GLEANINGS IN BEE CULTURE

OCT. '87

AMERICAN

HONEY QUEEN

Leslie Kuenzi

HONEY PRINCESS

Jayne Reece

☆ CELEBRATE ☆

NATIONAL HONEY WEEK

October 18 - 24, 1987

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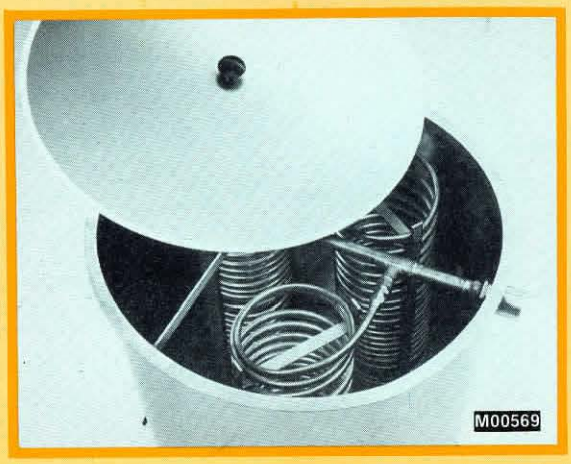

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ROOT PUBLISHING

GLEANINGS IN BEE CULTURE

OCT.'87

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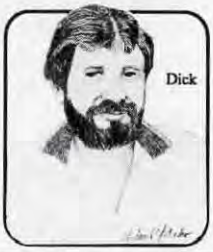

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COVER . . . Promote American Honey

Celebrate National Honey Week
October 18-24. Seven Sweet Days!

Coming in November

Try Holiday Cooking with Honey! Fruit cake, candy, cranberry sauce, cookies, bread, rolls — all great eating, especially during the upcoming Holidays. Friends and family always seem to eat more too — so be prepared, and cook with honey —coming next month!

But that's not all! Wintering is on the minds of nearly every beekeeper now, and we've got a great article on all the do's and don'ts for getting ready — and through — winter. Along with that, a primer on wax moth control for stored combs. An ounce of prevention now can save you pounds and pounds of comb next spring.

We have two interesting stories on the Africanized Honey Bee, too! One deals with successful management practices; the other on what happens after beekeepers begin these techniques. Shirtsleeves and shorts aren't out of the question!

Are you a woodcrafter? Building your own equipment (now that *Bee Space* has been carefully explained in this issue!) is not only a pleasant pastime, but a good way to save money. So — "Building Frames", and "Building a Kenya Top Bar Observation Hive" will be detailed here next month.

There's lots of action, and lots to remember, so tune in — in November!§

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If you are moving, please fill in the form below so we can process the change without undue delay. ***Also,*** if you have 2 addresses during the year (i.e., winters in Florida and summers in Connecticut) let us know which months you spend where and we can pre-program your address change so you will find ***us waiting*** when ***you move*** – No Delays, No Fuss!

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City State Zip

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ADDRESS NO. 2: Street

City State Zip

Circle Appropriate Months: J F M A M J J A S O N D

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THE INNER COVER

Weather or not...

Long ago I gave up trying to change the weather. No matter how much I worried, prayed, coaxed, cajoled, threatened or begged — mother nature did just as she saw fit. There may be some truth in what I read about the human race changing the weather, but I certainly don't have any control. Increased amounts of carbon dioxide could be responsible for the gradual warming of our planet. Hair spray and deodorant appear to be dissolving the ozone layer. And, thermonuclear ions, acid rain and massive irrigation projects are probably all contributing to the vagaries of the weather — and the fact that our garden didn't get enough rain this season.

We had some spectacular results in the Ohio Estate garden this past summer, but we had some devastating failures too. Of course, we take the credit for the successes, and conveniently blame the weather for the rest. But that's the easy way out. We did make some mistakes.

The same goes for our bees. They wintered well, (mild winter or good management? — good management, of course!), and were strong for the early flows. And early flows were tremendous this spring. We harvested maple, dandelion, basswood and fruit honey. We harvested early because we were out of supers for the main flow. We didn't take all the early crop though, and that was a good move (good management again, or just tired of extracting in June? — good management, of course!). It was a good move because honey production stopped — not 'fell off' or 'leveled out', but, quite simply — stopped at the end of June. Our scale colony began its inevitable decent July 1, and didn't quit until late August. Of course we didn't get any rain during that time either. See, I said it wasn't our fault.

The fact that we left some honey on kept starvation away; that, and the very little that was coming in. Between the two, most colonies maintained strong populations throughout the drought, and were in good shape when the rains, and corresponding goldenrod flow came in August. The timing was good, but unfortunately we can't take any credit for that either.

Maybe what we did could be called 'defensive beekeeping'. Leaving some honey on was a hedge against leaner times that *might* come, and preparation for the fat fall flow.

As it turned out, we have some rather unique honeys this year, the bees have ample winter stores, and, without going into a lot of detail, we can take the credit.

I don't try to change the weather anymore, I don't need to.

A marketing experience..

One of the gardening successes we did have this year was raising herbs (pronounced ERBS). We raised basil, anise, mints, chives, dill and some others. This year was a test of the local market, to measure the saleability and demand for fresh herbs. It was sort of a shotgun approach, testing the waters of wholesale marketing. But we got caught up in "selling fever".

There is a large vegetable broker in Cleveland who was anxious to have as many fresh herbs available as possible. They attract the 'speciality' buyers, who generally spend a bit more for produce because variety and quality are more important than price — the perfect customer.

We found out how the herbs had to be packaged, the size of containers and the schedule of delivery required. The 'hook' he gave us was "I'll sell everything you can bring!"

It sounded easy enough. Reality, however, is usually a harsh taskmaster.

But the broker was right — he sold everything we brought. However, I'm not about to retire and simply raise fresh herbs for a living — here's why.

PREPARATION: It took two of us 2 hours to pick enough herbs to send to market. Although there is no 'minimum', wholesale buyers are reluctant to purchase small quantities. They want enough for all their stores, and they want a consistent product.

Then, it took us another 2 hours to prepare the herbs for market. Required packaging: 10 stems per bunch, each bunch trimmed, wrapped in wet paper, put in a plastic bag and secured with a rubber band. We can get 12 bunches in an 8 qt. basket.

Three A.M. the next morning, one of us leaves for the Cleveland market, a 30 mile trip one way.

Profits: We sold, on average, 18 baskets per trip, at an average price (after the brokers fee) of $4.70/basket. **Total: $75.60 gross profit/ trip.**

Costs per trip:
Baskets @$.55 ea. — $11.00
Bags, paper, bands — $3.00
Gas, oil, @ $.21/mile — $13.00
Labor @ $4.00/hr. — $52.00
Seed, fert. etc/basket — $.20
TOTAL COSTS — $79.20

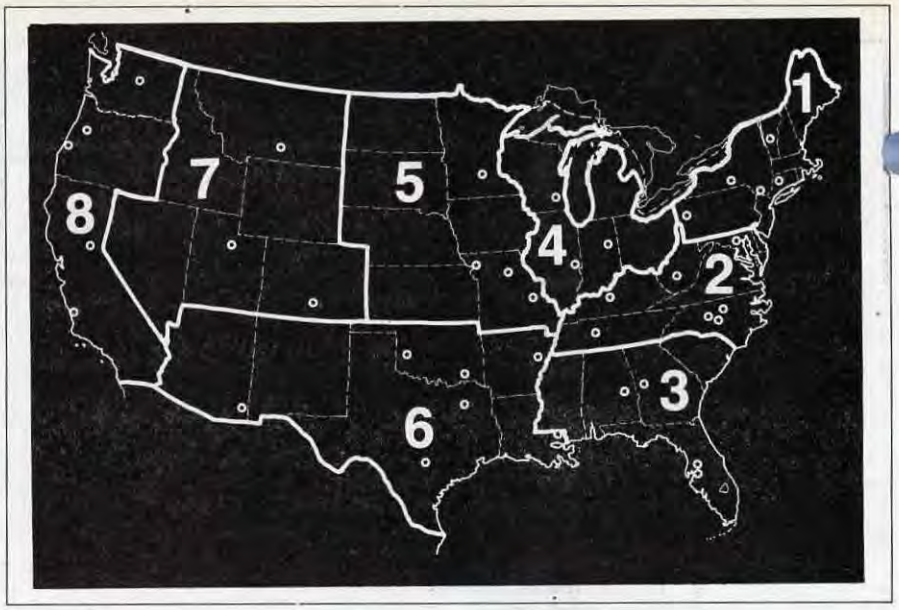
You can see that there is a $3.60 loss per trip — not extremely profitable, if you only look at the short run economics.

But this was the 'test the water' year. Our investment, as it were, will pay off in the long run. We have discovered a market that will pay us a fair price for our herbs, with a minimum of work on our part. We discovered a place where we can purchase baskets in bulk next year, reducing our cost to 40 cents each. And, we know that we can triple the number of baskets per trip, and still sell all of them.

Looking at production costs has helped too. We'll buy more seed, receiving a quantity discount, and we'll plant the rows to facilitate harvest, and we'll specialize in only 3 or 4 herbs instead of the 14 or so we did this year.

Continued on Page 598

October Honey Report



October 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	43.95	25.20	31.20	24.00	37.02	37.25	39.00	24.00-60.00	37.50
60 lbs. (per can) Amber	42.00	35.65	25.20	27.00	--	30.83	36.00	35.00	25.20-42.00	33.36
55 gal. drum/lb. White	.42	.69	.62	.52	.40	.62	.60	.53	.40-.69	.56
55 gal. drum/lb. Amber	.40	.50	.55	.45	--	.50	.55	.45	.40-.56	.49
Case lots -- Wholesale										
1 lb. jar (case of 24)	29.45	23.65	26.40	27.97	25.92	24.50	25.00	30.12	22.80-35.04	26.56
2 lb. jar (case of 12)	29.25	22.50	25.10	25.10	23.76	23.60	31.15	29.48	21.00-34.50	25.73
5 lb. jar (case of 6)	32.25	26.25	22.97	25.98	25.00	24.08	25.33	28.20	22.95-34.00	26.53
Retail Honey Prices										
1/2 lb.	.95	.94	.81	.85	.78	.82	.87	.87	.72-.98	.86
12 oz. Squeeze Bottle	1.30	1.28	1.49	1.39	1.17	1.28	1.09	1.39	1.09-1.54	1.31
1 lb.	1.63	1.52	1.51	1.57	1.36	1.50	1.27	1.54	1.27-1.85	1.50
2 lb.	2.75	2.72	--	2.88	2.39	2.71	2.69	2.64	2.18-3.03	2.67
2-1/2 lb.	3.75	3.25	--	--	--	3.30	3.41	--	3.05-3.75	3.38
3 lb.	4.00	4.13	3.50	3.23	3.33	3.77	3.49	3.25	3.25-4.30	3.65
4 lb.	5.00	4.90	--	4.85	5.01	4.56	4.34	--	4.34-4.99	4.67
5 lb.	6.75	5.77	5.50	5.71	5.19	5.33	4.99	5.30	4.99-7.00	5.60
1 lb. Creamed	1.75	1.75	1.35	1.55	1.66	1.83	1.57	1.57	1.33-2.05	1.64
1 lb. Comb	2.25	2.18	2.93	2.47	--	2.08	1.75	2.25	1.55-2.95	2.23
Round Plastic Comb	2.00	2.25	2.00	1.84	--	1.53	1.65	1.80	1.25-3.00	1.87
Beeswax (Light)	1.15	1.42	1.10	1.10	1.00	.93	.65	1.80	.65-2.50	1.27
Beeswax (Dark)	1.00	.78	.90	.84	.90	.85	.60	1.80	.60-1.85	.92
Pollination (Avg/Col)	25.50	--	--	27.50	18.00	23.50	23.00	25.00	18.00-27.50	23.19

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 $1.27 - $1.85 and the average price across the country is $1.510

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 1 has a price index of 1.00 this month and remaining regions are compared to that index.

•Region 1.

Price Index 1.00. Sales average to slightly above, though prices up a bit. Dry, hot weather in some areas have hurt production, while cool damp areas are suffering too. Overall, production average to above this year. Chalkbrood causing problems in some areas.

•Region 2.

Price Index .90. Sales steady to excellent. In areas where sourwood is available, sales incredible. (We didn't include sourwood prices in the report because they don't represent 'normal' prices and sales. For instance: 1# - $4.00; 2# - $7.00; 60# - $60.00.) Most areas dry, with fall flow expected to be poor. Regular honey sales slow due to weather.

•Region 3.

Price Index .71. Sales steady to slow, prices dropping. Fall flows slow in some areas, to excellent in others. Production this year generally good to above average. Loan program activity increasing.

•Region 4.

Price Index .80. Sales steady to increasing, with prices steady. Demand beginning to pick up. Dry weather has stopped production in most areas, and fall flows look poor.

•Region 5.

Price Index .59. Sales slow, prices down. Demand light. Colonies generally in good condition, with good production and adequate fall crop. Good moisture has helped.

•Region 6.

Price Index .83. Sales at retail slow, with prices dropping. Hot weather has slowed both sales and production. Moisture shortage in southern areas slowing production. Fire ants continue to be a serious problem in some areas with some hives completely destroyed.

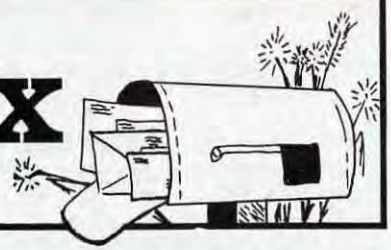
•Region 7.

Price index .93. Sales steady with prices rising, slowly. Reports of 120-150# surplus in some areas. But dry spots reporting much less. Fall crop looks good, as moisture has been adequate.

•Region 8.

Price Index .93. Sales up, and prices too. Northern areas having above average crop, but dry spots in some areas causing problems. Blackberry crop poor in Oregon. CA having problems with cotton flow due to diseases and cool weather.

Mailbox



Good Things Don't Always Come In Small Packages

Dear Editor,

Quite some time ago I acquired some thoroughly dead Africanized bees. Since these bees are NOT in or near the United States at this time, I decided to pin about 5 of them in a small display box. For comparison, I also pinned about 5 bees from one of my own Italian hives in another box. In this way I could take both boxes "visiting" for display at the beekeeping organization meetings I attended.

I really do not know who have been the more surprised — I or the beekeepers. The comment I continually hear is "They're small? I thought they were real big!"

Is this what publicity has done? Have the media 'blown it out of proportion'? The Africanized bee is now larger than life in people's minds.

I realize that very, very few of you have Africanized bees in your freezer (to prevent them from being destroyed by beetles before my next display). However, I would like to ask those of you who have seen or who have pinned Africanized bees to help me educate the people — beekeepers or not — about the bee.

Let's have our facts correct — the Africanized bee is indeed slightly *smaller* than our native bee.

Ann Harman
Laytonsville, MD 20879

Honey Board Horror

Dear Editor,

I am a hobby beekeeper with two strong colonies and five nucs I've just set up.

I just finished reading with unabashed horror, the article introducing me to my National Honey Board. Horror not at the aims and purpose of the board, but at the proposed scheme to fund it.

Do these people have any idea what 1¢ per pound assessment means to someone who makes their living, either full or part time, from beekeeping?

It does not sound like much, but it is. Based on the average price for honey of 50¢ per pound (August Monthly Honey Report for 55 gal. drum of amber honey), 1¢ per pound means you pay *2% of your gross income before expenses and taxes to the Honey Board.*

Many beekeepers are already having a difficult time making ends meet without this added burden. If the government really wanted to help the American bee industry, they would apply this assessment ONLY to imported honey and exempt all American producers.

Even better, they would make the assessment 5¢ per pound on foreign honey and place a floor price of the average cost of American honey before the assessment.

This would prevent dumping on the American market and provide a much needed income boost to our beekeepers.

Roland A. Paquette
P. O. Box 197
Windermere, FL 32786

In Response . . .

Dear Editor,

Mr. Roland Paquette's letter concerning the National Honey Promotion Board Program deserves a response. First of all, Mr. Paquette's point of view can be readily understood and appreciated. He is concerned about beekeepers making a living and about the competition U. S. producers face from foreign honey imports. No doubt many U. S. producers share these same concerns.

The U. S. Congress, through the National Honey Board, has given the industry the tool to "pull itself up by its own bootstraps". In this day of Graham-Rudman budget cuts the cost of agricultural, as well as other costly federal programs, are being closely scrutinized for reductions. If one day the honey price support program (read honey loan buy back program) were to end, what will U. S. honey producers have to rely upon, except the marketplace? A strengthened market demand is needed in order to receive fair prices for honey and honey products. I believe, as do thousands of commercial, part time and hobbyist beekeepers, that the one cent per pound assessment should be looked upon as a market development investment — an investment in the future of our industry.

When the U. S. Congress passed the Honey Research Promotion and Consumer Information Act the congress also recognized the concerns raised by Mr. Paquette. The congress, while acknowledging these concerns, addressed the key reason for forming the National Honey Board. The congress said that "the maintenance and expansion of existing honey markets and the development of new and improved markets or uses (of honey) was vital to the welfare of honey producers . . .". The congress went on to say (and I must say, I agree wholeheartedly) that the long run solution to the honey industry's problems lie not with government but with the industry itself through strengthening and creating new markets. In the law that created the honey board, the congress stated that "without cooperative action in providing for, and financing such (market development) programs, honey producers, honey handlers, and wholesalers and retailers are unable to implement programs of research promotion and consumer education necessary to maintain and improve markets for honey and honey products."

At the July, 1987 meeting of the National Honey Board, an aggressive 1 year marketing program was adopted. This program is designed to strengthen the position of the honey industry in the market place and to maintain, develop and expand markets for honey and honey products. Producers and others in the honey industry should look upon the one cent per pound investment as a means to increase and strengthen the markets for honey in the United States. Put another way, these assessment funds are being utilized to make

Continued on Next Page

MAILBOX... Cont. from Page 557

"the pie bigger for everyone" involved in the U. S. honey market.

Finally, Mr. Paquette addresses the matter of the assessment paid on imported honey. Under the law, imported honey is assessed at the same rate as U. S. honey. That is, at one cent per pound. Therefore, foreign producers are paying their fair share of the costs of promoting an increase in U. S. honey sales by paying the same assessment.

The National Honey Board is made up of elected representatives of the honey industry. The Board welcomes questions, comments and suggestions for improving the national promotion program from all segments of the honey industry. Communications can be sent to the National Honey Board, 9595 Nelson Road, Box C, Longmont, CO 80501.

Dwight Stoller
Sec'y. / Treas.
National Honey Board

Solar Bee Hives

Dear Editor,

I've been using these solar bee hives for about 6 years and find them very useful. They warm the hives on those 0° days so the bees can easily get to the stored honey.

They also enable the bees to take cleansing flights for good health.

I put them on about December 1, and remove them about March 15.

Lester Hershey
2023 Old Phil Pike
Lancaster, PA 17602

Stings! A real concern of 99% of the population.

Dear Editor,

People suffer vaccine injections, novocaine needles for dental work, broken legs while skiing, mosquito bites while camping, first degree burns from a sunburn at the beach, itching from flea bites from family pets, and will even risk being shot by an irate spouse for cheating.

I can talk with a lot of authority on the subject of stings. I started with bees 54 years ago and became sufficiently proficient in handling them that I did not get many stings, even when working in only summer shorts. In 1964 I experienced violent reactions, almost anaphylactic shock, so I quit keeping bees.

In 1985 I heard of the desensitization program using pure bee venom. I took the course of desensitization shots. Now, in 1987, I am back to working bees while nearly naked and try to get about a sting per day to maintain my immunity. It works! I have no problems!

George W. Imirie, Jr.
12705 Circle Drive
Rockville, MD 20805

Nasty Nitrous Oxide

Dear Editor,

In the section "Questions and Answers" by Richard Taylor, p. 395 in the July 1987 *Bee Culture*, John Turner asked if nitrous oxide had a permanent harmful effect on bees.

Thirty-odd years ago, when I was working in Nova Scotia, the Provincial Apiarist, Me. Endel Karmo, and I faced the same question. We set up a statistically valid experiment to test the results of nitrous oxide (ammonium nitrate added to lighted smoker) on longevity of honey bee workers of known ages. We obtained results that were significant at the 0.05 level but never did get the test written for publication. I do not have the data now but we found a definite *decrease* of 25 to 30% in the life span of worker bees.

V. R. Vickery
Macdonald College
21,111 Lakeshore Road
Ste. Anne De Bellevue, P.Q.
Canada H9X 1C0

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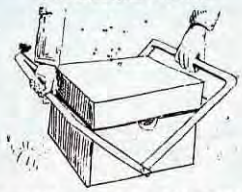


MAILBOX... Cont. from Page 558

American Female (and Male) Beekeepers Respond...

Editor's Note: We received an avalanche of mail regarding the comments in the August Mailbox about women, beekeeping, and traditions. Space (and propriety) limitations dictate that all of these letters cannot be printed. Further, many of them were similar (outrage, anger, etc.) so we're printing excerpts from those that reflect the majority of opinions received (and a couple that were particularly good).

"I am a female who can, and does, lift supers and work beeyards. I have over 40 colonies."

Cynthia Johnson
Newport, NC

"Dear Mr. Blanchard: Your head must be buried in a swarm of bees to believe there are no women in beekeeping. I'm 52, with 6 children and 7 grandchildren. I do nearly all the work, including lifting supers, wintering, supering and harvesting. My husband is terrified of bees. I'm also an RN, a carpenter and gardener."

Joan Pedigo
Oyster Bay L.I., NY

"To suggest that women are second class citizens because (some) can't lift an 80 lb. super, dripping with slippery honey, is stupid. Some men can't either! In fact, Steve Taber told me he preferred hiring women because they were easier to train, did better work, didn't argue as much as men, and didn't have egos that were easily bruised."

Robert Cucullu
Sedona, AZ

"Maryland has some excellent beekeepers, and some are women. Melaine Odlam ran 400 colonies, is now Extension Apiculturist, and lifts her own supers. Maryann Tomasko originated the canine bee inspector program. Ann Harman is President of the North American Apiotherapy Association and is a master beekeeper. It has been my experience that beekeepers treasure the variety of backgrounds, occupations, ethnic groups and sexes among their ranks. To me, THAT is the beekeeping tradition."

Stephen Mc Daniel
Baltimore, MD

"Please don't waste space in your fine magazine dealing with this type of letter. I'm a full time beekeeper who extracted (by myself) 10 drums of honey so far this year. I don't need anyone to defend me."

Name withheld by request

"I'm a full time beekeeper, in fact, I'm the only female commercial beekeeper in OK. I'm 66 and have worked bees for over 30 years. My husband did the equipment construction, I do the beekeeping. I'm also President of my local association, and Historian of the OKBA."

Dorthy Brister
Caddo, OK

Fewer Apples In 1987

Dear Editor,

The 1987 commercial apple crop in New England is forecast at 7.75 million bushels (42-pound units), 3

Continued on Next Page

MAILBOX... Cont. from Page 559

percent under last year's crop. Cool, windy conditions during bloom provided less than optimal pollinating conditions in many areas. Orchardists in the six states report generally moderate to heavy June drop, moderate to light fruit set, and scab infection levels light to non-existant. Poor pollinating conditions during bloom have reduced prospects for the 1987 pear crop. Production in Connecticut is forecast at 1,500 tons, 6 percent under the 1986 crop.

ED. NOTE: At 1 colony/acre this is to be expected. At 1-1/2 - 2 colonies/acre this could have been improved.

Attention Arizona Bee Associations:

Dear Editor,

As Chairman of the **Arizona Beekeepers Association Joint Committee on Bee Laws & Africanized Bee Identification**, notice has been forwarded to the presidents of all bee associations in the state of Arizona, including the Commission of Agriculture and Horticulture, that firm recommendation is being made that FABIS testing or any other identification testing based on the morphometric research done at the University of California at Berkeley, not be accomplished due to finding of supporting information bringing a conclusion of complete uselessness of the systems. Full rebuttals available.

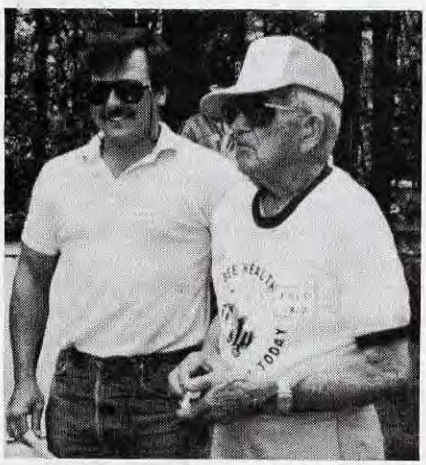
For more information contact Dee A. Lusby, 3832 E. Golflinks Road, Tucson, AZ 85713.

Dee Lusby

Maine's Honey of a Picnic

Dear Editor,

The **Maine State Beekeepers Association** held its summer picnic on July 19th at Thomas Point Beach in Brunswick, hosted by the **Sagadahoc Chapter**. Ron Riendeau, President, enthusiastically kept the days activities moving smoothly. Entertainment was provided by the Howard Hines Revue which added a country flair to the days attractions. Beekeepers were seen strolling around tables of merchandise donated to benefit the Association during the auction which took place in mid-afternoon. Other activities included a honey and wax show, photo contest, crafts, inventions, and games for the children. Awards were given to the oldest beekeeper, the youngest beekeeper, most hives, farthest distance traveled and youngest guest. Two raffles were held in which a "Beekeeper" stuffed bear and two lobsters were given away.



Ron Riendeau, President of Sagadahoc Chapter (L) and Maine's Oldest Beekeeper, Fred Hale (R).

M.S.B.A. President, Al Delicata, welcomed everyone and updated members on the status of the Association. Conditions are getting better — things are looking up!, were his comments on M.S.B.A.'s direction. Bob Egan, Vice President, kept track of the auctions bidders as Jim Reed entertained the audience with his colorful commentary. Tony Jadczak, Maine State Bee Inspector, spoke about the ETO chamber which should be put into use in the near future. He also talked about using menthol crystals for mites which have proven very successful in other states.

A new M.S.B.A. T-shirt was unveiled — for $8.25 anyone may purchase it and have it mailed to them. Children and Adult sizes are available. For more information please contact Al Delicata.

Anne Brown
Box 448, Greely Rd.
Cumberland Center, ME 04021

New Product

Scentry, Inc. announces commercial availability of their new honey bee swarm trap. The trap is a strengthened compressed pulp paper pot measuring approximately 17" x 17" x 17". A lid of the same material sleeves tightly into the top of the trap and extends out two to three inches from the lip of the trap to allow for fasteners. Both the lid and the trap are fitted with brass grommets to allow for easy fastening and to prevent tearing of the material.

The bait trap can be mounted either vertically or horizontally. It can be fastened to a wall, ceiling or tree by nails or wire or twine may be used.

Four ridges are moulded into the tight-fitting lid to encourage comb building. The pheromone lure included in the swarm trap kit is an added attraction to the bees. It is a synthetic reproduction of the scent released by scout bees when they have located a suitable new location.

Both trap and lure can be used a full season. Once a swarm is transferred from the swarm trap to a regular hive, both trap and lure can be used again to capture additional swarms.

For more information contact Scentry, Inc. P.O. Box 426, Buckeye, AZ 85326-0090. Telephone (602) 233-1772.§

Guest Editorial

THE KILLER COMETH

By TOM ELLIOTT, Editor, THE PHEROMONE
Newsletter of the Cook Inlet Beekeepers Association
P. O. Box 140173 • Anchorage, AK 99514

The attitude I have seen, in almost all of the writing on the impact of the Africanized Honey bee is very disturbing. It usually sounds something like this:

• *The Africanized Honey Bee is coming north. We will have to live with it in the future. That is sure going to be a terrible thing. Since we have bees, we will be guilty by association, and we can expect some strong controls and restrictions on our right to keep honey bees.*

• *It might help if we can educate the American public to realize that it isn't all that bad. One thing we have to do is never use those dirty words "African Killer Bees". And we must stop everyone else from using those words. That must be a large part of our education effort.*

I would like to make a comment on this "Educate The Public" theory. IT WON'T WORK! We have been trying to educate the public about our own docile honey bee and local governments are still eliminating, or trying to eliminate, beekeeping. Education has not been effective, even under ideal conditions.

The more noble side of man has been trying to educate the less noble side of man for as long as we have been civilized. Rape, robbery, murder, drunkenness, gambling, racism, and all the rest are still alive and well. Recent reports tell us that 90% of our 12 year-olds can expect to be the victims of a violent crime in their lifetime. So much for education.

Now don't get me wrong. Education plays an important role in correcting public attitudes. Our association offers a Honey Bee program to any school expressing an interest, and each year I take bees into several of the local schools. The changes in attitude are visible in the faces of many of the children (and even some adults) as you talk and show pictures of beekeepers in action. BUT, education won't do the whole job. We can't depend on it.

I will skip over the fear that the "Killer Bee" will be a terrible thing to live with. The jury will be out on that question for a while yet. The experts do not even agree.

I use the term "Killer Bees". We've been told to avoid that phrase, but when the "Killer Bee" arrives, you won't see many headlines using the term "Africanized Bee". Since we can't get rid of the term, let's do what the American Revolutionaries did with the name "Yankee." Let's use it to our advantage.

Look at the worst we have ever heard about this beast. They are the nastiest little creatures you have ever seen. They will go out of their way to give their lives for their home. They live only for the chance to sting someone.

And who will be the communities' first line of defense? That's right — YOU! As a person experienced with handling bees, you are the logical choice to take care of a problem colony which has just been discovered (probably after having been there over 20 years).

So, first of all, you are not part of the problem to be exiled from decent human society. A soldier on the front lines, you are a hero. And don't let the public forget it.

If you aren't permitted to keep bees, what is to motivate you to come to your town's rescue? You won't have any equipment — no need for it, right? An expensive killer bee squad will have to be supported by the taxpayers, and EVERYONE knows what a good job the government will do in taking care of any problem.

If American beekeepers exhibit any sense at all, the coming of the Killer Bee will be used for our own benefit and for the communities benefit.

However, we must continue to inform the public of the value of our bees. The threat of the killer bees should be used to illustrate that lesson. In the past it has been to our benefit to have folks tolerate bees. Let it now be to the public benefit to encourage beekeeping. We can now explain to people that it is to their advantage to have around as many well managed colonies of tame bees as possible. The more good beekeepers there are in an area the better off the area will be. We must push for legislation not only permitting honey bees, but actually encourage them. The killer bees, properly exploited may be the hammer to drive our point home.

I have been involved in fighting an attempt to stop beekeeping in my city. During that time I learned that the attitude of the local beekeepers can be the deciding factor in handling problems. We can't fight the whole community. We can show how we can help. I have repeatedly read that when the killer bee arrives, we can expect cities, and even states to impose strict limits on beekeeping or outlaw it altogether. If that happens, the fault is yours. Not only that, you will have let your community down. If the local association is responsible and puts out the effort, you can overcome fear and ignorance. But you can't wish it away.

However, don't expect a free ride. You will have to stand together, as a group, with the community and against any beekeeper who is a nuisance to his neighbors. You should be involved in both preventing and eliminating problems with honey bees in your community. If you aren't, the community is justified in doing whatever it knows how to do to protect itself. The fact that it will normally take foolish action is simply a result of inadequate beekeeping knowledge. They don't have it because you have not provided it.

I know you are a responsible beekeeper. You would not allow your bees to be a public nuisance, but not all beekeepers are so responsible. If we do not police ourselves, the community will botch the job for us.

And, if the sky doesn't fall, we will have advanced beekeeping. You will have strengthened you associations and, best of all, you can take credit for the LACK of problems.

Or, you can wring your hands and weep!§

The Cost of Beekeeping: A Look at 1945 and 1987

By KEN OLSON • 87417 Halderson Road • Eugene, OR 97402

My new bee supply catalog arrived last January. It reminded me of the 1945 catalog I'd bumped into in the garage one day last week. As I thought of these two catalogs, I decided to compare prices and supplies. A lot can change in 42 years in styles, methods, supplies and prices.

I found many items in that old catalog are practically identical to items in my newest arrival. There are the same queen excluders, bee escapes, hive tools, smokers, gloves ...

The most obvious difference I saw was the price list. Some items cost twice as much now as they did then. Other items cost three times, some four times as much as back then. Beekeepers making purchases in 1945 would scream OUTRAGEOUS!!! if they knew what we pay now for our supplies.

As you work on the questions below, keep in mind that in that year a stamp for first class mail cost 3 cents; a loaf of white bread cost 12 cents; a pint of peanut butter cost 34 cents; two pounds of coffee — 49 cents.

I think you'll be in for a surprise or two.....

1. How much did Dr. C.C. Miller's book *50 Years Among the Bees* cost in 1945?
   A. $5.00
   B. $3.00
   C. $2.25
   D. $1.00
   E. $0.75

2. Miller's book today costs?
   A. $9.95
   B. $8.95
   C. $7.95
   D. $6.95
   E. $5.95

3. How much did Frank Pellett's book, *Honey Plants of North America* cost in 1945?
   A. $4.50
   B. $3.50
   C. $2.50
   D. $1.50
   E. $0.50

4. A 1-pound spool of bee-wire in 1945 cost 60 cents. Today?
   A. $1.20
   B. $1.80
   C. $2.40
   D. $3.60
   E. $5.40

5. The price of 1 pound of hive staples today is how much greater than in 1945?
   A. 2X
   B. 4X
   C. 6X
   D. 8X
   E. 9X

6. A standard smoker, 2 pounds, today costs $15.95. What was the price in 1945?
   A. $0.75
   B. $1.25
   C. $2.15
   D. $3.00
   E. $1.65

7. Jumbo smokers now sell for $16.95. In 1945?
   A. $1.00
   B. $1.25
   C. $1.50
   D. $1.75
   E. $2.00

8. Today's bee brush, selling for $2.50, has plastic bristles, but in 1945 they had genuine horse hair with hardwood back. What was the price in 1945?
   A. $0.45
   B. $0.50
   C. $0.60
   D. $1.00
   E. $1.50

9. How much did a 40 gal. honey storage tank cost in 1945?
   A. $10.00
   B. $15.00
   C. $20.00
   D. $25.00
   E. $30.00

10. A one-story, standard hive, ten frames, today runs $49.95. What was the price of the same hive in 1945?
    A. $2.35
    B. $2.65
    C. $3.35
    D. $3.65
    E. $4.35

11. The indispensable hive tool was as versatile 42 years ago as it is today. The length is the same, 10 inches, and they were stainless steel back then. But the price is much different. Today it costs $4.15. 1945?
    A. $0.40
    B. $0.60
    C. $0.80
    D. $1.00
    E. $1.20

12. The plain, unheated 10 inch uncapping knife in 1945 cost how much? (Today it costs $4.15)
    A. $2.10
    B. $2.45
    C. $2.80
    D. $3.15
    E. $3.50

Answers on Page 600

Honey Bees, Pesticides and Apple Orchards in New York. Studies During 1979 - 1986 [1]

R. A. Morse[2], G. E. Strang[2], R. Nowogrodzki[2], and T. D. Spittler[3]

Pesticides continue to plague beekeepers across the country. If you, or members of your association suffered losses this past summer, now is the time of year to begin working on next years situation. Contacts with growers RIGHT NOW are important because they haven't bought next years' supply of chemicals yet. Also, continued contacts with county and state extension agents should be an ongoing practice. "After the fact" finger pointing is O.K., but pre-season work is even better!

Summary

During the past nine years, severe losses of honey bees due to pesticides have occurred in the vicinity of apple orchards in the northeastern U.S. Losses of such magnitude did not occur earlier in these areas. We have found that these losses are a result of changes in orchard management practices and increased use of one pesticide, Penncap-M. The situation has been made sufficiently difficult for beekeepers, and indirectly for growers, that further refinements in orchard management practices or changes in the pesticides being used are called for.

Introduction

In 1979 it was reported to us that bees in colonies near or adjacent to apple orchards in New York State were suffering losses from pesticides in July or August. This is much later in the season than the time of apple flowering, which is mid to late May. Until that time there were few losses because there were few flowers in orchards other than during bloom, when apples, dandelions and yellow rocket all flower about the same time.

In 1980 we found serious problems for beekeepers were taking place in the vicinity of apple orchards, and that Penncap-M was the material causing much of the difficulty.

This information was turned over to the NY State Dept. of Environmental Conservation (DEC), who conducted their own survey in 1981. They confirmed our findings, but took no action that year. Because of this inaction, fewer beekeepers reported losses in 1982 and 1983, giving DEC the impression the problem had been resolved, but that was not the case. Losses were reported again in 1984, so in 1985 we began more studies.

Sampling Procedures

In July and August of 1985 and 1986, several of us from Cornell made visits to apple orchards. We made observations on orchard practices and recorded the plants in flower; most commonly they were the clovers, including white dutch and alsike, birdsfoot trefoil and alfalfa. However, there were also milkweeds, purple loosestrife, burdocks and others in some orchards.

We also discussed current management practices and how they differed from those of 10 or so years ago with growers and extension personnel at Cornell. When losses were reported to us in 1986, samples of dead or dying bees, and sometimes pollen, were collected and frozen for chemical analysis. This included six samples collected by a cooperating family of beekeepers[4].

Results of the Survey

From observations in apple orchards south of Lake Ontario, coupled with discussions with growers and extension agents, we found that within the past 10 years there have been major changes in apple orchard management practice. Research has shown that if the undergrowth in an apple orchard is mowed or otherwise reduced, more water is available to the trees and larger apples are produced. Larger apples command a higher price. Accordingly, orchardists have increased their use of herbicides under the trees, and have been mowing between the trees. The mowing has discouraged the grass that has always been present on the floor and has encouraged the growth of the flowering plants mentioned above which attract bees. Then, when orchards are sprayed the excess spray lands on flowers and thus gets picked up by bees, instead of just landing on grass, on which bees do not forage.

Current recommendations also call for shallow-rooted fescues (a grass) to be planted between rows of apples. These grasses turn brown when water is short, diverting even more water to the apple trees. If only fescues grew between the rows there would be nothing to attract bees into the orchards at spraying time and there would be no losses. For the most part, growers follow recommendations and use herbicides under trees and mow between them; however, they have not used the shallow-rooted fescues extensively.

During the summer of 1986 dead bees were collected from the aprons of colonies that had obviously suffered pesticide losses. Pollen was taken from combs in several of the same colonies. Samples were collected between July 11 and August 4,

Continued on Pate 565

Footnotes

[1] The 1986 study was supported by a grant from the New York State Department of Environmental Conservation Bureau of Pesticides. The 1980 study was supported by a grant from the Environmental Protection Agency.

[2]Department of Entomology, Comstock Hall, Cornell University, Ithaca, NY 14853.

[3]Department of Food Science and Technology, 202 Food Research Lab, NYS Agricultural Experiment Station, Geneva, NY 14456.

[4] We thank Judith and Edward Doan for their assistance in collecting these samples. Other beekeepers from whom we took samples were: Cornelius Boerman, Phillip Collier, Benson Gabbert, George Milem, Francis Pautz and Lawrence Winters.

QUESTIONS?

Q. *I had ten strong colonies last fall. By spring four had died. The other six are in good condition. Why would four die?*

Robert M. Lacy
Shade Gap, PA

A. The chief causes of winter loss in this northern climate are (1) starvation, (2) excessive moisture and (3) lack of ventilation. I suspect in your case it was (3). In addition to leaving the bees ample stores in the fall, make sure they are up off the ground, on bricks or whatever, and not on low ground where moisture settles. Then be sure air can circulate through the hive, by having the inner cover hole partly open, for example, and tilt the hive forward so that dead bees will not accumulate and obstruct the entrance.

Q. *Should cream of tartar be added to sugar syrup when feeding bees?*

John E. Palmer
Newmarket, NH

A. No, it is simply a waste of time. Granulated sugar dissolved in warm water is quite adequate for bees which need supplemental feeding.

Q. *My colonies headed by hybrid queens are good honey producers, but I have heard that such queens do not produce good queens. What is your opinion?*

Roy Riley
Middlesboro, KY

A. I believe that the virtues of professionally raised hybrid queens are lost in their progeny if these are allowed uncontrolled mating, but I have no firsthand experience and would appreciate hearing from beekeepers who do.

Q. *I use two deep hive bodies for each hive but I am the only one in our bee club who does. Most use one hive body and one 6-5/8" super. Which is better?*

Ben H. Cox
Jackson, TN

A. In your latitude the smaller, 1-1/2 story hive should work fine. In the north, beekeepers usually prefer a full 2-story hive so that the bees will have plenty of winter stores. But what is important is not so much the size of the hive as the amount of winter stores. My own hives winter well in small 1-1/2 story hives even though I never feed them, because I leave them plenty of honey for winter stores. And our winters are long and cold.

Q. *I am new at beekeeping and today saw for the first time a new worker bee emerging from her cell. But on the same frame I saw about thirty pure white pupae with black eyes staring from their cells. I had understood that pupae remained capped until they emerged. What was the meaning of this?*

Kay Marmaduke
Witts Springs, AR

A. Those were drone pupae. In removing the frame you inadvertently scraped off the cappings to their cells, which is easy to do, since drone cappings protrude. Don't worry about it.

Q. *Is there an optimum number of drones that should be in a hive for maximum honey production? And is there a correlation between the number of drones and the quality of the queen?*

Marshall T. Slotterbach
Lettersville, PA

A. I believe there is no optimum number or proportion of drones in a colony. Even a heavy drone population seems to have little if any adverse effect on honey production. The drone population in a hive correlates not with the quality of the queen, but with the amount of drone comb.

Q. *What do you think of using nine frames instead of ten?*

Harvey B. Moats
Canton, IL

A. I use nine. But if you are starting with foundation, use ten until they get drawn, otherwise you might get two combs built on one of the frames or similar burr comb problems.

Q. *We live in a Chicago suburb where there are many different flowers. Our bees are midnites, and we never see them visiting these flowers, though we do see plenty of bumble bees. Would a different strain of bee forage better on these many flowers?*

Joe Mach
Villa Park, IL

A. Foraging bees concentrate on the most abundant sources of nectar, constantly shifting sources from one day to the next. Thus, if dandelions, for example, are in bloom, the bees are apt to ignore other less promising sources. Ornamental garden plants are almost never significant sources

Continued on Next Page

& ANSWERS!

by Richard Taylor

QUESTIONS... Cont. from Page 564

of nectar. This foraging behavior has little to do with the strain of bees.

Q. *Which is better for a solar wax extractor: two panes of glass with an air space between, or a single pane?*

Richard Taylor

Comment: This is a question I would like a reader to answer, with a sound or scientific basis for the opinion. I believe the double pane would hold the heat in the box longer, but I wonder whether the box would not get hotter with just one pane. I'll be glad to publish a good answer.

Questions are welcomed. Send them to: Dr. Richard Taylor, R. D. 3, Trumansburg, NY 14886 and enclose a stamped, self-addressed envelope for prompt reply.§

PESTICIDES... Cont. from Page 563.

and in all there were 21 samples of bees and 13 samples of pollen.

Penncap-M, in concentrations ranging from 0.04 to 3.0 parts per million, was found in all samples of bees. This material was present in all but one sample of pollen. We did not analyze for other pesticides.

There IS a Solution

Our experience in 1980 indicated that several other pesticides were present in samples of dead bees and pollen but none were found as consistently as Penncap-M. These observations concur with Atkins et al. (1981) to the effect that Penncap-M is the most difficult with which beekeepers must cope. In 1985 the state of Connecticut outlawed the use of Penncap-M in summer in apple orchards (and sweet corn) because of the trouble it caused beekeepers in the state. We have been told by pomology extension experts that alternatives to Penncap-M are available for fruit trees.

The Penncap-M label reads in part: "This product is highly toxic to bees exposed to direct treatment or residues on crops or blooming weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the areas to be treated." Clearly, if honey bees are killed as a result of Penncap-M there is a violation of the label statement and therefore the LAW! §

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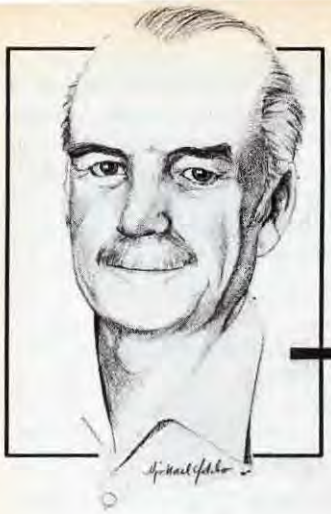
2. Connecticut Law Journal. *Legislation re: Use of microencepsulated methyl parathion dated May 27, 1986.* Page 3B.
3. Atkins, E. L., D. Kellum and K. W. Atkins. *Reducing pesticide hazards to honey bees.* University of California Leaflet 2883 revised February, 1981.



THE BEE SPECIALIST

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

"Some beekeepers seem resentful of new ideas, and view them as a threat rather than an opportunity"

BEEKEEPERS OR ENTREPRENEURS?

According to Fruit Grower magazine, there are too many farmers and not enough entrepreneurs. This is true in agriculture in general, the fruit industry, and the beekeeping industry. In his editorial in a recent issue, the author points out that people in business are generally considered to be entrepreneurs by their position, but one who deserves the title must have a vision, a goal, and a plan to reach it. The successful entrepreneur must develop a market. This requires advertising, promotion, and selling. Although his true interests may lie in producing his product, as is the case with many beekeepers, he must become involved in marketing (or enlist someone else to do it for him) because *"marketing is the key to success."*

Beekeepers, like others in agriculture, work hard, take risks, and often suffer from their business decisions. But they tend to stick with old ideas and old routines in the face of poor prospects. As noted in the editorial, the entrepreneur is more likely to be a market developer while the farmer (beekeeper) is a price taker.

Several years ago, I went to one of the national beekeeping meetings where a couple of progressive beekeepers attempted to interest others in ways to improve their marketing through special honey packs and other innovations connected with their beekeeping and businesses. It was discouraging to see the reactions they drew. Other beekeepers seemed resentful of the ideas presented and acted as if the new ideas were a threat rather than an opportunity. Perhaps the attitudes expressed are too often typical of beekeeping; not only are ideas not shared, they are not readily accepted from others. It is easier to stick with the old ways, the familiar ways, even in the face of serious financial problems.

But beekeepers have taken an important step toward becoming entrepreneurs — they have enlisted competent and motivated people, through the new marketing program, to do a much needed job. They have the vision and the goal of better markets and better incomes.

Selling University Honey

I haven't had a lot of experience in selling large, commercial quantities of honey, but I enjoyed selling honey at the University of Illinois for many years. Initially, we had our honey extracted by a commercial beekeeper and sold it at wholesale without doing

any packing. It also went to the University food service to be used in baked goods in the student cafeterias. The returns from the honey were small, so I decided to see how much honey the local market would absorb in five-gallon cans. We advertised it only on campus, thinking that fraternities and other groups would be interested in the larger quantities. The response was good — people stood in line to buy a 60-pound can during the noon hour, not just for groups but for family use. One lady of German descent carried off a can in each hand. Her family does not use any other source of sugar.

The success of the honey sales prompted a change in the marketing of apples by the Horticulture Department. They had always been made into cider, which was popular but required lots of work and was not very profitable. The facilities for making the cider were antiquated and not entirely sanitary. Frank Owen, extension fruit specialist, and I convinced the rest of the faculty in Horticulture that if people would stand in line to buy University honey, they would also respond favorably to fresh, tree ripened apples. Some profs remained skeptical even when we had to enlist the help of the University police to handle the crowds that came out to buy apples at the Horticulture farm. Other faculty members stood around the cash register rubbing their hands as sales of $20 to $40 thousand dollars were rung up each apple season.

It was time to sell the honey in smaller containers and to handle them along with the apples, or so we thought. We made an attractive label featuring honey "from bees with a college education." It was corny, but people remembered it and came back again. In fact, they came back in such numbers that the seven-pound pails of honey sold out too quickly, leaving disgruntled customers who had waited in long lines with those wanting apples. There was also consternation when someone dropped a pail of honey and the bees from our nearby apiary came to clean it up.

Before long, we had to separate the honey and apple sales completely to satisfy the sales staff and the public. We just did not have enough honey to keep it available during the long period of apple sales. For a later sale, we had nearly 800 pails of honey

Continued on Next Page

JAYCOX... Cont. from Page 566
and announced that they would be available on Saturday, first come first served, one pail per customer. During the week before the sale, I received calls from deans, department heads, and friends trying to reserve some honey for themselves. I lost a lot of points by refusing to make concessions and telling them to get someone to stand in line for them.

The line formed early, long before opening time of 8 AM. All of the 7 pound pails were carried off in about an hour and a half. You may think that the price was a consideration, but we always made certain that we charged as much or more than any other source. The appeal was probably twofold. People tend to equate good things with a University, but we also put out a good product. It was carefully handled and heated only enough to keep it liquid for a reasonable period and free of fermentation if it granulated. We had a big advantage, obviously, in selling University honey. But most beekeepers can develop good markets for their honey without that advantage.

Marketing for Small Producers

Sidney Gross is a college professor who keeps bees and sells honey in Northern Illinois. At least he did — I have lost track of him, but still find his book on honey marketing full of sound ideas for beekeepers who sell their own honey.

Dr. Gross comments on the continuing problem of beekeepers selling their honey at unfairly low prices which hurt everyone except the purchaser. The worst offenders are those who have small quantities of honey to sell and who want to be rid of it as quickly as possible. Gross' book is intended for the small beekeeper with up to 75 colonies and as much as two tons of honey to sell.

The problems of honey marketing, according to Gross, are: 1) Honey is not a necessary food; 2) Packaging can be a sticky problem; 3) Granulation alienates customers; and 4) Cut rate sales hurt everyone.

Dr. Gross sells honey at his home with a special sales area in which he can display containers of different sizes of quantities sufficient to tempt the customer. Never display only one container of a given size because the customer is hesitant to take what may be the last one. Each container is priced individually and a price sheet is also posted above the containers on the wall. He does comparison shopping to determine prices, and charges a nickel or so less than the average. This increases sales and cuts complaints, according to Gross. He includes a good, tested honey recipe with each purchase and changes recipes periodically.

Gift boxes make good items for holidays. Gross makes them up with a two-pound jar of honey or comb honey in a plastic box, along with a pair of dipped beeswax candles and a honey recipe book, home produced.

Gross notes a number of marketing ideas that do not work well for him. With a small production, he finds the usual store sales require too much volume as well as a steady volume throughout the year. He does, however, like to sell to health food stores. Observation hives attract people, not sales, according to Gross, and he advises not to use them. Even the classified ads in newspapers are not effective, but free ads on bulletin boards at stores, community centers, and colleges are worthwhile.

More effective methods of marketing include direct mail (postcards) and a honey newsletter. The newsletter is a simple one on a folded sheet of 8 1/2 by 11 inch colored paper. It tells about the crop year and gives current prices. It also includes information about honey and beekeeping, such as granulation, kinds of honey, etc. It is one of Gross' most important marketing tools and a copy goes with each sale. Copies are often passed on to others.

To encourage return business, Gross gives a rebate on empty jars bearing his label. This brings back good, usable jars which he recycles by washing and adding a new cap.

There are many other useful ideas in the book, *Honey Marketing: Tips for the Small Producer.* In 1978 it was available from Kitchen Harvest Press, 3N681 Bittersweet Drive, St. Charles IL 60174. I do not have a more current address.*

Honey advertising has recently been in the news. The H-E-B Company of San Antonio, TX ran the following ad: "Miss out on this year's Huajillo Honey Ice Cream and you may as well live in South Dakota. Another reason to be glad you live in Texas." South Dakota officials said the ad was designed out of ignorance and that the company owed the state an apology. The company president planned to send some of the honey ice cream to Gov. George Mickelson of South Dakota to smooth things over.

*Honey Marketing: Tips for the Small Producer is available from The A. I. Root Co. See ad this issue.

Seasick Bees?

I recently sold several colonies of bees to an amateur beekeeper who wanted them for a friend in El Paso, Texas. The bees were in two-story hives, strong colonies but very gentle. I made a date to meet at the apiary in the early morning to help get them ready to move.

When I arrived, not long before sunup, the man was there with a friend and I could hear them hammering on the hives, not a good idea just before a move. They were also being stung, in spite of their veils, coveralls, and gloves. The first thing I asked was what they did with the smoker. They didn't have one with them because they believed that *smoke makes the bees seasick if you use it on them during a move.* This was a new one on me. The man helping prepare the bees said that he had nine years' experience, yet he did not question the seasick story; he may even have brought it along.

Worst of all, the men were trying to close the hives with cleats and pieces of window screen and were nailing them in place. I went back to my truck, got a smoker going, and had no trouble folding the screen and closing each entrance with it. The two marvelled that I was not being stung without coveralls and with a short-sleeved shirt.

When they got the heavy hives onto their truck, the beekeepers went

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on down the road. I haven't seen them since, but hope they didn't have some other wild tale about how you handle bees *after* a move.

Beetowns!

In his book, *Bees and People*, Naum Ioyrish wrote that his cherished dream is to see the creation of beetowns, "macrobioutopias," or beeutopias, as special settlements for the elderly. These would be places where healthy retired people, men and women, could spend an active, socially useful, and productive retirement in picturesque surroundings out in the country.

A beetown would be a highly developed health resort with an apiary, producing every kind of bee product. It would be a modern community with many small houses and lots of group facilities and services including restaurants, health centers, swimming pools, sports grounds, and a club. The permanent residents would work three or four hours a day.

Ioyrish would have as the heart or center of this "Bee-Utopia" a huge bee farm of several thousand hives. Everyone would help in tending the bees, regardless of their previous occupations. The goal of the operation would be to supply "vitaminized and medicated honeys" to the medical profession. These, along with ordinary honey, would go to medical centers, health resorts, clinical institutions, and the pharmaceutical industry. Included in *Bees and People* are chapters on producing such special "Honeys" and on the use of honey as a medicine and remedy. These special honeys are made from mixtures containing sugar which are fed to colonies of bees and the stored product extracted. The mixtures contain such things as milk, fruit juices, vegetables, fruit, and medicinal herbs. Drugs also are included, as well as organ extracts, vitamins, ginseng, rose hips, and infusions of pine needles.

The author of *Bees and People* also envisions the community collecting bee venom in both crystalline and liquid form. It would also produce beeswax for the pharmaceutical and perfumery industries. The bee colonies would be fed special foods containing albumin and other proteins enriched with vitamins and stimulants (not specified). Those colonies would produce large quantities of royal jelly to be sold in ampoules and in tablet form, according to Ioyrish. Pollen would be collected on a large scale and propolis would be a source and base for the manufacture of new drugs. Even live bees would be provided to medical institutions for therapeutic purposes.

Trailer apiaries would be used to collect nectar from other sites and for pollination service. Ioyorish concludes the section on beetowns as follows: "Utopia? I think it is quite practical. And of inestimable value for a happy retirement."§

Testing Your Beekeeping Knowledge

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

The qualities and ultimately productivity of the honey bee colony depend on the egg laying and pheromone production of the queen. Her genetic makeup, along with that of drones she has mated with, determine the quality, size, and temperment of the colony.

Not only are queens extremely important to the colony, they are also an important component to the beekeeping industry. Most queens, packages, and nuclei are produced by beekeepers that specialize in queen rearing.

Please take a few minutes and answer the following questions to find out how familiar you are with queen production, management and biology.

The first seven 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. ___ Queens suffer from all the diseases that affect workers and drones.
2. ___ During each mating flight, a queen mates with a single drone.
3. ___ Queens leave their hives during orientation flights, at the time a colony is swarming or absconding, and for cleansing flights in the spring.
4. ___ Fertilized eggs laid by the queen are capable of becoming either workers, queens or diploid drones.
5. ___ Related queens are easier to introduce than unrelated queens during the requeening process.
6. ___ Queenless colonies are more aggressive than queenright colonies.
7. ___ Capped queen cells should not be handled or moved until approximately 24 hours before the queen is to emerge.
8. Please give two reasons for marking queens. (2 points)

9. Give three reasons for requeening a colony. (3 points)

10. Why will a laying queen in a colony without laying workers sometimes lay multiple eggs per cell? (1 point)

11. Name two materials commonly used to mark queens and the location on queen's body where the marking is placed. (3 points)

12. What is the procedure and advantage of producing double-grafted queens? (2 points)

13. What are the two types of queen cells found in a colony? (2 points)

EXTRA CREDIT QUESTIONS

14. ___ Using carbon dioxide to anaesthetize the queen during instrumental insemination stimulates her to begin laying eggs sooner than would otherwise be expected. (True or False, 1 point)
15. Name the three types of cells found within the queen's ovarioles. (3 points)

16. Other than differences in size and orientation, please explain how a capped queen cell differs from a capped worker cell. (2 points)

ANSWERS ON PAGE 600.

BEE TALK

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

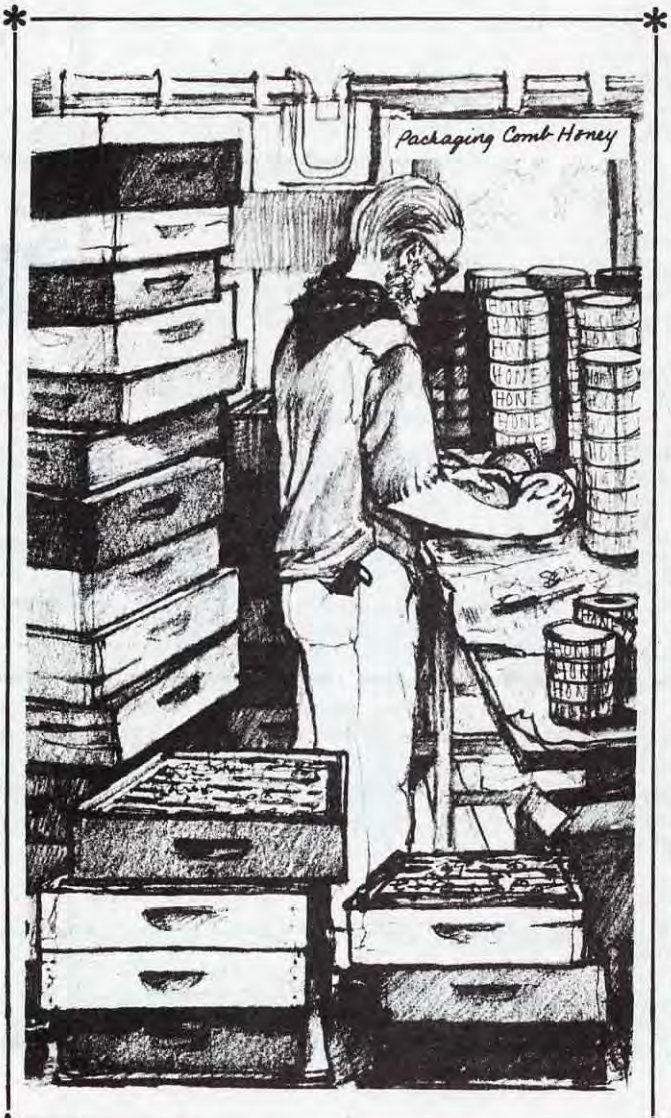
"I try to do the necessary things, do them right, and when needed. Most of the time this works."

Sometimes just about everything seems to go wrong, but then, less often, just about everything seems to go right. This year things went right for me, leading me to think that, after more than fifty years of working at it, maybe I am getting this art of beekeeping mastered after all. I did make one whopper of a mistake, one which, you would think, only a fool could make, and I'll mention it later. But first I'll describe what went right.

I did get a fine crop of comb honey, the best ever. Not only was there lots of it, but it was beautiful, almost all of it gorgeously light to snow white. And this in spite of the fact there was no basswood flow at all. That is usually our best flow here, the one I really count on for my comb honey crop. So, even without that, I must have done something right. I'll describe my apiary management for this year, with the hope that someone might find here a useful idea or two.

My aim is always to get the most honey with the least work. So I try to do the necessary things, and to do them right, and when they are needed. But I try to avoid unnecessary and time-consuming manipulations.

My bees all came through without winter loss. They almost always do. I don't wrap or pack the hives, nor do I feed them syrup. I just make sure they have lots of stores, even though they are only one and a half stories high. They were all heavy as lead in the fall, and that's what gets them through, good and strong. Starting early in April I gave each colony a bit of terra every couple of weeks, to prevent disease, and well ahead of when any supers would go on. It is a simple precaution, and it seems to be effective. Then as the colonies got good and strong and full of brood, early in May, I began my swarm prevention. That is the very essence of simplicity. I just took two or three — usually three — full-depth combs of brood and bees from each colony that was getting congested, replacing them with combs or foundation. If foundation was used then I made sure the deeper of the two stories, with the frames of foundation, was on top, the half story being moved to the bottom, so the foundation would get drawn in the upper part of the hive. If you put foundation down below it gets chewed up. Some colonies required this treatment only once. Some required it twice, and a few needed it a third time. But a few never got to the point of congestion where they needed it at all. In any case, I tried to do this before any swarm cells got started. I was guided by the degree of congestion in the hive. And here we need to note what CONGESTION means. It does not mean simply lots of bees, though that is a fairly accurate clue. It means a hive that is getting so full of brood that the queen has no place to lay eggs. That's what it means — a *brood nest that cannot expand.* That's when the bees start thinking about swarming. You can have a hive vastly overcrowded with bees — as when you shook swarm them — and they do not swarm, because they still have plenty of room for brood.



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BEE TALK... Cont. from Page 570

That's how I controlled swarming, and it worked well. It wasn't perfect — I still found two or three swarms — but it was good enough, and it took very little time. You can deal with several hives that way in less than an hour, since you don't have to find the queen. You just make sure she is not on the frames of brood you remove.

I put these combs of brood, along with the bees on them, together to make up new colonies, giving them a new queen. And some I put into nuc boxes, with new queens, to supply the people who always come around looking for nucs to replace their winter losses. They haven't learned yet how to avoid winter loss. It all worked out about right. I got a few new colonies, which I wanted, and made a little money on the side selling nucs.

The first supers went on the hives just ahead of the dandelion and fruit bloom. And before I knew it I had a crop of black locust comb honey. This is about the nicest honey in the world — light and mild and, if you don't leave it on the hives to get travel stained, it is snow white. As supers began to fill with the black locust honey I added another, underneath the first, keeping the fuller one on top where it would be free of travel stain and easy to harvest. I harvested them using two-way escape devices in screen boards, which is very easy, involving no noxious fumes and no rough handling.

I expected the basswood flow to follow, but it never did. Too hot. But before long came alfalfa and clover, and these yield beautiful comb honey. Some of my hives made sumac honey, which is dark and the cappings are apt to be dark and unattractive, though the honey is delicious. I make a virtue of this by offering it to my customers as dark, rich sumac honey, thereby explaining why the combs are not nice and white like the others.

By the middle of July there were hardly any supers still on the hives. Virtually every hive was back to one and a half stories, and would be left that way. All the fall nectar will go into winter stores. That I consider half the explanation for my success. The other half is my simple swarm control system. I don't waste time and effort feeding bees, I have good strong colonies come spring, and very few of them swarm.

What, then, was the dumb thing I did? I hate to say. But I once had a high school teacher who used to tell us, as part of life's wisdom, that we should learn from other people's mistakes, though it is hard to imagine anyone so foolish as to make this one.

Here is what I did. Needing a shallow super for the additional half story for a hive in which I had just hived a swarm, I bought one from a friend who told me it had come off a hive known to have American foul brood. I imagined that, since it was going onto a hive in which there was not yet any brood, maybe the bees would lick the combs dry and thus avoid picking up the disease. It didn't work. The bee inspector came around a few weeks later and found in that colony the first AFB I have had in years. I told the inspector what I had done, but he, being a gentleman as well as an outstanding beekeeper, tried not to make me feel too foolish. I burned out the colony before he came around again and felt as though I were doing penance. And it did, indeed, serve me right. NEVER fool with American Foul Brood.§

Questions and comments are welcomed. Use Trumansburg address, above, and enclose a stamped and addressed envelope, please.

Dad's Bees

Making Honey
Buzzing, Buzzing
Everywhere . . .
Bread with Honey —
Yummy!
Our pets . . .

Tim Janousek
Grade 2

RESEARCH REVIEW

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

"In general, yields of many fruit, seed and nut crops would drop by over *90% if honey bees were totally absent."*

Alfalfa hay is the fourth most important crop produced in the United States; only corn, wheat and soybeans are worth more money. The latest figures we have indicate that the 71 million tons of alfalfa hay produced annually is worth over five billion dollars. The paper cited below reviews the role honey bees play in alfalfa seed production. A bountiful seed crop is necessary for there to be a continuing hay crop, since alfalfa fields must be continually replanted. To quote the authors, "This article attempts to elevate bees .... to their rightful place as an essential cog in the growth of U.S. agricultural productivity."

The article is worthy of close study. The authors point out that the growth of the pollination industry has received little attention in the literature. Between 1915 and 1960, growers of large acreages of most fruits, nuts and seeds came to realize that "intensive bee pollination was essential to achieve high yields."

Growers of alfalfa seed were among the last of these groups to pay pollination fees. In fact, prior to World War II beekeepers would generally make payments (usually in honey) for the privilege of locating their hives on alfalfa seed farms. The value of bees was so poorly understood that in 1929 farmers in Utah got a law passed to keep any colonies from being moved into the state, because they believed that bees **Prevented** alfalfa pollination!

An abrupt change took place in alfalfa seed production in 1949. At that time growers in CA, OR, WA and ID began to specialize in alfalfa seed production. These Western states produced only seven per cent of the alfalfa seed in 1946 but a decade later were producing 60 per cent. Yields shot up from 50 pounds of seed per acre to over 300 pounds. The key was the intense use of strong colonies of bees.

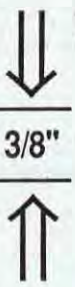
It was USDA researcher George Vansell who first concentrated large numbers of colonies in commercial alfalfa fields in CA in 1947 and thereby demonstrated the value of bees. But it was entrepreneurial efforts by CA beekeeper Harry Whitcombe in 1949 that convinced the seed growers. No grower was willing to pay a pollination fee, but one agreed to a gamble: Whitcombe, in return for concentrating his colonies in the grower's fields, would receive no payment except a percentage of the seed yield above 400 pounds per acre (the state average was 200 pounds per acre). The result: a yield of over 1,000 pounds of cleaned seed per acre and, as word spread, a revolution in agricultural practices. Now high concentrations of honey bee colonies — three to four per acre — is standard practice in alfalfa seed production, and sometimes thousands of colonies are used by a single grower.

In general, according to the authors of the article cited below, yields of many fruit, seed and nut crops would drop by over 90 percent if honey bees were totally absent. Even if beekeeping flourished but colonies were placed only at the density that would maximize honey production, pollination would suffer so much that yields would drop by over 50 per cent. Today colonies used for alfalfa pollination produce little honey because of the high density of bees and consequent intense competition for nectar. However, in most of the country, the key role bees play in agricultural production is still not widely enough known. This makes recounting facts such as those mentioned here especially important.§

Reference

Olmstead, A.L. and D.B. Wooten. *Bee pollination and productivity growth: the case of alfalfa.* American Journal of Agricultural Economics 69:56-63. 1987.

BEE SPACE:
The Concept Explained

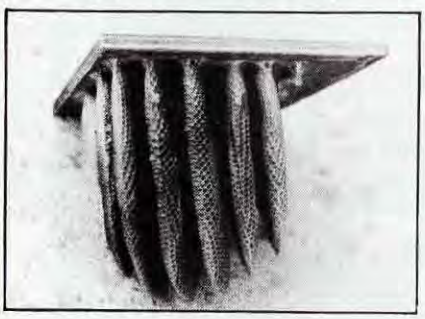


By FRANCIS L. W. RATNIEKS
Dept. of Entomology • Cornell University • Ithaca, NY 14853

In 1851 the Rev. Lorenzo Langstroth "discovered" bee space and applied his discovery to the invention of the movable frame hive. This discovery was to revolutionize beekeeping. Modern beekeeping is built upon the use of movable frame beehives incorporating bee space. It goes without saying, therefore, that beekeepers should have a thorough understanding of bee space.

However, over the past few years, it has become clear to me that the principle of bee space is often violated by beekeepers. Equipment is frequently built, by beekeepers and even bee supply dealers, that has incorrect bee space, and beginning beekeepers frequently space their frames incorrectly. The purpose of this article, therefore, is to explain bee space, and how the beehive is so constructed to take advantage of it.

Bee space is the classic example of the beekeeper working with his bees. If a natural honey bee nest, in a hollow tree or building, is examined the combs will be found hanging down vertically, parallel with each other, and with their faces separated by a gap of about 1/4-3/8 inch between their closest points. This gap is bee space. Bees use it to move around the hive and to access all the cells. One quarter inch is not much to a human, but to a bee it is quite sufficient for walking in. If there is a space much greater than 3/8 inch the bees will build comb in it. If the space is much less than 1/4 inch they will fill it with propolis. In the natural nest bee space also occurs around the edges of the combs, where they attach to the walls of the cavity, in the form of "peripheral galleries." These are elongate holes in the edge of the comb of abut 3/8 inch by 1/2-1 inch long. The bees can use these holes to move from one side of a comb to the other.



This is a series of combs built by a swarm in a bait hive. Note how the bees themselves construct their combs with a bee space between them. The Langstroth bee hive mimics what the bees themselves do naturally.

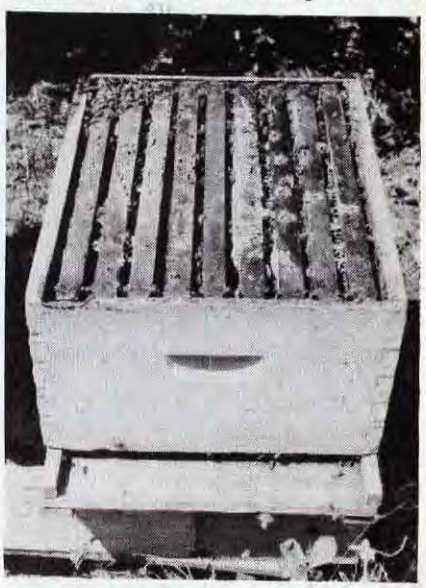
The purpose of bee space for the bees is probably to make efficient use of the nest cavity by making the combs as close together as possible, while still leaving room for moving around. Spaces smaller than 1/4 inch are probably filled in with propolis because the bees are too large to clean them. This prevents them becoming hiding places for pests like wax moth larvae, or spaces where disease spores could linger.

Eureka!

Langstroth made his discovery of bee space firstly by observing that the bees did not propolize the top bars to the cover in hives which have a 3/8 inch space between the tops of the top bars and the bottom of the cover. (He made this space by increasing the depth of the rabbet cut.) He later realized that if he made the same space at the side of the combs he could make wooden frames that would hold the comb securely, and yet be easily taken out. In his own words, "pondering, as I had so often done before, how I could get rid of the disagreeable necessity of cutting the attachments of combs from the walls of the hives . . . the almost self-evident idea of using the same bee space . . . came into my mind, and in a moment suspended movable frames, kept at suitable distance from each other and the case containing them, came into being. Seeing by intuition, as it were, the end in the beginning, I could scarcely refrain from shouting out my Eureka! in the open streets." And so the discovery was made, as is many a good one, in a single flash of inspiration which fell upon the prepared mind. Langstroth's discovery made hive manipulations we now take for granted immeasurably easier, or possible for the first time. Think for a moment, of the ease that movable frame beekeeping gives to such things as honey removal, disease inspection, queen finding, and dividing hives. Imagine doing these things to a fixed frame hive in which the combs are attached to the sides of the hive.

Today's Dimensions

Moving to the present, it is instructive to examine the plans for a movable frame hive to see where the design incorporates bee space. The frames are designed so that there is a 1/4 inch gap between the end bars and the side of the super. The rabbet is usually cut so that there is a one quarter inch gap between the top of the top bar and the top of the super. The bottom of the super and the frame are level with each other (this is known as top spacing, and is standard in the US. Bottom spacing would also work; what doesn't work is mixing top spacing and bottom spacing.)



A one story colony containing nine correctly spaced frames.

In this way when another super is added to a hive there is a 1/4 inch space between the top bar of one frame and the bottom bar of the frame above. If supers were built so

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BEE SPACE... Cont. from Page 573
that there were 1/4 inch gaps both above and below the frames then when supers were put on top of each other there would be a half-inch gap. This exceeds the bee space and will result in the bees building burr comb, making it harder to take hives apart and so resulting in wasted effort for both bees and beekeeper. Do-it-yourself beekeepers often make their supers too tall so that these large gaps are formed when normal frames are used. It would be a good thing if every beekeeper, and everyone involved in building beehives, realized that a super is made to a precision of 1/8 inch or better. I have recently seen some commercially purchased supers which were 5/16 inch too tall. Incidentally, one place where the bee space is not usually important is between the lowest frame and the floor of the bottom board. This gap is typically about 3/4 inch in height, as this gives plenty of space for the bees to go in and out, and to fan their wings when it is necessary to ventilate the hive. The bees will not build burr comb here unless the hive is very crowded.

The dimensions of supers and frames have to be matched to produce the correct bee space, and having frames of the right size is an essential part of building a hive with the correct bee space. Most U.S. beekeepers buy their frames, and for the most part these are accurately machined so that they will give the right bee space in the right places. Making your own frames is possible with care. However, anyone thinking of building their own frames, or supers, would be will advised to obtain an exact plan and dimensions for the equipment they are going to build. Taking measurements from a beehive, or old frames, is risky as they could have been assembled wrongly. In addition, measuring always introduces some slight error.

Assuming that you have supers and frames of the correct dimensions, is there anything else that can go wrong? The answer is yes, but fortunately what can go wrong can usually be put right, or even more easily be avoided altogether by spacing the frames correctly. The distance between frames is crucial. Frames of the so-called Hoffman self-spacing type have wide shoulders on the end bars. These frames are designed to give the correct bee space if ten of them are put into a standard ten-frame super and then pushed together as close as they will go. The two end frames should have an equal gap between them and the side of the

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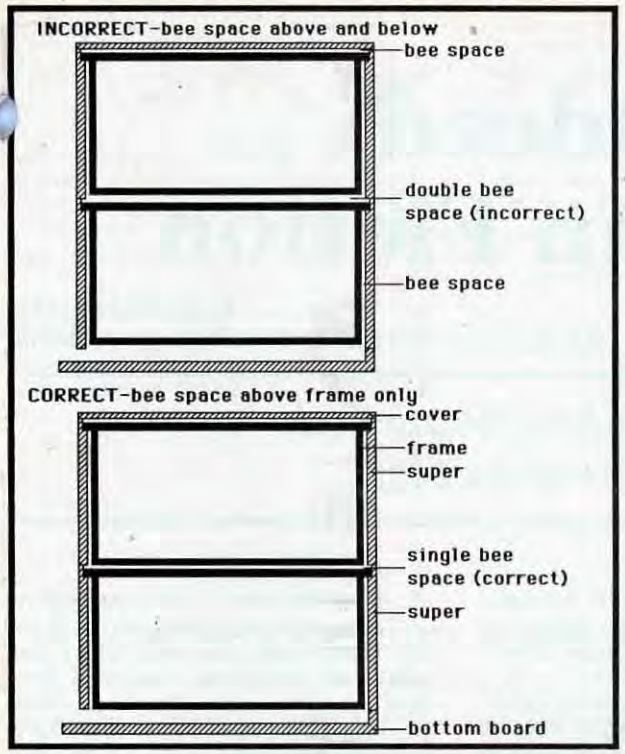
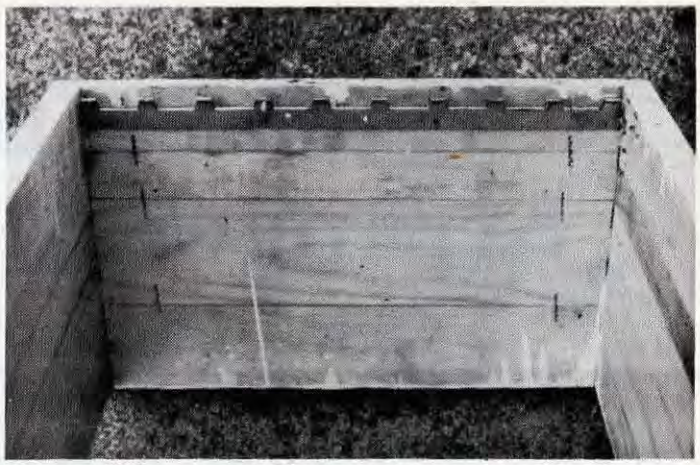
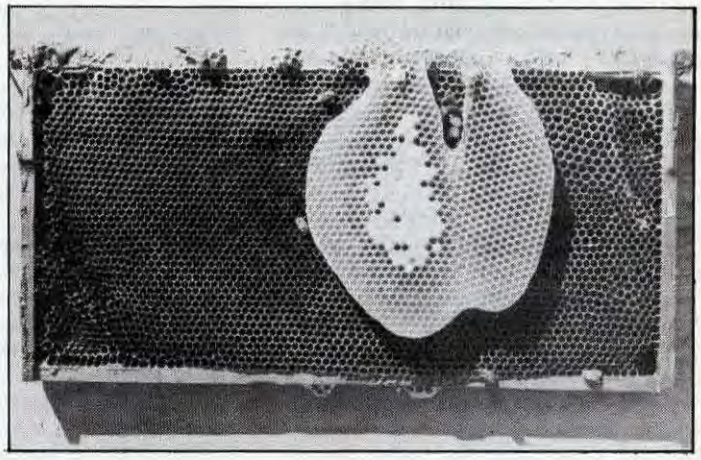


Cross section of a two super hive. Note how having a bee space above and below the frames gives a double bee space between supers. The bees will construct burr comb here. Also note how the bee hive has more than a bee space above the bottom board. The bees will not build comb here unless very crowded.

What happens if you leave a space; the bees construct another comb of their own. This will have to be cut out, wasting both your time and the bees' labor.



A super with frame spacers. These are not necessary to achieve the correct spacing but some beekeepers like them.



BEE SPACE... Cont. from Page 574

super. Frames that are not self spacing can easily be spaced by eye. Just remember that if you put ten frames in a super and arrange them with your hive tool so that all eleven gaps are equal and parallel you will automatically have the right bee space. Some use special spacing gadgets such as metal inserts with ten notches that fit into the super rabbet. Each notch holds a top bar at the correct spacing. These gadgets may be helpful to some but they are not necessary if care is taken to space properly by eye.

Eight, Nine or Ten Frames?

The standard super is designed to take ten frames but it can also be used with nine frames. Using nine results in a slightly larger, but still acceptable, bee space. When nine frames are used more care is needed in spacing because it is easy to have one of the gaps between two frames a little too wide. In addition self-spacing frames no longer work out exactly, as when ten are use. Any space that is too wide will be filled in with a new piece of comb by the bees. This makes it harder to inspect next time, and the new piece of comb has to be cut out. As it frequently contains brood this is a real waste of the bees' energies. The choice of nine or ten frames per super is up to the beekeeper, except that ten frames should be used when foundation is being drawn out. Using nine frames can make taking out the first frame easier. On the other hand using ten frames gives more cells for rearing brood. In honey supers nine frames are probably better than ten, as this results in more honey per frame, making extraction less work. Some beekeepers use only eight frames in the honey super. Any bits of burr comb, or additional comb, produced are cut off by the uncapping machine, so they really don't matter. In addition, the bees have a natural tendency to make honey storage combs slightly thicker than brood combs.

Sometimes the beekeeper is caught short of a few combs when adding supers, or manipulating colonies in some way. In this case the frames should be started at one side of the super and spaced with the normal bee space, leaving one big gap on one side. the gap should be filled in soon with more frames. Provided the hive is not crowded and there is no honey flow, it is unlikely that the bees will build in this gap, for a week or so at least. Do not try and stretch, say seven frames across a whole super as this will result in a lot of burr comb and additional combs being made. This would be particularly disastrous if foundation was being used, as the bees' efforts would be wasted in the production of a lot of cross-combed frames resulting in the frames being more or less useless.

A good example of a beekeeper solving a minor, but annoying, problem by thinking it through with bee space comes from P.H. Andrews, who reported on it in the December 1980 issue of *The New Zealand*

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Truth is, Indeed . . . Stranger than Fiction

By AUSTIN KNOX
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"I foolishly asked what had happened, and this is the series of events"

I met the gentleman who is the subject of this article early in the summer. He knocked on the door and asked if I could supply him with beeswax. He wanted a couple of pounds, and I certainly had that much. We talked as I was cutting off a slab, and it seemed his wife wanted it for her sewing kit. I thought that she either had a big sewing kit or was in the clothing repair business, but I gave him the wax and he departed.

About six weeks later, early on a Sunday morning, I got a frantic call from this same gentleman. He said he was in terrible trouble with a bunch of bees. He had called the fire and police departments and they both advised they didn't do bees. So he called me. I asked what the trouble was. He said he was barricaded in his house and couldn't go out. When I found out he was about 25 miles away I was a little reluctant to go, but I had advised the local police and fire departments that I would be available to help with any bee problems, so I told him I would see him shortly.

When I found his address in an exclusive suburb, I drove past the gate house to the main group of buildings. I didn't see any sign of life, bees or otherwise. When I rang the bell, the door opened a crack and I could see an eye peering out . Then my gentleman's voice said, "Thank God you are here, come in — quickly!"

He asked me to sit down and started to tell me what had happened.

It seemed that his son had gone off to college the previous fall and he and his wife, not wanting to take care of his dog, had given it away to a nice couple. I remember thinking, "What has this got to do with a bee problem?", but he continued. It seemed that a couple of weeks before, a swarm of bees had landed in the dog house, which was outside in the back of his tool shed. They had started to build comb and seemed to be collecting a lot of honey.

Then, he had gotten what seemed like a good idea. He would build an observation hive and put the bees in it, then charge his neighbors to come and look at them. He had seen such an exhibit, I guess, on one of his trips.

I had to interrupt him at this point to ask how he and his wife had gotten stung, as he had shown me his swellings during our conversation. Well, he said, his neighbor had told him that the best time to transfer bees from the dog house to his observation hive was at night. He had started to do so the previous evening but it had gotten dark, and he wanted to finish it this morning. But the dog house fell down and of course the bees came out and stung him. He started to run to the house, yelling. His wife came out to see what the trouble was and they stung her too. So they both went back in the house, called the police and fire departments, and finally me.

By this time I was thoroughly confused and suggested we look at the observation hive so I could see what had happened. I assured him that there were no bees in evidence so we went out to his tool shed, a small two room building.

In the back room, in the center of the rear wall was a floor to ceiling enclosure about two and a half feet wide. About three and a half feet off the floor was a nice shelf. Leaning against the side was a piece of clear plexiglass that was to be used to close up the front of the enclosure over the shelf.

I admired his work but asked where were the bees. "Outside" he said. So we went to the rear of the building and sure enough, there were the bees. There was a pile of splintered wood that had been a dog house, and mixed up with a lot of straw was comb, honey and a lot of bees happily lapping up the honey, not in the least interested in our presence.

I asked him again what had happened and this was the series of events.

He had lifted up the dog house the night before to nail it to the outside of the building. Foolishly I asked him why he did that. He said so that he could get the bees from the dog house into the observation hive. That make sense in a weird sort of way so I asked him to continue. He nailed the dog house to the wall and, as he had told me previously, it was getting dark, so this morning he went back to finish the job. His electric drill wouldn't handle a 1 inch wood bit so he got a hand brace and started to drill a hole from the inside of the building through the wall into the dog house. Again I had to stop him to ask why he was doing that. He looked at

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BEE SPACE... Cont. from Page 575

Beekeeper. Mr. Andrews was plagued by wax build-up on his queen excluders, which needed periodic, and labor-intensive cleaning. His excluders, of the wire grid type, were in wooden supporting frames which produced a bee space above and a bee space below the grid.

When the excluder was put on a hive, a double bee space gap was formed above the excluder and below the bottom bar of the frame above (note: his equipment used a bottom bee space in the supers). The bees then filled this gap with burr comb. His solution was very simple. He replaced the original supporting frames with frames that only had a bee space on one side of the grid. On the other side there was no space at all. When used the correct way, the modified excluders give exactly one bee space above and one below the grid, and solved the problem. His final comment, "Hopefully it will one day be possible to purchase excluders with bee space clearance on the bottom only," might well be echoed by US beekeepers, and only goes to show that no one, not even manufacturers, is entirely not-guilty of breaking the law of bee space.§

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TRUTH IS... Cont. from Page 576

me as if I was a little dense and replied, "So that the bees could get in". In a way THAT made sense too. He drilled through the building wall and started to bore a hole into the dog house wall. But the bit just pushed the dog house away from the building, off the nails and down it fell. He went outside to see what had happened and that was when the fun started.

I couldn't fault his story as, sure enough there was a hole in the building wall and there was a mess of lumber, bees and comb on the ground.

I couldn't resist asking him another stupid question though. "If he had gotten the hole into the dog house as planned, what was the next step?" His answer was perfectly logical. He would wait a few days until the bees had come into the observation hive to build comb, because *it was so much nicer inside!*

I decided not to ask any more questions about his beekeeping program and asked what he wanted me to do next, hoping he would say "Nothing". But he said he would like to get the bees inside the observation hive. It happened I had a super with some frames in the car, so I wired what comb I could into a few frames and put them inside on the shelf. I told him what he should do about an observation hive — get some books, read up on beekeeping, then buy one. Finally, get a local beekeeper to give him a hand to get it filled.

By the time we were done it was late afternoon He insisted I come in and have a cup of coffee and a sandwich. Since I didn't have lunch I accepted and had a snack. While I was eating my friend told me that since I had been so nice and that he understood that I was a vegetable lover he was going to have his gardener get me some Chinese cabbage which would be ready to eat shortly. After I finished eating I thanked him and left, shaking my head and thinking it sure takes all kinds.

About a week later when I returned from a short trip I found a big paper bag, full of the cabbage, stapled to the garage door. I gave most of it away and thought that was the last of an interesting experience. But it was not to be!

About a month later the phone rang and it was my friend again. He said that he had his colony in an observation hive but they seemed to be getting less and less and he was getting concerned. Would I like to drive over and look at them.

I had had enough of this man, who had been added to my list of unforgettable characters, and, thinking quickly, I told him that my wife and I were planning a trip around the world and that we were leaving that very afternoon. But in a moment of inspiration, I told him that in the next town there lived a professor of apiculture at the University of CT. I was reasonably sure that if he called the college and spoke to him he might be able to come over and advise him on his problem. He thanked me and hung up.

All of the above is true — except that my wife and I did hot have plans to take a trip around the world.§

NOSEMA:
A Disease That Deserves More Respect Than It Gets

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

"The good news is that control is cheap, effective and easy."

Even though it is sometimes difficult to show concern for all life's potential problems; within the beekeeping world, Nosema is a commonly occurring malady that deserves more respect and attention than it usually gets. The good news is that there is a good control procedure established and the condition is not hopeless.

Nosema disease is one of those (delightful?) situations in which most experts seem to agree — Nosema is a quiet problem that needs attention. Again and again I've been told or have read that I should do something to help my bees with this problem. I know I should so something, but I never have. Sometimes it's hard to worry about something as quiet as Nosema even though I know it's a problem. Nosema deserves more respect and certainly more priority.

It is cited in the literature that Nosema shortens the life of worker bees by 50%, lowers the amount of brood produced (Farrar, 1954; Moeller, 1956) and is accused of causing queen supercedure 2 - 6 weeks after infection occurs (Farrar, 1947). Hassasein (1951) reported that infections with *Nosema apis* retarded the development of the brood food glands in workers. Package bees are adversely affected by high levels of Nosema infection and build up very slowly (Farrar, 1947). The sneaky aspect of this description is that all this happens to adult bees without clear outward signs of the disease.

The disease doesn't kill adult bees outright and apparently has no effect on brood. Significant numbers (?) of bees crawling in front of the hive during the first few days of the nectar flow is the only characteristic of the disease and even that is vague. When the infection level is high, especially in the spring, the adult population drops to a handful of dirty bees and an unhappy queen. Commonly there are indications of bees soiling the inside of the hive or areas near the hive entrances are soiled by excrement (NOTE: spotting or dysentery is not automatically an indication of the presence of high levels of Nosema infection). Some of the older literature referred to this occurrence as "Spring Dwindling".

Many beekeepers are inclined to incorrectly assume the colony was in a bad location, went into winter on bad stores, couldn't take cleansing flights, has a bad queen, or had the entrance facing the wrong direction. In fact, some of the listed mistakes could have easily have had their genesis in Nosema. For example, maybe the queen was failing, but the reason was a high infection of Nosema. Maybe the winter was long and hard and the bees couldn't take many cleansing flights causing the parasite to spread even more rapidly. But the important thing is the Nosema was probably the cause of these wintering problems. If the colony survives until spring, a significant degree of recovery may occur, but chances are good that the same scenario will occur again during the next winter. Additionally, the colony was recovering from the problem instead of producing a honey crop.

If a beekeeper has a suspicion that Nosema is affecting the bees, with practice, the following procedure may help with diagnosis.

FIELD DIAGNOSIS OF NOSEMA

1. Select living suspect bees.

2. Decapitate one of the bees.

3. With forceps (common tweezers should do the job), grasp the last abdominal segment, which would be the lower "lip" of the sting chamber.

4. With a gentle, even stroke, pull the gut from the bee. The process should occur over a clean surface, preferably glass. A microscope slide is perfect, but use anything available since slides are not exactly a common item.

5. The first structure nearest the forceps will be the sting. The second will be the rectum and will likely have a viscous brown liquid look. The third obvious structure from the tweezers will be the ventriculus or the stomach. The stomach will comprise about one half the entire gut and should be amber, tan or brown. This will indicate a bee that is free from a high level of Nosema infection. However, a white, milky stomach indicates high pathogenic levels of Nosema. In early cases, the white stomach maybe quite swollen, but in advance cases the white stomach may have shrunken to the normal size. If a local high school or other laboratory has a compound microscope that will magnify up to 440X available for your use, great numbers of oval spores can be seen when looking at the contents of the stomach. For the field test though, the scope is not a requirement

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TEW... Cont. from Page 578

Researchers (Moeller, 1978) have spent many years and tests studying Nosema disease and trying to understand its spread. In years past, it was thought that wind, flowers and drinking water were the agents or spread. Those avenues are no longer accepted as viable. Broadly speaking, the parasite is spread by contaminated fecal matter; excrement having high spore counts. Moeller (1978) listed the following conditions that were conducive to Nosema build-up.

CONDITIONS FAVORABLE TO NOSEMA INFECTION

From Moeller, 1978

1. Contaminated equipment. If a colony died from high levels of infection and the soiled equipment was used to hive a swarm, package or nuc, there is an excellent chance that the subsequent hive will also be infected.

2. Colony disturbance. Oertel (1967) gathered data that showed that colonies that are manipulated at regular intervals, such as mating nucs, had higher levels than colonies that were manipulated infrequently.

3. Confinement. Winter cleansing flights are always desirable, even in warm climates where rainy weather inhibits flight. Probably, the bees that fly on marginal days and drop to the snow and die were ill from Nosema and were best eliminated from the colony. Of course a better alternative would have been to have never had sick bees to begin with.

4. Disruption of brood emergence. If young bees are not constantly available to replace weak, infected bees, the disease could possibly become established or, if established, get worse. Queenlessness, pollen shortage or pesticide exposure are common ways to disrupt brood emergence.

CHEMICAL TREATMENT FOR CONTROL AND PREVENTION OF NOSEMA

Currently, the chemical treatment of choice is Fumagillin (Abbott Laboratories) sold under the trade name of Fumadil-B. Fumadil-B is a water soluble form of Fumagillin, an antibiotic. Fumadil-B should not be stored above 86 degrees F, but should be kept in a dry, dark place. If infected colonies are being treated, the treatment should last long enough to insure that there is enough time to destroy the continued, but declining source of infection. The antibiotic comes in two sizes - 0.5 grams which makes 6 gallons of medicated syrup, and 9.5 grams, which makes 120 gallons of medicated syrup. The sugar syrup should be 2:1 (sugar:water). No heat should be applied after the Fumadil-B has been added to the syrup (Abbot Laboratories, 1982). In general, one gallon of medicated syrup fed in September-November and one gallon fed during January-March (depending on the climate) will be enough to suppress Nosema infections. Fumadil-B is compatible with Terramycin and they can be fed together. When Fumadil-B is fed any other way (e.g. extender patties, powdered sugar or pollen cakes) it is not as effective. A 9.5 gram bottle of Fumadil-B costs about $65.00, while a .5 gram package runs about $7.75. Fumadil-B, as with other drugs, should NOT be fed within 4 weeks of a nectar flow.

The method of feeding is a beekeepers choice. When I have fed Fumadil-B, I have had the best luck using top feeders, but this is strictly a matter of preference.

I am comfortable recommending Fumidil-B. Impressive numbers of research papers have supported the concern over the quiet damage caused by Nosema. I think an excellent and interesting challenge would be to treat part of your apiary and in a couple of years decide for yourself. Apply the Fumadil-B correctly and feed the other colonies un-medicated sugar syrup. See what happens. I think for once you will be surprised to find that low honey yields, queen supercedure and winter kills have direct links to Nosema.§

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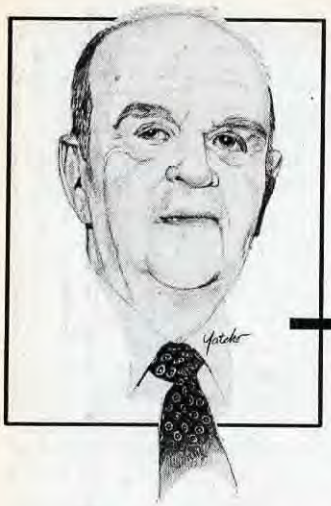

KOOVER'S KORNER

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

"I say it again — stay out of your hives. Your bees know far better than you what's needed."

Many years ago, 22 to be exact, the late Mr. Manley, one of the most knowledgeable beekeepers asked in his column, "What do you think? Why do hives produce more honey than others in the same yard?" I sent in a reply which was published with a picture of one of my hives. Here it is.

The colony pictured in the accompanying photo ran ahead of the pack that year. Here is what happened.

First, it swarmed with its clipped queen. The queen was lost so the bees returned to the hive. Several days later it swarmed with a virgin queen. The swarm was captured and towards evening was run back in the hive. A queen trap was slapped on. The virgin had it out with other contestants to the throne. Two days later the trap was removed. The virgin mated and they were off to the races. They would have gone on but I had enough and did not want my nice crop of sage honey spoiled by additional sumac and wild buckwheat honey which are bakery grades.

It is morale, Mr. Manley, high morale and nothing else. That hive of mine had it all their own way. You can manipulate them, try to control them, interfere with their instincts, and what have you got? You wrecked their morale.

When I read that beekeepers reverse their broodchambers I shudder. The bottom board of my hives are permanently attached. My broodchamber consists of just one hive body with 10 brood frames and a follower board. This, and a recessed entrance keeps the hive cool and warm. It's never opened all season long if I can possibly help it. Only if it becomes queenless do I step in. It's known as "LET ALONE" beekeeping. My bees love it. And so do I. And the reward is great.

To think that I know better than my bees is ridiculous. They do a perfect engineering job in constructing their broodnest. When you reverse the upper and lower broodchamber you turn everything topsy-turvy. Nothing is in line anymore. The air conditioning ducts between the combs don't line up anymore. Their bee-spacing has been disturbed. They do the best they can caulking things up with burr and brace comb. What a mess. It's hard to pump cool air up and down between the combs. On a hot day everything stops, nurse bees have to get out of the hive to prevent it from overheating. A big beard of bees congregates out in front until night brings relief. I have seen whole apiaries hang out like that on hot summer days in Southern CA. And it gets hot there in summer, with temperatures over a hundred degrees. Yet my bees, I am proud to say, not once ever hung out in all of the forty years I kept them.

Allen Latham, toward the end of his life wrote a book, *Allen Latham's Bee Book*, in which he stated: "The amount of honey in a hive is not determined by the number of workers in that hive; it is determined, rather, by the activity of those workers."

"I have had very populous hives store less honey than their neighbors with not nearly so many workers."

I say it again, keep out of your hives. Your bees know far better what's needed than you ever will.

When you get as old as I am it's nice to sit back and watch your bees do all the work.§

This was my High Morale hive.

PACKAGING PRIMER

BY ANN HARMAN
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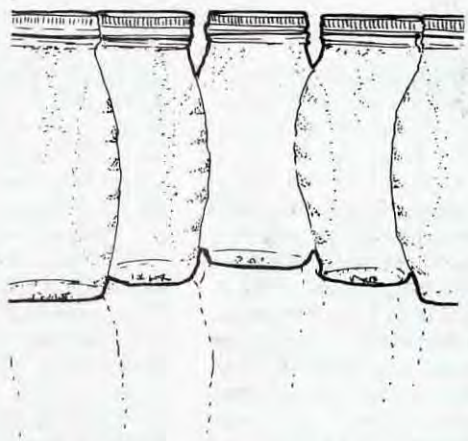

Bees Know How To Package Their Product — Do We Do As Well?

An acquaintance once showed me a jar of "local honey" she had purchased to help her allergies. She said it was nice honey and "it has a few bits and pieces of the flower in it." My curiosity was aroused since I could not imagine what sort of honey bee chopped off bits of flowers and stuffed them into honey cells! Well, investigation confirmed my worst suspicions — the "flowers" were bits and pieces of bees, along with some wax lumps. The honey was a mess, totally inexcusable.

Bees really know how to package their product in a clean, attractive manner. The cells are cleaned before any nectar is put in. Debris of the hive is carried away continually by house bees on their ceaseless rounds. The cells are filled to an appropriate capacity, then capped with new wax to keep the honey clean until ready for use.

Do we do as well?

JARS

Honey, the pride of our apiaries, deserves new jars, suitable for honey, not ones redolent of pickles or proclaiming super crunchy peanut butter on the lid. So many beekeepers grumble at the cost of new jars. Perhaps they do not realize that the cost of a jar with fresh, new lids, is very small compared to their own "labor cost". Although you might "pay" yourself $0.00 per hour, imagine what you would receive for honey processing if you really did pay yourself at least minimum wage. Now look again at the cost of an attractive jar.

Jars, newly purchased in cardboard boxes, may be safe to eat from but they sure are dingy. Do you have a dishwasher? If so, a quick trip through a cycle — jars only, no greasy pots — leaves the glassware sparkling clean. YOU are the dishwasher? Then a good rinse in HOT water, followed by AIR DRYING will achieve the same sparkle. You can clean jars in advance of extracting on a rainy day or while watching TV. So there is no excuse for grungy jars.

While we are thinking about jars, we should also consider lids. Please do not try to save pennies by reusing lids with cardboard liners. There are good reasons for discarding these. The cardboard absorbs odors and flavors, as well as moisture. When these are released to the freshly bottled honey, the results can be detrimental. The cardboard also gets compressed the first time the lid is firmly tightened. Cardboard does not recover its original shape, therefore when reused, the jar may leak.

Plastic lids can be washed and used again, as can the metal ones with attached plastic gasket, as long as these lids have been used previously only for honey.

It is best to discard any metal lid that shows rust or is scratched and unattractive. A nasty-looking lid tells the customer there may be something nasty in the jar.

Remember, the outer packaging of jar and lid is your customer's introduction to your product. First impressions are long-lasting. You want yours to be good.

EXTRACTING

Let's face it — extracting honey is a messy process. Mind you, I did not say dirty — like changing oil in a car.

In the first place, a few bees always cling tightly to their honey (reluctant to give it up?). Then there is always the squashed bee caught between frames or the loose bee that falls into the extractor. Some poor bee's head floating on your honey is an alarming sight for a consumer. Beeswax is enjoyed by comb honey lovers but non-beekeepers are apt to consider it a gummy, unpleasant contaminant. Unfortunately the

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Nearly
NORTH POLE BEEKEEPING

By BRUCE BESWICK
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Being a military pilot in Northern Alberta is at times an interesting and exciting job. But when technical difficulties cause you to be grounded for several months, you look for other means to keep yourself occupied. My family suggested beekeeping.

So after very little thought, I called the district agriculture office in early February, 1986. I was informed there were no registered beekeepers in the local area. I then called the provincial apiarist in Falher, Alberta. He informed me that a small commercial operation would be setting up in my area in the spring. He assured me that I would find the owners' advice invaluable.

After several long distance calls, I found out that the owners of T'n'T apiaries would be in town that coming week, and we could meet at the local motel. That day came, and as I entered the crowded motel restaurant, I wondered how I would recognize them. As I stood in the door, a tall fellow came up to me and asked if my name was Bruce. He introduced himself as Dave Tharle.

We talked bees over breakfast. Before leaving, I agreed to come over to his shop the following day. There I would help him unload "a few things", and we could discuss my new hobby in a bit more detail. I showed up the following morning, feeling slightly wrung out after a night on the town. You can imagine my dismay at seeing a tractor trailer and a pup parked in the yard. Both full of honey supers waiting to be unloaded! And wouldn't you know it, it snowed.

Dave looked at me and said "Only 3 more loads like this and we're all moved in". So for the entire month of March I helped Dave and his wife Barb move. Every time a transport arrived it snowed. This move was rapidly becoming an ordeal, but I felt honour bound to stick with it. My wife was constantly amazed at her lazy husband's new found energy.

The bees arrived in late April. All 650 three pound packages. I was amazed at the heat they produced. They were stored in an unheated shop and had to be fanned constantly to prevent overheating. We started shaking bees into hives April 28 at 8:00 PM. It was dark, cold, and yes, it snowed! Heavily!

We shook all the packages in the next few nights. Barb would set the packages on the hives, and I would shake out the bees. Then Dave would come along and release the queens. Back-breaking work, but it went quickly. The weather refused to cooperate, and snow was a problem.

Dave had to leave for the Peace River District in early May as a grizzly bear had been into his overwintered bees. He arrived back 14 May with 200 overwintered hives. Again, it snowed! This time it stayed for another week.

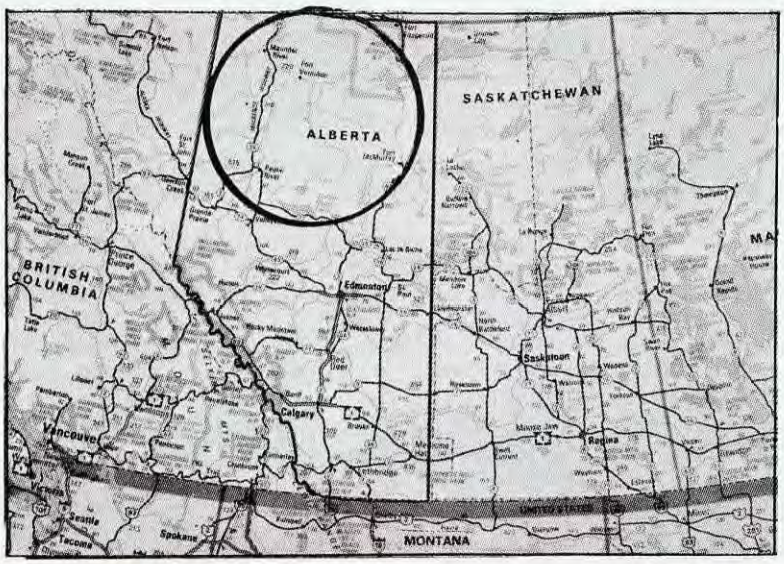
The problem with all this bad weather was there was no food for the bees. Willow, aspen, and alder are some of the early pollen sources in this part of the country. This spring they were almost non-existent. Pollen supplements and sugar syrup were required just to keep the bees going.

About this time Dave and I finally had my 5 hives all set to go. Dave let me keep them in one of his spring yards, as I had no place to keep them at the time. One showy day I drove out to the country and randomly picked a farm house. Dodging a rather large and unfriendly dog, I knocked at the door. An older gentleman by the name of Ron Mawson answered. After hearing my story of needing a place to keep my bees, and my willingness to pay rent in honey, we came to a rapid agreement. It seemed both he and his wife liked honey, and they had 300 acres of clover. I had hit pay dirt at the first farm!

Snow eventually turned to rain, which fell continually. I had to feed sugar syrup on the 3rd of June. We had two more weeks of rain and then two weeks of good weather, so I supered with one full depth super. I re-supered twice in the next month, and by the 25th of July my hives were six full depth supers high.

All through the month of July the weather ran hot and cold. Unpredictable weather seemed to mean unpredictable bees. Some days they were calm and manageable, and some they were mean and ornery — even if conditions during handling were warm and sunny.

I pulled my first honey on the 4th of August and extracted it late in the afternoon. With the abundance of honey I suddenly possessed, I wondered how I would ever get rid of it all. Between selling to the local baker, and giving it to friends, I managed to



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NORTH... Cont. from Page 582

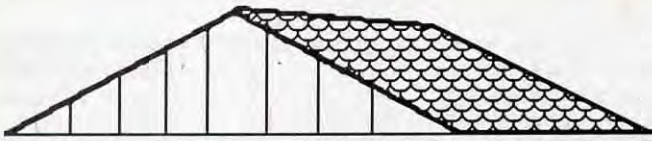
move it all in very short order. One of my friends jokingly called my product "Supersonic Honey", and the name has since stuck. I pulled honey again on August 20. As this was after a light flow, I received a very poor second crop. By the 25th of August the season was over, as frost had pretty well finished the clover and alfalfa. Final calculations showed I had averaged 110 pounds per hive. This was about average for the region.

Our first snow fell on the 12th of September, and I moved my bees from Mr. Mawsons' farm to my winter storage area. Although the populations of two of the hives were poor, I did not shake them out (I probably should have). As I kept the bees in two brood chambers, I switched the top brood for the bottom and vice versa. I placed the bees on pallets in a sheltered area, open to the south and commenced feeding.

I fed a mixture of sugar and water (as concentrated as possible). To this I added Terramycin and "NoCeema Fix". NoCeema Fix mixes with water much better the Fumidil-B and it does the same job. The bees went though approximately 6-1/2 gallons of sugar syrup each. After feeding I estimated each colony to weigh between 130 and 145 pounds.

I then wrapped the hives in R-20 pink insulation and covered them in plastic. I left some presents for skunks and mice under the pallet. The weather that winter was relatively mild, although temperatures dipped as low as minus 33°F. This past spring has also been unusually mild, but late in March we had one and a half weeks of snow (again!).

Beekeeping in this area is a bit different then "down south", but with 110 pound average per colony, we manage to live with the problems.§



HOME HARMONY

By ANN HARMAN
6511 Griffith Road
Laytonsville, MD 20879

It is still apple harvest time across the country. I've been looking at the papers on my desk and realize that I just can't let these apple recipes sit idle. They need to be used while the apple crop is still fresh and abundant.

I have seen variations on this next recipe, as well as different names. However it is made, and whatever it is called, makes no difference — it is delicious! Different flavors of honey AND different varieties of apples will give a wide range of taste. Go ahead and experiment — and let me know what combination of honey and apple you like best.

FRIED APPLES

6 - 8 apples,
sliced, cored, peeled (if desired)
2 tablespoons butter
1 tablespoon cinnamon
3/4 cup honey

Melt butter in fry pan. Add cinnamon and stir to mix. Add apple slices. Stir gently. Pour honey over apples. Cover and cook with medium low heat. Stir occasionally to prevent sticking. Make certain honey does not burn. When apples are soft, remove from heat and serve. These can be served with ice cream or with cream, if desired.

adapted from
MRS. KITCHING'S SMITH ISLAND COOKBOOK
by Frances Kitching
and Susan Dowell

All apple recipes benefit from flavorful apples, and this next unusual recipe is no exception. The apples are best pureed in a blender, but a food processor will work as well.

APPLE SHERBET

5 pureed apples
1/8 cup honey (a little more if tart)
4 tablespoons lemon juice
1 teaspoon grated lemon rind
1-1/2 cups milk

Combine ingredients and mix well. Pour into ice tray and freeze at coldest temperature until almost firm; turn into a chilled bowl and beat until smooth. Return to tray and refreeze. Or freeze with ice cream maker. Makes 6 servings.

FEASTING ON RAW FOODS
ed by Charles Gerras

Autumn is also harvest time for the winter squash. Try this tasty dish in place of the usual plain baked squash.

APPLE-ONION ACORN SQUASH

3 large acorn squash
4 medium onions, thinly sliced
1/4 cup butter or margarine
4 medium apples, cored, cut into
12 wedges each
dash of salt
3 tablespoons honey

Cut squash in halves; remove seeds. Place cut side down in shallow baking dish containing a little water. Bake 375° for 20 minutes. While squash are baking, saute' onions in butter until soft, about 5 minutes. Add apples; cook until tender, about 7 to 9 minutes. Salt to taste. Stir in honey. Remove squash from oven; turn right-side up. Stuff squash halves with apple/onion mixture. Return to oven in baking dish (without water). Bake 25 to 30 minutes, until squash are tender. Makes 6 servings.

THE ENCYCLOPEDIA OF CREATIVE COOKING
ed by Charlotte Turgeon

There must be as many ham glazes as there are cooks and cookbooks. This next recipe is a bit different and gives a flavorful glaze that is especially successful on canned hams.

BOURBON - HONEY GLAZE

1 canned ham (5# or larger)
1 cup bourbon whiskey
1 cup honey
1/4 teaspoon cloves
1 teaspoon grated lemon rind
2 tablespoons cornstarch

Mix bourbon, honey and cloves and lemon rind. Let stand, stirring occasionally while ham is cooking in 300° oven for about 90 minutes. After about 30 minutes, blend cornstarch

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into 1/2 cup of bourbon-honey mixture, then add rest of mixture and blend well. Heat over low fire until mixture thickens and comes to a boil. Simmer, while stirring, for about 1 minute until sauce is thickened and becomes clear. When ham is about half done, spread half of the bourbon-honey mixture over it. Then baste with sauce during final half hour of cooking. (The alcohol in the bourbon evaporates almost immediately when heated. The bourbon only adds flavor.)

101 GOURMET RECIPES
by Tom Hoge

Everyone needs a 'library' of quickly made cookies. If the cookie jar is full, then lunch boxes are more interesting, after-school snacks of an apple and cookies are easy to grab, and the before-bed kitchen raid is more satisfying.

MINCEMEAT COOKIES

1 cup butter or margarine
1/2 teaspoon vanilla
1 cup honey
3 eggs, lightly beaten
3-1/2 cups flour
1/2 teaspoon salt
1 teaspoon baking soda
1-1/2 cups mincemeat

Cream shortening. Add honey in a fine stream while continuing to beat. Add vanilla and beat. Add eggs and beat until just blended. Blend in the sifted dry ingredients. Stir in mincemeat. Drop by teaspoonfuls onto cookie sheet. Bake in 350° oven until light brown. About 60 cookies.

MAMA'S HONEY JAR COOKBOOK
by Catharine P. Smith

Fruit bars are as welcome as cookies, and a nice change. These date bars can be frozen for use at a later time — provided nobody discovers them in the freezer.

HONEY DATE BARS

1-1/3 cups sifted flour
1/2 teaspoon salt
1 cup honey
1-3/4 cup chopped dates
1 teaspoon baking powder
3 eggs
1 teaspoon vanilla
1 cup chopped nuts

Beat eggs until very frothy in a large mixing bowl. Gradually beat in honey, adding it in a fine stream. Add vanilla and mix. Sift dry ingredients together and stir into egg mixture along with dates and nuts. Mix well. Spread in greased 9 x 13 x 2 inch pan. Bake at 350°, 35 to 45 minutes. Cool thoroughly and cut into bars. Makes about 3 dozen.

BLUE RIBBON HONEY RECIPES FROM FAIRTIME
Billings, Montana

HINT OF THE MONTH

Vanilla is perhaps the most widely used flavoring. It not only lends its own taste, but also enhances other flavors such as chocolate. Two products are on the market: *vanilla* — the natural flavoring; and *artificial vanilla*. It is *truly* a mistake to try to save a few cents on such an important ingredient. The flavor or real vanilla cannot be duplicated. The flavor of artificial vanilla, or lack of, is easily detected. If you are preparing foods for a honey cookery show, ***never use artificial vanilla.***

MARKETING

By R. T. EDWARDS

Introduction

Nobody is going to sell your honey for you. Elsewhere in this issue we have articles on quality packaging, developing markets and the results of a survey conducted by the National Honey Board.

The following articles show how you can take a survey of your own marketing area and a couple of techniques you can use to increase sales and income! Both are important, both are easy to do, and both are excellent reading.

Surveys

As a beekeeper, you know the joys of your hobby or profession. But sooner or later, it becomes a business and when it does, you will want to advertise your product.

Advertising without knowing how to target those advertising dollars is like shooting at a moving target blindfolded and at night.

They say that communication is a two way street. When you advertise without gaining feedback, you are on a one way street that spends your money, without providing you anywhere to get off.

You need feedback — so, take a survey. A survey can be one of the most effective ways of acquiring feedback. A survey provides you with direction. It not only helps you discover whether your advertising dollars have hit the mark, but it can also show where your advertising dollars ought to be spent to get the most effective results with those dollars.

Consumers who buy honey are quite diversified. They are young, old, rich, poor, tall and short. The survey is divided into three sections. The first deals with the results of your current advertising program. The second deals with what advertising medium your customers use the most. The final area deals with the amount and frequency of honey use.

This information will provide you with a demographic view of your customers, along with their response to the top three advertising mediums, as well as specifically which medium will work best to get the message across to them.

You can include telephone advertising as well as a newsletter or flier as a forum for advertising in this survey.

The first section starts with the list of general communications habits. Newspapers, radio and TV are the major headings here. You could include non-traditional advertising mediums as well. These include: word of mouth, promotional events, fliers, bumper stickers and the like. Whatever advertising you use ought to be listed as a way to discover this information.

List the specific newspapers, radio or TV stations you use to advertise through. Place a checkmark beside the specific one the consumer (customer) tells you they saw or heard about your business.

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Sales Incentives

I am constantly amazed — there must be at least 50 ways to sell honey. Probably 52, one for each week. I haven't guessed the other two yet.

In any event, offering incentives is one way to make money selling honey.

The subject is incentives. Why should you bother? You have a quality product; sales are steady; people are buying most of your product, and you have little surplus. All good reasons why you shouldn't.

But, if you want to grow into a flowering business, if you want to sell that surplus honey and other hive products, chances are good that you just might want to consider some incentive programs.

Worked properly, you will find these are cheaper than running advertisements — which are hit or miss propositions and can get down right expensive.

Here's the premise:

When a customer comes to you without much coaxing, you have what is known as an advocate. You want to get to know this person and chances are good that you will find more than one.

When they return a second time, one of your many incentive programs can be initiated. The idea is to offer a third purchase discount. Why would you want to do this?

Well, there are a couple of very good reasons why you might, at this point, give an incentive program a run for it's money. First, you have discovered a satisfied customer, or group of customers. These folks are very likely to return a third time. And, if they are and you have surplus honey on hand, the third discount purchase can work a couple of ways for you.

One way this third time discounted purchase can work is by having that customer draw in other customers. If you are selling your honey for $5.75 per 5# jar and discount it 20%, you have a product purchased for $4.60, or $1.15 off the regular retail price.

Now, you have already made a profit from the two jars already sold to this customer. The third and fourth jars sell for $4.60 — you sell 10#'s of honey for $9.20 instead of one for $5.75 by offering the discount to the preferred customer.

That, by the way, is one of the stipulations of the

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incentive program. The preferred customer must buy two jars in order to receive the discount. Since the sale of your product is immediate, you realize a net gain from the purchase far exceeding any loss.

You see, if you had to wait for the purchase of that fourth jar from the same customer, over, let's say three months, chances are good you would have spent that loss of income through utility storage costs, reheating, etc.

Now, with that said, there are two other ways of offering the same product discount without having to offer the third and fourth jar on discount.

You could use the buddy system incentive program. This simply stipulates that the preferred customer brings along a friend. The customer receives the same discount if the customer's friend buys one $5.75 jar.

Here, you are selling two jars for $10.35 instead of $11.50, or $5.18 per jar. This comes to a 9% discount to the preferred customer and his or her friend. The friend will receive the same discount if they also bring along a friend. The double or nothing type of selling scenario, known as pyramiding and multi-level marketing does it every time.

A third way to approach the basic incentive program is to hand out business cards to your good customers, and have the individual sign the back of the card. Then, have the customer sell your honey for you. How? If they convince someone else to buy honey from you, the card is given to the new customer, brought to you and filed. Each card provides the original customer with an agreed on discount — say 3-5% per card received.

Again, the customer buys more honey because it is cheaper for them to purchase it, and that person's friend(s) buys honey at your retail rate. As long as that friend buys a 5# jar or more of honey, you can discount a 5# jar for the preferred customer for each sold to their friends.

Chances are good that you are going to wind up selling a lot more honey this way. And it is a lot cheaper than advertising in the local papers to acquire, basically, the same effect.

SURVEYS... Cont. from Page 586

The second section works basically the same way. Only this time you want to know what their favorite newspaper, radio or TV station is. List when they are reading, listening or watching. When you come to your non-traditional advertising methods, ask specifically if they would like to be contacted concerning the newest batch of honey available as well as whether they would like to be on your phone or mailing list concerning these products.

Here, you are mixing some rapport with your survey. Customers appreciate the regard you have for their needs and interests. That type of question is geared to show them you have a "We Care" attitude."

It's also good business.

If you conduct this kind of survey on a continuous basis for a year you will be able to compile, not only on a month to month basis, but quarterly as well as yearly, marketing information that will provide you with an overview of the buying habits of your customers. This in turn, will enable you to effectively advertise your products.

It will also help you discover whether or not you placed your advertising dollars in the right places. And from the survey, you will know where to advertise the next time.

Also, grouping customers into age and other categories will show you the current and on-going demographics of your consumer base. It will also give you some idea of the reading, listening and viewing habits of your customers.

All of this will help you determine long and short goal strategies dealing with local advertising. And you know this will change as the population changes — either age, ethnic etc.

Honey usage and demand information will help you determine supply needs and growth potential. When you ask questions about honey uses, you acquire a month to month demand indicator which will help determine whether you need to expand production or stay at current levels.

It will also help you determine what to advertise and when and where to advertise on a monthly basis. This is another one of those two way street aspects of your business that you need to have a handle on. This way you can now stabilize your product inventory as well as increase or decrease production (or availability) based on those answers.

Asking, "How much honey do you expect to use over the month (year)" is typical of what is meant. You will see this increase/decrease in the summer, and the reverse during the winter. But it will also give you a good idea of the overall monthly average demand which you will want to address with sufficient quantities of honey.

Now that you know what a survey can do, you can see that it will help you do a better job with advertising, and improve your business.§

A one gallon jar of sugar syrup inverted over the inner cover hole. The jar is then covered with an empty super and the telescopic cover put on top.

FALL FEEDING

By FRANCIS L. W. RATNIEKS
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Good Management INSURES *Strong Colonies*

In northern areas preparing colonies for winter is one of the most important tasks in the beekeeper's calendar. Good management at this time will help ensure live, strong, colonies next spring. The most essential thing is that colonies have enough stored honey to last them through the winter. Colonies that run out of honey during winter are certain to die. In addition, colonies with a generous surplus of honey will build up more rapidly in spring than those surviving hand to mouth on the early-spring sources of nectar, which are always uncertain because of the frequent poor foraging weather at this time of year.

The amount of honey stores required for overwintering by a strong two-super colony varies from place to place. In New York and other northern tier states it is reckoned to be about 60 lbs, which is equivalent to one full depth Langstroth super absolutely packed with honey. Further south the amount needed diminishes. The amount of honey needed for overwintering is something that beginning beekeepers should seek advice on from more experienced beekeepers in their area. In addition, the 60 lbs, or whatever the figure in your area is, is not a maximum. Colonies will not be harmed by having too much honey but will likely die if too little is stored, so you should err on the side of being generous. This is especially true when colonies are not weighed, as it is not possible to accurately tell the weight of a colony by hefting it.

If at the end of the last honey flow you have colonies which do not contain sufficient stores what can be done? There are a number of options. Firstly, weak colonies should not usually be overwintered. Weak colonies should be combined, or combine a weak colony with a strong colony. However, it often happens that strong colonies have too little stored honey, perhaps because of a poor year or because of over-harvesting. Their honey stores can be supplemented either by adding frames of honey from hives with surplus stores (or from a supply of full frames of honey kept back for this purpose), or by feeding sugar syrup. Feeding sugar syrup is more work than simply adding additional frames of honey but it has a number of possible advantages according to circumstances. The main ones are: a) if all your colonies are light on stores so that there is no spare honey available; b) if you want to trade sugar for honey and harvest a larger crop of honey than would otherwise be possible; c) drugs can be mixed with the sugar syrup.

Some beekeepers never feed syrup to their colonies, but instead rely on always leaving enough honey behind. However, if for any reason you are not one of these people the following provides some advice on feeding syrup.

When to feed syrup

Colonies should be fed while the weather is still warm as bees will not drink down the syrup in cold weather. If colonies are fed too early in the fall, however, the syrup may encourage brood rearing to continue longer than normal. In the Ithaca area of New York October is the best time for feeding. Your own experience of local conditions will be your best guide here. However, if you are unsure start feeding early.

Making up sugar syrup

Sugar syrup can be made up using bags of granulated table sugar (which is chemically known as sucrose) obtainable from the supermarket. Sucrose can also be bought at discount in large sacks (usually 100 lbs). Ready made up syrup (known as high fructose corn syrup) can also be purchased. Local commercial beekeepers will usually know the best places to buy these. For the hobby beekeeper it is probably easiest to purchase sucrose from the supermarket. However, if a few people get together then a bulk purchase may save a significant sum of money.

To make up sugar syrup from granulated sugar mix equal quantities of hot water and sugar and stir until the sugar is all dissolved. An easy way to do this is in a bucket using a piece of wood as a stirrer. A good rule of thumb is to fill the bucket almost half way with hot water and then fill it to within a few inches of the top with sugar and then start stirring. Don't give the sugar a

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chance to settle as this will make it harder to dissolve. Depending on the size of your bucket you can make from 2 to 5 gallons at a time, with each gallon containing about 5 lbs of sugar. Don't be tempted to make up a weak syrup to make it "go further". The bees have to evaporate off the extra water so making weak syrup gives both you and the bees unnecessary extra work. When deciding how much syrup to feed assume that one pound of sugar makes one pound of honey. Honey contains about 18% water, so that theoretically five pounds of sugar should make six pounds of honey. However, it takes a certain amount of work by the bees to make the honey and this uses up the other pound.

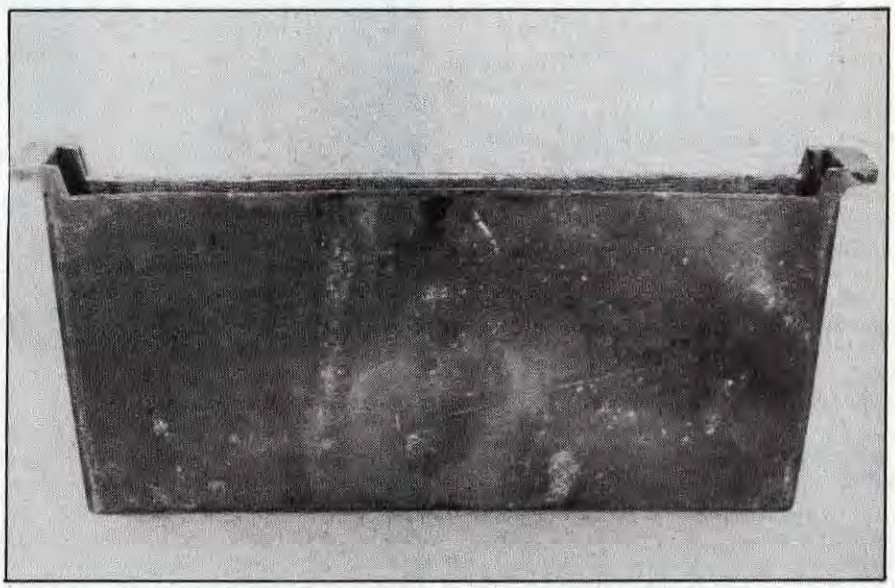
If you are planning to feed drugs, i.e. Fumagillin against nosema or Terramycin against American and European foulbrood, now is a good time to mix them in. The instructions on the drug packets will say how much to use, although this will partly depend on how much syrup you are planning to feed each colony. If you are going to feed one gallon per colony then you should use a more concentrated drug mixture than if you are going to feed several gallons per colony. Terramycin dissolves very easily. However, Fumagillin is somewhat hard to dissolve so the best method is to dissolve it separately with a little warm water and then to mix this in the syrup. Feeding Terramycin in the fall will prevent healthy colonies from becoming infected with either AFB or EFB during the fall, but almost all of the Terramycin will have broken down by the end of winter so it should be reapplied in early spring if spring time protection is desired.

Feeding sugar syrup

Once made up the syrup should be fed at once. If left hanging around it will start to ferment. The following are three ways of feeding it. All three methods can be effective if used properly, and all can be used to feed from one to several gallons of syrup. The beginning beekeeper is advised to try different methods to find one suited to his or her needs.

Bulk feeding using jars

This method is probably the simplest as jars can be obtained free from a cafeteria. All you need are some one gallon jars or cans with tight fitting lids. The lid is punctured with about 20 1/16 th inch diameter holes using a nail. The jar is then filled to the top with syrup and inverted over the inner cover hole, or the inner cover is removed and one or more jars are inverted directly over the brood chamber. Once inverted a slight vacuum is formed so that the syrup will not all pour out, although it can be sucked out by the bees. An empty super is then put over the jars and the telescopic cover put on top. The following points should be noted: a) if the holes are too large the syrup will leak out and waste; leaking syrup can also attract robber bees; b) if the holes are too small or become blocked with beeswax then feeding will be slow; c) if the sugar was not completely dissolved then sugar particles may block the holes; d) the jar will need cleaning out before reuse as the bees cannot lick it clean so that the last film of syrup will mold; e) the lid may sometimes be hard to remove if the bees have added wax to it. Hot water will soften the wax; f) depending on the number of jars used 1-5 gallons can be fed at once.



A purchased division board feeder made from plastic. It takes the place of a single deep frame. The inside surface is roughened to give the bees a good grip.

Division board feeder

This method uses a special feeder shaped like a frame that fits inside the hive. The feeder is used in conjunction with a float, such as a piece of wood, which floats on the syrup and prevents bees from drowning as they feed. Division board feeders can be made or purchased for about two dollars each. Purchased ones are made of one piece plastic and do not leak. Home made ones can be built using masonite for the sides and a softwood for the ends and bottom, and are sealed by using molten wax on the inside. The following points should also be noted: a) the division board feeder can be left in the hive all winter and used again in the spring; b) division board feeders usually hold about one gallon of syrup so that several trips to the apiary will be necessary to feed large quantities of syrup; c) unless you have got your float right you will drown a lot of bees; d) some earlier models of pur-

A division board feeder in use. There are two pieces of wood floating on the syrup to act as floats.

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FEEDING... Cont. from Page 589
chased feeders had smooth inner surfaces making it hard for the bees to climb out and resulted in unnessary drowning. Later models have ribbed or roughened inner surfaces for extra grip; e) it is necessary to open the hive and remove a frame to use a division board feeder.

Top feeder

A top feeder is essentially just a large tray filled with syrup which fits above the hive, between the inner cover and the telescopic cover, or between the top super and inner cover. Bees come up and feed on the syrup and are prevented from drowning by floats. Top feeders can be purchased for about $10 or made at home. If made at home a lot of attention should be given to making them leakproof, to making good floats, and to making them in such a way that robber bees will not be able to enter them. Because the top feeder exposes a large area of syrup above the hive they can easily attract robber bees from other hives if there are any small cracks between the inner cover or the telescopic cover and the feeder to let them in. Top feeders will not, therefore, be suitable for anyone whose hive equipment is not in good shape. The following points should also be noted: a) this is probably the best method for feeding large quantities of syrup fast. The capacity of top feeders may be up to four gallons and the syrup is consumed within a few days by a strong colony; b) top feeders are a relatively expensive investment but require the least amount of the beekeeper's time; c) there is no need to open the hive to use them if they are placed above the inner cover — make sure the inner cover has a hole in it; d) like the division board feeder drowning will be a problem unless the floats are working properly.

A purchased top feeder in use, but with the telescopic cover removed for the purpose of the photograph. The feeder has a capacity of almost four gallons. Bees come up via the slot in the middle. The syrup is held in the two large side compartments. Floating on the syrup are wooden floats made from pieces of lath with spaces for feeding.

Who Uses Honey?

By THE NATIONAL HONEY BOARD • 9595 Nelson Road, Box C • Longmont, CO 80501

Consumers are echoing what honey producers have said all along — there is no substitute for honey.

In a recently conducted consumer market research study sponsored by the National Honey Board, over 55% of honey users said that while they frequently use other sweeteners and syrups, there was no substitute for honey.

The consumer market research, which will be used to help guide the National Honey Board's promotional plans, profiled the current honey buyer and analyzed the attitudes of over 5,000 honey users and nonusers.

The study, conducted by Associated Marketing of Chicago, reported that the average U.S. honey user tends to be older, middle income and living in a smaller household. Children between the ages of 6 and 17 tend to be present in honey user homes to greater extent than homes with small children under 6 years of age.

Geographically, the study showed the South, West and the Northeast as the strongest honey markets. Furthermore, markets with populations of 50,000 to 1 million tend to have higher honey use than larger metropolitan or smaller rural areas.

Approximately 33.5% of U.S. households (about 30.0 million households) made one or more purchases of honey in the past year. The typical honey user purchased honey 2.6 times in the past year or about every 4 to 5 months. Approximately 36% of all buyers claimed only one honey purchase in the past year.

The winter months were identified as the peak usage period among 45.4 percent of the households studied. However, nearly 49 percent of the homes indicated a stable, year round use of honey.

Honey is primarily used at breakfast with 82% of the users claiming use of honey at the morning meal. Use of honey at dinner was mentioned by 42.4% of the users.

Honey was frequently claimed to be used (in 64% of the user homes) when an illness occurred. Honey was also commonly served at nonholiday guest meals (24.2% of households).

Honey buyers said that they prefer glass containers in 55% of the cases and plastic containers in 42.4%. Their most recent purchases, however were in glass jars in 64% of the transactions and in plastic containers in 33%.

Nonusers of honey primarily perceive honey to be used as a spread/topping or as a sweetener. Ingredient usage accounted for 44% of nonuser responses.

Honey users use honey as an ingredient in 88% of the households with uses of honey on meat/poultry products and in baking dominating the ingredient usage.

Honey users use honey as spread or topping in 82% of the households. Most frequently, honey users said that they used honey to top biscuits, bread or waffles. Beverages are sweetened by honey in 73% of the user households with hot tea being the most common beverage.

When asked why they did not buy honey more often 64% of honey users responded that "they didn't use that much" or "it goes a long way".

Honey users said that they like honey because of its taste and flavor and because it is natural. About one third of nonusers said that they did not like the taste of honey.

Over 90% of honey users said honey is convenient and easy to use. And, honey users consider honey to be a good value.

"The National Honey board will use the consumer research data to build on the strengths of current honey usage," said Bill Gamber, chairperson of the National Honey Board's Advertising and Public Relations Subcommittee.

"Also, this research will serve as a benchmark. In the years to come, this research can be repeated to measure the effectivness of the National Honey Board and its programs geared at increasing the positive attitudes toward honey," Gamber said.§

Profile Of A Honey User

AGE OF HOUSEHOLDER:
Homes with householder 40 years or older registered honey usage of 13% above the U.S. average. Households with a 34 or younger head were 18% below average.

ANNUAL INCOME:
Households with incomes of $10,000+ were between 11 and 31% above the average honey usage.

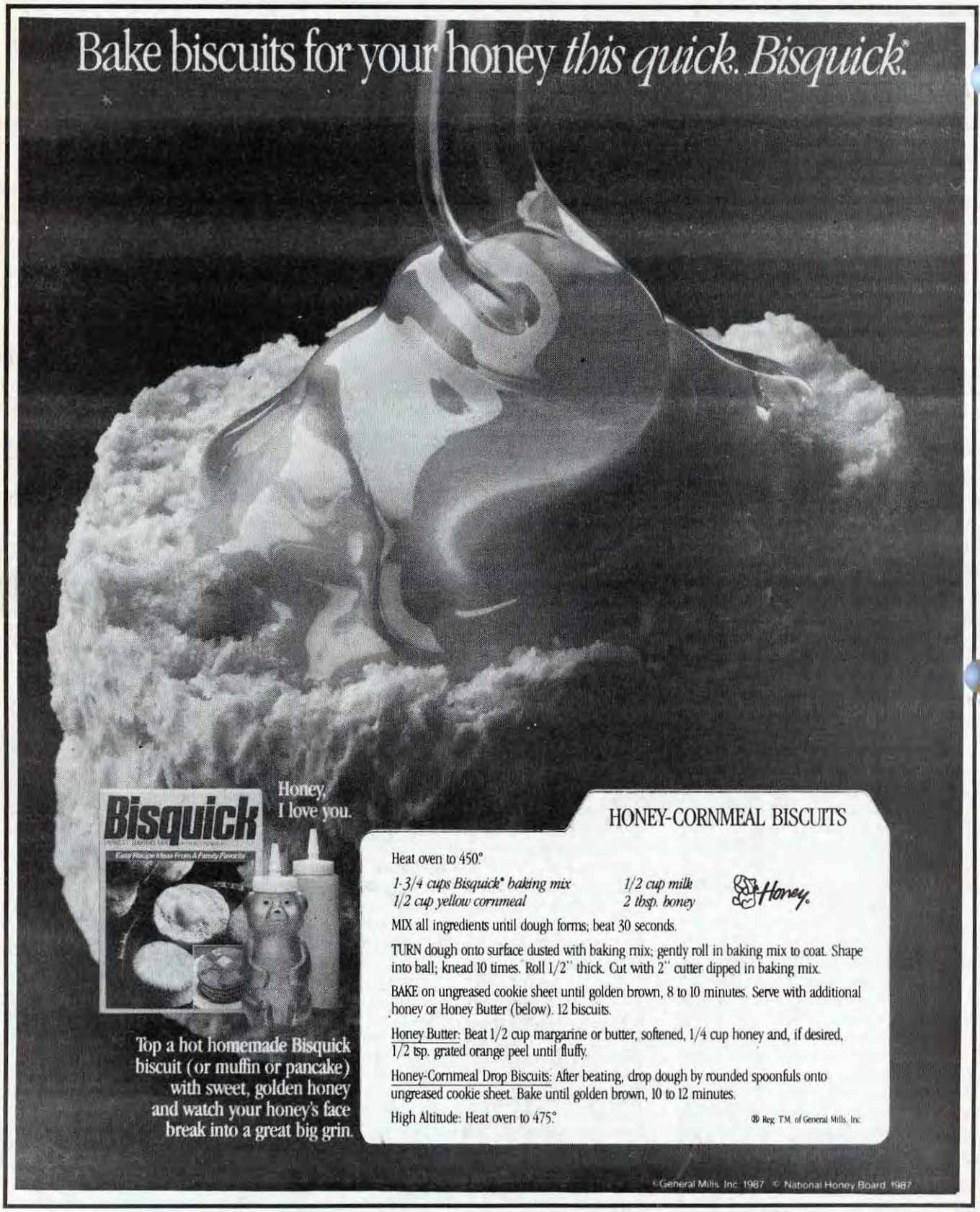
CHILDREN:
When children 6 to 17 years of age were in the homes, the households were 10 to 13% above the U.S. average in honey purchases. Under 6, usage declines.

HOUSEHOLD SIZE:
Homes with 2 and 4 members purchased more honey than all other households. Single member units were 25% below average.

EDUCATION:
As education increases, so does honey usage.

MARKET SIZE:
Mid-size markets with populations of 50,000 to 1 million yielded higher penetration levels than either the very large or very small areas.

REGIONS:
The Mountain, South Atlantic and Northeast regions reflect the highest honey usage. The East North Central and East South Central areas have the lowest honey usage.§



The National Honey Board plans to reintroduce an old-time favorite — biscuits and honey — in its first consumer advertising campaign. Look for this full page color ad in November and December issues of *Better Homes & Gardens, Family Circle, Good Housekeeping, Ladies Home Journal, Readers Digest* and *Woman's Day*. This ad will reach nearly **123 million people!**

Sticky Jars??

The NHB also sponsored a study to determine the conditions encountered by the consumer when he purchases honey.

The honey retail distribution study, also conducted by Associated Marketing, showed that honey was on display in virtually all large volume major market supermarkets.

In 34.8% of all stores, honey was stocked with syrups. Honey was frequently stocked near jellies or on a shelf with or next to peanut butter.

Sticky honey containers were found in 21.8% of all stores, while packages showing crystallization of honey were on display in 28.4% of the stores.

The container conditions varied substantially by geographic area. New England, the East Central and Pacific regions all showed above average sticky and crystallized containers on display.

In the East North Central, the sticky condition was 34% above average with crystallization 20% below average.

Crystallization appeared more frequently in the West, North Central, the Mountain and the Middle Atlantic area.§

But Food Service Industry Honey Use Is Increasing . . .

The market for honey in the foodservice industry can expand based on the honey's flavor appeal, natural image and diverse applications, according to a foodservice market research and analysis study sponsored by the National Honey Board.

The study analyzed honey usage patterns and attitudes toward honey in the foodservice industry. The study included operator and distributor interviews in both the commercial and institutional segments of the foodservice industry. The commercial segment of the food industry includes fast food, family and fine dining restaurants and hotels. The institutional segment includes schools, colleges, universities, hospitals, nursing homes and business/industry programs.

Only 52% of all foodservice operators use honey in some way, the study revealed. The highest regional penetration was in the West with 62.6% of foodservice operators using honey and lowest in the Northeast with 43.6%

The study found honey to be used consistently over the three meal periods in the commercial segment of the foodservice industry except in quick service restaurants where the use of honey as a dipping sauce increased lunch and dinner use.

Not surprisingly, quick service use of honey has shown the greatest increase in honey usage, mainly due to the honey-based dipping sauces for chicken nuggets.

Breakfast penetration was strongest in the institutional segment except in schools.

The predominant use of honey in the commercial and institutional segments of the foodservice industry is as an ingredient.

When asked to rate honey on several characteristics, quality, taste and use as a flavoring agent were ranked as favorable. Cost, ability to add value and use as a topping were not so favorably ranked.

Also, over half of the honey operators expressed dissatisfaction with the texture or stickiness of honey.

When questioned on how packers could improve honey packaging, 50% replied "there is no need for improvement".

"Given users' discontent with the texture and "gooeyness" of honey, it would appear they do not correlate packaging with handling the texture problem," the study reported. "Packaging is apparently not seen as the answer to the problem."

When asked to name the most important characteristic considered in the purchasing decision, operators mentioned quality most often (26%) closely followed by price (16%). When asked to name the second most important characteristic 22% mentioned price, and 19% named quality.

According to the study, most honey foodservice users purchase honey from full-line distributors; however, a surprisingly large percentage of fine and casual dining operators (33%) purchase honey through grocery wholesale distributors.

When asked what information would help them in their usage of honey operators mentioned recipes using honey (47%) as the most helpful item. Conversion charts were mentioned by institutional operators.

Foodservice and specialty distributors noted that quality was of primary importance when they made their purchase decisions. According to the study, the major complaint they receive from operators regarding honey concerns product quality, (i.e. too dark, too watery, poor taste).

Some distributors cited price as the reason honey is not used more frequently.

Distributors said there are few problems with current packaging although they said an opportunity existed to improve the ease of refilling containers with better package design.

Distributors uniformly stressed the urgent need to advertise honey through national magazines or television.

"The foodservice research showed that there is potential to increase the demand for honey in the foodservice market by providing information and by advertising honey," said Dan Hall, manager of the National Honey Board. "The Board will be reminding foodservice operators and distributors about honey's many uses and the real value it can add to their menus."§

WASHINGTON SCENE

By GLENN GIBSON • Minco, Oklahoma 73059

"Very few Congressmen have ANY information available that will help them vote sensibly on any of our problems."

Writing articles for publication generally means they need to reflect a positive tone without self-praise. At times this is difficult. Presently I have some negative thoughts that should be aired. Mr. & Mrs. Honey Producer your future is anything but rosy. I know most realize this, but a majority of you are silent and drift along, letting outsiders (non-honey producers) call the shots. Since our organization's membership is restricted to producers, it is difficult to understand how you can ignore the need for concerted tion.

Whether some will admit it or not our future will be decided in the halls of Congress (please be advised that I think this is a deplorable state of affairs and should concern everyone that produces honey — any amount). If proposals that are floating up and down the halls of Congress are approved, half of our industry as we know it will be wiped out. This need not happen, but unless the industry increases its efforts this gloomy prediction will be realized.

I feel that we have done a creditable lobbying job in Washington with the tools that we have had, but there is a crying need to step-up our efforts five-fold.

No Image In Washington

Very few Congressional offices have any information that will help them vote sensibly on our problem. In plain English, we have no clear image in Congress, and only a fuzzy one in the Administration. Should this concern you? I think it should! Congressman Joe Skeen, NM, advised me to keep him informed so that he couldn't vote for a measure that would put us out of business. Congressman Glen English, OK, who champions our cause at every turn is unable to overcome the negative votes of urban congressmen who have no understanding of beekeepers problems. "Correct you low-visibility here in congress should be your first order of business", he said. Senator David Boren, OK, tells me that our unique industry needs special legislation and expresses regret that such legislation is impossible. Other friends in both houses echo the same thoughts.

Opponents like Senator Dan Quayle and Representative Silvio Conte use very little factual information and uninformed members will agree with them. And the Administration has vowed to terminate our honey program at the first opportunity (This has been the Department of Agriculture's policy since 1981). Your silence allows these congressmen to vote against us with impunity. And the low-visibility image means that the Department of Agriculture gives our requests very little consideration.

During our ill-fated efforts to get the loan cap eliminated, I talked with a number of staffers who felt that our honey program should be terminated as quickly as possible. Time permitting I advised them about the pollination value of the honey bee to Agriculture and the Environment. In a number of cases smirks changed to a sincere question and answer session. If you had explained the pollination story before our visit, chances are good that the Congressman would have been friendly.

Low Visibility versus HIGH Visibility

We will stoutly contend that HIGH VISIBILITY in Congress is a must. Achieving this has been our main goal for years but, so far, we have only been moderately successful. Our campaign urging beekeepers to contact their congressional delegation since 1981 was the only plus in our efforts to salvage a position in the 1985 Farm Bill. I use the term salvage because we didn't get the type of program that would have worked with little or no cost to the government.

While our organization was stressing heavy beekeeper contact with congressional delegation, the American Beekeeping Federation, (ABF), with its horde of non-producer voters has continuously stressed the opposite. THIS IS CERTAINLY CONTRARY TO ALL BASIC LOBBYING RULES. The ABF policy leaves us puzzled to say the least. We have fully explained our policy — not once, but many times. I would be pleased to learn their reasoning. Merely saying that we must keep a low-profile explains nothing. Repeating a "no letters now" memo doesn't enlighten. Neither does "if it ain't broke, don't fix it" seem like good advice when the Administration has vowed to kill our program since 1982. Quayle and Conte have given us a number of warnings about terminating the loan program. Inaction on our part will not lessen their opposition nor will it serve us when the Department of Agriculture pounces on every opportunity to act-negatively.

Continued on Page 597

GIBSON... Cont. from Page 595

A Host of Problems Need Attention

Also, please remember that we have a number of projects that need attention in the Administration. And this means that we must actively explain the need in each and every case. Remember the garbage in the General Accounting Office report. Whether you realize it or not that report, with it misinformation, will plague us for years when the Administration makes a decision that involves our line where funding is critical. Beekeepers want fair treatment from their government. Do you and others that produce honey feel that the government is capable of writing a beneficial program without beekeeper assistance? If you do, then we are in for a bit of trouble on all projects.

I have difficulty thinking that very many are concerned about our several problems. A cursory look at the several state association convention programs shows very little interest in political problems and "how to" work them. When one or two powerful congressmen can promote legislation that will reduce the price of our domestic honey as much as 20 cents per pound, beekeepers should go into action.

In my columns these last few years I have repeatedly warned of such negative legislation, but so far too few have responded. Such legislation is a real possibility in the next few months. It is possible that we will be vitally affected in the budget Reconciliation and the Continuing Resolution. A low profile will not mean that we will escape scrutiny. On the contrary, we are cussed and discussed almost daily.

Low Profile?

PLEASE DO THIS:

° If you disagree with any of the statements I have made, please advise me. Also, please write if you agree.

° If any group would like to explain a conflicting view, please advise and we will allot time on our program at our AHPA convention next January 6 through 10 in Albuquerque, NM.

° If leadership in the several states would like a speaker from AHPA, please advise us.§

PACKAGING... Cont. from Page 580

beeswax is a product of uncapping and it manages to get everywhere.

One of your goals must be to remove bees and wax from every drop of your honey crop. Actually, it is not difficult or time consuming; it's just essential.

STRAINING

Many types of strainers can be used. One or two thicknesses of cheesecloth are quite effective. Some prefer a leg cut from a NEW pair of panty hose that has been washed to remove any excess dye or sizing. Fine strainers of stainless steel are available, as well as other types of strainer material. Use the bee equipment catalogs and check with your local equipment dealer for something that will suit your extracting methods.

It won't do any good to have strainers if they sit unused. Straining should take place while honey is running out of the extractor into settling containers. This step may well be the most important one of the clean-honey process. Don't omit it! You will be surprised at the difference it will make.

Change your straining material, or clean the strainer itself, frequently to avoid clogging and carrying small particles into the honey.

SETTLING

Here is another important step, not to be rushed. Perhaps it should be called "floating" since we are working with honey. Bees, wax and miscellaneous junk float on the surface. But honey is thick and small particles may take 2 or 3 days to travel upward, even if the honey is warm. Don't be in such a rush. The wait is worth it. If you are certain you won't bottle the top surface of the honey, then you may be ready to put your honey into (clean) jars. However, it may be best to skim off all the debris and foam. If so, then skim carefully until the surface is clean and shiny.

Before you bottle, check a sample of your honey. A second straining may be necessary if you have visible wax or debris still in the honey. Particles will be readily visible in light honeys, but dark honeys should be as clean. Let's live up to the labels that proclaim "PURE HONEY".

FILLING JARS

I spent a very sticky afternoon with honey containers and an accurate weighing balance to determine how full jars should be to give the customer accurate weight of honey. After all, that is what they trust me to give them!

I found that for a one-pound queenline, if "bee space" or 3/8 inch were left between the top of the jar and the surface of the honey, I was putting in exactly one pound.

The danger of overfilling is the customer's annoyance when honey slops over the rim as the jar is opened. Underfilling cheats the customer — not a good business practice at all.

CLEAN JARS (AGAIN)

You're not done yet. If honey dribbled over the jar threads, you will want to wipe them with a clean, damp cloth. This insures that no honey will run down the jar later.

Now you can put the top on and TIGHTEN!

Next, all stickiness must be wiped off the jar. My secret is to be sure my wiping cloth is kept well rinsed. A customer with sticky fingers might not let go of his money!

All you need now for a successful product is an attractive label, but we will discuss that another time.§

INNER COVER... Cont. from Page 555

What this should work out to is about a $130.00 PROFIT per trip. You can argue that charging my own labor is an unfair cost. After all, isn't this, like beekeeping, a labor of love. Yes, and no. I would be 'gardening' anyway. But as long as I'm dealing with the business world, I conduct my gardening in a business-like manner. The man that sells my herbs isn't going to do it for free. The people who eventually buy them are paying real money. The people who sell me seeds, fertilizer, gas and oil and baskets make their living selling those things. They don't say "Well, as long as you're doing this for free, I'll give you a break." No deals folks.

So why should beekeeping be any different. When you buy a super, hive tool, smoker, jars or labels — you don't get them cheaper just because you're keeping bees for fun. You may not sell much honey, in fact you may not have enough to bother. But if you know your costs, what you do sell should be sold at fair market value.

HEARD IN PASSING...

On fairly good authority, we have heard that congress has funded a National Apicultural Extension Position, to become effective with the passing of the new budget, or October 1, whichever comes first. Several excellent names have come up during discussions on this appointment, but a finalist has yet to be named. We applaud the efforts of those involved, both behind and in front of the scenes, that have brought this appointment about. This position has been sorely needed by our industry for more years than we can think of. Congratulations, and good luck. We'll have more as soon as the information is available. If we're lucky, in the November issue we'll have an interview with the holder of this prestigious, and difficult position.

A Get Well Message

We just received word that Charlie Koover, popular author of *Koover's Korner*, is at home recovering from knee surgery. He reports things are going just fine, but will be unable to answer correspondence for awhile.

Get Well Soon, Charlie!

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.

Many things contribute to an Editor's gray hair and ulcers, but none are more frustrating than misspelled words. The occasional THERE instead of THEIR, or YOUR instead of YOU'RE is bad enough, but putting HOBBIEST instead of HOBBYIST *on the cover* is inexcusable. We have, in the words of a nearly famous past presidential candidate, "No Excuses".

Answers To Testing Your Beekeeping Knowledge

1. ***True*** — Queens suffer from all the diseases that affect workers and drones even though the diseases are most prevalent and usually diagnosed within the worker caste.
2. ***False*** — During the mating flight, virgin queens mate with several drones in succession before returning to their hives. They may make more than one mating flight before they begin to lay eggs.
3. ***False*** — Queen honey bees leave the hive to take orientation flights prior to mating, during the mating flight(s), to participate in swarming and absconding but not to take cleansing flights in the spring. The wastes of the queen are removed by the retinue of workers that forms around her in the broodnest throughout the year.
4. ***True*** — Any fertilized egg laid by a queen is capable of becoming either a queen or worker. Queen and worker differentiation is dependent upon the quality and quantity of food received during its larval life. Queen larvae receive an abundance of royal jelly throughout their larval life whereas worker larvae receive "bee bread" after they are 3-3 1/2 days old. Fertilized eggs do not always become females however, they can develop into diploid drones. These diploid male adults are never found in a colony,as the workers destroy all diploid male larvae, a few hours after egg hatch. Adult diploid males have only been produced in the laboratory.
5. ***True*** — Honey bees recognize their own queen and retain their ability to differentiate between her and another queen for about 24 hours. When given a choice between their own queen and a foreign queen, the bees always prefer their own. Queens who are genetically similar (related) and are in a similar physiological condition to the queen that was removed from the colony have a much higher probability of being accepted than totally unrelated queens.
6. ***True*** — Since the pheromones produced by the queen are an important component in the social organization of the colony, queenless colonies are more aggressive than queenright colonies. Soon after a queen is removed, many agitated workers (guards) appear at the colony entrance, apparently looking for their lost queen.
7. ***True*** — Soon after a queen cell is capped until approximately 24 hours before the virgin queen emerges, queen cells should not be handled or disturbed. Queen cells placed on their sides during the pupal stage may die or the virgin queen may emerge with deformed legs or wings.
8. Queens are often marked for the purpose of:
   A) quickly locating them within the colony
   B) recording the age of the queen
   C) identifying genetic lines
   D) knowing when queen replacement or supersedure has occurred.
9. Reasons for requeening colonies are:
   A) reduce the swarming tendency
   B) increase the chances of winter survival
   C) control of some bee diseases, i.e. sacbrood, European foulbrood
   D) production of larger forager populations to increase honey yields
   E) improve colony temperament
10. Mated queens laying multiple eggs per cell is an indication that the queen does not have adequate space to lay in, such as in a nucleus colony or observation hive.
11. Queens are normally marked on the dorsal surface of the thorax. Materials often used are: fast-drying enamel or butyrate paints used for model cars, etc.; finger nail polish; metal or plastic disks glued to the thorax; typewriter correction fluid or oil paints dissolved in acetone.
12. Double grafting is a technique in which the larvae grafted into cells are discarded after 24 hours and replaced with new larvae of grafting age. It is believed that the second larva will be better fed due to the royal jelly that is already present in the cup and a larger, better queen will develop.
13. Two types of queen cells are produced in the honey bee colony: emergency and natural. Emergency cells are actually modified worker cells; cell is built around a worker larva that hatched from an egg laid prior to the queens disappearance. Queens developing in natural queen cells originate from an egg laid in a queen cup.

ANSWERS TO EXTRA CREDIT QUESTIONS

14. ***True*** — Historically, delayed egg laying was a large handicap to developing successful instrumental insemination techniques. Less than 20 percent of the inseminated queens actually started laying within 30 days after emergence. During the delay, queens were often balled and mistreated by the worker bees until many of them were killed and those that survived were greatly weakened. In 1945 it was discovered that two treatments with carbon dioxide would stimulate the queen to begin oviposition promptly whether inseminated or not.
15. *Egg cells, Nurse cells* — provide nutrients for developing egg. *Follicle cells* — form a continuous, protective sheath around the developing egg.
16. A capped queen cell differs from a capped worker cell in the following ways: A) queen larvae are sealed in the cell with an abundance of food; B) queen cocoons do not envelop the whole larva as do those of workers; rather, the cocoon is constructed around the sides and tip of the cell; C) the cocoon in the queen cell does not touch the tip of the cell.

There were 26 points possible 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
26-18 Excellent
17-15 Good
14-12 Fair

Answers to The Cost of Beekeeping

Page 562.

1. E	2. D	3. B	4. E	5. E
6. B	7. C	8. C	9. A	10. B
11. C	12. A			

News & Events

☆ NEWS ☆

U. S., Mexico Join Forces To Stop 'Killer Bees'

WASHINGTON — The Agriculture Department and Mexico are joining forces against 'killer bees'. The bees had been expected to arrive in this country by 1989 or 1990, said Steve Poore, an Agriculture Department spokesman. But under a three-year, $8.6 million program made final Friday, Sept. 4, the two countries will track, trap and kill queen bees and their colonies in an attempt to slow their advance.

Pfizer Leads Race for New Sweetener

Pfizer Inc.'s *alitame* is the leader in the race to develop a new artificial sweetener to compete with G. D. Searle's aspartame, the ingredient in NutraSweet. Alitame was submitted to the FDA in August 1986 and could receive approval by 1989, beating Johnson & Johnson's sucralose and American Hoechst Corp.'s acelfulfame K.

Food analysts say alitame tastes better than aspartame and is twelve times as potent. Moreover, unlike aspartame, it is heat-resistant and can therefore be used to produce low-calorie cakes and cookies. By exploiting the diet baked-goods market, alitame could generate sales of up to $900 million a year and "clearly could be bigger than NutraSweet," according to analyst Hemant Shah of Nomura Securities.

Berthold Appointed Associate Dean at DVC

DOYLESTOWN — Dr. Robert Berthold Jr. has been named Associate Dean for Science at Delaware Valley College, announced Dr. John C. Mertz, the College's Dean of Academic Affairs. Dr. Berthold will oversee the departments of Biology, Chemistry and Mathematics and Physics.

Berthold, 46, has been a member of the Biology Department for 19 years. He is most well-known in the community for his involvement in beekeeping and as the College's cross country coach.

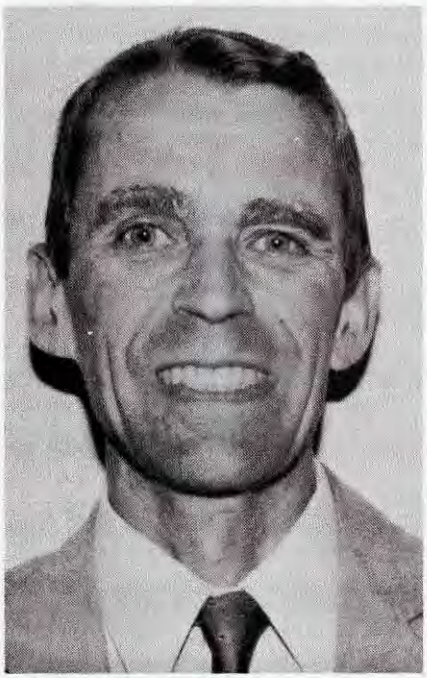
"He brings to the College's educational administration high levels of enthusiasm and energy," said Dr. Mertz. "As the College faces the challenges that lie before it, we will need his bold vision."

A 1963 graduate of Juniata College, Dr. Berthold earned his Masters in Entomology from Rutgers University and his doctorate from Penn State University. He graduated from Passaic Valley Regional High School in Little Falls, NJ in 1959.

Dr. Berthold is a member of the Entomological Society of America, International Bee Research Assn., Eastern Apiculture Society, President of the Professional Apiarists Society of North America, and of the Pennsylvania, New Jersey, Maine, Bucks County and Montgomery County beekeepers' associations.

Besides the courses in Biology that he teaches at Delaware Valley College, Dr. Berthold also conducts two popular non-credit courses in beekeeping each year at the campus.

The newly appointed associate dean has two children. He and his wife, Marnie, live in Doylestown.



Dr. Berthold

Continued on Next Page

TRI-COUNTRY WEEK! November 9-15, 1987
Fantasyland Hotel, Edmonton, Alberta

REGISTRATION FORM — Register before October 20th and SAVE!

Name _____ Spouse _____
Company _____ Phone _____
Address _____ Pcode _____
Zip _____

Registration Fees: (spouse included)			
ABA CONFERENCE: (Nov. 10 & Nov. 12 a.m.)	Earlybird $25		$ _____
TRI-COUNTRY SYMPOSIUM: (Nov. 11)	Earlybird $25		$ _____
CHC CONFERENCE: (Nov. 12 p.m., 13/14)	Earlybird $25		$ _____
Register for all three conferences by Oct. 20, 1987 for a 10% discount. Earlybird door prize drawing. Rates go up to $30.00 for each Conference after October 20th.		$67	$ _____
Organized Meals: Tickets also available at Convention up to 48 hrs. before event.			
Tuesday, November 10:			
LUNCHEON in the Exhibits Hall	tickets	@$10	$ _____
OPENING RECEPTION (evening)	tickets	@$ 5	$ _____
Wednesday, November 11:			
BREAKFAST with entertainment	tickets	@$10	$ _____
LUNCHEON with speaker	tickets	@$10	$ _____
Thursday, November 12:			
DELEGATES BREAKFAST	tickets	@$ 9	$ _____
LADIES AUXIL. BREAKFAST/MTG.	tickets	@$ 7	$ _____
LUNCHEON with speaker	tickets	@$12	$ _____
INTERNATIONAL BANQUET/DANCE	tickets	@$22	$ _____
Friday, November 13:			
LUNCHEON Tri-Country Report	tickets	@$12	$ _____
TOTAL ENCLOSED			$ _____

Mail to: ABA, 2434 - 104 Street, Edmonton AB T6J 4J8

☆ INTERNATIONAL ☆

Tri-Country Week! November 9-15, 1987 Edmonton, Alberta

Plans for the 3rd **Tri-Country Symposium**, (Mexico, US, Canada) are well in hand. There will be more than a dozen speakers from Mexico, Germany, Venezuela, Nicaragua, and many parts of the United States and Canada, covering a range of topics on exotic mites and Africanized bees. An information package is being prepared, but not in time to meet the publication deadline.

Contact Fantasyland Hotel directly at (403) 444-3000 (collect). Tell them you are attending the Beekeepers Convention. Rates: Executive $72; Deluxe Exec. with jacuzzi $85; Theme $95. DEADLINE FOR CONFERENCE RATE is October 9th. After that date, rooms are guaranteed on a first come basis only.

For more information, contact Louise M. Zwaenepoel at the Alberta Beekeepers Association, 2434 - 104 Street, Edmonton, Alberta, Canada, T6J 4J8, or phone (403) 435-0306 for details.

See Registration Form on Page 601.

☆ CALIFORNIA ☆

The **California State Beekeepers Association** invites you to join us for the 98th annual convention which will be held on the scenic central California coast in San Luis Obispo at the Park Suite Hotel. The convention is scheduled for November 16 - 20. In addition to an exciting program of speakers, we have a fascinating tour of the beautiful Hearst Castle planned. The convention offers our members and guests an opportunity to socialize, make valuable business contacts and be informed an updated on current interests to our industry.

Tuesday, November 17

8:00 Registration
9:00 Opening Ceremonies
10:30 National Honey Board Report
11:00 Calif. Honey Advisory Board Report
11:20 Apiary Board Report
11:40 Am. Beekeeping Fed. Report.
12:00 Lunch
1:10 Tom Webster, U. C. Davis, Ent. Dept. "The Effect of Monitor Pesticide on Honey Bee Brood."
1:40 Robin Thorp, U .C. Davis, Ent. Dept., "Crop Pollination in California: An Overview"
2:20 John Skinner, U. C. Davis, Ent. Department, "Sunflower Pollination: Past, Present and Future"
3:15 Larry Teuber, U. C. Davis, Agron. Department, "Floral Characteristics of Alfalfa Influencing Pollinator Activity"
4:00 Larry Goltz, "Bee Plants — Moving to Better Neighborhoods"

Wednesday, November 18

8:00 Pat Paswater, State Apiary In Apiary Report
8:30 Howard Rosenberg, Farm Labor Mgmt. Spec., "Learning to Live with the New Immigration Laws"
9:10 Karen Klonsky, Coop. Exten. U. C. Davis, "Microcomputers - How Can They Work for An Agricultural Business?"
10:00 Gordon Held, San Luis Obispo, "Business Use Of Computers"
10:45 Beekeepers Panel — Moderator, Eric Mussen, Ext. Api. U. C. Davis. Beekeepers Who Use Computers "What They Do, What They Don't Do, And What Have They Done To Our Business"; panel members are Karen Klonsky, Gordon Held, Brian Ferguson, Darrell Wenner, Richard Gannon, Edward Allen
11:45 Research Luncheon, Rob Page, Ohio State "Breeding Resistance to Tracheal Mites"

Thursday, November 19

8:00 Dave Gordon, U. C. Davis Ent. Dept., "A Survey of Current Beekeeping Practices in California: Implications for Africanized Honey Bee Control"
8:30 Christine Peng, U. C. Davis Ent. Dept., "A Bioassay for Antibiotics"
9:10 Orley Taylor, U. of Kansas, "Control of Natural Mating in Honey Bees"
10:00 Orley Taylor, U. of Kansas, "African Bees in Mexico: What To Expect"
10:40 Rob Page, Ohio State Univ., "Honey Bee Breeding: A Prognosis for the Future"
11:20 Harry Laidlaw, U. C. Davis, Prof. Emer., "History of Bee Breeding and Instrumental Insemination"

Additional information about the CSBA's convention may be obtained by contacting the CSBA president, Gene Brandi at 1511 Hawthorne Drive, Los Banos, CA 93635, (209) 826-2811 or the secretary/treasurer, Carol Penner at 19980 Pine Creek Road, Ed Bluff, CA 96080 (916) 527-0941. For discounted air fare contact American Airlines/American Eagle, Starfile No. S82203 at 1-800-433-1790.

☆ GEORGIA ☆

The **Georgia Beekeepers Association** will hold their annual meeting at the Holiday Inn, Perry, GA, on Oct. 9th and 10th, 1987. The program starts Friday at 8:00 p.m.

Continued on Next Page

Friday, October 9

8:00	Welcome and Introduction
8:05	Dick Kehl, "Notes from the Bee Yard"
[illegible]0	Dr. Frank Eischen, "Relationship of Bees & Ants"

Saturday, October 10

7:30	Registration
8:45	Dr. Larry Connor, "Drones, Drone Saturation"
9:15	Dr. Anita Collins, "AHB Bee Regulated Zone Plan"
9:45	Dr. Al Dietz, "Honey Bee Research Update"
10:45	Douglas Durant, "Pollination Sales Tools"
11:15	Kim Flottum, "Positive Ways to Deal with the Media"
11:45	Lunch
1:00	Dr. Al Dietz, "Research on Mites"
1:25	Dr. Larry Connor, "Improving Public Education"
1:50	Dr. Anita Collins, "Africanized Honey Bee Research"
2:15	Larry Cutts, "News from Florida"
2:30	Jim Harron, "Current Tracheal mite Regulations"
3:00	Business Meeting

There will be a meeting of the Board of Directors Friday at 5:00 p.m. Registration is $10.00. For more information contact Paul P. Harrison at (404) 294-5752 or Cecil Sheppard at (404) 491-3734.

☆ 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.

9:00	Registration
9:30	ISBA Meeting Reports; Pres., Sec., Treas., Hist., Apiary Insp. Report, Mr. Eugene Killion
10:45	Mr. Dan Hall, Manager of the National Honey Board, Longmont, CO, "The Honey Check Off Program"
11:30	Election of Officers
11:45	Lunch ($6.25 per person)
1:00	Walter J. Diehnelt, Honey Acres, Ashippun, WI, "Honey of a Museum"
1:30	Richard Porter, Pres. of Southern IL Beekeepers Assn., "My First Experience with Pollinating Apple Orchards"
2:15	Walter J. Diehnelt, "Beekeeping"
2:45	Local Chapter Reports
3:15	Installation of Officers
3:30	Remarks from the New President

Make check payable to Illinois [illegible]te Beekeepers and mail to Udell [illegible]eyer, R. R. #3, Box 308, Edwardsville, IL 62025.

☆ 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.

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.

☆ MAINE ☆

Maine Celebrates National Honey Week

The **Maine State Beekeepers Association** is promoting National Honey Week, October 18 - 25, 1987. Beginning on October 18th, public awareness will be a vital part of promoting our industry. Articles on beekeeping and "Open Houses" will be on the agenda to kick off a week of various activities.

S. M. Brown Apiaries on 239 Greely Road in Cumberland will hold an Open House on Sunday, October 18, beginning at 10:00 a.m. The public is invited to see beehives being built, honey extraction and a two story observation hive buzzing with activity.

For more information contact Stan & Helen Brown, (207) 829-5994.

Maine's beekeepers have promoted honey week at various county fairs during the month of September with posters and pamphlets. For information on activities in other areas of the state please contact, M.S.B.A., President Al Delicata, (207) 567-3822, R. R. #1, Box 417, Stockton Springs, ME 04981

☆ 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.

☆ MONTANA ☆

Eastern Montana Beekeepers Ass'n. Meets

The **Eastern Montana Beekeepers Association** will hold it's annual meeting October 11, 1987. There will be a speaker and plans will be formulated for 1988 programs and officer's duties. The 1987 Beekeeper of the Year Award will be presented together with the Sweepstakes Trophy for the winner in the Metra Park Fairtime Honey Show.

Continued on Next Page

For more information contact Sheri Kish, 3175 Vista Lane, Laurel, MT 59044, (406) 628-6110.

☆ NEW YORK ☆

The first annual **HONEY FESTIVAL**, with brunch, will be held at the Cayuga Nature Center, Route 89, just north of Ithaca, Saturday, October 3, 9:00 - 12:00. Live bee demonstrations, honey tasting, beeswax and candle making demonstrations, beekeeping equipment, books, biscuits, pancakes and honey.

☆ OHIO ☆

Coming Event for the Ohio State Beekeepers Assoc.

The Ohio Fire Academy, 8895 East Main Street, Reynoldsburg, will be the site for the fall meeting of the **Ohio State Beekeepers Association**. The date is November 7, 1987 with registration beginning at 8:30 a.m. and the meeting beginning at 9:00 a.m.

Speakers include Dr. Clarence Collison, Univ. of PA; Dr. Robert Page, Univ. OH; and a speaker from Prairie View Honey Co., Detroit MI.

There will be a $5.00 registration fee without lunch or an $8.00 fee with lunch charged at the door.

For more information contact John Grafton, Rt. 1, Box 269, Steubenville, OH 43952, (614) 282-2076.

Central Ohio Beekeepers

"Top Honey Production Methods for Extracted Honey and Comb Honey" will be Dr. Richard Taylor's topic when he addresses the **Central Ohio Beekeepers Association**. The club will meet on Saturday, October 17, 1987 at Blacklick Beech Maple Lodge in Blacklick Park, from 11:30 a.m. to 4:00 p.m.

The park is located on Livingston Avenue in Reynoldsburg, Ohio. There will be a pot-luck dinner and guests should bring a covered dish and table service. Anyone interested in beekeeping is invited to hear Dr. Taylor speak after the dinner.

For more information contact Bob Kessler, (614) 866-6864.

☆ OKLAHOMA ☆

The annual Fall meeting of the **Oklahoma State Beekeepers Association** will be held Saturday, October 24, 1987, from 8:30 a.m. until 4:00 p.m., at the O. S. U. Extension Building in Oklahoma City at 10th and Portland (930 North Portland).

The program will cover a variety of topics which will be interesting and useful to the beekeeper. A covered dish meal will be served at noon.

The **Central Oklahoma Beekeepers Association** will host the meeting, and will have their local meeting on Friday night, October 23, from 7:30 to 9:00 at the same location.

President of the Oklahoma State Association, Chuddie Smith, P. O. Box 34, Guthrie, OK 73044, (405) 282-4002, invites and encourages all interested persons to attend.

☆ OREGON ☆

The **Oregon State Beekeepers Association** will hold its Fall Conference, November 21, at the Surfrider Motel, on Highway 101, two miles north of Depoe Bay, Oregon.

Registration starts at 8:15 a.m. and the meeting starts at 9:15 a.m. Come relax, enjoy and have a great time.

For more information contact Dave Kerr, Oregon State Beekeepers Association, 8545 Perrydale Road, Amity, Oregon, 97101 or see the November issue of *Bee Culture*.

☆ TEXAS ☆

Texas Beekeepers Plan Short Course on Africanized Honey Bees

The **Texas Beekeeper Association**, will have it's annual meeting in Galveston, November 5 - 7, 1987 and will feature a number of events dealing with Africanized honey bees.

A special short course designed primarily for hobby and sideline beekeepers will be offered Thursday, November 5 by Dr. Larry Connor, Beekeeping Education Service, Cheshire, CT. This is the fifth annual short course offered by Dr. Connor for the Texas Beekeepers Association.

Titled "A Rational Orientation to Africanized Honey Bees", the program will deal with the many and varied challenges posed by these bees.

The objective is to establish a solid base of information for Texas beekeepers about these bees — so they have factual information to deal with, and not misinformation.

The short course held November 5, precedes the TBA convention and requires a special registration f ($30 per person; $50 per couple o business partners; $20 High School and College students). For registration information contact Margie Coplin, 3512 Jack Beaver Road, Arcadia, Texas 75717. Phone (409) 925-6336.

The program will be held at the Best Western Galveston Resort, 600 Strand, Galveston Island, TX 77550. Registration for motel rooms is $35 per night as part of the Texas Beekeepers Association Annual Convention. (409) 765-5544.

☆ WISCONSIN ☆

Educational Teleconferencing Network (ETN) offers discussion on Honey Bees

Wisconsin beekeepers have an opportunity to "sharpen" their overwintering bee management skills.

Fall and winter management of honey bee colonies will be discussed over the **Educational Teleconferencing Network (ETN)** on Octobe 8, 1987, at 8:00 - 9:50 p.m.

This free program is offered via the University of Wisconsin Extension Educational Teleconferencing Network which provides two-way voice communication between 200 sites throughout the State. Beekeepers interested in attending this program should call their local Extension office so the building and/or (ETN) room will be open that evening.

Annual Convention

The **Wisconsin Honey Producers** annual convention will be held in Madison on October 29, 30, and 31 at the Holiday Inn No. 2. It will have something for both hobbyists and commercial beekeepers. The main speaker will be Dr. James Tew from A. T. I., Wooster, OH.

Speakers from neighboring states will talk on beekeeping subjects and prominent personalities from Madison will be on hand, giving lectures and information. There also will be a woman's program this year!

A continuous silent auction will be held Friday, with the lucky bidders receiving their items at the Queen Reception.

For more information contact Wally Nass, N9596 Hustisford Road, Watertown, WI 53094.

☆ 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.

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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)

Propolis U.S.A., Route 8, Hayward, WI is again buying FRESH propolis hive scrapings. Send 5 to 10# sample which we pay for. (715) 634-4274. (12/87)

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)

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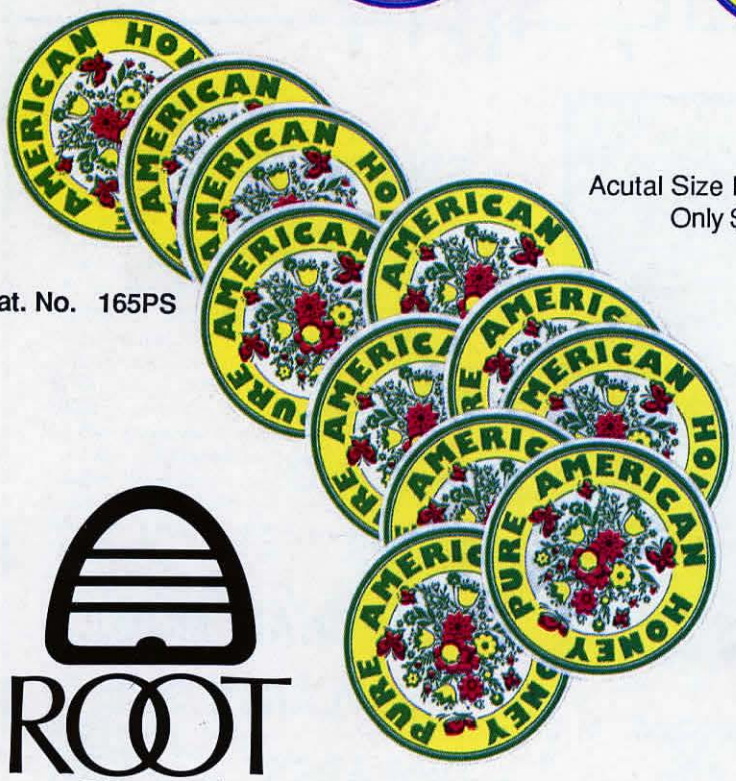

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