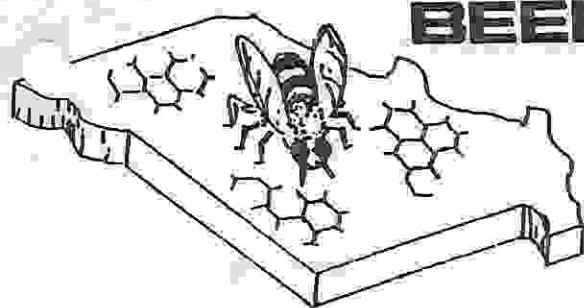


# MISSOURI STATE BEEKEEPERS ASSOCIATION



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VOLUME 28

QUARTERLY NEWSLETTER  
SUMMER, 1990

NUMBER 2

## DEAR BEEKEEPING FRIENDS:

Many times this spring I have thought of Mr. Gene Killion's wonderful presentation he gave at the ABF meeting in January called The Joys of Beekeeping. We all look in anticipation for a new beginning with our bees each spring, and a bountiful crop of honey if we have been good managers of our bees. There are not alot of "joys" as I write this with another rainy week ahead of us. This has been the spring to test all of our reasons we like working with bees. From reports all over the state, beekeepers are experiencing lost or weakened colonies from starvation just in the past six weeks. Many of us feel that if your colonies make it through to March, we shouldn't have any more problems with colony loss. Beekeepers in the western and southwestern parts of Missouri are having problems with losses from the tracheal mite and I have talked with beekeepers in the area west of St. Louis around Sullivan, St. Clair and Union who feel that their colonies were lost or weakened because of the tracheal mite. I personally feel that starvation and low morale of the bees can certainly make you wonder about whether or not your bees are infested with mites. Elsewhere in this newsletter will be information about new methods in treating for tracheal mites. Sharon Waddell has reported that the varroa mite remains a serious problem in the south central section of the state, along with starvation as a result of rainy weather. Perhaps this spring weather is a mixed blessing, and has caused feral colonies infected with mites to die out. The clover has begun to bloom beautifully, so if we can manage to keep our colonies strong until the rain stops; we may have a great honey flow. Hard to believe--but it is time to start thinking about the Missouri State Fair. The best show honey should be harvested shortly after the frames are capped. That certainly could be by the time you receive this newsletter. The honey show rules and entry blanks are in this newsletter.

MISSOURI STATE FAIR  
SEDALIA-AUGUST, 16-26

# MISSOURI STATE BEEKEEPER ASSOCIATION

## FINANCIAL REPORT

March 16, 1990

Cash in Bank -- 9-2-89

\$ 2,097.78

### Income:

Dues	\$ 533.00
Interest	76.44
Cook Book Sales	513.00
State Fair Merchandise	54.50
Fall Meeting Meals	555.00
Fall Meeting Raffle	<u>127.00</u>

Total Income

1,858.94

### Expenses:

State Meeting - Rolla	\$ 755.79
Newsletter	690.85
Honey Promotion	587.69
1990 Fair Merchandise	125.50
Postage	52.44
Phone Calls	57.03
Slides	88.67
Plaque--Beekeeper of Year	51.42
Checks Printed	<u>8.11</u>

Total Expenses

2,417.50

Cash in Bank -- 3-16-90

\$ 1,539.22

### ASSETS:

Checking Account	\$ 1,539.22
Inventory -- Cook Books	576.00
Fair Merchandise	<u>660.80</u>

TOTAL ASSETS

\$ 2,776.02

# MISSOURI STATE BEEKEEPERS' SPRING MEETING SUMMARY

THE SPRING MEETING WAS SUCCESSFUL AND A LOT OF FUN. HOWEVER, IT IS IMPORTANT FOR EVERYONE TO REALIZE WHAT COSTS ARE INVOLVED WHEN HAVING A MEETING OF THIS NATURE. THERE ARE MANY ADVANTAGES TO HAVING THE MEETING AT A LOCATION SUCH AS THE RAMADA INN. WE CAN HAVE THE MEETING ON A DATE OF OUR CHOOSING MOST OF THE TIME. YOU CAN RUN INTO PROBLEMS IF YOU DO NOT PLAN FAR ENOUGH AHEAD. THE PARKING IS NOT A PROBLEM, WHICH IT IS WHEN WE HAVE THE MEETING ON THE MISSOURI CAMPUS. THE HOTEL TAKES CARE OF ALL THE SETUP AND TAKE DOWN OF THE ROOMS. THE SETUP AND CLEANUP IS A LOT OF WORK FOR INDIVIDUAL MEMBERS WHEN THE MEETING IS AT A LOCATION OTHER THAN A HOTEL, SUCH AS THE MEETING LAST YEAR IN ROLLA. EVERYONE LIKES TO HAVE REFRESHMENTS AVAILABLE (AND THEY ARE NECESSARY IN ORDER TO HAVE A GOOD MEETING) BUT WHEN WE HAVE A LARGE TURNOUT WE CONSUME A LOT OF COFFEE AND SODA. THE FOLLOWING IS A SUMMARY OF COFFEE, SODA, ROLLS AND OTHER EXPENSES.

## EXPENSES:

1	URN COFFEE @ \$50/URN	\$	50.00
1/2	URN COFFEE @ \$30/.5 URN		30.00
4	POTS COFFEE @ \$4/POT		16.00
4	POTS DECAF @ \$4/POT		16.00
65	SWEET ROLLS @ .95 EACH		61.75
65	MUFFINS @ .50 EACH		32.50
88	SODAS @ .75 EACH		66.00
2	LITERS ICED TEA @ \$2.50/L		5.00
	SUB TOTAL	\$	277.25
	16% GRATUITY		44.36
	6.675 % TAX		18.51

TOTAL (REFRESHMENTS ONLY)\$ 340.12

## FRIDAY NIGHT BOARD MEETING

COFFEE & SODA (PLUS TAX-TIP)	\$ 43.41
ROOM RENTAL	50.00
TOTAL	\$ 93.41

## SATURDAY LUNCHEON

77 LUNCHESES (PLUS TAX & TIP)	\$613.97
(74 + 3 GUESTS)	

GRAND TOTAL PAID TO HOTEL	\$1047.50
SPEAKER (HOTEL & TRAVEL)	179.16
TOTAL EXPENSE	\$1226.66

## INCOME:

MEALS (74 @ \$8 EACH)	\$ 592.00
AUCTION	483.00
TOTAL INCOME	\$1075.00

NET COST OF MEETING	\$ 151.66
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PROGRAM CHAIRMAN  
LARRY HENSLEY

# MISSOURI STATE BEEKEEPERS ASSOCIATION

## Membership Meeting

March 17, 1990

Ramada Inn Columbia, Mo.

The meeting was called to order at 3:50 p.m. by President Mike Vanarsdall.

The minutes of the previous meeting were read. Luther Blair made a motion for approval, second by Roger Creighton. Motion passed.

The Treasurer's report was given, as attached. Glenn Stags made a motion for approval, second by Walt Bigelow. Motion passed.

The President asked for members opinions on holding the Spring Meeting away from the University. Charles Wills commented that members need to support the Association by staying at the hotel hosting the meeting and eating at the noon meal since the meeting room is usually furnished at no cost when these services are well-used by those attending the meeting.

Jim Hausam was presented as the selection of the Executive Board for Beekeeper of the Year. Francis Scheidegger also nominated Sharon Gibbons for the honor. Both nominees were asked to leave the room. After much discussion, Walt Bigelow made a motion to elect both candidates as Beekeepers of the Year. Second by Glenn Stags. Motion passed.

Roger Creighton made a motion that the Association appropriate \$200 for use in promoting honey and beekeeping at the Governor's Conference on Agriculture and the annual Legislative Banquet. Second by Charlie Wills. Luther Blair suggested raising the amount to \$250. Discussion followed during which Willa Wainright offered to donate \$50 for this cause. Motion passed.

Larry Hensley expressed a desire to hold a joint meeting with Illinois beekeepers, possibly in 1991. He suggested a spring meeting which will require coordination with the Illinois association since their meeting is in June and ours is in March. Walt Bigelow made a motion to give the Board authority to follow through on Larry's suggestion. Second by Roger Creighton. Motion passed.

The President appointed a revenue committee to investigate ways of increasing the Association's treasury for funding more promotional events. Members appointed are Glenn Davis, Glenn Stags, and Jim Hausam.

Jim Hausam reported that the 1990 State Fair will be held August 16 through 26. He is looking for volunteers to help man the sales booth. At this time, three local associations have offered to staff the booth on three different days. Two more locals and two individuals also offered their assistance.

Larry Hensley announced that the Fall Meeting will be held October 20 at the Quality Inn in Springfield, MO.

As there was no further business to discuss, the meeting was adjourned.

Respectfully submitted,



Jim Thaxter  
Secretary

**AMERICAN BEEKEEPING FEDERATION**  
For Immediate Release  
Contact: Troy Fore - 912-427-8447 or 912-427-4018  
May 28, 1990

## **HONEY BOARD REFUNDS TO BE ON BALLOT**

The 1991 referendum to determine the continuation of the National Honey Board should include a question on the assessment refunds, the House Agriculture Committee has decided.

As the committee "marked up" provisions for the 1990 Farm Bill, it included a list of amendments to the Honey Research, Promotion, and Consumer Information Act, the enabling legislation of the Honey Board.

At the request of the American Beekeeping Federation, the committee is proposing that the 1991 referendum ballot have two questions. The producers and importers would be asked to determine whether the Honey Program program should be renewed for an additional five years. They would also determine if the refunds should be ended. The National Honey Packers and Dealers Association is supporting the amendment to allow the vote on refunds.

A variety of other "housekeeping" amendments to the law were included in the proposal approved by the House committee. These include some refinements and "fixes" for problems which surfaced since the Board began collecting assessments in February 1987.

## From the Editor

AGRI-MO projects have received extra funding at the last state meeting. Thanks to Willa Wainright for donating \$50 to the fund. Currently as a commodity organization in Missouri, MSBA participates in two annual functions to promote honey (besides the State Fair). The Governors' Conference on Agriculture at which we served over 1200 people last year, and the Legislative banquet which serves about 600 people. Volunteers are needed as much as the money. We were unable to get enough volunteers for the Spring Festival at Silver Dollar City. It was a busy time in beekeeping for all of us. I'd appreciate anyone interested in helping in the future. It would make it easier to know who to call on for help. The more we can promote honey, the more we all will sell.

I'm disappointed to announce that the Secretary of Agriculture, Clayton Yeutter did not appoint me as alternate member to the National Honey Board. He passed over me and appointed Harry Fulton from Mississippi for the position. I have written to him for an explanation.

Other news from The National Honey Board is that Dan Hall has resigned as executive director. Mary Humann has assumed the position as acting director until a replacement can be named.

I didn't have space for a section on beginning beekeepers this time. I want to try to give words of encouragement to any of you new beekeepers. This is a difficult year to keep bees for even the most experienced beekeepers. I am hearing reports of many lost colonies because of starvation. Many other pests are taking advantage of low hive morale, especially ants. I even saw a copperhead snake slithering in front of one of my hives this week. Watch for brood diseases such as foulbrood. If in doubt, please ask for help from other beekeepers. Above all, feed them sugar syrup if they can't forage because of rain. Do not feed sugar though if you have already put on honey supers. The following article was written by Allen Holt, Editor of the Kentucky Bee Line about his experiences. Maybe it will make our problems seem small.

At one time when I started out keeping bees I had six hives. I lost all of these one winter. The reason was foulbrood. I didn't know what was going on. An experienced beekeeper looked at my hives and enlightened me. The best tool a beekeeper has is awareness. That is, awareness of what is going on.

This past winter I lost some colonies - a total of 16 out of 50. This is about 30%. I had more awareness this time around and had taken some action. The problem this time is mites. I had begun treatment last fall with menthol. Otherwise my losses would be much larger.

Last year I began a plan to increase the number of my colonies. I ordered queens direct from the South. They brought the mites with them. I know this because a new beeyard with only those queens introduced in new colonies showed the most infestation. I must admit that some of my losses were due to poor management - misjudging the amount of honey that the bees would need over the winter.

It looks like the tracheal mite has slipped up on us. And is all around. We will have to become more aware of his presence. And be prepared to treat for control and prevention. I am going to treat for tracheal mites with menthol on a regular basis. Just as I treat regularly for foulbrood.



BEEKEEPER OF THE YEAR for 1990 was selected by the membership at the Spring meeting of MSBA. At the meeting, Jim Hausam was presented as the selection of the Executive Board. However my name was entered into nomination from the floor, and in the proceedings that followed; the membership could not decide on who should receive the award, and decided to give the award to both of us. I'm sorry that I didn't have the foresight to remove my name from nomination at that time. I appreciate the acknowledgement of my service to the Missouri State Beekeepers Assn., but I feel that we should honor only one member each year. I feel that Jim Hausam has been the silent, behind the scenes, worker for MSBA for so many years; that he deserves this award all to himself. Besides taking care of the finances of this association, he has worked tirelessly each day of the ten day State Fair for the past several years. With that in mind, I would prefer that my name be stricken from the vote so that Jim would not have to share this award with anyone. He has earned it and deserves it. My time can come some other year. Therefore, Beekeeper of the Year for 1990 will be awarded to Jim Hausam at our Fall Meeting in Springfield, October 20, 1990. Please come and show him your appreciation for a job well done.

Thanks Again,  
Sharon Gibbons

\* \* \* \* \*

#### 1990 MEMBERSHIP DUES ARE NOW PAST DUE

This will be the last newsletter for those members who have not renewed for 1990. If you intend to renew your membership, please save me the work of removing your name from the files by renewing now. Also if you change addresses, please send me your new one. It costs 95 cents to reissue your newsletter. If anyone knows of someone not receiving their newsletter, please contact me. New members since March will receive the last newsletter along with this one as the bulk mail is so much more economical.

\* \* \* \* \*

WELCOME TO THE SOUTHCENTRAL BEEKEEPERS ASSN. They have 28 members who meet the first thursday of the month at the Howell- Orgon Electric Coop in West Plains. Please contact President Sharon Waddell at 417-256-8948, or Secretary Marge Kiltten at Rt.2, Box 2746, Alton, Mo. for more information about dates and times.

## VOLUNTEERS NEEDED FOR STATE FAIR BOOTH

We have had good response for help at the honey booth at the State Fair. However, we do need more help, especially for the second weekend of the fair. The American Honey Queen will be with us on the first weekend. The good news is that the honey exhibit has been returned to the east end of the building next to the honey booth. Thanks to Mr. Alwell and the Agri-Mo staff, as well as several outspoken beekeepers for their efforts.

The following is the list of volunteers Jim has for the days of the fair. Any additional volunteers, please contact Jim Hausam at 816-668-3456 after the last week of June. He will be gone for several weeks vacation in June.

August 15th: Set-up Jim Hausam-can anyone else be there?

August 16th: Truman Hardin, Charlie Wills, members of Boone Regional Beekeepers Assn.

August 17th: Two Rivers Beekeepers Assn.

August 18th: Robert Cantrell, Clarence Vogeler, R.&E. Hoover, (we need at least two more people.)

August 19th: same as above plus Mid-Mo Beekeepers Assn.

August 20th: Walter Bigelow, C.&K. Schwartz (need two more)

August 21st: Nelson, S Gibbons and P. Burleson

August 22nd: S. Gibbons, P. Burleson, and Mo.Valley Beekeepers

August 23rd: Mid- Mo. Beekeepers

August 24th: NO VOLUNTEERS

AUGUST 25TH: S. Gibbons WE NEED AT LEAST FIVE MORE VOLUNTEERS.

August 26th: same as above

Mary Hausam (sister-in-law of Jim) has been asked to do cooking demonstrations with honey in the Home Economics Bldg. She will do them daily. Look for her there.

Remember to mark your calender for the Fall State Meeting October 20th in Springfield. We had such an enthusiastic group at the spring meeting and hope we will have a great turnout in fall. We had nearly 100 people in attendance. Hope you all got your group picture that Francis Scheidegger took.

A special thanks to Luther Blair for doing such an outstanding job handling the auction. Everyone had alot of fun, plus the money raised by the auction offset some of the expenses. The auction produced \$483. THANKS AGAIN LUTHER.



# News

AMERICAN BEEKEEPING FEDERATION  
For Immediate Release  
Contact: Troy Fore - 912-427-8447 or 912-427-4018  
May 28, 1990

## HOUSE AG COMMITTEE APPROVES HONEY PROGRAM

The House Agriculture Committee has approved the continuation of the honey loan price support program as part of the 1990 Farm Bill. The approval came on May 22 as the committee "marked up" subcommittee proposals for the Farm Bill.

Despite appeals from the beekeeping industry, however, the committee approved the continuation at the 1990-crop support rate (54.02¢), not the requested 1989 support level (56.86¢). The support rate would be the same for the honey crops for the years 1991-1995.

A month earlier, the Senate Agriculture Committee had approved the 56.86¢ rate for the five years of the Farm Bill. If the rates which have been adopted stand through the floor debates in each chamber, the difference in the rates will have to be reconciled in a conference committee.

A House ag subcommittee had earlier approved the higher, 1989-crop rate. Apparently, the full committee adopted the lower rate in an effort to deflect criticism of the program from other Congressmen and from the Bush Administration.

Secretary of Agriculture Clayton Yeutter had reviewed action of the various House agriculture subcommittees from the Administration's perspective in a letter to Rep. Kika de la Garza, chairman of the House Agriculture Committee. The subcommittee's honey program proposal would cost an additional \$115 million over the life of the Farm Bill, Mr. Yeutter said. He contrasted the proposal to freeze the support at the 1989-crop rate with the current program, which, if extended, would reduce the support rate 5 percent per year.

(more)

"The adoption of the lower support rate by the House Ag Committee clearly shows that beekeepers are going to have to work hard to have a reasonable support program in the 1990 Farm Bill," said Don Schmidt, vice president of the American Beekeeping Federation and chairman of its legislative committee. "We sure are not home free."

Mr. Schmidt encouraged beekeepers to write to their Congressmen and Senators to say how much the loan program means to them and to their beekeeping operations. "The beekeeping organizations can do a lot in Washington," he said, "but there is just no substitute for that letter or telephone call from the voters back home."

As the debate on the 1990 Farm Bill intensifies, the farm subsidy programs are coming under fire from several Congressmen. A coalition has been formed by 15 House members who say they are committed to reducing government subsidies to farmers. On the same day the House committee approved the honey program, placed a limitation of \$250,000 on the payments a farmer could receive under the wool program.

Both the House and Senate agriculture committees have announced that they reserve the right to review any commodity support programs in light of budgetary constraints before they report out their bills. The Senate committee has interrupted its consideration of commodity programs until a six-member panel can devise a price support system acceptable to both Republicans and Democrats on the committee. Whether this system would be applicable to the honey program is unknown.

# # #

## COLOR CODING YOUR QUEENS

This years color to mark your queens is the color **BLUE**. The complete international five year color code for marking queens is as follows:

If the year ends in	0 or 5 : Blue	1990 or 1995
	1 or 6 : White (Gray)	1991 or 1996
	2 or 7 : Yellow	1992 or 1997
	3 or 8 : Red	1993 or 1998
	4 or 9 : Green	1994 or 1999

# INNER COVER

Last month we published an article describing a couple of ways to check honey bees for tracheal mites.

Since then we had an opportunity to talk with Dr. Alan W. Smith, of Ohio State University, who actually discovered the techniques we credited solely to Dr. Glen Needham. Dr. Smith was a graduate student at the time, studying mite biology, and he needed a good way to find mites in honey bees. The technique we described was his and it is accurate and easy.

But Dr. Smith has done more than discover an easy way to find mites. However, I'm getting ahead of this story.

Awhile back, when Dr. Smith was in the middle of this, Dr. Rob Page, now at Davis, CA was working on a mite resistance program at Ohio State. One part of the project had to do with isolating mites so he could infest bees with a known number of these pests. He kept putting individual mites in these little paper cups he had, but they kept climbing out, looking for lunch.

To stop this lunch break, as it were, he placed a barrier on the lip of the cup. He used vegetable oil, because it was handy, and because it worked.

Later, he discovered that those bees, exposed to mites in cups with oil on the rim, didn't get infested. It took Dr. Page a while to put two and two together, and when he did he passed the information on to Drs. Smith and Needham.

They took this serendipitous observation one step further and devised a series of experiments to try and explain why this was happening. But I'm getting ahead of my story again.

Dr. Smith had earlier set up four colonies of clean bees. To these he added mite infested packages and over a period of time described how an infestation builds, and what happens to the colony as it becomes infested.

We hope to have the study in detail later but I took notes on the highlights. They were pretty amazing.

The four colonies each reacted differently to the infestation. One colony slowly rose to a 60% infestation level; one only to a 45% level, and then trailed off to nearly nothing; one rose to about an 80% infestation level, but the mite population crashed during winter, and the last hit nearly 100% and died. The explanation — genetic variability between queens.

Dr. Smith also found a 3:1 ratio of females:males in spring (the highest population time, and the time of greatest bee-to-bee infestation rates). The rate dropped to 1:1 during the winter.

Most exciting was that he found female mites move from old bees to young bees by choice and selection, not random chance. It seems that the integument (skin) of a honey bee is very attractive to mites when the bee is four days old or less. Therefore, a female mite who has crawled out of a trachea and is hanging onto a few hairs, can tell a young bee from an old one when she's close. If the bee is of the right age the mite moves over, heads for the trachea and sets up house. Obviously, there are far more young bees in a colony in the spring than in the late summer or fall — a fact to keep in mind.

Dr. Smith needed to find out how mites were able to do this, so he set up a test where a female mite had a choice — go to a young bee or old bee — and the mite chose the young bee every time. But, interestingly, a mite would choose an old bee rather than die. Certainly it is to the advantage of the mite to choose a bee who will live a long and fruitful life rather than one that may die soon — no dummies these mites. Dr. Smith later found that there are several saturated and unsaturated hydrocarbons on the surface of a bee, and that these change when a bee is about four days old. Mites are able to detect this change with receptors on their feet and on their mouthparts. They can really tell age by feel.

Drs. Smith and Needham were at about this point when Page walked in with his observations on mites, bees and vegetable oil. Isn't it strange how these things work out sometimes?

Anyway, the proverbial light bulb goes off and several ideas sprouted in

these fertile minds. Why couldn't wouldn't mites that had come in contact with oil then infest bees? Maybe the oil was simply toxic to mites. Apple growers spray their trees in spring with an oil to kill overwintering mites. The oil coats the mites and they suffocate. Or, maybe the oil was interfering with the mites' chemo receptors and it couldn't find the bee, or didn't recognize a bee when they found one.

To find out which, they made some small wire cages, about the size of a quart jar or so. In these they hung a strip of cloth that had been soaked in vegetable oil, and added both infested and clean bees. To other cages, they added cloth strips with no oil, and infested and clean bees. After about a week, the clean bees in the oil treated cages were still clean — every one of them. Meanwhile, about a quarter of the clean bees in the untreated cages were infested. Score one for the oil.

Next test — expose clean bees to an oil soaked strip, then add them to an infested colony. Real world stuff here with the same results — treated bees stayed clean, untreated were infested.

Score another for the oil.

*Continued on Page 306*

## Recipe for Success

“... add sugar to shortening and mix thoroughly ...”

Another observation made by Dr. Eric Mussen in CA certainly supports these findings. Dr. Bill Wilson in TX has picked up on this, too. What they've seen is that beekeepers who fed their colonies either pollen supplement or terra patties this spring, and used vegetable shortening as a base (Crisco and the like), had reduced, and in many cases NO mite problems later.

In the *Globe* this month, there is a report released from the ARS that mixing menthol with vegetable oil speeds the evaporation of the menthol. This, says Dr. Bill Wilson, is a good thing to have happen.

However, in light of this new information (or old information used in a new way) I wonder if the oil has something to do with the increased efficiency. This sort of double whammy might be just what we need.

Well, the story ends here. A lot of people are interested in this phenomena and are trying to find out the what's, why's and wherefore's of it. In the meantime, some pretty sound advice has come out of this. If you can, get some vegetable shortening to your bees, right now! Don't use terra though, that's not legal everywhere. But shortening and sugar is.

Feeding bees is a time honored tradition. Powdered sugar seems better than granulated. Don't use a lot of shortening, just enough to hold the sugar together. We've listed some recipes we've already tried — bees will eat the sugar and spread the oil throughout the colony. It's too early to tell if this will cure or control mites on a colony wide basis, but all the evidence points in that direction. Spring is the best time to do it too, because that is when there are the most young bees, and the most mites.

I don't think menthol used in the regular way should be abandoned though. Especially in the south, where the fall weather allows a long enough exposure time after removing the honey. However, in the north this isn't always the case, and a sugar/shortening feed will certainly help.

If you are interested in putting a mix on your colony, all common recipes call for a mix of 1:2 ratio of shortening:sugar. One lb. of shortening and two lbs. granulated sugar makes about 6-8 patties — enough for that many colonies. □

**KIM FLOTTUM**

#### MENTHOL TREATMENT FOR HONEY BEE TRACHEAL MITES

1. Place 50 grams, or 1 3/4 oz. (by weight) of menthol crystals in a plastic or aluminum screen envelope (7 in. x 10 in.)
2. Fold over edges and staple shut.  
 Note: Colonies should not be treated with menthol when honey supers are on the hive. Be sure to read and follow label instructions.
3. Menthol packets should be placed on the bottom board or on the top bars of the top brood chamber.
4. When the daytime temperature is above 80 ° F. place the packet on the bottom board.  
 Note: If menthol is placed on the top bars and the temperature rises above the melting point of menthol, it will run down on the brood and the strong vapors will force the adult bees out of the hive.
5. When the daytime temperature does not reach 60 ° F. menthol packets should be placed on the top bars of the top brood chamber to take advantage of the heat generated by the cluster.

Note: If menthol packets are placed on the bottom board during cold weather, the menthol does not evaporate fast enough to achieve good control of the tracheal mite.

SINCE WE HAVE A LOT OF CONCERN AND DOUBT ABOUT WHETHER OR NOT WE BEEKEEPERS ARE SEEING COLONY LOSS RESULTING FROM STARVATION OR POSSIBLY THE TRACHEAL MITE, JOE FRANCKA (THE STATE APIARY INSPECTOR) RECOMMENDS THAT YOU HAVE YOUR BEES TESTED BY THE FOLLOWING PRIVATE DIAGNOSTIC SERVICE.

#### APIARY DIAGNOSTIC SERVICES

KATHARINE GARRISON  
 27109 OLD SWEDE CREEK ROAD  
 OAK RUN, CALIFORNIA, 96069  
 (916) 472-3854

The breakdown of laboratory services offered and respective prices as of June 1, 1990 is as follows:

- 11 dissections for tracheal mite are 20 cents per dissection.
  - 50 bee sampling (generally a sample per apiary) \$10.00 ea.
  - 20 bee sampling (individual hives) \$ 4.00 ea.
- A shipping and handling fee of \$2.50 is required if you wish your sample vials sent back to you after processing.

I also offer instruction for tracheal mite dissection method. The fee is \$50.00 per individual.

Note: Send samples in Isopropyl Alcohol. You don't have to have the bees swimming in it, just enough to cover the top of the bees. Write your sample I.D. (#1, #2, etc.) in pencil, just in case the vials leaks in transit.

#### TRACHEAL MITE CONTROL BY WILLIAM T. WILSON Weslaco Bee Lab

It is not known exactly why bees infested with tracheal mites die. Their tracheae become plugged with mites and mite debris, and the bee flight muscles may be deprived of oxygen. Toxic substances from the mites or mite feces may be involved. The mites could act as carriers of viruses or other disease agents. Problems of general stress on the colony, such as a poor queen, nosema, pollen shortage, or other factors, may contribute to colony mortality, but cannot account for all tracheal mite damage.

Currently the main- and only legal- control agent in the U.S. is menthol. It is effective against mites but not against wax moths or Varroa. It is estimated that 50-100 tons of menthol were used by U.S. beekeepers in 1989. Used appropriately, both natural menthol and a synthetic kind (L-form) are effective, but an isomer (D-form) is not.

Amitraz in several formulations was also effective in controlling tracheal mites in tests done near the Texas-Mexico border and in Nebraska. Other potential control measures that are being researched ...included the use of formic acid and introducing vegetable oil into a hive (as in an oxytetracycline extender patty for American Foulbrood control), which may prevent the mites from identifying and entering young adult bees.

# News

## AMERICAN BEEKEEPING FEDERATION

For Immediate Release

Contact: Troy Fore - 912-427-8447 or 912-427-4018

MAY 28 1990

### ASCS Offices to List Honey Buyers

In an effort to reduce loan program forfeitures by helping honey producers and honey buyers get in touch with each other, the American Beekeeping Federation and the USDA's Agricultural Stabilization and Conservation Service have developed a system by which prospective honey buyers can be listed in county ASCS offices.

"We realized that many producers were forfeiting their honey to satisfy their loans because they simply didn't know who would want to buy it," said ABF President Bob Brandi.

"Forfeitures increase the cost of the honey program. The more the program costs the government, the harder it is to justify its operation and to convince Congress to keep it going.

"A lot of producers who got into the business when forfeiture was the custom never developed a relationship with buyers. On one hand, we had producers who were forfeiting honey even though they could realize a bit more from it by selling it on the market," Mr. Brandi noted. "On the other hand, we had packers looking for honey. We approached ASCS to see how we could remedy this situation."

After ABF Secretary Troy Fore wrote to Dan Shaw, ASCS deputy administrator for state and county operations, inquiring about possible avenues for solutions, Mr. Fore and former ABF president Binford Weaver visited with Mr. Shaw in his Washington office.

"Once he had a clear idea of what we wanted and what we felt it would accomplish, Mr. Shaw was very interested," Mr. Fore said. "He saw that we both had the same goal: to operate the honey program in a manner to cost the government the least money and to benefit the honey producer the most."

The most workable solution seemed to be to provide a list of prospective honey buyers to county ASCS office to post on their bulletin boards. The Federation offered to solicit the names, to collate them by states, and to provide them to Mr. Shaw to distribute to the appropriate state offices, if this would be necessary to make the program work.

Mr. Shaw agreed to present the project to Department of Agriculture attorneys for approval. On May 22, he wrote Mr. Fore that the plan had been approved. He had already prepared instructions to be distributed to state and county ASCS offices "which provide that county offices shall post the names and addresses of all honey buyers that have expressed an interest in purchasing honey."

"We appreciate (the Federation's) interest in the honey price support loan program, and thank you for the opportunity to respond to your request," Mr. Shaw wrote.

"This is probably all we can do on this," said Mr. Brandi. "Now we just encourage buyers to get on the lists in those states from which they want to buy honey, and we encourage producers to consult the lists and solicit offers from the buyers."

#### How It Will Work

- Any honey buyer wanting to be listed in the county ASCS offices of a state should contact the ASCS office for that state.
- State offices will prepare a list and distribute it to its county offices.
- County offices will post the list for public inspection. They will not post individual honey buyers' advertisements; nor will they assist honey buyers or honey producers in honey sales transactions.

NOTE: A list of the state ASCS offices is available from the American Beekeeping Federation office, P.O. Box 1038, Jesup, GA 31545, ph. 912-427-8447.

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## It's time for the fresh, sweet taste of fruit and honey

This summer, the National Honey Board will team up with California Summer Fruit to promote a fresh, sweet taste.

A honey dressing for peaches, pears, plums and nectarines will be demonstrated in the produce sections of key supermarkets in nineteen markets. Sweet samples along with brochures highlighting honey and fruit recipes will be distributed at the demonstrations.

"We want to lift the typically low summer sales of honey," said Dan Hall, executive director for the National Honey Board. "By positioning honey in the produce section and sponsoring in-store demonstrations, we are guaranteed success."

To expand the honey produce tie-in, honey will be featured with apples in Phoenix and grapefruit in Minneapolis. These tests may lead to additional cooperative programs with the apple and grapefruit industries in future years.

To support the summer programs, the Honey Board will co-sponsor a national radio and television publicity tour as well as a full page color story featuring honey and fruit recipes in newspapers' food sections.

To extend honey's visibility in the produce section, the Honey Board has developed display bins, available for purchase at cost. (\$12 each or \$45 for five — includes shipping and handling.) The bright yellow free-standing "it's time for Honey" displays can hold up to 50 lbs. of honey.

Let your customers know that it's time for fruit and honey!

The "it's time for the fresh, sweet taste of fruit and honey" promotion

will take place

TO LIFT THE LOW SUMMER SALES

in these markets:

Atlanta  
Baltimore/DC  
Boston  
Buffalo  
Chicago  
Dallas/Ft. Worth  
Denver  
Houston  
Kansas City  
Miami  
Milwaukee  
Minneapolis (grapefruit)  
Phoenix (apples)  
Pittsburgh  
Portland  
Richmond/Norfolk  
San Antonio  
San Francisco/Bay Area  
Seattle  
St. Louis  
Tampa/Orlando

For additional information, contact the National Honey Board office.

## Board targets health food stores with Celestial tie-in

The Honey Board will team up with Celestial Seasonings Teas this fall to promote a healthy pair.

The promotion will focus on health food stores and will feature a mail-in rebate and offer for healthy honey recipes.

The program, scheduled to be launched in September, will include display and shelf tear pads featuring the special rebate/recipe offer.

## Keeping informed—The Honey Board newsletter

Volume 3, No. 2

The National Honey Board Newsletter is published quarterly to inform honey producers, importers and handlers about the Board's promotional programs. Information in this newsletter may be used or reprinted with acknowledgement to the National Honey Board.

If your mailing address is changing or you receive more than one copy, please contact the National Honey Board office.

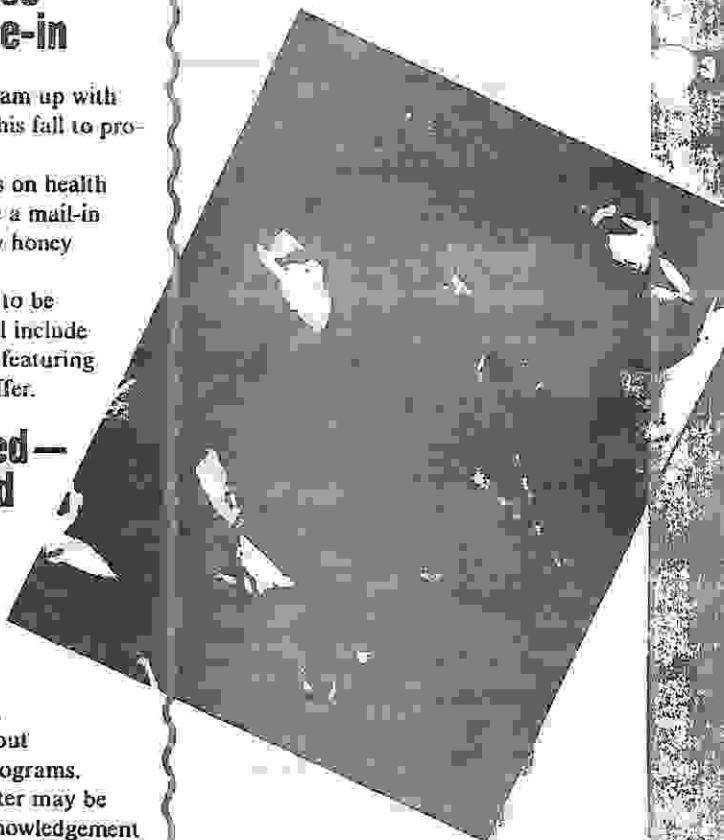
## Releases highlight Spring honey uses

Passover, Valentine's Day and bread with a twist were highlighted in recent National Honey Board releases sent to newspapers across the country.

Developed for Passover, the Honey Walnut-Fruit Tart blends all the ingredients representing purity and tradition to the Jewish people. The recipe combines the basic elements of Charoseth—a mixture of honey, fruit and nuts—which is a ceremonial replication of the mortar used to cement the bricks which built the pyramids in Egypt.

Honey Grapefruit Delight, a simple dessert which is rich in taste but not in calories, was featured in a special Valentine's Day release (pictured below).

Ancient and ethnic bread recipes with honey were reviewed in a third release. The release was complemented with a recipe and photo of Savory Honey Braid — honey bread with a twist!







USDA Interagency  
Technical Working Group  
on the  
Africanized Honey Bee

## Apiculture Awareness

APRIL, 1990

VOL. 3, ISSUE 4

### APHIS' CURRENT ACTIONS AND FUTURE PLANS FOR THE AFRICANIZED HONEY BEE (AHB)

#### CURRENT APHIS ACTIVITIES

##### 1. Traditional Ongoing Activities in the United States

APHIS has been active in successfully excluding over 15 isolated artificial introductions of AHB during the past 7 years. In addition, since 1922 APHIS has regulated the importation of honey bees and honey bee germ plasm. The regulation was amended in 1976 to prevent the introduction of AHB.

##### 2. Cooperative Program in Mexico

Since 1987, APHIS has been conducting a cooperative program in Mexico with the Secretaria de Agricultura y Recursos Hidraulicos. The program was designed to slow the northern movement of AHB and develop management technologies for keeping desirable strains of honey bees in Africanized areas. AHB has continued to expand through Mexico, but at a much reduced pace. This indicates the first objective of the cooperative program has been met, therefore; this program will be terminated by October 1990.

##### 3. Coordination with the National Association of State Departments of Agriculture Cooperative Planning

APHIS is cooperating with the National Association of State Departments of Agriculture (NASDA) to develop a National Honey Bee Certification Program. The development of this program is a NASDA initiative being coordinated through the NASDA Honey Bee Steering Committee. The program is an attempt to standardize requirements for interstate movement of honey bees.

##### 4. Coordination within USDA

The Agency is a member of the USDA Interagency Technical Working Group (ITWG) for AHB. The ITWG is charged with coordinating USDA activities on the AHB issue. The ITWG chairmanship rotates among the member Agencies with APHIS as the current Chair. The USDA member Agencies responsible for AHB are: the Agricultural Research Service, Extension Service, Cooperative State Research Service, and the Office of Public Affairs. This group developed a Departmental Policy signed by the Secretary in January 1990. Based on this policy, APHIS analyzed a wide range of program alternatives and identified the other preferred alternative to be coordinated with the ITWG.

#### FUTURE PLANS

##### 1. APHIS Plan for 1990-1992

###### A. Continue to eliminate isolated introductions through:

- \* regulation of international commerce; and
- \* detection and response to isolated pioneer swarms preceding the arrival of the front.

2. *Conduct cooperative activities to prepare for arrival of the AHB front, specifically:*

- \* monitor AHB in Mexico (East and West Coasts) until the front arrives in Texas;
- \* cooperate with Texas in the detection and management of pioneer swarms in advance of the arrival of the AHB front;
- \* disseminate information on AHB occurrences in the United States through the Cooperative Agricultural Pest Survey Program;
- \* establish a cooperative infrastructure with ARS, State regulatory officials, and State coordinator for AHB identification;
- \* provide methods development support for field testing of technologies developed through research; and
- \* develop and disseminate information related to APHIS activities.

3. *Continue to participate with the NASDA Steering Committee in the development of a National Honey Bee Certification Program.*

4. *Support the State of Texas regulations to contain AHB introductions on a short-term basis.*

#### **APHIS REGULATORY POSITION**

APHIS does not intend to enact a quarantine or enforce emergency regulations in the State of Texas when AHB arrives. This decision is based on several key points:

1. *The State has a regulatory plan which does an excellent job of protecting the beekeeping industry of Texas and the rest of the States. Texas can respond more readily to the unique nature of pioneer swarms which do not lead to AHB establishment.*
2. *The first migratory swarms captured will be isolated cases and not connected with any mass expansion from Mexico. Texas will regulate when a swarm is captured and deregulate when no other AHB's are found within the immediate area. The State can regulate and deregulate in a much more timely manner than the Federal Government. The Federal regulatory process takes approximately 18 months to implement and much longer to rescind.*
3. *Federal regulations would likely be counterproductive to the certification program being developed by the NASDA Honey Bee Steering Committee. The certification program should be implemented before permanent regulations are necessary or possible for the expanding AHB front.*

Richard R. Backus  
Acting Deputy Administrator  
Plant Protection and Quarantine

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#### **AN UPDATE ON "MITICUR"**

The miticide "MITICUR" (manufactured by the NOR-AM Chemical Company) was to be reviewed by EPA for residues using data provided by NOR-AM. The review was to take place this past February, 1990. However, now EPA says (according to NOR-AM) that it will be the end of June, 1990 before they get to it. Therefore "MITICUR" will not be available as soon as NOR-AM thought. For further information, contact George J. Raymond, Marketing Manager, NOR-AM Chemical Co., P.O. Box 7495, Wilmington, DE 19803.

# No Killer Bees, Please!

## Battle Plans to Tame the African Honeybee

In 1956, a project to improve beekeeping in South America brought 46 honeybee queens from South Africa to Rio Claro, Brazil. It was thought that the African bee, *Apis mellifera scutellata* would be good breeding stock for beekeepers in tropical Brazil. While research was being conducted with the queens, an accident occurred that allowed 26 swarms headed by African queens to escape into the environment. By 1970, most of Brazil's bees were Africanized, and the Africanized bees were heading into Central America. Since then, they have moved northward at the rate of 200 miles a year and are expected to reach Texas in 1990.

These bees are popularly known as "killer bees," the subject of sensationalized newspaper and magazine articles. Movies have helped spread distortions about these bees that could cause unnecessary panic when they arrive in the U.S.

The sting of the Africanized bee is no different than that of the European bee that we have in North America. The big difference is in the aggressive or defensive behavior of the Africanized bee. When disturbed they react three times faster than European bees and pursue whatever caused the disturbance. Many of the stinging incidents that occurred in Latin America could have been avoided. They occurred only because beekeepers were initially unprepared and kept hives too near homes and confined animals.

According to researchers, there are seven major problems associated with the Africanized honeybee movement into the United States.

1. Africanized bees have the potential to exhibit extreme defensive behavior even with minimal disturbance. This behavior will impose a hardship on beekeepers and the general public.
2. Honey production has dropped in areas of Africanization. This will be especially true for the temperate U.S. where the tropically adapted Africanized type will be less effective

than the currently available European varieties.

3. The Africanized bee swarms and absconds much more frequently than European varieties. These behaviors will reduce honey production and increase negative feelings toward honeybees by the public.
4. Historically, when Africanized bees enter a new area, all commercial stocks of bees become Africanized if good management practices are not adopted.

*"People sometimes refer to these bees as more aggressive, but that's not really an accurate term. What they are is more defensive."*

—Thomas Renderer

5. Africanized bee identification is very difficult. The only method of identification currently available relies on a set of precise body measurements which statistically identify a sample of bees as Africanized. In general, Africanized bees are slightly smaller than European bees.
6. While effective as pollinators, Africanized bees will be difficult to use in pollination management systems due to their excessive defensive behavior and sensitivity to disturbance.
7. Recent research in cold climates predicts that Africanized bees will survive throughout much of the U.S. To help control Africanized bees, scientists are seeking to genetically change the attitude of the African bees by selecting those characters that are desired and eliminating those that are not wanted. The attitude adjustment that bee researchers seek would include attitudes of gentleness, non-swarms, high honey production, disease resistance and ability to overwinter.

In the future, beekeepers will need to

manage their hives with more persistence. Management will include the ability to know the exact origin of their stock. By marking the queen on the thorax with a dab of paint, the beekeeper will know that the queen was stocked and when to requeen a colony of bees.

Whenever a queen turns up without a mark on her back, she should be replaced with a marked queen. The beekeeper can tell how old the queen is from the mark, and the marked queen is easy to find among the many workers. The paint should last as long as the queen lives. The international five year code is: for years ending in 0 or 5, the color is blue; 1 or 6, white; 2 or 7, yellow; 3 or 8 red; and 4 or 9, green.

Some researchers are experimenting with new ways to mark bees with transmitters and bar codes. The miniature transmitters are glued to the back of bees to enable investigators to track their flights, thereby determine their foraging and mating behavior. The device is powered by an array of tiny solar cells and transmits infrared pulses that can be detected at a range of more than 1,000 meters.

The bar codes, alternating black and white lines of varying widths like those found on packaged foods, are the world's smallest. Nine stripes, less than one-tenth of an inch wide, are glued to the tiny hairs on the backs of bees. An electronic bar code reader at the doorway of the beehive records each bee's exit and entrance.

Scientists hope the bar code system will reveal such things as how hard honeybees work collecting pollen and nectar, the number of trips each bee makes, the length of time each spends foraging and how resistant bees are to pesticides.

"Keeping track of individual bees used to be almost impossible because they all look alike," says entomologist Stephen L. Buchmann, of the Carl Hayden Bee Research Center in Tucson, Arizona. "We couldn't easily monitor bees leaving and returning to their hives."

*Continued on page 11*

## BEES Continued from page 6

Now, we're keeping a dossier on each tagged bee to record its activity over a long period."

Another project by researchers is to improve hives for trapping swarms of Africanized bees. Scientists have determined exactly which odors attract these hybridized bees and how much room they like when they select a new nest. If Africanized bees arrive, these custom-made hives could be set out to trap bees and monitor areas for spread. If Africanized bees move in, they could be destroyed.

The traps will do two things. First, they will let scientists know if and when Africanized bees infiltrate the area and in what quantity. Second, they will provide information about existing European populations in the areas. Traps would be set up in long lines to intercept swarms as they move northward into an area.

Monitoring European bees now will tell scientists if Africanized bees spread parasites and if they change the native bee's body size and swarming behavior. That will give officials in other areas advance warning of what to expect and how fast.

Thomas Renderer, Agricultural Research Service geneticist, says "People sometimes refer to these bees as more aggressive, but that's not really an accurate term. What they are is more defensive." His group is working on finding natural and synthetic compounds to subdue the bees. One possibility is a mosquito repellent developed by Agricultural Research Service (ARS) in the 1950s called Deet. Deet is currently an ingredient in more than 30 insect repellents on the market. Deet quickly subdues bees in lab tests. Although the bees eventually recover, Deet makes them stop stinging at the moment, giving victims time to run away. "It's kind of like Mace in that it temporarily debilitates them," Renderer says.

He points out that Deet would have to be sprayed in the air near the person or animal being stung. In tests, spraying the compound directly on the skin before the attack was not as effective in subduing the bees as was permeating the air with it at the moment of attack.

For national parks and other outdoor public areas, scientists have developed a system for trapping and killing Africanized bees in a way that is environmentally sound. Officials could put out a sugar syrup bait and check to see what kind of bees have responded to it. If Africanized bees are there, they would put a couple of drops of poison in the a syrup to kill the bees. Since there is no spraying, risk to the environment is minimal.

Dr. Roger Morse, an entomologist with Cornell University writes in "Scientific American" that some of the ini-

tial responses to the Africanized bee in the United States are predictable. But, despite all efforts to the contrary, the descendants of *Apis mellifera scutellata*, the Africanized bee, will soon become a common sight in fields and garden throughout the southern United States, and perhaps even in the north. Honeybees both, Africanized and European, will continue to thrive, produce honey, and pollinate our crops, and as time goes by, the nickname "killer bee" will no longer be used for this much maligned creature.

Claude Wade, Outdoor Indiana

## Baklava Sundaes

Capture the luscious flavors of this rich Greek pastry in our easy-to-make dessert. Prepare the crispy cups and sauce a day ahead, then assemble just before serving.

6 sheets frozen fillo dough  
1/2 cup butter, melted

Vanilla ice cream  
Honey-Nut Sauce (recipe on page nine)

Thaw fillo according to package directions. Remove 6 sheets. Refreeze remaining fillo (see Fillo Facts on page nine). Place fillo on flat surface and cover with plastic wrap or a damp cloth towel. Remove one sheet at a time, leaving remaining fillo covered. Place one fillo sheet on work surface. Lightly brush with some of the melted butter. Top with another sheet of fillo. Repeat brushing and layering with remaining melted butter and fillo. With scissors, cut fillo stack into twelve 4-inch squares. Form fillo cups by pressing squares into muffin pan with corners extending above edges of cups. Bake in 400° F. oven for 5 to 8 minutes or until golden brown. Cool in pan on wire rack. To serve, spoon ice cream into fillo cups and top with Honey-Nut Sauce. Serve immediately.

Makes 12 servings

### Honey-Nut Sauce

This sweet, nutty topping is the crowning glory for Baklava Sundaes.

1/2 cup sugar  
1/2 cup water  
1/2 cup honey  
2 teaspoons fresh squeezed lemon juice  
1 teaspoon fresh grated lemon peel  
1 cup chopped walnuts, toasted  
In medium saucepan, heat sugar and water over medium-high heat until mixture comes to a boil. Reduce heat and simmer 5 minutes. Remove from heat and stir in remaining ingredients. Cool to room temperature before spooning over ice cream filled fillo cups.

Makes about 1 1/2 cups

TIP: To toast nuts, spread in single layer in shallow pan. Bake in 300° F. oven, stirring often, just until nuts are golden, about 8 to 10 minutes. Be careful not to overtoast. □

PAGE NINE





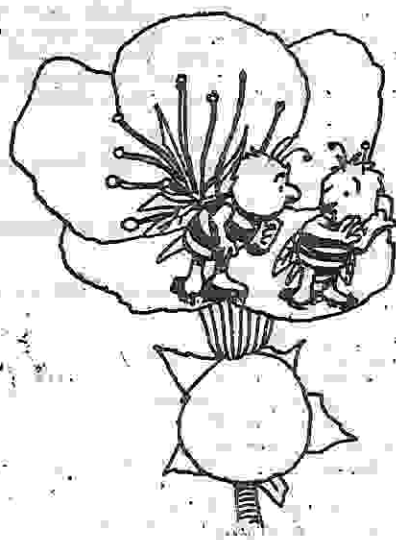
TYPE OR PRINT ALL INFORMATION

ENTRY WILL NOT BE PROCESSED WITHOUT EXHIBITOR SOCIAL SECURITY NUMBER.		SOCIAL SECURITY NUMBER		PLEASE ACCEPT THESE ENTRIES SUBJECT TO THE RULES AND REGULATIONS AS CARRIED IN THE 1990 MISSOURI STATE FAIR PREMIUM BOOK BY WHICH I AGREE TO BE GOVERNED, AND I FURTHER DECLARE THAT ALL STATEMENTS MADE IN CONNECTION WITH SAID ENTRIES ARE TRUE.
EXHIBITOR'S NAME				
ADDRESS		COUNTY		
CITY	STATE	ZIP		
AGE		TELEPHONE NUMBER (      )		EXHIBITOR'S SIGNATURE
				A separate form must be used by each exhibitor & department.
				This form may be duplicated
				USE OTHER SIDE FOR ADDITIONAL ENTRIES

[illegible]







"Here comes the queen... Look busy!"

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### Section C

## API CULTURE

Superintendent - Michael Brown, Lee's Summit, MO

Asst. Superintendent - Honey Cookery -  
Loretta Weller, Jefferson City, MO

Judges

Bee Culture - Gary R. Ross, Ottawa, KS

Honey Cookery - Viola M. Young, Columbia, MO

Amount offered by Fair in this Section ..... \$1,501.00  
JUDGING PROGRAM - Thursday, August 16, 9:00 a.m.

### Rules and Regulations

1. Exhibitors in Classes 1, 2, 16, and 17 are requested to pre-enter by mail and entries should be received by 5 p.m., August 8.
2. Exhibits that are to be shipped must be on the grounds not later than 3:00 p.m., Wednesday, August 15. All exhibits must be in place by 5:00 p.m., Wednesday, August 15.
3. No entries will be accepted after Aug. 15.
4. All exhibits must have been produced in a Missouri apiary of the exhibitor since the 1989 Fair. Dark honey may be a 1989 product but produced since the 1989 Fair. All exhibits must be under the direct management of the exhibitor. Premiums will be paid to Missouri exhibitors only.

5. No two exhibits of the same class shall be made by the same person or any member of his or her family, or from the same apiary. In the case of a company or partnership, the exhibits shall be entered in the name of the firm or company.
6. A class tag must be on each entry.
7. Exhibitors of Honey Cookery must have recipe shown with the exhibit. The recipe must be correct. The foods may contain some sugar, but this must be stated on the recipe. Preference will be given the exhibits containing the least sugar, other things being equal.
8. Shallow, Brood Frame, Cut and Section Comb honey should not be covered by an opaque covering on either side.
9. The exhibitor may place his name and address on his exhibit after the judging has been completed.
10. Signs on Apiary exhibits will be limited to 10" high x 14" wide in size.
11. Exhibitors may distribute honey recipes, bearing their name and address from their exhibit space.
12. Exhibitors will not be allowed to rearrange or remove any part of their exhibit, except bees which may be removed late in the evening to permit flight.
13. The judge will prepare a score card for each exhibitor in each class in both divisions, for the purpose of helping the exhibitor improve his or her exhibit.
14. Entries will be released at 5:00 p.m., Sunday, Aug. 26 and must be claimed by 8:00 p.m., Aug. 26, or they will be forfeited to the fair management.

### Division A BEE CULTURE

Amount offered in this Division by State Fair ..... \$1,224.00

Specials: A Grand Champion Ribbon will be awarded to the outstanding exhibitor in Apiary Products who has won the most premium money. In the event of a tie the Grand Champion Ribbon will be awarded to the exhibitor who has won the most blue ribbons. Further ties will be broken by proceeding to the next lower ribbon until a winner is determined.

### HONEY

#### Individual Classes

1. Display of Apiary Product, including bees in one frame observation hives, (one 5 3/4" frame of honey permitted above if desired) beeswax and at least 150 pounds of honey. Must include classes 2 to 15. Exhibitor has the privilege of pyramiding exhibit. The winner will be determined by the most total points accumulated on the score sheet in Classes 2-15. In the event of a tie the winner will be determined by exhibitor who has won the most blue ribbons in Classes 2-15. Further ties will be broken by proceeding to the next lower ribbon until a winner is determined.

\$40 \$35 \$25 \$15

2. Store display for retail outlets of a permanent nature. May be displayed as a table or floor display occupying approximately nine square feet of surface area. It may include comb and extracted honey, posters, artificial flowers, and any other items that add aesthetic appeal to the display. This class will be judged on attractiveness, quality of product, arrangement and appeal to customers, and should be a display from which honey would be sold.

\$25 \$20 \$15 \$12 \$10 \$8 \$6 \$4

3. Display of light extracted honey in standard honey jars, assorted sizes, 25 to 50 pounds.

\$12 \$10 \$8 \$6 \$5 \$4

- 4 Cut comb honey in plastic boxes, all sides visible. Six packages of approximately one pound.

\$12 \$10 \$9 \$8

- 5 Round or square section comb honey, six packages, with top and bottom of comb visible.

\$12 \$10 \$9 \$8

- 6 Light bulk comb honey, six 2 or 2½ pound jars

\$8 \$7 \$6 \$5

- 7 Dark bulk comb honey, six 2 or 2½ pound jars

\$8 \$7 \$6 \$5

- 8 Light extracted honey, six 1 pound jars

\$10 \$8 \$6 \$5 \$4 \$3 \$2 \$1

- 9 Dark extracted honey, six 1 pound jars

\$10 \$8 \$6 \$5 \$4 \$3

- 10 Sealed honey, white, brood size frame (9¼" x 17¾")

\$7 \$6 \$5 \$4

- 11 Sealed honey, white, shallow-depth honey frame (5¼" or 6¼" x 17¾")

\$7 \$6 \$5 \$4

- 12 White candied honey, unwhipped, six 2 pound jars, produced in 1989-1990

\$7 \$6 \$5 \$4

#### BEES AND BEESWAX

- 13 White Beeswax, 3-pound cake not over one year old

\$6 \$5 \$4 \$3

- 14 Yellow Beeswax, 3-pound cake not over one year old

\$6 \$5 \$4 \$3

- 15 Queen and her bees, with emerging brood, in one-frame observation hive. One 5¼" frame of honey permitted above bees if desired. Identification of Race preferred.

\$13 \$10 \$8 \$7

#### Group Competition

Any Missouri local beekeeping association may exhibit in any one or all classes listed below. All entries will be governed by the same rules as apply to individual competition. However, premium money will be paid to the local beekeeping association responsible for the entry, and ribbons will be awarded to the individual preparing the entry. Only one entry per class per individual will be permitted, however, other individuals may enter the same class from the same local association except that Class 30, queen and her bees, will be limited to only one entry per association. A Grand Champion Ribbon will be awarded to the association winning the largest amount of premium money. In the event of a tie the Grand Champion Ribbon will be awarded to the association that has won the most blue ribbons. Further ties will be broken by proceeding to the next lower ribbon until a winner is determined.

NOTE: Entries under group competition will not be competing against individual entries.

A portion of the premium money for the group competition was contributed by the Missouri State Beekeepers Association.

#### HONEY

##### Group Classes

- 16 Display of Apiary Product, including bees in one frame observation hives, (one 5¼" frame of honey permitted above if desired) beeswax and at least 150 pounds of honey. Must include Classes 17 to 30. Exhibitor has the privilege of pyramiding exhibit. The winner will be determined by the most total points accumulated on the score sheet in Classes 17-30. In the event of a tie the winner will be determined by the association that has won the most blue ribbons in Classes 17-30. Further ties will be broken by proceeding to the next lower ribbon until a winner is determined.

\$40 \$35 \$25 \$15

- 17 Store display for retail outlets of a permanent nature. May be displayed as a table or floor display occupying approximately nine square feet of surface area. It may include comb and extracted honey, posters, artificial flowers, and any other items that add aesthetic appeal to the display. This class will be judged on attractiveness, quality of product, arrangement and appeal to customers, and should be a display from which honey would be sold.

\$25 \$20 \$15 \$12 \$10 \$8 \$6 \$4

- 18 Display of light extracted honey in standard honey jars, assorted sizes, 25 to 50 pounds.

\$12 \$10 \$9 \$8 \$7 \$6

- 19 Cut comb honey in plastic boxes, all sides visible. Six packages of approximately one pound.

\$12 \$10 \$9 \$8

- 20 Round or square section comb honey, six packages, with top and bottom of comb visible.

\$12 \$10 \$9 \$8

- 21 Light bulk comb honey, six 2 or 2½ pound jars

\$8 \$7 \$6 \$5

- 22 Dark bulk comb honey, six 2 or 2½ pound jars

\$8 \$7 \$6 \$5

- 23 Light extracted honey, six 1 pound jars

\$10 \$8 \$6 \$5 \$4 \$3 \$2 \$1

- 24 Dark extracted honey, six 1 pound jars

\$10 \$8 \$6 \$5 \$4 \$3

- 25 Sealed honey, white, brood size frame (9¼" x 17¾")

\$7 \$6 \$5 \$4

- 26 Sealed honey, white, shallow-depth honey frame (5¼" or 6¼" x 17¾")

\$7 \$6 \$5 \$4

- 27 White candied honey, unwhipped, six 2 pound jars, produced in 1989-1990

\$7 \$6 \$5 \$4

#### BEES AND BEESWAX

- 28 White Beeswax, 3-pound cake not over one year old

\$6 \$5 \$4 \$3

- 29 Yellow Beeswax, 3-pound cake not over one year old

\$6 \$5 \$4 \$3

- 30 Queen and her bees, with emerging brood, in one-frame observation hive. One 5¼" frame of honey permitted above bees if desired. Identification of Race preferred.

\$13 \$10 \$8 \$7

#### Division B

##### HONEY COOKERY

Amount offered in this Division by State Fair ..... \$277.00

Special: A Champion Ribbon will be awarded to the outstanding exhibitor in the Honey Cookery Division and will be decided on total ribbon points; 4 points for 1st; 3 points for 2nd; 2 points for 3rd; and 1 point for 4th. In case of a tie, the exhibitor with the most total points on the score cards will be the winner.

A portion of the premium money for Honey Cookery was contributed by the Missouri State Beekeepers Association.

Note: The score card used in judging the Foods exhibits will be used in judging honey cookery and awards decided on total points. The recipes will receive consideration. They must be attached and correct. Preference will be given exhibits containing the least sugar, other things being equal.

##### Class

- 31 General display of uses of honey in preparation of bread, pastries, candies, also canning. (No open liquids.) Recipes attached.

\$20 \$16 \$12 \$8

32 Honey Fruit Cake, recipe attached	\$12	\$10	\$8	\$6
33 Light Honey Cake, recipe attached	\$10	\$8	\$6	\$4
34 Dark Honey Cake, recipe attached	\$10	\$8	\$6	\$4
35 Box of Assorted Honey Cookies, 1 pound (six kinds). Recipes attached.	\$10	\$8	\$6	\$4
36 Box of Assorted Honey Candies, 1 pound (six kinds). Recipes attached.	\$15	\$12	\$10	\$8
37 Loaf of Honey Whole Wheat Bread, recipe attached.	\$10	\$8	\$6	\$4
38 Loaf of Honey Quick Bread, recipe attached.	\$10	\$8	\$6	\$4

**SCORE SHEET FOR JUDGING APIARY PRODUCTS**  
**EXTRACTED HONEY**  
(Classes 3, 8, 9, 18, 23, 24)

1. Degree of Density	20 points
Above 18.6% moisture	0 or Disqualify
18.18.6	10
17.18	15
16.17	20
15.16	15
below 15	10
2. Freedom from crystals	10 points
3. Degree of cleanliness and freedom from foam (clarity)	20 points
4. Cleanliness and neatness of containers	10 points
5. Flavor and aroma	20 points
a. Absence of Off flavor, overheating, and fermentation	
6. Color	10 points
7. Appearance and suitability of containers	5 points
8. Accuracy and uniformity of volume	5 points
Total points possible	100

**CUT COMB HONEY AND BULK HONEY FRAME**  
(Classes 4, 5, 10, 11, 19, 20, 25, 26)

1. Uniformity of appearance	20 points
2. Absence of uncapped cells	10 points
3. Uniformity of color	15 points
4. Absence of watery cappings	10 points
5. Cleanliness of section and frame (freedom from stain)	15 points
6. Freedom from granulation and pollen	5 points
7. Uniformity of weight	15 points
8. Total weight of entry	10 points
Total points possible	100

**BULK COMB HONEY**  
(Classes 6, 7, 21, 22)

1. Neatness of cut	15 points
Rugged edges, parallel cuts, four-sided cut, and uniformity of size of cut	
2. Absence of watery cappings, uncapped cells, and pollen cells	15 points
3. Cleanliness of product	20 points
a. No travel stain, specks of foreign matter, flakes of wax, foam and crystallization	
4. Uniformity of appearance	25 points

5. Density, flavor and appearance of liquid part	20 points
A. Density determined as #1 under extracted honey	
6. Uniformity of volume	5 points
Total points possible	100

**CANDIED HONEY**  
(Classes 12 and 27)

1. Appearance, suitability, and uniformity of containers	10 points
2. Color	15 points
3. Crystallization (texture - smooth and fine)	20 points
4. Firmness of set (not runny but spreadable)	20 points
5. Absence of impurities, including froth, no blemishes	10 points
6. Flavor and aroma	20 points
7. Uniformity of volume	5 points
Total points possible	100

**BEESWAX**

(Classes 13, 14, 28, 29)

1. Color; white on class 13 and between straw and canary yellow on class 14 (undamaged by propolis, iron stain, etc.)	30 points
2. Cleanliness, freedom from surface dirt, honey and impurities	25 points
3. Freedom from cracking, shrinkage and marks	15 points
4. Aroma	15 points
5. Texture (grain)	15 points
Total points possible	100

**BEES IN OBSERVATION HIVE**

(Classes 15 and 30)

1. Bees; uniform color, size and correct type	15 points
2. Queen; age, size, shape, behavior and marking	20 points
3. Brood; compact pattern, show all stages	20 points
4. Variety; presence of queen, workers, drones, brood honey, pollen, etc.	15 points
5. Cleanliness and suitability of the comb	10 points
6. Appearance, cleanliness and suitability of observation hive	10 points
7. Correct number of bees for interest and ease of observation	10 points
Total points possible	100

**STORE DISPLAY**

(Classes 2 and 17)

1. Attractiveness (pleasing and eye-catching)	20 points
2. Quality and variety of products in the display	40 points
3. Originality of arrangement	20 points
4. Sales appeal; display from which honey is sold	20 points
Total points possible	100

TO MEMBERS

We are interested in each and every one of our members, and although we cannot give each one the individual attention we would like, we try to make your membership meaningful and trust it adds zest, pleasure and profit to your beekeeping endeavor. You may not even have bees, but your interest in bees and what the bees contribute to our nation's economy will lead to prosperity for all.

If you have a few minutes, I would appreciate having a few lines from you, and you may be sure it will make the job of being editor more pleasurable. If you know of any beekeeper who does not belong to Missouri State Beekeepers Association, please pass this newsletter on to them and encourage them to join. Dues are \$4.00 per year. Make check payable to "Missouri State Beekeepers Association". If you belong to a local association, pay \$3.00 state dues through your local treasurer.

ENCLOSED IS \$ \_\_\_\_\_ for \_\_\_\_\_ YEARS OF MEMBERSHIP.

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

PHONE \_\_\_\_\_

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