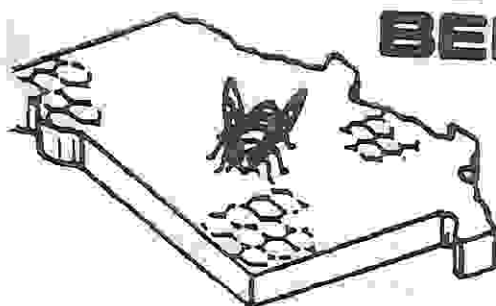


# MISSOURI STATE BEEKEEPERS ASSOCIATION



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Bridgeton, Mo. 63044  
(314) 291-1360

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314 Quinmooor Drive  
Ballwin, Mo. 63011  
(314) 394-5395

VOLUME 25

QUARTERLY NEWSLETTER  
DECEMBER 1987

NUMBER 4

DEAR BEEKEEPERS,

HAPPY HOLIDAYS AND A BLESSED NEW YEAR!!!

The 1988 officers of the Missouri State Beekeepers Association are:

President	Joe Solt	Bridgeton
Vice President	Mike Vanarsdall	Sibley
Program Chairman	Dr. Flermoy Jones	Columbia
Secretary	Jim Thaxter	Moberly
Treasurer	Jim Hausam	Lincoln
Editor	Sharon Gibbons	Ballwin
Liaison	Jay Tohtz	Kirkwood

Board Members:		
3-year term	Roger Nichols	Raytown
2-year term	Neal Bergman	Kennett
1-year term	George Vanarsdall	Sibley
Member-at-large	Gene Kaufmann	St. Louis

CONGRATULATIONS to the new and renewed officers!!!

Thank you to Walter Bigelow who served as 1987 President. Your contribution to Missouri beekeeping is appreciated.

A special thanks to Carol Boeckmann who has been your editor since December, 1978. That was 36 newsletters ago!!! The amount of time Carol has spent in behalf of Missouri beekeepers is difficult to measure, but the quality of her work shines through year after year. Carol was presented the Award of Merit for Outstanding Service to the Missouri State Beekeepers Association on March 17, 1984. I think it would be nice if individual beekeepers would let Carol know how much her efforts were appreciated by sending her a small greeting at this holiday time of year. Carol's address is 619 Mendelssohn Dr., Kirkwood, Mo. 63122. As I assume the editorship, I can assure you that the job is not a small task. When Carol brought the records to me, my first thought was "...where do I store all this stuff." Carol not only compiled the material for the newsletter, but maintained correspondence with other state associations, local associations, schools, 4-H clubs, etc. We wish her the best in all her future endeavors.

NOTICE TO STATE NEWSLETTER EDITORS: Editorship has changed. Send correspondence to: Sharon Gibbons, 314 Quinmooor Dr., Ballwin, Mo. 63011.

MISSOURI STATE BEEKEEPERS ASSOCIATION  
BUSINESS MEETING  
October 17, 1987  
Maryville, Mo.

The business meeting was called to order at approximately 2:00 p.m. following the conclusion of the day's program.

President Walt Bigelow reported on several items. George Vanarsdall will again represent Missouri beekeepers on the National Honey Board nominating committee. George is also the candidate for the Citation of Merit Award given by the University of Missouri-Columbia Ag. Alumni Association. The Governor's Conference on Agriculture will be held December 13-16 at the Lodge of the Four Seasons. All beekeepers are invited. On October 28 the Governor will sign a proclamation declaring November as Apiculture Month.

Jim Anderson, Horticulture Marketing Specialist with the Missouri Department of Agriculture, reported congratulations and appreciation for the good display of honey at the State Fair. He reported that Joe Francka made a video of events at the fair which he will show at the spring meeting. There were prizes totaling \$448 that could have been won, but were turned back to the State Fair board. Jim also reported that the Department of Agriculture will finance half the cost of producing a directory of honey sellers. Inclusion in the directory is voluntary and a notice and application will be published in the next newsletter.

President Bigelow reported on a letter he received from American Honey Princess Penny Reece, in which she congratulated Missouri beekeepers on a fine fair. He also reported that the Executive Committee had voted to participate in and again donate \$282 to the State Fair for premium money, as in 1987. The Secretary made a motion to this effect and directing the State Fair committee to make the arrangements. Joe Solt seconded the motion, which passed by voice vote.

The President reported that Joe Francka wants the membership's evaluation of Varroa mites, and a recommendation as to possible action to be taken. The general consensus was that the Association needs more information to make a knowledgeable decision.

The minutes of the previous meeting were read. Joe Solt moved for approval, Curt Dennis seconded, and a voice vote passed the motion.

Jim Hausam presented the Treasurer's report as attached.

President Bigelow expressed the need for more help to work in the honey booth at the State Fair.

The Secretary made a motion to order more Honey Cookbooks as the inventory is getting low and demand still exists. Joe Solt seconded the motion which passed by voice vote. The Secretary also made a motion that the new order of books be distributed on a cash and carry basis. Curt Dennis seconded the motion which passed by voice vote.

The Secretary read a proposed change to the Association's by-laws relating to the President, Vice President, and their term of office. He then made a motion that the proposed changes be implemented. Curt Dennis seconded, passage followed.

Oscar Eubach made a motion that the Program Chairman be authorized to choose a site for the 1988 fall meeting. Ken Hauenstein seconded and a voice vote passed the motion.

Nominating Chairman Joe Solt presented a slate of officers as follows:

President, Joe Solt  
Vice President Mike Vanarsdall  
Program Chairman Flerney Jones  
Secretary Jim Thaxter  
Treasurer Jim Hausam  
Editor Sharon Gibbons  
Two year board member Neal Bergman  
One year board member George Vanarsdall

Curt Dennis made a motion that the slate be accepted, Carol Kjelskus seconded and it was passed by voice vote. Nominations were accepted from the floor for three year and at-large board members. Respective nominees were Roger Nichols and Gene Kauffman who were duly elected.

The meeting was declared adjourned at 3:20 p.m.

Respectfully submitted,

Jim Thaxter, Secretary

# The National Honey Board

9595 Nelson Road  
Box C  
Longmont, CO 80501  
(303) 776-2337

October 7, 1987

FOR IMMEDIATE RELEASE

For more information, contact:  
Mary R. Humann  
(303) 776-2337

Honey is used by commercial manufacturers in products ranging from pharmaceutical items to baked goods.

To protect, expand and develop the use of honey in manufactured products, the National Honey Board has hired Thomas J. Payne and Associates of San Francisco, a firm specializing in food technology and market development.

"Today's consumers want convenient, natural and great tasting foods without added chemicals or preservatives," Tom Payne, president of the food technology marketing firm, said. "Food manufacturers are looking for ingredients which meet the consumers' demands -- ingredients like honey."

In his presentation to the National Honey Board's Research and Advertising Subcommittee, Payne outlined a three-step program to increase the manufacturing industry's use of honey:

1. analyze the chemical, physical and aesthetic characteristics of honey in relation to lucrative areas for market development.
2. document honey's characteristics for food technologists.
3. spread the honey message to decision makers in the food industry.

-more-

"The result is that honey will become an energized ingredient in new and existing products," Payne said.

In its first year, the National Honey Board's Food Technology Market Development Program will include the establishment of a honey information bureau, a technical specification brochure, articles in manufacturing trade journals including the American Institute of Baking's Technical Bulletins and presentations at key food industry meetings.

The National Honey Board selected Payne because of his firm's successful work in promoting California raisins and walnuts to food manufacturers both here in the United States and abroad.

"Honey is a wonderful ingredient with a history as a manufacturing ingredient yet it has far to go to reach its potential," Payne said. "With the newly approved NHB market development program, the future for honey in food manufacturing looks very bright."

###mrh###

## COLOR CODING YOUR QUEENS

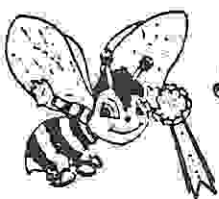
This years color to mark your queens is the color RED The complete international five year color code for marking queens is as follows:

If the year ends in 0 or 5 : Blue	1980 or 1985
1 or 6 : White (Gray)	1981 or 1986
2 or 7 : Yellow	1982 or 1987
3 or 8 : Red	1983 or 1988
4 or 9 : Green	1984 or 1989

## EDITORIAL

As the transition from past officers to newly elected officers takes place, the message is clear. The way to improve our association is from within. In the past years, Carol has asked for contributions for the newsletter from individual members; but few have submitted articles. I will publish, within reason, all articles of beekeeping interest submitted by the membership. The purpose of this newsletter should be to educate and inform beekeepers in all areas of Missouri. Those of us near large cities benefit from strong local organizations, and can help new beekeepers; but many beekeepers live in rural areas where this newsletter is their only communication with beekeeping news. As the problems with the mites and Africanized Honey Bees increase, this link becomes more important.

In this issue, I will include columns of general interest, and also articles that I asked various beekeepers to write. There will be a section devoted to getting information to the beginner, recipes for the honey cooks, a letter from our President, Joe Solt, and each issue will highlight one of our local beekeeping clubs. I chose Midwestern Beekeepers Association for this issue because they won the Grand Champion Group Competition in Apiary Products at the State Fair.



## The Honey Pot



### PEAR AND HONEY PIE

Pastry for 9-inch 2 crust pie

- 6 cups fresh pears-peeled and sliced
- 1 cup HONEY
- 4 Tablespoons minute Tapioca
- 2 Tablespoons flour

Mix honey, tapioca, and flour. Add pears and mix lightly until pears are coated. Put mixture into pastry lined pie pan and cover with pastry. Bake at 425 degrees for 30-40 minutes until crust is golden brown.

EDITOR'S COMMENT: This pie recipe recently won 1st place in the Eastern Missouri Beekeepers Honey Baking contest pie division. It was submitted by Shirley Grosche. I thought the pie was unusual and delicious!



## *In The Beginning*

This column is intended to help the beginning beekeeper. I welcome any articles with helpful hints that you feel would help others avoid the mistakes you have made (for we all have made them), or unusual ideas you have used to increase your productivity. This first article was written by Gene Kaufman, Board Member, Missouri State Beekeepers Association.

### FEEDING BEES

Honey is the basic food of bees; however, at times it becomes necessary to supplement their food requirement in the form of sugar either in the dry, candy, or liquid form.

The first reason to feed the bees is to stave-off starvation until the natural honey flow starts again. It is needless to say that a colony of bees will not survive for very long with little or no natural stores unless supplemental feeding is done.

A beekeeper must judge for himself how much honey he will leave for his bees. It is safe to say that if enough honey is not left, then feeding must be started in the fall going into the winter, and again in spring until the honey flow starts and the colony is again able to sustain itself.

The question can be raised why some colonies need supplemental feeding and other colonies in the same yard do not. Two reasons come to mind. One is that some colonies tend to store all their new honey up high in the supers, with little or no honey kept in the brood area. Then, after the beekeeper removes all his supers in the fall, those colonies end up light in stores, and before long will be starving. Secondly, it could be that there was a nectar dearth for some time, and that the biological timing sense - the brood rearing/nectar flow ratio - of some colonies was not sensitized, and they kept on raising brood at an abnormal rate, and soon found themselves running low or out of stores.

It is the accelerated brood rearing in the early spring that causes a high rate of food consumption of a colony. There are probably more colonies lost from starvation in the springtime from mid-March into May for this reason than all other causes combined.

The second reason for feeding bees is to stimulate them for brood rearing in the spring. This is done by the beekeeper who wants to recoup his winter losses or increase his number of colonies. Also, bee-raisers and queen-breeders in the south resort to stimulative feeding in order to raise a lot of bees for their package-bee business. It is vital to stimulate bees for queen rearing, because without it, it will be most difficult to raise queens.

For the accomplished beekeeper, stimulative feeding of bees is his greatest asset in determining the coming honey crop. But, in the hands of an inexperienced beekeeper, stimulative feeding will only become a problem later on in the spring because it produces excessive swarming.

## FEEDING BEES con't.

To the beginning beekeeper this might be confusing. Here he has a starving colony coming out of the winter, and he is told that if he feeds his bees in early spring, it will stimulate brood rearing and cause swarming later on. What is he to do? Really he has no choice. If he hopes to save his starving colony, he must feed his bees. His second line of action will be to become well informed on swarm prevention tactics.

A colony which is still heavy with honey coming out of the winter should not be fed unless the beekeeper has plans to divide the colony into nucs later on in the spring.

A third reason for feeding bees is to give them medication. The accepted method of medicating bees is to include the medicine in the feed. This can be done in liquid form, in patty form, or by shaking dry powder over the top bars of the brood area. Medication feeding, if done in the spring, must be done early enough so that it is out of the way before the time of honey supering. This is very important in order to keep from contaminating the newly stored nectar.

Supplemental feeding, stimulative feeding, or medication feeding is done whenever necessary for the welfare and benefit of the bees, but, under no circumstances should bee feeding be done with the intention of producing honey. That would be adulteration of honey, and would definitely be violating the law, as well as the honor of the beekeeper.

E. R. (Gene) Kaufmann

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TREES . . . . . Wildlife Bundles . . . . . TREES

The Missouri Conservation State Forest Nursery near Licking, Mo will offer for sale trees and plants for landowners beginning in February, 1988. Orders should be made now. Plants of interest to beekeepers are Tulip Poplar, Black Locust, Shrub Lespedeza, and Vitex. For more information contact your local forestry district or write: TREES, Missouri Department of Conservation, P.O. Box 119, Licking, Mo. 65542.

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DUES . . . . . DUES . . . . . DUES . . . . . DUES . . . . . DUES

Your 1988 dues are now payable.

If you are a member of a local beekeeping association, your statedues of \$3.00 should be paid to your local association. The local association treasurer should forward your name with complete address and zip code to the State Treasurer.

If you do not belong to a local association, your dues are \$4.00 and are to be sent directly to Mr. Jim Hausam, Treasurer, P.O. Box 141, Lincoln, Mo. 65338. Make your check payable to Missouri State Beekeepers.





## MSBA SPOTLIGHTS MIDWESTERN BEEKEEPERS ASSOCIATION

Midwestern Beekeepers Association has 180 members. We meet on the third Sunday of each month at the Eastwood Hills Community Center, 7400 Ozark Road, Kansas City, Mo. I understand that Midwestern Beekeepers Assn. is in existence today because of some very active beekeepers at the state and local level that have passed on. We at Midwestern have tried to build on that foundation. Our monthly meetings consist of a short business meeting and a program that pertains to some aspect of beekeeping. For example, the November program was a talk and demonstration on beeswax candle making by Mike Vanarsdale; and

a talk by George Vanarsdale on his commercial beekeeping operation. It was an excellent program. I wished more beekeepers could have enjoyed and learned from it.

The Midwestern Beekeepers have a booth at the American Royal in the Educational area, to show the school students about the world of bees. The American Royal has a special arrangement with the public schools, and set up tours through the American Royal exhibits. Our educational booth consists of an observation hive and a display of beekeeper tools and protective equipment. It also includes a full-size bee hive and educational beekeeping pictures. We sell honey bears with the proceeds going to the Midwestern Beekeepers treasury. The students really ask a lot of questions, and it is a lot of fun helping them find the queen in the observation hive.

We also have some members that go to the public schools with observation hives and tell the students about bees. We have found that in the process of explaining beekeeping to the students, that there are a lot of adults that want to know about the bees too. That's when you sell memberships. Our membership dues are \$5.00 per year. Membership entitles you to the monthly newsletters, free loan of books from the library, discounted bee journals, rights to free (non-commercial) advertising, and monthly meetings. Membership is open to all those interested in beekeeping.

Glenn Davis  
President, Midwestern Beekeepers Assn.

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### "BEEKEEPERS OF MISSOURI UNITE"

THERE IS AN EVIL LURKING ALL AROUND US AND IT'S NAME IS "VARROA"

As most of you know, the Varroa mite has been found in several of our neighbor states. At this time, Dr. Joe Francka, our State Entomologist, is trying to decide whether or not our state should be quarantined in order to prevent the Varroa mite from entering Missouri. He needs our help to determine if the mite is already here, thereby making quarantine useless.

Joe asks us to voluntarily send in samples of our bees to be checked for the Varroa. Please follow the procedure listed here as soon as the weather permits.

# VARROA MITE (continued)

Take a sample of bees from near the brood nest. Fill a pint jar 1/3 to 1/2 full of bees (about 500). Pour in about 1/2 cup of rubbing alcohol and cap the jar. Please label the jar with your name, address, and location of the colony that the sample was taken from. Please take a sample from at least 5% of your colonies.

The samples may be delivered to the Department of Agriculture office in St. Charles (call 314-441-6933 and ask for Bill Brennecke or Don Courtney). You may also contact Joe Solt at 291-1360 in the St. Louis area, or call Dr. Joe Francka at 314-751-2462 in Jefferson City.

The State of Missouri needs our help to determine if this dreaded parasite is with us. Perhaps the local associations could serve as collection points for samples to make it easier to get a complete sampling from Missouri.

Respectfully.

Joe Solt - President  
Missouri State Beekeepers Association

\* \* \* \* \*

FROM USDA NEWS DIVISION

September 21, 1987

## UNITED STATES AND MEXICO WILL WORK TO SLOW SPREAD OF AFRICANIZED BEE

The U.S. Department of Agriculture and the Mexican Ministry of Agriculture and Water Resources have agreed to cooperate in a program to delay the northward advance of the Africanized bee.

Bert W. Hawkins, administrator of USDA's Animal and Plant Health Inspection Service, and the agreement was finalized today by an exchange of diplomatic notes in Mexico City between U.S. Ambassador to Mexico Charles J. Pilliod, Jr., and Mexico's Minister of Agriculture Eduardo Pesqueira Olea.

The program, developed by scientists from USDA's Agricultural Research Service and APHIS, is being implemented at the Isthmus of Tehuantepec in southern Mexico, just north of where the bees are currently known to have advanced.

"This program gives the U.S. and Mexico an opportunity to delay the spread of the Africanized bee and learn more about how to minimize its impact," said Hawkins. "In areas where this bee is already established, it has disrupted pollination systems, affected honey production and created a public health nuisance, so it's important that we control its movement as soon as possible."

The program to impede the movement of the bee is being carried out in a 100-mile-long zone, called the Bee Regulated Zone (BRZ). According to Hawkins "The Isthmus of Tehuantepec was chosen for several reasons, mainly because it is the narrowest part of Mexico and therefore the easiest and least expensive to regulate. Also, the Isthmus is fairly flat, and most areas in the region are accessible by car."

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The Isthmus is divided into three control areas where educational, regulatory, survey, control and research activities are carried out. These activities will first be implemented on the Pacific Coast side of the Isthmus and expanded northward as needed.

Hawkins said program actions are designed to attack the bee at each stage in its life cycle. "The first step will involve educating the public and local beekeepers about the Africanized bee," Hawkins said. "This, along with a quarantine on the southern side of the BRZ, will help prevent the 'human assisted movement' of bees into new areas, which often happens when the bees are moved on vehicles and machinery." Hawkins added that a bounty system will be established to encourage citizens to report colonies and swarms of Africanized bees. These bees will then be tracked down and destroyed.

"Within the BRZ," Hawkins said, "we will make special efforts to see that Africanized queens do not invade managed hives. For example, at intervals of two to four months we will certify all queens as European and place queen-excluder devices on managed hives."

According to Hawkins, other actions will include using pheromone-baited traps to capture Africanized drones and alternately flooding the area with European drones to increase matings between European queens and European drones. "In addition," Hawkins said, "we will bait special hives to attract and kill Africanized queens, and we will attract and capture Africanized swarms by using hives that appear to have been recently abandoned."

As these actions are carried out, Hawkins said, results will be analyzed and necessary changes made. In addition, new technologies will be integrated into the program as soon as they become available. A technical committee comprised of representatives from government, universities, and industry will advise the program.

"Moreover," Hawkins said, "scientists will continue to research bee breeding and drone trapping methods, queen detection and storage, different uses of pheromones, and new techniques of detecting and identifying swarms and colonies of Africanized bees."

The program, estimated to cost about \$8.6 million over the next three years, will be jointly implemented and funded by USDA and the Mexican Ministry of Agriculture.

#

NOTE TO EDITORS: Assistant Secretary of Agriculture Kenneth A. Gilles and Mexico's Vice Minister of Agriculture for Livestock and Forestry Manuel Villa Issa will participate in a brief ceremony to inaugurate the program on Tuesday, Sept. 8, at 3:30 p.m., in room 104-A of USDA's Administration Building, 14th & Jefferson Drive, S.W. Gilles, Villa Issa and other USDA officials will be available after the ceremony to answer media questions about the program.

FROM THE PRESIDENT'S CORNER

Hello fellow beekeepers. My name is Joe Solt and for the next two years, I will be your president.

During my term as president, I would like to do a good job for you. In order to serve you better, I need your input. Only with the input of the members at large, can we as your officers, make the proper decisions in regards to our association.

What do you want us to do? Which direction do you want us to take on the state level? What do you think about the Varroa Mite situation? What would you like to see at the state meetings?

Only with your opinions on these and other issues can your officers make decisions which will benefit you all.

As most of you know, interest in beekeeping and membership has been dropping at both the state and local level. I feel that some of this is due to the economy and a general lack of interest on the public's part in beekeeping in general. I want to know what you think the reasons are.

I know of several local associations that are having problems acquiring officers to keep their association alive. Members need to take an active part in their local associations. An association can only function as long as it has officers and members who care enough to make things happen. The people who are officers, need to start thinking ahead of time about who might be interested enough to become an officer when their term is over. Don't wait till the last minute and then wonder why no one wants to be an officer.

Talk to people. Some of you "Old Timers" offer to take a new member or an interested person under your wing. Contact your local newspaper and have them print a public service announcement of your meeting time and place. Tell people that you have bees and answer their questions. Go a little bit out of your way to be helpful and informative.

One of our main objectives as an association is to promote honey and beekeeping. In order to do that, we must have a strong membership, both at the state and the local level.

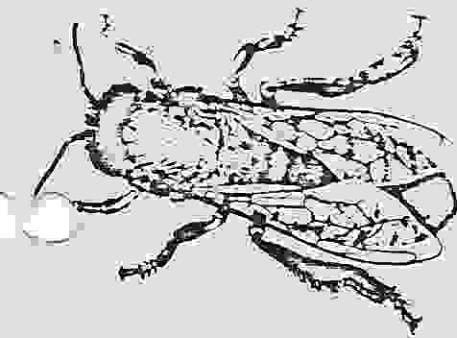
The State and Federal Governments are both looking for our input concerning the Varroa Mite and whether or not we should quarantine the state if the mite is found. This issue is one that needs our immediate attention. The executive board and myself, feel that we do not have enough information yet to recommend that the state quarantine. We don't want to see another situation develop like it did with the acarine mite. We have advised the United States Department of Agriculture and our State Entomologist, Dr. Joe Francka, of this. I have asked them to bear in mind that while most of our members are small beekeepers, our several large commercial beekeepers would be greatly affected by a quarantine. We need your input concerning this issue.

I am looking forward to hearing from all of you. Remember, this is your Association.

Respectfully yours,



Joseph F. Solt - President  
Missouri State Beekeepers Association



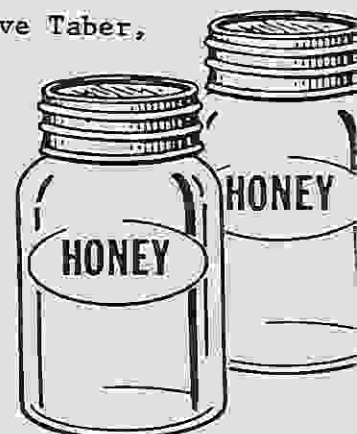
MISSOURI STATE BEEKEEPERS ASSOCIATION  
Spring Meeting - March 19, 1988  
Columbia, Missouri

University of Missouri

Union Ballroom

A.M.

- 8:30 - 9:00 Registration
- 9:00 - 9:05 Meeting called to order - Mr. Joseph Solt, President, Mo.  
State Beekeepers Association
- 9:05 - 9:10 Invocation & Welcome - (To be announced)
- 9:10 - 9:20 Introductions - Mr. Joseph Solt, President, Mo. State  
Beekeepers Association
- 9:20 - 10:20 Breeding Bees for Disease Resistance - Mr. Steve Taber,  
Honey Bee Genetics, Vacaville, CA
- 10:20 - 10:45 Break
- 10:45 - 11:45 Tips from a Honey Judge - Mr. Gary Ross  
Kansas State  
Apiarist, Topeka, KS
- 11:45 - 1:00 Lunch (on your own)



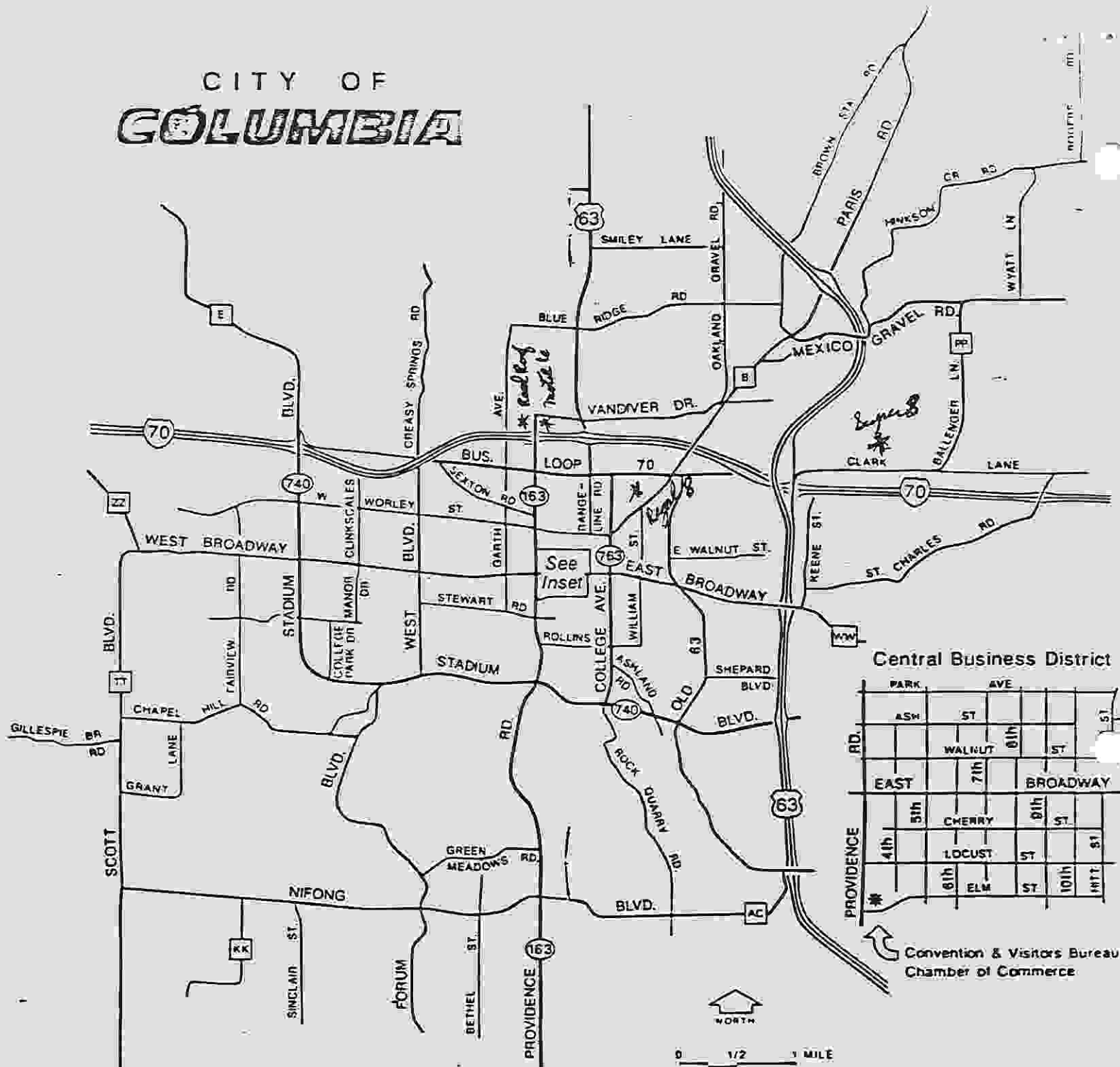
P.M.

- 1:00 - 2:00 Beekeeping Tour in Europe - Mr. Steve Taber, Vacaville, CA
- 2:00 - 2:45 Honeybee Pheromones and Bait Hives - Dr. James W. Johnson  
Extension Entomologist
- 2:45 - 3:15 State Fair Report - Mr. Joe Francka, State Entomologist,  
Mo. Dept. of Agriculture, Jefferson City, Mo. and Mr. Jim  
Hausam, Treasurer, Mo. State Beekeepers Association
- 3:15 - 3:45 Business session
- 3:45 - Attendance prizes and adjournment

Everyone is invited to attend the Executive Board Meeting at 7:30 p.m.  
on Friday, March 18 at the new Boone County Extension Center. Take I-70  
west of Columbia to Fayette exit, turn left (cross over I-70) on Highway  
UU, second building on left (large brown building).

See attached sheet for hotel reservations - please register early.

# CITY OF COLUMBIA



## MOTEL 6

1718 NORTH PROVIDENCE ROAD 442-3155

## REGAL 8 INN

1800 I-70 DRIVE SW 445-8433  
1-800-851-8888

## SUPER 8

3216 CLARK LANE 474-8488

## RED ROOF INN

201 EAST TEXAS AVENUE 442-0145  
1-800-848-7878

	1 BED SINGLE	2 BEDS 2 PEOPLE	2 BEDS 2 PEOPLE	2 BEDS 3 PEOPLE	2 BEDS 4 PEOPLE
MOTEL 6	\$18.75	\$23.95	\$23.95	\$27.95	\$31.95
REGAL 8 INN	22.88	27.88	32.88	32.88	32.88
SUPER 8	24.88	29.88	31.88	33.88	35.88
RED ROOF INN	25.95	30.95	32.95	34.95	34.95



# NEWS

United States  
Department of  
Agriculture

SLP 21 1987

USDA News Division  
Room 404-A  
Washington, D.C. 20250

## BACKGROUNDER

Office of  
Information

Janna Evans (202) 447-3981  
Diane O'Connor (202) 447-4026  
Sept. 8, 1987

### Africanized Honey Bee

#### THE U.S. - MEXICO BEE REGULATED ZONE

The Africanized honey bee crossed the Mexico-Guatemala border in late December 1986 and is now located near the Isthmus of Tehuantepec in southern Mexico.

In an effort to slow the bee's northward spread, the U.S. Department of Agriculture and the Mexican Ministry of Agriculture and Water Resources (SARH) are cooperating to form a zone in southern Mexico through which the bees will have difficulty moving. This Bee Regulated Zone (BRZ) is designed to delay the bee's movement long enough to give researchers and beekeepers time to find ways to manage it or possibly stop it.

**Background** The Africanized honey bee originated in Africa, where it ranges from Senegal on the west coast to South Africa on the southern tip. It was brought to Brazil in 1956 by a researcher who hoped to develop a hardier, more productive bee. Six months after the bees' arrival, 26 swarms were accidentally released.

Since then, the bee has spread both northward and southward through the Americas, interbreeding with the European honey bees common in the Western Hemisphere, and passing on its undesirable traits to future generations.

The Africanized honey bee could disrupt pollination systems because it is a poor pollinator, unlike the more familiar European bee used to pollinate \$20 billion worth of U.S. crops each year.

In addition, the U.S. honey industry could be affected. Rather than storing its honey as European bees do, the Africanized bee uses most of its honey to feed its brood. European bees in the U.S. produce \$200 million worth of honey each year.

Another reason the Africanized bee is undesirable is its close association with the varroa mite in South America. This mite is regarded as a major pest of bees, since it parasitizes and debilitates bee larvae. Africanized bees could carry the parasite into the United States, a possible threat to agriculture equal to the introduction of the bee itself.

-more-

How  
Africani-  
zation  
Takes  
Place

Past efforts to control the Africanized bee have failed because of its complex colonization processes, known as Africanization. The control effort in the BRZ counters each of the processes of Africanization.

One way Africanization occurs is through "human-assisted movement," the inadvertent transport of the bee from an Africanized area to a non-Africanized area. Prime swarms are another way. Once the Africanized bee is established in a new area, it begins a major reproductive cycle that results in enough new bees to form a new colony. A third way Africanization occurs is queen parasitism. Here, an Africanized queen and some worker bees take over a hive occupied by European bees. Hybrid offspring of this hive will have Africanized traits within 8 to 9 weeks.

Africanization is furthered by the Africanized bee's mating superiority, gained because more fertile male bees (drones) are produced than in European colonies. Under these conditions, matings between European queens and Africanized drones are more likely and result in more offspring with Africanized traits. Absconding swarms play a final role in the colonization process. Unlike the European bee, the Africanized bee absconds or leaves its nest rather frequently when threatened by predators or lowered food supply. Absconding swarms travel great distances, enabling the bee to colonize new areas quickly.

Control  
Program

The current program to slow the Africanized bee's northward spread is being implemented at the Isthmus of Tehuantepec, at 90 miles across the narrowest part of Mexico. The BRZ is divided into three areas.

In Area 1, surveys and trapping are being used to monitor the bee's spread. Area 2 is the actual BRZ. Because of the bee's pattern of movement, the program is being implemented first on the Pacific coast of Area 2. Northernmost Area 3 is being surveyed to find out if the bee has passed through the BRZ.

Control  
Actions  
of the  
Program

The first step in controlling the Africanized bee's movement involves educating the public and local beekeepers about the AHB. This, combined with a quarantine on the Africanized (south) side of the BRZ, helps counter human-assisted movement of Africanized bees into new areas. A bounty system encourages citizens to report swarms and colonies of Africanized bees.

Within the BRZ, special efforts are made to ensure that Africanized queens do not invade managed European hives. This action, which entails certifying queens as European every 2 to 4 months, and placing queen excluder devices on all managed hives, counters the prime swarm and queen parasitism processes.

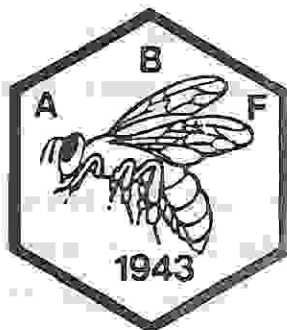
The next step involves two actions used together. Africanized drones are captured in traps baited with sexual attractants called pheromones. Then, European drones are flooded into the area, which now contains relatively few Africanized drones. The absence of Africanized drones increases matings between European drones and European queens. The actions are alternated every 2 weeks and counter the Africanized bee's mating superiority.

Another action involves using hives that appear to have been recently occupied. For behavioral reasons associated with the bee's aggressive nature, occupied or recently inhabited hives make ideal nesting sites for Africanized swarms. When the bees colonize in these baited hives, they are trapped and killed. This method of capturing bee swarms counters the prime and absconding swarm processes of Africanization.

Africanized queens are captured in hives that simulate "queenlessness." The appearance of queenlessness is accomplished by either placing a European queen in a small cage inside a hive, or removing the queen from the hive. Under these conditions, the hive is very attractive to an Africanized queen. When she colonizes the hive with a small group of workers, the queen is destroyed. This step counters the queen parasitism process of Africanization.

#### Research and Evaluation

The final aspect of the control program is research and evaluation. As control actions are implemented, results will be analyzed and revisions made as necessary. Also, new research will be integrated into the program as soon as it becomes available. In this manner, the project will become more effective over time, furthering efforts to control an insect that could greatly affect our agricultural production.



#### HONEY IS GOOD . . .

Beekeepers are so enthusiastic about their own honey crops! And, indeed, they should be. Your own honey is truly the very best. However, in their enthusiasm, some beekeepers will make claims that honey is good for you in a number of ways. What, actually, is in honey, and what can those ingredients do for you, if anything?

Let us take a look at a one-pound jar of honey. We can see this one pound as being 1 1/3 measuring cups, or 10 fluid ounces, or about 22 tablespoons, or 64 teaspoons. Another way to look at this one-pound jar is to see it as approximately 4 tablespoons water, 7 tablespoons glucose, 8 tablespoons fructose, 1 tablespoon sucrose (which is table sugar) and 2 tablespoons other sugars. The acids, proteins,

vitamins, minerals, enzymes and other minor constituents all add up to less than 1/2 teaspoon.

Honey does contain a little protein, carbohydrates, no fats, vitamins, minerals, enzymes, acids and substances giving flavor and color.

Of all the identified 181 different substances in honey, we know that most are of plant origin; the plant, after all, produces the nectar. Some substances can be traced to pollen, found in all honeys, while others are added by the bee herself. The actual origin of some constituents has not yet been positively determined. However, one fact is definite—all of the compounds in honey are familiar ones. There are no surprises, no unique substances.

Beekeepers and their customers use honey in many ways; in coffee and tea, of course on breakfast toast, and in cooking, whether it be barbeque sauce or chocolate cake. Most honey consumers probably use between one to six tablespoons per day.

One tablespoon of honey (on morning toast) supplies us with about 60 calories. For comparison, you would get the same number of calories by eating one medium-sized apple or one regular hamburger—plain, with no roll or additions.

Honey is not really considered a source of protein, but then neither is our apple. They both contain only

about 0.3% protein. Our diet is already rich in proteins from meat, eggs and dairy products. We can depend on our lunchtime hamburger, 16% protein, and our dinner-time chicken, 20% protein, to supply our daily protein needs. The proteins in honey actually vary widely in both amount and type, possibly dependent on the plant source. Therefore, it is difficult to predict exactly what proteins honey can supply.

The acids in honey serve to enhance flavor. Some acids are products of enzyme activity within honey, others may be originally in nectar. Many of our foods contain various acids, but they are not considered essential to our health.

The materials giving color and flavor to honeys are perhaps the most important ones to honey lovers! The rich ambers, dark gold, pale yellow and subtle whites are pleasing colors inviting us to drizzle a spoon of honey on a hot biscuit. The range of flavors, from floral orange blossom, rich tulip poplar, delicate fireweed and fruity blueberry bring us the fascination and enjoyment of honeys in our diets.

Honey is good! Encourage your customers to appreciate the delicious flavors and the versatility of your excellent product. That is a claim you can make with pride.

## THE BREAD OF THE WORLD, BUTTER, AND HONEY

The wonderful season of Christmas is with us again, and we take time to reflect on things concerning the true meaning of Christmas.

To a beekeeper, the Biblical account of honey should prove to be very interesting. Honey is mentioned often throughout the Bible. Even though it does not speak of beekeeping as an occupation, it certainly acknowledges honey as a food whenever foodstuffs are listed.

In the 7th chapter of Isaiah, we read about the Assyrian Bee which was to be called to the almost deserted land of Israel. "And they (the bees) shall come, and shall rest all of them in the desolate valleys, and in the holes of the rocks, and upon all thorns, and upon all bushes." (Isaiah 7:19) "And it shall come to pass...butter and honey shall everyone eat that is left in the land." (Isaiah 7:22)

In this very same chapter of Isaiah, a very familiar prophecy of Christmas was also given. "Therefore, the Lord himself shall give you a sign. Behold, a virgin shall conceive and bear a son, and shall call his name Immanuel." (Isaiah 8:14) And, it goes on to say, "Butter and honey shall he eat." (Isaiah 7:15)

When we think of butter and honey, the picture of bread comes to mind immediately. In the book, "Breads Of The World," breads from 46 different countries are listed, and we see that bread is indeed a staple around the world...it is often called the "staff of life." While bread is an everyday food, at Christmastime we tend to dress breads in a very festive mood. Honey is often used in making bread sweet for the holidays.

Various countries have special sweet breads that are unique to their culture and background. All tend to bring back memories. My favorite is Stollen. Stollen is a sweet yeast bread that comes from Germany. It is very much a favorite

at Christmastime. The dough is heavy with fruit and nuts, and can be baked in a regular loaf shape or in a braided loaf, which after it is baked, is decorated with a glaze and bits of candied fruit. The aroma of freshly baked stollen can transform a kitchen into a wonderful place.

Jesus, whose birth we celebrate at Christmas, also called himself "the bread of life." (John 6:48), and said, "he that eateth of this bread shall live forever." (John 6:58) His words were compared to honey in Psalms 119:103. "How sweet art thy words unto my taste, yea, sweeter than honey to my mouth."

May you have a very enjoyable Christmas, and may your words be pleasant in the New Year.

"Pleasant words are as an honeycomb,  
sweet to the soul, and health to the bones."

Proverbs 16:24

Carol Kaufmann



Office of the Governor  
State of Missouri  
**Proclamation**

WHEREAS, Missouri has more than 900 beekeepers providing service to the agriculture community through pollination of fruits, vegetables, grain crops, and flowers; and

WHEREAS, recent figures show that Missouri has more than 125,000 colonies of bees producing in excess of 6.5 million pounds of honey each year; and

WHEREAS, the production and sale of Missouri honey and beeswax contributes in excess of \$5.5 million to the economy each year; and

WHEREAS, the Missouri State Beekeepers Association, in cooperation with the Missouri Department of Agriculture, strives to provide high-quality honey to consumers and educate Missourians about the art of beekeeping;

NOW, THEREFORE, I, JOHN ASHCROFT, GOVERNOR OF THE STATE OF MISSOURI, do hereby proclaim November 1987 as

**APICULTURE MONTH**

in Missouri and urge all Missourians to recognize the contributions of Missouri beekeepers to our economy and join in the observance of this growing industry.

IN TESTIMONY WHEREOF, I have hereunto set my hand and caused to be affixed the Great Seal of the State of Missouri, in the City of Jefferson, this 28th day of October, 1987.



*John Ashcroft*  
Governor

Attest:  
*Ray D. Hunt*  
Secretary of State

MISSOURI STATE BEEKEEPERS ASSN.  
314 Quinmoor Drive  
Ballwin, Missouri 63011

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