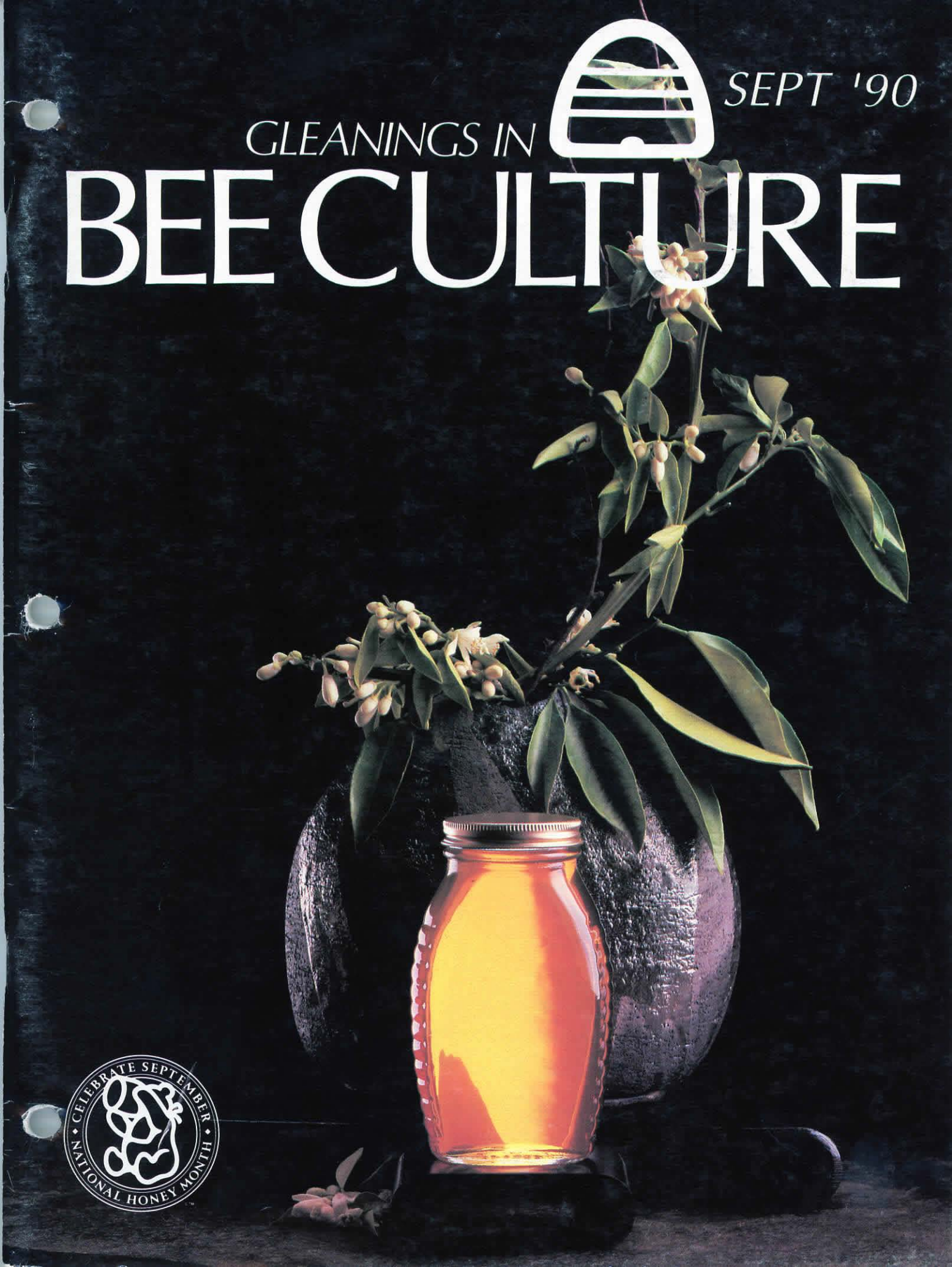
SEPT '90

GLEANINGS IN BEE CULTURE



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Robert Stanners	Assoc. Publisher
Kim Flottum	Editor
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Contributors:

• Ann Harman
• Roger Morse • Steve Taber
• Richard Taylor • Charlie Mraz

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Columns

Departments

COVER... This Orange Blossom Special reflects the work of photographer Jim Cummins, and beautifully draws attention to Honey and National Honey Month.

Photo courtesy of the National Honey Board

SEPT. '90 CONTENTS

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117 Years Continuous Publication by the Same Organization

Features

INNER·COVER

Keep, Or Kill

Other than the Honey Board itself, I don't know of any more vocal, ambitious or consistent fans for the Honey Board than *Bee Culture*, The A. I. Root Company, or myself.

I offer this bit of self-congratulatory stuff because, occasionally, we have to step back and take a close look at who we are, really. The Honey Board has done exactly what they said they would do, in terms of the most professional honey promotion this country has seen in years — maybe ever.

But after five years of growth, both by the Board and by this industry a re-evaluation is in order. This for two reasons: Their contract states that after five years they have to get a report card from the people they serve reflecting what they've done; and second, some of the people they serve want to change the rules.

I want to examine some of the things that are going on with the Honey Board, its supporters and the USDA. I don't want you to think, for even a second, that my support for the Board or for the generic promotion of honey, has changed. Though I am not a financial supporter, my contribution is genuine. Consider the following in that light.

I can't believe that anybody would choose to put the National Honey Board out of business but there's a better than even chance that's going to happen next spring.

Initially, the plan was to give the Honey Board a try for five years and see how it goes. If the people paying the bills liked what they bought (the feeling was) they would vote to continue it. That's the way business should be run do the job, or end the program. I don't think anyone can say the Honey Board hasn't done the job they were hired to do (though there are some who don't like the job description).

The out, of course, was that if you didn't like what they were doing, or felt you couldn't afford the cost (a 1¢ per pound assessment) you could get your money back each year. What could be better? A voluntary producer supported promotion program is about as good a deal as you can get.

But there's a move afoot to change that, which, in my opinion, spells doom for the Honey Board. Let me give you some background.

Currently, many commodity groups have check-off programs similar to ours. Some are voluntary, some aren't. For the latter, if you produce, you pay, whether you like the program or not.

The USDA is pushing even more commodity groups in this direction, too. Now, though, the ante to enter the game is a little higher. New groups are (almost always) told "You've got two years of *mandatory* payments and then you can vote to Keep or Kill the Board" There's a lot of pressure for these Boards to succeed. The Honey Board has five years to prove itself and next June it's time to 'Keep or Kill' them. This, then, should be their report card. But the deck has been stacked.

There are some who feel that, "If I *voluntarily* contribute, **you** should voluntarily contribute, too. And, it appears, they're going all out to make sure you volunteer. When the vote comes up next spring, you're going to have ***two*** choices: first, should the Honey Board be continued; and second, should contributions (read check-offs) be *mandatory* with no chance of refund?

There are some well-meaning rationales behind this movement.

After five years, the Board has a pretty good idea of how to budget its available resources for the program it

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NEXT MONTH

Our coverage of the bee industry just keeps getting better, and here's a few hints of what's in store.

In November, we're taking a close look at what's going on out west. The Wonderful West will take a look at the pollination business in CA by Eric Mussen; an overview of beekeeping in the Pacific Northwest by Mike Burgett; a study on honey bee stress from Arizona by Eric Erickson; and some thoughts on beekeeping equipment used in the West (and elsewhere) and why, from Larry Goltz, former *Bee Culture* Editor.

December brings, besides Christmas, a look at the Northeast part of the country, with a picture of 'Back East Beekeeping'. Dewey Caron, Delaware Extension, has an informative look at the East Central states; Larry Connor takes us through the more northerly regions; and Roger Morse has a piece on New York. Along with these there is an article on pollination out here, too, and, if we can get them to hold still long enough, some insights on the migratory business in that part of the world.

January will have several timely and important articles on the environment, politics and the economy — all for the convention time of year.

February will have several excellent pieces on American Foulbrood — who has it, how do you detect it and how do you treat for it. But there's more in February — the South: the Grandest Place of all for bees and beekeeping!

But what about Next Month?

Recent research takes the spotlight in October. A look at the activities at the Baton Rouge Lab; What's going to be happening at the Ohio State Lab now that all the new folks have arrived; an overwintering study from Oregon; Overwintering Nucs; Cosmetics you can make and even more! Whew!

All this in October. Don't miss it! ☐

MAILBOX

■ Experienced, Plus . . .

I am a biologist and a 1987 graduate of the Federal University of Bahia. I am single and have worked in Apiculture since 1984. I also work with the IBM/PC using the following software: wordstar, word, D'Base III plus, Lotus 1-2-3, etc. I 'll take work in any city of this country. Please send queries to:

Urandi Alves de Santana
Jardim Madalena
rua E no. 6 Apto. 22 - Brotas
CEP 41950 Salvador, Bahia, Brasil
South America

■ Bleaching, Still

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35% food grade H_2O_2 ads also regularly appear in every issue of the weekly newspaper, *The Spotlight*, a publication dedicated to covering the side of the news the media doesn't tell us. Request sample copies from:

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I hope this information will be of help to other *Gleanings* subscribers.

Harold J. Pearson
Bethany, OK

■ A 'Super' Healer

Recently a retired M.D. and sometime Medical Historian, called my attention to a reference in the Smith Papyrus on the use of honey as a wound dressing.

We have often discussed the use of earlier and simpler remedies for our medical "woes" which have validity for today. To add to my list of such treatments as the use of aloe as a pharmaceutical (a succulent plant useful for treating minor burns, etc.), honey as a wound dressing would have special fascination for a beekeeper.

The Author of Papyrus recommended the application of a salve, daily, composed of Mrht, byt and ftt. "Mrht, byt and ftt?" "Mrht", loosely grease, could be a vegetable oil or animal (snake grease) oils. "Ftt" is lint made up of a vegetable filler and "Byt", surprise, is honey.

As any good beekeeper knows, honey is anti-bacterial. Honey can kill most bacteria within a week by simply drawing the water from the bacteria cells. In addition, honey contains the enzyme glucose oxidase, the end chemical, after reduction is hydrogen peroxide, a common disinfectant, and gluconolactone + gluconic acid, a mild antibiotic.

Combined with some kind of natural fat, animal or vegetable (or Vaseline, a petroleum product) in about the amount of 1/3 honey to 2/3 fat and applied with a dressing, this treatment can be beneficial. It will keep the wound clean and prevent drying of the damaged surface. Antibiotic, aseptic and antiseptic, it does not produce "pound" flesh, or fat granuloma.

We have had a number of occasions to use such natural treatments as aloe

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MAILBOX

for minor burns with extremely good effect. We have not had the occasion to try the wound dressing. Not being interested in occurring a wound for test purposes, we can only suggest the next time you have a major cut — try it.

Richard Starky
Brimfield, MA

■ Brave Bear

I read with interest (July '90) your article "Bear" because I have had experience with a bear tearing apart my apiary. The reason I am writing is to tell how close bears will come to a house even if dogs are close by.

Last year, 1989, I had seven colonies torn apart by a bear in the Rock Creek section of Colorado Springs, CO. It was a poor year here and when the bear got through all the bees left. I could only salvage the supers and frames.

In the early 1960's I was pastor in Perham, ME. I had eight colonies about 150 feet from the parsonage. I was serving as Dean of the Jr. High camp at Baptist Park and I had a call from my wife telling me my colonies had been upset. So I had to go home, 25 miles, and I saw it was bear damage. I did the best I could in my limited time to carry them next to the parsonage and made three colonies out of them. I had hoped that the next week I could get them back in some kind of order. The next day my wife called again. The supers had been knocked over and several were carried about 40 ft. away and scattered around. The neighbor next to us had three dogs that roamed around but that did not deter the bear. I had to go back and gather up the supers and frames and took them several miles away. I did not have a pick-up at that time and it was difficult to get them in the trunk and make several trips to a new location.

My experience is that bears will come right up to an occupied house for his (and my) honey. This year I have moved my bees to the plains so I should be safe from bear attacks.

Pastor Carlton Cockey
Simla, CO

■ What Was Used?

Since the varroa mite has become well established in Germany, other older bee problems have greatly intensified, e.g., nosema, brood diseases and queen loss. I learned this from the official bee inspector who checked our three hives in the center of Munich, thought to have a brood disease. My own experience of five years keeping bees in Munich certainly showed me it is a lot trickier and more unpredictable than I had thought, but I had not made the connection to the varroa mite. In Germany, one does not speak of American foulbrood and European foulbrood — rather it is Malignant foulbrood and Benign foulbrood. (Laboratory examination of brood samples indicated that we had the benign variety in one hive, which the bees were able to deal with themselves.)

Here beekeepers are obliged to treat for varroa mites, and we all use the same medication which is purchased through the local bee club. It is a Bayer product called Perizin, a liquid diluted with water that is squirted between the frames. It is administered

Continued on Next Page

MAILBOX

twice in late Fall when brood is no longer present. Perizin smells like strong moth flakes and kills a lot of bees as well as a lot of mites.

I also have seven hives in Lucketts, VA. They get very little care these days other than supering up, removing honey and feeding in the fall. They are peppy, mite-free so far, very productive and a joy to come home to.

However, in the April '90 *Bee Culture*, Dr. Roger Morse mentioned various medications being used with great success in Germany in fighting varroa. I have never heard of any of them, either at bee meetings or in the local bee magazine *Imkerfreund*.

Louise E. Mayr
Museumsinsel 1
8000 Munich 22
West Germany

■ Hummingbird Helpers

In response to a request in July's "Mailbox", I include some information on hummingbird feeders with bee guards. You can also purchase replacement "bee-guard" in lots of (6) six. Bee-Proof hummingbird feeders are available from Mellinger's, Inc, 2310 W. South Range Rd., North Lima, OH 44452. The cost is $9.95 plus postage or another model is $9.69 plus postage.

I enjoy your magazine and await it every month with anticipation.

John E. Martel
Altoona, PA

In reading my latest issue of *Bee Culture*, I note the letter from Mr. Zier about hummingbird feeders. We have written to Mr. Zier but I am sending you the information also in case there are others interested.

We have just recently purchased a hummingbird feeder with bee guards and it works beautifully. The bees and hornets cannot get into it at all. This feeder is made by Perky-Pet Products, Inc., 2201 So. Wabash St., Denver, CO 80231 and as I recall, cost around $7.00. We purchased ours at a large discount store which carries farm supplies along with a multitude of other products.

James Spangler
Neillsville, WI

■ Smart Bees

Can aggressively defensive bees (not AHB) be trained?

Recently my partner and I set out to move and examine a long-neglected hive. I never wear coveralls nor use smoke, I'm a one hive hobbyist, and I approached this hive the same way. Big mistake! A hundred or so bees came boiling out as soon as we lifted off the top hive body. A couple of dozen or so found my shirt and jeans no impediment at all. We stopped right there and went to get heavier clothes and a smoker. We were not attacked again.

A few days later I came back with a smoker and two pair of coveralls and went through the two hive bodies with no difficulty. I spent a couple of hours working through a mess but noticed no need to renew the initial smoking. So when I returned the next time for further manipulation, I had a smoker available but didn't use it. A lot of bees flew, of course, but none attached. They were as docile as my home hive.

Can bees learn that having their hive opened isn't necessarily a threat? I've not read this anywhere. They are Italians, and have not been requeened (by a beekeeper) for six years.

Dan Hendricks
Mercer Island, WA

Ed. Note: Either these particular bees are far smarter than mine (which haven't learned this trick yet) or there were other factors involved. I suspect time of day, weather, available forage or some external cue had kept forager bees at home the first time you checked the hive and they were ready. Also, the initial opening may have been, of necessity, fairly rough, since the hive had been neglected for awhile, so removing the cover and inner cover may have caused lots of noise, vibration and the like. In either case, I'm glad they settled down and I'm happy to see neglected colonies taken care of.

■ Simple Ways

In response to the article in July's issue of 'Mailbox' by Stuart Root, his method is complicated and a lot more expensive than the method I use.

I simply use hot water and a good detergent, namely Dawn, then when suds are formed add about a tablespoon or two of Arm and Hammer Washing Soda. Let the utensils, pails and strainer cloths soak a few minutes. The wax turns soft and breaks down then can be removed with a metal sponge. Strainer cloths can be washed by hand then rinsed in clear hot water. Most of the wax is gone. I then put the nylon cloths into the washing machine and they come out just like new.

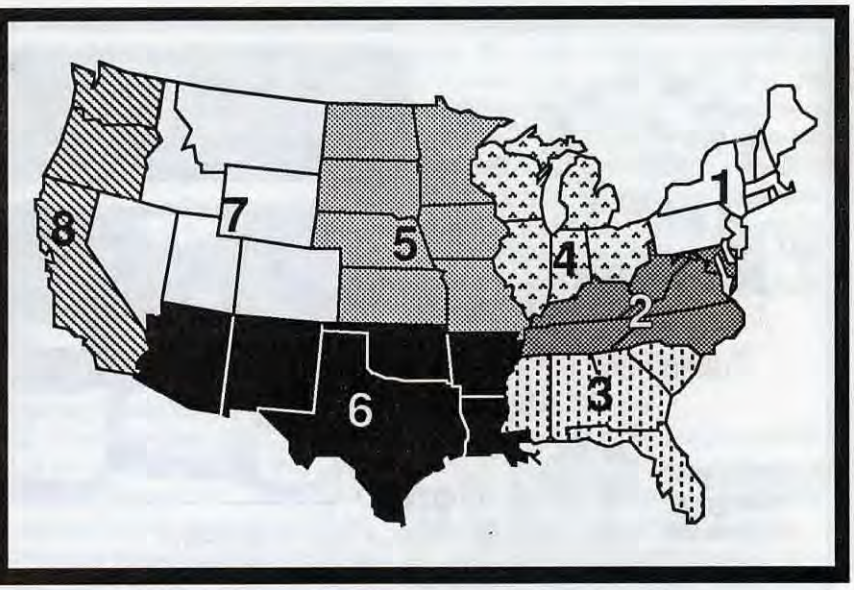
I discovered this method years ago and found it sure simplifies clean-up at hardly any cost. I was going to write about this subject before but never took the time until this aticle motivated me.

Marian Bilenky
Caspersburg, PA

SEPTEMBER Honey Report

September 1, 1990

REPORT FEATURES SUMMARY: R=Range of all prices; A=Average prices across all regions; LM=Last month's average; and LY=prices one year ago.



	Reporting Regions								Summary		History	
	1	2	3	4	5	6	7	8	R	A	LM	LY
Extracted honey sold bulk to Packers orProcessors												
Wholesale Extracted												
60 # Wh.	33.50	40.31	44.00	40.00	39.50	49.00	41.50	39.25	31.00-46.00	40.35	45.18	37.27
60 # Am.	38.33	34.25	40.75	37.40	38.00	46.95	36.00	37.33	30.00-48.00	37.70	40.77	32.90
55 gal. Wh.	.57	.48	.44	.49	.45	.54	.47	.49	.38-.60	.48	.55	.52
55 gal. Am.	.57	.45	.41	.49	.39	.46	.47	.45	.36-.59	.45	.51	.47
Case lots — Wholesale												
1 # 24's	28.77	27.65	33.30	25.08	23.49	24.25	28.75	29.08	20.40-39.60	25.94	28.66	26.47
2 # 12's	26.33	25.68	30.73	24.49	22.55	23.00	27.50	28.97	20.00-31.00	26.40	26.44	26.29
5 # 6's	33.38	27.75	23.50	26.81	21.95	22.70	28.09	27.57	21.90-38.50	27.22	27.99	27.50
Retail Honey Prices												
1/2 #	.95	1.16	1.20	1.11	.90	.96	1.05	.99	.83-1.50	1.06	1.08	.94
12 oz. Plas.	1.46	1.36	1.55	1.34	1.17	1.21	1.44	1.45	1.10-1.75	1.37	1.40	1.38
1 #	2.15	1.59	1.74	1.57	1.51	1.45	1.60	1.61	1.20-2.59	1.66	1.73	1.57
2 #	2.63	2.74	3.40	2.95	2.39	2.67	3.19	2.58	2.25-4.00	2.82	3.00	3.04
2-1/2 #	3.60	3.90	3.50	3.49	3.53	3.19	3.71	3.50	3.20-4.50	3.64	3.45	3.35
3 #	3.89	3.96	4.50	3.45	3.87	3.90	4.29	3.90	3.00-4.99	3.92	4.01	3.94
4 #	5.10	5.10	5.25	4.95	4.79	4.33	4.98	5.00	4.35-5.25	4.93	4.74	4.61
5 #	7.25	6.10	6.25	6.13	5.72	5.08	6.27	5.65	5.00-7.25	5.97	6.15	5.79
1 # Cr.	2.00	1.25	1.48	1.53	1.57	1.75	1.75	1.86	1.40-2.00	1.70	1.60	1.61
1 # Cb.	2.00	2.07	2.50	3.00	2.17	2.10	2.69	3.35	1.25-5.00	2.52	2.34	2.28
Round Plas.	2.00	2.00	1.99	2.05	1.95	1.95	1.90	1.87	1.85-2.25	1.97	1.89	2.00
Wax (Light)	1.60	1.10	1.10	1.15	1.00	.98	1.05	1.13	.90-1.30	1.16	1.07	1.10
Wax (Dark)	1.50	.95	1.02	1.05	.95	.88	.95	1.03	.85-2.00	1.06	.97	.91
Poll./Col.	28.75	20.00	30.00	31.25	--	24.00	--	24.00	20.00-37.50	26.88	26.25	24.90

MARKET SHARE

Whatever the weather, beekeeping goes on. So, the National Oceanic and Atmospheric Administration, National Weather Service says that the next couple of months will be: Moisture — generally low in the north and west, high in the south and average in the east. Temperature — warmer than average north, east and west and cool to cold in the south central area. Any bets?

Region 1

Sales about right for this time of year, but prices not rising significantly. The 'recession' in the region seems to be affecting honey prices, too. Mite losses and poor crops aren't helping either, but pollination and honey prices will probably be rising shortly.

Region 2

Localized specialty crops (sourwood and the like) seem to have fared well, and will mess up prices for a couple of months. But 'regular' crop demand is up too and sales are steady to rising. Production about average, but mites have drop populations so that total crops will be short.

Region 3

Prices steady to rising a bit as new crops come in but many are short. Several crops short this year, and demand this fall should drive up prices even more. Drought in some areas hurting also.

Region 4

Sales doing well and prices rising to meet increased production costs, mostly. Mites, in some areas, causing 30-50% losses, resulting in shortages. Most of region reporting average to excellent crops. However, northeast section feeding in August because of cool/wet conditions and strong populations.

Region 5

Prices and sales seasonally average. Not too much to get excited about. However, the region is very exciting when looking at conditions. The eastern half has been cool and wet with spots of drought, while the western half has been just the opposite. Crops from poor to average reported and reduced bees and beekeepers noticeable now — and certainly next spring.

Region 6

Prices down, demand down and sales stagnant. Weather probably the problem, but this is a seasonal slump. Production said to be average to good in most areas and a heavy harvest predicted. AHB meetings have spotlighted beekeeping in the southern areas — and pollination needs next spring MAY be a problem.

Region 7

Sales demand and prices all going strong, typically for this time of year. Most of region in pretty good shape after a slow start this spring. Sit-tight operations and migratory alike having trouble with mites.

Region 8

Sales generally good, especially in the north. Central and southern areas about the same to slower. Cool, wet spring, and hot, dry summer actually may produce a good crop. Southern bees seem in good shape, but drought limiting production. Some colonies melting!

Consumer Honey-Use Survey

Welcome to *Bee Culture's* first unofficial, unscientific, barely-funded, but nevertheless fascinating Consumer Honey Use Survey.

We thought National Honey Month would be the ideal time to send out our roving reporter and check out a hundred or so folks in the northeast Ohio area to see what they know about honey, how they use it, and a little bit about bees and beekeeping.

Since our sample is relatively small (about nine dozen people), and our time limited, we can say that the results are valid for only the northeast part of Ohio, but we feel the trends shown are far more universal.

Even so, we did get a good mix of people — urban (Cleveland and Akron), suburban (suburbs of both), small town (Medina and others) and rural. As it turned out, we managed to catch more males (55) than females (47) but our arbitrary age spread came out pretty well — 17 (17%) were under 20 years old; 53 (52%) were between 20 and 50; and 32 (31%) were over 50.

Here's an interesting note — 14 (14%) of those questioned didn't really know where honey came from (we can't guarantee the accuracy of that but they seemed genuine) but of those, 11 used it regularly anyway. Maybe they haven't figured it out, but we're glad for every customer we can get, right?

Of all the people questioned, 16 didn't use honey at all (16%) which means that fully 84% (86) use it to some degree.

We took a closer look at who doesn't use honey, though, because they are the most interesting folks here. First, more males (10) said they didn't use honey than females (6). But most of the 16 (12) knew where honey came from. The age spread was about the same as the larger sample.

Speaking of knowing where honey comes from, 88 (86%) knew that honey came from honey bees. But 14 (12%) didn't! Interestingly, half were under 20, the other half between 20 and 50. Those over 50 all knew about bees and honey.

When we looked a little deeper at who, and how, honey was used, we found some interesting trends. As stated, 86 (84%) of our respondents routinely used honey. Forty four (51%) used honey on the table, but only 14 (16%) used it for baking. Of those, half were in the 20-50 age group, and half were over 50. And they were equally divided between male and female. Note that no respondents under 20 routinely cooked with it — nothing new here, but it confirms yet another belief held by most beekeepers.

Most respondents bought their honey at grocery stores and most preferred light honey over the darker flavors.

Obviously, knowing the kinds of honey used is important, but here there were some interesting surprises. Sixty four of the respondents (74%) who use it preferred 'light' honey, while 22 (26%) preferred 'dark' honey.

But we broke it down further from that when it came to the darker color, because we've always favored the minority. Besides, knowing who buys your product is important.

Dark honey users (22 of them) were divided pretty evenly between male and female (12 and 10) but the age spread was heavily weighted in favor of the older respondents. Only two were less than 20, six were between 20 and 50, while 14 were over 50. Most, 17, bought honey at the farm, while seven got it at grocery stores.

Surprisingly, dark honey was used evenly between table use and cooking, and the purchasing habits were similar in that about half purchased less than three pounds per year, while half bought more than 3 pounds per year.

We also wanted to find out where these folks got their honey. (Remember, 86 used it in the first place.) Surprisingly, at least to us, 69 (82%) of these

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SURVEY . . . Continued From Page 517

honey buyers made purchases at the grocery store. I guess our preconceived notion that beekeepers tend to sell mostly from their back porch and farm markets will finally have to be put to rest. Which, by the way, strongly points the direction you should consider if selling honey is a problem.

It's obvious we should have asked if these store purchases were price driven or if there was brand loyalty involved. This is vital to producers because it sets the rules on how you approach a buyer. Next time we'll follow up on that.

However, 28 (33%) respondents said they purchase honey from 'farmers', or beekeepers in this case. But here's the interesting part of this question. When we asked how much honey per year they purchased, the 69 folks who bought honey only in stores *averaged* 1.8 pounds of honey used per year. This is over three quarters of a pound higher than the national average. But those who bought from beekeepers, or from both, averaged a full three pounds of honey used per year! This is almost twice as much as the others, and three times as much as the respondents to the survey made by the National Honey Board. (Numbers do not always total because some respondents make more than a single choice.)

This purchasing trend points out that at least some portion of honey sales are *probably* an impulse buy in grocery stores, though we're sure there's brand loyalty, too. However, sales to grocery stores are also based on both brand loyalty by the store owner (because of service, quality and price) and good old price alone.

This points out that if you charge more for your product than the competition, the store must sell more, and at a higher price. But we realize that breaking that price barrier with store owners is difficult. Of course, this does not consider the problem of slotting, a topic we'll be covering later this year.

Often, successful beekeepers will sell at an artificially low price to gain entrance to a store. Then, after a trial period where sales justify a price increase, will raise to an acceptable level. But only strong sales will justify this. If your product is the same quality as the next guys, you won't sell more honey.

For background, we also asked if people knew about African Honey Bees and, yes, Killer Bees.

For the African Bee it was 54 yes, 48 no, as far as knowing what it was. Killer Bees were, not surprisingly, a different story. Eighty eight knew our friend the Killer, and only 12 had not heard of it.

An even 50 respondents knew of both the African and Killer Bees, and believe it or not, 10 respondents (10%) hadn't heard of either.

Excluding med-fly in California, we doubt that any agricultural group is so well known by those who are not directly involved. This speaks well of the information producing machines in this country.

We said in the beginning, and reemphasize now, this survey is not the result of an official or scientific undertaking by our staff. But, we are confident it reflects general trends in honey purchasing habits and knowledge of the product. Use it accordingly. □

RESEARCH REVIEW

DR. ROGER A. MORSE

Cornell University • Ithaca, NY 14853

"A compendium of things to consider."

Problems with Onion Pollination

For a number of years, growers of onion seed have complained about a lack of bee visits to flowers and poor pollination. Honey bees have been observed flying over blooming onion fields to other crops that are in flower. It has been known, too, that onion nectar has a potassium concentration that is about ten times that found in the nectar of competing plants.

In the study reported here, it was found that onion nectar has a sugar concentration sufficiently high that honey bees should be attracted to the flowers in numbers; however, the number of bees foraging on onion flowers has been lower than would be expected. The author states, the "high potassium concentrates had a repellent effect on bee foraging" When offered artificial nectar containing both potassium and sugar, the bees were still able to detect the differences in the sugar level and those that did feed selected the richest sources. No suggestions as to how to increase the number of bees visiting onion flowers were made.

References

Hagler, J. R. *Honey bee response to simulated onion nectars containing variable sugar and potassium concentrations.* Apidologie 21: 115-121. 1990.

Fly Control with Muscovy Ducks

Those who have watched farm animals are aware of how much they suffer from flies in the summer. For many year, researchers have been searching for good methods of fly control. Here is a new twist on an old problem. When adult muscovy ducks were penned with a young calf, the ducks would feed on flies on the calf's legs. When the calf was lying down, sleeping or resting, the ducks would take flies off its back. In the 12 week test reported in the paper below, the ducks were not injured by the calves. Ducks removed flies 30 times faster than several commercial fly control devices tested including commercial bait cards, coiled fly paper rolls, fly sheets, or fly traps. They had a positive advantage over insecticides that might be used for fly control in that the ducks could be sold at the end of the season. In a preliminary field test on a 120 cow dairy farm, it was found that 30 to 40 ducks, together with good sanitation, gave good fly control.

Sometimes the scientific papers and reports I read are rather boring but this was one of those interesting, "fun" papers.

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Glofcheskie, B. D. and G. A. Surgeoner. *Muscovy ducks as an adjunct for the control of the house fly.* Journal of Economic Entomology 83: 788-791. 1990.

Honey Bee Tolerance to Insecticides Varies

Honey bees varied as regards their tolerance to four insecticides that were tested. The insecticides included carbaryl, which in some formulations is well-known for its adverse effects on bees. The author concludes that it should be possible to select insecticide-

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Some onion flowers are more attractive than others. Here's a reason why.

tolerant strains of bees that might not suffer serious losses when used for pollination. These determinations were made by treating individual bees, not whole colonies. Nevertheless, this is an important contribution, should it ever become necessary to develop pesticide resistant honey bees.

References

Smirle, M. J. *The influence of detoxifying enzymes on insecticide tolerance in honey bee colonies.* Journal of Economic Entomology 83" 715-720. 1990.

The Life of Certan® in Controlling Wax Moths

The bacteria, *Bacillus thuringiensis*, is known to be a good agent to control wax moths; it is sold as a commercial preparation, Certan®, that may be sprayed onto stored combs to protect them against wax moth attack. In the tests reported in this paper, the bacterial spores do not survive on treated combs in active honey bee colonies for more than ten to twenty weeks. On stored combs the life of the bacterial spores decreased in time and at higher temperatures and humidities. In combs stored at 10°C (50°F), Certan® would give good protection for the long period of time between seasons but at high temperatures, 30°C (86°F), there was a rapid loss of viability. □

References

Vandenberg, J. D. and H. Shimanuki. *Viability of* Bacillus thuringiensis *and its efficacy for larvae of the greater wax moth following storage of treated combs.* Journal of Economic Entomology 83: 760-765. 1990.

Mites

STEVE TABER of Honey Bee Genetics

Goudous, 82370 Villebrumier, France

"Some thoughts on mites, bees and beekeeping."

I tell you we have problems. I have reports of both tracheal and varroa mites killing bees. So what do we do, or more specifically, what do YOU do. The article this month is full of suggestions of ways that we can attack this problem, both you and me.

Acarapis woodi, the internal parasitic mite is the first up for discussion. The mite invades the tracheal tubes, sucks the blood, may cause other damage like inserting bacteria or viruses in the bees body and may be chokeing off some of the air supply to the bees blood. No one knows exactly how it injures a bee but we do know that when bees go into winter with an infestation rate of 30% or higher (meaning that 30% of the adult bees in a hive at the beginning of winter are infested to some level with mites) they most likely will not survive as a colony. The only *approved* treatment is with menthol crystals placed near the brood in warm weather.

Since beekeepers in Europe (and particularly in England where the mite was first discovered 67 years ago) no longer complain about the mite, the thought is European bees are resistant to the mite. Dr. Roger Morse at Cornell in New York State believes that, and obtained permission from USDA APHIS to import stock from England during the summer of 1989.

Drs. Gary and Page ran a study in Florida partially financed by the CA beekeepers to find out if there was a genetic basis for resistance to the mite. After two generations of breeding they did indeed develop a more resistant stock.

We think that it is likely then, that within a few years bees totally resistant to the mite will be available, and we also believe that natural selection will produce a resistant bee in the next 20 or 30 years. So there is hope just around the corner.

Concerning the second mite, *Varroa jacobsoni*, the news is not so good. Most of the best work on this mite comes from W. Germany, France, Israel and Poland. It is the unanimous opinion of researchers and beekeepers that I talked with that **All colonies will die unless treated with a miticide.** Before beekeepers realized that, most of the colonies in the European countries that have become infested were dead.

So far, mite populations have not developed in the U.S. to kill many bee colonies. However, in a year or two you will hear more and more reports about varroa mites. Presently, we have a miticide approved for use, Apistan, made by Zoëcon.

Present biological control methods developed to fight varroa are expensive and only suitable for beekeepers with a few hives. They involve caging the queen, removing drone brood at periodic intervals and other time consuming operations. My preference is to remove sealed drone brood because the mites are preferentially attracted to drone larvae. The catch is that you must examine your hives frequently to remove the sealed drone brood —about every 12 days.

Can we develop bees that are resistant to this pest? The answer is yes, but it will take some time. Robin Moritz, working in W. Germany discovered that the faster development time of two

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It's no wonder bees have trouble when their trachea are filled with mites!

South African bee races, *Apis mellifera scuteleta* and *A. m. capensis* prevented varroa from developing large populations because it could not develop on worker bee larvae.

Christine Peng, University of California at Davis, working in China with money partially coming from CA State Beekeepers, discovered that the native host of varroa, *Apis cerana,* never develops large destructive populations for at least two reasons, faster development time, and the bees actively find and kill, by biting, the mites.

So we could breed bees with both those characteristics, but in the meantime many colonies may die and a great hardship will be forced on a large segment of the farm population, dependent on bees to pollinate their crops.

My opinion is that live bees are better than dead ones, and we should bring live resistant bees into the U.S. now to help us and our bees survive.

Many beekeepers in the U.S. attended the APIMONDIA Congress held in Brazil last year. While there, they heard many papers on the Africanized bee (AHB) in Brazil as well as on varroa mites. The AHB has been in Brazil for over 30 years now. Varroa for not as long, but most bee colonies in Brazil have been infested. Most Brazilian beekeepers make little effort to control varroa and honey production in Brazil is much greater today than it ever has been.

People who I have talked to who looked at the bees in Brazil and who have also looked at the bees much further North in central America say there is a great difference between them They reported at a seminar at U.C. Davis, that they thought the bees they saw would not be a real big problem for CA beekeepers (K. Fondrick and R. Page).

I think we should immediately bring bees from Brazil into the U.S. — LEGALLY. Careful selection of stock of the more gentle and more manageable bees should be made. They could be held in isolation by beekeepers equipped to artificially inseminate queens and test offspring.

Would queens and drones escape? Sure. So what. According to all the experts, they will arrive in Texas this year. In the meantime we can start a breeding program to get their temper under control and make them more adaptable to U.S. conditions.

You know the AHB has always received bad press. It does have some good qualities besides being resistant to varroa mites. AFB is seldom found in colonies of AHB's and a faster development time and colonies that are more populous would be a boon to package shippers and to growers needing bees early in the spring for pollination. Give it some thought. □

A SALES RUN with Buzz Riopelle

KIM FLOTTUM

I've recently had a chance to ride with Buzz Riopelle on one of his honey sales runs. It was a Saturday, which is why I was able to go, and, according to Buzz, a pretty typical day. I'll let you be the judge.

But let's back up just a bit. Buzz Riopelle is a sideline beekeeper living in NE Ohio, not far from Cleveland. He works for a fire department so has those odd on-again, off-again shifts that allow him three or four days at a time to take care of his bees and business.

Buzz runs a couple hundred colonies, spread out around the county. He spends early spring inspecting and dividing and late spring moving many of them to pollinate the growers he works for. A couple of years ago we featured Buzz in a series of articles on doing divides and moving bees for pollination. That's when I decided to find out why he was successful at selling the honey he makes.

He occasionally has a helper when moving colonies but does almost all the work himself. He'll spend a day gathering supers, brings them home and stacks them in his honey house. Then, it's a day or two or three extracting. He uses a Maxant chain uncapper and radial extractor and is pleased with both. Working by himself most of the time precludes the efficiency of the uncapper, but it's easy to use and goes fast, he says.

Once extracted, the honey is stored in 60's or barrels until needed or until he has time to bottle up.

Honey types are segregated when possible (this year he had a pollination contract in pumpkins and in a short period made 'pumpkin' honey — a dark, but distinctly pumpkin flavored type, mild enough to be clover, but far smoother). He also makes basswood, locust, apple and other flavors when possible and, using a blue-inked rubber stamp, identifies the flavor on the top of the cap.

He sometimes buys particular flavors from other beekeepers, either because he didn't produce any or has

The typical farm market. This one is open about six months a year, but is busiest during harvest season. It's the PERFECT place to sell 'local' honey.

customers who specifically want a certain type.

When bottling, Buzz seldom applies his label because it "breaks my stride", he says. So, most cases sit in the storage area of his honey house without labels until needed.

It was shortly after Buzz finished extracting that I went along for the ride. Fall is the ideal time to sell honey, says Buzz, for a lot of reasons.

In the six or eight weeks before Halloween, literally hundreds of farm markets open up in the area to take advantage of the 'Harvest Season' These are mostly small places that feature garden crops, apples, or a mix of natures best at this time of the year. Also, the weather's a little cooler so people aren't going to the beach, the kids are in school, vacations are over, and, on a bright sunny weekend day, thousands of city folks are out looking at fall colors and for some of the 'home grown' produce they think they can only find at a local farm market — out in the country.

"And," Buzz asks as we leave my house at 7:30 in the morning, "What farm market worth the name, wouldn't carry honey?"

Because he has several outlets, Buzz has set up distinct delivery routes. These usually start close to home, swing out to distant stores, and work their way back. During winter and spring, there are generally fewer stops and on a good day you might make two routes instead of one. But today, it's just one, long route.

The first stop was at an egg farm. Though they make eggs by the millions, most go to a distant wholesaler but local people sometimes stop and the owners took advantage of this by selling a few extra items. "They only handle one or two cases a year, but they're happy, and I go by every week so it's no problem to stop," said Buzz.

The next stop was at one of the seasonal farm markets that had just opened and was still stocking shelves. They had called the night before saying it was that time again, and could he stop out the next day? Buzz, with a very full trunk, had to move several cases to get at the half gallon jars on the bottom.

"They like my label," he said, as he put one on each jar. "But I usually carry jars without labels because some of these small markets put on their own label, or just leave it blank with a sign on the shelf that says 'Local Honey'. It's easier to apply a label in a store, or even

"It's better to bring jars without labels, even if you have to put them on when you get there. Some farm markets don't want a label, but would rather sell 'Local Honey' That's fine with me!"

out in the car than to make two trips because I didn't have what they wanted."

Next stop was an apple orchard market, open only two or three months a year. They sell two or three cases of one lb. jars a season, with the label. They made their initial contact by chance at a public meeting.

"One of the problems with these markets," says Buzz, "is that most are small, unheated buildings. The cooler weather (it was 48°F the day we were out) tends to speed crystallization, and I have to replace about 10 cases every fall from these outlets.

"I take these home and liquify them, but I try to save my label, if there is one, because of the cost," says Buzz.

Next stop is at a large, year round farm market. He sells 1 lb., 2 lb., bears and comb honey. They take all their containers without labels and apply their own.

Fall is their busiest time because they also run a huge apple orchard (which Buzzs' bees pollinated this spring) and sales are strong. They also sell hundreds of Christmas gift boxes which they put honey in (both liquid and comb) and they start putting them together before Thanksgiving.

Buzz checks with the store supervisor on how much they need, goes to the car and fills the order. While doing that, I chatted with Sue, the store's supervisor.

"We like Buzz's honey because the

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"I've got to keep good records, because some accounts pay up front, and some I have to bill later. I NEVER leave a store without leaving a receipt, though, even if they don't pay. That way, we both have a record."

There are 16 fronts of honey here. More than in most grocery stores. Buzz has five of them. Two 2#, two 1# and bears.

quality is always consistent, which is the most important aspect we look for in a supplier," she said. "But there's more than that.

"He gives good service. I mean he's here before we run out, replaces all the candied stuff, and isn't high pressure about what we should carry.

"We pay top dollar (over $2.00/lb. wholesale) and expect top service. We get it. So we keep buying from him," she added.

The final planned stop for the day was at a grocery store, one of three in a chain, but the only one Buzz served. He had stopped in a couple of days earlier and checked his stock, noting he was low on several sizes, but particularly five lb. jars. He uses his label here because of the competition. Also on the shelf were a national co-op brand, a large regional brand, and a generic label. There were, in total, 16 fronts of honey — a lot for a medium sized store.

"I got this account because the previous supplier didn't give good service," says Buzz. "Sticky jars, crystallized honey it was most always a mess.

"I approached the owner, and got the account," said Buzz. "It's mostly bears here," he said, "but maybe it'll pick up when they see how good mine is!"

After the grocery store we started home. It was past lunch and after going through all those stores I was hungry.

But Buzz had a different idea.

"You know," he said, "I was past here a few days ago," pointing to a small strip mall coming up on the left," and I noticed this new little store. I thought I'd give it a try.

"It's called 'A Taste of Ohio' and only carries food and food stuff made in Ohio. My honey's a natural here," said Buzz.

We pulled into the parking lot. Buzz checked the mirror and his shoes and hopped out of the car.

"Let's check the place out," he said, and we cruised in, as nonchalant as could be. Candies, jams, jellies, dried fruit all sorts of food stuff and all grown in Ohio. And books about food grown in Ohio and well, you get the idea. And honey, but not much, and not very well tended. One jar stuck to the shelf when I picked it up.

"Back to the car," said Buzz. Into the trunk and out comes two jars. A label goes on one, the other blank. He checked the mirror again, brushed off his pants and put on a different, well-pressed jacket.

"A professional image is one of the strongest sales tools you've got," said Buzz. But you don't want to be too fancy. Clean, well-groomed, clean-shaven and the like makes an immediate image. Most people tend to think your product is as good as how both you *and* it looks.

"I always bring in my business card, a price sheet and two jars of honey — one with my label on it so they see how it looks, and one without, which I send home with them.

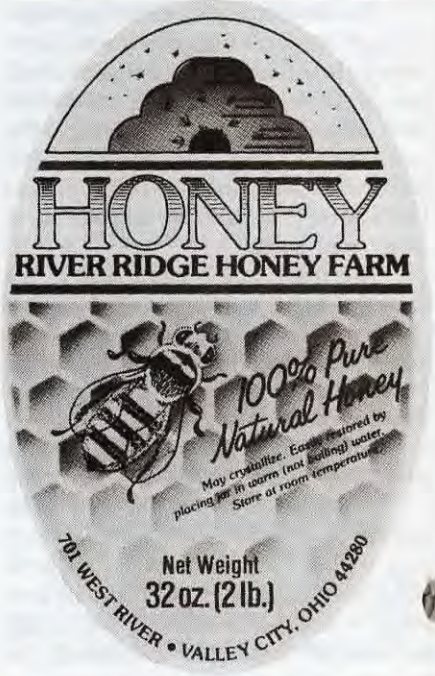
"That way, they see me, my product, my prices and get to test it — all at the same time. I try to make the decision as easy as possible, but I never, never pressure a sale. My honey sells itself, it doesn't need any help. The rest — good appearance, good label and service, and follow-up are *benefits* to the buyer."

The store's owner liked what she saw, and tasted, liked the price and the service, and bought two cases for this store, and two cases for another store she had in Cleveland, which was really a bonus.

That was it. The day was over (at least for me because Buzz went home to bottle up enough to replace the 18 cases he'd sold that day).

"Some of my accounts pay when I deliver, and I must bill others. I have to keep good records so I don't forget who to bill, who has paid, how much honey I've sold, how much I need to get ready for the next trip, when to check bees... "

Well, that's a sales run with Buzz Riopelle. Good service, a good product, and the right touch for making new sales keeps this sideliner in business. □



An attractive label can go a long way toward getting on a store shelf.

MASSACHUSETTS MADNESS

Everyone knew it was going to happen, sooner or later. It's just that everyone kept thinking later, then later yet. Certainly not sooner, and please, not now. But now it is. Or to be more exact, early in August the **Massachusetts Madness** began.

This story was still unfolding as we went to press, but below is an early version. More is probably available even as you read this.

"State and federal officials are investigating an alleged pattern of pesticide misuse by migratory beekeepers that has raised questions about apiary practices nationwide and the quality of U.S. honey supplies," read the opening sentence of the *Boston Herald* article, dated Aug 4, 1990.

"Regional EPA officials briefed national EPA regulators, and may urge the FDA to test samples of honey supplies for pesticides," it read.

The story then related details about two operations under scrutiny, and fluvalinate, the 'misused' pesticide.

"Resident beekeepers claimed migratory firms, who control two-thirds of the state's bee industry, were not observing laws governing use of the chemical, which EPA ranks as 'low to moderately' toxic. Inspections turned up violations."

Further on, "A source close to the investigation, asking not to be named, said officials are concerned about possible contamination of commercial honey supplies, or honey distributed freely to schools, elderly centers and other human service institutions."

This article has all the necessary ingredients for a made-for-TV drama—locals vs. outsiders; government intervention in private business; a restricted-use pesticide; innocent children and elderly people being poisoned by tainted honey; sources close to the investigation who refuse to be named, and finally, in the middle of the page, in a box large enough so even casual scanners will see it, an unsupported quote from an investigator, "It's symptomatic of misuse throughout the U.S."

I don't know how much of this article is true, how much has been 'embellished' to make the story exciting, or if anything will come of it. This, like many other articles, may pass quietly from the scene, with little or no problems for the honey industry.

And friends, if you believe that, I've got a bunch of bridges to sell you, too.

A few years back, tainted watermelon, from a single field, grown by a single company, made a few people ill, and put several watermelon growing businesses out of business. The growers were fined, jailed and publicly humiliated. But the taste for watermelon is still a little bitter for many consumers.

More recently, the Alar scare is another reminder of what can happen. It didn't make any difference whether apple growers ever used it—if you grew apples you probably ate them, because they didn't sell at all well that year.

One lesson learned from both incidents is that an industry absolutely must have a crisis management plan, in place, before the crisis occurs.

In Dec '88, I discussed the how's and why's of developing such a plan. Of course, I intended it for an African Honey Bee problem, but the possibility of tainted honey is certainly worthy.

"It's symptomatic of misuse throughout the U.S."
— Investigator

Fortunately, the Honey Board was far-thinking, and has a plan already in place, dealing exactly with the situation. But do you? What do you tell that reporter (or what *did* you tell that reporter) who asks "What about this poison honey we hear about?"

Last month, we published two articles on dealing with the media. Both were excellent for how-to advice, and in giving insight to how reporters and editors 'think' about stories. But neither of these dealt with emergencies. And emergencies are where it's at when it comes to gathering the news. Public service announcements and good-will fluff are good for filler on the six o'clock news, but it's life and death, scandal and sex, conflict and war that gets the ratings and sells newspapers. Tainted food, local vs. outside business, crime and punishment — these are the meat of the news, and it pays to be ready for the worst — even if it never comes.

FIRST THINGS FIRST

- Have a designated spokesperson to deal with questions and reporters.
- Have a second in command ready, just in case.
- Know what 'expert' employees to call in immediately.
- Know what to do next —
  + who answers the phone
  + who calls a news conference
  + who does phone interviews
  + what do you tell your employees

WHAT'S NEXT?

Common sense interview skills come into play next—

- **Always** return phone calls to reporters.
- **Be prepared.** Know as much as you can about the story, know what you have done along the lines of the story (do you use fluvalinate?). Anticipate the obvious questions about poisoned honey, and what you, and only you, are doing to:
  a) keep your honey pure;
  b) keep other honey pure; or
  c) keep your nose out of it.
- Always, always, **tell the truth.**
- **Have two or three positive points** dealing with the problem that you will get across to the reporter. And make sure you get them across. Like —
  + Value of honey bees to pollination
  + You do not condone the **illegal** use of any pesticide
  + **Legal** use of pesticides in all agriculture makes it possible for U.S. farmers to feed millions, daily, with no problems whatsoever
- Have your **news kit ready,** showing all sorts of good beekeeping information
- **Never say, "NO COMMENT".** If you don't know the answer, send the reporter to someone who does - The Honey Board, (303) 776-2337; the American Beekeeping Federation (912) 427-8447; or the American Honey Producers, (605) 627-5621.
- **Always tell the truth.**
- **If you don't know the answer,** send the reporter to someone who does. Don't make one up.

Kim Flottum

AIDA

BASIC SELLING TECHNIQUE

RICHARD THOMAS EDWARDS

There are few people who know how to sell and the simple truth is, there is only one way to sell your honey and that's by using a simple formula. It is called AIDA.

If you want to sell a house, a car, or almost anything else for that matter, you will use this. You want to capture the attention of the customer, you want to generate interest concerning the merchandise you intend to sell, and you hope all of this will cause the customer to develop a desire sufficient enough to take action and make that purchase.

Notice that you go through the same steps before making a purchase. Your attention may have been captured by an ad, your interest was developed by the sales person and you then justified your willingness to take action which was fired up by your desire to take action and make the purchase.

Notice, that it is your attention and interest in the product which must be fired up before your customer desires to take action. Therefore, you have two steps which must be created by you before a customer is ready to take action and make a purchase.

Sounds simple, doesn't it? Well, it is. The problems begin when you assume your customers are already fired up to make a decision and take action by making a purchase.

Just because customers come to you does not mean they are interested in making a purchase. It is your job to create the attention and the interest in your customers to the point where they desire to take action and make a purchase.

Have you ever observed a customer in a store walk up to a salesperson, express interest in a particular product, walk over to that product and then walk away without making a purchase? Where was the salesperson?

Clearly, the product had gained the attention of the customer, but it did not, and could not, fully "sell" the customer. That was the job of the salesperson. And that's where the line of steps necessary to fully "close the sale" was disrupted.

There could have been outside forces which hampered the selling environment. The customer may not have liked the color, doubted the quality, or have found a better buy somewhere else and wanted to check or do some comparison shopping before making a decision.

But all of these could have been "argued" by the salesperson. Argued in the sense that the product that got the customer's attention should be highlighted so that the product's value became higher, increasing interest, and the customer will then decide upon taking action.

"Attention, Interest, Desire and Action!"

Use AIDA as a way to develop your own "arguments" or selling points — features, benefits and examples of use. You will be better armed to instill attention and interest in your customers. And it is only through attention that you can communicate interest to and in your potential customers. □

Selling Hints

PAT RADLOFF

No one ever decided to keep bees because of a burning desire to hawk honey in heavy traffic.

The challenges of marketing a product are varied and honey is no exception. Hobbyist and commercial beekeepers each have a set of problems specific to their operations. Let's look at the hobbyist first.

PROBLEM 1
Supply

Most beekeeping starts as a pleasant curiosity, grows into a deep interest, develops into an irresistible pull, and then blossoms into a full-blown fever.

Although there are women and student beekeepers, the majority of hobbyists are middle-aged men. They are outdoor people who enjoy woodworking and gardening. Bees fit into the grand scheme of things. Bees pollinate and produce a wonderful product — honey . So, "Why not have a hive or two?" It's so much fun to put the equipment together (maybe even make some in the workshop) that soon the bee yard expands into a half-dozen colonies.

Even though the family's quota for honey has been satisfied, those 6-plus colonies keep cranking it out. What once was a trickle is now a river of gold. Friends and relatives are gifted, the demands of neighbors and co-workers are met. Still the fever burns. Honey income is spent on more woodenware, a bigger settling tank, and a motorized extractor.

PROBLEM 2
Demand

I remember the prophetic words of my beekeeping friend, Clayton Knepley: "There's a lot of money in beekeeping — my money!"

So, to market the surplus, our beekeeper sets up a table in the front yard, hangs out a sign, and displays honey in a collection of jars from instant coffee, peanut butter, and Gator-Ade. Parts of the original labels are still attached. Business is slow.

'Uniqueness' is a goal of some beekeepers, and a 'unique' jar will help.

PROBLEM 3
Packaging

Let's examine that further. Honey, and for that matter all honey products, should be packed in sparkling clean and clear jars or bottles. A full display table draws customers so those containers should be of uniform shape and the label should be eye-catching. This is not the time for an elaborately detailed bee illustration, which is a turn-off for most customers. Bugs — yuck! A sketch of the primary floral source is much more appealing.

PROBLEM 4
Pricing

Beginners run down to the local supermarket, check the going rate for the generic honey and decide to give their product the same price, in order to be competitive. Nonsense!

PROBLEM 5
Specializing

Why emphasize the similarity to a product already on the grocer's shelf, that is, honey processed by the ton for the mass market. The local beekeeper must focus on the unique advantages of his product — honey made from local flowers, honey produced with very little

processing. Think of the appeal to travelers who want to buy something they can't get anywhere else, to health-conscious consumers who are looking for natural foods, to mead-makers who appreciate and demand the local stuff. In other words, if you've got it, flaunt it! Advertise and promote it with pride. It's a gourmet food.

Commercial beekeepers have their own special headaches.

Did you know that the average American consumes yearly 100 pounds of sugar to one pound of honey. Terrible ratio. Sadly, a lot of that honey is not produced in the United States.

PROBLEM 6
Imports

It's hard to compete with low foreign labor costs and a one-cent tariff. Each year commercial packers buy honey from Argentina, Canada, China, Mexico, and other countries. What about the fact that no foreign honey bee has ever pollinated the 19 billion dollars worth of U.S. food produced yearly that is dependent on insect pollination? Frankly, my dear, no one gives a damn. So much for loyalty. It will require some innovative thinking to cut labor, equipment, and packaging costs but I'll bank on American ingenuity.

PROBLEM 7
The Honey Price Support Program

It was created after World War II to help the beekeepers who complied with the war effort and expanded when sugar rationing went into effect. For awhile, domestic honey was consigned to this program and not redeemed since the going price per pound was higher than in the market place. The government has little alternative but to give it away in food-to-the-poor and school lunch programs. Some of the honey was poor quality and hurt the demand for more. Fortunately, this situation is changing because of a shortage in recent years. In fact, there have been predictions there will be NO honey left by November of this year.

There's also the National Honey Board. One of its features is a consumer education program and, if successful, could create enough demand for honey in its various forms to not only wipe out the domestic surplus but absorb the foreign imports, too.

Most markets call for the standard queenline containers. "We've always carried it in those," is often heard. The key to success is to 'give the customer what he wants'.

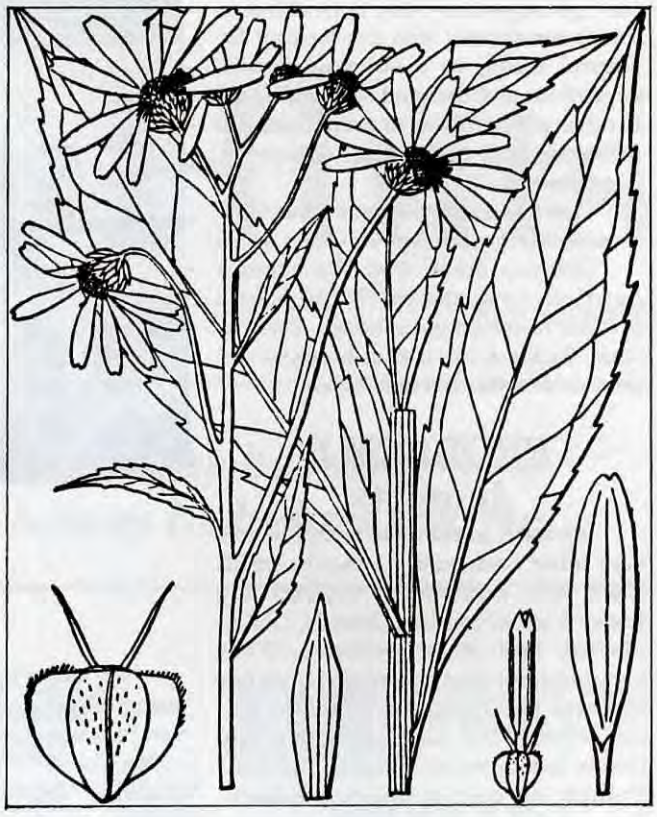
We haven't begun to promote the many ways to use honey. When's the last time you stirred some honey in your coffee, poured a dollop on a dish of ice cream or enjoyed a brilliant glass of mead?

The problems of marketing can be seen as a headache to be endured, or challenge to be overcome. It depends a lot on attitude. Personally, I love a challenge.

Have you had your honey today? □

Pat Radloff is a beekeeper and honey seller living near Columbus, OH. She is a member of the nominating committee for the National Honey Board and was publisher of the newsletter Better Beekeeping. *This article originally appeared in the American Mead Society Newsletter.*

The Golden Honey Plant



B. A. STRINGER

In December of 1879, a new bee plant was brought to the attention of readers of *Gleanings in Bee Culture*. Mr. M. M. Stovar of Table Rock, NE, sent a specimen to Professor W. J. Beal, who wrote the "Bee Botany and Entomology" column. Mr. Stovar wrote, "I send you a good honey plant. Please tell me the name of it. It is very dry and hot here now (September) and scarcely anything else yields honey but the bees are on this plant from morn till eve. It grows from 5 to 8 feet high, in the timberlands along the creeks, and has now been in bloom about a week" He enclosed some seed pods, flowers, buds and a leaf.

Prof. Beal replied that the plant was *Actinomeris squarrosa*, "a tall perennial somewhat resembling coreopsis and helianthus. These are all good for bees wherever found, and there are many kinds. It was commonly called crownbeard or wingstem.

Dr. G. L. Tinker of New Philadelphia, OH, also noted the attraction of this plant to bees. He had observed the Golden Honey Plant in the wild in his area, and was able to provide details on its growth and hardiness. He wrote in *The American Bee Journal*, 1882, "it is perfectly hardy here at 30° below zero. Its natural habitation is on moist soils, and it is spread to other locations mostly by high water in the river every spring. Owing to the seeds being broadly winged, they readily float and are carried away. It will grow in low thickets, among large trees in deep shade, and in most any location. It often also grows very thick upon the ground, when it crowds out all other kinds of weeds and grass upon any kind of moist soil, clay, sand or loam"

The bright yellow, daisy-like flowers, blooming from the first of August to mid-September, apparently produced little pollen but copious nectar. Dr. Tinker noted that the flowers produced well both in very wet and very dry seasons, which "will remove all doubt as to its reliability in this section" Stock did not graze the plants, and the Golden Honey Plant was not invasive in pastures, which indicated that here indeed was a valuable honey producer. It was described as "a weed of no known value except to the honey bee"

Dr. Tinker attributed the honey with considerable worth: "Honey made from it is somewhat balsamic, and will, undoubtedly, prove to be a superior pectoral remedy for some affections of the lungs. The flavor is aromatic, rich, very sweet, and is preferred by many to that of the white clover; it is also less apt to derange the stomach"

Frequently also classified as *Verbesina* species, the Golden Honey Plant and its close relatives continued in popularity for many years. In 1926, Mr. Victor Vinson of Irvine, KY, reported nearly 100 pounds of surplus per colony of "beautiful golden honey of good quality" from this source. The honey was sold at 30¢ a pound, and Mr. Vinson was well satisfied with his crop.

Beekeepers also reported the Yellow-Top, or 'Sore-eye', *Verbesina encelioides*, which has an 'atrocious odor', was "much visited by bees for both honey and pollen" This plant is little affected by heat or drought and is common in southwest Texas.

In *The American Bee Journal* of February, 1940, Mr. Frank Pellett wrote that "we have a number of clumps (of crownbeard or wingstem) in the apiary and along the borders of the lawn where they have been for more than thirty years. In all that time, they have never failed to swarm with bees during the period of bloom. Indications

are that a rich flow could be harvested where the plants are abundant."

The *Canadian Bee Journal* also reported that the plant grows naturally from Ontario south to the Gulf of Mexico, and expressed the opinion that "if it were present in large quantities, it would no doubt produce a surplus of honey."

Mr. Pellett believed "it seems probable that much honey comes from this source in localities where it is credited to other plants" He suggested, since the wingstem grew so readily in many places, "it is worthy of attention by those who have unused land on which to sow the seeds.

The Golden Honey Plant can be used as a backdrop in garden beds or as a specimen planting in a corner of the yard. It does best in full sun, but blooms abundantly in partial shade.

There are no records showing Mr. Pellett's idea was followed up. The plants are somewhat coarse in appearance and unlikely to be cultivated as ornamentals. They are long-lived perennials, yet do not spread invasively. Because the plants have no other use except their value to bees, the potential in this area remains unknown. □

NECTAR SOURCES WORDSHEET — by Elizabeth Dilley

Clover, Locust, Purplevetch, Dandelions, Tulip Poplar, Ironweed, Henbit, Linden, Goldenrod, Forsythia, Apple, Basswood, Maple, Strawberries, Aster

X	H	G	O	L	D	E	N	R	O	D	C	V	R	M	I	E	A	K
M	A	P	L	E	U	P	I	S	R	J	C	C	R	D	E	V	P	R
P	U	R	P	L	E	V	E	T	C	H	Q	Y	S	N	U	J	P	Z
K	W	G	O	Y	T	T	Y	J	A	E	Z	W	K	M	Q	R	L	A
B	R	R	V	B	K	F	J	V	H	X	F	V	E	T	L	C	E	P
L	Y	A	X	T	X	Z	L	V	A	Z	U	G	S	U	O	X	Y	G
G	S	G	T	K	Y	W	X	U	H	L	F	O	Y	L	C	X	P	D
Q	T	K	Y	R	T	I	R	O	N	W	E	E	D	I	U	N	H	A
C	R	D	L	Y	X	J	G	J	L	X	M	L	A	P	S	W	G	N
L	A	Y	D	L	K	B	S	U	R	M	S	I	L	P	T	I	Y	D
O	W	F	O	W	V	I	D	K	Y	S	D	Z	Z	O	F	W	N	E
V	B	X	P	B	A	S	S	W	O	O	D	T	A	P	X	A	Y	L
E	E	R	P	J	I	T	Y	Q	Z	O	I	T	S	L	N	X	R	I
R	R	I	P	F	O	R	S	Y	T	H	I	A	T	A	H	B	V	O
T	R	D	P	F	C	A	H	Y	V	V	U	Y	E	R	K	H	H	N
A	I	C	T	X	I	N	B	F	H	X	D	H	R	M	V	K	C	S
B	E	L	C	Z	J	I	S	H	O	I	O	R	U	S	B	W	P	M
J	S	O	E	Z	I	P	L	I	N	D	E	N	C	I	K	Q	Y	F
U	L	O	R	H	E	N	B	I	T	Z	Y	Z	M	I	X	U	E	E
H	H	I	S	M	Z	T	W	V	J	U	H	B	M	N	T	C	L	P

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THE AFRICANIZATION OF A NATION
Belize, Central America

MICHAEL BURGETT
GLENN FISHER
ROSE O'DOHERTY

For six weeks in January and February this year we served as members of a review team in a project surveying the beekeeping industry in the Central American nation of Belize, formerly British Honduras. This gave us an invaluable opportunity to view the changes made to a tropical beekeeping industry by the introduction of an African honey bee biotype. The serious disruptions that are now occurring to the small beekeeping industry in Belize may offer some valuable insights into what North Americans can expect following the arrival of African honey bees into our country.

Michael Burgett and Glenn Fisher are located in the Department of Entomology, Oregon State University, Corvallis, OR 97331-2907; and Rose O'Doherty is an Entomologist, Belize Ministry of Agriculture and Fisheries, Central Farm, Cayo District, Belize.

About Belize

Belize is a small Central American nation occupying the southeastern corner of the Yucatan peninsula. The land mass cover 8,866 sq. mi., which makes it slightly larger than Massachusetts. It is 174 miles at the longest point and 68 miles at the widest point. Mexico is its northern neighbor, Guatemala forms its western border and the Caribbean Sea the eastern border. Its physical features include the largest unbroken barrier reef in the western hemi-

sphere; a belt of low coastal areas; flat, dry coastal plains; elevated mountain masses and many square miles of unbroken jungle vegetation, especially in central and southern Belize. The climate is sub-tropical to tropical with temperatures ranging from 50°F (10°C) to 95°F (35°C) depending upon elevation and season. The annual rainfall is a gradient from 60 inches in the north to a very wet 160 inches in the south.

The population is estimated at some 170,000 which gives Belize the lowest human density of any South or Central American nation (19 per square mile). It is populated by Afro-Belizeans (Creoles and Garifuna), Mestizos, Maya, Asians and Europeans. The singular metropolitan area is the coastal community of Belize City (pop. 40,000) which is the former capital and still the main commercial center. The country is divided into six political districts and the government is a Parliamentary democracy with a Cabinet headed by a Prime Minister and a bi-cameral National Assembly. Independence from Great Britain was attained on September 21, 1981. The official language is English (a remnant of more than 100 years of British rule), but Spanish and Creole are also spoken by many Belizeans as well.

The primary economic bases are sugar, fisheries, citrus, bananas, rice and light industry. The primary natural resources are forestry, fishing and land. The currency, the Belizean dollar, is tied to the U.S. dollar at 1 BZE$ = US$0.50.

In pre-columbian times Belize was a major center of Mayan culture. Over 800 Mayan centers are known within the present day boundaries of Belize, several of which are now believed to have equaled or surpassed the cultural grandeur of Tikal in Guatemala. [As an interesting aside, the Mayan culture was involved in beekeeping for many centuries before the arrival of Europeans in the western hemisphere in the 17th century. Their honey and wax producing bee was not the honey bee of Europe however, rather they utilized several species of honey producing stingless bees native to the New World. The Mayans even possessed a god of beekeeping, *Ahau Lib Cab*. There is to this day a vestige of stingless bee beekeeping by descendents of those early Mayan people.]

Belizean Beekeeping

Modern beekeeping utilizing European honey bees has traditionally been a small-holder activity in Belize, with the typical beekeeper maintaining approximately 15 to 25 colonies. Beekeeping has been and continues to be a part time, secondary income generator for those involved. While the statistical record is less than firm, a historical beekeeping industry of 500 individuals maintaining some 10,000 colonies was the norm during the decades of the 1960's, 1970's and well into the 1980's. The beekeeping industry has been firmly organized into a series of district cooperatives which are overseen at the national level by the 'Belize Honey Producers Federation' headquartered in the northern district of Orange Walk.

Beekeeping has been practiced almost solely for honey production, and though practiced throughout the country, honey production has been concentrated in the two northern districts of Orange Walk and Corozal. Nearly all the honey produced has been exported to Europe, primarily Great Britain, through the efforts of the national beekeeping federation. Record years of production (in excess of 600,000 pounds) were 1976, and 1984-1988. The average honey yield per colony for the period 1980-1989 was 77.5 pounds. Little, if any, use of honey bees as managed pollinators for the national agricultural base has taken place.

The floral communities and subtropical to tropical climate of Belize have combined to create what could be termed a beekeeping paradise. A lengthy primary honey flow period from March into June and secondary nectar/pollen flows generally allow colonies to maintain themselves without the need for supplemental feeding during non-honey flow periods. The primary honey flow commences shortly after the end of the wet season and continues into the hot, dry summer period. Beekeepers frequently extract honey on a monthly basis during this time period.

Beekeeping practices have been strongly influenced by Mexican beekeeping management schemes "imported" from the Yucatan in the early 1950's. As such, Belizean beekeepers utilize top opening, movable frame equipment which is usually of standard Langstroth dimensions, normally 10-frame deeps. Apiaries frequently possess 10 to 30 colonies placed on several long, Mexican style hive stands with up to ten colonies per stand. Apiaries are year round, fixed location, with very little movement of colonies. Beekeeping equipment and supplies are regionally available through the district honey cooperatives.

Honey bee queen stocks, prior to Africanization, have come from Mexico, the United States and internally by the queen rearing activities of numerous Belizean beekeepers. These queen stocks were genetically of European ancestry.

Government assistance to the beekeeping industry has been through the Ministry of Agriculture and Fisheries, which normally employs an apiaries officer in each district and a national apiaries supervisor in the present capital of Belmopan. Apiaries officers are a combination of bee inspectors and extension personnel. Over the past ten years, several of these have received advanced beekeeper training in the U.S. and Israel. The U.S. Peace Corps has also conducted beekeeper training in Belize and has intentions of markedly increasing these efforts in the near future.

"There has been a decline in beekeeper numbers, honey production and colonies because very little has been done to work with this situation."

Africanization

The African race of honey bees (*Apis mellifera scutellata*) and its hybrids now found in the Western Hemisphere, are the result of an introduction of African bees into Brazil in 1957. In

Continued on Next Page

AHAU LIB CAB Mayan God of Beekeeping, entering his beehive expressed as a thatched building. Carved in river slate by the Garcia Sisters, San Antonio, Cayo District, Belize, Central America, 1989.

the 33 years since their escape in the Sao Paulo area, their descendents have spread throughout most of South America, all of Central America, into Mexico and are now reported to be approximately 160 miles south of Brownsville, Texas. The following chronology tracks the African honey bee (AHB) through Central America into Mexico:

Panama	-1982
Costa Rica & Honduras	-1983
Nicaragua & El Salvador	-1985
Guatemala	-1986
Mexico	-1987

The exact arrival of the first pioneer swarms of AHBs into Belize will never be known, however, according to the U. S. Agency for International Development (USAID), the first positive identification of AHBs took place in March of 1987. Considering that AHBs were present in Guatemala in 1986, it is very conceivable that AHBs were present in Belize six months to a year prior to the first recorded detection early in 1987. From the statistical record of honey production by District, depression of beekeeping initially took place in southern Belize beginning in 1987 and progressed northward. To confuse the matter a bit more, AHBs were discovered in the Mexican state of Quintana Roo on the northern Belizean border in November of 1987 and would easily have moved southerly into the major beekeeping districts of northern Belize. Due to the relative short north-south dimension of Belize, it did not take AHBs long to colonize the entire country.

For beekeepers who have only experienced European races of honey bees (EHB), the entrance of AHBs into their region has historically caused serious disruptions to their beekeeping operations. Throughout South and Central America the excessive swarming, fierce colony defensive response and the lack of colony buildup have caused many beekeepers to abandon beekeeping altogether. Thus far this has been the case in every other country in South and Central America where AHBs have gone and Belize has proven to be no exception to this phenomenon.

It needs to be emphasized that African honey bee subspecies (= biotypes) evolved over several million years in response to the tropical and sub-tropical climatic and floral conditions of Africa. Because of this they are much better adapted than EHBs to the tropical and sub-tropical regions of Central America. AHBs are able, by means still not completely understood, to outcompete EHBs in these regions of the Americas.

Based on information we received from individual district apiaries officers and the statistical records of the Belizean Ministry of Agriculture and Fisheries there has been a decline in the number of beekeepers, number of producing hives and honey production during the past several years. We were able to further document the beekeeping decline during our six weeks in Belize by visiting apiaries in all six districts.

We visited 58 apiaries which contained approximately 620 colonies. Individual colony health ranged from large numbers of deadouts (colonies devoid of bees) to a minority of hives possessing surplus honey ready for extraction. The majority of apiaries examined were in a state of literal and figurative decay.

Numerous apiaries had been abandoned altogether and left to physically rot, which in the Belizean climate takes a very short time. Nearly all living colonies were infested with comb destroying wax moths. More or less all the deadout colonies had the combs com-

pletely destroyed by wax moths, and most were being attacked externally by termites. There was little to no vegetation management within any apiary sites and we observed many colonies completely overgrown. Evidence of abandoned equipment left within the apiaries was widespread.

Nearly all apiaries and most colonies in those apiaries showed positive signs of mild to severe Africanization. Field identification of Africanization includes a heightened defensive response, brood combs with nearly 100% of the cells occupied by eggs, larvae and pupae, high brood to adult bee ratios, extreme agitation of the bees on the comb surfaces (running), the clustering of vast numbers of bees on the outside of the colonies during and following inspection, and the rapid entrance of worker bees into the colonies without alighting on the landing boards.

During the course of our apiary inspections we collected apiary-wide samples of worker bees to be examined by the USDA Fast Africanized Bee Identification System (FABIS). We also examined worker bees for the presence of the honey bee tracheal mite, *Acarapis woodi*. These analyses were conducted by our fellow team member Dr. Enrique Benitez, a private apicultural consultant from Chetumal, Quintana Roo, Mexico. Based on FABIS morphometric analysis, 39% of the honey bees examined would be termed "highly" Africanized. The consensus of our review team was that all apiaries visited, if not already fully Africanized, were in the process of eventual complete genetic domination by African honey bee genes. We also discovered the first known infestation of the honey bee tracheal mite in Belize. It was found in a single apiary near the village of San Antonio in the Cayo District in southwestern Belize near the border with Guatemala.

The review team was constantly impressed by a condition that should be described as *beekeeper discouragement*. All beekeepers encountered commented that their beekeeping operations are much smaller than in previous years. Reductions of 50 to 75% were commonly reported. With few exceptions all interviewed beekeepers were doubtful that beekeeping conditions in Belize will improve.

We did encounter a minority of beekeepers who have fully recognized the significance of Africanization and are in the process of changing their management systems in attempts to maintain colony productivity. These changes include: frequent colony examination; careful queen and swarm management; removing apiaries from human and animal domiciles; placing colonies on individual hive stands; reducing the number of colonies per apiary; extracting honey away from apiary locations and/or night-time honey extraction; judicious use of smoke; and finally, the requirement of additional protective clothing. It needs to be emphasized that it was a small minority of beekeepers who expressed the willingness to continue the battle with *abeja africanos* (African honey bees).

"(some) beekeepers have recognized the significance of the AHB and are changing to meet it."

Predictions

For the next several years, left unassisted, beekeeping will remain on the decline in Belize with only the minority of those most skilled beekeepers continuing to modify their beekeeping systems as they learn to cope with AHBs and their hybrids. Eventually, as in other tropical American countries, new beekeepers will enter the profession. Under this scenario, in 10, to 15, to 20 years beekeeping will perhaps regain the economic stature it held prior to the entrance of AHBs in the late 1980's.

In an effort to assist the rehabilitation of Belizean beekeeping, our review team was requested to provide a strategy to expedite beekeeping recovery. In summary, this suggested program includes three primary objectives for immediate implementation, which are:

1. Immediate development of European queen sources from geographical areas still unaffected by AHBs and *Varroa jacobsoni* infestation.
2. The establishment of an indigenous queen rearing program.
3. The development of AHB management programs and training, using a technical advisor brought into Belize from a country that has already undergone the AHB phenomenon. Educational assistance would be immediately available through the development of a cooperative program with the Mexican program for the control of AHBs.

We fully appreciate that this program will require fiscal and technical resources that are presently beyond the capabilities of the beekeeping industry as presently structured. This program has been recommended to the Belizean Ministry of Agriculture and Fisheries in order that they may seek external funding for its implementation.

Acknowledgements

We express our gratitude and debt to our fellow team members, Mr. Martin Cal, Apiaries Officer, Belizean Ministry of Agriculture and Fisheries; Dr. Enrique Benitez, Apicultural consultant, Chetumal, Quintana Roo; and Mr. Julian Avila, Belize Honey Producers Federation. We also thank Volunteers in Overseas Cooperative Assistance, Washington, DC, who sponsored the consultancy; the USAID mission in Belize for technical support; and the U.S.Embassy, Belize city.

All Wrapped Up

MARGARET FIFE TANGUAY

Two lady beekeepers, city slickers at that, have beaten the market by answering the needs of a targeted market segment — people too busy to wrap presents.

Backyard beekeeping in Brentwood is almost a tongue twister, but my partner Brenda Noyes and I were able to answer specific trends, to capitalize on the life-style of our own neighborhood, and to carry out a profitable beekeeping business for the past five years. Lest you think the money is gold, our profits tend more toward copper, but our honey is good as gold. After all, most hobbies cost plenty to maintain, but our's pays for itself with "money left over"

The bee pasture in our Southern California neighborhood is ideal. There are beautiful lawns and flower beds, and sprinkler systems to make the flowers grow. Scattered swimming pools and hot tubs form an abundant water supply — but don't kid me, it's not the beautiful rose or smiling pansy that provide enough nectar for my bees, it's the flowering trees of southern California: the lavender Jacaranda, the flaming Coral trees, the fragrant citrus, the pungent Eugenic hedges, jade plants, towering avocado trees and spreading walnuts whose blossoms make our honey. There is always something flowering, enough and then some.

In our modest suburb we kept our near neighbors happy with an educational program. Sounds grand, doesn't it, but in a time honored beekeeping tradition we sweetened them up with gifts of honey, and more importantly, we involved them in the process. Everyone saved jars for us, and as you know, once someone starts saving jars, they are hooked. There's no way to make them stop.

Margaret Fife Tanguay.

The involvement went even deeper than that. What we needed was help, of the heave ho type. When Margaret first got the hives, hand-me-downs from a carpenter, she went to the L. A. County Beekeepers Association meetings and met venerable Howard Westley, another Brentwood neighbor, to whom she apprenticed herself. From Howard and Jim Tighe, a displaced Bostonian, homesick for his bees, we learned the trade. The L. A. Honey Company rented or sold us all we needed, so we were launched.

The first spin out we invited a couple of friends, a classroom teacher, a colleague and our families to help. Even Grandma Tanguay, then 85, made baking powder biscuits, timing them to be done to coincide with the first bucket of new honey. All the workers took a break to taste the new honey on those feather weight biscuits with real coffee in the good China cups. Nothing is too good for our free labor. At the end of the day everyone went home with a party favor — a complimentary (recycled) jar of the best honey they had ever tasted.

The party grew as the years went on; folks from church, our local rabbi, museum docents, teenage friends of our kids, our postman, sorority sisters who just took pictures, long lost cousins, the medical students. We never realized how many people would derive such pleasure from all that hard work. Almost philosophically they seemed to value and treasure this fundamental contact with nature. Each time their enthusiasm grew.

The guest list enlarged and specialists evolved. Only Judy will work right at the hives with Margaret, Jim and Howard. Brenda and Annette are in charge of the hot knife table and the decapping. Mort and Peter run the extractor, Kathy the kitchen and washing up, and Grandma Fife comes from Kentucky to fill the give-away jars.

But we had a problem — too much honey — so we joined the neighborhood craft show and professionally packaged, labeled and calico capped our honey. Peter made documentary give-away sheets on his word processor and laster printer (agrarian culture meets space age technology), we produced kitchen tested honey recipes and finally we made hand dipped beeswax candles in a very colonial way. In truth, we were in business, and making a profit.

Our sales pitch was: bring honey next time not a bottle of wine as a hostess gift; give honey to all those health food nuts on your Christmas list. Or. National Secretary Week is here, or Rosh Hashana needs apples and honey, same as in the time of Moses.

Each year at the craft sale, with our bee posters we do our educational

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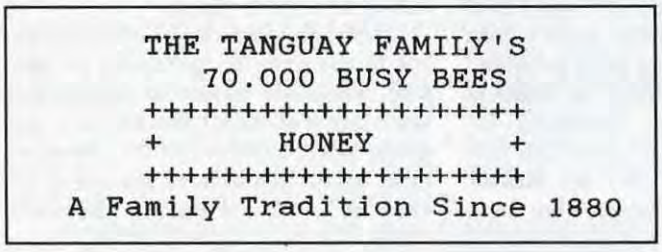
Margaret Fife Tanguay is the great granddaughter of James T. Fife, inventor of the Fife Hive. *Bee Culture* featured a story on Mr. Fife in our October '89 issue.

The whole gang gets together when we make honey!

spiel and more people ask to be invited to help. We are popular speakers for schools and classrooms. We help with Science Fair projects and the entire cycle of nature and people and friends and bees starts over once again with unending momentum. □



Our two labels. Hand-lettering lends a touch of 'Homemade' authenticity.

The finished product. Pure, natural honey in a beautifully decorated, ribbon bedecked jar. The Brentwood folks pay gold for these.

SELLING SECTIONS

ROUND COMB HONEY

BUZZ PHILLIPS

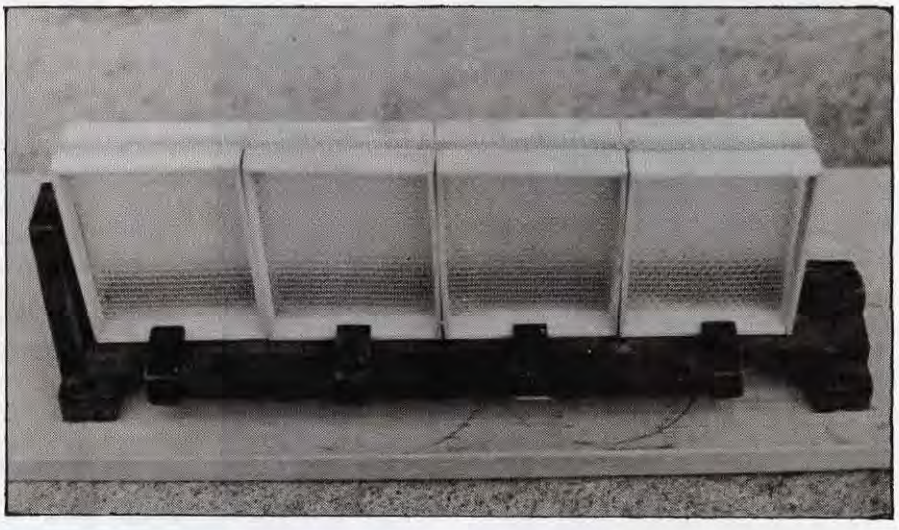
Most beekeepers producing comb honey in round sections have no difficulty in selling it at a good price. However, some beekeepers are expert at producing comb sections, but are at a loss when it comes to selling it. Fortunately this situation can be *corrected*, because the demand for comb honey has *always* exceeded the supply, and will continue to do so for the foreseeable future. The basic reason for the demand is that comb honey is a beautiful, fragrant, and delicious natural food and as long as a high quality product is presented, consumers and dealers stand ready to buy it.

It is helpful to know something about the history of comb honey production and marketing, and apply the successful principles from the past to the present. During the late 1800's and early 1900's, comb honey in square wood sections dominated the honey market. Comb honey was shipped to the major markets by the freight car load. However, it took a lot of hand labor to fold each box, insert a piece of foundation, and assemble the wood sections in the super. Packaging took even more hand labor as each box was scraped free of propolis and wax and wrapped or boxed for market. On the store shelf it was susceptible to damage from poking fingers. Therefore, when mechanized uncappers, large extractors, and machines to bottle honey became available, production of comb honey hit a fast decline. The demand was still there, but supply was gone. A few beekeepers continued to produce sections, with the labor to clean and package being supplied mostly by family members. Comb honey became a rarity.

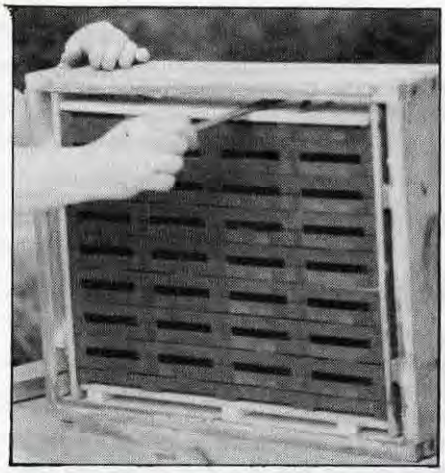
This situation persisted until two events occurred that changed the downward course of comb honey production. First was the production of molded plastic round section equipment by Dr. W. Zbikowski in about 1955, and next, the resurgence of interest in natural foods in the 1960's and 1970's. The idea of round sections was not new, as articles were published in *Bee Culture* in the 1880's illustrating equipment made with wood frames and glass rings virtually the same as today's plastic equipment. What was new was that the plastic equipment was a real labor saver, cutting labor costs to less than one-fourth that of wood sections.

This made it possible to begin to profitably supply the increasing demand for natural comb honey. This was considerably augmented by Master Beekeeper Richard Taylor who, for a number of years, single-handedly promoted the round section equipment first made by Dr. Zbikowski, and adapted the Killion-Kruse principle to the round section super. The effort was further augmented in the mid-1970's, when Tom Ross, of Massillon, Ohio, made further improvements in the equipment, began production under the name Ross Rounds, Inc., and made the equipment widely and easily available through dealers. In the late 1980's, comb section production was further encouraged by the circumstances of the international honey market, which lowered the prices of extracted honey, while the prices for comb sections were steady to slightly rising.

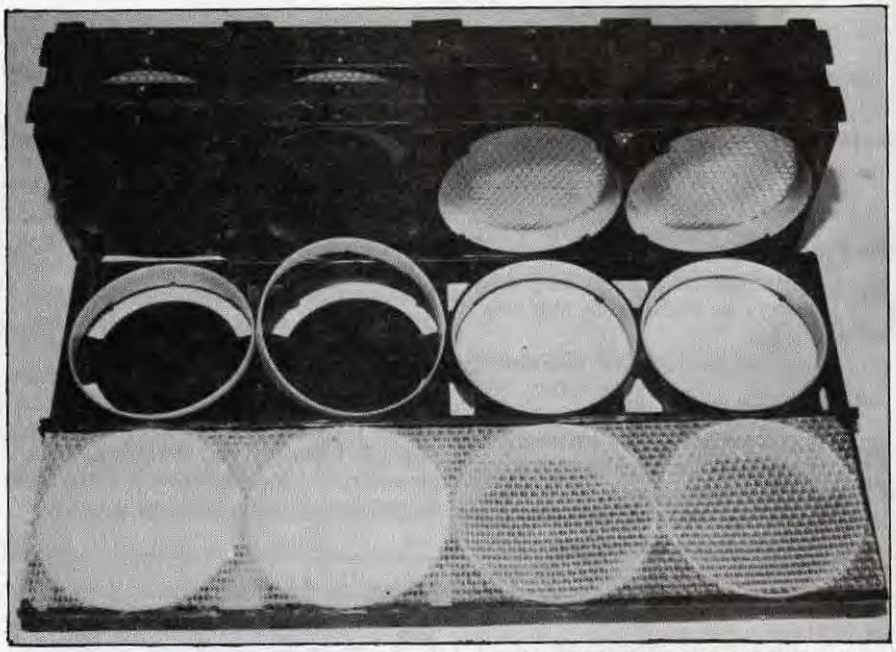
Marketing strategies differ according to the quantity produced. In general, wholesale buyers or distributors want lots of at least 1,000 sections, and prefer lots of 5,000 to 10,000. Moreover, most would like to have the lots delivered at intervals during the year.



Wooden sections, such as these, were labor-intensive to prepare, harvest and market.



With the advent of the round plastic section, both preparation



and installation became easier, and more cost-efficient.

However, since few producers can supply these requirements, most of today's buyers will usually settle for what they can get. Buyers such as these can be found at state and national beekeepers' meetings, food trade shows, through ads in national bee journals and national beekeepers associations' newsletters, and through your state department of commerce. Your customer may turn out to be a fellow beekeeper who already has found a buyer, and can sell more than he alone can produce.

In selling at the wholesale level, it is important to remember that everyone between you and the consumer must make a profit, or there is no sale. Some producers handle this by selling as much as they can locally at retail or direct to stores, and sell the balance of their crop at a wholesale price. Be sure the wholesale price you set includes all your costs and a reasonable profit. Remember that retail sales take time, effort, and skill, so your wholesale price must leave room to add retail costs and profit, and still arrive at a reasonable and competitive selling price.

Beekeepers producing less than a thousand sections have other options for the disposition of their crop. For those producing only one or two supers, it is no problem, as most eat their crop, enter it in shows or fairs, or use it as gifts. Those who produce more than they can use in this manner must either sell it, or give it away, or keep it in the freezer until they run out of room. The option of whether or not to give away honey rests with the individual. Most beekeepers producing smaller quantities of sections have no problem selling them, and while this is no satisfaction to the beekeeper with unsold sections on hand, it is also his or her salvation.

The solution to this problem is to find someone who likes to sell honey, and make a deal to have them sell your honey for you. Your alternative is to go to your local community college and sign up for some courses in retail marketing, and even this might not work.

The truth of the matter is that some people enjoy selling, and others do not, and there is no point in doing something you do not enjoy unless your life depends on it. Certainly, the reduced profit from having someone else retail your honey is not likely to force you into bankruptcy, so go ahead and produce all the honey that you enjoy producing, resign yourself to getting a less-than-retail price for it, and let someone else enjoy selling it. □

QUESTIONS? ANSWERS!

Richard Taylor

No Help Here

Q. Can mites be spread from one colony to another by the beekeeper.

John E. Palmer
Newmarket, NH

A. This is not how mites are normally spread, and I do not believe it is a problem against which one need take precautions. However, moving bees (i.e., brood and frames) from one colony to another may contribute to moving both or either tracheal and varroa mites.

Question?

Q. Why are you opposed to the use of menthol to control tracheal mites?

Russell Peter
Kennewick, WA

A. I do not like introducing any foreign substance into a bee hive. I make an exception for terra, which is effective even in minute quantities, is inoffensive to bees and presents no danger of contaminating honey if used correctly. Menthol is offensive to bees and must be used during warm weather. Some beekeepers have reported good results from just dropping two or three menthol cough drops into the brood nest area. The bees do not retreat from these, but on the contrary, consume them, and this seems perfectly harmless. More promising is the use of vegetable oils, as bees which come into contact with these appear, as of now, resistant to mites. Since mites do not contaminate the hive furniture, my own practice is to revive mite-killed colonies by supplying them with combs of brood and bees from other colonies, and requeening, thereby solving, more or less, the swarming problem as well.

Good Thing

Q. When in the fall should I treat my bees for mites and wax worms?

Frank Laster
Dalton, GA

A. I know of no good treatment for wax moths in an active colony other than (1) strong colonies and (2) sub-freezing temperatures. For tracheal mites, the current recommendation is to use pre-packaged menthol pellets. These can be purchased from bee supply companies in mesh pouches. The basic requirement is to use them only *after* all honey has been harvested but when temperatures will rise above 60°F. The pouch is placed over the brood combs and left there for two weeks. Detailed instructions are provided with the medication, and must be followed precisely.

Heat, or Not

Q. Does all extracted honey have to be heated before bottling, or is this procedure insurance against types of honey that granulate quickly?

P. Zalewski
Glen Ridge, NJ

A. Some honeys, such as those from many of the tree sources like basswood, are very slow to granulate and should not be heated. Other honeys, such as buckwheat and dark honeys generally, are seriously degraded by heating. The only reasons for ever heating honey are to prevent granulation and to prevent fermentation. Honey that is good and thick is not vulnerable to fermentation unless exposed to moisture. If, then, one sells his honey directly to customers, rather than through stores, where it is apt to be on the shelf a time, it is best to bottle only honey that is not thin, warming it a bit, perhaps, for easy bottling, and then put a sticker on the jar explaining granulation and how it can be returned to liquid by warming the jar in hot water.

Drone Comb Home

Q. I have seen ads for drone foundation to be used to control varroa mites. How does this control varroa?

Walter Swartz
Montclair, NJ

A. The varroa mite lays her eggs in brood cells and has a predilection for drone brood. One idea, then, is to remove capped drone brood after the mites have begun to develop there, thus reducing the mite population.

Not Fun!

Q. My bees are near an amusement park, and an officer of the park says that a number of stings have been reported. He has proposed either to put out poison for the bees to take back to the hive or put out sticky syrup to drown them, but instead, we are going to set out syrup with sticks floating in it to attract the bees away from the problem areas without harming them. Can you suggest anything else?

Wayne Kartchner
Farmington, UT

A. When people begin to complain of stings, I think it is time to move the bees; otherwise, you run the risk of a lawsuit, especially if someone were to suffer a severe reaction. Moving them at least a mile should be sufficient. Trying to bait them away with syrup is likely to exacerbate the problem, by putting the bees in an angry and robbing mood.

Home Made

Q. I'm interested in making my own beeswax foundation, using the method of dipping wet slabs of wood into melted wax to get thin sheets of wax. Where can I find a wax press? And what would happen if I gave the bees unembossed sheets of wax?

Chester Charlton
Santa Cruz, CA

A. Inexpensive foundation presses that work on the principle of a waffle iron were available from England, but I have not seen them advertised for some time. In general, making one's own foundation is not a good idea. It is often of poor quality and is seldom worth the trouble. Beeswax can be swapped for foundation with a small "workup" charge, making it quite inexpensive.

INNER COVER . . . From Page 509

wants to carry out. It has had a few growing pains, and is approaching what could loosely be called 'maturity' All the connections have been made, furniture purchased, positions filled (and refilled), and the rest, so that it can now proceed smoothly.

However, because funding is voluntary, levels are never cast in stone until they've been collected and refund time has expired. This makes long term planning difficult and less efficient. Mandatory contributions would provide a more stable financial base, goes the reasoning, so that money collected could be used most effectively. From a marketing standpoint, that's a valid reason because planning is the foundation of sound financial management.

But what happens when there's three bad crop years in a row? Or, a temporary reduction in beekeepers for a period of time because of the African honey bee, varroa mites, or even a shortage on a world scale? All the regulations in the world can't make money when honey isn't produced or imported. And so much for planning if any of these occur.

In my opinion, that argument doesn't hold water. There's going to be annual fluctuations in funding regardless of the cause. Though imports will probably tend to even out the cash flow, the possibility exists that flucuations will occur.

Good planning will include the variances, and perhaps efficiency will suffer a bit because of it. But your business, and mine, and most have the same problems. Why should we spare the Board the opportunity to operate in the real world?

A second reason forewarded by the non-voluntary group is the "Everyone benefits, everyone should pay" reasoning. I'm just not sure that's correct. See if you agree.

Honey sales figures have changed since the Board's inception. But there have been droughts, shortages, inflation, mites, and floods, too. I'm not doubting the data, but neither am I sure what effect the interaction of all of these factors has had on honey prices. Couple this with the fact that some beekeepers are extremely successful at marketing their own product, and the "Why should I pay for your advertising when you're not doing what I do" reason tends to cancel the whole thing out. The conflict is obvious.

Another reason promoted by the 'Forced Only' group is that if the Board continues to allow refunds, it won't be long before the slide becomes an avalanche which will take the whole program with it. There will be a 'run on the bank' as it were, and everybody will request their money back. The Honey Board will become bankrupt.

But this hasn't occurred yet. Though refunds were the highest they've been last year (about 12% of the funds) and have been climbing slowly. I don't anticipate a wholesale slaughter, for a couple of reasons.

First, this is one of the cycles I mentioned earlier. Some producers have needed the money to stay in business (though not all that have requested refunds, I imagine). Let's face it, drought, inflation, pesticides and severely reduced crops take their toll.

But second, and more importantly, a successful program will increase honey sales (or at worst keep them stable), and when the price support program goes under, direct sales will be the mainstay of the honey industry. Producers, when they can no longer rely on the government for a stable marketing system, will be required to deal exclusively on the free market. A stable, solid and professional marketing program is the only way this will occur.

As an afterthought, there will always be some refunds requested by those individuals who are successfully moving their product without any assistance, thank you. In fact, it would be good to see that contingent increase in size, but some producers can't move as much as they produce, while others have no intention of even considering anything but selling to a packer. Both are good and proper, and both need a generic program like the Honey Board.

These are the primary reasons the 'Forced Only' club advocates — reduce annual variability, increase fairness, and decrease the chance of wholesale refunds.

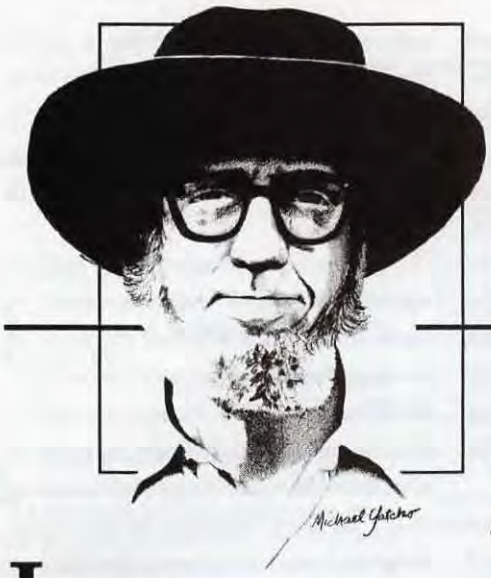
Now, let me give you two reasons why donations *must* remain in your control:

First, and most obvious, is that a mandatory deduction is a tax. It will be voted on, certainly, but it is a tax over which whose spending you will have NO control! (Presently, if you don't like what you see, you can 'vote' by pulling your funds.)

Which brings up the second, and in my opinion, far more sinister reason the mandatory contribution must not occur. The way the USDA has structured this program, the Board of Directors, the people who decide where the money goes, ARE NOT ELECTED. Rather, THEY ARE APPOINTED by the Secre-

"One reason often given . . . (to eliminate refunds) . . . is that everyone will ask for their money back, and the Honey Board will be bankrupt."

Continued on Page 546



BEE TALK

RICHARD TAYLOR

Box 352, Interlaken, NY 14847

"This is a simpe, effective way to harvest honey. Try it yourself and see."

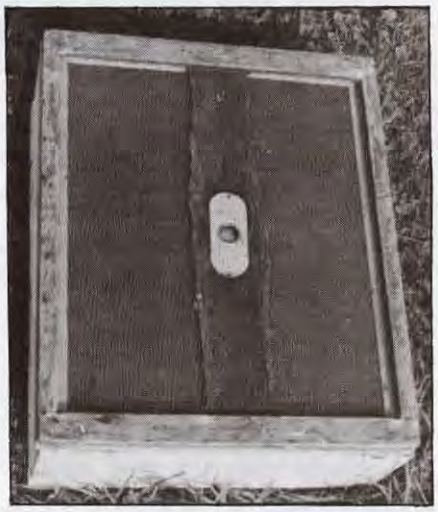
I think I have never talked here about harvesting procedures. Any manual of beekeeping will tell you, in a general way, the various ways to get the honey off the hives, but beekeepers with limited experience often get fouled up on some detail. So I'm going to describe in great detail just how I do this. I don't claim that this is the only way or even the best way, but it works best for me, and it is the system I have been using reliably for years. I'm going to be talking here about harvesting comb honey, but with obvious modifications of detail, the system is applicable to harvesting honey for extracting.

I use two-way bee escape screens. The standard inner cover is designed, with its oblong hole in the center, to be used with these bee escapes, but it does not work nearly as well or as fast as an escape screen. An escape screen is just like an inner cover except that most of the wood is replaced by eight-mesh screen, that is, screen with eight openings per inch rather than the usual sixteen. A thin wood strip runs down the center, with the oblong hole in the middle for the two-way escape device. I know of no company that sells these, but it is a simple matter to make them up. An even better, though less rugged, escape screen is the so-called "down and out" screen, which has the two-way escapes in two corners, placed in such a way as to allow the bees to escape from the supers into the hive below OR to the outside. These can be purchased or, if you have one to copy, you can easily make more. In any case, it is essential to use eight-mesh wire screen, not ordinary fly screen.

One two-way escape is enough. Beekeepers sometimes think they should use at least two, in case one gets plugged, but a two-way escape rarely gets plugged *unless* there is brood in the super above it, in which case it will certainly become plugged.

When a super of comb honey is ready to harvest I stand the brick that I keep on each hive on end. Sometimes two supers can be taken at once, but seldom do I find three of them all finished. If two are to be taken, then I stand two bricks on the hive on end, or lay a stone there, or whatever, to remind me. And in any case, I always keep the supers that are farthest along *on top*, leaving the least finished ones underneath. This minimizes travel stain, and makes harvesting simple

When the day to begin the harvest arrives, I go into the apiary and lean an escape screen next to each hive that has a brick on end. The rest is simple. I raise the super from behind a few inches, slip the escape screen in, let the super back down and then, with hive tool, slide everything into place. It is extremely easy and simple.



This is the two-way escape screen that works so well for me. Make sure the rim is ON TOP so bees can get to the escape device.

With comb honey you do not harvest all the honey at once. You take the supers as they get finished, and before the honey has become darkened by travel stain. Hence, you do not need a great supply of escape screens. Ten are enough for forty or fifty hives, each one getting used over and over as needed.

Before pushing the two-way escape into the center hole I peer into it to make sure it will work. If the springs have been propolized or there is any other obstruction, I clear it with a little nail or toothpick. If the space between the spring tips is too small or too large, that is easily corrected by a bit of probing with a nail. Usually they are okay, requiring no fussing around at all.

The inner cover on the super must not be pried up or loosened. This is important. The bees will have propolized it down tight, and thus it should remain. A loose inner cover easily slips slightly askew, creating a crack through which the bees will rob the honey out.

And if you are producing comb honey, then that inner cover must have only a thin rim around the bottom, so that there will be no more than three-eighths inch of space under it. If the space is larger, then you will find a drizzly mess when you pry it loose. By the same token, you cannot produce round sections in a super that is more than four and a half inches deep — as I have noted before.

The inner cover hole, meanwhile, has been covered with a scrap of asphalt shingle. This is better than scrap wood,

because you can flatten it down tight, leaving no crack for bees to get back in. I keep a few discarded asphalt singles in the apiary all the time, tearing off scraps for this purpose as needed.

Having got all the escape screens inserted under the supers to be harvested, and with the outer covers still off the hives, I now go back and check each one to make sure there are no cracks. If there is a crack, then there will be a few tell-tale bees there, so it is easy to spot. Anything that looks like it might be big enough for a bee to get through, sooner or later, is taped over with a piece of masking tape. You don't need to use duct tape for this; masking tape, which is cheap, works fine, and stays in place long enough to get the honey harvested. Bees don't chew through it, because they do not know there is any crack under it.

I leave the escape screens in just two nights, no longer — unless, of course, it is raining on the day for harvesting, or something of that sort. A day and two nights are long enough. If you leave the honey longer, then the two-way escapes can get gummed up. And if you have missed a crack, then this enables you to get the honey off before the bees find that crack and harvest it for themselves. There are usually very few, if any, bees left in the supers. Once in a great while you'll find bees still in the supers. Check to make sure there is no brood in them. Bees will never abandon a super with even a small patch of brood in it. Of course, comb honey should never have brood in it, and almost never does. If the problem is just that the escape screen for some reason didn't work, put on another. Usually this second screen can just be inserted on top of the one already there, and all the bees will be out the next day. Nine times out of ten the reason for the failure of the escape device is that the bees were able to go back into the super through some crack. Usually this will be an unnoticed looseness around the two-way escape itself. Again, sometimes a rank beginner will use the screen upside-down, so that even if the two-way escape is inserted properly, there is no space above it, and the bees cannot even get to it. Be sure there is space under the super, that is, have the rim of the escape screen *on top*.

Inserting the screen is a simple task. Simply lift the super(s) you want to clear, slide the screen in, and set the supers back down. Adjust everything so it is bee-tight. Any cracks or crevices can be covered with masking tape later.

Harvesting a fairly large apiary now takes only a few minutes — as long as it takes to carry the supers from the hives to your truck or car. I stand them on end on the tail gate as I remove them, so the few bees, often drones, can fly home. But they must not be left exposed that way for more than a half hour or so. Then, when I'm ready to start home, I stack them crosswise, for the same purpose. By the time I get to the honey house there are very few bees left, maybe a half dozen, maybe more. These fly to the window and I let them out.

Now I've got the supers stacked in my honey house. As the season continues more will be brought in, as the honey gets properly finished by the bees, but meanwhile, the work in the honey house begins. Here there is plenty of opportunity for mistakes. I'll give the details of my honey house work next time. □

Questions and comments are welcomed. Use Interlaken address, above, and enclose stamped envelope for a prompt response.

INNER COVER . . . From Page 543

tary of Ag. Of course, the secretary is given a list of people, drawn up by a nominating committee who more or less knows what's going on in the honey industry. However, that list is not always rubber stamped and a given individual can be REJECTED. In fact, the secretary can continue to reject people until he gets exactly the right person.

So, for a moment, imagine the following scenario

A global market oriented administration decides that 'small' commodity producers (dairy, honey, soybeans, wheat, etc.) are 'inefficient' and should be weeded out so only the big guys are left. This directive is foremost in the minds of the people who select the appropriate secretaries, the Agricultural Secretary among them.

The Ag Secretary then transmits that philosophy directly to the people he/she appoints—i.e. commodity board members. The upshot of this is that your funds *could* be going to put you out of business. Or, at the very least, not being spent in your best interests.

The fact that Board Members aren't elected is a sore point, and an easy remedy could be to have elections, run by ASCS, for any given region.

But I don't think that's going to happen. It hasn't yet, for any Board I'm aware of, and it probably won't for this one either. Which means your *only* voice is your choice to support, or not support.

And this, finally, brings me to why I fear for the future of the Board.

Many producers are concerned about the problems I've already mentioned (plus some I haven't) and feel there's only one alternative — Kill the Board. This is because the thought of being *forced* to support an organization they do not have a say in is not a viable alternative, and since there *is* a chance the Board could continue on a 'Forced Only' basis, the choice will be to Kill rather than Keep.

This would be catastrophic for this industry. But it may happen, just the way I've outlined, and for the reasons I've catalogued here. The choice is completely in the hands of those who support the Board with their money, and their votes.

Are you one of these? If so, don't Kill the Board, but don't make it a 'Forced Only' club either. Keep the Board, but keep it Free!

Kim Flottum

Game Answers — from page 533

X	H	G	O	L	D	E	N	R	O	D	C	V	R	M	I	E	A	K
M	A	P	L	E	U	P	I	S	R	J	C	C	R	D	E	V	P	R
P	U	R	P	L	E	V	E	T	C	H	Q	Y	S	N	U	J	P	Z
K	W	G	O	Y	T	T	Y	J	A	E	Z	W	K	M	Q	R	L	A
B	R	R	V	B	K	F	J	V	H	X	F	V	E	T	L	C	E	P
L	Y	A	X	T	X	Z	L	V	A	Z	U	G	S	U	O	X	Y	G
G	S	G	T	K	Y	W	X	U	H	L	F	O	Y	L	C	X	P	D
Q	T	K	Y	R	T	I	R	O	N	W	E	E	D	I	U	N	H	A
C	R	D	L	Y	X	J	G	J	L	X	M	L	A	P	S	W	G	N
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O	W	F	O	W	V	I	D	K	Y	S	D	Z	Z	O	F	W	N	E
V	B	X	P	B	A	S	S	W	O	O	D	T	A	P	X	A	Y	L
E	E	R	P	J	I	T	Y	Q	Z	O	I	T	S	L	N	X	R	I
R	R	I	P	F	O	R	S	Y	T	H	I	A	T	A	H	B	V	O
T	R	D	P	F	C	A	H	Y	V	V	U	Y	E	R	K	H	H	N
A	I	C	T	X	I	N	B	F	H	X	D	H	R	M	V	K	C	S
B	E	L	C	Z	J	I	S	H	O	I	O	R	U	S	B	W	P	M
J	S	O	E	Z	I	P	L	I	N	D	E	N	C	I	K	Q	Y	F
U	L	O	R	H	E	N	B	I	T	Z	Y	Z	M	I	X	U	E	E
H	H	I	S	M	Z	T	W	V	J	U	H	B	M	N	T	C	L	P

GLEANINGS GLOBE

SEPTEMBER, 1990 ALL THE NEWS THAT FITS

Penn State Takes the Lead

EXTENSION THE ANSWER

In a recent article in CHOICES, the influential magazine of the American Agricultural Economics Association, two college administrators argue that many of society's perplexing problems need to be tackled head-on by the nation's Land Grant Universities, and the venerable Extension System is the way to do it.

Writing in the Second Quarter 1990 issue of CHOICES, Penn State's Lamartine Hood, Dean of the College of Agriculture, and Wayne Schutjer, his Associate Dean for Extension, contend that cooperative extension of the agricultural colleges has a unique opportunity to provide leadership for the entire university.

"Cooperative extension provides a practical working model of how a university-based outreach program can translate the scholarship of research scientists into solutions to problems for individuals and communities," they write. "Its experience with and access to local government and community leadership uniquely qualify cooperative extension to help interested faculty in all of the university's colleges conduct action programs, research, and continuing education at the local level."

At the same time, they note, such interaction can provide scientists with an understanding of real-world problems facing these groups. By using the cooperative extension system, say the authors, the "total university obtains the knowledge necessary for fuller participation in the social and economic problems facing society," and would also gain extension's off-campus program delivery skill, community connection, and far-flung, community-based political and budgetary support.

Hood and Schutjer envision a broad university-wide commitment to outreach programs that bring university resources to bear on pressing social issues: drug abuse, teenage pregnancy, water quality, waste management and economic development.

Commenting on his essay, Dean Hood says that what he seeks isn't so much the direct intrusion of university researchers into the affairs of a locality: rather, he sees a pressing need for researchers to insure that their research priorities meet the needs of society as expressed in the continual dialogue cooperative extension has with the public.

That dialogue and issue-oriented priorities, Hood notes, netted Penn State Cooperative Extension an additional $5 million (41% increase) in state funding in 1987 and Penn State research another $3 million a year later. Fifty-five new cooperative extension field staff were hired, many of whom were placed in urban areas, such as Philadelphia. Hood and Schutjer concede that this is a case of putting extension programming where the votes are, and believe that from the standpoint of mission fulfillment, social problem-solving, and funding tactics, it's the right thing to do.

"It's unrealistic, though," Hood says, "to think that you will have universal support for these changes among the faculty. It's an evolutionary process. But as you appoint new people, you bring them in with this understanding."

Emphasizing that the entire Land Grant University has a public service mission, Hood stated, "I like to say that *everyone* at a Land Grant University has an extension responsibility, even if not an explicit extension *program* responsibility. I like to just leave that philosophy weighing upon them."

USDA and the AHB

MORE TRAPS

The USDA has set up four interconnected trap lines in south Texas to capture and track swarms of Africanized honey bees. "We expect the first swarms to reach southeast Texas between late summer and next spring," says James W. Glosser, administrator of USDA's Animal and Plant Health Inspection Service. The traps have a chemical attractant to lure honey bee swarms inside. Once trapped, they are sent to a lab for identification because it is impossible to differentiate a Africanized honey bee from a local honey bee without a lab exam.

USDA traps use a box but are similar to this one.

More Being Spent in Restaurants

FOOD COSTS UP 7.5%

U.S. Retail food sales were up about 7.5% in 1989 to $686 billion. But the share of disposable income Americans spent on food and other grocery products fell from 11.9% to 11.6%. Sales included $276 billion in retail sales of food for consumption at home, $223 billion in food eaten away from home, $77 billion in alcoholic beverage sales and $119 billion in sales of non-food grocery items such as tobacco, health and beauty aids, and paper products. **About 17% of the total value of retail food went to U.S. farmers.** Imported farm commodities got 3% and unprocessed seafood 1%. Food processing firms provided 16% and grocery wholesaling and retailing establishments 19%. Eating and drinking places provided 11% of the value of final sales, transportation 4% and other food suppliers 29%.

FEDERATION NEWS

ESSAY WINNER

A California student, who helps his father with his backyard beekeeping hobby, is the winner of the top prize in the American Beekeeping Federation 4-H Essay Contest.

Tim McGuire, 13, of Camarillo, CA, earns $250.00 cash as the top essayist in the 1990 contest on "The Relationship between Honey Bees and Man through the Ages". He attends the Master's Christian School and is a member of the Las Posas 4-H Bee Club. He has helped his father work his three colonies, hiving swarms and extracting honey. This year he and his sister started their own colony.

In his winning essay, Tim documents the man-bee relationship from cave drawings to the Space Shuttle.

"In the beginning we were after the honey," he wrote. "We then became dependent on (bees') pollination, and now, with a new emphasis on nutrition, we are returning to our appreciation of the healthful qualities of honey as opposed to our dependency on refined sugars."

Placing second is **Allison E. Rose**, 13, of Hernando, MS. She has been in 4-H entomology four years. For her efforts she gets $100.00. "Nature has been enriched by the work of the honey bees," Allison wrote, "for the millions of flowers that have helped the bees make more honey have also received a great gift from the bees, a gift of life for their seeds. Without the visits of bees, most of these flowers would die."

Writing the third place essay and winning $50.00 is **Mark Dickinson** of Tallahassee, FL. "Man has had a close relationship with honey bees throughout the ages," he concluded his essay. "While man has kept bees for thousands of years primarily to enjoy the products of the hive, today man is becoming more dependent on the honey bee than ever before. Man's relationship with honey bees should grow even closer as time goes on."

In addition to their cash awards, the three essayists will receive a book on beekeeping as will each of the state winners from the other 23 states which submitted essays.

Special recognition is being made of **Michael Pruett**, the KY state winner, for the line drawing of a beeyard which he drew to accompany his essay.

'91 MEETING IN MOBILE

The American Beekeeping Federation's annual convention will return to the Deep South next year, when it meets in Mobile, AL, January 23-27.

"In Mobile, beekeepers will find all the hospitality the south is famous for," says Troy Fore, ABF secretary and convention chairman. "The people in Mobile promise to 'roll out the red carpet' for us and to do everything they can to make our convention a success."

The headquarters hotel will be the Stouffer Riverview Plaza. The 375-room highrise is located in downtown Mobile, overlooking historic and scenic Mobile Bay. The beekeepers are expected to fill the hotel and, for the most part, be the only group meeting during that week.

Mobile is located where north-south Interstate Highway 65 intersects east-west I-10. It is a day's drive from Jacksonville, FL (420 miles), Nashville, TN (467 miles) and Houston, TX (491 miles). Several major airlines serve Mobile Municipal Airport.

"A program which will inform and entertain while addressing the important topics of the day is being planned," says Mr. Fore. "We are open to suggestions for program topics and speakers."

More details will be published as the convention date nears. Beekeepers who are not members of the Federation who want to receive the convention mailing should contact the ABF, P. O. Box 1038, Jesup, GA 31545, ph. (912) 427-8447. Those who have inquired and all ABF members will be mailed a pre-convention packet in the fall.

For Next Year

1991 CONTEST RULES

The topic for the 1991 American Beekeeping Federations 4-H Essay is "Honey Use in My Community" Your essay should describe ways honey is sold, served, and used in your community. Rural residents could focus on a nearby city, but the size of the community reviewed or the variety of uses discovered will not be factors in judging the essay.

To gather information for your essay, you may investigate the following areas:

Consumer Use: Do your neighbors eat honey? Why or why not? How much do they use and how do they use it? Talk to the "good cooks" in your community about their use of honey.

Retail Honey Sales Outlets: (Beekeepers who sell directly to consumers as well as food stores.) Note volume and variety of honey on display. Interview managers about their honey sales.

Foodservice Establishments: Visit traditional restaurants and fastfood outlets to determine if honey is available on request, is routinely offered with certain menu items, or is not available. Interview managers about the establishments' use of honey. Don't overlook your school's foodservice.

Food Manufacturers: If there is a food processor in your area which could use honey in its products, visit with the manager to discuss the company's use or non-use of honey.

RULES

Contest is open to **active** 4-H Club members only. 4-H'ers who have previously placed first, second, or third **at the national level** are not eligible; other state winners are eligible to re-enter.

Essays must 750 to 1000 words long, written on the designated subject only. **All factual statements must be referenced with endnotes;** failure to do so will result in disqualification of the essay. A brief biographical sketch of the essayist, including date of birth, complete mailing address, and telephone number, must accompany the essay. (The word limit does not include the references or the essayists biographical sketch.)

Essays submitted for national judging must be typewritten, double-spaced, on one side of the paper and should follow standard manuscript format.

Essays will be judged on a) accuracy; b) creativity; c) conciseness; d) logical development of the topic, and e) scope of research.

Essayists **should not** forward essays directly to the American Beekeeping Federation office. Each state 4-H Office is responsible for selecting the state's winner and should set its deadline so state judging can be completed at the state level in time for the winning state essay to be mailed to the ABF office **before** May 1, 1991. No essay received after May 1 will be considered.

Each state may submit **only one entry.**

Final judging and selection of the National Winner will be made by the ABF's Essay Committee, whose decision is final.

The National Winner will be announced by July 1, 1991.

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

Mail the winning state entries to 4-H Essay Contest, American Beekeeping Federation, Inc., P. O. Box 1038, Jesup, GA 31545.

Hobbyists Too

REGISTRATION REQUIRED IN FLORIDA

It is time for beekeepers to stand and be counted. In fact, in Florida, it's now the law.

Recent changes in Florida's apiary laws mandate that all Florida beekeepers commercial and hobbyists alike — must register with the Florida Department of Agriculture and Consumer Services' (FDACS) Bureau of Apiary Inspection and be issued a registration number and certificate.

"It's illegal to sell or transport honey bee colonies that haven't been inspected or for anyone to keep bees if they haven't registered with the department," said Laurence Cutts, chief of FDACS' Bureau of Apiary Inspection. "The law applies not just to commercial beekeepers but to hobbyists as well, regardless of how many bees they have or how they are used."

Once a beekeeper is registered and the bees inspected, the beekeeper will be issued a registration number that must be used to mark the hives. Registration numbers will also help in identifying stolen hives.

Cutts said that commercial beekeepers have nearly all complied with the law, but that many hobbyists may not be aware of their responsibility.

Changes in the law came about in response to various problems within the industry including American foulbrood and, more recently, varroa mite, as well as to potential problems such as the eventual arrival of the African honey bee.

"For the present, bees need to be inspected and certified for problems like American foulbrood and varroa mite. This protects all beekeepers, including the one being inspected. Eventually, with the arrival of the African honey bee, bees will have to be certified as European."

"African bees are going to have an impact on both the hobbyist and the commercial beekeepers," Cutts said, "and will change the face of beekeeping for many years to come. For example, beekeepers will no longer be able to move and place their hives with the same degree of ease that is currently the case."

A good registration and certification program should help eliminate some of the problems both now and in the future.

Although the law has been in effect for about two years, apiary inspectors have not strictly enforced the requirements so beekeepers would have time to comply. That period of leniency is about to end, however, and beekeepers could conceivably face administrative fines of up to $5,000 for failure to comply with the law.

"Although the penalties do exist, our object is to gain compliance, not to fine people," Cutts explained. "We are concerned that not everyone is aware of the changes in the law, so we want to do everything we can to publicize the requirements. Hobbyist beekeepers are traditionally the most difficult to reach, because they are not always associated with a beekeeping organization that provides ready access to new information."

To register in Florida, a beekeeper should contact the Bureau of Apiary Inspection, Division of Plant Industry, P. O. Box 1269, Gainesville, FL 32602 or call (904) 372-3505. The toll-free number is 1-800-821-8662. There is no registration fee.

SEND NEWS and VIEWS TO GLOBE

Marketing Tips from WA State

In the 1989 summer edition of the Washington State Beekeepers Newsletter, the following public relations ideas were published. Here they are:

- **Make a presentation to a local school and take a reporter with you.** Use an observation hive, a video, bring a suit, hive, other beekeeping gear — put on a show!
- **Conduct a honey tasting.** Take samples of local honey varieties to your newspaper's food editor. Don't forget to bring something to eat with these, crackers and the like. You might even want to make up some recipes with honey and the same with sugar so the editor can see the difference honey makes.
- **Provide a tour of your facilities.** Invite media representatives to join the tour and take pictures of your beekeeping operation in honor of Honey month.
- **Set up a honey display in your local mall or supermarket.** Any high traffic area will do. Offer honey tasting, pass out coupons and honey trivia and tout National Honey Month. Remember, this helps you, not just the stores.
- **Plan your own honey event.** There is publicity power in numbers, especially in small towns. Consider teaming up with other beekeepers and organizing a honey event, such as a sale. Provide free samples of different flavors of honey, pass out honey goodies.
- **Make a special "National Honey Month" sticker for your honey jars.**
- **Send a favorite honey recipe** along with a release and a personal note, to the food editor of your local newspaper.

USDA MAKES GOOD MOVE

ONIONS and BEES . . .

With help from onion breeders, picky southwestern honey bees might stop holding seed production down and onion prices up, a U.S. Department of Agriculture scientist said.

"We've discovered that nectar from Texas, Arizona and California onion plants contains too much potassium and not enough sugar to suit honey bees, so they don't pollinate the crop," said entomologist James R. Hagler of the Agricultural Research Service in Tucson, AZ.

"If geneticists bred onions with more appealing nectar, it could translate to more seed for growers and less seasonal swings in onion prices at the grocery store," said Hagler at the Carl Hayden Bee Research Center.

Bees do a fine job with the Pacific Northwest's onion seed, grown in summer. But Hagler said poor pollination of the southwest's winter and spring crop cut yield as much as 80% on a field.

In tests in Arizona, "when we moved hives into onion fields, the bees flew out, straight up into the air, about 10 feet above the crop, and flew to blooming mesquite shrubs up to 200 yards distant, rather than gather the onion nectar or pollen," said Hagler in the latest issue of the agency's magazine, *Agricultural Research*.

A positive clue for breeders, said Hagler, is the considerable variability he found in nectar of six commercial varieties. "Wild onions could be another genetic pool, since bees prefer nectar from those types," he said.

Volunteers for Queen Rearing Project

COSTA RICA NEEDS HELP

Do you want to experience and see beekeeping with African bees first hand in Central America? Do you like to work with beekeepers? Farmer-to-Farmer is looking for a volunteer to teach queen rearing in Costa Rica.

Farmer-to-Farmer, administered by Volunteers in Overseas Development (VOCA), is a private, non-profit organization that sends highly qualified individuals overseas to provide short-term specialized technical assistance to organizations or governmental agencies. Peace Corps volunteer Brad Roberts, a farm management specialist working with coffee growers in Guancaste Province of Costa Rica's Nicoya Peninsula, has identified a county agricultural center in Hojancha that needs technical help in queen rearing to help the beekeepers of the region. The center has a 1/2 time beekeeping specialist, Dauber Rodriquez, who will assist the Farmer-to-Farmer volunteer in reaching approximately 25 beekeepers who operate 1,500 hives. The volunteer will teach the beekeepers how to raise their own queens and develop a more gentle bee.

DEWEY CARON

While in Costa Rica teaching University of Delaware semester abroad students, Dr. Dewey M. Caron, Entomologist at the University of Delaware, recently visited Hojancha. Everything is ready for a person familiar with the techniques for raising queens to go to Hojancha and immediately help the beekeepers improve in the region. In Hojancha, as elsewhere in Costa Rica and Central America, the beekeepers have only aggressive African bees unless they raise gentler bees using queens from less aggressive stock. The beekeepers of the Hojancha region need to learn how to raise queens, requeen and to select for gentle yet productive bees in their colonies.

This Farmer-to-Farmer project will work with the Hojancha agricultural center funded by a loan from the Interamerican Development Bank. Dauber Rodriquez, the beekeeping specialist, has over 15 years experience with bee colonies and the necessary expertise to organize meetings of beekeepers. As a volunteer you would teach and demonstrate proper queen-rearing techniques and the methods of how to improve the local bee selection.

Volunteer situations are not necessarily easy challenges. Charles Caulkens, in a September 1989 *Bee Culture* article on beekeeping in Costa Rica, reported that a Peace Corp volunteer in Costa Rica with over 30 years of beekeeping experience from Montana was not able to establish a requeening program and he was working with gentle bees before African bee arrival. But it can be a rewarding experience. Bill Clark, retired Extension Apiculture Specialist for Pennsylvania and now a commercial beekeeper in Pennsylvania, volunteered for a one month Farmer-to-Farmer program working with a beekeeping cooperative in Esparza, Costa Rica. These beekeepers use queen mother stock from Hawaii and San Andreas Island (in the Caribbean) and raise their own queens. Bill Clark reports in the January 1989 *Speedy Bee* that the "resulting cross is very workable". The beekeepers of Hojancha need to learn how to do the same thing.

The Agricultural center has some queens from Hawaii and they have the facilities to help train beekeepers to raise their own F_1's. If you like a challenge, know Spanish, know how to raise queens and would like to volunteer to help beekeepers in a foreign country, this is for you.

Guanacaste Province is the best beekeeping territory of Costa Rica. It has a 6 month dry season and a 6 month rainy season. A volunteer should go south in December or January when the days are hot and the bees are collecting lots of nectar. Hojancha, a community of 6,000 persons, is in an agricultural area isolated in a hilly area of the lower Nicoya Peninsula. You would live and take your meals with a local family. Time off could be spent at Nosara or Samora, the most beautiful beaches in all of Costa Rica only 1/2 hour away by bus. San Jose, the capital in the central valley at 4,200 feet, is 5 hours distant but there is daily bus service.

Interested? Contact Bill Brands of VOCA (202-626-8750) or Dewey Caron at the Univ. of Delaware (302-451-2526) for further details.

IRRIGATION WATER USE INCREASING

Well numbers rise but water sources being depleted

U. S. Farmers and ranchers used 27.4 trillion gallons of water for irrigation in 1988, according to results from the 1988 Farm and Ranch Irrigation Survey conducted by the Commerce Department's Census Bureau.

Fifty-seven percent of the water was used in California, Nebraska, Texas, Idaho and Colorado. The survey shows that an estimated 84.2 million acre-feet of water were used for irrigation, compared with 82.4 million acre-feet in 1984. The average of 1.8 acre-feet of water applied per acre remained unchanged.

Amounts of irrigation water applied varied from a high of 4.4 acre-feet per acre in Arizona to a low of 0.7 acre-feet per acre in Georgia and Michigan. The top five states in estimated total quantity of water applied, in million acre-feet, were California (23.3), Nebraska (6.5), Texas (6.3), Idaho (6.1) and Colorado (5.6).

Nationally, irrigation water used for major crops ranged from a high of 2.8 acre-feet per acre for sugar beets for sugar (0.7 million acres) to less than an acre-foot per acre for soybeans, peanuts, and tobacco.

The number of wells used for irrigation by U.S. farmers increased by 9% from 1984 to 1988, to 346,000. They were operated by nearly 112,000 farmers in irrigating 56% of all irrigated farm land. California,

Continued on Next Page

MORE TAXES!

The average worker will spend 3 minutes a day more this year paying the tax man. Sharon Seiling, family resource management specialist at Ohio State University, says it's going to take 2 hours - 45 minutes of work each 8-hour day to pay federal, state and local taxes. The federal government alone gets 1 hour 47 minutes of that pay, she says. Where does the rest of the average worker's daily pay go? Seiling says nearly 1.5 hours covers housing and household operations. Food and tobacco use 57 minutes of work. The rest of the day goes to health care, transportation, clothing, recreation, other expenses, and some savings.

IRRIGATION Continued

Nebraska and Texas led all states in numbers of wells used.

Farmers reported that 42% of wells used for irrigation used backflow prevention devices. Well depths averaged 226 feet, with an average pumping capacity of 757 gallons per minute and an average operating pressure of 35 psi.

Forty-eight percent of water for farm irrigation came from wells, 11% came from on-farm surface sources, and 41% from off-farm water suppliers. The water from off-farm water suppliers cost an average of $14.45 per acre-foot in 1988, up from $11.21 per acre-foot in 1984.

Acres irrigated by sprinkler systems, representing 39% of total irrigated acres in 1988, increased by 1.5 million acres. Center pivot-low pressure (under 60 psi) accounted for 36% of land irrigated with sprinkler systems.

On-farm pumping of wells and surface water for irrigation occurred on 149,000 farms at a total energy cost of more than $1 billion, or $7,000 per farm. Electricity was the power source for 56% of the acres irrigated by pumps, accounting for two-thirds of energy expenditures.

Expenditures for capital investment in 1988 were reported for 82,000 farms, averaging $7,500 for purchases of irrigation equipment, new well construction, or leveling of land for irrigation purposes. Expenses for maintenance and repairs of irrigation facilities and equipment averaged $2,500 per farm.

The Census Bureau advises that since these data come from a survey, they are subject to sampling variability and other sources of error.

Copies of the 1988 Farm and Ranch Irrigation Survey, AC87-RS-1, are available for $5.00 (stock number 003-024-06863-0) from the Superintendent of Documents, U. S. Government Printing Office, Washington, DC 20402.

Zoëcon has Improved Product

APISTAN STRIP RELEASED

Zoëcon Corporation has announced a new EPA-approved and registered Apistan® Strip that can now be installed in a simple one-step process.

The redesigned APISTAN Strip has pre-cut slits which form the strip into the shape of a "T", allowing it to rest between two frames and thereby eliminating the need for a thumb tack or nail. Because the new strip is more rigid than the original one, it is much easier to slide between the frames of the hive.

The APISTAN Strip has received full EPA approval and will be readily available wherever beekeeping products are sold. Like the original APISTAN Strip, the redesigned product contains a 10% concentration of the active ingredient *fluvalinate*.

According to USDA studies, colonies that are exposed to APISTAN over a 28-day period have shown a 100% Varroa-mite mortality rate.

Colonies infested with the Varroa have a high brood mortality, more deformation and a shorter colony life. Infested hives face strict regulatory requirements, limiting their transportation and increasing cost associated with moving the colony.

HONEY BOARD HIGHLIGHTS

Secretary of Agriculture Clayton Yeutter has appointed 14 members to the National Honey Nominations Committee for terms ending Dec. 31, 1992.

The appointees are from 14 states whose committee representatives completed terms Dec. 31, 1989. In early 1991, the secretary will appoint four National Honey Board members and alternates from names the nominations committee will forward.

Reappointed are Luther Darrel Jester, Osceola, AR; James Harold Gibbs, Valley Center, CA; Philip George May, Harvard, IL; Ann Worischek Harman, Laytonsville, MD; Jack Kenneth Thomsen, Glenwood, MN; Edward James Doan, Hamlin, NY; Howard Merrill Taylor, Stratford, SD; Robert Melroy Graham, Spring City, UT; and Stephen Andrew Conlon, New Martinsville, WV.

Newly appointed are Barbara Mary Stockwell, Arivaca, AZ; Paul Edmund Limbach, Silt, CO; Thomas Joseph Muncey, Sparks, NV; Albert Bryan Belliston, Burley, ID; and Tommie Ray Chancey, Jr., Dayton, TX.

The National Honey Nominations Committee was established by the 1986 Honey Research, Promotion, and Consumer Information Order, as authorized by the 1984 Honey Research, Promotion, and Consumer Information Act. The order provides that the top 20 honey producing states each have one committee representative, which the secretary appoints from names advanced by that state's beekeeping association. The committee nominates candidates from whom the secretary then selects members and their alternates to the National Honey Board.

The Board administers a national promotion program for honey under terms of the order. Honey producers and importers finance the honey board's programs through assessments on honey entering the marketplace. USDA's Agricultural Marketing Service monitors the board.

Region 1: Washington, Oregon, Idaho, California, Nevada, Utah, Alaska and Hawaii.

Region 2: Montana, Wyoming, Nebraska, Kansas, Colorado, Arizona and New Mexico.

Region 3: North Dakota and South Dakota.

Region 4: Minnesota, Iowa, Wisconsin and Michigan.

Region 5: Texas, Oklahoma, Missouri, Arkansas, Tennessee, Louisiana, Mississippi and Alabama.

Region 6: Florida, Georgia and Puerto Rico.

Region 7: Illinois, Indiana, Ohio, Kentucky, Virginia, North Carolina, South Carolina, West Virginia, Maryland, District of Columbia, Delaware, New Jersey, New York, Pennsylvania, Connecticut, Rhode Island, Massachusetts, New Hampshire, Vermont & Maine.

NEW PRODUCT

Shedd's Country Crock new Honey Spread is spreading in popularity.

The spread, introduced in '89 in southeastern markets, has exceeded anticipated sales movement, reported Matthew Smith, associate product manager for Van den Bergh Foods Co.

The traditional Country Crock package includes the National Honey Board's lovable honey bear symbol. "It is a symbol of quality and conveys wholesomeness," Smith said. "Our research showed that consumers are using honey because it is a natural sweetener. We wanted our product to be naturally sweetened."

The product was originally developed in conjunction with a southern restaurant chain.

"Consumers began calling saying 'this tastes great — where can I buy it?' We had a flood of letters," Smith said.

Soon, consumers across the nation may be able to buy it. According to Smith, the product will probably be available nationwide in the next few years.

Please support these and other products which use substantial amounts of honey.

But They Do Have A Place

BEWARE OF BUG ZAPPERS

Bug zappers may do more harm than good, says an insect specialist at Ohio State University. Zappers use light to attract insects and electric grids to kill them.

"Most homeowners hear the zap and breath the smell of fried bug and think they're killing harmful insects," says Dave Shetlar, a landscape entomologist. "But most of the bugs killed, such as ladybugs and lacewings, are beneficial because they eat insect pests or pollinate flowers. Zappers used at night on porches actually kill few pests."

Mosquitoes are attracted to a zapper's light, but only come within 10 feet of it, Shetlar says. "So if you're on the other side of the porch, the zapper draws mosquitoes right to you, and you get bit more often."

Studies show mosquitoes are attracted to faint light, and won't get close to light as bright as that from bug zappers. Mosquitoes usually find victims by searching for carbon dioxide, which is exhaled by mammals.

Bug zappers also kill few flies or wasps because both sleep at night, Shetlar says.

"Many homeowners who buy zappers think they're environmentally conscious because they use the devices instead of pesticides," he says. "Unfortunately, sales of these machines capitalize on homeowner ignorance."

However, industrial zappers will control flies if used right.

"Inside livestock barns, flies go to zappers during the day and until about a half-hour after dark," Shetlar says. "The the machines should be turned off or they'll bring other insects in from outside."

Zappers work in other places, too.

"Once they close for the day, some restaurants use zappers to kill flies or pantry moths. So the machines do the job if used at the correct time and place and against the right insects."

For homeowners, the best way to control flying pests is to prevent them from breeding, Shetlar says. For mosquitoes, that means removing or cleaning objects that hold water, such as old tires and rain gutters, where the pests may lay eggs. For flies and wasps, that means keeping the inside and outside of homes clean.

To keep pests out of homes, use screens on doors and windows. To keep mosquitoes away outdoors, use an insect repellent.

Be Careful When Buying Traps

DON'T GET TRAPPED

False claims are luring consumers into buying traps that only monitor bug populations. Traps sold to control flies, yellowjackets, Japanese beetles and gypsy moths prey on consumer ignorance, says an insect specialist at Ohio State University.

"Fly traps are in," Dave Shetlar says. "They use a sugar and yeast mixture to draw flies into a jar. Although they do attract some flies, they don't control them, and may actually bring more into the house.

"The only effective way to cut fly numbers is through good sanitation. That means keeping homes and yards clean and placing garbage in closed bags or tight containers."

Flies breed on decaying organic matter such as discarded vegetables or meat. They also breed on animal or human droppings.

"The number of flies has dropped way down since people started using tightly-sealed garbage bags and cans in the 1970's," Shetlar says.

If flies are a constant nuisance in a home, Shetlar says find what's attracting them and try to eliminate it.

"In urban areas, problems occur around dumped garbage, pet droppings, or garbage bags torn open by cats, dogs or raccoons," he says. "In rural areas, it could be a mismanaged manure pile that breeds flies."

Consumers are also being drawn into buying a trap for yellowjackets. It uses a sugar mixture and chemical attractant to lure the pests into a jar. Unfortunately, the trap misses its mark, Shetlar says.

"The trap works fairly well on native yellowjackets. But the trouble-makers are the more numerous German yellowjackets, an introduced species. The trap's bait doesn't appeal to them, so they don't enter it."

German yellowjackets have displaced native ones in many parts of the United States, Shetlar says. They're much more aggressive, willing to sting with little provocation, he says.

The best protection from yellowjackets is to avoid them. If they fly or land nearby, stand still and then move slowly away, Shetlar says. Striking or swinging at them or running away often provokes their attack, he says.

Because yellowjackets are attracted to scents, avoid wearing perfume, hair spray or aftershave lotion when outdoors, Shetlar says. The pests also head for shiny objects and bright colors, so avoid wearing shiny jewelry and buckles, and don't wear bright colors, such as yellow or orange.

To discourage both yellowjackets and flies, food placed outside should be covered until eaten, Shetlar says. Garbage should be kept in sealed bags or containers.

Two other traps using chemical attractants can do more harm than good.

Japanese beetle traps are such good attractants, they bring in more pests than they can handle, Shetlar says. They only hold about half the beetles they attract, he says.

"The closer the traps are to plants, the more the plants will be eaten. Moving the traps further away may not help if they bring in many beetles. And adding more traps may also bring in more pests."

Another potentially trouble-causing trap targets gypsy moths.

"The traps only monitor gypsy moth populations, but some are sold as controls. The traps won't control the moths, no matter how many are used.

"In fact, when many traps are used in an area, the build-up of chemical attractant causes male gypsy moths to stop flying and start crawling up tree trunks to find female moths. This actually makes it easier for the moths to mate because the females don't fly but cling to tree trunks."

Shetlar says consumers have started catching-on to one pest-control scam.

"It's fortunate that sales of ultrasound bug chasers are dying down," he says. "People are realizing they're a fraud."

"Research shows the chasers won't work. Insects get used to the sounds or vibrations, which are so weak they can't penetrate walls or furniture.

However, several types of traps do effectively control some insect species or alert homeowners and growers to the presence of others, Shetlar says. Using traps to monitor pests is an excellent way to decide whether controls are needed, he says. One such successful device is the red ball trap used to monitor apple maggot flies.

Consumers interested in buying insect traps should first consider calling their local office of the Cooperative Extension Service, Shetlar says. The offices maintain recommendations on traps, and will offer tips on effective insect control methods.

"Never think that war, no matter how necessary, nor how justified, is not a crime."

Ernest Hemingway

BOTTOM . . . Cont. from Page 560

Other than self delusion, self hypnosis, or auto suggestion, there is no scientific proof that either rhino horn or a diet of shark fins is an aphrodisiac. But there is strong evidence that honey is.

Permit me to elucidate. All healthful and nutritious foods give energy; but none do it as fast and effectively and sweetly as honey.

The beauty of honey as an aphrodisiac is that the supply is not going to run out. The rhino, and somewhat less likely the shark, could quickly become extinct. And then what? But honey production can be increased quite readily, so that the supply and price are likely to remain in better balance. What a sweet way to achieve success.

So here we are, with possibly the greatest aphrodisiac ever, and until now no one has recognized the wonderful possibilities blooming under their very noses.

In a court of law, all parties are sworn to uphold the truth. To tell the truth, the whole truth, and nothing but the truth. Obviously both sides cannot be scrupulously honest. Here's how it is done.

If we state that we are giving only an opinion (according to legal definition, there has never been a dishonest opinion) all we need do is start the information circulating. Then step aside and let rumor mills do the rest.

As for the truth; we will be telling the truth, that honey is a wholesome energy food, and anything that gives you energy makes you feel better, and when you feel better you feel The whole truth; the portion that we choose to disclose will be completely true, to the best of our knowledge. And nothing but the truth; because we will not even mention any part that is dubious.

Well, what are we waiting for? Let's get moving and tell the world what we have. Honey, the sweetest discovery since - - -! □

Display Index

Sex and the Honey Bee

E. Edwin Rybak

BOTTOM·BOARD

In today's world nothing grabs the attention better, or is more effective in promotion and advertising, than sex.

Beekeepers are missing a great bet, through their lethargy and indifference. Or unawareness.

All the scientific and medical evidence is on our side; honey is a great aphrodisiac. We shouldn't be so shy in recognizing this fact, nor so squeamish in exploiting the wonderful marketing opportunity.

Here we are, with all the visual evidence daily entering our eyes, drumming into our ears and beating into our brains, even as we blithely turn away and overlook the very obvious. The demand is there!

So what do we do, collectively? We sit on our 60 pound cans and 55 gallon drums of golden ambrosia and, like a bunch of defeatists, moan and groan about imports, slow markets, surpluses, low exports, low demand, and all the supposed other ills that plague our industry.

Even the Honey Marketing Board could use a few lessons on the How-To's of selling. Apparently they have no expertise in effective advertising. (For this they deserve a stinging rebuke.) And obviously they've never heard of me. Well, here I am; with the greatest promotional and marketing idea in the world for selling gobs and gobs of honey. In fact, information on how to create a world honey shortage; perhaps even a crisis. Such sweet success.

Sex is so rampantly pervasive in every segment of our society that we can safely say it will never be outlawed. It is so ingrained in our genetic biological characteristics that it can never be reasoned out. It has become so universally established that it can never be educated out of the human system. Nor can we be immunized against it. It is an addiction that the human race has eagerly embraced and learned to live with joyfully. And there is nothing to replace it.

We, as beekeeper, might as well take advantage of this genetically acquired human trait. It is certain that we did not induce it, nor can we change it in any way. But we can do our part to promote an increased and heightened measure of pleasure. The beauty of it is that our entrepreneurial enterprise is perfectly legal, morally and socially acceptable, and already in demand. It can be carried on in the open and in broad daylight. We may even get some well deserved recognition and respect.

So successful will this promotional campaign be that I foresee when extracted honey will sell at above $10 per pound. And comb honey, by virtue of its greater potency because it loses none of its effectiveness through straining, filtering and processing, for upwards of twice that price; based on today's prices.

So, instead of droning on about our dilemma, we should be humming a hymn of praise and thanksgiving to the industrious honey bee.

If the world can believe that a smidgen of rhinoceros horn increases their sex drive, it will believe anything. Then why not honey? At the very least, my claims are tinged with truth. The latest fad, which threatens to bring the scourge of the ocean to extinction, is that a diet of shark fins functions as an aphrodisiac.

Now, I'm into organic gardening and, organic or not, it is well known that plants need certain micronutrients for proper growth and development. This being so in the plant world, then it is also true in the animal kingdom of which we are a species; that micronutrients affect our physical and emotional health and well being.

Another point needs clarification. We cannot deny that botulism spores are sometimes found in raw honey. But I would like to suggest that it is because honey is such a potent aphrodisiac that it should not be fed to infants under a year old. Their young bodies are biologically unprepared for such powerful stimulants.

But for adults, honey is a source of wholesome energy and therefore is, ipso facto, an aphrodisiac. It should be augmented with a balanced diet of fish, lean meat, potatoes, broccoli, carrots, lettuce, tomatoes and other wholesome vegetables and fruits, to dilute the high potency of honey. Once the facts are made known and clear, the world will absorb, in every sense of the word, all the honey we can possibly produce.

Unlike the horn of the rhino or shark fins, which take longer to disperse throughout the physical system to be effective, honey goes to work almost instantly.

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