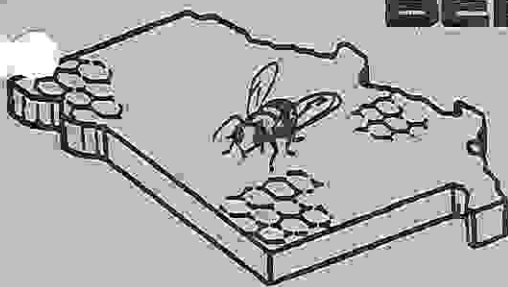


MISSOURI STATE BEEKEEPERS ASSOCIATION



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VOLUME 22

QUARTERLY NEWSLETTER
MARCH 1984

NUMBER 1

DEAR BEEKEEPERS,

Frigid December is history. January with its milder moments has also faded away. And here we are in February with only a few weeks until the arrival of one major harbinger of the new beekeeping season — the Annual Missouri State Beekeepers Spring Meeting.

This year's meeting is scheduled for Saturday, March 24 at the Memorial Union Building at the University of Missouri, Columbia. (See the last page of the newsletter for directions.) The featured speaker will be Mr. Troy Fore, Jr., the editor of "The Speedy Bee". Mr. Fore's morning presentation on "Honey Marketing" is most timely with the continuous increase in competition from less expensive imported honey. His afternoon topic "Value of Publications to Beekeepers" comes from his particular area of expertise.

Additional activities will be the talk by Mr. Charles Wills on "Extending the Life of Equipment"; the movies "Bee Management" and "Honey Handling"; and the Business Session with the presentation of the 1984 Beekeeper of the Year Award. A very full day!!!

Remember all are invited to the Friday evening board meeting at 7:30 p.m. In fact, each local association should have one representative at this board meeting. (Details are found on the agenda on page 11.)

Beekeepers who wish to become certified in the restricted use of chemicals (EDB) will meet in Room 2-28 of the Agriculture Building from 1 to 5 p.m. on Friday, March 23. (See agenda on page 11 for additional information.)

If you think that you will attend this certification program, please fill out the section below. Clip and send to Dr. Flernoy Jones, Extension Entomologist, 1-80 Agriculture Building, University of Mo., Columbia, Mo. 65211.

NAME _____

ADDRESS _____

ZIP CODE _____

PHONE _____

FROM AROUND THE STATE

On pages 15 and 16 of the September 1983 newsletter were listed the names and locations of the 17 local beekeeping associations in the State of Missouri. In December a new local association was formed - the PRAIRIE COUNTRY BEEKEEPERS ASSOCIATION. This new association, which is ten members strong, is located a bit north and east of Joplin, around the Lamar and Carthage area. We warmly welcome them!!

PRAIRIE COUNTRY BEEKEEPERS ASSOCIATION

President - Alvin Hillman, Rt. 4, Lamar, Mo. 64759
 Vice President - Joel Berry, Rt. 4, Lamar, Mo. 64759
 Sec & Treas - Virginia Hinderger, Rt. 2, Lamar, Mo. 64759

JEFFERSON COUNTY BEEKEEPERS ASSOCIATION - 1984 Officers

President - James Bieg, P.O. Box 51, Hillsboro, Mo. 63050
 Vice President - Mary Reed, 40 Fifth Street, Hillsboro, Mo. 63050
 Sec & Treas - Marko A. Bishop, 7255 Hwy 30, Cedar Hill, Mo. 63016

EASTERN MISSOURI BEEKEEPERS ASSOCIATION - 1984 Officers

President - Curt Dennis, 2415 Johnstown, Florissant, Mo. 63033
 Vice President - Gene Kaufmann, 3742 Druso Drive, St. Louis, Mo. 63125
 Secretary - Loretta School, 9322 Crawford, St. Louis, Mo. 63144
 Treasurer - Larry Mensley, 13520 Old Jamestown, Florissant, Mo. 63033
 Corr. Sec. - Sandy Mensley, same as above
 Programs - Sharon Gibbons, 314 Quinmoor Drive, Ballwin, Mo. 63011
 Refreshments - Charlotte Dennis, 2415 Johnstown, Florissant, Mo. 63033
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 Dolton Ammons, 1115 S. Clinton Road, Caseyville, Ill. 62232
 Marice Swoboda, 10343 St. Joan, St. Ann, Mo. 63074
 Russ Nelson, 123 Huntleigh Forest Drive, Kirkwood, Mo. 63122

WANTED - Money recipes of Missouri cooks for use in compiling a favorite honey recipes cookbook.
 Please put each recipe on a separate sheet of paper, type written or neatly printed. Be sure to put your name and full address on each recipe.
 Send to Mrs. Jean Tohtz, 113 Woodridge, Kirkwood, Mo. 63122.

LET IT BEE KNOWN . . .

The following information comes from a Research News release of August 1981 by the U.S. Department of Agriculture.

"Common table sugar is a disaccharide, and Michaelis and Bela Szepesi, research nutritionists at USDA's Carbohydrate Nutrition Laboratory, Beltsville, MD, reported various adverse metabolic changes among rats consuming disaccharide diets.

"Rats displaying the disaccharide effect had larger livers, increased fat-inducing enzymes, more fat in the blood, higher levels of insulin in the blood, and more body fat, Michaelis said. Most of these changes are considered to be risk factors for diabetes and heart disease in humans. The problems were not so evident in rats on equivalent mono- or trisaccharide diets.

"The most common monosaccharides are fructose and glucose, Michaelis said. Fructose, for example, is found in fruit and is a component of honey . . ."

* * * * *

The following information appeared in the April 1982 issue of The Kentucky Bee Line.

"One of the greatest needs continues to be promotion of honey products and education of the public about honey production. According to the American Beekeeping Federation, honey is consumed at the same levels as in the 1960s. That level is .8 to 1.1 pound of honey per person per year. Consumption of corn syrup and related products has gone from .1 to 18.9 pounds per person per year in this same length of time."

* * * * *

The following excerpt is taken from the October 1983 issue of the Mississippi Department of Agriculture & Commerce Beekeepers newsletter.

"Millions of pounds of honey, our honey as U.S. taxpayers, is waiting in warehouses to be utilized. We can't let it be sold through regular marketing channels. It must be utilized through means that will not compete with our future markets. We already have too much competition from imported honey.

The U.S. Government proposes to utilize this honey in excess of 100 million pounds through school lunch programs and other welfare programs. We individually can play a big role in moving this honey from warehouse to millions of mouths. But how?!

The Mississippi Beekeepers Association at its annual meeting in Biloxi, Mississippi, took on the responsibility (duty) of contacting all the local school boards and school nutritionalists by letter requesting that they use this "free" honey in all lunch programs both on the table and in baked goods. We will need your follow-up support in time, effort, and financial support as follows:

'Each local school board should be contacted by one or more local beekeepers who will assist them in advice on baking with honey (recipes) and provide squeeze bears or other similar dispensers for making honey available on the table at meal time.' Each local club should make this a number one priority in their projects for 1984. It could increase their local honey sales too in that some of those kids will develop a taste for honey and honey, our product, will be in the public's eye more than ever."

* * * * *

BEWARE OF SWARMS NEAR BALTIMORE (MARYLAND) HARBOR

Editor's Note: The threat of Africanized bees entering the United States by arriving as a swarm at one of our ports is very real. The following article describes how the Maryland Department of Agriculture and the beekeepers in the Baltimore area are handling this very real problem. The following article is by I. Barton Smith of the Maryland Department of Agriculture and is reprinted from the October issue of the "Pollen Basket", the University of Maryland's beekeeping newsletter.

On June 12, 1982, a swarm of honey bees was dislodged from a ship at South Locust Point Marine Terminal, Baltimore, Maryland. The swarm which settled on dock equipment was exterminated by a USDA Animal and Plant Health Inspection Service (APHIS) employee. A sample of bees examined for race identification indicated that the bees were Africanized. During the fall of 1982 the Maryland Department of Agriculture (MDA) Apiary Inspection Service examined all registered colonies within a two-mile radius of the Baltimore Marine Terminal and took bee samples for race identification. All colonies were found to contain European honey bees.

Due to the threat of a future accidental importation of African honey bees from a ship the MDA and/or APHIS request that beekeepers do not capture any swarms within a 1-mile radius of the Baltimore Marine Terminal or inner harbor. Instead, swarms should be reported to the Maryland Department of Agriculture at 841-5920 or APHIS will exterminate the swarms and have the bees identified for race.

Two swarms have been collected by the APHIS this year - one on May 13, 1983, and one on May 24, 1983. Both swarms were adjacent to the water front area near shipping terminals. The first swarm was identified as being European bees. A report has not yet been received on the second swarm. I would like to thank Baltimore beekeeper Nason Donahue who was contacted about the second swarm for notifying the Maryland Department of Agriculture.

Although no one likes to have bees killed, it is imperative that beekeepers cooperate with the Maryland Department of Agriculture and APHIS to help protect Maryland and the US beekeeping industry from an accidental importation of African bees. No one is sure how African bees will behave in our climate, but one thing is certain, the adverse publicity that would result if African bees entered the United States would severely hurt the hobby and industry of keeping honey bees.

Taken from the December 1983 issue of The Stinger, the official newsletter of the Alabama Beekeepers Association.

POLLINATION 1995

David N. Griffith, Editor
Dadeville, AL 36853

In America we have taken it for granted that pollinators for our crops would always be present when needed, except in a few special situations when "bees for hire" could be brought in. However, that might be changed in the near future, and beekeeping, as we know it now in the South, may become a topic for discussion by the historians, and throughout North America some adjustments will have to be made.

The arrival of the Afro-Brazilian bees from across the Mexican border (expected between 1988-92) is expected to trigger the loudest public outcry that America has heard since Pearl Harbor. The minds of the public will be thoroughly sensitized by the news media and Hollywood ("Killer Bees", "The Swarm", etc.). Anything that scratches bites or stings will be called a killer bee. Liability insurance for anyone who owns bees will be prohibitive, so there will be vast areas where no one will claim to own a colony of bees. There will be demands that insecticides be used, and in such quantities that it will kill off friend and foe alike. Beekeepers, who are caught napping or who have no place to go, will find dead bees around their hives by the shovel-full.

The USDA has had observers, researchers, etc. in limited numbers in South America learning what they can about those bees . . .

Early reports from South America led us to believe that the African bees would be harder to work with than European strains, but that beekeepers would be able to cope with them and still stay in business. Later reports, however, indicate that was a premature conclusion. Compared to European strains, they are much easier to become aroused and will often remain aroused all day. They will often seek a victim and often pursue him for more than a mile — not just one bee but many. This makes livestock particularly vulnerable, as well as people.

This situation with its legal liabilities and other implications has driven most South American beekeepers out of business, and the rest a way back from populated areas. Labor to work with them is hard to find and quite expensive. Venezuela used to be a major exporter of honey, producing an average of 250 lbs/hive, which sold for about 38¢ per pound. Now they are importing honey which sells for \$3.50 per pound when it can be found. This ought to tell us something!

There is another pest that is riding in with the African bee — the parasitic Varroa mite, which sucks its food chiefly from the pupae and adult bees. This will be a major hazard to beekeeping, even without considering their current African host.

It has been suggested that, since the African bee is a tropical insect, it is not likely to cross the Mason-Dixon line (except on the West Coast). Crosses with the European bees have tended to Africanize the European rather than Europeanize the African. However, that may not continue that way indefinitely. But it is also suggested that with repeated back-crosses with the European bees, some of the ill-temper of the African could reach much farther north than is currently believed.

What has this to do with the American farmer who is not interested in honey? -- First, you must remember that the honey that goes to market represents only about 5% of the work of the bee. The pollination of many plants has been taken for granted, but, when bees are no longer around and most other pollinating insects have also been killed, there will be a notable drop in the production of many crops. Some are highly dependent on insects for pollination, e.g. cucumber, squash, melon, etc. These may almost disappear from the market -- and what will that do to the price of food and feed -- and to inflation?

There are several interest groups who will also become aware that they are involved. Fruit and vegetable growers have long been aware of their need for pollinators. Livestock will be affected by way of pasturage and harvested feed. Ornamental horticulturists may find fruits, berries, etc. scarce. Hunters will find game scarce since wildlife will find many of their staples in short supply. Environmentalists and ecologists will see many species of plants, insects, etc. in danger of extinction as well as the biological balance fouled up. Succeeding generations will feel the effects of the tons and tons of poisons that are sprayed over the countryside.

We were able to completely exterminate the Mediterranean fruit fly, but with a heavy infestation in all the countries to the south of us, I see no possibility of eliminating the source. We should expect this to be a continuing problem. . . . That is the problem, now what is the solution?

* * * * *

A queen honey bee can lay her weight in eggs during a 24-hour period.

Honey bees are not native to North or South America. The first bees were brought to North America by Virginia settlers in the 1620s.

Placing frames of good clover honey on each side in the brood chamber helps prevent nosema as the bees take the honey out of the side frames in early spring and store it around the brood.

from Hubert Martin as appeared in the Oct. 1983 issue
of THE KENTUCKY BEE LINE

* * * * *

Breeding Plan for Bees

The use of artificial insemination in a scientific manner by beekeepers has the potential to create an elite new family of honey bees.

"Our goal is to develop a new scientific basis for breeding bees to be gentle, produce lots of honey, overwinter well and resist disease," says ARS entomologist Eric H. Erickson, Madison, Wis.

Ultimately, new lines of gentle bees could help counter the threat of Africanized bees that are migrating toward the United States through Central America, Erickson says.

Thirty-five queen honey bees, selected from throughout the United States, are the basis for the experiment conducted at the University of Wisconsin-Madison.

"Artificial insemination (AI) is a means by which we may be able to maintain a closed population of 35 colonies that continually produce viable broods," says Erickson. "AI will keep queens isolated from drones that may have the genetic qualities we want in our bee populations."

From a natural mating, undesired genetic qualities are likely to appear because a queen may mate with several drones of questionable family background from colonies a mile or more from her hive. Once she is fertilized there's no more opportunity for mating with a better pedigreed candidate. She will never mate again.

Artificial insemination prevents the possibility of any natural mating. It's done with a steady hand under a microscope on queen bees that have been anesthetized with carbon dioxide.

From each new generation of bees in each colony, Erickson and entomologist Robert E. Page will select queens to be artificially inseminated with a mixture of semen from the 35 colonies. That's the number of queens that their computer mating studies show is needed for closed populations to avoid excessive inbreeding.

Inbreeding may cause shot brood, a situation in which the colony loses some of its viability because fewer than normal numbers of fertilized eggs develop into workers. Instead, many of the fertilized eggs develop into abnormal bees known as diploid males—



Honey bees on a comb, as seen through the glass of an observation hive. Artificial insemination may permit genetic improvement of the honey bee. (0962X) 130-19

bees with homozygous sex alleles. Workers, or heterozygous females, rid the colony of the abnormal males by eating them as soon as they are hatched.

Normal males, or drones, develop only from unfertilized eggs.

Until now, shot brood has been the complication that has kept artificial insemination from becoming a powerful tool for most kinds of selective breeding. To avoid shot brood, USDA scientists began a hybrid bee breeding program using AI in 1943. In order to produce excellent hybrids, many inbred lines had to be selected, maintained and tested, said Erickson, but the lines were easily lost.

Despite failures, however, there have been successes. Agricultural research technician Emmett R. Harp and Erickson developed a line of bees that are extraordinarily gentle and well suited for beekeeping around urban areas. Release of this line to the industry is planned for 1983.

Until the U.S. Congress passed the 1981 farm bill, the USDA could turn over plant germplasm to private industry but it could not release bee germplasm that it had developed in the course of research.

"The new line of bees are good honey-makers," Erickson says. "Generally, gentle bees are just as productive as more aggressive strains."

The notorious Africanized or so-called "killer bees" are migrating toward the United States via Central America.

"This bee, while not as aggressive as some reports would suggest, is a source of concern as its presence in the United States could impose economic hardships on our beekeepers," says Erickson. "This is because with it will come a new bee disease, caused by a Varroa mite, and undesirable behavior problems associated with honey production and crop pollination."

If the mongrels do reach the Southern United States, perhaps their natural interbreeding with new lines of gentler bees could reduce their threat to the beekeeping industry, says Erickson. And advances in the use of AI in closed bee populations could enable establishment of African-gene-free germplasm reservoirs for restocking apiaries that may be despoiled.

If research shows the closed population approach to bee breeding produces high-quality queens, Erickson says the methodology would be such that any bee breeder could conduct a selection program. Moreover, their improved bees may be kept for many years to come.

Eric H. Erickson is located at the Department of Entomology, University of Wisconsin, Madison, Wis. 53706.—
(By Ben Hardin, Peoria, Ill.) ■

The following is taken from the N.E. Kansas Beekeepers Newsletter, THE BEE BUZZER, March 1982.

MORE ABOUT THE DOUBLE SCREEN

Requeening a colony is a serious proposition. If the new queen is not accepted during the first or second attempt to introduce, you might as well unite the colony with some weaker colony by using the newspaper method. Then make a division later on.

To overcome the danger of loss caused by killing the queen before introducing the new queen, it is possible to divide your colony by using a double screen and to introduce your new queen into the upper story. Permit her to lay there 30 or more days before killing the old queen and reuniting the colony. This system is practical and is being used with great success.

The main advantage of the double screen method is that you never have a colony without a queen. On the other hand, you have all or most of your colonies with two queens for 30 days so that your colony strength actually increases under this system. If queens can be secured in early spring and this system of two queens used until the start of the honey flow, the colony strength may be increased greatly while the tendency to swarm is reduced. The colony is then re-united with a substantial increase in the size of the honey crop.

* * * * *

The following article is taken from the Sunday, January 1, 1983 issue of The Anchorage Times, Anchorage, Alaska.

Bee Pollen Replaces Jelly Beans in Oval Office by Betty Beale

Happy New Year and health galore in 84. For the latter maybe you should copy Ronald Reagan.

At the president's last state dinner I sidled up to him and asked, "Is it true you eat bee pollen bars everyday?" "Yes," he replied. I had heard, I continued, that they contributed to his health and kept his hair from turning gray. "I eat them because I like them," said the smiling president.

The fact is that bee pollen, the only known food on Earth containing all nutrients considered essential for perfect health (unless you're horribly allergic to bee stings) has been documented in recent years as being good for everything from premature aging and allergies to sexual impotence.

Soviet scientists have found it has such regenerative properties their athletes take it. One of their scientists discovered the largest number of people over 100 years old in the same occupation were beekeepers, who sold their honey and kept for themselves only the residue of honey-scraps which turned out to be almost pure pollen.

Sometime in January new Secretary of the Interior Bill Clark will be called on by the chairman of the Conference of National Parks

Concessions' Rex Maughan, who has marinas on Lake Mead and Mohave in Nevada. Maughan's booming business, though, is his Forever Living (aloe vera) Products of Phoenix, Ariz., the sixth fastest-growing, privately-held company in the country. Now he's gone into bee products and will bring Clark (and some for the president) his chewable bee pollen tablets fortified with royal jelly. "Did you know," said the excited Maughan, "that the queen bee, who eats royal jelly, lives over six years, while identical bees, deprived of royal jelly, live only three to five weeks?"

Never again will I swat a bee!

* * * * *

The following is taken from an article by Glenn Stanley in the March 1982 issue of THE BEEHIVE, newsletter for the Flint Hills Beekeepers Association, Emporia, Kansas.

SPRING MANAGEMENT The first thing is to make sure each colony is free of disease. The second thing is to notice the pattern of the brood. If it is good and the queen has only produced through the previous season, then you may decide to keep her another year. . . . Next, the actual combs containing brood are counted.

If the queen is to be retained, then the comb containing her is placed in the original brood chamber along with three additional combs containing brood. The amount of brood recommended at this time is semicircles on each comb approximately 7 inches from the bottom bars to the top of the brood circle and about 14 inches from side to side at the bottom bar. Each brood comb containing this amount of brood will have about 4,200 cells of brood in the various stages. Four combs such as this contains about 16,800 cells of brood.

During the middle of April and after, most well-wintered colonies will have more than the four combs of brood required to develop good colonies. So the extra frames of brood with adhering bees are placed in one of the brood chambers removed earlier in the year. Proceeding onto more colonies and going through the same procedure will provide additional combs of brood and bees. When another FOUR are assembled, then the colony can be provided with some combs of honey, pollen and a couple of empty combs. This complete colony with sufficient bees, brood, honey and pollen is then moved to another apiary where their new queen is introduced. The entrance is opened only to the minimum and the queen can be introduced easily by spreading the brood frames slightly and making a hole through the queen cage candy with a probe. Place the queen cage, screen down, over the brood frames, invert the inner cover and then replace the outer cover. Since the bees on the combs came from two or more colonies they are completely confused and tests have shown that they accept queens better under these conditions. It is also helpful to feed the bees during the time of queen introduction, even though they apparently have adequate stores.

After about three weeks, these new colonies will be crowded in the single brood chamber. Then it is time to add the second brood chamber. KEEP THE ENTRANCE REDUCED until the beginning of the main honey flow and, if the surplus honey combs are white (as they should be), the queen will likely not lay eggs in them.

* * * * *

The following news clipping was sent by Mr. Francis Scheidegger of Kirkwood, Mo.

How To Avoid Painful Bee Stings

You can cut your risk of getting a painful bee sting by not wearing perfume or after-shave lotion next time you're in the great outdoors.

Liz Rodrigues of the Eastern Apicultural Society of North America, which promotes beekeeping, says: "Insects have such a keen sense of smell. They can detect flowers that are two miles away. Any sweet-smelling scent will attract them."

Bees will be drawn to those wearing perfume because they mistake the sweet scent for nectar. But once they realize there is no nectar, they will generally go away, says Ms. Rodrigues.

She adds that the real culprits are hornets, wasps and yellow jackets, who invite themselves to your picnic. "Unlike bees, once you attract them, these insects will go after your food," she says.

"They are so brazen that they will land on a hamburger you're eating and not hesitate to sting you right on the mouth.

"They think it's their food and they're going to get it even if they have to sting you for it," says Ms. Rodrigues. "Yellow jackets are particularly aggressive, accounting for 80 percent of the insect stings in this country."

* * * * *

Taken from the June 1982 issue of GARDENING, Vol. 29, No. 6, p. 4.

Dear Editor:

I was very interested in the reader's letter regarding bee stings in the February O.G. When I lived in Hawaii many years ago, I suffered a painful yellow jacket sting on my leg. This resulted in my whole leg becoming swollen, and it was several weeks before the reaction finally subsided.

My neighbors, an elderly Hawaiian couple, advised me that I should have soaked the sting with vinegar immediately. I soon had the opportunity to test this remedy when my 4-year-old daughter stumbled into a hornets' nest and was stung in a dozen places. I immediately soaked pieces of cotton with vinegar and secured each piece over a sting puncture with adhesive tape. I left the vinegar-soaked cotton in place for two hours. The results were amazing. Only one sting became slightly swollen and that was because the cotton had shifted off the puncture. None of the other stings were red or swollen. I've recommended this remedy to many of my friends who've had the same excellent results. The vinegar seems to neutralize the venom of the sting. It works well for all other types of stings and insect bites.

Klara M. Shoupe
North Patchogue, New York

* * * * *

MISSOURI STATE BEEKEEPERS' SPRING MEETING

University of Missouri - Columbia

Memorial Union

Saturday, March 24, 1984

A.M.

8:30 - 9:00 Registration

9:00 - 9:05 Meeting Called To Order By President Crain

9:05 - 9:10 Invocation

9:10 - 9:20 Welcome And Introduction Of Officers

9:20 - 10:30 "Honey Marketing", Troy H. Fore, Jr., Editor, "The Speedy Bee"

10:30 - 11:00 Coffee Break

11:00 - 11:30 Extending Life of Equipment - Charles Willis

11:30 - 11:50 "Bee Management" - film

11:50 - 1:15 Lunch (On Your Own)

P.M.

1:15 - 1:35 "Honey Handling" - Film

1:35 - 2:30 Value Of Publications To Beekeepers - Troy H. Fore, Jr., Editor, "The Speedy Bee"

2:30 - 3:00 Business Meeting

3:00 - 3:30 Attendance Prizes

All are invited to attend the Executive Board meeting on Friday, March 23, 1984 at the Boone County Extension Center, 1408 I-70 Drive SW, approximately 3 blocks west of the Howard Johnson Motor Lodge

Beekeepers are encouraged to stay at Howard Johnson Motor Lodge, West Blvd. exit off I-70, where special rates of \$35.00 single or double occupancy are available. Be sure to indicate you are with the Missouri Beekeepers Association. (314) 442-1191

CERTIFICATION - Beekeepers interested in becoming certified for use of Restricted Use chemicals (EDB, etc.) will meet in Room 2-28 Agriculture Building at 1:00 - 5:00 p.m. Friday, March 23. The required training will be provided by Univ. of MO Extension and Dept. of Agriculture personnel. Be sure to invite any beekeeper interested in use of Restricted Use compounds, because future opportunities for specialized training will be limited. For more information contact Flerney G. Jones, Extension Entomologist, 1-80 Agriculture Building, University of Missouri, Columbia, MO 65211. Ph. 314-882-3637.

I-70 EAST OF COLUMBIA

Leave I-70 and turn into the business loop 70. Turn left at Tandy Avenue and follow this road south to the second set of stop lights. Turn right on Rollins Street and proceed to the stop sign at Hitt Street. Turn right and park in the Visitors lot $\frac{1}{2}$ block up Hitt. The Agriculture Building is across the street and the Memorial Union is 1 block North.

I-70 WEST OF COLUMBIA

Leave I-70 and turn onto #740 Bi-Pass. Follow #740 approximately 5 miles to the junction of Providence Road. The football stadium will be ahead and on your right. At Providence Road turn left and go approximately 2 blocks to Rollins Street. Turn right on Rollins and follow it to Hitt Street. Turn left and park in the Visitors lot $\frac{1}{2}$ block up Hitt Street. The Agriculture Building is across the street and the Memorial Union is 1 block North.

FROM #63 SOUTH

Turn left onto Stadium Road and proceed to College Avenue. Turn right on College to the first stop light. Turn left on Rollins Street and turn right on Hitt Street. Park in the Visitors lot $\frac{1}{2}$ block up Hitt Street. The Agriculture Building is across the street and the Memorial Union is 1 block North.

MISSOURI STATE BEEKEEPERS' ASSN.
619 Mendelsohn Drive
Kirkwood, Missouri 63122

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