all, and the bees will be guided by the slight ridge of comb that remains around the edges. This is worth considering, since beeswax, and hence foundation, can contain minute traces of fluvalinate absorbed from Apistan strips.

Evodia Seedlings

Where can I get seeds or seedlings of the Chinese Evodia tree?

This question has come from many readers. Those who have tried to grow this wonderful nectar source from seeds have had little success. For seedlings, which can be transplanted with great success, see classified ads for May or June.

Swarm Behavior

I saw two good-sized swarms issue from the same hive at the same time and cluster on a branch about five feet apart. About 45 minutes later both returned to the parent hive. What was going on?

J.B. Barrett
Gaston, IN

I can't be sure – bees often do strange things – but I suspect these were "after swarms," that is, swarms that come out a day or so after the prime swarm has left with the old queen. Such after swarms usually abscond, however. Another possibility is that they came out when a virgin queen left on her mating flight, then returned to the hive when she did.

Queen Advantage

What are the advantages of Midnight and Caucasian queens? Are they resistant to mites?

Bert Clayton
North Charleston, SC

No bees are, to date, truly resistant to *Varroa*, nor are these races resistant to tracheal mites. Midnights were developed long ago as good honey producers, and many have found that they are.

Avoiding Stings

I have heard that, to minimize the danger of bee stings when out of doors, one should avoid perfumes and brightly colored clothing. Is this true?

I have heard this too, the last time from a physician. It is, of course, nonsense, unless you happen to be very near an apiary. The assumption there is that a honey bee is a vicious animal that will attack if she encounters you, so you should try not to attract them by looking and smelling like a flower. I find this idea pretty funny.

Swarm Races

Are Carniolans more likely to swarm than other races? If so, should I not use them for comb honey? What makes the Yugoslavian Carniolans more resistant to mites?

Bert Clayton
North Charleston, SC

The race of the bees is much less significant than the age of the queen so far as swarming is concerned. First year queens are far less likely to swarm than older ones. Swarm control depends much more on management than on the race of the bees. The Yugoslavian Carniolans have been bred to resist tracheal mires and so show some resistance. They are not resistant to *Varroa*.

Unprovoked Attack

Five minutes after finishing working in my apiary without any problems a warring party of bees came over the six-foot fence and attacked me in large numbers, giving me about a dozen stings. Why would they do that? And why did they wait so long, for an unprovoked attack?

Nancy Bradbury
Denver, CO

This is indeed unusual, and I don't know the answer. Sometimes, when one bee makes a sting, it provokes others to do the same, so perhaps one bee stung you or your clothing belatedly, for whatever reason, and this brought on the mass attack.

Air Traffic Control

I have read that you can guide an airborne swarm to a low branch by directing sunlight into it with a mirror. Does this really work?

Bert Clayton
North Charleston, SC

I have never heard of this, and I doubt very much that it would work at all. I suspect that the discoverer of this system was dealing with a swarm that was about to cluster on a low branch anyway.

Pollen Trap Info

Where can I get information about pollen traps? When to put them on the hive, how long to leave them there, what effect they have on honey production, how to store the pollen, etc.?

Colleen Howe
Friday Harbor, WA

Good information on pollen traps can be obtained by writing to Mr. Lloyd Spear, 4 Leda Lane, Guilderland, NY 12084.

Questions are welcomed. Address: Dr. Richard Taylor, Box 352, Interlaken, New York 14847 enclosing a stamped envelope for response.

Answers!

Richard Taylor

Firestorms, Honey, and Lerps

John Mitchell

When a firestorm roared through Oakland hills neighborhoods in the San Francisco Bay Area almost a decade ago, my childhood home was nearly destroyed. Shortly after, investigators coined the word "firestorm" because the blaze moved with such speed and intensity, it spawned its own powerful winds and other climatic effects. More than 2,500 homes were destroyed, leaving thousands of refugees. Those who didn't move away in despair would spend years rebuilding their lives and battling insurance companies to collect damages. Oakland fire investigators said a major factor in the deadly conflagration, which killed 25 people including a firefighter and a police officer, was the presence of so many eucalyptus trees, nearly a forest canopy on the hilly terrain. The trees created piles of oily litter, the makings of a hot-burning fire hazard.

But eucalyptus trees have their fans, especially among beekeepers in California and elsewhere who speak of the great quantities of nectar and pollen that some varieties can produce. Landscape designers and homeowners who find the trees aesthetically appealing have used them for decades. Beekeepers in other areas of the country where the trees can survive may want to try them out in their landscapes.

Bill Lewis, treasurer of the Los Angeles County Beekeepers Association and a beekeeper for more than 25 years, has harvested, bottled and sold eucalyptus honey as a floral variety for a decade from his apiary in Lakeview Terrace, California.

"It's a popular honey among my customers," Lewis says. "A lot of people think it's going to taste like cough drops or have the taste of eucalyptus leaves in them, but it doesn't. People buy it just as much as they buy my water-white sage. It's got a pleasing flavor."

Lewis says eucalyptus is a major winter feed for Southern California honey bees. "It blooms when nothing else is blooming and tides the bees over."

The species was first brought to this country from Australia around 1850. It was then cultivated intensively by timber speculators as a potential source of lumber. Belatedly, it was discovered the wood was unsuitable for construction, or much else. But the eucalyptus thrived, and has since become a "signature" tree in the California landscape, used to provide sturdy windbreaks and as a fast-growing ornamental.

Eucalyptus are generally hardy to Zone 8 on the U.S.D.A. cold-hardiness map (some species to Zone 7), and so can live throughout California and across a swathe of the southern United States. In the north and northeast, the trees are kept ornamentally as potted shrubs that are brought into the house or greenhouse to winter over.

In their range, trees of this genus can easily become invasive due to lack of natural enemies. And in the United States, they have. But after 150 years of dominating the landscape, one of the eucalyptus' natural enemies has finally caught up to it.

The Golden State is now struggling to fight off an infestation of an Australian pest called the redgum lerp psyllid (*Glycaspis brimblecombei*), which, despite its name, chomps on a smorgasbord of eucalyptus genus types-16 by one count-including those widespread in California, like the blue gum (*Eucalyptus globulus*), river redgum (*E. camaldulensis*) and sugar gum (*E. cladocalx*) eucalyptus. Many trees in California have been hybridized, crossed with susceptible species, making their blue-green leaves fodder for the redgum lerp psyllid.

The bug was discovered, of all places, across from the agricultural commissioner's office in Del Monte, California, during the summer of 1998, according to Frank McDonough, a horticulturist at The Arboretum of Los Angeles County. Cindy Werner, an agricultural inspector for the county, noticed the tell-tale white cones (lerps) and copious honeydew, so she turned some samples over to an entomologist who made the initial identification. How the pest got to the United States is unknown.

"Lerp" is an Australian aboriginal word that describes the sugary wax cup the juvenile-stage psyllid nymph produces for cover and protection. The lerp is composed of a sugar-based substance that is non-water soluble. When the cocoons drop off the trees, they gum up pools and sewers, causing backups. Maintenance costs have skyrocketed wherever the pest has appeared, McDonough says.

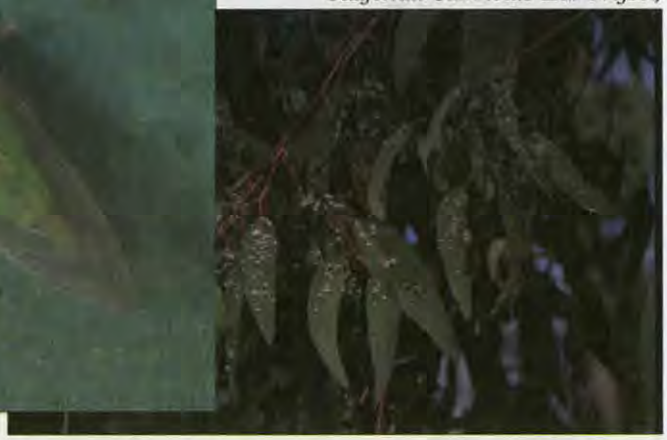
The redgum lerp psyllid causes extensive defoliation when unchecked by pesticides or natural predators. Infested trees soon look deathly, blighted. The University of California Statewide Integrated Pest Management Project, psyllid damage is primarily aesthetic. But some scientists contend that repeated defoliations will eventually kill the eucalyptus. "These are tough trees," says Donald Dahlsten, a professor of environmental science, policy and management and biological control at the University of California, Berkeley, "but the question is how many times they can be defoliated before they die."

A more likely fate is that other insects and disease organisms, such as the eucalyptus longhorned borer (*Phoracantha semipunctata*), will move in on the weakened trees and finish them off.

"There are anti-eucalyptus and anti-exotics people who could care less if we lost them all," Dahlsten was quoted as saying in a university press release. "But other people who have these trees will do anything to save them, including dousing them with pesticides."

Lewis, the Los Angeles-area beekeeper, has seen the damage caused by the psyllid. "The trees look skinny, brown and dead." He says eucalyptus around his area seem to have weathered a heavy lerp infestation last

(Left to right) Late instar nymph, eggs, adult, and early instar nymph with white covering.



River red gum foliage heavily infested with redgum lerp psyllids. (photos by Jack Kelly Clark, courtesy University of California Statewide IPM Project)

year pretty well, and the honey harvest wasn't badly affected, "but I've seen trees in other areas where they look dead. Some of those probably succumbed to it. I haven't seen an infestation this year, yet, but if we get another infestation like last year we are certainly going to lose some more."

The redgum lerp psyllid also produces a gooey honeydew that, according to the Los Angeles County Agricultural Commissioner's Web page, "stains the ground beneath trees, sticks to the shoes of pedestrians and can appear as hail in severe infestations." A black sooty mold grows on oozed-over surfaces, damaging cars, buildings and anything else under a stricken canopy.

Beekeepers in California and elsewhere in the United States where the bug can be found may be surprised to find a new kind of honeydew honey gathered from the redgum lerp psyllid. Lewis says that's not likely, at least in Southern California. "Last year, the lerp showed up about the same time as some of our other strong nectar flows," he says. "I didn't notice a lot of bees on the eucalyptus at the time we had a severe infestation of the bug."

Australian beekeepers and researchers give contradictory accounts of whether honeybees collect redgum lerp psyllid honeydew. Several Australian beekeepers were contacted and none report taking a honeydew harvest. One of the problems in trying to make predictions about honeydew gathering based on the Australian experience is that the psyllid has no natural enemies here, so its prevalence-and that of the honeydew-is much greater.

Southern California officials estimate that the cost of redgum lerp psyllid damage for everything from removing dead trees to cleaning goo-smeared cars and buildings to clearing lerp-clogged drains has risen into the millions. The humble psyllid prompted Los Angeles County last year to call an emergency meeting of department heads and stakeholders to gather information to fight the pest.

David Lofgren, a horticulturist at The Arboretum of Los Angeles County, says the following eucalyptus species are those that have been hardest hit by the redgum lerp psyllid, and beekeepers may want to avoid planting them:

E. camaldulensis, E. globulus, E. cladocalx, E. rudis, E. dealbata, E. tereticornis, E. blakelyi, E. eridgesiana, E. nitens, E. mannifera, E. diversicolor, E. brassiana.

There's good news though for eucalyptus lovers. An Australian wasp smaller than a pea that parasitizes the redgum lerp psyllid has been imported and is scheduled to be experimentally released in some California counties this summer, mostly in the south. Dahlsten, the Berkeley professor, discovered the tiny wasp in Australia last year that lays eggs in its prey, killing it. The new wasps have not been officially classified.

"Everybody wants the parasites," says Dahlsten. "Especially people in Los Angeles have been pressing me, saying, 'we need to release right away.'"

Don't make honey production the only criterion for selecting plants for your landscape, and be choosy about the eucalyptus trees you establish in your area. Eucalyptus makes for a great windbreak and some plant it for erosion control, but can become a terrible fire hazard. I remember standing on an Oakland hillside with my brother, wary of looters and ready to evacuate, as I watched the strange wind from the fire zone-as it came to be called-whip red-hot eucalyptus embers mixed with ashes of burning homes into the night sky and out to the Pacific Ocean. I cursed the neighbors under my breath who had allowed a grove of 16 eucalyptus trees to grow in their neglected backyard adjacent to my mother's house. My mother, along with our neighbors, was lucky, and didn't get burned out. But it's been almost ten years since the fire, and after repeated contacts with the neighbors, their insurance company and the city, that grove is still there.

If I still lived in Oakland, I would keep as many hives in that yard as possible, but, so near the fire zone, the memories that come with the sweet varietal honey would be bitter. BC

John A. Mitchell is a contributing editor to Bee Culture *magazine. He is a radio producer, garden magazine writer and the owner of Conservation Honey in Cambridge, MA.*

GLEANINGS

JULY, 2000 • ALL THE NEWS THAT FITS

Be Ready, Or Be Gone

AG MEGATRENDS

Dan Manternach, Chief Content Officer of AgWeb.com and Past President of Professional Farmers of America was the featured speaker at a recent meeting for Ohio State University Extension.

The seven megatrends Manternach predicted for the coming decade are: 1) a continued decline in farms and farmers due to an aging farm population, the strong job market for current farmers and Generation X farm youth, and farmers' unwillingness to change from production-driven markets to market-driven production; 2) the virtual consolidation of farms through Global Positioning Systems; 3) the arrival of big benefits from precision farming to the early adopters; 4) the reversal of opposition to genetically modified organisms or GMOs because of increasingly recognizable benefits; 5) an explosion in contract farming and shuttle farming as biotech companies will need more control over the production process, and more producers will produce in several regions to provide year-round employment; 6) an explosion in identity-preserved crops that will transform the grain transport infra-structure and; 7) an explosion in e-commerce for purchasing inputs and marketing products directly to end users. One of Manternach's closing challenges was that "if we want today's youth to stay in agriculture, we must change the culture of whining that permeates all of agriculture.

How will these Megatrends affect your future in agriculture? Is your glass half empty or half full? A lot will depend upon how you view the world.

Comments on Web, Other News

NHB REFERENDUM

• Comments from industry members on the proposed Honey Research, Promotion, and Consumer Information Order have been published on the USDA's Web site. You can access the comments via the "Industry comments regarding proposed order" link at the NHB industry Web site (www.nhb.org).

• In April, Agriculture Secretary Glickman announced a new tool in the USDA's efforts to increase product exports – an online directory of U.S. exporters that will help potential customers find suppliers of specific products. You can register your company online at www.fas.usda.gov/ussupplier.

• Need a speaker from the National Honey Board for an upcoming meeting? Contact Tina Tindall at 800.553.7162 to discuss your needs. Available speakers include current and past NHB board members, staff and other industry representatives.

• Associations are reminded that it's time to order Honey I Love You recipe brochures in preparation for Summer fairs and shows. Associations may request up to 1,000 free brochures for fairs. Assessment-paying industry members may request 500 free brochures. To place your order, call the NHB order line toll-free at 888.421.2977, then select item seven.

AAS AT EAS

The American Apitherapy Society (AAS) will run a course in conjunction with the Eastern Apicultural Society (EAS) Summer meeting in Salisbury, MD, July 31 to August 2, presenting two levels, one for the beginner as a comprehensive introduction to Apitherapy and a second, exploring in greater depth. The experienced teachers cover topics from products of the hive to bee venom therapy. There is a test validated by a certificate of knowledge.

Jennifer Conover, 937.364.1108; fax 937.364.9109; email: aasoffice@in-touch.net.

LDP Fails

LOAN PROGRAM, CROP INS OK

On May 24, congress approved and sent to the President legislation which continues the honey loan program for 2000-crop honey; however the loan deficiency payment sought by producer organizations was not approved.

The measure does include authorization for the first federal crop insurance program to cover honey production. Details of the crop insurance program were not available at presstime, but it will be 2001 or perhaps 2002 before the actual insurance will be available from underwriters.

It is unclear whether the loan program will be available immediately or after the start of the new federal fiscal year on October 1, 2000. The provisions are identical to the 1999-crop program. The loan will apparently drop a penny to 58¢, calculated at 85% of the previous five years' prices, omitting the highest and lowest years. The annual National Agricultural Statistics Service prices are used for the calculation.

ABF and AHPA had asked for a loan rate price, of 80¢ with ability to repay at the market price, as set by USDA. This would have resulted in a benefit of 20-25¢. That plan fell victim to a lack of funds; $1.6 billion was spread over 26 commodity programs. The loan program is pegged at $7 million; due the arcane federal system, the loan is considered an expense to the government for the year when the money is expended, but the repayments are not counted as offsetting income the following year.

WHAT PEOPLE ARE SAYING . . .

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J.A. Goff, Chico, CA

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G. Evenson, Mankato, MN

"I am a principal of an elementary school and am always talking about bees and how important they are to us. This video will surely help the children to better understand the beauty and mystery of bees. Thank you for making this possible. I think that the video is a pictographic work of art." J. Ovbey, Marietta, GA

www.worldofbees.com

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ABF 4-H WINNERS

"Honey was man's first sweet," began Jason David heath for his winning essay in the 2000 American Beekeeping Federation 4-H Essay Contest.

The eighth-grader from Goshen Lempster School, in Lempster, NH, detailed the relationship between "Man and Honey Bees Through the Centuries." He covered the usual "food of the gods," the "drink of the gods" (mead), the transport of bees to the New World, and the uses of beeswax, before discussing the importance of bee pollination to food production. For his efforts, he gets a cash prize of $250.

Second place essayist Hannah Roach, 12, of Bay City, OR, took a different tack with her essay. The home-schooled sixth-grader wove a story of a young girl visiting her grandfather. En route to his home, she skinned her knees, and he doctored them with a "honey ointment." Then, they explored the treasures in his attic, with each discovery, prompting a "honey story." For example, finding an old recipe book led the grandfather to relate that his brother and sister-in-law ran a bakery and used honey in many of the recipes. Hannah called her essay, "Honey's Heritage." She receives $100 cash award.

Ginger Clements, an eighth-grader at Claiborne Academy in Homer, LA, is the third place winner. She receives a $50 cash award for her essay which covered bee-human relationships as old as Pliny the Elder and as recent as the discovery of the use of honey in healing stomach ulcers.

Essays were received from 27 states, the largest participation in many years. The judges said the majority of the essays were well-written and showed the results of heavy research. In addition to the three top winners, the judges noted that four essayists had turned in papers which could have easily won a prize in other years. In an unprecedented decision, four honorable mention awards are being made, to: Ildyko Lovas, 10, of Emmaus, PA; Shannon Adamiak, 16, of Ocala, FL: Mary Johnson, 12 of Stamping Ground, KY; and Meghann Evans, 12 of Walnut Cover, NC. These four young ladies will receive National Honey Board aprons.

Each state winner, including the top winners, will receive a copy of the new 21st edition of A.I. Root Co.'s Starting Right With Bees.

For 2001 and subsequent years, the 4-H Beekeeping Essay Contest will operate under the auspices of the newly organized Foundation for the Preservation of Honey Bees. The essay topic for 2001 is "Encouraging Youth to Become Beekeepers." The 4-H'ers can write from their own experiences (what is there about bees and beekeeping which might appeal to them?), talk to friends who keep bees for a hobby, and even search out adults in their communities who are or have been beekeepers. They should review the level of interest in beekeeping in the past and today, and, perhaps, mention some famous beekeepers, real and fictional.

Students interested in writing should contact their local 4-H offices for contest details. The state selection must be done through the 4-H system.

WI QUEEN

The Wisconsin Honey Producers Association is proud to announce that Jody Hanson has been named the 2000 Wisconsin Honey Queen. Jody is an 18-year-old senior at North Crawford High School where she is the president of her senior class and a member of National Honor Society. She is the daughter of Dennis and Jean Hanson of Gays Mills, Wisconsin.

Jody's parents operate the Kickapoo Honey Farm. She has assisted them in the business since she was a child, providing her with a solid background from which to promote the beekeeping industry.

And African Workers, Too

AFRICAN QUEENS DIFFERENT

Africanized honey bees have an unexpected advantage in the battle to keep beekeepers from replacing highly defensive Africanized queens with gentle, easily managed European ones.

Within one week after their queen dies or is removed by beekeepers, Africanized worker bees – which are female – are capable of activating their ovaries to produce viable female eggs for re-queening the hive. That's according to preliminary findings by Gloria DeGrandi-Hoffman of the ARS Carl Hayden Bee Research Center, Tucson, AZ and Stanley Schneider of the Univ. of NC at Charlotte.

European worker bees' ovaries can't start producing eggs until the queen has been missing for at least three weeks. And, egg-laying worker bees that are queenless typically produce male offspring. In contrast, the Africanized workers' faster, one-week response to queenlessness, and ability to produce a queen from their own female eggs, could explain why many beekeepers' efforts to re-queen an Africanized hive with a docile European queen haven't succeeded. Queens introduced into colonies that have egg-laying workers will be attacked and killed.

Scientists already knew that some kinds of African honey bees, such as the Cape bee of South Africa, can lay viable female eggs within one week of becoming queenless, and nurture them to become their queen. But the ARS and University researchers are apparently the first to observe this phenomenon in Africanized worker bees in the northern hemisphere.

Migrating from Brazil, Africanized bees are today found in AZ, CA, TX, NM and NV.

The scientists are developing new tactics to foil the Africanized workers' ability to make their own Africanized queen. DeGrandi-Hoffman reported the findings at the Second International Conference on Africanized Honey Bees and Bee Mites, held recently in Tucson. ARS, the U.S.D.A.'s chief research wing, was co-sponsor.

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♦INTERNATIONAL♦

Second Caribbean Beekeeping Congress Nevis, West Indies, August 14-18. The Congress Secretariat 869.469.5521, Exts. 2124,2153,2154. Fax 869.469.1698 or 469.0324 or email: psalhc@hotmail.com

The 47th Annual Beaverlodge Beekeepers' Field Day June 23 at Beaverlodge Research Centre, Beaverlodge, Alberta.

Contact Don Nelson, Box 29, Beaverlodge, Alberta, Canada T0H 0C0, 780.354.5122, nelsond@em.agr.ca

♦ILLINOIS♦

University of IL Short Course on Bees & Beekeeping July 29-30 at Univ. of IL Illini Union and Bee Research Facility.

Registration is $75 including materials, refreshments and honey tasting. Rates available at the Hampton Inn, 217.337.1100. Ask for Group Code "Bee".

Call 217.333.2910, FAX 217.244.3499.

♦INDIANA♦

Michigan Beekeepers Association and Indiana Beekeepers Association in conjunction with Michiana Beekeepers Association will present a program for Beekeeping Families July 14-15, at Newcomer Center, Goshen College, Goshen, IN. The meeting begins at 1:00 p.m. Friday and ends at 4:00 p.m. Saturday.

Registration is $6/Individual, $10/Family, $2/Student. Speakers include Pat Heitkam, Zachary Huang, Greg Hunt and more.

For information contact Dave Laney 219.656.8701.

♦MASSACHUSETTS♦

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Visit the website: www.capecodcom/bcba/eas2001.html.

♦NEBRASKA♦

BEETOPIA! NE Bkprs. Assn. annual convention is November 17-18, at the Best Western Central Executive Center, Omaha.

Contact Dennis Stenner, 13401 S. 34th Street, Bellevue, NE 68123-2330, 402.293.0973, stenner@radiks.net

♦NEW YORK♦

Empire State Honey Producers will hold their annual picnic July 22 at Alayne and Jim Doan's place in Hamlin. Following the business meeting and featured speaker, a pig-roast/dish-to-pass lunch is planned.

Call the Doan's at 716.659.9141.

♦NORTH CAROLINA♦

The NC State Bkprs Assn's annual Summer meeting July 20-22, Burlington, at the Holiday Inn, 2444 Maple Avenue.

Contact Dr. John Ambrose, 919.515.7660 or Don Moore, 336.584.3195.

North Carolina State Beekeepers Association/South Carolina State Beekeepers Association will a hold a joint meeting in Myrtle Beach, SC March 9-10, 2001 at the Crown Reef Resort and Conference Center.

Contact Mike Hood 864.656.0346.

♦SOUTH CAROLINA♦

SC Bkprs Assn will host its Summer meeting at Clemson University, July 13-15 in the Poole Agricultural Building Auditorium on campus.

The meeting begins at 1:00 p.m. Thursday with a short course. Friday and Saturday includes presentations by Ann Harman, Lawrence Cutts, Reg Wilbanks, Steve Taber, Steve Forrest, Rick Sutton and Mike Hood.

Contact Mike Hood, 864.656.0346 or mhood@clemson.edu

♦VERMONT♦

The VT Bkprs Assn will hold their annual Summer meeting July 22, 8:30 a.m. to 3:00 at Yankee Kingdom Orchard in West Addison. Bob Stevens is the guest speaker.

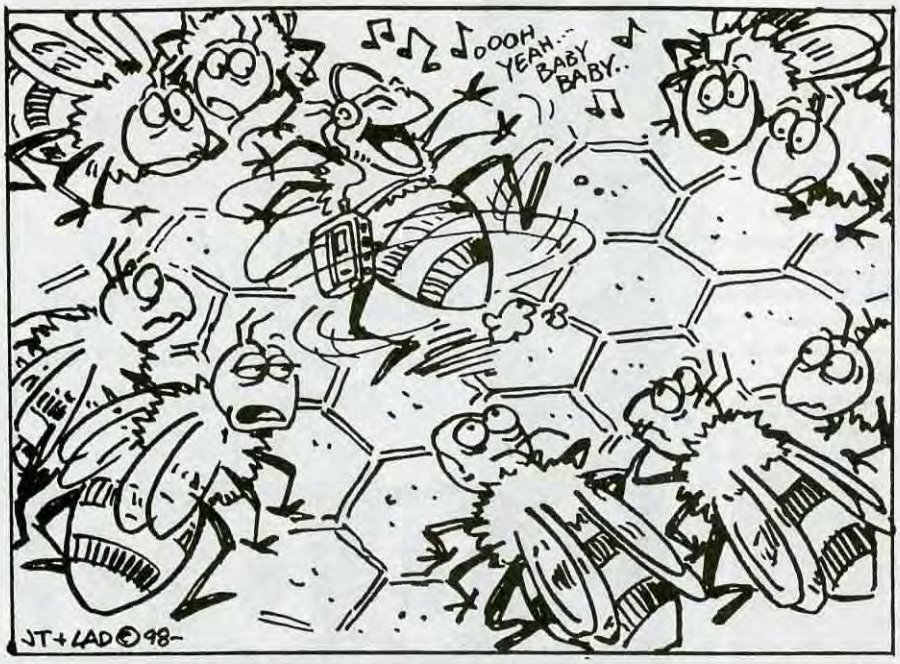
Honey Harvesting and Extraction Workshop will be held August 12 from 10:00 a.m. to 2:00 p.m. and the same location.

Contact vtba@mailcity.com or write VT Bkprs Assn, 405 Browns River Rd., Essex Junction, VT 05452, 802.759.2387.

♦WEST VIRGINIA♦

The 20th WV Honey Festival will be September 9-10 at the City Park in Parkersburg, WV.

WV Honey Festival, P.O. Box 2149, Parkersburg, WV 26102, 800.752.4982.



"I have absolutely no idea where she's telling us to go . . . do you?

BOTTOM ... Cont. From Pg. 56

not need to even turn on this special equipment today after all. No sense wearing it out."

When I told Bobbalee about my troubles later that day, she said I had made a mistake. According to her, the first thing I should have said to the Walgrens was, "There, I guess that part's done," and just continued on with moving the bees by hand. That'll teach me to go anywhere without her.

As the sun was setting, I managed to get most of the bees into a hive body, including, I thought, the queen, but there were still a lot of bees up underneath the siding and down the dryer vent. I told the Walgrens that I would leave the hive body there the next day so the other bees could move in with the queen.

"What if they come back out?" asked Mrs. Walgren.

"They won't because the queen is inside the box."

"What if the queen comes out."

"She won't."

"Why not?"

I had to think about that a minute.

"Because," I said, "queens love boxes."

"Is that why you have all those other boxes?"

"Why, yes," I said, thinking quickly, "how perceptive of you. Those other boxes are essentially bad decoys. You see, when the queen looks at those two boxes with the sides missing, or the two of them connected by a shop vac hose, she sees what miserable boxes they are and that the hive body box is a much better box to raise a family in."

"Huh!" said Mr. Walgren suddenly, now completely enlightened.

"The queen can see that far?" asked Mrs. Walgren.

"Oh, yes, she's got a good eye for boxes," I said.

When I told James, the inventor of the two boxes, about my problems with them, he said that he was sorry, but he had forgotten to give me the extra shop vac hose that went with the boxes. I immediately imagined an extra hose in combinations with everything else, but it didn't help. So, I said the next best thing.

"Huh!" I said, pretending to be completely enlightened.

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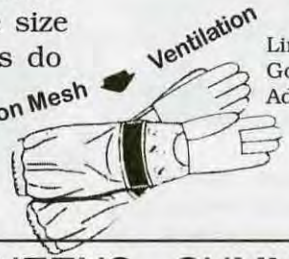

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Thinking Outside The Box

Ed Hughes

As we get older, we should prepare ourselves for accepting new ideas in the beekeeping business. New devices and new procedures, some of them invented by the younger generation, may be of considerable worth.

James, my wife Bobbalee's son, is younger and a computer scientist. Thus, when he gave me a piece of beekeeping equipment of his own design, I was prepared to admit that, just because I didn't understand it exactly, didn't mean that it wasn't a wonderful and beneficial invention.

It consists of two boxes, each of which has one hole in it for attaching a shop vac hose. One box nests inside the other for convenient carrying. One box has a screened side. The other has an open side.

My instructions for using them were simple, and I'm quoting from the inventor himself: "This will help you collect swarms from difficult-to-reach places."

In the middle of May, I had a venerable couple come to the door, reporting that a swarm of bees had roosted under their siding just above a basement window. According to them, the bees may have also moved partway down a dryer vent in the window.

"You called the right man," I told the Walgrens, "I have just the piece of equipment for getting those bees out."

Telling them I would be there shortly, I unlimbered the two boxes, grabbed the shop vac and the rest of my equipment, and headed for the site.

When I hauled the two boxes out, Mr. Walgren's interest was piqued, and he asked if they could watch the procedure. I assured them it would be safe and possibly instructive.

"This piece of equipment," I showed them the boxes, "was made by my stepson."

They smiled weakly.

"It extricates swarms from difficult places."

The smiles waned, and I realized I was stalling for time. I had thought that, by the time I got everything together and drove to the Walgren house, I would figure out how the two boxes worked together and how they connected with the shop vac.

It seemed to me that there were only a couple of possibilities. My first plan was to attach one of the boxes to the suction end of the shop vac hose. But what was the second box for? I also tried picturing both boxes attached to either end of the hose, leaving the shop vac to fend for itself. Lastly, I thought I might cram one box inside the shop vac, but it was soon obvious that the boxes were both much too large.

Laying the two boxes out on the ground at the Walgrens, I tried moving them into different alignments. The Walgrens seemed as puzzled as I was. Occasionally, as Mr. Walgren watched me, he seemed like he was about to say something. At one point, he took his hand away from his chin and began pointing at the boxes. I paused, listening carefully to what he would say. But then he stopped, his mouth half open. Finally, he put his hand back on his chin and frowned harder than before.

I connected one of the boxes to the end of the shop vac hose and checked Mr. Walgren's expression. If anything, the frown deepened. Disconnecting the hose from the shop vac, I tried connecting the two boxes to either end of the hose, leaving the shop vac sitting by itself. Mr. Walgren scowled and cast a skeptical look at his wife. Finally, I walked over to where they were standing.

"You know, I'm thinking I might

Continued on Page 52

BOTTOM BOARD