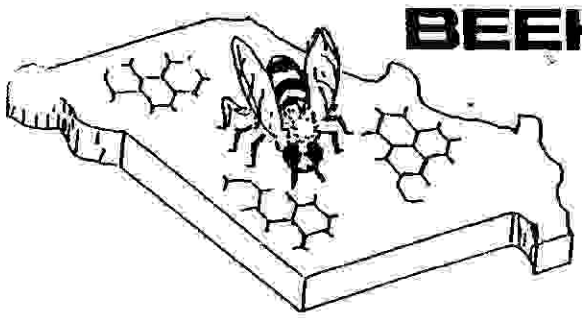
MISSOURI STATE BEEKEEPERS ASSOCIATION



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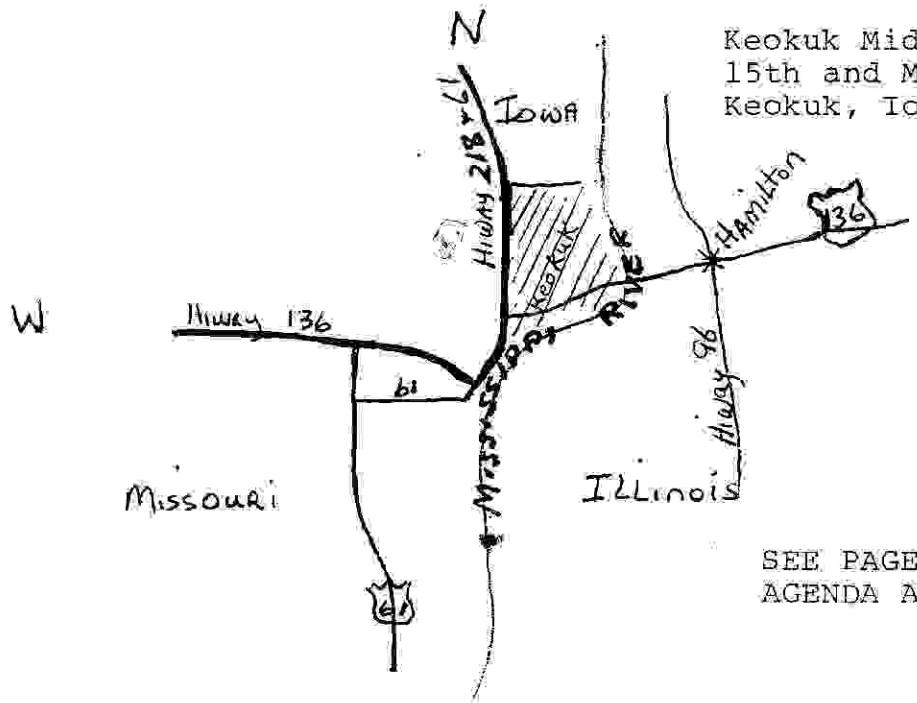
VOLUME 29 QUARTERLY NEWSLETTER NUMBER 1
SPRING, 1991

DEAR BEEKEEPING FRIENDS:

I urge all of you to attend the MSBA Spring meeting in Keokuk, Ia. on April 26th and 27th. The meeting will be much different for us, since we will be involved with a tri-state meeting. The advantage is that we are able to put together a very strong program with the help of the other states. Keokuk is a small town, and hotel space is limited, so make your reservations promptly. Tours will be available at Dadant on Friday afternoon and earily Saturday morning, for all interested in seeing their operation. We will have an Executive Board Meeting on Friday, April 26th, in the Steamboat Room at the Days Inn of Keokuk. It will start promptly at 7:30, and each local association should have at least one representative present. It is an open meeting, and all beekeepers are invited to attend. Our regular business meeting will be at 3:30 on Saturday in the cafeteria. The agenda is on separate pull-out pages. This is the best map that I could come up with!



Keokuk Middle School
15th and Main Street
Keokuk, Iowa

SEE PAGES 19-21 FOR AGENDA AND REGISTRATION.

WHAT TO DO IN MARCH

Begin special preparation for pollination and/or early honey flows.

a. Feeding - for colonies with less than three frames of stores use 2 parts water to 1 part sugar o dry sugar sprinkled on top of the frames in emergencies.
b. Equalizing colony strength: switch frames of brood in weak colony with those from strong one.
c. Prepare colonies for movement, if necessary.
d. Special techniques to insure strong hives: unite very weak or queenless ones with strong hives using newspaper method.

2. **Reverse brood chambers only if cluster is broken:** Flying bees are a good indication.

3. **Winterkill check: Look for dead colonies.** Dead bees in cells, head first, mean starvation. Seal entrances and remove dead colonies to bee-tight area to prevent robbing and spread of disease. Dead colonies should be cleaned up as a precaution against disease. If there is evidence of disease the hive should be fumigated. For small amount of equipment, a propane or blow torch over all surfaces will fumigate the wood.

4. **Apiary location: Keep in mind some basic requirements for new location or improving an old one.**
a. Locate near ideal floral and water sources with good air and water drainage.
b. Use hive stands to keep entrances above ice and snow and to preserve bottom boards. Try two eight-inch concrete blocks for this purpose.
c. Stagger colonies to prevent drifting (can paint hive fronts with different symbols ie. X, O. Area should be inconspicuous but easily reached with a vehicle and comfortable to work ...
e. Use south or east facing slope or exposure. (less wind, more sun).
f. Provide a windbreak to allow cleansing flights on sunny winter days even when snow covers ground. (Fast-growing bamboo provides a nice shield but can get out of hand.)

5. **Provisions: Organize food reserves on both sides and above cluster.**

6. **Consultation: What to do when in doubt.**
a. Call your honey buddy in your area or
b. Call STATE APIARY INSPECTOR
Joe Francka, Box 630, Dept. of Agriculture, Jefferson City, Mo. 65101 (314)751-2462

WHAT'S IN BLOOM IN MARCH

1. Still: elms, maples, alders and willows.
2. New: wild mustard and dandelion (toward end of month).

BEE MANAGEMENT: WHAT YOU SHOULD HAVE DONE IN FEBRUARY

1. Clean out bottom boards with twig.
2. Feed, if necessary.
3. Place orders for bees/queens.
4. Order bee equipment.
5. Prepare bee equipment.

FROM THE EDITOR:

As most of us are aware, last year was not a banner year for honey production. This year will be better! My hives seemed to have come through the winter in much better condition than last winter. March is the critical month, however.

Cookbook orders must be in by April 1st. We need to order 1000 cookbooks for the best price. We still aren't at the 50 percent mark yet, so please get your orders in. The book will cost members $5.00 and non-members $7.50.

_______ COOKBOOKS @ $5.00 EACH =$__________

SEND CHECK TO:

JIM HAUSAM RT. 2, BOX 117 LINCOLN, MO 65338

Both Glenn Davis and myself have received alot of orders for the booklet, "Honey Bee Diseases & Pests". They should arrive by mid-April. This is another money making project for our club in order to keep the dues low. If you want us to save you a copy, please contact either one of us, or send a check for $3.00.

I am pleased with the low number of returned newsletters from address changes. Thanks to those who have remembered to send me their address changes. If you want a newsletter, I must have a correct address. The US Postal Service will not forward bulk mail.

At the American Federation of Beekeeping meeting in Mobile, Al., the Kansas Honey Producers and the Missouri State Beekeepers Assn. joined forces to offically extend an invitation to the Federation to hold it's 1993 annual convention in Kansas City. Don Schmidt, Vice President of ABF has already made a trip to check out the facilities in KC. I hope we have an opportunity to host a national convention.

Sharon Gibbons, Editor

* *

News from Joe Francka- State Entomologist

Joe feels like the tracheal mite will be in all areas of Missouri this spring, and feels that we should be looking for weakened colonies after winter; and checking for mites if you have unusually high winter losses. The varroa mite is a problem in the South-central part of Missouri, and is not wide-spread at this time. He asks you to remain alert for out-of-state beekeepers who may be maving hives into the state without his knowledge. Please contact him if you notice something unusual in your area, or with your bees.

Joe has asked for input from the MSBA Board of Directors about how Missouri should handle such issues as the Africanized Bee, and the question of intrastate movement of bees with mites. If you have any opinions, please contact Mike Van arsdall, (not Joe Francka) or come to the Board meeting at Keokuk.

Joe has revised the State Fair entries and rules. A complete list will be featured in the next newsletter. New for exhibitors will be Division B, which will include Art designs in beeswax, and beeswax candles.

The Executive Board met on Feb. 23, 1991. In attendence were Mike VanArsdall, Glenn Davis, Glenn Staggs, Larry Hensley, Jim Thaxter, Sharon Gibbons, Roger Nichols. Ron Vivian and Charles Perrin were also present as auditors. Issues upmost in mind were how to streamline the budget, control spending, additional income projects, and the State Fair. It was decided that the newsletter should remain the size it is, but that we should solicit advertising to help with the cost. The following is a breakdown of advertising per issue. We appointed a Advertising Editor who will handle the new business.

Advertising requests should be sent to:

WILLIAM RANDALL
Rt. 1, Box 32
AUXVASSE, MO 65231

Deadlines for Advertising:

DEADLINE	PUBLICATION
February 15	March 1
June 1	June 15
September 1	September 15
December 1	December 15

ADVERTISING RATE

Business ads per issue:

Business Card size	$ 7.50
Quarter page	25.00
Half page	40.00
Full page	75.00

Classified ads, per 30 words:

MSBA member	$2.00
Non-member	3.00

* *

CHANGE OF ADDRESS

If you are moving or receiving more than one copy of MSBA newsletter, please let me know immediately.

NAME_____
ADDRESS_____
CITY_____
STATE_____ZIP_____

Send changes to: Sharon Gibbons, 314 Quinnmoor Dr., Ballwin, Mo. 63011.
We no longer can afford to send out returned newsletters by 1st. class mail. The cost to reissue a newsletter that is returned for incorrect address is $.95.

* *

1991 MEMEMBERSHIP DUES

THE TIME IS HERE FOR 1991 DUES. The dues have increased to $5.00 for the year. These can be paid either through your local association treasurer or can be paid directly to MSBA Treasurer:

Jim Hausam, Rt.2, Box 117, Lincoln, Mo. 65338.

All members will have the expiration date of their membership following their name on the newsletter,starting this year.Non-renewed memberships will not receive the next newsletter.

WHO'S WHO IN MISSOURI BEEKEEPING

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SEMO HONEY PRODUCERS ASSN. (Poplar Bluff area) Secretary, Bob Carter Jr. 407 LeSeiur, Portageville, Mo. 63873

BUSHWACKER BEEKEEPERS ASSN. (Nevada area) Treasurer, HGeorge Reeves, Rt.4 Box 226A, El Dorado Springs, Mo. 64744

SOUTH CENTRAL BEEKEEPERS ASSN. (West Plains area) President, Sharon Waddell, Rt.4, Box 400, West Plains, Mo. 65775

* *

1991 BEEKEEPING SHORT COURSE SCHEDULE
AGRICULTURAL TECHNICAL INSTITUTE
1328 Dover Road, Wooster, Ohio
Contact Ms. Sherry Ferrell, Telephone: (216)264-3911

DATES ARE: May 3-4,1991 Basic Beekeeping
June 7-8,1991...Honey Bee Diseases
June 21-22, 1991..Honey Bee Queen Production
Classes are for either credit (1 hour) or non-credit

U.S. HONEY PRODUCTION UP 11 PERCENT

HONEY PRODUCTION in 1990 from producers with 5 or more hives, totaled 196 million pounds, up 11 percent from 1989. There were 3.19 million colonies producing honey, down 7 percent from 1989. **YIELD PER COLONY** averaged 61.5 pounds, up from the unusually low 51.4 pounds in 1989. **PRODUCER HONEY STOCKS** were 30.7 million pounds on December 15, 1990. Bee populations were reduced significantly in some areas due to adverse weather, disease, and mite infestations.

Prices for the 1990 crop averaged 52.8 cents per pound, up 3 cents from the 1989 price of 49.8 cents per pound. Prices are based on retail sales by producers and sales to private processors and co-ops. At the U.S. level, prices for each color are derived by weighting state average prices by the state quantities sold. Prices increased for most types of honey in 1990 except for the extra light amber and amber honey retailed by producers. Government payments are excluded from the honey prices published in this annual report.

Honey production in **Missouri** totaled 1.9 million pounds for 1990, down 5 percent from the 2.0 million pounds last year. Missouri producers received an average price of 53 cents per pound in 1990, unchanged from 1989. The value of Missouri's honey production was $1,002,000 compared to $1,084,000 a year ago.

HONEY PRODUCTION, 1990

State	Colonies of Bees	Yield per Colony	Honey Production	Stocks Dec. 15	Average Price/Lb.	Value of Production
	-thous.-	-lbs.-	-thous. lbs.-		-cents-	-thous. dol.-
Arkansas	31	75	2,325	279	49	1,139
Illinois	19	40	760	448	74	562
Iowa	70	54	3,780	945	52	1,966
Kansas	36	67	2,412	241	60	1,447
Missouri	**30**	**63**	**1,890**	**567**	**53**	**1,002**
United States	3,188	61.5	196,035	30,746	52.8	105,033

INSTALLING PACKAGES

There are as many different ways to hive a package of bees as there are package bees to hive. Choose a technique that sounds best for you and your experience or one that the other beekeepers in the area use. You'll find that honey bees are pretty forgiving.

Before the bees arrive have all of your equipment assembled, painted and ready to use. If the hive has been freshly painted let it air out for a couple of days. Have all of your equipment in the place it will stay and ready to use. You'll avoid a lot of last minute panic and unplanned rushing around.

Your bees have bounced around in the package for several days and they'll be ready for a place to call home. It is best to hive them as soon as possible. However, if you cannot hive the package immediately, store the bees in a cool, dark, dry place, such as a garage or basement. Feed the bees with a 1:1 sugar:warm water mix, using a misting sprayer and applying directly to the screen. Be careful you do not use a spray bottle that previously contained poisons or cleaners. If they are agitated, this feeding will help to quiet them.

If is best to hive the bees late in the afternoon. This will keep flying to a minimum and by morning, the bees will have settled in the new hive. Before you start, feed the bees once again. One way to install a package starts by removing the hive cover, inner cover and several frames form one side of the hive. If you wear a bee suit, veil and gloves put them on at this time. Experienced beekeepers will tell you protective clothing isn't needed while installing packages, the theory being that the bees are disoriented enough and they won't sting. Do so at you own risk at least initially. However, if you won't to learn to work bees without wearing glove, this is an ideal time to start.

Gently shake the bees down to the bottom and spray with sugar syrup.

Next, spray the bees with sugar water again, and give them a moment to lap some up. Tap the package on the ground just hard enough to dislodge the bees form the top of the package. With your hive tool, remove the cover of the package. You will see the can that contains the ar syrup the bees used for food during the trip, and next to that the metal tab that holds the queen cage. Pull up the can far enough so you can remove the queen cage and set the lid back over the opening of the package. Inspect the queen and make sure she is alive and apparently healthy.

At one end of the cage remove the cork covering the white candy. Sometimes a cork is not used and just the metal tab covers the candy. Swing this out of the way. Use a frame nail and pierce a small hole through the candy. Be careful not to go so far as to lance the Queen. Place the queen cage down between two frames. Hanging by the metal tab of wire. Position the cage so the candy is facing up, and the cage screening is 90 degrees to the frame. Push the frames together to help support the cage. Make sure the screen side is not covered by comb material. The bees *must* have access to the queen.

Then, remove the cover on the package. Carefully remove the syrup can and set it aside. Pick up the package and to gently shake the bees into the hive, making sure to dump some directly onto the queen cage. Shake the remaining bees into the space left open from the missing frames. You won't get every bee out of the package, so set it down in front of the hive. Gently replace the frames you removed earlier. Do not force the frames down into place. You will squash many of the new bees. Rather, let the frames slowly settle in place on their own as the bees move out of the way.

Slowly put the hive back together, being careful not to smash any bees in the process, you should feed the bees sugar water to help them draw out the comb if the hive has all or mostly new foundation. Make sure to install an entrance reducer, this will keep the entrance down to the size the small colony can protect.

Things form this point will happen pretty much on their own. Check the queen cage in three days to make sure the queen has been released. If she is still in her cage, release her. In either case, remove the empty queen cage.

These are the basic point of hiving your new package of bees, but there are may variations. However, if you stick to the basics (as described here or any of the many other publications on the subject), you'll find success. Experiment and find a system that works best for you and your location.

From *Gleanings in Bee Culture*, February 1991

Clusters and Reversing Brood Supers

-M. A. Macfarland-

It has finally occurred to me after four years of beekeeping that if I plan to be a beekeeper I had better start learning about beekeeping. I have found that it takes a lot of work to either lose or keep colonies, so I may as well do the later. Below is a summary of what I think is a key piece of understanding for early spring hive management.

Clusters - In order to survive a long period without food sources from the field, bees will store food inside the hive in the form of honey and pollen. In the fall, when the temperature falls below a level at which the bee can live and move (usually 57 degrees F), they generate heat by creating a thermal environment of their own in a cluster. This coincides with the time that the last brood has emerged and the high temperature of the brood rearing period ends. During the winter, the cluster will expand and contract with the changing outside temperatures. Bees will leave the cluster and the hive on days above 50 degrees F for cleansing flights.

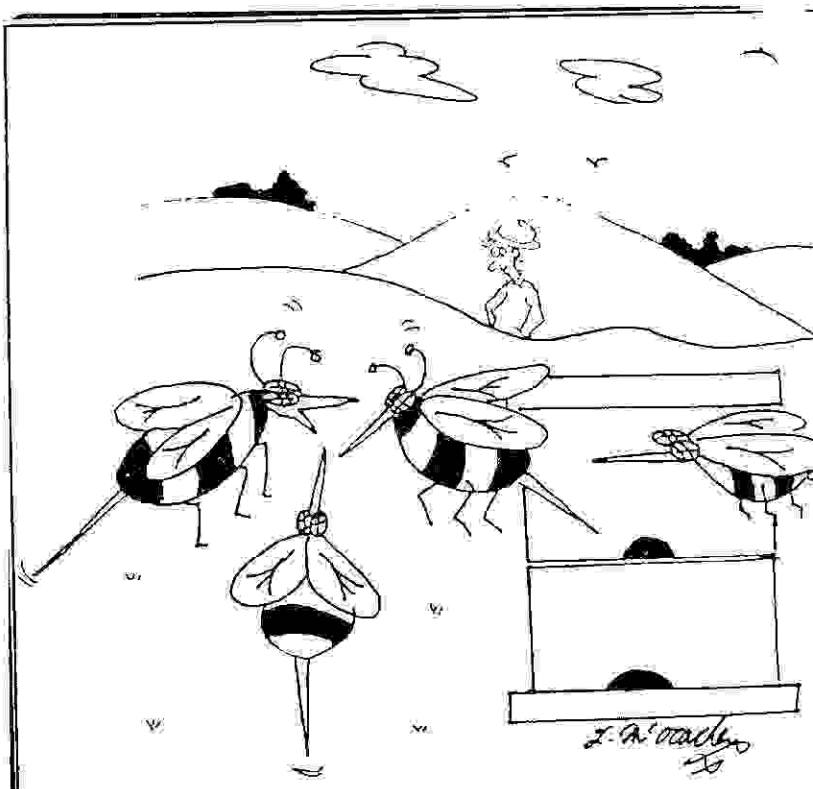
The cluster is a sphere of bees several layers thick with their thoraces in contact and abdomens extending outward. The hair on the thorax provides a living shell and heat is generated by the activity of bees spreading fanning muscles and shifting positions from the middle of the cluster outward and the perimeter bees of the cluster shifting inward. As adjacent stores are consumed, cells are emptied and the cluster is shifted. If the colony is in a two story hive, the cluster is normally in the upper story by spring.

To prepare the bees for winter clustering, at the end of August take the honey supers off, treat with menthol the first two weeks of September, sprinkle Terramycin mixed with powdered sugar and feed sugar water. During the winter the bees will exhaust supplies within reach and will not normally abandon the brood nest if extreme temperatures prevail. The objective is to build the colony up to full strength by the first nectar flow in early to mid May, but not too strong as to encourage swarming.

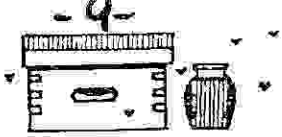
Reversing Brood Supers - Reversing is a matter of weather and the population of the hives. Dom Gaeta suggests that around the end of February, Fumidil-B may be mixed with sugar syrup, Terramycin can be sprinkled with powdered sugar on the frames being careful not to sprinkle directly on the brood nest, and menthol could be added mid March to prevent any stress on the hives caused by the mite. The sun and bees will warm the colony at this time so the menthol vapors will penetrate the hive. Depending on the weather, check around April 1st if there appears to be wall to wall bees and five or so frames of brood in the top super, then reverse. When the population is high the bees have the strength in numbers to keep the hive warm even if they are moved to the bottom. If there do not seem to be many bees in the top super and only a few frames of brood in the top and bottom super, don't reverse but check again by April 15th. In this later case, there are not enough bees to keep the bottom super warm and the bees are better off left on top. Dom Gaeta also cautions against removing the entrance reducer if the nights are cool - below the mid 30 degrees F. Drafts on the brood nest would be deadly.

After reversing, check the queen in a week and make sure she is moving and laying brood. If not, add a frame or two of brood from the top to the bottom super. The important thing is to keep the bees warm. The queen should move upward into empty portions of the brood area and then into the empty combs above. The worker bees will then rearrange the stores of the colony around the new brood area. This stimulates the colony to greatly increase its population. The bees will take cleansing flights more often now as the weather warms up. Older bees will die and younger bees will emerge. In the case of a strong hive, the supers may have to be reversed again before the main honeyflow begins. By May 1st the honey supers should be on the colony with a clean queen excluder. It would be helpful to add two shallows with drawn comb. Check the bees every week to ten days until the end of June.

Finally, it is important to learn how to 'read the hive' as Dom Gaeta puts it. When inspecting ten hives in a row, no two will be treated the same way. Hopefully with these thoughts in mind, all of your bees, and mine too, will be off to a terrific start for the New Year.



"LET'S GIVE HIM A GOOD SCARE BY ALL PLAYING DEAD."



THAXTER'S BEES

Cutting Spring Losses From Tracheal Mites

By Jim Thaxter

Spring is nearly upon us again, and with it comes the time in the beekeeping cycle when actual bee work can begin again. By the time you read this article, you may have had the opportunity to do some quick inspections of your bees. You may have an idea of how they fared the winter: how much honey they have left, how strong your colonies are, or how many hives have already given up and left you empty boxes to clean.

It is the rare beekeeper who never loses any hives during the winter. Most people consider up to 10 percent to be an acceptable loss, but aim for less than that. Sometimes, losses are unusually high, and you'll need to look for unusual causes — like tracheal mites.

For instance, a year ago some Missouri beekeepers were finding losses as high as 50 percent. Weather conditions were unusual for the Midwest last spring, and cold, wet weather was blamed for much of the bee mortality. Undoubtedly some colonies did starve to death because they could not forage during their spring build-up time, but the bad spring followed a fairly good honey year. Hives should have been heavy with honey the previous fall and well provisioned for the winter. Even with poor spring weather, the bee losses in some areas were unacceptably high.

Although not confirmed, there are suspicions that these higher-than-normal losses were due to tracheal mites. Several beekeepers lost significant numbers of hives that still had honey in them; starvation could not have been the reason. The mites are so hard to detect that they weren't confirmed as the cause of the above-normal losses, but in the cases when laboratory analyses was done, the results confirmed the presence of tracheal mites in large numbers.

These microscopic mites feed and reproduce inside the bees' breathing tubes, or tracheae. Bees breathe by means of openings in their bodies that allow passage of air in and out, similar to air exchange openings on the leaves of plants. Mated female adult mites enter the air openings, or spiracles, puncture the trachea wall with their mouth parts and feed on the bee's blood. They lay eggs that soon mature, and the new adult mites mate and move on to other bees. Thus, the mites have a doubly debilitating effect on the bees: they are parasitic, and they block the bees' breathing tubes.

The mites were first detected in the United States in 1984 and have spread rapidly. Transporting bees for pollination and selling package bees and queens have contributed to their spread from the southern states to the northern. Buyers of these bees don't always know the health history of the stock they purchase, and an inspection certificate is no guarantee that the colonies the bees came from didn't have a low infestation that was not detected during the inspection process. Once the bees are hived in their new location, a low mite population will take several months to turn into a large one. By then the beekeeper may think the queen is failing or suspect some other reason for the decreasing productivity of the hive. Finally, so many bees become infected with mites that the colony dies, usually in the early spring.

Tracheal mites are difficult to detect, but they can be controlled once they are found.

As mentioned, the mites are very difficult to detect. They are microscopic and only spend a short time outside the tracheae, so the only way to detect them is to dissect a bee and do a microscopic examination of the exposed trachea. To add to the difficulty, not all bees in an infested colony will test positive for mites, so a large number of bees must be tested to ensure that an accurate infestation rate can be determined.

The testing procedure takes time, and with the large number of beekeepers that are concerned about these mites, laboratories doing the testing are overworked. The Missouri Department of Agriculture is not running the test for mites on samples sent in just for that purpose, but there are at least two independent labs that will test for a fee. For information about fees, sampling and shipping, contact:

Apiary Diagnostic Services
27109 Old Swede Creek Road
Oak Run, California 96069
(916) 472-3854

Microanalytical Services
7 Tucker St. #65
Pepperell, MA 01463
(508) 433-8429

Although detection methods are still slow, once the presence of mites is confirmed there is something that can be done to protect the bees. The U.S. Environmental Protection Agency has approved menthol crystals as a control substance for tracheal mites. Menthol is effective, but it must be used according to label directions, which state that menthol must be removed at least one month before a honey flow. It should not be used while honey supers are on the hive.

Menthol is most effective at temperatures above 70 degrees Fahrenheit. In addition, if the bees survive the winter, they seem to have a good chance of making it through the summer without being badly affected by tracheal mites. When they form their winter cluster, the mites have the advantage. They can easily move from bee to bee, spreading the problem throughout the hive. Thus, the best time to treat with menthol is in the fall after the honey harvest to reduce the mite population before winter clustering starts, and again in the spring to reduce the population while the bees are building their own numbers.

Missouri Farm March/April 1991

Thaxter's Bees - con't.

Before starting a treatment program, I would recommend having your bees tested for tracheal mites, especially if hives seem weak or are slow to build up in the spring. Proper action to solve a problem can only be taken when you are sure what the problem is. Hives could be weak from other causes, so do not rule out the possibility of diseases or even bad weather like last spring's as a cause of poor performance.

Honey bees are biological creatures controlled by heredity, and variable genetic traits may also hold some promise for the control of tracheal mites. These mites were first discovered in England in the early 1900s and were blamed for the death of a large number of colonies. The bees that survived probably had some genetic trait making them resistant to or tolerant of the mites. Since then, tracheal mites are not considered a serious problem in that country. Stock from Great Britain is being studied in hopes of breeding resistant bees for propagation in North America. U.S. beekeepers are also evaluating their own bees for possible resistant strains to be bred for commercial queen production. A resistant bee would certainly be preferable to annual medicinal treatments.

Until there is a such a cure, beekeepers can best treat tracheal mites by paying close attention to their hives. If you suspect you have a mite problem as you inspect your hives this spring, have your hives tested and proceed with control measures from there. Good luck, and enjoy the start of the new season! •

THE EDITORIAL DILEMMA

Getting out a newsletter is no joke.
If I print jokes, people say I am irreverent.
If I don't, they say I am too serious.
If I clip things from other magazines I am too lazy myself.
If I don't, I am stuck on my own stuff.
If I don't Print every word of every contribution I "Don't Appreciate Genius".
If I do "The columns are filled with Junk".
If I make a change in your article, I am "Too Critical".
If I don't I am blamed for poor editing.
Now, as like it as not, someone will say I swiped this from some other source.
I Did!

•

THE GOLDEN GATE

I stood at the Golden Gate,
my head was bent and low,
I meekly asked the man of fate,
which way I had to go.
"What have you done?"
St. Peter said,
"to seek admission here."
"On Earth," I said, "I was an Editor
For many and many a year."
St. Peter opened wide the gate,
and beamed on me as well,
"Come in and choose a harp" he said,
"You've had your share of hell."

•

WHAT KIND OF SOY BEAN TO PLANT ?

According to information given by Elbert R. Jaycox, then editor of Bees and Honey newsletter from the Department of Horticulture, College of Agriculture, University of Illinois at Urbana Campaign the best variety of soy bean to plant for nectar secretion is Elk, followed by Williams and Wells. Soy bean honey is accepted by most honey eaters as very good. Some say it is as good if not better than clover.

From *The Bee Buzzer*, January 1991

HOT DIP PRESERVES WOOD

To preserve wooden hive parts you can use a hot dip. Mix six parts of paraffin and four parts of rosin and heat to 300 deg. F. The mixture is usually heated over an open fire outdoors, and one must take great care not to raise the temperature of the boiling solution above 300 Deg F. The flash point of the solution is about 400 deg F. Each hive, with the bottom board attached is immersed in the liquid and held for about a minute to let the wood absorb as much of the solution as possible. The hive is then raised and allowed to drain back into the tank. After the wood cools no wax is visible on the wood surface. Now the hive is dipped again for five seconds, and then removed. This causes a thin coat of wax to remain on the wood surface. This wax coating keeps the wood good for several years and can be cold dipped again as needed.

By Robert Gibson

CONGRATULATIONS TO: ERMA CARY of Springfield, Mo.

Erma was the Grand Prize Winner in the National Honey Board's recipe contest inWoman's Day magazine. If anyone in Southwestern Missouri knows Erma, I'd like to get more information from her about her entry.

PURE AND NATURAL HONEY

It's everywhere these days: Breads, cakes, cookies, muffins and scones.
Souffles, fritatas and tostadas. Roasts, meatloafs and stir-frys.
And a few more places you might not expect.

WHAT'S GOING ON?

Consumers have clearly discovered that honey is boon to all sorts of dishes.
And they proved it in 1990. That's when thousands of them
entered the National Honey Board's recipe contest in Woman's Day magazine.
Some of the winning recipes follow.
Each was chosen for its unique combination of flavor, texture and color.
That's because honey contributes these properties to all recipes.
Honey is renowned for keeping baked goods moist.
For adding sweetness without extra sugar. For turning breads a rich brown.
And for expertly complementing savory flavors. Beekeepers have known about
these properties for a millennium and invite you to enjoy them today.

HONEY SHORT BREAD

Erma Cary, Springfield, MO
Grand Prize Winner

- 1 cup butter
- 1/3 cup honey
- 1 teaspoon vanilla
- 2-1/2 cups all-purpose flour
- 3/4 cup chopped pecans

With an electric mixer beat butter, honey and vanilla together until mixture is light and fluffy. Add flour, a cup at a time, beating well after each addition. If dough becomes too stiff to stir, knead in remaining flour by hand. Work in nuts. Pat dough into shortbread mold or ungreased 9-inch cast iron skillet. Score the surface with a knife so it can be divided into 24 wedges; with a fork, prick deeply into the knife scores. Bake at 300°F 35 to 40 minutes. Cool 10 minutes and remove from pan. Cut into wedges while warm. Makes 24 wedges.

OLD FASHIONED OATMEAL PIE

Dorothy DeWyze, Palatine, IL
Second Place Winner

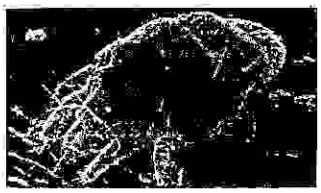
- 3/4 cup honey
- 2 eggs, beaten
- 3/4 cup *each* quick-cooking oats, coconut and packed brown sugar
- 1/2 cup *each* butter or margarine, currants and chopped walnuts
- 1 9-inch pie shell
- Whipped cream

Combine all ingredients except pie shell and whipped cream; mix well. Pour into pie shell. Bake at 350°F 40 to 45 minutes or until filling browns and knife blade inserted near center comes out clean. Cool. Top with whipped cream and serve. Makes 6 servings.

Ralph Settle
Died June 1990
Long time member of MSBA
From Mexico
Mo.

Save the bees

Bees from a Benedictine abbey in England are the latest hope for bees threatened by the tracheal mite (*Acarapis woodi*), the most serious problem facing bees in North America. Fifteen queen honeybees from the only strain in the world reportedly bred for resistance were imported this year under quarantine. The U.S. Department of Agriculture hopes to crossbreed their offspring to get bees that won't succumb to mites, tiny parasites that have wiped out half of all hives in many states.



Tracheal mites clog bees' breathing tubes.

The bees were bred by a 92-year-old monk, Brother Adam, a recognized bee authority who began taking care of the abbey's hives 80 years ago. Although resistance to tracheal mites has yet to be demonstrated on this side of the Atlantic, bees propagated from Brother Adam's strain are sold as Buckfast bees by Weaver Apiaries Inc., R.1, Box 256, Navasota, Tex. 77868, (409) 825-2312.

Some beekeepers have controlled tracheal mites by placing menthol in the hive, but results have been inconsistent, says William T. Wilson, research entomologist with the USDA Honey Bee Research Lab in Weslaco, Tex. Ready-to-use packets of menthol (a natural mint derivative) are available from apiary supply companies, but success depends on temperatures high enough (70° to 90° F) to vaporize the menthol in about two weeks. Menthol also can contaminate honey, and should not be used during peak collecting times. "Beekeepers have to fine-tune applications for their own area," says Wilson. A more recently introduced mite, *Varroa jacobsoni*, could potentially cause more damage, says Tom Rinderer, Ph.D., research director of the Honey Bee Breeding, Genetics and Physiology Laboratory in Baton Rouge, La. Several chemicals are available to control it, but mites could easily develop resistance. One of these chemicals, fluvalinate, is suspected of misuse after honey in Massachusetts was found to contain up to 22 times the legal amount last summer.

The USDA recently imported bees from Yugoslavia with twice the normal resistance to the varroa mite for observation and possible breeding. Meanwhile, beekeepers with a few hives can control the varroa mite by encouraging the queen bee to produce large numbers of drones, says Rinderer. This is done by placing a "drone foundation," or beeswax frame, in the hive.

Drones are more likely than worker bees to become infested. If these extra drones are removed and destroyed before they emerge from their egg cells, the varroa mite goes with them and the hive will survive, although honey production may drop, says Rinderer.

Written by Joanna Poncavage, with contributions from Jill Jesiolowski.

NATURE'S WAY

The purpose of agriculture is quite different from that of a factory. It has to provide food in order that the race may flourish and persist. . . . The nation's food in the nature of things must always take the first place. The financial system, after all, is but a secondary matter. Economics therefore, in failing to insist on these elementary truths, has been guilty of a grave error of judgement. . . .

Sir Albert Howard
An Agricultural Testament

DO'S AND DON'TS FOR TALKING TO THE MEDIA

Successful media interviews require practice and a positive approach. The most successful spokespersons consider media interviews valuable opportunities to reach large audiences with an important message. And with a few exceptions, most reporters are simply trying to do a story. Being helpful, open and honest with reporters adds to the overall success of the interview. The following are a few guidelines that will help you get your message across with the most positive results.

1. Accept interviews because you have a message you want to get across. This gives you and the beekeeping industry a voice and a chance to educate people about your livelihood

2. Set your own agenda for the interview before it starts by having two or three key points YOU want to make during the interview. Stress the importance of honey bees to U.S. food production. Having your key points and supporting data ready helps you maintain control of the interview.

3. If possible, ask the reporter for a brief rundown of his/her questions before the interview begins. Establish time limits for the interview, especially for radio and television.

4. Have photographs or visuals ready for the reporter. Propose a tour of the bee yard. Explain technical words like bee suit, veil, super, hive body, smoker, pheromone, frame, capping wax, honey harvest, nectar flow, queen, worker and drone. This will help the reporter understand beekeeping better and will help you develop a good relationship with him/her.

5. For television interviews, wear simple clothes with a bit of color. A bee suit is ideal for television even though it is white because it is unique and interesting. If the story is for radio, help the reporter record the hum of a bee hive. Use good posture and eye contact.

6. Prepare for the interview. Know your material. Talk openly but always stick to your area of expertise. Always be honest.

1. Don't feel controlled by the reporter. You can guide the reporter along your chosen course instead of simply responding to a stream of questions. You have an interesting story to tell and that gives you some control.

2. Get YOUR message across but don't be evasive or sneaky. Don't feel like you have to choose one of the alternatives the interviewer offers. Be honest but don't feel you have to answer the question exactly the way it is asked. Never be rude or hostile. Don't let yourself be drawn into an argument.

3. Don't ask for a complete list of questions; just get the basic idea of what the reporter is looking for.

5. Except when wearing a bee suit, avoid white or beige clothes on the outer layer because they tend to make a person look pale. Avoid busy or distracting clothes and jewelry. Women should avoid low cut blouses. Don't fidget or have anything in your hands to play with. Don't swing in swivel chairs.

6. Don't let yourself get sidetracked and never talk about subjects that are not in your area of expertise.

7. Remember that reporters often work on tight deadlines. Always return their calls, even if it is to say that you can't get the information. In this case, give the reporter the names of a few people who could help.

8. No one is an expert on everything. Remember that it's alright to say, "I don't know," when you don't know the answer to a question.

9. At the end of an interview, reporters will often ask if you have anything else you'd like to add. ALWAYS have something to add. This is where you get your key points in.

10. Ask for a copy of the story when it is published or aired. Review it for strengths and weaknesses and use this to do even better next time.

7. If you don't know the answer to the question or feel you are getting out of your area of expertise, never say, "No comment." It makes you look guilty.

8. Unless you are scientist in a position to do so, don't predict the future. Don't bluff. Don't tell jokes that might be misinterpreted.

9. Never ever go "off the record," even if you feel the reporter is trustworthy. Don't give personal opinions because they will appear to reflect the policy of the entire beekeeping industry.

10. Don't expect to get a chance to review or edit the story before it is printed or aired. Most reporters won't comply.

Prepared by USDA, APHIS, Public Information
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BEEKEEPING TIPS:
PREPARATION OF APIARY PRODUCTS
FOR EXHIBITION

Prepared by Clarence H. Collison
Department of Entomology- MSU

October, 1990

The preparation of apiary products for exhibition and competition requires the beekeeper to not only select a product of superior quality but to display it with high standards of "showmanship." Showing honey is not difficult but it does require a high level of care and attention to detail.

There are several important points that must be considered in developing a high quality pack of liquid or creamed honey. The appearance, suitability, and uniformity of containers is important. Select your jars with great care. In cleaning the jars, be sure that they are completely rinsed after washing. Any trace of oil, detergent, or soap will appear on top of the honey by the time it reaches the show bench. Each jar should be filled to the same height with uniform honey in all containers of the entry. All jars should be filled to the top of the lip which encircles the neck. For liquid honey, careful settling and straining is required to get the honey free from crystals and impurities including froth. Avoid straining the honey through a material that is likely to leave lint in the honey. Caps must be clean inside and out. Truly, high quality extracted honey has a characteristic sparkle of cleanliness when held up to the light.

Any time honey passes through air it picks up air which gives it a cloudy appearance. A lot of bubbles can be prevented during the extracting process if the honey is warm and the extracting is done in a warm room where the temperature is 75-80 F. Do not permit the honey to drop any great height. Place a sloping board in the tank so that the honey runs, not falls after straining. Allow the honey to settle for at least 24 hours and bottle it cold.

Honey for exhibition purposes should be heated only hot enough to eliminate crystals and make it possible to strain through a strainer of about 100 mesh without destroying the flavor. Temperatures of 110-130 F. should be sufficient. Good aroma, density, and flavor are the requisites of prizewinning honey. Extracted honey must meet the required moisture content of 18.6 percent or below. Entries above this level are disqualified.

In judging creamed honey, the texture is probably the most important factor. Creamed honey should have crystals which are fine enough not to be felt on the tongue when the honey is tasted. Absence of grittiness, solidified foam and extraneous material on the surface is important. The honey should be spreadable but not so soft that it runs from the knife. Flavor and aroma are also important considerations.

Comb honey should be capped with new clean (free of bee "travel stain"), white, unsoaked cappings. Section comb honey entries in round sections should have all cells capped; wooden sections may have the outermost rows of cells uncapped. All cells should be of uniform height and filled with high quality honey. In addition, the wood or plastic sections should be free of dirt, propolis, and bits of wax. Scrape any excess wax and propolis from the section surface.

Chunk honey and cut comb honey should contain neatly cut, fully capped combs which fill their containers completely. Pieces of comb should all be oriented the same way in the container. The liquid honey surrounding chunk combs should show all the characteristics of good extracted honey. Bits of wax from the comb and dirt should be absent.

High quality beeswax is between straw and canary yellow in color and free from surface dirt, honey, and propolis. All wax of the entry must be uniform in appearance, have a pleasant "bee hive" odor and not be greasy or sticky to the touch. Use only wax from well-drained cappings removed from new white combs and melted in a water bath container over an electric heater. Never heat beeswax over an open flame, because of the fire hazard. Do not boil beeswax too vigorously or for too long. This can result in incorporation of air bubbles, and damage to the wax. When wax is boiled without water beneath, discoloration occurs if the temperature exceeds 185 F. Do not heat beeswax in tanks composed of monel metal, iron unless galvanized, zinc, brass, or copper because this will discolor the wax. No appreciable discoloration occurs in vessels of aluminum, nickel, tin or stainless steel.

The melted wax should be strained through fine cloth to remove any foreign particles. Before pouring into a mold, the wax should be allowed to solidify partly on the surface. Shrinking is best reduced by a slow-cooling process, as in a warm oven. This will help to reduce cracking and shrinkage. The mold should be carefully filled and allowed to solidify completely before being removed. A rim left by shrinking wax can be carefully smoothed off on a warm, flat surface.

Extension Service UPDATE

United States Department of Agriculture

USDA Interagency Technical Working Group on the Africanized Honey Bee

Apiculture Awareness

JAN. & FEB. 1991 VOL. 4, ISSUES 1 & 2

AFRICANIZED HONEY BEE (AHB) TRAP LINE ESTABLISHED

Three more trap lines, each with 40 to 50 traps, are being established to cover the area from Falcon Lake to Zapata, Texas. Officials from the New Mexico Department of Agriculture, New Mexico State University, Texas Agricultural Extension Service and APHIS PPQ officers participated in AHB identification training January 8-9 in El Paso, Texas. Local television stations aired segments of the training on the 6 and 10 o'clock news.

SOURCE: Animal and Plant Health Service Weekly Report, January 22, 1991

FLUVALINATE STRIPS

The Environmental Protection Agency confirmed to APHIS that fluvalinate strips, with expired registration, for use in controlling Varroa mites can be used for survey work with no registration. This information is being communicated to the States

SOURCE: Plant Protection and Quarantine (PPQ) highlights, January 18, 1991

AFRICANIZED HONEY BEE (AHB)

Numerous swarms of AHB have been captured in Mexico approximately 80 miles south of McAllen, Texas. Recent trapping in the area produced 32 swarms of bees; 26 of these were identified as Africanized.

SOURCE: Plant Protection and Quarantine (PPQ) highlights, January 18, 1991

VIRGINIA QUEEN AND COMBLESS PACKAGE REQUIREMENTS

Transporting bees into Virginia which are in compliance with Virginia law is not prohibited. The Virginia Department of Agriculture and Consumer Services requires that all bees on comb, combless packages and queens consigned to locations in Virginia from any place outside Virginia must meet specific shipping conditions.

All queen and combless package bee producers are requested to notify the Virginia State Apiarist at the following address of shipments sent to Virginia beekeepers. This policy is in support of resolutions passed in 1990 by the National Association of State Departments of Agriculture (NASDA) and the Apiary Inspectors of America (AIA).

SOURCE: Frank M. Fulgham, State Apiarist, Virginia Department of Agriculture & Consumer Services, P. O. Box 1163, Richmond, Virginia 23209; telephone number: (804)786-3515.

ABF News Release

For Immediate Release
AMERICAN BEEKEEPING FEDERATION
Contact Troy Fore: 912-427-8447 or 427-4018
February 11, 1991

Federation Reaffirms Support for Honey Board and Refund End

The American Beekeeping Federation has reaffirmed its support for continuing the National Honey Board program and for ending the assessment refunds.

In its annual meeting in Mobile, the Federation overwhelming defeated a proposal which would have deleted from a resolution a statement of support for an affirmative vote in the referendum to end the refunds.

It was argued that some persons who were otherwise supportive of the Federation were being alienated by the push to end refunds. A number of speakers countered that the Honey Board is making great strides in honey promotion and that without refunds it would have even more funds with which to work.

After the attempt to amend the resolution failed, the Federation membership adopted the resolution as presented. It again put the Federation on record in support of both continuation of the Honey Board program and ending the refunds. The referendum is planned for June 1991.

The Federation declined to go on record in support of another proposition -- favoring the payment of outstanding claims for 1979 and 1980 under the Beekeeper Indemnity Payment Program – after hearing an appeal that it not ask its representatives to go to Washington to defend what is remembered there as the worst program ever.

The Federation approved various other resolutions, including:

- THANKING those responsible for making the Mobile convention a success and the American Honey Queen Committee and Honey Princess Ann Kerian for a good year.
- REQUESTING the USDA-ARS to conduct research aimed at the control of the wax moth.
- ENDORSING the adoption of the honey bee as the National Insect of the United States.
- ENCOURAGING USDA-ARS to appoint and fund a chemist to conduct primary research on the properties of honey.
- WORKING to establish a legal definition of honey for use by FDA in protecting our industry.
- RECOMMENDING the FDA establish "Standards of Identity" for "honey"-named products, which, as a minimum, state that honey must be included in the product itself and that the FDA also establish "Standards of Identity " for the most commonly produced "honey"-identified products, such as breads and sauces, which set minimum amounts of honey which must be in the products in order to be called a "honey" product, e.g., Honey Bread or Honey Sauce.
- REQUESTING USDA-AMS to develop standards for round comb section honey similar to those which exist for other section comb honey.
- DIRECTING the ABF Secretary to prepare and present to the Congressional staff members who were helpful in getting the honey portions of the 1990 Farm Bill adopted certificates expressing the Federation's recognition and appreciation for the staff members' assistance.

• ASKING the Environmental Protection Agency to monitor closely the use of chemicals utilized in outbreaks of insect pests, so as to minimize the loss to the bee industry.

• RECOMMENDING that agencies requiring bee colony depopulation for disease and pest control be required to indemnify the affected beekeeper with fair and just compensation in a timely manner.

• ASKING the Environmental Protection Agency to expedite reviews of all applications of Section 3 General Use labels for use of amitraz and/or other suitable chemicals as soon as possible and requesting a Section 18 Emergency Use registration for Miticur amitraz strips for use until the Section 3 General Use label can be obtained.

• URGING Congress to provide additional funds for research on tracheal and varroa mites.

• SEEKING the appropriation of sufficient funds to complete the Weslaco bee research facility and to enhance the current level of research work at all the bee labs and request that a representative of the Federation be involved in internal review of the ARS bee laboratories.

• REQUESTING that Zoecon pursue general use registration of its Apistan strip for packaged bees and requesting a Section 18 Emergency Use registration for Apistan package strips for use until the Section 3 General Use label can be obtained.

• URGING producers of queens and packaged bees to use a registered preventative treatment if available for varroa mites in all shipments of queens and packaged bees to retard the spread of varroa mite.

• WORKING for establishment and implementation of a program under which the U.S. Department of Agriculture or state departments of agriculture will certify queen rearing operations that demonstrate that such operations ensure adequate control of matings to produce gentle stock.

• RECOMMENDING that importation of a particular honey bee stock be allowed if and only if that stock has an identifiable beneficial trait that has not been found in the existing U.S. honey bee populations; that the dissemination of stock be allowed if and only if the stock has been quarantined and regularly examined for at least one year without detecting any disease or parasite of honey bees; and that the Federation be consulted prior to all proposed importations of honey bee stocks.

• URGING USDA to develop and implement public education on Africanized Bees and encourage states to develop a plan of action to deal with the problem.

• CONTINUING to work the with NASDA Steering Committee in establishing a national bee certification program.

• REQUESTING USDA-ASCS to study and implement ways of adjusting the honey lower loan repayment rate in a manner causing the least disruption to our industry.

• SUPPORTING the concept of the establishment of a central honey bee stock center.

# # #

Dadant & Sons, Inc.

51 South Second Street
HAMILTON, ILLINOIS 62341 • (217) 847-3324
FAX# 1-217-847-3660

Come and join us for the ***Tri-State Beekeepers Meeting April 27, 1991.*** We hope you will make an enjoyable weekend out of the event and we are listing some of the many tourist activities in the area during that time. Make your plans now and please make your motel reservations at once as it is building up to be a busy time for everyone. The area is full of fun and excitement for all ages, so don't miss out on this one.

We feel your state associations have planned a very informative and entertaining program covering most of the "hot" topics of current times. Our factory will be available for tours Friday afternoon from 1:00 to 4:00 p.m. and again Saturday before the meeting from 7:00 to 8:00 a.m.

SCHEDULE OF EVENTS

Friday, April 26, 1991	1:00 p.m. until 4:00 p.m. tours of Dadant & sons, Hamilton, Ill.
Saturday, April 27	7:00 a.m. until 8:00 a.m. tours of Dadant & Sons, Hamilton, Ill.

TRI-STATE BEEKEEPERS MEETING

Saturday, April 27 8:00 a.m. until 9:00 a.m. registration—
Keokuk Middle School Auditorium
15th and Main Street
Keokuk, Iowa

9:00 - 9:15	Welcome by Tim C. Dadant, president of Dadant & Sons, Inc. Program moderator, Bob Wells, Iowa Dept. of Agriculture
9:15: - 10:15	Gene Killion, retired Illinois state apiarist and currently extension apiculturist, University of Illinois. Topic—Queen Rearing
10:15 - 10:45	Break—Coffee and Rolls, compliments of Dadant & Sons
10:45 - 11:45	Bob Cox, Iowa state apiarist and former research entomologist at the Weslaco Honey Bee Labratory Topic—Mite Detection and Control
11:45 - 12:30	Phil May, commercial beekeeper in northern Illinois and Wisconsin Topic—Colony Management
12:30 - 1:30	Lunch break - Keokuk Middle School Cafeteria
1:30 - 2:30	Jim Tew, national program leader, Apiculture Extension Service, USDA, and head of the Agricultural Technical Institute Beekeeping Technology Program at Ohio State University. Topic—Africanized Bees
2:30 - 3:30	Bob Smith, newly hired director of the National Honey Board in Longmont, Colorado Topic—Honey Promotion Update
3:30	Adjourn—Missouri State meeting in Cafeteria

RE-ENACTMENT OF THE BATTLE OF PEA RIDGE

Be sure to attend one of the many events that weekend of the Civil War re-enactment featuring the First Brigade Band of Milwaukee, Wisconsin. Re-enactors in full uniform will fight the Battle of Pea Ridge which is the battle that saved Missouri for the Union. It is a battle that saw Southern troops attacking from the north and soldiers from Arkansas and Texas fighting alongside French-speaking Louisianians and Indian regiments serving under their own officers.

Moreover, the Missouri State Guardsmen who fought for the southern cause were not yet officially in the Confederate service. The Union soldiers came from Missouri, Iowa, Illinois, Indiana, and Ohio. Many spoke German as their first language. Both warring powers knew Missouri controlled navigation on the Missouri and Mississippi Rivers. Control of Missouri was extremely important to President Lincoln in Washington and President Jefferson Davis in Richmond. Both the Union and Confederacy made the acquisition of Missouri a high military and political priority. Pea Ridge brought to an end the campaign that began on Christmas day 1861. In mid-February 1862, the Missouri State Guard commanded by Major General Sterling Price crossed into Arkansas.

The encampment complete with all of their tents, clothing, supplies and re-enactors will be open to the public throughout the weekend at no charge. Volunteer artesans have come from far and wide to demonstrate their skills and sell their unique handmade period products. As with the re-enactors, these craftmakers are preserving and perpetuating another part of our cultural heritage. In addition, local organizations have studied recipes of that era and will be serving foods in the park throughout the weekend.

The City of Keokuk played an important role in the Civil War. It was the swearing in point for all Iowa volunteers in the Civil War. At one time four camps were located there housing several thousand men.

Keokuk was assigned the responsibility of administering to the sick and wounded brought in by boat from the southern battle grounds. Seven Civil War hospitals were located in Keokuk with the largest having 652 beds. Keokuk's National Cemetery is a direct result of Civil War soldiers who died enroute to Keokuk or after having arrived at one of the hospitals. Both Confederate and Union soldiers are buried in this National Cemetery—one of the original 12 established by Congress on July 7, 1862. It is Iowa's only National Cemetery and the first established west of the Mississippi River. The cemetery is open to the public for viewing at no charge.

LOCK AND DAM

While you're in the Keokuk-Hamilton area, be sure to visit the Union Electric Power Plant and Dam along with the old Keokuk-Hamilton Bridge. In 1913, when the Dam and Power Plant were complete, the Power Plant was the largest electric generating plant in the world. Later, a 1200 foot lock, the largest on the upper Mississippi River, was constructed to accommodate modern towboat operations. The old vehicular traffic bridge, a swing span bridge, has been converted to an observation deck where visitors can watch the towboats making their way through the dam and lock—a fascinating sight in itself.

HISTORIC NAUVOO

Just 12 miles north of Hamilton along the beautiful scenic Mississippi River drive is the city of Nauvoo which was once a Fox Indian village of 400 to 500 lodges. It was relinquished by a treaty in 1824 for 200 sacks of corn. Members of the church of Jesus Christ of the Latter Day Saints, known as Mormons, settled here in 1839 in hopes of escaping religious persecution. After changing the name to Nauvoo, they incorporated the town and received a special charter from the Illinois Legislature. Missionaries such as Brigham Young converted thousands in England and elsewhere, causing people to migrate to the area. The town grew as business and industry flourished. By 1844 its population surpassed Chicago and Nauvoo became Illinois' largest city. With the boom came an increase in criminal activity. Sentiment toward the Mormons was not favorable during this period since many people blamed them for the lawlessness. Ironically, the lawlessness figured prominently in 1844 when the LDS founder, Joseph Smith, was shot and killed in the Hancock County Jail in nearby Carthage while he was supposed to be under protective custody. Today historic Nauvoo is being brought back to its former beauty.

Over 24 authentically restored shops and homes are living museums to the industry and culture that once flourished here. Early 19th century crafts have been revitalized and are demonstrated daily. Over 80 full-time tour guides are available to assist you. The village blacksmith still fires hot iron with hand-pumped bellows and you can see an authentic 1840 printing press in action. The famous Browning rifle and gun collection is on display in the Jonathan Browning home and there are horse and buggy rides and craft displays. Come and see the "Williamsburg of the Midwest." For more information contact Nauvoo Tourism, Box 55, Nauvoo, IL 62354, Phone (217) 453-6648 or Joseph Smith Historic Center, Box 338, Nauvoo, IL 62354, Phone (217) 453-2246 or LDS Visitor Center, Box 215. Nauvoo, IL 62354, Phone (217) 453-2237.

RIVERBOAT CRUISES

The excitement of river boat gambling on the Mississippi River begins April 1, 1991 with the arrival in Keokuk, Iowa of The Emerald Lady, a luxurious stern-wheel powered boat that is an authentic replica of the original steamships that once graced the river. Not since the steamboating glory days of the 1800's has there been such glamour, such excitement and such entertainment on the river. The style and grandeur of the original 19th century steamboats are captured with every detail. White marble, Aubusson style carpet and rich gilted Philippine mahogany await you. Begin the action on the casino deck with games of

black jack, craps and slots. Savor the exeptional cuisine in the spacious dining room on the second deck. On the third deck you'll find more entertainment. Dance to the beat of live music or thrill to more casino action. Stroll in the fresh air and take in the breath-taking views of the Mississippi River Valley from one or their promenade decks or the upper observation deck. The game area comes alive with the ring of hundreds of slot machines and the whirl of the roulette wheel. This is gambling entertainment for every adult to enjoy. With a $5.00 betting limit and a $200.00 loss limit, passengers can be assured of an exciting friendly gaming atmosphere. Remember, there is no limit on the winnings. This is an opportunity of a lifetime for one of the first river boat cruises on the Mississippi. There are separate cruises for breakfast, brunch, dinner and even a moonlight cruise. For reservations call 1-800-448-7450.

IMPORTANT

With all of the activities it's important to make your motel reservations at once. Space is limited. The entire Tri-State area feels that all motels will be filled to capacity. Please call at once and make your reservations at any of the motels listed.

Days Inn (84 units)
Main & 4th St.
Keokuk, IA 52632
Phone: (319) 524-8000

Keokuk Motor Lodge (60 units)
U.S. Highway 218-Main St. Rd.
Keokuk, IA 52632
Phone: (319) 524-3252

Keokuk Super 8 Motel (62 units)
3511 Main St.
Keokuk, IA 52632
Phone: (319) 524-3888

Chief Motel (21 units)
2701 Main St.
Keokuk, IA 52632
Phone: (319) 524-2565

Iowan Motor Lodge (140 units)
U.S. Highway 61
Fort Madison, Iowa 52627
Phone: (319) 372-7510

For more detailed information on area activities, contact Keokuk Area Convention & Tourism, 401 Main St., Keokuk, IA 52632. Phone (319) 524-5055 or 524-5599.

If we can be of any help, please give us a call. We look forward to seeing you April 27 and 28.

Regards,

DADANT & SONS, INC.

TRI-STATE BEEKEEPERS CONVENTION REGISTRATION

April 27, 1991
Keokuk Middle School
15th and Main
Keokuk, IA

NAME _____ ADDRESS _____

CITY _____ STATE _____ ZIP _____ PHONE _____

NO. IN PARTY: _____ADULTS AT $10.00 EACH
_____CHILDREN UNDER 12 at $5.00 each TOTAL $_____

Registration fee includes lunch and coffee and donuts at break. Lunch will be catered at the Keokuk Middle School Cafeteria and will include: Fried chicken, mashed potatoes and gravy, vegetable, salad, roll, dessert and drink.

MAKE CHECK PAYABLE TO MISSOURI STATE BEEKEEPERS ASSOCIATION
MAIL TO: LARRY HENSLEY,
13520 OLD JAMESTOWN ROAD
FLORISSANT, MO 63033
(314) 355-6935

TO MEMBERS:

We are interested in each and everyone of our members. Although we cannot give each one the individual attention we would like; we try to make your membership meaningful and trust that it adds zest, pleasure and profit to your beekeeping endeavor. You may not even have bees, but your interestin bees and what the bees contribute to our nations 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 that it will make the job of editor more pleasurable. If you know of any beekeeper who does not belong to Missouri State Beekeepers Assn., please pass this newsletter on to them and encourage them to join.

Dues are $5.00 per year. Make check payable to Missouri State Beekeepers Assn. If you belong to a local association, pay your dues through local treasurer.

ENCLOSED IS $_____for_____YEARS OF MEMBERSHIP.

NAME:

ADDRESS_____

CITY_____STATE_____ZIP_____

PHONE_____

MAIL TO:JIM HAUSAM --RT.2, BOX 117--LINCOLN, MO., 65338

MISSOURI STATE BEEKEEPERS ASSN.
314 QUINNMOOR DRIVE
BALLWIN, MO. 63011

Address Correction Requested

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