GLEANINGS IN BEE CULTURE

SEPT. '87

FEATURES

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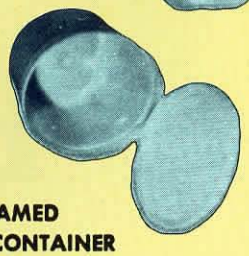

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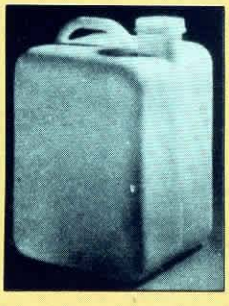

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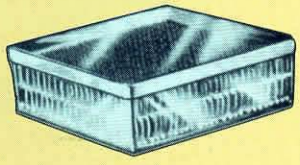

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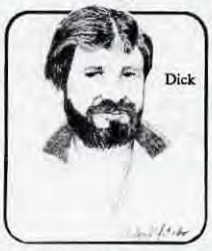

GLEANINGS IN BEE CULTURE

SEPT.'87

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FEATURES

ARTICLES

COLUMNS

DEPARTMENTS

COVER . . . Our Cover nearly *Covers* it all, but there's more! **Articles** on everything from Mites to Mice; and our **Columns** range from Super sizes to Queen cages. The **Department** section *Covers* everything from Marketing to Reader's Opinions. *Bee Culture* Covers *it all!*

Coming in October

October means National Honey Week — which means a focus on marketing the crop just produced. So . . . next month we offer several ideas on marketing, both honey and other hive products. Some innovative ideas, and some that may seem a bit dated, but when dusted off and given a second chance, really work!

Bee Culture also offers the best in basic information, and October is no exception. We know many beekeepers make their own equipment, and bee space is THE PRIME consideration in equipment construction. And THE BEST article we've ever seen on Bee Space comes next month; everything you've EVER wanted to know, the why's and how's. It's all here!

Keeping Bees in the North? An excellent story of beekeeping in Alberta comes next month, too. Coping with the extremes and how to manage these conditions is well explained.

Of course, we all occasionally have to deal with an uninformed public, and "Stranger Than Fiction" is a true story you won't believe!

Finally, another look at the pesticide problem. Did you have some this year? Some folks are solving this age-old nemesis and here's their story.

No tricks but all treats, coming your way in the October *Bee Culture* — Don't miss it!§

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THE INNER COVER

How hot do your bees have to get before you decide to requeen? Or don't you mind hot bees? As long as they stay healthy, continue to produce honey and don't swarm at the drop of a hat, they're just fine?

Or, if they're 'way out in the country', away from people, they can stay as mean as they want?

There has never been a good case for the belief that "hot bees make honey", but I've run into a few people who swear by them. If they don't nail your shirt to your back and leave at least 100 stings in your gloves they're not worth having; and of course they *always* out produce those mild mannered bees *some* folks have. This last statement is usually accompanied with just a trace of a sneer, a definite puffing out of the chest (and sucking in of the stomach) and a hint of sarcasm in their, now, somewhat louder than normal voice. I'm reminded of Rambo Beekeeper, 3 foot hive tool in hand, blood dripping from numerous wounds shouting an obscenity at some enemy, daring them to attack!

Well, maybe you do like hot bees. But The Ohio Estates' bees produce honey, resist disease and even thrive. Given the choice, my preference is obvious.

But there's a bigger picture here that all U. S. beekeepers are going to have to see — soon.

ONCE MORE — WITH GUSTO!

As you probably know, the USDA and APHIS have another plan of attack in Mexico. A segmented scheme designed to do the same job as the first plan they introduced, at a greatly reduced cost. To stop, or at least slow the northward march of the Africanized honey bee is the goal, again; but this time in pieces, first one coast, then the middle and finally the other coast. Of course, during all this there will be research programs (funded by U. S. taxpayers) underway to help understand the bee better, and prepare us for its' eventual arrival.

You can't help but wonder why this program wasn't developed in the first place. It's cheaper, by millions of dollars, and according to APHIS officials, will be even more effective than the first. My guess is that it will be just as effective. Only this time the effort will cost less.

Apparently Mexico has started some fairly innovative education programs for both beekeepers and the public. They're spending a bunch of money in this area — they're getting ready. A premonition that this plan too is ill conceived, or is it just basic common sense in case it doesn't? Probably some of each. After all, it's

in their backyard already — in harms way, and all that.

Meanwhile, U. S. Public Health officials are ignoring this entire matter — APHIS has said so, and even tried to get them motivated, but alas, AIDS is commanding all the attention, and getting all the money.

In spite of the best, and worst USDA and APHIS efforts, the Africanized bee will arrive. And that's why I'm talking about hot bees.

I'm convinced that beekeepers don't like to run hot bees, except of course for the rare Rambo type. We (meaning U. S. beekeepers) will not tolerate an Africanized (read defensive here) stock in our hives. And it's this philosophy, and practice that will both protect us as an industry, and the public at large.

You have seen numerous reports of how beekeeping as an industry essentially shuts down in a country when this bee arrives. The beekeepers apparently don't like hot bees either, and the public can be, and occasionally is threatened by their presence. The stock becomes entirely too unmanageable and they throw in the towel.

So what we hear is how devastating this creature is, how beekeepers suffered, and the problems these defensive bees cause innocent people and animals. So what.

Comparing beekeeping in the tropics to beekeeping in the U. S. (even southern Florida) is like comparing apples and oranges. It just ain't the same. There are entirely too many reports of beekeepers thriving under these conditions, even in the tropics, for me to believe that, given certain conditions, the Africanized bee **WILL NOT** shut down beekeeping (hobby, sideliner or commercial) in this country.

Ah, you ask, what are those "conditions" you mention.

Well first, the U. S. isn't the tropics. The worst cases you hear

Continued on Page 544

Monthly Honey Report

September 1, 1987

The following figures represent current prices reported by our contributors. They are based on reports from many states averaged out for each region. Where insufficient information is received, no price is shown. The retail prices represent the price of each size jar.

Wholesale Extracted	Reporting Regions									
Sales of extracted, unprocessed honey to Packers, F.O.B. Producer. Containers Exchanged	1	2	3	4	5	6	7	8	R	A
60 lbs. (per can) White	44.00	39.23	24.60	33.90	26.40	35.60	40.00	39.50	24.60-44.00	36.18
60 lbs. (per can) Amber	42.00	34.03	22.20	25.80	--	31.17	38.00	32.50	22.20-42.00	32.97
55 gal. drum/lb. White	.63	.55	.42	.53	.44	.61	.56	.57	.42-.63	.54
55 gal. drum/lb. Amber	.60	.50	.38	.43	--	.48	.50	.45	.34-.60	.48
Case lots -- Wholesale										
1 lb. jar (case of 24)	28.50	23.27	23.06	24.34	25.92	23.86	26.50	28.38	22.96-35.04	25.38
2 lb. jar (case of 12)	27.50	22.00	--	22.75	23.76	23.97	25.10	29.40	21.00-29.40	24.22
5 lb. jar (case of 6)	30.00	26.08	23.04	25.56	23.04	24.84	25.95	28.98	23.04-32.46	26.02
Retail Honey Prices										
1/2 lb.	.90	.92	.79	.82	.83	.83	.90	.91	.79-1.00	.87
12 oz. Squeeze Bottle	1.50	1.28	1.19	1.36	1.17	1.25	1.35	1.32	1.00-1.50	1.30
1 lb.	1.55	1.53	1.29	1.57	1.41	1.45	1.65	1.50	1.25-1.79	1.51
2 lb.	2.70	2.73	--	2.87	2.60	2.67	2.85	2.35	2.29-3.00	2.74
2-1/2 lb.	3.35	3.50	--	--	--	3.08	--	3.54	3.00-3.75	3.34
3 lb.	4.00	4.07	3.49	3.25	3.69	3.81	3.95	3.42	2.75-4.33	3.76
4 lb.	5.00	4.87	--	5.37	4.67	4.60	4.95	--	4.50-5.89	4.87
5 lb.	6.00	5.76	5.49	5.75	--	5.32	5.95	5.67	4.99-6.27	5.63
1 lb. Creamed	1.75	1.50	1.35	1.55	1.59	1.49	1.60	1.57	1.25-1.79	1.69
1 lb. Comb	2.25	1.85	3.00	2.44	1.49	2.02	--	2.25	1.49-3.00	2.15
Round Plastic Comb	1.75	1.95	2.00	1.90	--	1.65	3.00	1.60	1.50-3.00	1.91
Beeswax (Light)	.95	.88	.95	.85	--	.85	.95	.90	.83-.95	.89
Beeswax (Dark)	.90	.80	.85	.75	--	.75	.80	.80	.75-.90	.79
Pollination (Avg/Colony)	30.00	15.88	--	28.75	18.00	20.67	--	18.50	12.00-30.00	20.77

Honey Report Graph Features

On the far right hand side you will see two different columns. The first, labeled "R", is the price range of prices reported from all contributors -- lowest to highest. The second column, labeled "A", is the average price of a particular commodity across all regions. Example: the range in price of a 1 pound jar of honey sold retail is $1.25 - $1.79 and the average price across the country is $1.51.

In the comments section you will see a figure called the "Price Index". This figure is only a descriptive statistic that compares ALL regions to the highest region of the month.

Example: Region 7 has a price index of 1.00 this month and remaining regions are compared to that index.

•Region 1.

Price Index .99. Prices steady to increasing slowly. Sales increasing moderately. NE conditions hot and dry, may lead to reduced fall crop. Excellent production so far. Bears increasing.

•Region 2.

Price Index .85. Sales steady to increasing, with prices inching upwards. Hot, mostly dry conditions, causing concern about fall crop. Production good to date, with harvest same to somewhat larger than last year.

•Region 3.

Price Index .70. Prices steady to decreasing, sales average. Early crop larger than last years disaster, but dry conditions threaten fall production.

•Region 4.

Price Index .82. Sales steady to excellent, prices increasing. Early flows caught some unprepared. Crop extremely variable, with very high and very low moisture honey being extracted. Excellent production means much going under price support program.

•Region 5.

Price Index .79. Sales extremely variable, strong in some areas and weak in others. Prices reflect sales. Crop best in years, with colonies generally in good condition.

•Region 6.

Price Index .82. Sales and prices moderate. Variable rains caused spotty production. Too much or too little in most areas, though some excellent. Fire ants causing some problems.

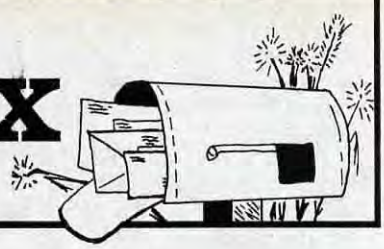
•Region 7.

Price index 1.00. Demand normal, prices rising. Dry weather has reduced crop somewhat, but prices rising. Fall conditions not good due to lack of moisture.

•Region 8.

Price Index .92. Sales excellent, prices steady. Northern areas doing best in several years. However, Calif. generally dry, with somewhat reduced crop. Pollination progressing, but expectations are not good for later crop.

Mailbox



NO SWIMMING ALLOWED!

Dear Editor:

In your July '87 issue of *Bee Culture* on Page 395, the question was raised about bees being a nuisance gathering water from swimming pools!

I have ten hives in my yard and the only time I have trouble is when the pool is not properly chlorinated.

If the chlorine level drops too low, bees will gather water from my pool. But by bringing it to the proper level, they leave it alone.

Ray Schiebel
Rt. 1, Box 1006
Woodford, VA 22580

OPEN DISCUSSION

Dear Editor:

Mr. Koover's remarks in his opening paragraphs in the July '87 issue of *Bee Culture* are distressing to me. Differences of opinion are a fact of life, a basic phenomenon of nature and, when presented in a rational and constructive manner, usually a force for good. Criticism alerts us to other ideas, some good and others not-so-good, but when received with an open mind, it keeps us alert to change, stimulates us to re-examine and (if necessary) improve our techniques, methods and equipment, and in the long run, strengthens the industry.

It would be a shame if Mr. Koover were to simply call it quits and stop writing (as he intimates he may do) because others' opinions differ from his. I can't help feel that it would be his loss as much as ours.

Wade B. Lawrence
10814 Daysville Road
Frederick, MD 21701

Ed. Note: Well put. Open discussion is at the heart of any advancement. I learned much of plastics, and people, by this discussion.

A TASTE OF HONEY

Dear Editor:

A Taste for Honey by H. F. Heard is a detective story with an unusual twist, but recent comments in *Bee Culture* suggests the real mystery may be that a taste for honey can be developed at all by using products available in the market. A group learning to grade commercial honey during the Master Beekeeper Program in 1978, concurred in the observation that none of the samples tasted very good. As a child I remember my mother bought a five pound pail of clover honey from a beekeeper, but I preferred dark Karo syrup on bread to the cloying sweetness of the honey.

It was a pleasant surprise to discover our bees produced excellent honey from mixed flowers, and we have also purchased delicious basswood, locust, Tupelo, raspberry, mesquite, thyme, citrus, honeydew, etc. But we learned early on that honey delicious at extraction was repugnant six months later if stored in the kitchen cupboard. We advise recipients of our honey to fill a small serving dish, and store the remainder in the freezer. Our honey crystallizes rapidly to a creamy consistency after extraction in September, and is then stored at freezing, or near freezing, temperatures through March. By May there is space in the freezer for any remaining surplus.

Most honey is probably flavorsome when first extracted, but if heated for filtration and stored at warm temperatures for several months the delicate odors and flavors that make it interesting deteriorate. A second heating to reprocess for bottling will insure further damage to this extremely fragile product. Some producers even keep their honey in a heated tank for easy filling of jars as required.

The National Honey Board has authorized a market research study of consumer usages and attitudes. They should stipulate that samples include freshly extracted honey in addition to commercial packs; as well as some of the minor, unique varieties. It is hoped that honey on restaurant tables will result in more honey on consumers' kitchen counters. I have four packs of honey brought back from a San Francisco restaurant in 1986, stored in the freezer, ready for submission in a "Worst Honey Contest". Fortunately I tasted it before spreading any on my English muffin. The orange marmalade I did use was not gourmet, but then neither was it repulsive. The preference for other sweeteners may not lie in their superior attributes, but rather that they are bland and less disagreeable than the honey available?

Toge Johansson
R. D. 1, Box 256A
East Berne, NY 12059

Continued on Next Page

MAILBOX... Cont. from Page 501

RECREATIONAL VALUES

Dear Editor:

Thank God for our commercial beekeepers and bee producers. We sideliners and hobbyists need their expertise and production capacity.

However, it is a well-known fact that the vast numbers of hobbyists (some very outspoken) "exercise" backyard beekeeping in a very cost-conscious way.

Yet, some spend country club dues to play golf, others have horses, some have boats, some have season tickets to football or baseball, some pay for weekly league bowling, swim clubs, tennis clubs, ad infinitum — All of these recreational "sports" are expensive, and no doubt enjoyable.

Many profess that their hobby is beekeeping. Yet, many will *not* use their *free time* to manage their bees or buy new queens, but buy cheap woodenware, fail to feed, let wax moths destroy good comb for lack of PDB, use bad comb instead of installing new foundation, fail to paint woodenware, package honey in old jars and refuse to pay $5 - $10 annually for bee association memberships.

Then, while they are boating, golfing, bowling, feeding their horses and generally spending lots of money entertaining and "being seen", their bees swarm, starve, become nasty, become diseased and are non-productive. They blame the problem on the bees!

Now, I ask you, "What are your recreational *values*?" Are you really a good beekeeper? I, as a senior citizen, starting bees 54 years ago, have owned horses, yachts and country club memberships. But back to the "nitty-gritty". I work hard with my bees and they provide me with looked-for recreation. In conceit, I'm a good beekeeper only because I study and work at it. Sorry if I offended many!

George W. Imirie, Jr.

SOME THOUGHTS ON CHOOSING A NATIONAL INSECT

Dear Editor:

Everyone would probably agree that the insect chosen to represent this country should be recognizable to most people, found throughout the nation, and preferably have an economic impact. For those who feel apathetic or think they are too busy to lend support to the honey bee, here is an overview of some insects who *could* have been nominated.

Ask apartment dwellers which insect they know best and they will scream "cockroach"! Actually, "cockroach" screams rather well — try it. The poor cockroach is never given credit for being extremely adaptable, enough to be known as the insect that has been on the earth longer than any other. Surely such persistence could be rewarded. The exterminators of the US would definitely support its nomination. There's real economic impact.

It is possible the ant could be in contention. My mother looked upon the annual summer invasion of ants (big, little, black, red) into her kitchen as a commentary on her housekeeping. The summer was spent in waging war on the ant "trains" that marched across the counters into the jam and honey. Certainly an insect that spawns countless cartoons of invading picnics could receive consideration as the nation's insect.

How many hours are spent in tracking down and swatting a common house fly? Anything handy that can be grabbed and swung will

Continued on Next Page

MAILBOX... Cont. from Page 502

substitute for a fly swatter. What is it about the soft buzz of a housefly that incites both man and beast to a frenzy of activity, even on a warm, lazy summer day? The chase? The swat! The victory! It's almost household baseball. Perhaps the house fly could become the National Sporting Insect.

The persistent whine of the mosquito must rank among life's most annoying sounds. The mosquito could even be called one of life's most annoying insects. How many evening walks, patio barbeques, and other pleasurable activities have been spoiled by thirsty mosquitos? Perhaps some kind of recognition should be given to this tiny, fragile insect that can chase the much larger and more intelligent human beings into seeking refuge indoors. The purchase of sprays, repellent lotions and "bug lights" must contribute a worthwhile quantity to the nation's economy, and all for an insect that is seldom seen, but always felt.

Finally, we need to consult Man's Best Friend — the Dog. The population of dogs in the United States would wield a considerable vote for the flea as satisfying all the criteria for a national insect. Every grocery store devotes shelf space to products for fleas on dogs and cats. With the flea, we have a recognizable, nationwide and economically important insect. Choosing the flea as national insect would bring cheer to every itching, scratching dog.

After thinking about these possible choices, I really believe that the honey bee is by far the best selection. There is only one drawback — honey bees do not have large, flamboyant wings that endear them to the general populace as do butterflies. You will have more success in convincing Congress to *choose* the honey bee than trying to *breed* a honey bee with fancy wings. Take time out from annihilating those other critters to write a letter of support for the honey bee.

Ann Harman
6511 Griffith Road
Laytonsville, MD 20879

LOAN PROGRAM EXPLAINED... AGAIN

Dear Editor,

It seems that not many beekeepers are aware of the circumstances by which the honey support program had the $250,000 payment and loan limitation put into affect. The purpose of this letter is to review how the limitation occurred and the outcome of the recent attempt for its removal.

During the congressional discussions of the 1987 budget for agriculture crop programs in September, 1986 there was an attempt by a few representatives on the House side to establish a $50,000 payment limit for honey producers participating in the loan and support program. Chairman of the house agriculture committee "Kika de la Garza" was finally able to establish a $250,000 payment limit which was unfortunately applied to loans as well as payments. This limitation was to apply to the 1987 and subsequent programs and did not apply to the 1986 program.

There was a recent attempt by some of the large honey producers to remove the limitation of $250,000 on loans made to producers by introducing an amendment to the program as part of the 1987 supplemental appropriations in the House of Representatives. Representative Silvio Conte led the discussion to not only defeat the proposed amendment to remove the loan limitation but also include removing generic certificate use for honey. Conte has again shown his opposition to the honey price support program by leading the effort to defeat the proposed change in the loan limitation. He has also demonstrated how precarious our position is in maintaining the present program.

One of the favorable aspects of the honey loan program is the "buy back" feature which applies to the 1986 and subsequent programs. This "buy back' feature has permitted packers to buy domestic honey in substantial quantities at prices comparable to imported honey. As a result of the movement of domestic production moving into the U.S. market, the amount of honey that will be turned over to the government will be considerably less for the 1986 crop as compared to previous crops.

I would urge those producers who are not participating in the "buy back" portion of the support program to start looking for buyers for their honey. We must make this feature work for us and reduce the cost of the honey program to the government.

After the recent unfavorable vote in the house on the removal of the limit it should be obvious that we as an industry need to do everything possible to maintain and continue the present honey price support and loan program. It should be apparent that the industry needs to keep a low profile by not calling attention to the program and by doing everything possible to reduce the cost to the taxpayer. Each honey producer has

Continued on Next Page

MAILBOX... Cont. from Page 503

that obligation and I hope beekeepers will accept that obligation.

E. Randall Johnson, President
The American Beekeeping Federation, Inc.

BAR-B-Q BEES?

Dear Editor:

A swarm of bees made their home this spring in my neighbor's outdoor Bar-B-Q. I removed them and they are now doing fine in their new abode.

Benny Winkler
R. R. #2, Box 208
Normangee, TX 77871

IN THE CASE OF LANCE ASHMORE vs. BEEKEEPER:

Not Guilty (But please be more careful in the future)

Dear Editor:

Your article in the July *Inner Cover* is an apt description of the worst plague facing beekeepers today — the "possessor of beehives".

Every beekeeper would agree that AFB is a dreaded plague but it does not do its work overnight.

Rather, it is slow, progressive and in the end, fatal. This suggests certain possibilities concerning the "possessor" and his beeyard.

1. The beeyard had not been visited for a long period of time (probably many months since almost 30% of the hives were already dead)

or

2. The beeyard had been visited but through carelessness and/or ignorance no observation was made that certain colonies were dead or severely weakened. This should have commanded immediate attention and resulted in the discovery and correction of the problem by the owner himself.

or

3. The beeyard had been visited and it was obvious that a problem existed. The problem was allowed to continue due to ignorance and/or malicious intent to harm surrounding beekeepers.

All are inexcusable.

As to Mr. Ashmore's actions, he did what any good inspector would do, through his actions, the affected area was properly, neatly and effectively "cleaned-up". In fact, it's debatable whether the time and expense of scorching the tops, bottoms, and supers was justified. In this case, total destruction would have been appropriate. Perhaps a few snapshots would be in order in the future to establish locations, problems, ownerships, etc. Photographs can be used to establish a very strong case.

"Mr. Aggrieved Owner" has *no* moral rights, including that of being referred to as a "beekeeper". Let us hope that his primary civil right is an honest judgement upholding the $25.00 fine based on *each* violation (14) and an additional assessment for deliberate intent to damage surrounding beekeeping. The precedent of a legal "swift-kick" must be established now before beekeeping heads down the path of our present day, enlightened, "suit happy" society.

J. A. Barnes
B & B Apiaries
5125 Robinhood Road
Winston-Salem, NC 27106

Dear Editor:

Your July *Inner Cover* is, to say the least, very interesting.

If I understand the situation correctly, Mr. Ashmore's helper followed the letter of the law. I don't know what state this took place in or how the law is written. I would guess that the law makes no provision for plastic comb. The law about burning the combs has more than likely been in effect, word for word, for years. When it was written, plastic comb was not around. Beekeepers in this state should take notice, read up on the law and try to change it to reflect modern trends in beekeeping. I think the courts should find for Mr. Ashmore and against the beekeeper.

Moraly I have trouble with this sad tale. I find it hard to believe that the owner of the hives could not be located. Tax rolls, plat books and talking to people in the area will soon locate the property owner, who should know the owner and how to contact them. I have done this several times when looking for future out yards.

I must take Mr. Ashmore to task. I think he should personally see that the proper steps are taken when AFB hives are found. This responsibility should not be delegated to his "helpers". It is his job and he is ultimately responsible. That is what he is being paid for. However, I doubt if he could not of burned the combs, even if he had known that they were plastic. Right or wrong, the law is the law. If the law is a bad one, get it changed.

I have a bad feeling about this "beekeeper". I hope his whole stock was wiped out. He is a bee owner, not a beekeeper, and a sneak to boot. I have no doubts that he knew his hives contained AFB. They were not regis-

Continued on Page 505

MAILBOX... Cont. from Page 504
tered and I assume had no identifying marks traceable to him.

To conclude, I think Mr. Ashmore and his "helper" did the right thing to burn the combs, plastic notwithstanding. I also think Mr. Ashmore had better get on the stick. The killing and burning of hives is very serious. He should directly supervise the locating of the owner. As far as burning is concerned, he should be sure all steps have been properly followed. In court he is going to be asked some hard questions about this incident and his supervision of it. This should be a good learning experience for him. I'm sure the next time one of his "helpers" wants to kill and burn hives he will pay closer attention.

Wm. J. Dare
2191 N. 350E
Rolling Prairie, IN 46371

Dear Editor:

This is in response to your request for opinions on the litigation between the bee inspector and the owner of a diseased and unregistered apiary.

If, as you describe the situation, the apiary was unregistered, and this was in violation of law, and if the inspector tried conscientiously to locate and notify him, then the court is not going to uphold any claim made by the owner against the inspector. The precedent here is very old; namely, that one cannot sustain a claim that rests upon his own wrongdoing, or, as it is sometimes expressed, a plaintiff must come into court "with clean hands".

Richard Taylor
R. D. 3
Trumansburg, NY 14886

Dear Editor:

I read with interest the July 1987 *Inner Cover* about your friend Lance, Apiary Inspector. After reading the article you asked for opinions on what is right or wrong, legal or moral. Remembering a previous *Inner Cover* article you wrote you again placed yourself neatly right in the middle of the road. I read the article placing you in the position of prejudice for your friend Lance and not completely objective. I will try to prevent an unbiased position neither for or against anyone, but first lets get rid of the irrelevant comments.

1. This man didn't have AFB because he had unregistered apiaries. (Wisconsin doesn't even have apiary registration.)

2. This man is not denying he had AFB . . . he paid his fine. Can he be interested in whether the State informed him of his options? (Is fumigation acceptable under his state law?)

It seems unreasonable to me that a landowner doesn't know who has bees on his land.

The question is how these bees were infected with AFB? This is a serious question because according to Dr. Roger Morse in the December 1986 issue of *Bee Culture* on page 613 entitled *Research Review — Rethinking American Foulbrood Control*, he and Dr. H. Shimanuki of the U.S.D.A. agree that imported honey is contaminated with AFB spores. Inspectors find AFB highest around "garbage dumps". The federal government has no laws about AFB, only the states have laws, so the Federal doesn't care if the imported honey is contaminated with AFB spores. Therefore, if the states allow this contaminated honey into their state as a form of infection, then they have no justification for having an inspection at all because they could be the innoculator. In this case, the state could be the cause for this mans AFB. It is like the apple packer that operates a packing line. At the beginning of the line he allows someone to innoculate the apple with rot, then at the end of the line he has an inspector that destroys all rotten apples. Can you see the silliness? The packer has three choices.

1. Get rid of the innoculator and keep the inspector.

2. Get rid of the inspector and keep the innoculator.

3. Get rid of both of them.

One thing for certain, he can't keep both and justify his actions.

Mel Disselkoen, I.M.N., Inc.
P. O. Box 9552
Wyoming, MI 49509§

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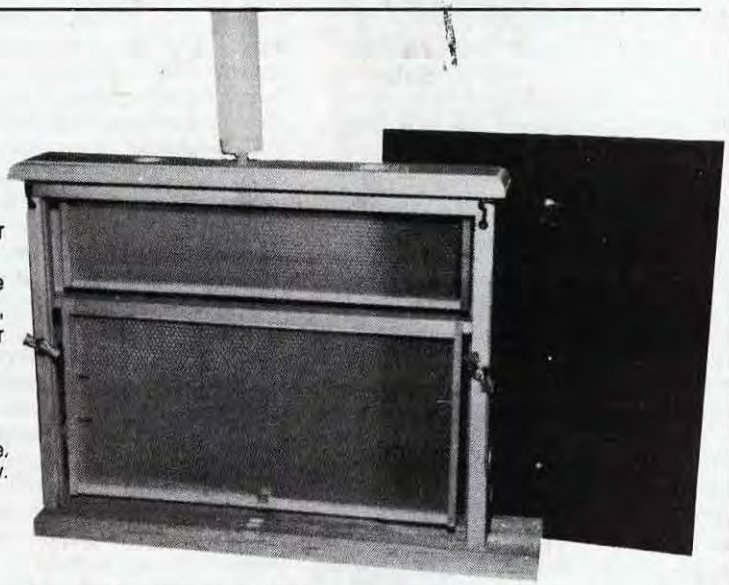

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QUESTIONS?

Q. *In my area, when would be the best time for fall requeening?*

Charles R. Miller
Salem, IN

A. Do it during a fall nectar flow and well before the first frost. Queen acceptance is best when there is nectar coming in.

Q. *A queen I introduced to one of my colonies in October was not accepted and the bees built queen cells. Can a queen from one of these cells be expected to get mated this late in the year, when daytime highs are around 70°?*

C. Edwin Smith
Decatur, GA

A *I* think there is almost no likelihood of a mating in late fall, even in your warm climate. Queens mate in drone-congregating areas, usually far from their hives, and I do not believe that drones congregate in those areas in late fall. A queenless colony can usually survive the winter with ample stores, and you can give it a frame of brood as soon as drones reappear in the spring.

Postscript: The author of this question proved my answer wrong by noting in subsequent correspondence that one of those queens had mated and begun laying that fall.

Q. *When extracting in the fall, I find many combs only partially filled and not capped over. What should I do with these, so as to have them ready for next year?*

Eugene Burris
Bethany, OK

A. Hold them horizontally and see whether you can shake the honey from the cells. If it shakes out easily and is thin and watery, then it is nectar rather than honey and should not be extracted. But if it is thick, like honey, then it is honey and you should run the combs through your extractor, even though they may be uncapped. Supers with nectar in them can be stacked near your hives where the bees will discover them and quickly clean them dry.

Q. *I baited my supers this year by putting one comb of unsealed or partially sealed nectar from last year's harvest into each super of empty comb. The bees are completing these bait frames and capping them over. Can I extract this honey along with the rest?*

Jeffrey Hamelman
W. Brattleboro, VT

A. Yes, although the honey in the bait combs, in case it has begun to granulate, may impart granulation to the rest of the honey when it is extracted. Otherwise, there is no problem. It is not, however, ordinarily considered worthwhile to use bait combs in extracting supers. If the combs are still sticky, from the previous year, then the bees are rapidly drawn up to them.

Q. *I sold my neighbor a gallon of honey a month ago and she reports that it went sour. What went wrong?*

John Agle
Farwell, MI

A. Honey ferments, or goes "sour", when exposed to moisture. I suspect you either extracted the honey in a damp place, such as a basement, or stored it there. Possibly you extracted it from the combs before it had become thick or "ripe". Fermentation in honey can be checked by heating it, in a water bath (not over direct flame), to about 150°, but the combination of fermentation plus heat will rob it of flavor.

Q. *Do robber bees ever steal sugar syrup that is being fed to a colony? I fed a colony this fall by inverting a jar of syrup over the inner cover hole with an empty super around it, and robber bees appeared to be entering and leaving the hive entrance.*

Mrs. Robert Loddengaard
Hillsborough, NC

A. Yes, I have seen this happen, especially when some of the syrup drizzles out through the hive entrance. It is quite common in the case of weak colonies that are being fed, and more common in fall than in spring. It is almost impossible to stop once it has started. The best cure is prevention, by restricting the entrance before the feeding starts.

Q. *Can all the medications be mixed together for fall feeding?*

John E. Palmer
Newmarket, NH

A. No. Sulfa can be mixed with syrup, but it is not approved for use with bees. Terramycin degrades when mixed in liquid solution, so should be used only in mixture with powdered sugar.

Q. *Someone told me that my hive, which was very strong with bees and had produced four supers of honey, had too many bees to go through the winter. Have you ever heard of that?*

Walter Prahl
Murdo, SD

A. No, that is absurd. A colony cannot be too populous for wintering, provided it has ample stores.

Q. *Can moth balls be used to protect stored honey comb?*

Pat O'Connor
Killarney, Ireland

A. Yes, but the easily available paradichlorobenzene crystals are better. Combs sticky with honey will absorb the odor in either case, so must be thoroughly aired before reusing them.§

Questions are welcomed. Please send to: Dr. Richard Taylor, R. D. 3, Trumansburg, NY 14886 and enclose a stamped, self-addressed envelope.

& ANSWERS!

by Richard Taylor

HONEY WORDS: A Match Game

by Carsten Ahrens
3461 Harrisburg Street
Pittsburgh, PA 15204

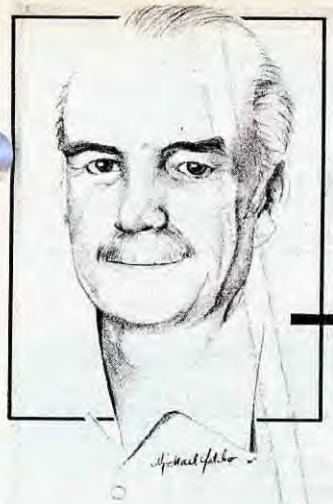
Any substance as thick, as sweet and as syrupy as honey would surely have worked its way into our vocabulary. And so it has.

Match the answers (a-n) with the correct questions (1-14).

1. ___ Honey
2. ___ Honey ants
3. ___ Honey badger
4. ___ Honey bear
5. ___ Honey bee
6. ___ Honeycomb (noun)
7. ___ Honeycomb (verb)
8. ___ Honey creepers
9. ___ Honeydew
10. ___ Honey eaters
11. ___ Honeyed
12. ___ Honey locust
13. ___ Honeymoon
14. ___ Honeysuckle

a. A kind of melon; a sweet sticky substance exuded by certain insects and plants
b. Certain shrubs or vines having pink, yellow or white tubular flowers
c. A structure of 6-sided cells made by bees to hold honey or larvae
d. Certain nectar-eating Australian birds
e. A trip taken by a newly wedded couple
f. A term of endearment
g. Sugary; dulcet
h. *Apis mellifera*
i. An African or Asian carnivorous mammal, also called 'ratel'
j. Insects that raise aphids and get honeydew from them which they store in the extended abdomens of certain workers
k. A thorny U.S. tree that is a member of the bean family
l. To fill with holes, ro riddle
m. Colorful, melodious birds of South and Central America
n. A raccoon-like mammal, the kinkajou

Answers on Page 536.



THE BEE SPECIALIST

By ELBERT R. JAYCOX • 5775 Jornada Road North • Las Cruces, NM 88001

". . . I continue to recommend the use of shallows because of the convenience of size and lighter weight."

WHAT SIZE HIVE BODIES?

What is the best depth for the hive bodies and combs that make up the brood nest of a colony of honey bees? You can get several different answers, at least from the literature, but not a lot of scientific results to justify one size or the other.

Nearly everyone in the United States uses the 9-5/8 inch hive body for the brood chambers of bee hives. But there are some strong advocates, especially in other countries, for the advantages of using even deeper hive bodies, most often when the colonies are on permanent locations and do not have to be moved. Such 11-5/8 inch bodies, the Modified Dadant (MD) and the Jumbo, have been touted as a more ideal size that allows the combs to contain the entire expanse of brood without its being split into two or more boxes. With the deep box and an MD super of 6-5/8 inch depth, you are supposed to have an ideal wintering unit for each colony.

There are no supply companies making the deep MD and Jumbo bodies in the country, as far as I know. However, the MD super in 10-frame size is readily available and widely used. The 6-5/8 inch depth is a good compromise between using full-depth supers and the so-called *standard* shallow which is 5-11/16 or 5-3/4 inches deep. The "Illinois depth" super is probably the most popular size, but the late Walter Kelley always called it ". . . an odd-sized super used by a few beekeepers." He said it was convenient, but cost more to cut from standard lumber widths.

I do not know how many beekeepers use the Dadant-depth shallow for the entire colony rather than using deep boxes for the brood chamber along with various sizes of honey supers. In our apiary of up to 125 colonies at the University of Illinois, we tried for a long time to maintain half of our bees in all-shallow equipment and half in deep brood chambers. Part of our justification for such comparison was the idea that wintering bees need to be able to "communicate" from one intercomb space to another during the winter. What better way than to use combs shallow enough that even a fairly small cluster would encompass two or more sets of combs and the spaces between them?

We also liked the idea of handling lighter units but were aware that finding queens was more work

with a greater number of frames. In spite of the supposed advantages in wintering, the colonies in the totally-shallow hives seemed to "disappear." We never seemed able to maintain a 50-50 balance and gradually moved towards all-deep brood chambers. This could have related to our reluctance to use combs from honey supers for brood chambers or the greater convenience of preparing new colonies in deep boxes. However, success in wintering of bees in the two types of hives would tend to dictate what kind of equipment we used to make new colonies in the spring. If colonies survived better in deep bodies, more new, deep hives would be made up in the spring, furthering the imbalance in types of hives. I always had the feeling that more colonies did well and survived in the deeps, but I continue, even now, to recommend the use of all shallows because of the convenience of uniform size and the relative ease of lifting the smaller hive bodies.

Dr. C. L. Farrar, of the USDA laboratory at Madison, WI, was a strong advocate of the all-shallow hive. He ended up using square, 12-frame boxes 6-5/8 inches deep for all the laboratory colonies. In 1944, he wrote that, "Any size or style of hive equipment with flexibility for arrangement will enable the beekeeper to obtain maximum crops when enough units are provided to meet the colony's optimum space requirements." But he was already leaning toward the use of all-shallow equipment in 1944. By 1968, he still said that any size was all right, but recommended the use of hives made up entirely of 6-5/8 inch-depth hive bodies. At that time, he stated that the standard, 10-frame deep equipment was unsatisfactory for two-queen colonies. He also noted that brood rearing was not curtailed by the depth of frames; it is limited only by the *amount* of comb space, its position, the food supply, and queen's egg-laying ability, according to Farrar.

In case you are wondering, at this point, how I got started on this train of thought, you can find the answer in a report by Dr. J. R. Harbo given at the American Bee Research Conference held in Baton Rouge, LA, in October, 1986. He was investigating the management of field colonies to find how best to select genetically superior queens and lines of bees. Earlier, he studied the effects of numbers of workers, the amount of comb, the volume of the hive: all are

Continued on Next Page

JAYCOX... Cont. from Page 509

variables that must be controlled in genetic studies with honey bees. In the new report, Harbo had looked at the effect of comb size on the selection experiments. What he found may be related to my results with all-deep and all-shallow colonies as well as those of Farrar.

Harbo found that colonies with the largest combs produced more brood and had more adult workers at the end of a two-month experiment, than did colonies with the two smallest combs used. Equally important was the fact that there were smaller differences in the queens' egg laying rates on small combs, differences that were evident when larger combs were used. Harbo's conclusion: the combs used in testing must not only be the same size, they must be large.

The differences were conclusive. Colonies with the largest combs produced on the average about 33 percent more adult bees. The final adult population on the larger combs was about 35 percent greater than colonies with the smallest combs of the four sizes used.

If there are similar differences, even not so pronounced, in ordinary field colonies in relation to their comb size, we should be looking again at the deep combs of the Modified Dadant hive. These results of Harbo could also help to explain, in part, the tendency of my colonies in all-shallow hives to survive less often than bees in deeper boxes. If this is true, what about Farrar's results? Conceivably, his use of only shallow boxes reduced the differences between his colonies. With his intensive and successful management, his results remained much superior to the average beekeeper. Harbo's results make you wonder if Farrar could have done even better with the deep MD brood boxes and a shallow or two for winter/spring stores.

PREVENTING HONEY HOUSE FIRES!

Honey house fires are a constant threat to beekeepers in the United States because of the presence of heated beeswax, smokers, boilers, and flammable wax combs. According to G. M. Reid, Apicultural Advisory Officer, Hamilton, New Zealand, the number of such fires and close calls is high in New Zealand. In *Waikato Bee Notes* he outlined some preventive actions that can help lower the risk: 1) have electrical wiring checked regularly by an electrician; 2) keep all smokers in metal containers or a metal-lined box on the truck; 3) wash benzaldehyde fume boards regularly (to remove crystals) and store them away from rags and other flammable materials contaminated with turpentine, solvents, or gasoline; 4) build boiler rooms away from the honey house, and; 5) keep supers of combs in separate buildings.

There are fire-retardant paints and varnishes available that can help to reduce the risk of a fire getting started. They are available in full-service paint stores such as Given Paint Mfg. Co., and Hanley Paint Mfg. Co. in El Paso, TX. The paints are not inexpensive — as much as $45 per gallon.

LUPINES AND BEES

In an earlier column this year I wrote about the prospects for a new crop, sweet lupine, *Lupinus angustifolius.* Dr. J. S. Gladstones, a lupine plant breeder with the Western Australia Department of Agriculture, sent me information and publications dealing with cultivation of the sweet lupines. He said that in his experience, it has not appeared that honey bees made any difference in the seed setting and yield of the lupine cultivars he works with. Enclosed also was a statement by A. C. Kessell, Senior Apiculturist, about honey bees and lupines. He says that lupines are not regarded as good bee pasture. Two blue-flowered selections are regarded as nectarless, but they provide worthwhile quantities of pollen for the spring buildup of colonies. In plots of white lupine, Kessell says the bees much preferred the wild radish growing among the lupines. He thinks that some of the newer varieties may be of more value than the old ones as sources of nectar and pollen. But there are no records of big honey yields from sweet lupines grown in Western Australia.

D. F. Langridge and R. D. Goodman reported in 1985 that honey bee visits increased seed yields of the lupine cultivar "Hamburg" (*Lupinus albus)* in Victoria, Australia. They also observed that the bees collected "appreciable quantities" of pollen and nectar so that colonies stored a surplus of both in their hives.

KILLING SWARMS

When I was in Panama in March to help with a class on the management and control of Africanized bees, we had a number of different demonstrations of techniques relating to the bees. One of these was a simple

Continued on Next Page

JAYCOX... Cont. from Page 510

method of killing swarms without pesticides and with little or no danger to the individual doing the job or to people nearby. The demonstration was by Sr. Ramon Vanegas, chief of the national beekeeping program of Panama. He has used and shown the technique widely in Panama, where Africanized bees have been established at least since 1982.

Vanegas filled a backpack sprayer with a gallon or more of water and added a liberal packet of household, powdered detergent, probably half a cup or more — he gave no exact measure. The object is to make a strong, sudsy mix of the detergent and water. Other materials such as soaps, including insecticide soaps, would probably be as effective if they greatly reduce the surface tension of the water. The spray head was adjusted to give a wide cone or fan of fine spray to enable the operator to cover the bees quickly.

There was a moderate-sized swarm, probably two or three pounds of bees, beside a window of an empty office building where the demonstration was given. One of the students, with protective clothing and a veil, sprayed the swarm with the detergent mixture. He methodically and quickly covered and soaked all the bees. As portions of the swarm fell away, he continued spraying any bees not previously hit by the solution. In no time, all the bees were immobile and they died very quickly, leaving no flying bees in the area. Many of us had no veils on, and we were not bothered by any of the bees of the swarm.

The technique is preferred in Panama over other methods involving insecticides. I am always hesitant to recommend toxic materials for killing free-hanging swarms, even when they pose a 'threat' to people nearby. I expect to try out this newer method for myself and may then recommend it if it appears suitable for people having no experience with honey bees. Obviously, such a treatment would not be effective in destroying established colonies within any kind of building or natural cavity. Regardless of the low risk involved, the person doing the job should wear protective clothing and a veil.

"WHEN ALL ELSE FAILS..."

We eat a lot of honey in our home, usually directly on cereals, toast, hot cakes, and muffins rather than in baked goods and other recipes. One of the reasons for this usage is my wife's experience with honey recipes, especially those we tried years ago when I first began working with bees. Mrs. Grace and the American Honey Institute helped sell honey; they also put out some bum recipes. The results with those recipes were inconsistent, to say the least, and they were sometimes close to inedible. Now, there are many fine honey cookbooks, (and magazine columns), but we still shy away from any whose recipes have not been carefully tested.

Several weeks ago, my wife bought a box of cake mix with a prize-winning honey recipe on the carton. It sounded good, and certainly must have been tested. She mixed it up, poured it into a bundt pan, and set it in the preheated oven. About a half-hour later, disaster struck. The cake batter, which should have been setting up by then, was pouring over the sides of the pan and dripping onto the oven heating element; things got a little smoky. Next, the cake collapsed far below the rim of the pan. The end result was a very chewy blob, nothing like a prize-winner.

My mild-mannered wife was pretty unhappy about the results and had a few words to say about honey recipes. We've had some incidents in the past in which some recipe tasted odd or had an unusual texture. When this happens, I usually ask a few questions about what was left out or whether there was an error in the quantity of some ingredient. This time, I asked a couple of questions, one of which was "How about the correction for elevation?" Las Cruces is about 3900 feet elevation, but we rarely think of it as being very high.

The directions on the box said to use one cup of honey for elevations below 3500 feet; above that, to reduce the honey to one-half cup. My wife protested that 3900 and 3500 were so close that no correction should have been needed. But she found another box of cake mix with the same recipe and tried again. This time, with the reduced quantity of honey, the cake was light, fluffy, and tall, with great flavor. It was a good example of that old saw "When all else fails, read the instructions". At least in this case, the instructions and 400 feet in elevation *did* make a difference.§

Testing Your Beekeeping Knowledge

By CLARENCE H. COLLISON
Exten. Entomologist • Penn State University
University Park, PA 16802

Effective colony management requires an understanding of basic bee biology, so that proper decisions can be made in relation to colony conditions. Recognizing each caste and developmental stage is extremely important in determining the quality of the queen and organization of the brood nest. In addition to identifying brood stages, knowing the length of time that is required for each developmental stage is essential, especially when a beekeeper is trying to raise a few queens. Failure to harvest queen cells at the right time can result in the destruction of the cells by the first emerging queen.

Please take a few minutes and answer the following questions to find out how familiar you are with basic honey bee biology. The first eight questions are true and false. Place a "T" in front of the statement if entirely true and an "F" if any part of the statement is incorrect. (Each question is worth 1 point.)

1. ___ Swarms normally issue from a hive while the new queens that are being reared in preparation for swarming are still in the larval stage.
2. ___ Virgin queens and drones are attracted to each other within the broodnest of a colony.
3. ___ When a worker begins foraging in the field, she initially begins collecting pollen and as she ages, she switches to the collection of nectar.
4. ___ Development of laying workers is inhibited by the queen's pheromones and the presence of worker brood.
5. ___ When larvae between 3 and 4 days old are transferred from worker to queen cells, adults produced have characteristics intermediate between those of queens and workers.
6. ___ Each colony of honey bees possesses an odor which is shared by all its members and differs from those of other colonies.
7. ___ A few days prior to swarming, a colony sends out scout bees to begin searching for a new homesite.
8. ___ Within the colony, the presence or absence of pheromones is detected by specialized cells located on the antennae.
9. Please explain why honey bees are considered to be social insects. (3 points)

   _____

   _____

   _____

10. Name two ways in which absconding is different than swarming. (2 points)

    _____

    _____

11. Honey bee development varies with caste and broodnest temperatures. Please complete the following table for approximate developmental times for each stage and caste. (7 points)

Developmental stage	Duration of stage (days)		
	Queen	Worker	Drone
Egg	?	3	?
Larva	5-1/2	?	6-1/2
Pupa	?	12	?
Total	16	?	?

Answers on Page 536.

NATIONAL HONEY WEEK
October 18-24, 1987

Frank Robinson, Sec'y. - Treas., The American Beekeeping Federation, Inc.

Although the National Honey Board is now operational and already has several promotions underway, that doesn't mean that we can all sit back and leave all promotion to them. National promotions such as the Honey Board carries out will complement, not substitute, for your local efforts.

So remember, the American Beekeeping Federation is again sponsoring **National Honey Week** and will make available at very reasonable cost a variety of promotional materials for you to use in your area. Why not make an effort to have one of the attractive posters in as many store windows as possible to remind people to try some honey? Everyone should also have a supply of the recipe leaflets and informational leaflets on hand and if you will contact your local newspapers and encourage them to print some features about honey during National Honey Week we can send you several articles that are suited for this purpose.

The cost of these materials is very little (Posters 75¢ ea., Informational Leaflets 3¢ ea., Bumper Stickers 50¢ ea. and Recipe Folders $7.00/100 or $6.00/100 when 500 or more are ordered. These prices include postage.) Contact The American Beekeeping Federation, Inc. 13637 N. W. 39th Avenue, Gainesville, FL 32606 (904) 332-0012 and get your order in early.§

How To Invest In Your NATIONAL HONEY BOARD

By DWIGHT STOLLER • National Honey Board
Sec./Treas. and Compliance Committee Chairperson

In the last issue I introduced the National Honey Board. I reviewed the formation of the Board and objectives. I also explained that the National Honey Board was our investment in the future of the honey industry, and I asked for your support.

In this issue, I will plunge into the details of "how-to" comply with the National Honey Board's promotion program. I ask that you think of this not only as how to comply — but how to invest. Investments take time and thought. I ask you to take the time to review "how-to" invest in your National Honey Board.

There are just a few forms that the National Honey Board uses to keep track of honey sales and to validate compliance. In this article, I will describe these forms in detail and discuss the uses of each.

Transaction Report (TR)

The form most commonly used to comply with the promotion program is the Transaction Report (TR) (see Exhibit A on page 514). The TR is used to record all honey purchased from producers by handlers and pounds of honey produced and sold by producer/packers.

If you are selling honey to a handler, the handler completes the TR and gives one copy to you, keeps one and sends one to the NHB office. The NHB office files its copy and enters the information from the TR in the NHB computer.

The TR form requires the collecting handler's name, address, company name, and requests the handler's tax identification or social security number. The TR also includes the producer's name and address and requests the producer's tax identification or social security number. The date of the transaction and the crop year of the honey involved in the transaction are also required.

The middle portion of the TR is a worksheet to determine the assessment to be collected. First, the person completing the TR includes the number of pounds involved in the particular transaction. Then, by multiplying the number of pounds in the transaction by $.01 (1 cent per pound), the handler calculates the total assessment on the honey in the transaction.

Some people have made advance payments to the National Honey Board. The next line on the TR is available for the handler to fill in the amount of the advance payment. The producer must show a numbered Advanced Payment Certificate (APC) to the handler. The handler records the APC number in the space provided on the TR, then subtracts the advanced payment credit from the total assessment and records the balance in the next line of the TR.

Much honey has been placed under loan with the Agricultural Stabilization and Conservation Service, so the ASCS is collecting the promotional assessment when honey enters the loan program; when loans are settled or when there are "buy-back" disbursements. The handler will enter the ASCS loan number (which is to include state and county codes as well as the loan number) into the space(s) provided on the TR. The amount collected by ASCS is entered into the blanks on the worksheet. This amount is then subtracted from the balance and the handler will not collect the assessment.

If the producer can provide the handler with an NHB numbered Exemption Certificate, the handler is not required to collect any assessment. Later I will discuss the Exemption Certificate and how to qualify. The exempt producer is asked to sign and date the TR in order to validate the exempted TR. However, this signature is not required.

The collecting handler's agent must sign and date the TR. Finally, the National Honey Board asks the handler to collect some statistical data at the bottom of the TR. A study is in progress each year to examine the number of pounds in the channels of commerce of each color of honey, of the moisture content of the honey and the primary floral sources that are being used. This is optional information but your assistance is requested.

Remember, the TR is also used as a monthly reporting document for those producers who pack their own honey.

Recognizing the concerns of small operations, the Board recently approved a policy whereby producer/packers or handlers can fill out their TR forms and send in their forms with payment when accumulated collections reach $30, or on a semi-annual basis. This policy alleviates the need to submit monthly small assessment payments. However, you still need to record your transactions on a TR form as they occur.

Domestic Handler Report (DR)

Collecting handlers use a Domestic Handler Report (DR) to summarize the domestic honey purchased each month. Copies of every TR completed for the month are attached to the DR. The DR summarizes each of these transactions. There is a similar monthly report for importers called the Importer Report (IR).

Exemption Application (EA-1)

Small beekeepers, who do not wish to invest in the promotional program, can file for an exemption of assessments. To qualify for exemption, the producer must provide evidence that he produces less than 6,000 pounds of honey per year.

Evidence that the beekeeper produces 6,000 or fewer pounds of honey can vary from an ASCS loan summary to a recent hive inspection certificate. Once evidence is received and approved by the Board, the beekeeper will be issued a numbered

Continued on Next Page

HONEY BOARD . . . Cont. from Page 513

certificate of exemption. The certificate will cover all honey produced that specific crop year. ***The producer who does not wish to invest in the National Honey Board's promotional program must have a numbered exemption certificate if his honey is handled by another individual, ASCS or a marketing cooperative.*** If you do not need the numbered certificate, you can use the Simplified Form EA-2.

Simplified Exemption Application (EA-2)

A simplified form has been developed for beekeepers who produce less than 6,000 pounds and give their honey away or sell their honey directly. This form is called the Simplified Honey Producer Exemption Application (EA-2, shown on page 515, top). This form is easy to use. Beekeepers who have produced honey which is consumed at home, given away, or distributed through local outlets, but is not handled by another individual, by the ASCS or by a marketing cooperative, can use this form. When a qualified producer completes the form in Exhibit B (EA-2) and sends it to the National Honey Board, they become automatically exempt from the promotion assessment for that crop year. If you qualify and send in this Simplified Honey Exemption form, and you do not handle any other producer's honey, no further reports are required.

Honey Producer Donation Form (HD-1)

As I stressed in my previous article, beekeepers of all sizes are important to the success of NHB programs. If you request an exemption (EA-1 or EA-2) from the promotional assessment, I urge you to make a donation to the work of the National Honey Board. Use the bottom portion of Exhibit B (HD-1, shown on page 515) to make a donation.

Donations, as well as assessment payments, are tax deductible. Anyone who is not subject to assessment can donate. Therefore, donations can be accepted from exempt producers, handlers, suppliers and other persons interested in supporting the promotional honey programs.

In the Future

The forms that the Board uses today will change from time to time to accommodate changes in the industry and to accommodate unforeseen needs of the industry. The National Honey Board works to make compliance an easy task. We want you to be as excited about the future of the honey industry as we are. And, we want you to be able to invest in the future as easily as possible.

You are encouraged to share your ideas with Board Members or with staff members at the Longmont, Colorado office.

Carefully consider your investment in your future. If you qualify and chose to be exempted, consider making a donation to the National Honey Board. Whether you are a large commercial producer or a hobbyist or part-time producer, whether you are a handler or a co-op member, we invite you to be part of your **National Honey Board**.§

EXHIBIT A.
Sample for filling out TR form

NHB-COPY

TR
09125

Form Approved - OMB No. 0581-0153

TRANSACTION REPORT
HONEY RESEARCH, PROMOTION, AND CONSUMER INFORMATION ORDER

THIS INFORMATION IS REQUIRED BY LAW

SEEMORE SALES — (Collecting Handler's Name)
(701) 222-3333 — (Telephone No., Include Area Code)

HONEY HANDLERS, INC. — (Name of Business/Company Name)
234-56-7890 — (Tax I.D. No. if available, or Soc. Sec. No.)

23 RISING MARKET WAY (Address) BLOOMING DALE (City) CO. (County) 56789 (State) (Zip)

Date 9-3-87 Year Honey Produced 1987

Producer Name SALLY SWEET Street or RFD 123 BLOSSOM BLVD.
City SELLERSVILLE State CO Zip Code 45678
Tax I.D.# (Preferred), or Social Security # 123-45-6789

Pounds in transaction 7,200 x $.01/pound (Producer-packers see * below.)	=$	72.00	Assessment.
Advanced Payment Certificate# (Enter $0 if no advance payment credit.)	-$	—	(Credit)
	=$	72.00	Balance
ASCS Loan #'s (Enter $0 if no collection was made by ASCS.)	-$	—	(Collected by ASCS)
	=$	72.00	**Balance Due**
Exemption Certificate # EC- If producer presents Exemption Certificate, no assessment should be collected. Without an Exemption Certificate, the "Assessment Collected" should equal "Balance Due".	=$	72.00	**Assessment Collected (Forward to NHB)(a)**

I do hereby attest that I hold a valid Exemption Certificate for the crop year 19___, with the correct Certificate Number given above
Signed _____ Date _____

*Pounds of honey processed for sale monthly from producer-packer's own production should be reported as "Pounds in transaction" above. For producer-packers who during this same month are NOT first handlers of other domestic and/or imported honey, a monthly "Handler's Report" or "Importer Report" need not be filed. File this report by the 15th day of the month following processing for sale. Period covered by this report _____

I certify under the penalties provided by law, that this report is a true, correct, and complete report. I also certify that I am authorized to sign this report.

SEEMORE SALES (Collecting Handler's Name (print)) OFFICE MGR. (Title)

X Seemore Sales (Signature) 9/3/87 (Date)

OPTIONAL INFORMATION FOR STATISTICAL USE ONLY

This information is not required by law, but is requested for statistical purposes. Such information is valuable to the National Honey Board in planning research, promotion, and consumer information projects. THIS INFORMATION, AS WELL AS ALL INFORMATION COLLECTED BY OR SUPPLIED TO THE BOARD OFFICE, WILL, BY LAW, BE HELD IN STRICT CONFIDENCE. INFORMATION SUPPLIED ON THIS FORM WILL BE USED BY OFFICE STAFF ONLY, AND WILL NOT BE AVAILABLE TO HONEY BOARD MEMBERS OR OTHERS. HONEY BOARD MEMBERS AND OTHERS WILL HAVE ACCESS ONLY TO CUMULATIVE STATISTICS.

Pounds 7,200, Color (Circle One) White, (Extra Light Amber) Light Amber, Amber
Moisture 17.8 %, Primary Floral Source(s) GOLDENROD

(a) Send assessment to: National Honey Board, 9595 Nelson Road, Box C, Longmont, CO 80501 (303) 776-BEES

White - NHB Copy
Yellow - Handler's Copy
Pink - Seller's Copy

EA-2

EXHIBIT B.
Actual form for use.
May be reproduced as needed or removed and submitted.

Form approved
OMB NO. 0581-0153

SIMPLIFIED HONEY PRODUCER EXEMPTION APPLICATION
HONEY RESEARCH, PROMOTION AND CONSUMER INFORMATION ORDER

QUALIFICATION - Beekeepers who produce less than 6,000 pounds of honey per year and produce honey which is consumed at home, given away, or distributed through local outlets but is **not handled by another individual, by the ASCS Commodity Credit Corporation or by a marketing cooperative.** [If you produce less than 6000 pounds of honey per year, but sell to another individual, ASCS or a marketing cooperative, you may contact the National Honey Board office at (303) 776-BEES for a standard Exemption Application (EA-1)]

INSTRUCTIONS - Honey producers, as defined above, can annually apply for an exemption from NHB assessments by filling out this form. **By returning this completed form, the qualifying producer is automatically given assessment exemption for the year. Make and keep a copy of this form**—when completed and signed it is your notification of acceptance of the "Simplified Exemption". NOTE: This exemption does not relieve you of the need to maintain annual production records.

Return to: National Honey Board, 9595 Nelson Road, Box C, Longmont, Colorado 80501.

(First name) (Middle) (Last) (Social Security or Tax ID # Optional)

(RFD or Street) (City) (State/Zip) (Phone)

I hereby certify that my total production of honey did not exceed 6,000 pounds during the past year. My honey is consumed at home, given away or distributed through local outlets. None of my honey is handled by another individual, ASCS or a marketing cooperative.

Signature _____ **Date** _____

HD-1

Form approved
OMB NO. 0581-0153

HONEY PRODUCER DONATION FORM
HONEY RESEARCH, PROMOTION AND CONSUMER INFORMATION ORDER

VOLUNTARY DONATION - Exempt honey producers are not assessed under the program but can make a voluntary tax deductible donation to the National Honey Board. Donations from exempt persons/organizations can be of any dollar amount. This money will be used for nationally coordinated honey marketing research, promotion and consumer information programs aimed at expanding markets for honey producers. As a supporter, you will be helping to promote honey use and will receive a regular National Honey Board Update.

I wish to make a Voluntary Donation to the national marketing work of the Honey Board. Enclosed is my donation of $_____ ($10 minimum suggested—no maximum) to support this work. NOTE: Donation is tax deductible. Make your check payable to: National Honey Board. Thank you for your support.

Return to: National Honey Board, 9595 Nelson Road, Box C, Longmont, Colorado 80501.

( )

(First name) (Middle) (Last) (Phone)

(RFD or Street) (City) (State/Zip) Date

Tracheal Mites:
History, Biology and Control

By LARRY CONNOR • P. O. Box 817 • Cheshire, CT 06410

The Tracheal Mite *(Acarapis woodi)* has reached many states, and in all probability will reach all states in the next few years — regulations notwithstanding.

Several controls have been tried, some good, some not, some legal, most not. However, the basic research on this creature was done over twenty years ago in Italy in a study funded by the USDA. Then as now, menthol was found to be an effective and safe treatment for colonies. Below is a summary of this study.

Also, two short pieces are included that look at control successes with other methods. The comparisons are interesting.

Introduction

From 1962 to 1967, the USDA financed research on acarine disease — now called the honey bee tracheal mite, in Bologna, Italy. This project was conducted by Professors Ida Giavarini and Guilia Giordani, Instituto Nazionale di Apicoltura, Via S. Giacomo n. 9, Bologna.

The following summarizes data collected by these scientists. The work consists of study of the life history on the mite and its basic biology. These studies may be helpful in understanding the tremendous variation in reports by different beekeepers with bee colonies in North America.

The honey bee tracheal mite was well established in Italy by 1958 (Giordani, 1959). In 1962, experimental apiaries were made of *Acarapis woodi* infested colonies. Colony mortality was documented, and bees were removed from colonies and tested for the percentage infested with mites. While several other factors were also found to cause colony death, most mortality was attributed to very high mite populations.

Field test results

Of the mite-infested colonies observed throughout the 5 year research period, 66.4% died in the test apiaries at Aosta and Bologna, Italy. The mortality was due largely to high mite infestation levels. In an Arezzo apiary, the infestation was lower at the start of the study, and remained so throughout the trial period. The mortality was also lower.

Natural swarms were caught, and artificial swarms (increase) were made, and were placed in the same apiary locations. Overall, these new colonies suffered a 44.1% mortality. But the artificial swarms, made up from young bees, only experienced a 16.6% mortality, while natural swarms lost 53.5%. This probably reflects the difference in age distribution in the two types of colonies; natural swarms contain a mixture of ages, while artificial increase colonies consist of mainly young workers.

Without intervention with chemicals, the authors concluded that most colonies would suffer drastic losses. While these losses were higher in the northern test locations than in the south, the authors warned that this could be a result of their limited sample. They noted that in other years, the mites caused considerable mortality in Arezzo, and in locations even further south. They also noted that the bees in Arezzo were in the hands of very skilled beekeepers, who looked after the colonies a great deal better than beekeepers in other areas.

Mite infestation levels varied widely — as many North American studies have indicated. There were changes in both the mite populations, and the percentage of infested bees. The authors write: "It is much more difficult to explain . . . the apparently capricious course of this disease, its sudden and wide fluctuations, and the irregularity of the annual cycle in an individual apiary. This would seem to point to a more or less close dependance on ecological factors, and especially temperature and humidity." While they frequently mentioned temperature and humidity as critical factors in influencing mite populations, the researchers were unable to show any correlation between these levels and the number of mites present in an apiary.

In the laboratory, mites withstood low temperatures better than bees, were less sensitive to temperature changes, and appear to "welcome" high levels of humidity. The authors write: "This agrees with the theory that the disease worsens when in the interior of the hive there has, at the same time, high relative humidity and low temperature, which results, among other things, in large heat losses and consequent weakening of the colonies."

Over the five year period, there were general similarities between the apiaries. Mite populations peaked during and after an extremely cold and snowy 1962-63 winter, followed by a decline in mite populations in 1964 and 1965 (with a few casual increases) and then an increase again in 1966, again following a rather cold winter. The research results correlated well with the general HBTM levels, and losses, in Italy during the same time period.

The second factor affecting mite populations was the level of the nectar flow. Following ideas suggested by Bailey (1958), the authors argue that when the nectar flow is strong, and bee foraging activity is intense, mite populations often decline. Old, infested bees have reduced contact with young workers, thus reducing the possibility of the mites spreading and increasing in population. In addition, a good nectar flow correlates with increased brood rearing and strengthened population structure. Again, work underway in

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North America indicates a decline during a good nectar flow.

The authors conclude: "Acarine disease really does follow periodic cycles, with peaks and depressions, linked to different factors of various orders that may overlap, interact, and add one to another; so that too many variables are in play to get a precise response from statistical investigations or to make it possible to identify well defined and unchanging factors responsible for the periodic and rapid worsenings and remissions in the disease. The impression is, however, that temperature particularly, and humidity bear a pre-eminent role, albeit passing through the filter of the biological conditions of each individual colony, and that the disease manifests itself in a virulent form whenever two negative factors happen to be added one to another."

The natural course of the disease was followed for five years and involved 150,000 insects studied in the lab. There was never a constant increase in the level of the infestation, but instead, there were marked changes from year to year and from month to month. There was a fairly close correlation between the percent of infected colonies and the number of bees in each colony which had the disease. At its worst, the disease was devestating. In Aosta, 15 colonies died in 1963 and then the level declined. In Apiary B in Bologna, 32 colonies died in 1963, the worst year. But in Arezzo, the level of disease remained low.

BIOLOGICAL OBSERVATIONS

Laboratory investigations

In the lab, about 8,500 bees were naturally or experimentally infested, and then examined for mites. *Acarapis woodi* were found in not just the prothoracic tracheae, but also in the air sacs of the head, the thorax and the stomach. In fact, mites were often found in the heads of newly infested bees, when the thoraxic tracheae were free and empty. *The presence of the mites in the air sacs of the head were found to be rather common.* The dorsal air sacs, lying against the base of the compound eyes and around the optic lobe, were a preferred site for the mites. Parasites of all stages, from the egg to the adult, were found. The very thin walls of the air sacs were often heavily melanized, or darkened, by mite activity. Location in the abdomen was quite rare.

The movement of mites from one bee to another does not appear to be stimulated by crowded conditions within the hive. Instead, there appears to be a natural instinct for the mite to move from bee to bee. The paper reports the presence of mites in remote places, which were extremely laborious to check. *This indicates that a clean prothorasic thracheal system does not guarantee a mite-free bee.* This complicates diagnostic and regulatory efforts, and may be a factor in developing chemical control methods. In fact, in one study, when a

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Controlling Acarine Mites with Natural Materials

Egypt Goes the Natural Route

By Dr. Mahmoud M. Mazeed
Plant Protection Res. Institute
Ministry of Agriculture
Cairo Dokki

Introduction

The acarine mite, *Acarapis woodi* (Rennie) invades the tracheal system of bees generally during the winter or early spring and may reduce colony strength below economic production levels. It can cause death to colonies if it is joined with other diseases (Bailey 1984) while Shimanuki allowed that *Acarapis woodi* alone can completely destroy the infected colonies. Many use chemicals for controlling the mite. Others use natural substances such as mustard oil and menthol. They found that such substances were more effective against adult mites than immature stages.

The objectives of our work were to use medical plants not harmful to humans instead of the acaricides in colonies which can cause problems for humans when using contaminated honey.

Five medical plants were used to control acarine disease; five heavily infested colonies were used for evaluating the use of these materials for controlling *A. Woodi*; and another infested colony was used as a control.

Preliminary experiments were carried out to study the effect of a powder or oil from these medical plants on the parasite. These plants were:

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20 Years of Acarine Mite in India

By F. A. Shah
Kursu, Rajbagh,
Srinagar - 190008
Kashmir, India

Folbex is the Answer Here

Acarine disease drifted into Kashmir valley during 1966. The State Department responded and advised beekeepers to use remedial measures, mainly acaricides, to help the situation. Beekeepers, however, took this disease lightly. The result was a loss of around 85-90% of the colonies by autumn 1969. Looking at the wholesale destruction of colonies, beekeepers realized the lethal ability of *Acarapis woodi*. They realized that without using remedial measures, they could not ignore this disease and stay in business.

With this began an era of chemical treatment. Initially, use of the acaricide Folbex gave poor results and queens were killed by bees in the treated colonies. In due course, and with proper fumigation of Folbex, an effective control of the disease was achieved. During these years, nature has eliminated highly susceptible colonies and regular chemical treatment has proved only a temporary solution. If an apiary is left untreated for a season or two, the losses due to acariosis amount to over 50%, even after 20 years of the disease. Therefore, breeding of disease resistant stock will only be a long term control.

This disease reaches the peak stage during late autumn, when one finds it difficult to walk in an infested apiary without trampling the crawlers. Overwintered infested colonies usually collapse during the coldest period of the winter because infested bees become dysentric and unable to take cleansing flights. The result is they lose the ability to form normal winter clusters and finally collapse. Some infested colonies survive winter and carry on the infestation during the next season; but this usually ends in catastrophe if left untreated.

The most insidious nature of this disease is that the symptoms (crawling of bees) are vivid only when a colony has reached a stage of total collapse. Otherwise, periodical dissection of hundreds of bees of a colony is made to determine infection.§

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chemical fumigation treatment was used, the mites in the thorax were dead, but those in the head were still alive.

Mites apparently moved constantly from bee to bee, looking for a new bee to infest. The authors suggest that female mites may move into one bee and deposit eggs, and then move to another bee and do the same thing. This may be commonly found in new infestations, where mite populations were low. This would explain the rapid build-up of the percentage of infested bees in a short time period.

It has been suggested that 10 to 12 day old bees are past the point of infestation, perhaps because of the hardening of the bees hairs around the spiracles (the opening of the tracheal trunk). This mechanism may only occur when there is a constant supply of new young bees, that is, when brood is emerging in large numbers. During the winter, this cannot happen, and mites must move into older bees, probably with more difficulty than into young bees. This explains how the level of bee infestation can be low in the fall, and high the following spring. From January to March, many dissected bees showed signs of a beginning infection. This was evidenced by a sole female, a female with a few eggs, or eggs and larvae only. The infected bees were apparently those which emerged in the fall, and were then several months old. These bees were found in severely infected colonies where the majority of the bee population showed tracheae that were darkened and hard, and crammed with parasites. Initial infestations were usually monolateral — in only one tracheal trunk.

In one colony, observed closely during the winter, the infestation followed this pattern:

Month	% Infested Bees
December	28%
January	41%
February	49%
March	90%
	Colony Death

When healthy bees of known age were emerged in the laboratory and were brought in contact with old diseased bees in laboratory cages, there was a trend for the mites to infect the youngest bees. However, with very high infestation levels in the older bees (60%), the older bees were also attacked. This implies that there are at least two mechanisms at work in this system.

In cage trials, the authors found that mites "show a most decided preference for recently emerged hosts". When forced to infest older bees, the mites appear to find a less favorable environment, and the reproductive rate is reduced. *This suggests that the preference of the mites for very young bees is not due simply to some mechanical factor, such as the impenetrability of stiff hairs surrounding the prothoracic lobes, but due to specific physiological factors found in young bees which are not found in older bees.*

While infected bees sometimes developed darkened or melanized tracheal walls, the process was not related to mite population levels. Instead it is possible to find darkened tracheal walls when only a few mites are present, or normal walls associated with very high numbers of mites.

Laboratory infestation of bees

By artificially manipulating bees in laboratory conditions, the authors were able to study the spread of the disease. They found that the spread was much more rapid, and with higher mite populations, when young, healthy mites were associated with old carrier bees containing a high number of mites. For the first 7 days after emergence, the bees appeared to be equally attractive to the mites.

By infesting bee larvae (not infested by the mites in the wild) in the laboratory and then exposing newly emerged bees to them, 6.3% of these bees became infested with mites. But it also indicated that the bee larvae were poor hosts for the adult mites. By comparison, when newly emerged workers were placed in direct contact with infested adult bees, the resulting infestation amounted to no less than 77% of the bees. The authors therefore conclude that "the transmission through the brood would appear to be rather unlikely".

Resistance of mites to death after death of the host bee.

The average survival of mites after the death of the bee varies as to the time of year:

Season	Survival Period
Spring	15 hours
Summer	26-28 hours
Fall	30-40 hours
Winter (0-2°C)	120+ hours

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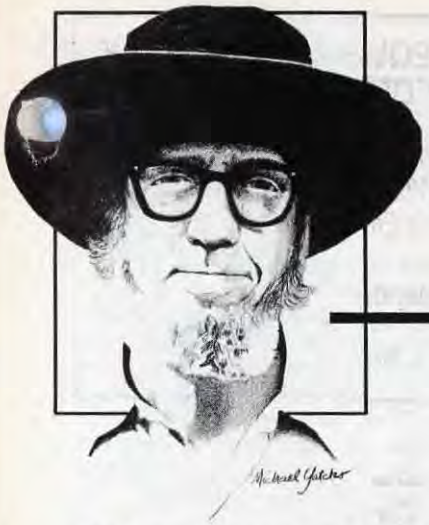

BEE TALK

By RICHARD TAYLOR • R. D. 3 • Trumansburg, NY 14886

"Many are called but few are chosen. I think I know why."

I mark the seasons not by the calendar, nor by solstices or other established signs, but by the things that have come to have meaning for me year after year — the first dandelion of spring, the return of the orioles to my walnut tree, the first frost of October, a great many things like this repeat themselves each year. Each portends a new state of things, and my spirit undergoes the appropriate shifting of gears. The latest such marker of the evolving year came just yesterday — July 19th — when I saw the first wisps of goldenrod. It ushers in a period of fulfillment for me as a beekeeper. There won't be much apiary work now except for harvesting my supers. No more supers will go on, except for a few of the comb sections that didn't get quite finished. The bee year is, in a significant sense, over. The autumn honey is for the bees, their reward for the hundreds and hundreds of white honey sections they have given me. My bees will require no fall feeding, nor any spring feeding either, and every colony will come through the winter strong, ready to repeat, more or less, what happens every year. Life's tempo will begin to slow, the frost will strike with deadly certainty, and slowly the bees will withdraw for the long wait. And so, more or less, will I, as my warm hearth replaces the sun and I wait for the auguries of spring — the peepers, the first dandelion.

This has been going on for a long time with me, adjusting my life to the stages of the seasons and especially to the bees. Doubtless everyone does the same, though in different ways and degrees. But, those for whom beekeeping has become a basic ingredient of their lives are few indeed. It is not that people are not drawn to beekeeping. Many are. If one sets aside those who distrust nature generally and have an aversion to insects and a basic fear of bees, virtually all the rest have a fascination for bees and for the work of a beekeeper. There is a mystique in beekeeping that resembles nothing found in any other agricultural pursuit. Why, then, are there not lots more beekeepers?

Many are called . . .

Many, it seems, are called, but few are chosen. I do not know the source of that epigram — perhaps from the Bible, but more likely from Calvinist theology. It does, in any case, apply wonderfully to beekeeping. Lots of people take up beekeeping, sometimes with great enthusiasm, but rather few stay with it. Of the countless numbers I have seen start beekeeping, often in response to my encouragement, I can think of very, very few who have gone on to be and to remain serious beekeepers. After a year or two their apiaries, begun with such eagerness and industry, come to be neglected. Supers put on one year are still there the next, unharvested. Equipment falls into disrepair and the colonies, no longer of much use to anyone, throw swarms, their owner neither knowing nor caring.

This baneful sequence has sometimes led me to wonder whether people should ever be encouraged to become beekeepers. Perhaps, I have thought, those relatively few who would make good and lasting beekeepers would gravitate to it without special encouragement.

Over the years I have taught many short courses in beginning beekeeping. Most of the students have then gone on to the next step of getting a hive or two. But of all these many students, I can think of none who has stayed with it and become a serious, long-time beekeeper. One student bought a hive, set it up in his garden, introduced a nuc — and then never opened it again, never supered it, never did anything except allow the bees to come and go. After several years the hive, for reasons unknown, died. To my astonishment this gentleman replaced it with another hive, which he purchased, complete with bees, and as before, has done absolutely nothing with it since.

What is the answer . . .

It is a familiar story — an enthusiastic rush into beekeeping, which soon becomes a marginal interest, followed by a total loss of interest and complete neglect. But I think I have found the underlying reason for this, which is, more than anything else, the problem of what to do with the honey crop once you get it. Just one hive is apt to produce more honey than a family can use in a year. And it is utterly dispiriting to have perhaps eight or ten hives, a half ton of honey needing to be harvested, and no idea what to do with it. ***MARKETING*** honey is, I think, the one big problem that besets the backlot beekeeper. Harvesting, extracting and packing honey is not, in itself, terribly rewarding. It is a lot of work and it can be sticky and messy. And if the reward of it all is just a lot of honey sitting around to granulate then interest in beekeeping is apt to decline — fast.

What all this means is that a good sideline or backlot beekeeper must have another talent, in addition to skill as an apiarist, and that is skill as a salesperson. That is not, really, much of a requirement, because honey is very easy to sell, but it seems to be a requirement many cannot meet.

The really good beekeepers I know have no trouble selling their crops. Some simply take a case of honey to their place of work from

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a) Clove *(Eugenia aromatice)* Oil
b) Peppermint *(Mentha piperata)* Oil
c) Marjoram *(Origanum Majoranum)* Oil
d) Eucalyptus *(Eucalyptus globulus)* Salt
e) Warmwood *(Artemisia berb alba)* Powder

A piece of cotton was immersed in the Oil of each; clove, peppermint, marjoram and the salt of Eucalyptus. All were put in pietry dishes under the combs; warmwood was used as a powder of leaves and flower which was also placed under the combs in infected colonies.

Ten days later, we introduced 20 newly emerged marked workers. At 5-7 day intervals, the introduced bees were collected and examined. This process was repeated nine times during 45 days, and the results recorded, after which the materials were removed from the colonies.

Random samples of 20 workers from each of the infested colonies were collected and transferred to the lab for examination. Ten days after removing the materials, 20 newly emerged workers were marked and introduced to each of the last infected colonies, again to study the reactivity of the parasite. At 5-7 day intervals, the young marked workers were collected and transferred to the lab for examination. These samples were repeated 6 times during one month and the results recorded.

Results

Materials were used as mentioned above. After using these substances the data showed:

1. The samples taken from the control were 100% infested.
2. In the samples from the Oil of clove, peppermint, Marjoram and the salt of eucalyptus, the nine samples of the introduced bees used after 45 days were free from the mite, the oil of the first three substances has a strong smell and it affects odors of the colony and causes robbing.
3. According to the warmwood, it was noticed that the first introduced sample of bees (after 10 days) was found 25% infested while the other eight samples were completely free from the mites.

The samples which were collected during the 10 rest days from bees of the infected colonies showed that old workers were still infested, but with inactive and dead mites.

The samples of young bees used after the rest period with all treatments showed promising results as they were completely free from the mite.

Conclusion

Powder and oil of some medical plants which caused no harmful effects to humans were used in infested colonies. Plants used: clove, peppermint, marjoram, eucalyptus and warmwood; although the warmwood had the latest effect in the beginning, it has some advantages which make it preferable to use.

It is available, cheap, easy to use and had no bad side effects. It is preferred to be used during autumn and it can be used as protection for all colonies.§

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When infested bees were kept in a refrigerator at -20°C the insects withstood the low temperatures for a maximum of 6 days, while some mites were still alive after 16 days, in hosts which had been dead at least 8 days!

Mites on queens

Not all queens heading heavily affected colonies were infested. Out of 39 queens examined, 21 had mites and 19 were completely free from mites (Yes, the numbers don't add, but that is the paper's content). However, in one queen there were 87 adult mites, 48 larvae and 9 eggs.

Conclusions

"From the research there emerges the objective and documented fact of the appreciable losses that uncontrolled Acarine disease can inflict. Among such losses one must include, beside the death of many colonies, the reduced honey yield of those that survive. At Aosta, for example, the bees gathered barely anything and every year abundant sugar feeding was required. Similar conditions occurred in the Bologna apiaries, and the Arezzo apiary itself, notwithstanding the slight infestation, gave consistently lower crops of honey than those of a healthy apiary."§

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TAYLOR... Cont. from Page 519

time to time, where their fellow workers eagerly buy it up. This is almost effortless selling. One friend of mine puts a few cases in his car every time his family drives off to visit his relatives, selling it at roadside stands along the way. This too, requires little effort and no extra driving. And in fact, almost any backlot beekeeper can sell, over the course of the year, a great quantity of honey just by setting it out on the porch with a sign out front.

It is, however, that final step in beekeeping that one has got to be able and willing to take if one is going to stay with it and find the activity fulfilling. You must have good honey, attractively packed, and then somehow make it available. You don't have to do much more, unless you aspire to big things, but you must be willing to do that.§

Comments and questions are invited. Use Trumansburg address, above, and enclose a stamped addressed envelope for prompt personal reply.

Where Have All The Beeyards Gone?

By DR. JAMES TEW • The Agricultural Technical Institute • Wooster, OH 44691

"I had a load of bees to put on a spot that wasn't there anymore!"

In recent articles, I and others have discussed the problems associated with finding and occupying good yards. The process is always a challenge. Just finding the yard is the first step — keeping the yard is frequently the second imminent problem.

I have personally had situations within the past year where good, convenient locations were usurped from beneath my very nose — all for the good of something else other than beekeeping. As all of you should know, when beekeeping goes head to head with almost anything else (Local ordinances and government support programs are two examples of constant battles that beekeeping must fight), beekeeping frequently loses. Having yards recalled to change the purpose of the land is not uncommon.

Before . . .

In South Alabama, we had a scenic location; in fact, it was a classic deep south jungle with tall Tupelos, tulip Poplars and a myriad of wild flowers, all laced with thick mats of climbing vines. This low-lying swamp habitat, if one could stand the heat and mosquitoes, was perfect for a good smell of the hives and the sound of life — bees, birds and countless other natural sounds; all combined into a moment that made beekeeping harmonious with its surrounding.

After all those years of undisturbed natural serenity, this particular location got directly in the path of one of nature's nemesis — "Improvement". A shopping mall was built on a nearby knoll. Naturally, the neighboring lowland, with all the ensuing plant and animal life would have to be eliminated. It was. The natural setting was changed to reflect the new needs of the retail center. Now there is a shallow, mud-bottomed pond with threatening "NO TRESPASSING" signs where only two years ago stood an unblemished piece of nature. On the nearby hill stands the new mall. When confronted with such financial strength, beekeeping concerns were never given remote considerations. As beekeepers, we did what we could — we moved our colonies to other locations.

I had a scenic yard in Ohio quite near the bee laboratory. The location, shaded by two tall cherry trees, overlooked a small pond and was matted with grass, which would overtake the hives if not mowed regularly.

And then . . .

All phone rings sound alike. One can't tell how urgent, if urgent at all, the message that follows will be. With no warning, a call came that the area where my bees were located would have to be sprayed for gypsy moths. I would have to close or move the hives while an insecticide was used to regain control of the errant outbreak. I elected to move the colonies. I loaded them on a trailer, by myself, and moved the 15 colonies to another location. Since I would only be in the new location briefly, I didn't bother unloading the hives. Spring changed to summer and I finally got around to connecting the trailer to my truck and made the early evening trip to the cherry tree location. *The entire location was gone.* It was funny. I had a load of bees to be deposited on a location that didn't exist any more. In place of cherry trees and grass, there was now graded hills showing subsoil and tree roots and an unhappy grass cover crop. The farm had been sold even before the moth spraying episode and it happened that the bees were gone when the earth movers showed up. I knew then how a bee must feel upon returning to the hive location only to find that the hive has been moved. I returned the colonies to the second location, the one that I had thought was temporary, and unloaded them. They are there even now.

. . . After

I don't have any recommendations that beekeepers could follow to insure the continuance of good yards. Everything changes. I recently read that 3,000 acres of tropical forest were destroyed each hour of the day,

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THE LAMENT OF THE HONEYPOT COLLECTOR'S WIFE

By Karen Steed

He scans flea markets by the score
And over worthless junk does pour,
Searching for his Holy Grails
His skeps and pots, his shakers, plates and pails.

From ancient ladies in the towns
With antique bones in antique gowns,
He's not wanting love nor money
But seeks instead his pots for honey.

Never tiring of his quest
For unchipped pots that pass his test,
Wanting naught without a bee,
It's a wonder he's kept me!

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seven days a week. What then could substitute for the smaller plants, for bees and other wild life? Very little. I'm afraid that it's an unfortunate fact of our current times.

Alternatively, all of us require forest products — wood — in the form of paper, houses and heat. Few of us could criticize the prudent use of land and timber. I only hope that prudence prevails.§

RESEARCH REVIEW

By DR. ROGER A. MORSE • Cornell University • Ithaca, NY 14853

"This fall, select apiary sites with extreme *care"*

This past spring several New York State beekeepers phoned and indicated they had unusually heavy winter losses in some locations. We visited a few sites and obtained samples from surviving colonies. In some cases we found over 50 per cent of the colonies dead. The samples from these yards, as well as some from yards with high survivorship and some samples collected by the beekeepers themselves, were examined by the USDA laboratory in Beltsville, Maryland that is under the direction of Dr. H. Shimanuki. Most of the samples from yards with high winter losses contained bees heavily infested with tracheal mites, *Acarapis woodi.*

Last fall was a difficult one for honey bees in our state. The fall honey flow never materialized. Bees gathered very little fall pollen. This situation makes wintering difficult under any circumstances, as colonies will go into winter with more than the usual proportion of old bees because there is so little to stimulate fall brood production.

Finding large numbers of mites does not mean they were the primary problem. They could be merely secondary parasites ready to take advantage of any colony in a weakened condition. It is understood by those who work with bee diseases that a honey bee colony can usually tolerate one or two of the lesser diseases at one time; however, as the number of simultaneous diseases increases so do the problems.

I reported in the May (1987) issue of *Bee Culture* that several researchers are working on control methods for tracheal mites. Those I have talked to concur that menthol vapors will kill mites; menthol is, of course, considered very safe for humans and is widely used in food flavoring. In conversation with Dr. Shimanuki I learned that New Jersey is taking the lead in obtaining label approval for menthol from the Environmental Protection Agency and in formulating recommendations for its use as a miticide. We hope some advice will be available in time for use this fall but that is not certain.

WHAT TO DO THIS FALL?

Most people familar with mites agree they are now widely distributed in the US, probably present in most states. Northerners have special concerns because of the long, harsh winters. Acarine disease, by itself, will probably not kill any colonies. However, if mites are present and there are other wintering problems such as poor locations, European Foulbrood, sacbrood, and especially, nosema, colonies could die from the combination.

Advice for this fall for Northern beekeepers is to select winter locations with more than usual care. They should be dry, preferably sloping to the east or south, and be fully exposed to the sun. It seems to me that fewer beekeepers pack their colonies for winter today than did a few years ago. I suggest some form of wintering protection would be helpful. (A bulletin describing one method of wintering is listed below).

Perhaps most important is that each colony should be fed one and preferably two gallons of medicated syrup after the fall honey has been harvested; a good time is at or soon after the first frost. The syrup itself should contain two parts sugar and one part water. Two medications should be used simultaneously in the same can or jar of syrup: Terramycin (oxytetracycline) especially for European Foulbrood and Fumidil-B (fumagillin) for nosema control. Neither of these drugs has any effect on tracheal mites. However, if we can reduce European Foulbrood and nosema as problems then the bees will be better able to tolerate the mites.

THE FUTURE

During the past several months I have talked to many people about the problems of chalkbrood and Acarine disease. It seems obvious that what is needed is the development of bees resistant to both and perhaps some of the other lesser diseases at the same time. All the information we have at present indicates the task of developing such bees should not be too difficult. The question is, who will do it? So far, private enterprise, notably Steve Taber of CA, is ahead. None of the government laboratories seems to be interested. Steve has pointed out very carefully in several of his articles the pitfalls that are to be avoided. Maintaining high honey production is, of course, a first priority in developing any genetic strain. This means one must have a fairly elaborate system for testing new stock.§

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HOME HARMONY

By ANN HARMAN
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Early autumn is definitely apple time. Roadside stands offer popular eating apples along with local favorites for cooking. There is even a revival of the "antique" apple varieties which are fun to grow and fun to use. These come grafted on dwarfing stock so even a small suburban garden can have several apple trees. Other autumn fruits such as pears are beginning to appear. Since fruits and honey are a perfect combination, it is difficult to select a few recipes for you to try. The recipes still sitting on my desk are equally good. I shall just have to save them for another time.

The old favorites — apple pie and baked apples — are so easy to make with honey. All you do is substitute honey for sugar in your favorite recipe. You can experiment with different flavors of honey to see what taste treats you can create.

All baked goods with apples are superior with a flavorful apple and somewhat disappointing with a tasteless one, even if you use honey in the recipe. Select some tasty apples and try this recipe:

FRUIT COBBLER

1/2 cup honey
1/4 cup butter
1 egg
1/2 cup milk
1 cup flour
2 teas. baking powder
dash salt
1 teaspoon vanilla
2 cups sliced fruit (apples, cherries, blueberries or peaches)
1/3 cup honey
1 cup boiling water
1 tablespoon butter
1 teaspoon cinnamon

Mix the 1/2 cup honey and 1/4 cup butter. Add egg and beat well. Stir in milk. Sift dry ingredients together. Add to honey mixture and beat smooth. Stir in vanilla. Spread evenly over the bottom of 8-inch square baking pan. Mix fruit, 1/3 cup honey, boiling water, butter and cinnamon. Pour on top of batter. Bake at 375° for 45 minutes. Cake will rise to top during baking.

THE HONEY KITCHEN
ed by Dadant & Sons

The following recipe makes use of both apples and pears and will make an excellent accompaniment to meals in the months to come.

ROSY MINT RELISH

3 cups fin. chpd unpared apples
2 cups finely chpd unpared pears
1 cup finely chopped onion
1 cup finely chopped green pepper
1 cup chopped golden raisins
1 cup finely chpd sweet red pepper
1 cup chopped fresh mint leaves
2-1/2 cup honey
1-1/2 cups white vinegar
1 tablespoon salt

In a large kettle, mix all ingredients; heat to boiling, stirring occasionally. Preparé jars and water bath for canning. Fill jars and process according to standard canning instructions. Makes 7 to 8 half pints.

Recipe hint: Don't chop all those ingredients by hand. Use a very coarse blade on a meat grinder, or use a food processor.

This recipe for a quickly-made dessert is an excellent end to a hearty meal. Although it is best served at room temperature, you may also enjoy it slightly chilled.

STEWED APPLES IN WHITE WINE

2 pounds apples
1/4 cup butter
2 tablespoons honey (more if apples are very tart)
1/2 cup water
1/2 cup dry white wine
1/2 teaspoon salt
1 teaspoon grated lemon peel
1/4 teaspoon ground nutmeg

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Beekeeper Liability Exposure:
Excerpts from a Wisconsin ETN Network Program

By WALTER L. GOJMERAC • 237 Russell Labs • University of Wisconsin • Madison, WI 53706

The ETN is a private telephone network linking hundreds of people across Wisconsin, with about 185 listening sites. Each site has a speaker and four microphones so participants can listen to and talk with the instructor, who can be located anywhere phone service is available. The ETN has been used for University of Wisconsin beekeeping educational programs regularly since April 16, 1975.

This program, which aired April 15, 1987, had as a guest an attorney to discuss and answer questions in reference to beekeeper liability problems. This topic generated considerable interest; questions and comments were such that beekeepers everywhere will find a summary of this program interesting.

Jerold Aubry is a graduate of the University of Wisconsin Law School, has been in private practice and currently is teaching at the Wisconsin Vocational Technical School at Eau Claire, Wisconsin.

Mr. Aubry initiated the legal part of the discussion with an overview of the liability problems and concerns of interest to beekeepers. He didn't visualize great liability risks or exposure associated with bee stings as such, then elaborated further and stated that beekeepers should be aware of four different types of liability problems or exposures.

1. Common law negligence: This is when you fail to function as an ordinary prudent beekeeper. Cases of bees stinging people have never reached the Appeals Court level in Wisconsin. It is held by law that when a person harbors an "inherently dangerous animal" such as a skunk or snake, this person is strictly liable if someone gets hurt, no matter how careful you might be. Bees are not considered inherently dangerous.

2. Negligence *per se*. You would be considered negligent *per se* if the keeping of bees is prohibited by law or ordinance, no matter how carefully you kept them, and someone got injured; you're liable.

3. Nuisance: This is different than negligence. Nuisance focuses on a condition, while negligence looks at conduct. This is when you operate or handle your property (bees or hives) in an unreasonable manner such that its condition interferes with the rights of others to use their land or property in a reasonable fashion. These kinds of cases do happen, even in Wisconsin.

4. Product liability: Not in the keeping of bees, but in the selling of honey, i.e., if someone is injured or becomes ill by eating your honey. This could be a case of negligence an/or strict liability. All the person would have to prove is that your honey was unreasonably dangerous.

The audience had an opportunity to ask questions or make comments (Q/C); and I (WLG) or Jerry Aubry (JA) responded.

Q/C: *When we medicate bees, and honey has no tolerance for the product used, is this going to create a problem?*

WLG: Yes. If oxytetracycline (Terramycin) is found in honey a law is violated, hence you're *negligent*. You are violating a state as well as a federal law, so either agency, the FDA or Wisconsin Department of Agriculture, could lodge a complaint for selling adulterated honey. This is why the recommendation is that this medication should be applied **at least 6 weeks before honey flow,** then no residue will be found in the honey.

JA: If this medication in any way would be harmful to humans, I could also see a product liability suit and these are difficult.

WLG: The possibility of causing injury with this product is very remote because we're dealing with parts per million or per billion, nevertheless, it's still a violation of the law, because none should be there. Also quite serious: suppose someone made an accusation that they got sick from eating your honey, and in fact it did contain an illegal residue, it would be difficult and costly to prove your innocence. The fact that you violated the law means you're negligent.

Q/C: *What about infant botulism?*

WLG: The standard suggestion is not to feed honey to babies less than 1 year old. There has been a lot of publicity on this and every beekeeper should know about it. This suggestion is backed by the medical profession, and the national honey industry.

JA: Obviously some of you are "on notice" of this. When you are "on notice" that something can cause harm to humans, the law imposes on you the "*duty to warn*".

Q/C: *I received a complaint about a nuisance problem. I keep bees out in the county and a new neighbor complains about bees coming around his buildings. Does this nuisance law apply to people out in the county too?*

JA: In 1981, Wisconsin passed the "right to farm law". This would fit farmers who are beekeepers and under Wisconsin Law — Operate 50 or more hives. The neighbor who

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moves in cannot recover damages if your operation was conducted on the same scale *before* he moved in. In other words, if you were there first, he is out of luck. The only time or way he could collect damages from you is if you changed your method or increased the size of your operation.

Q/C: *You just said the magic word "insurance". The major insurance companies with he exception of one — will not give liability insurance if they know you are keeping bees in any way, shape or form.*

WLG: I had conversations with several insurance agents and in summary their responses were quite similar: The home owners policy will cover a beekeeper as long as it's a true hobby and *no honey is sold.* Once honey is sold, it becomes a business and you no longer have coverage — you then would need a business insurance. One large farm insurance company did not identify beekeepers as special. In other words, if you had their regular farm policy and you had bees you are covered. One gray area: say you have 200 colonies and lived in town. Obviously you're not a farmer and you don't have the typical farm policy, then you ought to talk to an insurance agent or agency. Unfortunately, any insurance company can exclude certain coverages under our free enterprise system. I suspect some insurance companies are running scared with adverse publicity related to Africanized bees. They might be anticipating problems down the road and executives are making decisions in that they don't want to be involved in these things.

Q/C: *I called 4 companies and none would insure me on a home owners policy for raising bees. I live in a Metropolitan area but my bees are in a rural area, 1/2 mile from the nearest farm. I have only two colonies, I was told I would need a separate liability policy and the quote was $500 to $1000. I was also told that if I continued to keep bees my homeowners policy would be cancelled.*

JA: I disagree with these insurance people. I looked at the History of Beekeeper liability on things like stings and property damage and can find only one case in Wisconsin where bees flew into a pesticide treated field. Compare that with slips and falls by someone coming in your driveway. I don't know where the insurance industry is coming from in this situation.

Q/C: *We as beekeepers are being penalized for this; whether there is a basis for it or not. I was told some youngster could wander in to the yard, kick over a hive, get stung and possibly die, then I would be sued. My question is what can we do about it. I did call the Commissioner of Insurance and was given a number to call. That person said I could become an assigned risk.*

JA: The only risk I can see in your situation is an "attractive nuisance". If you're in a neighborhood with a number of small children, no fences, and someone wanders in and begins poking at the hive — yes, you could be liable. Other than that I cannot offer you a suggestion or assistance. My understanding is assigned risks apply *only* to automobiles. Another suggestion I can offer is to go to the legislature, the representative in your district.

A/C: *What if one of my bees stung a youngster, not the landowner, but someone else — is the landowner responsible?*

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JA: Yes, there would be exposure to liability.

WLG: The question that would be asked, was there negligence on the part of the landowner, and also one would have to prove they were your bees, not wasps, hornets or wild honey bees.

JA: The person would have to go through the same kind of procedure or analysis. If the landowner does everything a prudent landowner would do, fences, etc. and the youngster is trespassing, the person would have a difficult time proving a claim.

Q/C: *We had 4 cases and you touched on parts of all of them. The first thing the person has to prove is that they're your bees, and no one can prove that even if the bee is killed and brought in. In one case a person moved a hive into an area and didn't even put bees in — immediately the next door neighbor brought a nuisance charge. When it went to court, the person making the complaint was asked if the specific bees could be identified. Then the day before the trial a policeman was asked to verify that there were not bees in the hive. One case involved droppings on automobiles and that was a little different.*

Q/C: *What are the standard limits on product liability when selling honey?*

JA: Recommended limits I would say between $500,000 and $1 million. Product liability is the most scary risk of all.

WLG: I'm sure most beekeepers don't have product liability, however this is a very serious risk. Most of you will recall the Tylenol situation a few years ago. I received an inquiry in reference to whether there was a movement in the legislature to require tamper-proof containers. My response was that I knew of none, but some companies have gone ahead using tamper-proof containers on their own.

Q/C: *Are we not stirring a pot here by discussing this?*

JA: The possibility or probability of lawsuits going very far in reference to stings is virtually nonexistant, not only in Wisconsin, but in the United States.

WLG: I agree that liability from stings is minimal, unless I'm reading this wrong, but then the Africanized bee might change the pattern. Now, if you're keeping bees illegally then that's another story. You're negligent. Every year I receive several calls from city or village council persons about passing an ordinance to keep honey bees out of a specific city or village. So far, I've been able to talk most of them out of it by saying you already have a nuisance ordinance, why have another law, or is it necessary?

Q/C: *Would bee hives falling or blowing off a truck be a case of liability:*

JA: This kind of liability already exists. If you're traveling along a road and something happens, you're liable.

A/C: *In case of being liable, maintaining an attractive nuisance — what constitutes living up to the law? Do you have to fence your bees in or warn everyone within a 2 mile radius?*

JA: I'm going to have to hedge, because there are no absolutes; yes, fences, warnings. It depends on the neighborhood. If you're in an area with many youngsters, that's different than a neighborhood with primarily adults.

Q/C: *I'm going to keep bees in the village limits in what was once a fenced cow pasture. Does a fence absolve me from liability?*

JA: There is no way one can be absolved from liability in our legal system. It's easy to start a lawsuit if you can find an attorney willing to take your case. The cost of defense when you're sued can be substantial. Based on what you told me, I don't think you need to do more.

Q/C: *In fall we have an open house to show people how we extract honey. Are we leaving ourselves open to liability problems in reference to bees. We don't have business insurance.*

JA: There is a possibility but what is the probability? I would suggest you might have them sign a release.

WLG: It's unfortunate that companies won't handle beekeepers because their decision is based on *ignorance rather than facts.* Also in a situation like you have, consider having general liability insurance because someone could slip and fall

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Peel apples only if skin is thick. Cut into thick wedges and remove core. Melt butter in skillet which has a lid. Add apples and saute until golden. Drizzle honey over apples. Add water, wine, salt, lemon peel and nutmeg. Cover and simmer until apples are just tender, about 20 minutes. Cool. Cover and refrigerate. Makes 6 to 8 servings.

NATURALLY DELICIOUS DESSERTS AND SNACKS
by Faye Martin

Recipes for pears are not nearly as abundant as for apples. This next recipe is delicious served either piping hot or well chilled. Furthermore, a fruit soup can be served for breakfast, lunch or dinner.

PEAR SOUP

2 pounds fresh Bartlett or Kieffer pears (canned can be used)
4 cups water
1/8 teaspoon crushed anise seed
1 stick cinnamon
1/2 cup honey (use slightly less with canned pears)
1/4 cup raisins
1/4 cup medium sweet sherry, brandy, Madiera or mead

Cook pears in the water with cinnamon stick and anise until pears are soft. Remove cinnamon stock and put pear mixture through food mill. Add honey, stirring until dissolved. Chill, if desired to serve cold. Soak raisins in wine or brandy and put on top of soup just before serving. Serves 4.

KITCHEN CREATIONS WITH HONEY
Ann Harman and Ernest Miner, Jr.

September is also a return to lunch boxes for school children. This sheet cake, unfrosted, is moist and not overly sweet. Even if you are not fixing a lunch box, it is definitely worth a try. By the way, this cake has won quite a few ribbons at honey cookery shows.

OATMEAL CAKE

1 cup oats
1/2 cup butter
1-1/2 cups boiling water
1-3/4 cups whole wheat flour
1 teaspoon soda
3/4 teaspoon salt
1 teaspoon cinnamon
1/4 teaspoon nutmeg
2 eggs
1-1/4 cups honey (a one-pound jar)
1 teaspoon vanilla
1 cup chpd nuts (optional, recommended)

Combine oats, butter and boiling water and let stand about 20 minutes until cool. Sift dry ingredients together. In a large bowl beat eggs until foamy. Add honey in a fine stream, beating well. Add vanilla and stir in oats mixture. Add sifted dry ingredients about 1/2 cup at a time, beating well after each addition. Add nuts. Pour into 9 x 13 inch well greased and floured pan. Bake at 350° for 30 - 40 minutes or until done. Cool before cutting into squares.

If you plan to enter the cake into a honey show you may wish to have a frosting. Try this simple cream cheese and honey combination. It is perfect for the Oatmeal Cake, but is a bit soft for lunch boxes.

FROSTING

12 ounces cream cheese, room temperature
1/2 cup honey
Optional: 1 teasp. vanilla
chopped nuts
Beat cream cheese until smooth. Add honey in fine stream while beating. Add vanilla, if desired and sprinkle nuts on top. Makes generous frosting for 9 x 13 inch cake, top and sides.

If you have a good apple recipe using honey that you would like to share with our readers, please send it on to me.§

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so you're vulnerable to that kind of liability also.

Q/C: *Are there any states or associations that have a self-insurance program for beekeepers?*

WLG: I've checked with several colleagues in other states and none were aware of problems comparable to ours. I do work with other groups of businesses and people, and one in particular had comparable problems of reluctance of insurance to cover them and cancellation of policies. In this case the State and National Association has been quite influential in educating insurance companies and getting some insurance companies to provide coverage. They're not out of the woods yet, but an Association has more influence than an individual.

Q/C: *In the open house situation would it be helpful to have a caution sign telling people the owners are not responsible for accidents?*

JA: All these things help, that is putting people on notice that you are taking reasonable precautions.

Q/C: *I have 200 hives and have an insurance policy through the American Beekeeping Federation. It covers everything, including product liability. One needs to belong to the Federation to obtain this policy. The Federation does not underwrite the policy, an insurance company does.*§

The Wenzels — A Family of Brazilian Beekeepers

By DAVID DE JONG • Faculty of Medicine, USP • 14.100 Ribeirao Preto, SP • Brasil

Armando Wenzel owns about 1000 colonies of Africanized honey bees. He is well known among beekeepers in Sao Paulo and has been a frequent visitor to our honey bee laboratory in the Department of Genetics of the Ribeirao Preto campus of the University of Sao Paulo. Mr. Wenzel likes to maintain, in nucleus colonies, some pure-mated Italian queens as mother queens, so he brings along Italian drones from the hybrid colonies that he maintains in Rio Claro. Dr. Ademilson Espencer E. Soares inseminates queens reared in our University apiary with semen from Mr. Wenzel's drones; Mr. Wenzel takes the artifically mated queens back home to continue his breeding work.

On one of his recent visits, I interviewed Mr. Wenzel, thinking beekeepers in other countries would be interested in knowing something about the beekeeping industry in Brazil.

Armando Wenzel's grandfather immigrated from Austria. Grand-dad began beekeeping in Brazil in 1920 and by 1930 had built up to 250 colonies. Armando's father helped out, and by 1926 had his own outfit, eventually building to 120-140 colonies. The bees provided the only income for a family that grew to include 10 children, 7 of them sons, all of whom are now active beekeepers.

Armando, now 54, began working with his father's bees in 1940, at the age of 8. He has usually kept about 250-300 colonies, though during the last 10 years he built to 1000: 600 based in the state of Sao Paulo and 400 in the northeastern state of Piaui.

Together, the four Wenzel brothers own between 2500 and 3000 colonies in the Piaui outfit, though only one stays to take care of them. Most of the work is done by family members — children, nephews, etc.

They keep the bees near Picos, Piaui, from December to May; this is the wet season, when the bees gather nectar from the many wild flowers of the "Caatinga." Caatinga is a kind of brushy savannah that turns from a desert-like area to a panorama of green growth and flowers when it rains. In May, the colonies are moved to the state of Ceara, where the cashew trees and some local bushes are in bloom. As with all beekeepers, their honey yields depend on the vagaries of nature. Generally they made an average of 110 lbs. per flow, or 220 pounds per colony per year up until 1982. In 1983 a severe drought in northeastern Brazil reduced yields to virtually nothing. There was some honey in 1984, and by 1985 they were up to an average of 55 lbs. per flow. All of the honey is extracted in a central honey house, with no heating, using a 70-frame extractor. The honey is packed in 60-pound cans.

They have few problems with swarming, but during the dry season 10-40% of the colonies leave the hives. Though the Wenzel's could prevent absconding by leaving more honey on the hives, or by feeding, they feel the added cost is not justified. The empty hives are remounted and placed in the woods at the very beginning of the flowering period, and within a few days most are filled with swarms. No queens are raised in this northern (tropical; close to the equator) operation, and all colonies are *very definitely* Africanized. The Wenzels generally place each of their northern apiaries at least 500 meters (about 1/3 mile) from houses and animals, which is not difficult in those sparsely populated regions*.

All the other brothers have their bees in Sao Paulo and Parana states, keeping from 200-600 colonies each. They practice a migratory beekeeping schedule, taking advantage of three flows: eucalyptus, orange,

Continued on Next Page

FOOTNOTE: Mr. Wenzel's use of Italian stock, though not unique, is not common in Brazil. The great majority of Brazilian beekeepers do not raise or buy queens, in part because they are used to and satisfied with Africanized stock, but also because most have little experience with queen rearing.

WENZELS... Cont. from Page 530

and field flowers, including the tree "capixingui."

Armando works his 600 hives with three helpers, all family members. They usually average 110-130 lbs. per hive per year. Most of the colonies in the south are hybrid Italian. The queens are Italian that have been allowed to open-mate with Africanized drones. He renews his queen mother stock through artificial insemination in our Genetics Department, as already explained. Most beekeepers don't bother with such an extensive requeening program, but Armando prefers the hybrid colonies for ease of handling and because it makes apiary siting easier.

Unlike the situation in the more tropical north, absconding is not much of a concern in Sao Paulo. Armando loses very few colonies. And as long as the colonies are given supers, there are few swarming problems.

Armando Wenzel's family has been beekeeping in Brazil for over 66 years. His colony numbers and total honey yields have never been higher than in the last decade, and the family and its beekeeping tradition continue to grow.§

* The apiary isolation distance depends a great deal on the local climate type. In Sao Paulo state, which is subtropical, the bees are much less defensive than they are in northern Brazil, which is close to the equator.

Honey Word Answers

from Page 508

1.	f	8.	m
2.	j	9.	a
3.	i	10.	d
4.	n	11.	g
5.	h	12.	k
6.	c	13.	e
7.	l	14.	b

A Detestable Bee Job That Turned Into Fun

By STEVE TABER of Honey Bee Genetics • P. O. Box 1672 • Vacaville, CA 95688

"It's always an emergency and it has to be done yesterday"

There are a few jobs that I absolutely detest while working with bees. Killing a colony that the inspector wants burned takes top priority, or killing bees for any other reason.

Picking up dead colonies and cleaning them up — maybe that's the worst, because they always die from my neglect. I also hate calls requesting my expertise in removing bees from a building, and always do my best to talk the owner into leaving them alone. But every now and then, as many of you know, you get caught in a trap which you can't escape. This happened to me several days ago.

A local building contractor called to say that his people were remodeling a building. There were bees in the building and I was recommended by someone who knew that I kept bees, and would I come and get them. It's always an emergency, it always has to be done right now, or yesterday, and it's always a long, run-on sentence.

Now, my day is already planned, I know what has to be done and what I would like to complete before the day is over, and now this! I tell the contractor that before I leave the house the bill will be *a minimum of* ***$50.00.*** He said fine, but if it got much higher than that to call him, and would I please hurry.

I know that many of you have been in exactly the same situation with a swarm. The owner of the unwanted bees wants you to pay him for this valuable commodity, or if you don't want to pay him, at least work for free, and get those bees out of there! And Hurry!

I told the contractor I didn't work for free and he acted a bit surprised that I would assume any one would. But, I herewith state, "There is no other business where people expect you to work for free, and give them free samples of your honey." Why then, do people drive up when they see bees and a sign that says 'honey' and expect a free jar?

All these unpleasant thoughts are running around in my head as I load up every conceivable thing I can think of that I might need to get the bees. The fact that there were construction people would help, because there would be all kinds of tools laying about. And, then at the last minute, I think, hey, these are not my nice gentle bees, these are going to be fierce killer bees. So I run in and get my coveralls.

THE JOB...

The bees are located in one of the old buildings in downtown Vacaville that had been remodeled many, many times. The building, indeed, housed our local Vacaville newspaper. After wandering around with one of the news staff employees, who didn't know where the bees were, I found them. They had built their nest in a space about a foot deep and a foot high, and two feet wide, above an air-conditioning unit. The previous remodeling contractor had apparently cut the hole in the wall too large. The bottom part was filled with the unit, and he placed a piece of plywood the correct size over the hole on the outside and another on the inside.

I don't mind people watching me when I work, and I know many of you don't either. But some people watch nice and polite, and some are insulting watchers. There were about five or so of the contractor carpenters about, and they were all O. K. They were there to do a job and I was there to do a job to help them, and we talked and laughed. As I got down to light my smoker, I noticed a pair of real shiny shoes and neat pressed pants right behind me. The smoker was lit, I stood up, turned around, and this guy looked like he had just stepped out of a fashion magazine. He didn't say anything, so I just continued about my business. But he started to bother me by just being there, one of those I call an insulting watcher.

It was then I realized I had forgotten to bring water to rinse my hands of honey. So, I turned to this fellow and said something like "You aren't doing anything except standing around, and I would very much like some water to rinse my hands in. Do you think you could help me?" Well, he did a lot of mumbling and grumbling, but he marched off, and shortly a young lady appeared with a jug of water. I said to the contractor guys, "I think I just ran off the boss." We all had a great laugh.

I had brought along five gallon buckets with lids for the combs and an empty shipping package to sweep the bees into. I started cutting out combs, dropping them into the buckets. It was dark and dismal where I was working, but I didn't have to work balanced on a ladder. I was cutting out combs at shoulder height, easy as pie. The combs were parallel and flat and, after the third comb was removed I decided to take a look at the brood. Even in this bad light the brood didn't look good to me.

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TABER... Cont. from Page 532

I carried the piece of comb into the next room where there was light. Lo and behold, it was solid rotten with AFB. In a few more weeks the colony would have been dead and the combs eaten up with wax moth.

The combs fit into two, five-gallon containers; they had maybe five pounds of honey and maybe a pound and a half of bees. It was a pretty miserable batch, all in all. There must be some backyard beekeepers within a mile and a half radius of the colony who should be thankful their bees didn't get a chance to rob out that honey. It was the first time I have ever seen a wild colony with disease. Most people seem to blame wild colonies, such as this, with spreading disease. My unasked for opinion is that beekeepers spread the disease by shifting combs about and working with disease-contaminated tools, smokers and coveralls, not to mention dropping honey everywhere.

I work at breeding disease-resistant bees and estimate that in nature there is at least one disease-resistant colony for each twenty. Resistant bees may or may not show up with the disease. If they do, it is usually only one or two cells. The bacteria causing the disease are in the hive, so when you swap combs with that hive into a colony that is susceptible it will quickly come down with the disease.

This whole job, from the time I left until I returned home took about an hour. I had earned an unexpected $50.00, but felt good about removing the diseased colony from the general bee population.§

Winter/Summer Mouse Guard and Bottom Board

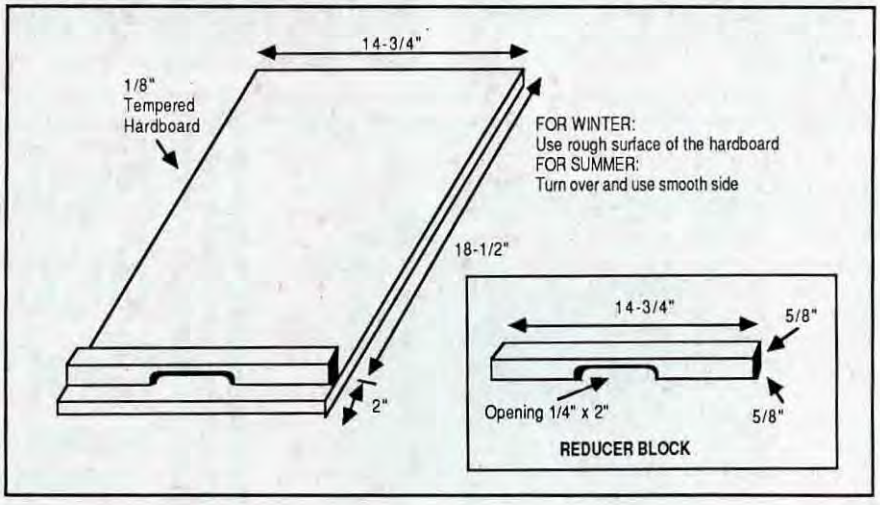
Have you ever had problems with mice in your hive? During the fall, mice begin looking for an extra cozy place to spend the winter. Bee hives are unusually tempting, and if a mouse has ever taken up residence in a colony of yours, both you and your bees are usually sorry come spring.

There are several items for sale that prevent, or attempt to prevent these creatures from moving in each fall. No matter how you tackle the problem, anything is better than having to clean chewed combs, fecal material, nesting stuff or even a propolized mouse carcass next spring.

One thing that is not often considered when preventative methods are employed is the anatomy of the mouse itself. If you take a close look at a mouse (dead mice are more easily observed than live specimens), you will notice they have a somewhat flattened skull. This allows them to pass through an opening 3/8 inch high. This dimension is the common bee space. But bees will do equally well with an opening of only a quarter inch. There's the trick, and the secret of the success of the following piece of equipment.

This simple mouse guard/bottom board has another obvious advantage. Come spring, simply pull it out, clean it off, reverse and reinsert. No more breaking down the colony, cleaning and rebuilding. This obviously isn't for everyone, but if you have just a few colonies, construction is cheap, simple and quick.

Thanks to Gerald Cosgriff, Cosgriff Honey CO., P. O. Box 269, Libby, MT 59923 for the idea.§



Southern States to 'Buzz' England and The National Honey Show

The 56th National Honey Show will be held on Thursday, Friday and Saturday, October 22-24, 1987 in Porchester Hall, London, England. To mark the occasion, the Southern States Beekeepers Federation will, for the first time, join ranks with the British by sponsoring a trip to the show. As stated in a British publication " . . . we look forward to a milder winter and a fine summer in 1987, in the hopes that a bountiful harvest will be evident in the number of exhibits on the stands."

The trip, lasting from October 17 to October 26, 1987 will include the following:

- Roundtrip airfare from New York via KLM Royal Dutch Airlines.
- Transfers via deluxe motorcoach.
- Lunch in Bath on arrival day
- Two nights accommodation in Cardiff
- Lunch enroute to Buckfast Abbey
- One (1) night accommodation in Plymouth
- English breakfast and dinner in Plymouth
- Guided sightseeing in Stonehenge and Oxford
- Lunch enroute to London
- Five (5) nights accommodation in London
- English breakfast daily in London
- All taxes and service charges
- Luggage tags and document folder
- Lucas travel escorts

Serious bee business will divide its time into three places for three events, each event having its own distinct character.

First, at Cardiff University, Wales, four speakers from both the Southern States Beekeepers Federation and the British contingent will make presentations. Those in attendance will learn first-hand about the Acarine mites effect in England from the two foremost authorities, Dr. John Free and Dr. Leslie Bailey.

Next, the group will travel to Plymouth to meet Brother Adam at Buckfast Abbey and tour his queen rearing facilities.

Finally, it's on to the largest honey show in the world in London. For those wanting to enter their own displays of honey, there are basically two categories — the International, open to anyone in the world; and that for members only. Those entering the International may use their own jars but the "members only" category requires entrants to use jars supplied by the show. Dr. Ambrose assures members that these special jars will be available at the show. While guest speakers have not been made final, past shows have fielded a host of outstanding authorities. During the three days of the show, a wide range of topics will be considered.

For those wanting further details, contact Shirley Curtis, Lucas Travel, Inc. P. O. Box 21808, Greensboro, NC 27420. Those who register for the tour will have forwarded to them a copy of the program of events, which includes a description of the rules and regulations governing the show.

Perhaps our American guests can bring some of their "bountiful harvest" and contribute to this rewarding show.§

Answers to Testing Your Beekeeping Knowledge

1. ***False*** The emergence of a swarm normally occurs a day or so before the first of the queens being reared emerges from her cell. Swarming thus occurs while the queen is in the pupal stage.
2. ***False*** Virgin queens and drone honey bees pay no attention to one another either in the hive or at the hive entrance, in spite of the fact the virgin queen begins producing sex attractant when she is 5 or 6 days old. Not until a queen reaches a minimum height above the ground do the drones pay attention to her. This height depends on the speed of the wind at any given time.
3. ***False*** The type of forage collected by an individual worker is dependent upon the needs of a colony and the type of forage available. Individual foraging patterns are not related to forager age. Foragers often collect pollen on some trips, and nectar on others during the same day.
4. ***True*** With removal or loss of the queen from the colony, the ovaries of some of the workers begin to develop. The presence of laying workers in a colony usually means the colony has been queenless for approximately two weeks. Pheromones from the queen contribute toward the inhibition of worker ovary development. The presence of worker brood will also inhibit ovary development. Therefore, the brood remaining in a colony after the queen is lost temporarily suppresses ovary development until a new queen is reared.
5. ***True*** The differentiation mechanism associated with the development of a larva into either a worker or queen begins with the hatching of a fertilized egg and is not complete until after 3 or more days. The transfer of a larva between 3 and 4 days old from a worker cell to a queen cell, results in an adult with characteristics intermediate between those of a worker and a queen.
6. ***True*** Colony odor is believed to be partly inherited, partly acquired from the food the bees have been consuming and absorption of scents from their environment. Therefore, each colony has a distinctive odor which is shared by all of its members. Odor differences are used by guard bees to recognize robbers, new queens and individuals that have drifted to the wrong colony entrance.
7. ***True*** The process of selecting a new homesite begins even before a swarm has left the parent colony. These scouts spend several days of steady effort to sort through the possibilities and identify the single best dwelling place. The final decision is normally made after a swarm has left and clustered near the parent hive.
8. ***True*** Honey bees detect odors of pheromones by specialized cells located on the antennae. At least 13 different sensory structures have been identified on the antennae.
9. Honey bees are truly social insects since:
   A) members of the same generation use the same composite broodnest.
   B) there is a reproductive division of labor, a worker caste cares for the young of the reproductive caste.
   C) an overlap in generations so that offspring assist parents.
   D) individual bees are unable to survive by themselves.
10. Absconding differs from swarming in that: a) the entire colony moves to a new location in response to unsatisfactory conditions in the nest; and b) it is not associated with the rearing of a new queen.
11.

Developmental stage	Duration of stage (days)		
	Queen	Worker	Drone
Egg	3	3	3
Larva	5-1/2	6	6-1/2
Pupa	7-1/2	12	14-1/2
Total	16	21	24

There were a possible 20 points in the test this month. Check the table below to determine how well you did. If you scored less than 12 points, do not be discouraged. Keep reading and studying — you will do better in the future.

Number Of Points Correct
20-18 Excellent
17-15 Good
14-12 Fair

Radioactivity and Bees:
A New Meaning For The Word 'Hot'

By PIOTR JURGA • Ul. Slowianska 22/9 • 60-651 Poznan, Poland

It's been just a bit over a year since the Nuclear power plant accident occurred in Russia, but the topic is still the most popular item of discussion at meetings of beekeepers in this country. It's no wonder though, as this is the first time bees have been exposed to, and collected pollen exposed to high amounts of radioactive fallout.

We were not informed about the accident until several days after the fact, so most beekeepers did not have an opportunity to watch their bees during the critical period of peak exposure. Nevertheless, I collected the opinions and comments from beekeepers while I was working as an Officer for an Apicultural Cooperative. They were often similar, and recently the President of the Polish Beekeeping Association confirmed them in press. Since this information has indeed been published, I thought I'd pass it along.

First, not aware of the disaster, a number of beekeepers were surprised to notice that, although the weather was fine, their bees reduced foraging to a minimum for anywhere from a few hours to a few days. Was this a form of self defense? Perhaps. During this period, radiation levels were from 300-500 times higher than normal.

Second, tests confirmed that pollen collected during a period 2-3 weeks after the accident was significantly contaminated with radioactive Iodine. Beekeepers also noticed a high incidence of supercedure during this period. Speculation is that royal jelly, the principle component of the queen's diet, was also contaminated, since it is made with a pollen base.

Third, according to official reports, our honey was polluted with radioactive elements very inconsistently. There was no rain for 3-4 weeks after the accident so ground waters remained relatively uncontaminated. Also, plants do not accumulate Iodine, so any honey contamination was probably due to the incidence of pollen or dust that had been exposed. Further, the present amount of radioactivity in our honey only runs 10-60 Bq (degrees Becquerel) per 2 lbs. The strictest foreign standards call for a maximum of 110 Bq per 2 lbs.

These observations show how dramatically honey bees will respond to an environmental threat that humans, unless using very sophisticated equipment, cannot even detect.

Although this report is not highly scientific, we hope the situation does not reoccur for a retest. Once was more than enough.§

July Cover Contest

If you looked at the cover of the July issue (Fig. 1) and said to yourself, "Sure, I know what that is, he made it too easy", and then didn't bother to enter — perhaps you should have. Over 100 readers did take the time — perhaps motivated by the prize of a correct identification.

However, there were NO correct answers! Remember, the question read " . . . exactly what the photo is, Close doesn't count, professionals can't enter. Be careful, it isn't quite what it seems."

And, in all fairness, I must admit that it was a trick question. Of the 113 entries, 71 people guessed that the photo was of the wing hooks of a honey bee. Some went so far as to name the hooks exactly, which was good. Some even said they were the hooks on the wing of a drone, which was even better.

But, even these were incorrect. Again, we needed the exact answer.

And what is the *exact* answer? The photo shows the wing hooks of a worker *Apis cerena*, NOT *Apis mellifera*. I said it was a trick question.

But we did this for a reason, not just to ask a trick question. Many things in beekeeping are not quite what they seem, and often, what appears as one thing is actually something else altogether. It always pays to put aside preset convictions and approach a situation with an open mind. Especially when a sneaky Editor asks what appears to be a very simple question.§

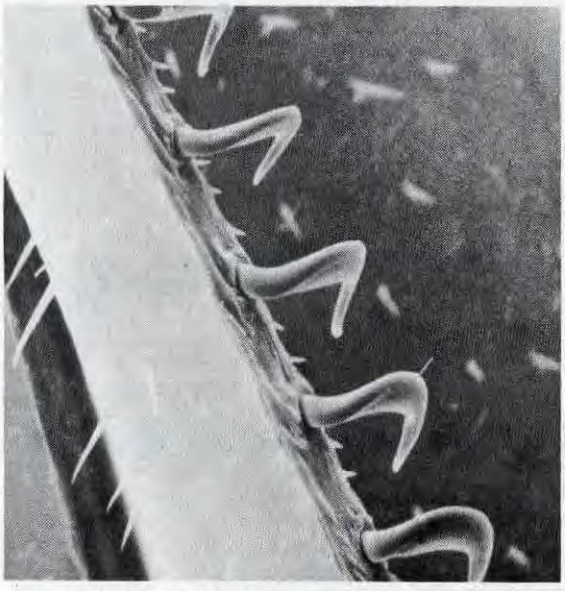


Fig. 1. Wing hooks of Apis cerena worker.

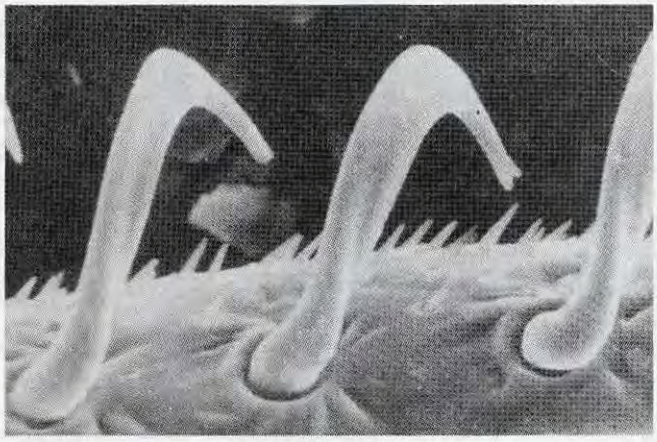


Fig. 2. Queen wing hooks on the leading edge of the hind wing, each with a slightly forked terminus. The bent and twisted nature of the hook is apparent from this angle; in three dimensions the hook extends in two directions.

Figures 2, 3 & 4 Courtesy of Dr. Eric Erickson, Tucson, AZ.

Fig. 3. Worker wing hooks with nearby short peg organs. Hooks arise from a socket; each hook is bent twice, at the midpoint and at the tip.

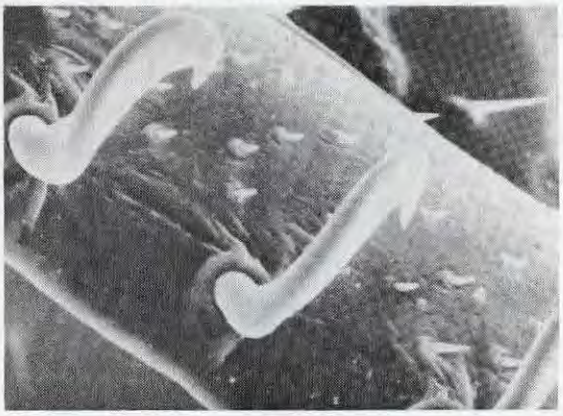


Fig. 4. Close-up of the drone wing hooks. These are somewhat larger than those of the worker. Socketed small peg organs are abundant on the surface engaged by the trailing edge of the forewing.

MONTANA POLLEN & HERBS
A MARKETING SUCCESS

By TERRI MC FERRIN SMITH • 265 Helterline Lane • Plains, MT

While studies show that bee pollen promotes good health, Ron and Denise Hoage have found that it's also good for business. When they retired from the World Health Organization in Geneva, Switzerland to Ron's native Montana in 1981, they were looking for additions to a business distributing health products.

In 1982, they stumbled on the opportunity to buy Big Sky Bee Pollen, Great Falls, MT. They began to market the green, yellow, gold and orange granules collected in southeastern Montana from their garage. By 1983, that product had found its way into 1000 outlets in 45 states and overseas. In 1984, they processed and marketed over 20,000 pounds of pollen. The phenomenal demand for their colorful, dry, pollution-free product prompted them to make a private stock offering in 1985, which financed the building of a new plant and the addition of a marketing person to their staff. Today,

Montana Pollen and Herbs manufactures 45,000 pounds of pollen products annually, markets to 1500 outlets and employs 13 workers year round.

Ron credits the source of the pollen with their early success. He was selling the clean skies and semi-arid climate of Montana as much as the pollen. Now, he boasts "No one else does quite what we do." Product diversification, the idea that pollen works synergistically with other nutrients, makes Montana Pollen and Herbs (MPH) different from their competitors. The Hoages now think of themselves as manufacturers, offering a total marketing line of nutritional supplements. They offer 20 different products specifically tailored to customer needs rather than the unlikely looking brown bag or the lone bottle of cure-all capsules or tablets of most pollen marketers.

In addition to granules, capsules, tablets and chewable wafers, the firm offers formulas to increase sexual appetite, to improve energy, to depress the appetite, to strengthen bones and to slow aging. Propolis capsules cater to the sore throat and influenza customers, the propolis spray to those in need of a breath freshener and the tincuture to those with ulcers, burns, wounds and skin lesions. Royal jelly is sold in capsules and wafers. In addition, MPH is developing personal care products such as an anti-wrinkle oil, lip gloss, and a deodorant. Two products contain no bee products. One, an enzyme popular among the Japanese, Co-Q10, is in the first phase of FDA testing for marketing as an over the counter drug.

The basic ingredient, bee pollen, must meet basic criteria of low-humidity, cleanliness, taste and color. High humidity pollen like that collected along the Mississippi River will spoil. The Hoages prefer semi-arid sources such as Montana, the Dakotas, Wyoming, Idaho, Saskatchewan and Alberta. Before contracting pollen, they try to visit the area, checking for industrial air pollution, rodent contamination and wax moth larva. They urge contracted beekeepers to collect pollen two to three times weekly for purposes of cleanliness and because they've found the more pollen harvested, the more pollen bees collect.

Their pollen is also subjected to a taste test. They don't want a bitter flavor like that of knapweed, the type of honey produced local to their western Montana plant. Rather, they are after a "creamy, sweet" flavor achieved by mixing a variety of bee pollens. In this mix, color is also important. Seventy percent of the granules are yellow or orange.

Hoage shudders at the expense of the nutritional analysis and the $4,000 label encoder which dates

Continued on Next Page

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bottled products for freshness. His wife Denise estimates their investment in processing and manufacturing equipment now at $50,000. Equipment includes a seed cleaner which sifts the pollen through a series of vibrating screens to extract such things as bee legs and bits of wax. The pollen is then dried in a coffin-like drying bed away from sun and heat. Air circulates at a temperature never exceeding 80 degrees to an 8 percent moisture level.

Mixing is done in a converted cement mixer painted to an FDA approved white. The bee pollen may then be mixed with milled herbal ingredients, pressed into tablets or encapsulated.

Granules, capsules and tablets are then bottled in amber to screen light and nitrogen flushed to press out oxygen on sealing. The amber and nitrogen are critical to preserve freshness, as pollen is both light and oxygen sensitive. Under these conditions, pollen capsules and tablets stay fresh for two years without refrigeration, the granules longer. Freshness, according to Denise, can be gauged by scent and moisture levels.

Montana Pollen and Herbs' bright, airy labels are the handiwork of full-time marketer, Roger Parchen. All labels carry information about the potential for allergic reaction. The firm pays product liability insurance premiums of $5,000 per year. And the FDA inspects the plant, labels and sales literature annually.

Hoage explains that he will no longer sell bee pollen in bulk as he did in the beginning, because of occasional complaints about allergic reactions. The highest incidence of allergic reactions occurs in the consumption of raw granules, when bee pollen contacts mucous membranes. Then, he has no way of knowing to which bee pollen a consumer could be reacting. With a Montana Pollen and Herbs label, paper barriers and safety seal, Hoage limits his liability. He adds that with pollen capsules there is almost no incidence of allergic reaction.

Packaging isn't only critical to protect product quality and the firm's liability. Hoage explains that the product must be rethought and packaged for each market. With the help of Global Marketing Associates, Inc., an export management company, MPH is in the process of identifying solid overseas companies to handle their bee products. For example, the Asians are predisposed to health, but not to supplements. And there are language barriers. In Japanese, no word can explain that bees collect the pollen and the word "pollen" alone carries negative connotations. New names for the product that don't play up the word "pollen" and repackaging some products as a healthful candy may be the way around these obstacles. Pollen 'n Fruit, a chewable wafer that combines pollen with vitamin C and orange juice, papaya and pineapple, is a "Japanese idea," according to Denise.

Loving Mood, Pure Energy, Pollen Lite, Pollen Plus and Healthy Bones are the trademarked names of functional herbal formulas not limited to the bee pollen displays of grocery, drug or health food stores. They are the work of a Missoula, MT, product formulator and a consulting Utah biochemist.

Loving Mood, as the name implies, is formulated for people who want to enhance sexual desire. It combines bee pollen with damiana, siberian ginseng, saw palmetto and sarsaparilla in capsule form. The product capitalizes on studies showing the successful use of bee pollen to treat prostatis and impotence.

Pure Energy blends gotu kola, siberian ginseng and royal jelly into a caffeine-free supplement to sustain and increase energy. Capsules of Pure Energy also have scientific basis. Studies on athletes taking bee pollen showed an increase in recovery power and improved second performances.

Pollen Lite is marketed as a natural slimming formula that works by balancing body metabolism and regulating the thyroid gland. It highlights "phenylaline" as the substance in bee pollen that suppresses appetite. Other ingredients include spirulina, bladderwrack, aloe vera, fennel, burdock and flaxseed.

Yet another supplement, Pollen Plus, appeals to customers in need of both increased energy and decreased appetite. In addition to bee pollen, these capsules contain spirulina, aloe vera and rose hips as a source of vitiman C.

Healthy Bones, a calcium supplement, caters to increased public awareness of the need for calcium. It highlights bee pollen's high calcium and magnesium content. The pollen also contains organic material necessary to the assimilation of the mineral. A technical process of reacting organic molecules of citrate, aspartate, orotate, ascorbate and picolina to the mineral produces highly digestible forms of calcium. Calcium

Continued on Next Page

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and phosphorus hydroxyapatite boost the bone strengthening qualities of this product.

An early attempt at diversification, marketing a pet pollen, was dropped after Montana Pollen and Herbs found this market was not significant in health food stores. However, studies have shown that chickens fed bee pollen increased egg-laying. Broiler chickens gain weight on bee pollen, as do piglets and calves. MPH now supplies a major natural pet food dealer in New York.

To date, no other product has been dropped. Product offerings are evaluated periodically, as sales figures become available. Marketer Roger Parchen said that sluggish products may be repackaged, reducing size and count to find a better price point. These products may be the first candidates for specific product advertising. In the past, the firm has concentrated on positioning advertising, primarily print ads in consumer-oriented publications such as *Let's Live, Best* Ways and *Health Store News*. The advertising budget is evolving at 2-3 percent of gross sales. Last year, they spent $20,000, a far cry from the word-of-mouth advertising the Hoages relied on in the beginning.

In addition to advertising, MPH uses tele-marketing. One in-house employee services the northwest. Others working on a commission basis service the entire country, working from a mailing list. Two sales representatives cover NY and CA, and an independent distributor supplies the Carolinas.

Surprisingly, Hoage says beekeepers selling bee pollen to local markets in 5 and 10 pound bags are their biggest competitor. He can pay contracted beekeepers $3.00 per pound. He admits the price is not much of an incentive to beekeepers with far ranging hives in remote areas. Adding ten percent for processing (cleaning, drying, mixing) and another 25 percent for distribution, bulk bee pollen wholesales at $6.25 per pound. That's not enough profit to suit Hoage. He prefers to add his manufacturing and marketing expertise to bee pollen. Allowing stores a 10-15 percent profit margin, the retail price ranges from $10-15 per pound of product.

Last year, when Spanish imports of bee pollen were reduced by half, Hoage had the opportunity to sell hundreds of thousands of pounds to fellow health food producers. During '83-85, Spain supplied 3 million pounds annually to this market. Spanish pollen was cheap because the dollar was strong. Domestic beekeepers could not afford to trap at world prices. Denise wrinkles her nose, characterizing Spanish bee pollen as sun-dried (destroying nutrients) and crunchy. The Hoages protected their supply of premium domestic bee pollen to meet manufacturing needs through harvest of this year.

Another competitor, the Swedish Cernelle company markets pure pollen pharmaceutical products. In recent years, Cernelle has mounted a marketing campaign against the growing bee pollen trade. They have suggested that digestive enzymes the bee adds to pollen are somehow dirty. Hoage asked to be quoted: "If a company's product is so weak that it can only be sold by putting down the competition, it must not be a very good product." He added the Cernelle's pollen sources very likely received a good dusting of Chernobyl radiation.

MPH does see seasonal fluctuations in demand for their products. Granule sales rise in the spring as consumers begin weight loss and exercise programs. Demand for royal jelly and propolis products tends to be more constant. During the winter of 1985, royal jelly capsules were their top selling product, as no one then marketed it year round. MPH purchases royal jelly from Chinese sources, explaining that it is hard to compete with inexpensive labor there. However, MPH is interested in purchasing domestic propolis, especially from poplar, fir and cottonwood sources.

Trainers at the Spokane horse track have used MPH propolis to CURE canker sores and warts on their animals. Several western Montana physicians have begun to recommend bee pollen to allergy and radiation patients. Montana Pollen and Herbs' line of nutritional supplements is cashing in on the consumer driven health food industry. Parchen characterizes the Hoages as entrepreneurs with the knack to develop any product. With sales doubling in each year of business, Parchen says their motivation is living in Montana and creating one's own opportunities.§

A 1985 chemical analysis of MPH bee pollen done by Hazelton Laboratories, Madison, WI, suggest bee pollen may be natures richest and purest food — as ancient mythologies, scriptures and early physicians claimed.

GRAMS PER 100 GRAMS MPH POLLEN	
Protein	22.0
Moisture	11.9
Fat	9.0
Ash	2.2
Crude Fiber	3.0
Dietary Fiber	7.6
Carbohydrates	45.3
Calories	350

MILIGRAMS AMINO ACIDS PER GRAM POLLEN	
Lysine	14.7
Histidine	5.57
Arginine	9.3
Aspartic	20.0
Threonine	7.32
Serine	6.8
Glutamic	23.5
Proline	23.0
Glycine	9.96
Alanine	10.8
Valine	10.7
Isoleucine	10.9
Leucine	14.4
Tyrosine	3.16
Phenylalanine	5.08
Tryptophan	2.36
Cystine	3.57
Methionine	4.62

VITAMINS MILIGRAMS PER KILOGRAM	
A - from Beta Carotene	5.0 (8300 iu)
C	200.0
Alpha tocopherol	46.0
Thiamine hydrochloride	14.0
Riboflavin	11.0
Pyridoxine HCL	2.9
Vitamin B12	trace
Biotin	.05
Folic Acid	19.0
Niacin	110.0
Pantothenic Acid	7.7
Potasium	525.0
Selenium	.30
Sodium	40.4

MINERALS MILIGRAMS PER KILOGRAM	
Calcium	1857.0
Phosphorus	4498.0
Magnesium	824.0
Sodium	300.0
Aluminum	42.1
Iron	75.2
Boron	29.8
Copper	9.22
Zinc	35.3
Manganese	20.0
Chromium	.38

Radical New Package For Long Distance Transportation Of Honey Bees

By RUSSELL BERRY • Arataki Honey Ltd. • R.D. 3 • Rotorua, New Zealand

A breakthrough in the technology of long distance transportation of Honey Bees from New Zealand to Canada has been achieved with the first delivery of 704 Arataki Tube Package Bees.*

These bees were delivered to Toronto, Montreal and Winnipeg in excellent condition from New Zealand. Not only did I have the fun of meeting the challenge of designing a new package, working with our staff in New Zealand in raising queens, also filling and palletizing packages, transporting by truck and four different aircraft, and hiving bees, I also had the great excitement of going back, in two days with Dr. Cameron Jay, to see our newly hived bees, with queens laying and fresh pollen and nectar coming in. One of those thrills a beekeeper gets perhaps once in a lifetime.

The development of exports from New Zealand to Canada has been a long term project for us. My family and I first went to the United States and Canada in 1980, and again in 1983, travelling a total of 25,000 miles in motor homes, enjoying your beautiful countries and hospitality. All the while though, we were trying to ascertain the future for our queen bees and package bees in your countries.

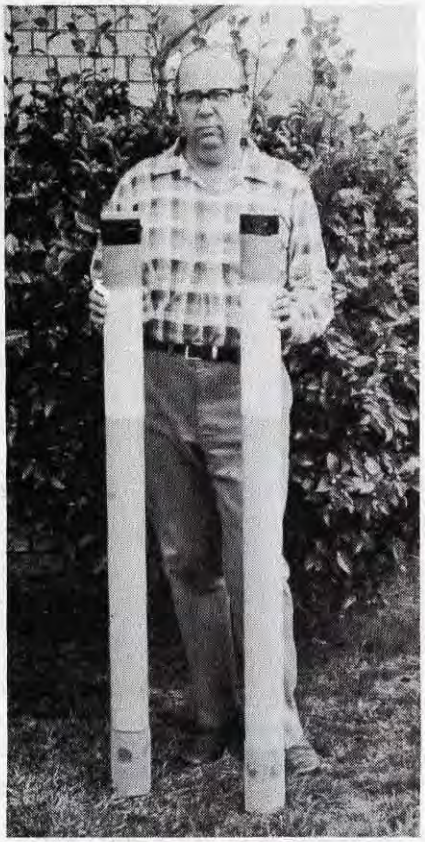
In 1985, John Craighead of F. W. Jones & Son Ltd. imported, from us, the first pallet of bees ever to be sent out of New Zealand. Ever since, we've been thinking there must be a better, more economical way of sending bees to Canada. The traditional wooden package has been used for many years for transporting bees from the United States to Canada by truck. But, here we were using this same packaging system for transporting bees from New Zealand to Canada, by air. This is a very different operation, where transport costs end up as a far greater percentage of the final imported cost of packages than those imported from the United States.

This year, after going to the Saskatchewan and Manitoba Beekeeper Association Conventions and talking to many of the beekeepers there, I decided it was time to proceed with designing a new tube package for bees. A tube package which was designed to be transported in large numbers in a vertical position.

The aims of the Arataki Tube Package, which seem to have been achieved, were:

1. To give the bees a greater degree of control over the environment inside the package, with regards to the environment outside the package, than given by traditional packages.

a. To draw cool, fresh air, from low down and discharge warm, aromatic air, above, avoiding bees using air that has been discharged from other packages, while working with natural air convection.



Russell Berry holding two Arataki Tube Packages.

b. To make the tubes narrow enough to allow the bees to restrict this air flow, when the environment is cold outside the tube.

c. To make the tube with less area for entry of light, thus reducing this effect on the bees when tubes are shifted form a dark to light environment.

2. To make a package with less chance of bees getting out accidentally.

3. To make a package that is cheaper and less labor intensive to manufacture and fill.

4. To make a feeding system which will not leak when subject to air pressure variations or jarring, and is reliable under a wide variety of conditions, including laying packages on their sides, when transporting small numbers at hiving time.

a. This was achieved by using a synthetic mesh cloth to make a long feed sock, filled with sugar syr[illegible] jelled with agar.

5. To make a package with lots of surface, in which the bees are able to hold onto, thus lessening the stress of the bees holding onto each other, throughout transportation.

6. To make a package which is cheaper to transport than conventional packages.

a. We transported *432 conventional* 2 lb. packages, without contouring, on an airline pallet 125 inches long by 88 inches wide. With *Arataki Tube Packages we transported 704* 2 lb. packages, without contouring on the same sized airline pallet.

7. To be able to water all packages during transportation if necessary, even when double screened.

8. To lessen the stresses on bees, and to have them arrive in the best possible condition even when long distances have to be covered.

9. Last, but certainly not least important, to be easier to hive th[illegible] conventional packages.

a. This is now quite simple. Simply take the gauze cap off,

Continued on Next Page

PACKAGE... Cont. from Page 542

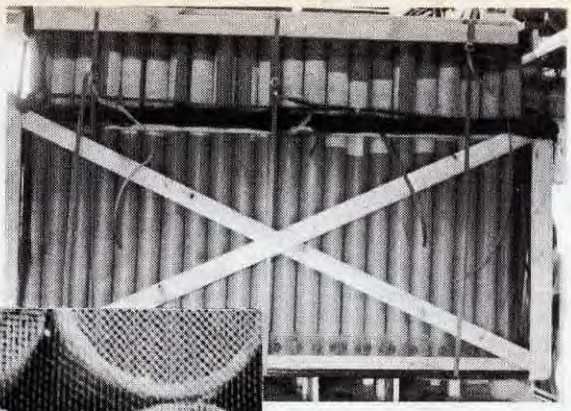
remove feed sock with attached queen, tip Arataki Tube upside down, one knock on the floor board and it's empty!

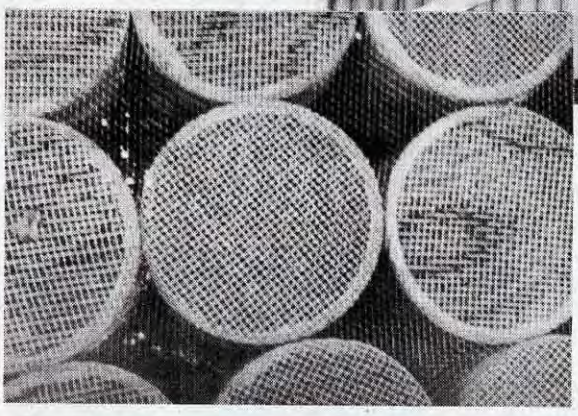
One of the more colorful parts of my trip was to listen to the comments of the beekeepers who were not expecting to see such packages. I really appreciate their immediate and heartfelt reactions to the Arataki Tube Packages, and hope I have more feedback so adjustments to the tube package can, if necessary, be made. If my judgements had been wrong and the bees had died during transportation to Canada, it would have cost us $35,000 (N.Z.D.). Some think me crazy to risk such money but what I have tried to achieve is to give the Canadian beekeepers another economic source of bees.

I wish to thank the Canadian and American beekeepers for their time in giving me some insight into their industry over the years. In particularly, I wish to thank Dr. Cameron Jay for his valuable assistance.§

*NZ Patent application number 220150 © N.Z. 1987 Russell Berry.

704 Arataki Tube Packages ready to leave Rotorua, New Zealand for Canada.





Looking down onto top of palletized Arataki Tube Packages.

We recently had a conversation with Dr. Cam Jay while he was in Ohio at the International Conference at Wooster. His comments on this package were that it was "revolutionary" and "exciting".

The advantages are obvious, and all package producers should consider this technique.

The Editor

INNER COVER . . . Cont. from Page 499

about are in the tropics. As the bee moves north, or south, of the equator, manageability increases (see Brazil article, this issue). This is further verified by Erickson (see *Bee Culture,* Sept. and Oct. '86) and comments made by Dr. Jaycox at the Ohio State meeting in July. Also, again in the tropics, Saraiva was able to maintain gentle stock, in spite of overwhelming outside pressure (see *Bee Culture,* April, May '87). All of these success stories have a common thread though, and that's the fact that requeening was a basic element in all these cases.

Which is another condition. U.S. beekeepers have access to the best queen industry in the world. Right now, you can get a good queen for $6 - $8. Simple, fast and reliable. But, you say, what will happen to the queen industry when the Africanized bee gets here? Won't they be out of business?

Ask Steve Taber, Phil Rossman or any of the queen breeders you know. They'll tell you that it will be business as usual. Artificial insemination, basic genetics and a solid knowledge of bee breeding techniques and practices will ensure a steady supply of the quality queens beekeepers in this country (and many in the world) rely on.

Another condition — U. S. beekeeper management skills. You know when something's not right with your colonies. You know seasonal management, fall harvesting, disease control and all the rest. And, if you've got a question or a problem there are numerous places to go for an answer. There is a wealth of information available to beekeepers in this country with a problem. Books, journals, beekeeping associations, University and Extension personnel (yes, there are some available) and other beekeepers. American Beekeepers are among the most highly educated, best informed and most organized in the world.

Finally, Beekeepers are the most stubborn group of people, as a whole, I've ever encountered. Giving up is not a term usually applied to beekeepers. But, you ask, what about all those who have had troubles with something as small as the tracheal mite. And, I return, who, or what was the problem here? The mite is not a good thing for honey bees — but the irregular regulations that tried to contain them were far worse. How many colonies were 'depopulated' by the mite, compared to those 'regulated to death' by state and federal officials?

THE REST OF THE STORY

I think the beekeeping industry can deal with any problem that comes its' way — marketing (the honey board); mites (management and menthol); diseases (inspections and drugs); Africanized honey bees (management, education and requeening). The problems our industry CAN'T deal with are external, out of our control — foreign imports (international politics); prohibitive state and federal regulations (against almost everything); and uninformed or misinformed beekeepers!

Those who keep bees and aren't aware of what to do or how to do it — whether diseases, marketing or the AHB — will be a weak link in this chain of control. An uninformed public and media will be bad enough, but a beekeeper who either doesn't know how to deal with a problem, or refuses to practice contemporary beekeeping procedures will certainly be a black eye for those who do.

Of course I haven't said anything about the rest of the country. Beekeepers will continue to keep bees, and under even normal management practices, will continue to make and sell honey, pollinate crops and just plain enjoy their bees.

But what about feral colonies, or even feral beekeepers. It's been said that the AHB will survive in the wild in the south — the Everglades for instance. Even here there are reports that they have *not* survived previous USDA introductions. But can they survive in Ohio? Reports of AHB released in the past in the U.S. suggest that they won't, even in Florida, let alone Ohio or Connecticut.

Only time, and perhaps research, will tell. That's why I started talking about hot bees. Your management skills and even your personal tastes in bees will go far in how well you do when the real pressure (internal or external) starts.§

FOR THE RECORD . . .

Gleanings continually seeks accuracy in our publication. We recognize that errors do occur and use this space to correct them when discovered by staff or readers. Mistakes may occur in writing, editing or mechanical reproduction of the magazine. It is our policy to correct these mistakes. We encourage questions or comments from readers. Call (216) 725-6677 during business hours or write us at the address on the contents page of this magazine.

HINT OF THE MONTH . . .

Creamed, or granulated, honey is the perfect consistency for peanut butter and honey sandwiches. Creamed honey stays put — in the sandwich — therefore, it is quite suitable for lunch boxes. For an after-school snack one of my sons always ate a banana with honey drizzled on from a squeeze bottle — banana in one hand, squeeze bottle in the other!

— By Ann Harman

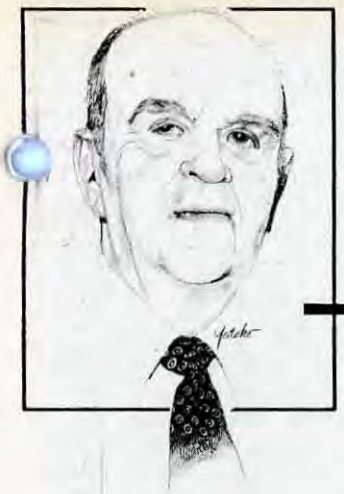
USE THIS NEWS RELEASE FORMAT

The _____ Beekeepers Association announces the release of the 1987 Honey Crop. This year has provided an exceptionally good crop of honey, as the weather, the bees and our floral sources have combined for excellent crops of ____, ____ and ____ honey.

Our local honey is not only good-tasting on toast, breakfast cereal and English Muffins, but is excellent when used in recipes calling for honey. But remember, you can use honey in place of sugar in many recipes. Honey makes breads moist, brownies chewier and sauces richer.

For more information on how to obtain 1987 Crop Honey or how to bake with honey, contact _____ at ___-____ or _____ at ___-____.

Support your Local Beekeeper. Buy Local Honey.



KOOVER'S KORNER

By CHARLES KOOVER • 1434 Punahou St. #709 • Honolulu, Hawaii 96822

"It has always seemed a little odd (to me) for a beekeeper to raise or purchase a fine queen and then let the bees release her"

Edward Lloyd Sechrist, in his excellent book entitled *Honey Getting,* (now out of print), blamed the supersedure of a newly introduced queen on the upsetting of the colony balance. In a chapter on requeening he had this to say. "In a normal requeening, brood rearing slows up or ceases all together, and a point is reached where there are no very young larvae and little production of larval food. The normal balance of the colony is not upset by any sudden removal of the queen, and the colony is ready for the young queen to begin her normal procedure of laying sparingly at first and then gradually increasing her production. This important point must be considered if requeening by any plan is to be successful.

"The commercial operator cannot afford this long normal process in wholesale requeening of a thousand colonies. He may want to put in the new queen at the same time he removes the old one. Then, if the queens he introduces are not actively laying, the colony balance may be upset. Too often this unbalance results in supersedure of the new queen soon after she has laid a few eggs. This is because a colony that was conditioned to an active laying queen suddenly has one that lays only sparingly, as does a queen from a cage after a journey through the mail.

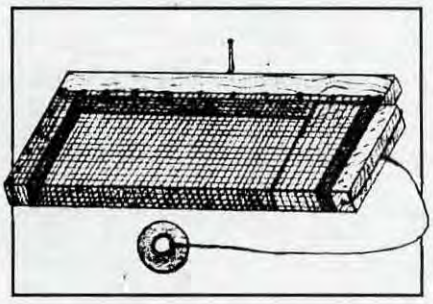
"If however, the colony has become full of brood and honey, and, as a consequence, the laying of the old queen has been cut down; or if the honeyflow is slowing up and brood rearing is on the decrease, the new queen, with her minimum egg-laying, balances the condition of the colony and supersedure is not likely.

"It should always be remembered that there are two different conditions in colonies to which queens are introduced: 1) that in which the egg-laying of a queen is at a maximum when she is removed, and; 2) that in which her egg-laying is at a minimum. To balance the colony conditions, a queen in the same condition as the one removed should be introduced."

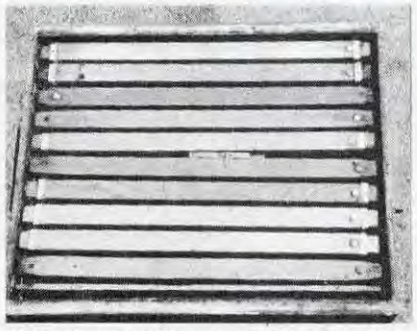
This is practically impossible for most beekeepers and a quicker and yet safe solution had to be found to avoid supersedure of newly introduced queen. This has now become practical through the method of releasing the queen by the beekeeper instead of by the bees.

ONE GOOD WAY TO DO THIS

A number of years ago The A.I. Root Co. offered the Dr. Miller introducing cage for sale in its catalogue. It is the finest introducing cage I know of for a number of reasons. Even so it has one fault, for like all other introducing cages the releasing of the queen is left to the bees, which depend upon the length of time it takes them to eat out the candy. The Root cage, instead of having a solid block of wood to close it, as shown in Fig. 1, was sealed by a block of wood with a tunnel in it,



which the beekeeper filled with candy. As Fig. 1 shows, the bees have no way of releasing the queen from this cage. They can, and will, feed and groom her through the wires, and since the screen is of coarse mesh they can attend to her wants very well. Furthermore, the cage is only 5/16th of an inch thick, fitting perfectly between combs. One does not need to spread them apart to place this cage in the brood nest. By turning the bent nail sideways (see Fig. 2) it is suspended between the top bars near sealed honey and brood. This prevents the queen from being chilled, since she occupies the cage in solitary confinement. It is also the easiest cage to put the queen in. When



allowed to walk up a window pane and holding the open end of the cage above her she will walk right in.

There are a number of reasons why a colony of bees will not accept a strange queen. One of these is when she is in no condition to start laying at a rapid rate. A queen which has been buffeted around in a mail bag needs time to recuperate. After she has been confined in this cage in the colony for at least five days, and up to two weeks, she will be in complete accord with the colony. Even a laying worker colony will accept her after this length of time. She has been groomed and her queen substance has been passed around amongst the occupants of the hive, which puts them in complete harmony with her.

It always seems a little odd for a beekeeper to go to such great pains and expense to either raise or purchase a fine queen and then leave

Continued on Page 551

News & Events

We encourage organizations to publish meeting notices and other events in this section. Publicity is the key to gaining new members and reminding others in your area that would be interested in attending your event.

But to do this there are a few guidelines we ask you to follow:

1. We ***MUST*** receive your notice by the ***FIRST*** of the month preceding publication. For example, for your announcement to appear in the October issue, we must receive your notice by ***SEPTEMBER FIRST***. To meet printing deadlines, there are NO exceptions.

2. Meeting schedules are okay and sometimes can't be avoided. However, a list of speakers and events is usually just as informational, takes less space, and is more likely to get read by prospective attendees.

3. ALWAYS include: A contact person for more information (address mandatory, phone number suggested) date, time and location of the meeting.

4. We recommend that you publish your meeting date for 2 consecutive months. Although you may not have your speakers lined up this far in advance, you probably know when and where you will meet. For the first month, publish the date, time, place and contact person. For the second month you can amend your notice to include the speaker list.

5. We don't know every schedule. You have to let us know EVERY YEAR that you're having your Annual Meeting.

6. Don't forget to publish this same information in OTHER news outlets.

7. Thanks for the help!

☆ NEWS ☆

Summary of 1987 Support Program

The price of 1987-crop honey is supported through a nonrecourse loan program at a national average of 63.0 cents per pound. Loans on 1987-crop honey are available for domestically produced extracted honey with moisture content no greater than 18.5%. Eligible producers may obtain loans through local ASCS offices during the period April 1, 1987 through March 31, 1988. All loans mature no later than 9 months following the month in which application was made.

Support prices, by color and class, are as follows:

Table Honey	Cents/Pound
White or lighter	66.1
Extra light amber	62.1
Light Amber	57.3
Other table and non-table honey	51.4

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Government Checks to Resume

President Reagan recently signed legislation authorizing $9 billion in funding for the Commodity Credit Corporation, which makes surplus commodity purchases for the federal government, including honey.

"Many beekeepers have been waiting for over 80 days for these funds and I hope this resumption will reverse the problems we've seen as a result of the Democrats' stall on this bill", said Wisconsin Senator Bob Kasten.

Congressional Democrats held up the bill by seeking to attach controversial arms control provisions to it, Kasten said.

He added that he successfully cosponsored a Senate amendment to the Trade Bill to prevent future delays of CCC checks by authorizing a permanent, indefinite appropriation for the CCC.

Arms and Honey?

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Basil Furgala Scholarship Fund

The Minnesota Hobby Beekeepers Association, has established The Basil Furgala Scholarship Fund at the University of Minnesota.

The fund is to provide financial support for a graduate student or students specializing in apiculture at the University of Minnesota.

Contributions in support of this scholarship will be paid to the University of Minnesota Foundation. University Foundation, Morrll Hall, University of Minnesota, Minneapolis, MN 55455. Contributions should be identified as being for The Basil Furgala Scholarship Fund.

Ed. Note. Scholarships are always a good cause; this is especially good, honoring a great beekeeper. Help if you can.

☆ MEETING NEWS ☆

NEW YORK

WNYHPA MEETS
Beekeepers Tackle Pesticide Issues

Beekeepers concerned about pesticide-caused losses of honey bees faced the problem head-on Saturday, June 27, with a regional meeting on pesticides. Attending were beekeepers, Extension Personnel, DEC Officers and some pesticide users and representatives.

Nancy Robson, DEC pesticide inspector from Avon, was presented with the "Friend of the Honey Bee" award for 1986 by the **Western New York Honey Producers Association**. "She has done more on behalf of the honey bee than any other public person we know in New York in 1986", commented one of the association officers at the presentation. "She took positive action to stop violations of pesticide label directions by some fruit growers who had been poisoning bees by contaminating clovers that grew in the orchards. At Nancy's insistence, they mowed blossoming clover before spraying, thus avoiding the hazard to bees.

The participants got copies of the bee protection directions of many pesticides. It was noted that it is the responsibility of the pesticide applicator to obey these label directions and thus prevent poisoning of area honey bees as they forage.

Richard Nowogrodzki, Beekeeping Extension Specialist from Cornell, presented information from studies done in 1980 and 1986, noting that the area from the Finger Lakes westward is where most of New York's losses have been seen.

Greg Lindenfelser, of the Avo

Continued on Next Page

NEWS... Cont. from Page 546

office of the Department of Environmental Conservation, expressed the willingness of the DEC to investigate violations that cause bee losses. He told beekeepers the proper procedures to follow when bee kills are noted so that the DEC personnel can determine what caused the damage and take enforcement action.

He also proposed several new restrictions on the use of Penncap-M, an insecticide that is extremely hazardous to honey bees because it is gathered and stored with the pollen in the hive, where it can do damage for many months.

David Green of Beekeepers' Neighborhood Watch told of last years effort to prevent damage before it occurred (see *Bee Culture,* April '87). Pesticide users were monitored as they sprayed, to make sure they complied with the bee-protection provisions of the law. In the test area, compliance with the label directions was obtained and the bees made a fine crop of honey. This was after a pattern of several years of serious losses. This also helped the pesticide users by keeping the bees available for pollination. Green noted that legitimate pesticide use, even with Penncap-M, does not harm bees.

The meeting closed with a panel discussion with Debbie Wasson, Extension fruit pest management specialist; Greg Lindenfelser and Nancy Robson of the DEC; Abbie Fox, Pest Management Specialist for Comstock Foods of Bergen; Ed Doan, a commercial, pollinating beekeeper of Hamlin, and Dr. Jeffrey Huether, a field development representative of Pennwalt Corporation (makers of Penncap-M). The panel was moderated by WNYHPA President, Michael Potoczak of Corfu.

Ms. Wasson mentioned that improving the orchard floor is a major objective of the Extension Fruit Team. A strip of bare earth should be maintained under the trees, with pure grass sod between the rows. With no broadleaf weeds, there will be no bloom to draw bees.

Dr. Huether noted that many pesticides are losing effectiveness due to insect resistance, and the future hopes for pest control were centered in biological engineering, rather than new insecticides. It was also noted that it is becoming increasingly difficult and expensive to register new pesticides or renew old ones, so fewer pesticides are available.

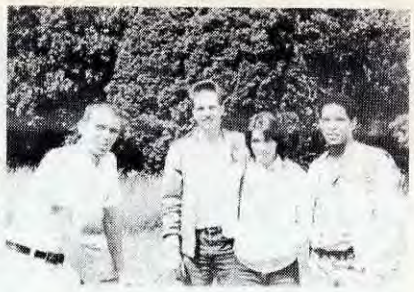
There was a cooperative spirit generated at the meeting. Western New York Honey Producers emphasizes that bee-kill problems are caused by pesticide misuse, that is — not following the required procedures as directed by the label. Please preserve our pollinators when using pesticides, by following bee-protection directions on the label.

For more information contact: Sally Potoczak, 541 Bell Road, Corfu, NY 14036.

PENNSYLVANIA

Foreign Beekeeping Students at College Bee Short Course

Doylestown — The broad appeal of honey bees and honey production was evident at the Delaware Valley College campus in June, as three beekeepers from Trinidad and Africa joined the ranks of students who took part in the College's annual summer beekeeping short course.



Patrick Butcher from Trinidad, the West Indies, came to the United States for the express purpose of taking the three-day course, which he read about in a beekeepers' journal. He hopes to use the information gleaned from the popular course to expand his family's beekeeping operation from 150 to over 1,000 colonies.

Two missionaries, Dale and Sue Everswick, home on furlough from Zimbabwe, have plans of educating other missionaries in the art of beekeeping. They also plan to supply them with colonies of bees to be used as a source of income.

What impressed the Everswicks most about the short course was the "tameness" of the bees in the College's yard. While one can walk through the campus' beeyard with little or no protection and can open colonies of bees with few, if any, stings, Dale and Sue report that the African bees are quite fierce.

The College's course is offered under the direction of Dr. Robert Berthold, beekeeping specialist and associate professor of Biology. He is assisted by Jack Matthenius, the New Jersey State Supervisor of Beeculture. Marnie Berthold, who is an expert on home uses of honey and honey by-products, provides an illustrated talk on this subject.

Dr. Berthold will offer the spring and summer short courses again in 1988. For more information on the programs, write Dr. Berthold at the College, Doylestown, PA 18901, or call (215) 345-1500.§

☆ FOREIGN ☆

ALBERTA, CANADA

The Tri-Country Committee, (Mexico, US, Canada) will meet the week of November 9-15, 1987 at the Fantasyland Hotel in Edmonton, Alberta.

For more information, see the October, 1987 *Bee Culture,* or contact Alberta Beekeepers Association, #24,

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NEWS... Cont. from Page 547

7215-147 Ave., Edmonton, Alberta, Canada, TSC 2T1.

INTERNATIONAL BEEKEEPING WORKSHOP

This is to inform you that the International Beekeeping Workshop scheduled for July 5-11, 1987 at the University of Science and Technology, Kumasi, has had to be postponed because of the extension of the University term into July.

The new dates for the workshop are September 13-19, 1987. Written applications should be sent to the Director, Technology Consultancy Centre, University Post Office, Kumasi, Ghana, West Africa by August 9th. The venue and all other details remain unchanged.

☆ CONNECTICUT ☆

The **Western Connecticut Beekeepers Association** monthly meeting will be held on September 17, 1987 at 8:00 p.m. at the Fairfield County Extension Office, Stony Hill Road, Bethel, CT.

DON'T MISS THIS ONE! Our guest speaker will be Dr. James Tew of the Agricultural Technical Institute of Ohio State. His topic will be "Winter Preparation and Management". The public is welcome and admission is free.

For more information contact Fairfield County Extension Office, (203) 797-4176.

☆ ILLINOIS ☆

The **Illinois State Beekeepers Association** will hold their Annual Convention on November 14, 1987 at the Department of Ag. Bldg., IL state fairgrounds, Springfield IL.

For more information see the October, 1987 issue of *Bee Culture* or contact Alfred E. Trost, 626 Evansville Ave., Waterloo, IL.

☆ KANSAS ☆

The fall meeting of the **Kansas Honey Producers Association** will be held at the Best Western Holiday Manor, Junction I-135 and U.S. 56 Highways, McPherson, Kansas 67460 (316) 241-5343 on Friday, October 9, and Saturday, October 10, 1987. Friday registration begins at 9 a.m. and Saturday's registration begins at 8 a.m.

The main guest speaker will be Dr. James E. Tew, Extension Specialist in Apiculture, ATI, Ohio State University. Dr. Tew has a wide range of interests and knowledge in all phases of beekeeping that will be a valuable experience for Kansas beekeepers. Plan to attend and be prepared to share your beekeeping experiences during question and answer periods, and pick up valuable information from the speakers as well as from fellow Kansas Honey Producers.

For more information contact: Robert Brown, RFD 1, Box 96, Haddam, KS 66944, (913) 778-2954.

☆ LOUISIANA ☆

AAPA, BEE RESEARCHERS TO MEET OCTOBER 5-7 AT BATON ROUGE

The 1987 meeting of the **American Bee Research Conference** will be held on October 6th and 7th in the New Agricultural Building on the Louisiana State University campus at Baton Rouge. Everyone interested in apicultural research is invited to attend and all research scientists are encouraged to present scientific papers related to the genus *Apis*.

Abstracts are required of all papers given. The cost is $50 per paper plus $10 registration fee. For more details concerning this conference, write to John Harbo, Honey Bee Breeding, Genetics and Physiology Laboratory, 1157 Ben Hur Road, Baton Rouge, LA 70820 or Joseph O. Moffett, Honey Bee Research, 509 West Fourth St., Weslaco, TX 78596.

The AAPA (American Association of Professional Apiculturists) will meet all day Monday, October 5, immediately preceding the research conference. The AAPA discusses and acts on matters relating to all phases of apiculture. All professional apiculturists are invited to attend this meeting and air their views.

☆ MARYLAND ☆

Plan to attend the **Sixth Annual Maryland Honey Festival** at Oregon Ridge Nature Center in Cockeysville, MD, on Saturday and Sunday, October 3-4, 1987 from 12 noon to 5:00 p.m. Free admission.

Featured will be demonstrations on Extracting, Making Mead, Dipping Candles, Fashioning Skeps and Making Honey Ice Cream.

Also, educational exhibits/talks on Apiotherapy, Beginning Beekeeping, Beekeeping Equipment, Capturing Swarms, Products of the Beehive, Pollination, Pesticides and Honey Bees and Stinging Insects.

There will be sales of Beeswax, Honey, Candles, Ice Cream and Pollen and free samples of honey and honey-laced cookies and drinks.

See demonstrations by the Beebeard King of Maryland, watch a bee movie and participate in the honey run — new this year!

For more information contact: John Iannuzzi, Festival Chairman, RD 4, Ellicott, City, MD 21043 (301) 730-5279.

Continued on Page 551

☆ Classified Corner ☆

Classified rates: 55¢ per word, (effective August 1, 1987) each insertion payable in cash in advance. Each initial, each word in names and addresses, the shortest word such as "a" and the longest word possible for the advertiser to use, as well as any number (regardless of how many figures in it) counts as one word. Copy or cancellation orders **MUST** be in by the 1st of the month preceding publication (Example: January 1 for February publication). If your order has missed the cut-off date, your ad will appear in the following issue. Proof sheets available on request for an additional 2-word charge. Send classified ads to: The A.I. Root Co., Attention: Cyndi Stephens, Class. Ad. Mgr., P. O. Box 706, Medina, Ohio 44258-0706. For more information call (216) 725-6677, ext. 213.

MAGAZINES

THE SCOTTISH BEEKEEPER Magazine of The Scottish Beekeepers' Association, International in appeal. Scottish in character. Membership terms from A. J. Davidson, 19 Drumblair Crescent, Inverness, Scotland. Sample copy sent, price 20 pence or equivalent.

What do you know about the INTERNATIONAL BEE RESEARCH ASSOCIATION? The many books and other publications available from IBRA will deepen your understanding of bees and beekeeping: an IBRA membership subscription — inclusive of *Bee World*, a truly international magazine published quarterly in the English language — will broaden your beekeeping horizons. Details from IBRA voluntary representative H. Kolb, P. O. Box 183, 737 West Main, Edmond, OK 73034 (phone 405-341-90984); or from IBRA, 18 North Road, Cardiff CF1 3DY, UK.

DAIRY GOATS — For milk, pleasure and profit. Excellent for children, women and family! Monthly magazine $18.00 per year ($25.00 Foreign). Sample Copy $3.00. DAIRY GOAT JOURNAL, Suite 226, 401 N. Broad St., Philadelphia, PA 19108.

SCOTTISH BEE JOURNAL. Packed with practical beekeeping. Sample copy from Robert NH Skilling, FRSA, 34 Rennie St., Kilmarnock, Scotland. Published Monthly, $4.00 per annum.

BEEKEEPING. A West Country Journal — written by beekeepers — for beekeepers. 1.50p inland or 1.80p ($4.00 Overseas). 10 issues yearly. Editor, R. H. Brown, 20 Parkhurst Rd., Torquay, Devon, UK. Advertising Secretary, C. J. T. Willoughby, Henderbarrow House, Halwill, Beaworthy, Devon, UK.

BEE CRAFT — Official (monthly) magazine of the British Beekeepers Association. Contains interesting and informative articles. Annual Subscription $5.10 (Surface mail) and $7.10 (Airmail). The Secretary, 15 West Way, Copthorne Bank, Crawley, Sussex, RH10 3JS.

THE AMERICAN BEEKEEPING FEDERATION needs your support! Join in supporting efforts to stop adulteration, to improve marketing conditions and to encourage the continued research on African Bees and Varroa and Acarine Mites. Please send for information, membership application and sample copy of bi-monthly News Letter! Write To: THE AMERICAN BEEKEEPING FEDERATION, INC., 13637 N. W. 39th Avenue, Gainesville, FL 32606.

INDIAN BEE JOURNAL. Official organ of the All India Beekeepers' Association, 817, Sadashiv Peth, Poona 411030. The only bee journal of India published in English, issued quarterly. Furnishes information on Indian bees and articles of interest to beekeepers and bee scientists. Annual subscription postpaid in foreign countries: For individuals US $7.00; for institutions, companies and corporate bodies US $10.00 or it's equivalent, to be received in advance by IMO or bank draft, payable in Poona (India).

THE APIARIST. All about New Zealand beekeeping. P. O. Box 34, Orari, 8750, New Zealand.

WANTED

ALMOND POLLINATION NEEDS YOUR BEES — If you can provide strong colonies. **Pollination Contracting.** Now arranging contracts. Offering reliable service in central CA for 1988 season. L. Hicken (209) 823-5141 or C. Carroll (209) 823-1386. (1/88)

Mackensen insemination devices and microscopes. Price will depend on condition of device and scope. Steve Taber, P. O. Box 1672, Vacaville, CA 95696. (11/87)

YOUR AD COULD HAVE BEEN HERE

FOR SALE

AUCTION SCHEDULED FOR AUGUST 29, 1987, CANCELLED. COMPLETE LUCRATIVE ARIZONA BEEKEEPING BUSINESS AVAILABLE FOR SALE. Very clean, topnotch, ten frame operation with 1987 queens. 87 registered proven locations. 53 are state protected with four mile protection zone state enforced including the finest citrus locations in Arizona. Absolutely no competition and no pesticide exposure. Locations can easily support 9,000 colonies. Famous water white honey area. Prime mesquite, catsclaw, alfalfa, wildflower, brush and agricultural locations. Year around production. Pollination on apples, pistachios, melons. These and all other locations within sixty miles of Tucson. Excellent potential wintering other beekeepers' beehives as sideline as well as raising queens, packages and nucs. Complete, automated honey house, hydraulic liftgate trucks, pollen traps and production equipment. Honey and pollen business. Originally sold due to owner injured in semitruck collision. Business will not be parted out. For more information call: Tom Martin, **ARIZONA BEE PRODUCTS,** 1-602-327-3800. Evenings. (12/87)

EXTRACTOR. 30 frame Woodman, Wood extracting stand, 3-tub uncapping stand. (309) 963-4195 or (309) 379-4261. (9//87)

Queen inseminator. Brand new, never used. 125 C.C. Pollen Traps. Must sell. Make offer. K. Henry, Malone, NY 12953, (518) 483-7610. (9/87)

150 stands bees, all related equipment. Write for details: Stearns, 4605 Redstart, Houston, TX 77035. (11/87)

Bee supply business for sale. Large inventory, 5 state clientele. Located in the Black Hills. Negotiable terms. Send name and phone number to: Sweetharvest Bee Supply, 3057 Pioneer Drive, Rapid City, SD 57701. (TF)

NEW, ASSEMBLED ROSS ROUND Supers. Complete *w/frames,* rings and foundation - $33.00 each. Postpaid. (216) 723-1344 evenings. (9/87)

20 frame radial extractor, power drive, complete. $295.00 or best offer. P. O. Box 103, Deford, MI 48729 (517) 673-3739. (9/87)

Mini Bee Farm for sale. 10x55 w/12x65 addition, 3 bedroom mobile home. Corrals, satellite dish, 20x20 workshop, 2 wells, on 2 acres +15 ac. leased land. 500 stand bees 300 queen excluders, 63 supers, 96 half supers, Cowan uncapper, wax melter, holding tank, 24x60 extraction plant. All this and much, much more. Century 21, Oracle Realty, Oracle, AZ. Call Barbara (602) 896-2830 / (602) 792-9119. (9/87)

Steel honey drums. Satisfaction Guaranteed. Can ship any quantity. S. E. Minn. (507) 778-3307. (2/88)

Small, complete bee business outfit. Write Herbert Martin, 13 E. Z. Street, Dryridge, KY 41035. (9/87)

Kelley 33 frame radial extractor, 40 gallon honey tanks, uncapping tank, all stainless, used once. Save hundreds. (606) 689-4564. Kentucky. (9/87)

56 colonies. Standard 10 frame with two 5-3/8 shallows — $45. Extra shallows. Ready approximately October 15th. No junk. Phone (412) 221-6799 or write: Al Stankus, Box 60, Morgan, PA 15064. (9/87)

In Ohio, 300 colonies with 500 supers with fall crop $75.00 each or best offer. (216) 296-3789. (10/87)

Barrels of Saskatchewan white honey available by semi-load. McCabe Apiaries, Porcupine Plain, (306) 278-2538. (10/87)

100 single and double brood hives with supers. (615) 647-2551. (9/87)

720 two story, 10-frame colonies, 1800 KTB Feeders, 1,000 Double Screen Split Boards, 500 Frame Feeders. Taylor's Honey, Stanford, Montana (406) 566-2673. (9/87)

HONEY MOISTURE TESTER. Hydrometer 15-21%. $21.95 airmailed. AMBROSIUS, Svanvagen 50, 83162 Ostersund, Sweden. Checks accepted. (11/87)

Bursa-Fil bottling machine, stainless steel warming oven, holding tank, honey pumps, Fork-lift truck. Rhoda Wahl, Route 2, Box 212, Clayton, NY 13624. (315) 654-2157 (10/87)

HONEYSTRAINER. 8th year. Easy, practical, convenient. Guaranteed. Use with bucket. Instructions. Approximately 18"x21" 100 mesh nylon bag. $3.50 each, two or more $3.00 each. Beckman G, Box 633, Stuart, FL 33495. (TF)

15 deep supers with frames, inspected. $12.00 each. Keagle's, 7722 N. Gannett, Sagamore Hills, Ohio (216) 467-5507. (TF)

FOR TOP QUALITY BEE SUPPLIES and advice on beekeeping problems, visit your nearest Root dealer and send for your FREE 1987 Root catalog. The A. I. Root Co., P. O. Box 706, Medina, OH 44258.

Commercial quality 9-5/8 @ $2.85 ea., 7-5/8 @ $2.75 ea., tops & bottoms @ $1.70 ea. Satisfaction guaranteed. Orders less than 50 items, add 50¢ each. For prices or to order write: North Idaho Woodcrafters, Box 201, Spirit Lake, ID, 83869 or call (208) 772-2333 evenings. (9/87)

RADIAL HONEY EXTRACTORS, stainless, 5 and 10 frames, patented. Also complete line of equipment. Write or call: GAMBLE'S Bee Supply & Candle Co., (919) 299-3973 after 5 PM weekdays, anytime Sat., P. O. Box 7997, Greensboro, NC 27417. (TF)

BEES & QUEENS FOR SALE

WE USE ALL POSSIBLE CARE in accepting advertisements but we cannot be held responsible in case disease occurs among bees sold or if dissatisfaction occurs. We suggest that prospective buyers ask for a certificate of inspection as a matter of precaution.

GOOD QUEENS PAY! For quality and service all season long, call ALLEN'S BEE RANCH in Northern California! (916) 221-1458. (TF)

NEED QUEENS? Rossman Queens Produce. 1-5, $6.00; 6-25, $5.00; 26-99, $4.50; 100+, $4.00. Marking - 50¢, clipping 25¢. Call (912) 985-7200. Rossman Apiaries, P. O. Box 905, Dept. C, Moultrie, GA 31776. MC & Visa. (9/87)

MISCELLANEOUS

MEADMAKERS, WINEMAKERS, BEERMAKERS
Fresh stocks, Fast Service. Free Catalog. O'Brien's, Box 284M, Wayne, IL 60103. (10/87)

HERBS ARE FOR BEES: Plants, seeds, saffron bulbs; exciting catalog $2.00. Rosemary House, 120 So. Market, Mechanicsburg, PA 17055. (1/88)

$1,000's WEEKLY stuffing envelopes. Self-addressed, stamped envelope: Success Publications, Drawer 389-Q, Clanton, AL 35045. (TF)

Dealership Territories are available in some areas. Please contact The A.I. Root Co., P. O. Box 706, Medina, Ohio 44258.

Bee Stick Pin, hand painted. $3.60 /dozen. $1.00 for sample. Beepin, 63 Orchard Park, Tiffin, OH 44883. (9/87)

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THE A.I. ROOT COMPANY NEEDS WAX!! ANY AMOUNT, CALL FOR PRICES. (216) 725-6677

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Pure, pesticide-free. Clean and dry. $7.00/pound. You pay postage. Honeycomb Apiaries. R. R. 3, Box 74, Kaukauna, WI 54130. (414) 532-4314. (TF)

CLEAN FRESH FROZEN AMERICAN BEE POLLEN, give us your needs and we will quote prices. Howard Weaver & Sons, Rt. 1, Box 24, Navasota, Texas, 77868, or phone: (409) 825-7714. (TF)

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BEE BOOKS, wide range of titles. Free lists from Scoutbottom Farm, Hebden Bridge, England. (TF)

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NEWS... Cont. from Page 548

☆ OKLAHOMA ☆

Ernie Knight, a native born Oklahoman who has been actively involved in his State and Local beekeeping associations, was selected by the **Oklahoma State Beekeepers Association** to receive the Albert Lincoln Award as Oklahoma's "Beekeeper of the Year".

"A Knight with Shining Armor"

He became interested in keeping bees some 15 years ago and has built his apiary from one to 46 colonies. He is devoted to encouraging and helping other beekeepers in his area as he works through his local Four State Beekeepers Association, which was organized ten years ago. He is currently serving as the program chairman to bring interesting and educational programs to the group.

His activities in the community include Meals-on-Wheels, the Literacy Council, and Boy Scouts, besides being very active in his church. He's a lover of nature and two of his favorite activities are organic gardening and beekeeping.

Mr. Knight retired after working 30 years for the B. F. Goodrich Company. He and his wife Bessie have lived in Miami, Oklahoma for 40 years. They have three children and five grandchildren.

Ed. Note: Congratulations, Mr. Knight. The "Sooner" State is indeed fortunate.

KOOVER... Cont. from Page 545

it to the bees to release her. By giving the new queen ample time to become adjusted to the new hive her acceptance is assured. That is if the bees have nothing they recognize as a potential future queen, like queen cells.

Introducing a queen with a cage (as shown) is a simple matter. When the cage is placed between two combs a thumbtack should be placed over the bent nail to prevent the cage from sliding between the combs when the wire is pulled from the outside of the hive. When the time comes to release the queen, slowly pull on the wire and the plug will come out of the wire cage. A week later the cage and the plug can be removed. The queen will be laying, for the whole operation was performed without disturbance. I yet have to hear of a failure if the instructions are carried out correctly.

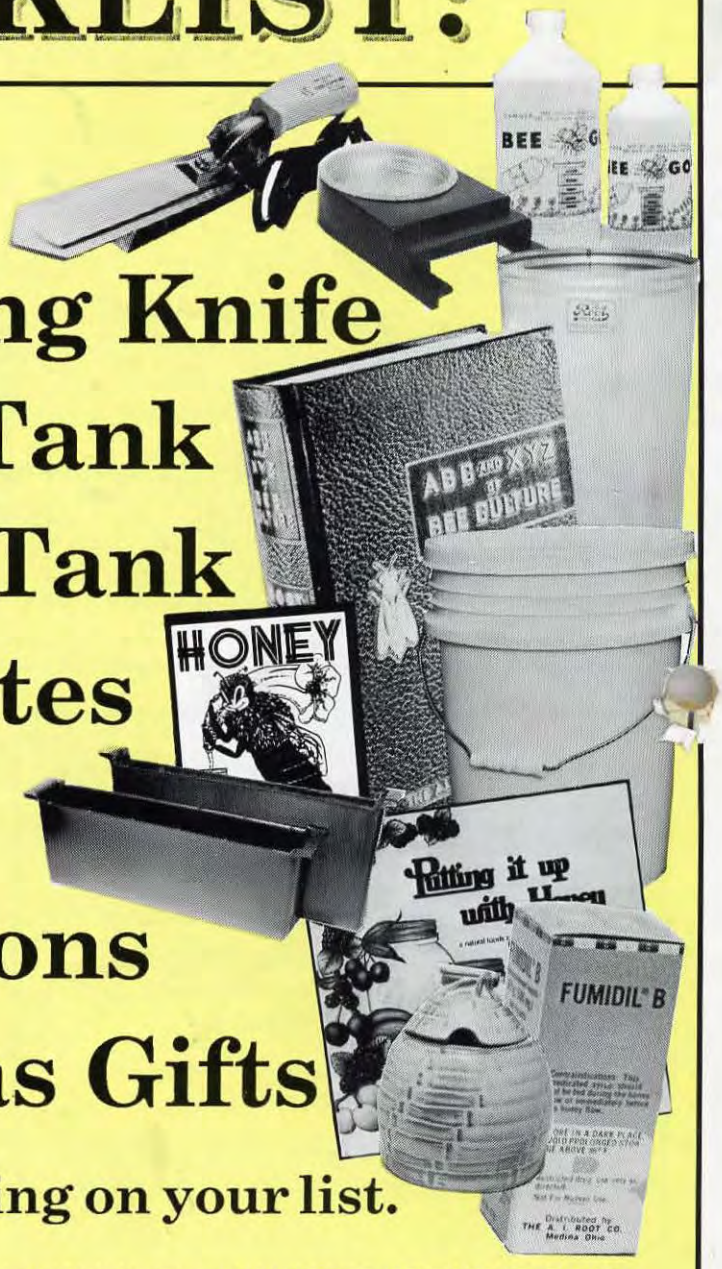
It is true that it takes an extra trip to release the queen, but considering the gamble one takes by letting the bees do the releasing it is well worth the extra effort.§

Anyone wishing to receive complete printed instructions on how to make this simple cage please send a dime and self-addressed envelope to me here in Hawaii.

DISPLAY INDEX

FALL CHECKLIST:

- ☑ Bee-Go
- ☑ Uncapping Knife
- ☑ Storage Tank
- ☑ Bottling Tank
- ☑ Extra Gates
- ☑ Feeders
- ☑ Medications
- ☑ Christmas Gifts



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