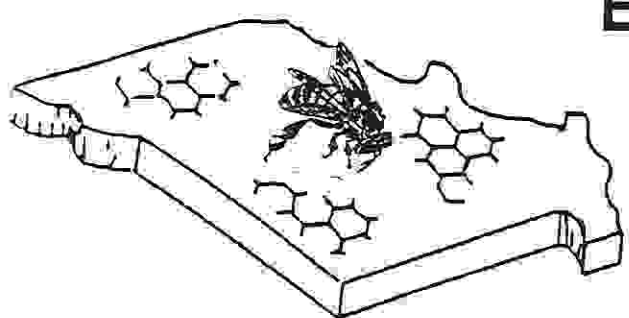


July 95

MISSOURI STATE BEEKEEPERS ASSOCIATION



PRESIDENT
SHARON GIBBONS
314 QUINNMOOR DR
BALLWIN, MO. 63011
314-394-5395

VICE PRESIDENT
NEAL BERGMAN
P.O. BOX 591
KENNETT, MO. 63875
(314) 888-2465

PROGRAM CHAIRMAN
LARRY HENSLEY
13520 OLD JAMESTOWN RD.
FLORISSANT, MO. 63033
314-365-6935

SECRETARY
PAMELA WRIGHT
RT. 1, BOX 777
WEST PLAINS, MO. 65775
417-257-1770

TREASURER
RON VIVIAN
P.O. BOX 448
OAK GROVE, MO. 64075
816-690-7516

EDITOR
JIM THAXTER
RT. 4, BOX 60 E.
MCBEELY, MO. 65270
816-263-2694

VOLUME 33

QUARTERLY NEWSLETTER
JULY 1995

NUMBER 3

FROM YOUR PRESIDENT

Thank God for the sun! Since our spring meeting, I have never experienced such a mixture of weather and headaches with the bees. If they weren't starving, they were swarming. Some hives swarmed in spite of everything I did to prevent it. I talked to several of you in other parts of the state, and you all were experiencing similar problems. The St. Louis area had a good black locust flow, nearly three weeks long, although the weather was very cool. The locust bloomed two weeks early here, didn't bloom at all (or very little) in mid-Missouri; and two weeks late in the Kansas City area. As of the first week of June, I was still feeding hives in rural Missouri. As I write this, the bees are working like there is no tomorrow. It looks like we are going to have a good harvest after all. The weird weather has made me nervous; so I'm going to harvest the capped honey as soon as possible. Since the farmers haven't been able to plant, I'm sure that when they do, there will be many more fields planted with soybeans than corn. The soybeans will be blooming much later than usual, so beekeepers should have a honey flow throughout the summer. Remember to get your honey off early enough to put your Apistan strips in by September 15th. The best thing to do is to put the strips in as you take your last honey supers off.

It is time to turn your attention to the Missouri State Fair. Honey entries need to be brought to the apicultural exhibit on August 16th. We received three bids for providing the honey to be sold at the fair. However, we did not get anyone to run the fair booth for the 10 days of the fair. Our Missouri Honey Queen, Cheri Guthals, will be working at the fair and will be a candidate for Missouri State Fair Queen. The American Honey Princess, Rachel Hempel, will also be there. Please spend some time helping us at the fair. At this time, I don't know how it's going to all come together, but without your help it won't.

FALL MEETING

The fall meeting will be held at the Holiday Inn at Lake of the Ozarks on October 6 and 7. The meeting is a two day meeting and starts at noon on Friday. We will have a Honey Queen banquet on Friday night. Our main speaker will be Marla Spivak. Ms. Spivak is with the Department of Entomology at the University of Minnesota. Ms. Spivak will discuss "Breeding Queens for Mite Resistance," "Alternative Methods of Mite Control," plus she will show a video on raising queens. A detailed agenda of the entire program will be mailed at a later date. Room rates are \$63 for doubles and singles. Call and get your reservation now. The number is (314)365-2334. There are plenty of activities and entertainment for the spouses. Brochures will be mailed with the agenda and registration packet at a later date. Don't forget to tell the person who takes your reservation that you are with the Missouri State Beekeepers.

BEES NEEDED

from Ray Nabors, State Apiculture Specialist

I am asking for your help with a research project. The aim of this project is to measure our Missouri bees. The Africanized bees have slightly different measurements of many body parts. We will be measuring the wing length and the width of the wax mirror on the 4th ventral abdominal sclerite. We will use the data gathered from this study to determine if future specimens of "ornery" bees are likely to be of European or African descent. We need your help to establish our base line measurement.

Please go to one apiary and select one hive. Open the hive and collect 100 bees (about a baby food jar full) and place these in a container (prefer plastic with a tight seal) with alcohol. Take this to

your nearest Extension Center and ask them to mail it or mail it yourself to:

Ray Nabors
University of Missouri Extension
P.O. Box 1001
Caruthersville, MO 63830

We need these bees this summer, 1995! I ask each beekeeper to send only one sample, so that we will have a sample from nearly everywhere in the state. Put the address of your operation on the sample and please give us the date when collected and the county.

Each sample must have:

1. Date of collection
 2. County where collected and nearest town
 3. Address of the beekeeper
- Thank you for your cooperation. Ray

SEASONAL TIPS

Early July may still be time for a honey flow. Late July is a slowing, sometimes of the honey flow, and letting the bees finish more of every super before putting on another. Still, you need to check for room frequently. You can pull a super off and extract it if it is more than 75 percent capped. Be sure to check moisture content before extracting. It is easier to pull moisture out of honey in the frame than it is after it is extracted.

August is the time to get ready for the State Fair. Start pulling and extracting honey, get the supers back on the bees to be cleaned and let them finish what they have on them.

September is the time to make sure all your supers are off, all hives have Apistan strips put in as you take off the last super. Don't forget to dust them 2-3 times with terramycin/powdered sugar between the last super removal and cold weather. Get your extracted, cleaned supers put away until next year, and be sure they are stored so the mice can't get into them.

Allowing supers to freeze during the winter months won't hurt them at all, and will help keep wax moths out of them. Wax moths shouldn't bother comb that has never had brood in it, but they will go after pollen that was stored in honey supers.

DID YOU KNOW?

The Asian honeybee, *Apis cerana*, was the original host of the Varroa mite. The mite was first discovered on the Asian honey bee in Java in 1904. When the European honey bee was introduced into the far east, the mite moved from its native host to the new bees.

The Varroa mite has a five stage life cycle: egg, six-legged larva, protonymph, deutonymph, and adult.

Only adult female Varroa mites feed on the blood of adult, pupal, and larval honey bees. Male mites die after copulation since their mouth parts are modified for sperm transfer only.

Adult female Varroa mites prefer drone brood for laying their eggs. Thus, drone brood can be used to attract female mites ready to lay eggs. Then the drones can be removed from the comb or the comb itself can be disposed of.

Varroa mites reproduce only during the times when brood is being reared in the hive. Without bees and brood, mites can survive not more than five days. They can live in a comb of sealed brood kept at 68 degrees up to 30 days, and can survive on dead brood for several weeks.

The life cycle of a female mite is 8-9 days, and a male is 6-7 days.

The Varroa mite is considered to be the most serious pest of honey bees in the world. They also are associated with the transmission of acute paralysis virus, a new disease to the honey bee.

The differences between male and female mites are size, color and

shape. The female is brown to reddish-brown, 1.1 to 1.2 mm long, 1.5 to 1.6 mm wide and shaped like a tiny clam shell. The male is smaller (0.7 by 0.7 mm) and yellow to grayish white. It has a rounded shape, not flattened like a clam.

The female moves into brood cells containing young larvae just before the cell is capped. They engorge themselves on the royal jelly, then begin feeding on the blood of the pupae.

TRACHEAL MITES

The tracheal mite has a four stage life cycle: egg, larva, resting nymphal and adult. A female reaches maturity in 14-15 days, and males in 11-12 days. Its life cycle is completed within the respiratory tract of the adult honey bee except for brief migratory periods.

After worker bees emerge from their cells, female mites migrate into their trachea by passing through the first thoracic spiracle, the only ones large enough to permit the passage of the mite.

The tracheal mite reproduces throughout the year.

Gravid (pregnant) females migrate preferentially to young bees from emergence to four days old. Dissection is the only method used to check for the tracheal mite.

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TREATING THE BEES' WHEEZE

Natural products show promise for controlling tracheal and Varroa mites

Virginia beekeepers Dennis and Neva Whetzel started noticing several years ago that their "golden angels" were losing their will to fly.

The honey-producing angels emerged from their hives and walked around outside.

They weren't acting like the busy bees whose pollinating activities add an estimated \$15 billion to the value of U.S. food crops each year. And the work they do pollinating hay and seed crops for livestock consumption makes possible meat and dairy industries worth another \$35 billion. All in all, honey bees contribute to about one-third of the total value of the U.S. food supply.

Small wonder that in her travels, a typical honey bee wears out her wings after 20 days--and 500 miles--of foraging for nectar and pollen.

But the Whetzels' bees, like many others across the country, have been slowed by tracheal and Varroa mites. Tracheal mites work their way into a bee's breathing tubes, making it hard for the bee to breathe--much less to fly.

Nor is it easy for her to fly when the blood-sucking Varroa mite has sapped her strength. In 1992, two years after the tracheal mites appeared, the Whetzels found that Varroa mites had weakened and killed many of their bees. These mites have become an increasing problem across the country since the mid-1980's.

To combat Varroa, the Whetzels and other beekeepers put strips containing fluvalinate, a synthetic pyrethroid, inside their colonies. But at \$3 to \$6 per hive, the strips are an added expense in a profit-slim business. Another limitation: the strips can only be used

when bees aren't collecting nectar and pollen, to ensure that fluvalinate residues don't wind up in honey. And there are reports from Europe that Varroa mites have become resistant to fluvalinate--meaning its long-term effectiveness could be limited.

Beekeepers use menthol against tracheal mites. But that, too, adds to costs and is labor intensive.

Mites are the biggest threat to domestic honey bees, killing thousands of colonies each year. The Whetzels and other beekeepers who are struggling with the mites are looking for a less expensive, safer mite medicine to give their bees. Now, U.S. Department of Agriculture scientist Nick Calderone may be able to fill that prescription.

Calderone, an entomologist with USDA's Agricultural Research Service, is testing natural plant extracts that, in lab studies, killed both types of mites without harming honey bees. Also, the extracts are effective against Varroa in small-scale field tests.

Based at the agency's Bee Research lab in Beltsville, Maryland, Calderone is conducting large-scale field studies in four states to see how well the extracts fare at commercial apiaries.

Tests are under way at Whetzel's Golden Angels Apiary near Harrisonburg, Virginia; Haven Keller's apiary in Mercersburg, Pennsylvania; in Texas in cooperation with ARS entomologist William Wilson at Weslaco; and in Minnesota in cooperation with entomologist Marla Spivak at the University of Minnesota.

USDA's Sustainable Agriculture Research and Education Program helped fund the research.

Against Varroa, Calderone used a blend of natural plant oils--primarily thymos and eucalyptus oil. The oils are derived from herbs and other plants and kill fungi, bacteria, and other organisms, as well as

mites.

And a "major advantage of these plant oils is that they have low mammalian toxicity," Calderone says.

Calderone and ARS technician Rick Turcotte mixed the plant extracts and soaked them into a green, foam brick that florists use for flower arrangements. Then they put the absorptive bricks into hives for several weeks in late fall, after bees had finished making honey. The mixture killed 98 percent of Varroa mites and was as effective as the fluvalinate strips.

For tracheal mites, the researchers mixed oils from peanuts, sunflowers, rapeseed, or soybeans in sugar patties and placed them in 71 colonies at the Pennsylvania apiary. After three months, they removed bees, dissected them, and counted tracheal mites in the bees' breathing tubes.

The result: only 1.5 to 2.5 percent of the bees were infected, compared to nearly 10 percent of those in untreated colonies.

Calderone says he still has to perfect a way to apply the compounds with as little labor as possible and would have to gain regulatory approval from the Environmental Protection Agency to use the compounds to control honey bee mites. Ideally, he hopes to find a mixture of compounds that would kill both mites.

"We still have a way to go before we have a commercial product, but we're encouraged," Calderone says. "These compounds exhibit a significant potential for controlling mites and may also be effective against some honey bee diseases." by Sean Adams, ARS.



SPRING MEETING MINUTES

Columbia, MO
March 11, 1995

Presided over by Sharon Gibbons, President.

Minutes read by Pam Wright, Secretary. Motion by Glenn Davis to approve, seconded by Sharon Waddell, passed.

Treasurer's report by Ron Vivian:

Balance on 9/28/94	\$3213.09
Income	4973.00
Expenses	5250.16
Balance 3/6/95	2935.93

Savings account 9/27/94	\$2316.77
Interest	36.15
Savings 12/31/94	2352.92

Memorial fund \$138.03
Motion to approve by Roger Nichols, seconded by Glenn Davis, passed.

OLD BUSINESS

Queen report by Glenn Davis.
Report on cookbooks by Kelly Bergman.

Insurance report on general liability for association.
Motion to follow the recommendations of the executive board by Francis Scheidegger, seconded by Milton Wright, passed.

NEW BUSINESS

State Fair will be starting on August 17 and go for 10 days.
Volunteers for fair; Bob Klingenberg, Dan Adams on weekends, Ian Brown, Joe Baumann first Friday. We'll put out a bid sheet for the honey.

Bill Kohne resigned; Charlie Wills nominated to fill out term.
Motion to accept by Glenn Davis, seconded by Sharon Waddell, passed.

Tax number--we have none;
Ron Vivian will apply for one.

Beekeeper of the Year--Com-

mittee recommends award to Ron Vivian. Motion to approve by Milton Wright, seconded by Carol Kjelshus, passed.

Historian needed for the association--volunteer requested.

Mailing list--Oscar Coindreau has asked for it. Motion that he can have it if he becomes a member by _____, seconded by Bob Wade. Passed by a vote of 17 to 20. Because of the closeness of the vote, another motion was introduced to put a notice in the newsletter that those who don't want their names given out can ask that it not be given. Motion by Bob Wade, seconded by Milton Wright, passed.

Motion to reconsider the last two motions and table until the next meeting. Motion by Sharon Waddell, seconded by Maynard Thompson, passed.

Motion to adjourn by Francis Scheidegger, seconded by Sharon Waddell, motion passed.

*recipes-----
recipes-----recipes*

A new Missouri State Beekeepers Cookbook is being prepared. We need your best honey sauce recipes. It can be a sauce for an entree, a dessert, or a salad dressing. However you top it off with HONEY, we want to know about it. Please send your recipes to Kelly Bergman, P.O. Box 591, Kennett, MO 63875.

STATE FAIR

State Fair time will soon be here. As usual, we need volunteers to work in the booth during the fair. Opening day for the fair will be August 17th. All exhibits need to be in place by the 16th. If you would like an enjoyable experience and would like to promote beekeeping, please come and help us. This is the only event we sponsor to raise money for our association. If we have to hire help, we would not

make a profit. Please contact Ron Vivian at (816)690-7516 or Sharon Gibbons at (314)394-5395.

WANTED: ANTIQUE BEEKEEPING ITEMS FOR STATE FAIR BOOTH

We would like to have an educational display area at the fair of beekeeping things used throughout the years. If you have any, please contact Sharon Gibbons. We would return them to you after the fair. Also we could use pictures of you as a beekeeper and educational pictures of activities that your club participates in.

FALL MEETING

The fall meeting will be held at the Holiday Inn at Lake of the Ozarks on October 6 and 7. The meeting is a two day meeting and starts at noon on Friday. We will have a Honey Queen banquet on Friday night. Our main speaker will be Marla Spivak. Ms. Spivak is with the Department of Entomology at the University of Minnesota. Ms. Spivak will discuss "Breeding Queens for Mite Resistance," "Alternative Methods of Mite Control," plus she will show a video on raising queens. A detailed agenda of the entire program will be mailed at a later date. Room rates are \$63 for doubles and singles. Call and get your reservation now. The number is (314)365-2334. There are plenty of activities and entertainment for the spouses. Brochures will be mailed with the agenda and registration packet at a later date. Don't forget to tell the person who takes your reservation that you are with the Missouri State Beekeepers.

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Section C APICULTURE

Superintendent - Michael Brown, Lees Summit, MO
Asst. Superintendent - Honey Cookery -
Loretta Weiler, Jefferson City, MO

Judges

Bee Culture - Gary Ross, Ottawa, KS

Honey Cookery - Viola M. Young, Columbia, MO

Amount offered by Fair in this Section \$1,389

JUDGING PROGRAM - Thursday, August 17, 9:00 a.m.

RULES AND REGULATIONS

- Exhibitors in Classes 1, 2, and 17 are requested to pre-enter by mail and entries should be received by 5 p.m., August 10.
- Exhibits that are to be shipped must be on the grounds not later than 3:00 p.m., Wednesday, August 16. All exhibits must be in place by 5:00 p.m., Wednesday, August 16.
- No entries will be accepted after August 16.
- All exhibits must have been produced in a Missouri apiary of the exhibitor since the 1994 Fair. Dark honey may be a 1994 product but produced since the 1994 Fair. All exhibits must be under the direct management of the exhibitor. **Premiums will be paid to Missouri exhibitors only.**
- No two exhibits of the same class shall be made by the same person or any member of his or her family, or from the same apiary in the case of a company or partnership, the exhibits shall be entered in the name of the firm or company.
- A class tag must be on each entry.
- Exhibitors of Honey Cookery must have recipe shown with the exhibit. The recipe must be correct. The foods may contain some sugar, but this must be stated on the recipe. Preference will be given to the exhibits containing the least sugar, other things being equal.
- Shallow Frame, Brood Frame, Cut and Section Comb honey should not be covered by an opaque covering on either side.

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- The exhibitor may place his name and address on his exhibit after the judging has been completed.
- Signs on Apiary exhibits will be limited to 10" high x 14" wide in size.
- Exhibitors may distribute honey recipes, bearing their name and address from their exhibit space.
- Exhibitors will not be allowed to rearrange or remove any part of their exhibit, except bees which may be removed late in the evening to permit flight.
- The judge will prepare a score card for each exhibitor in each class in both divisions, for the purpose of helping the exhibitor improve his or her exhibit.
- Entries will be released at 5:00 p.m., Sunday, August 27 and must be claimed by 8:00 p.m., August 27, or they will be forfeited to the fair management.

Division A BEE CULTURE

Amount offered in this Division by State Fair \$627

Specials: A Grand Champion Ribbon and \$25 will be awarded to the outstanding exhibitor in Division A who has won the most premium money. In the event of a tie the Grand Champion Ribbon and money will be awarded to the exhibitor who has won the most blue ribbons. Further ties will be broken by proceeding to the next lower ribbon until a winner is determined.

HONEY

Individual Classes

- Display of Apiary Product, including bees in one frame observation hives, (one 5 3/8" or 6 1/4" frame of honey permitted above if desired) beeswax and at least 150 pounds of honey. Must include classes 2 to 14. Exhibitor has the privilege of pyramiding exhibit. The winner will be determined by the most total points accumulated on the score sheet in Classes 2-14. In the event of a tie the winner will be determined by exhibitor who has won the most blue ribbons in Classes 2-14. Further ties will be broken by proceeding to the next lower ribbon until a winner is determined.
\$40 \$35 \$25 \$15
- Store display for retail outlets of a permanent nature. May be displayed as a table or floor display occupying approximately nine square feet of surface area. It may include comb and extracted honey, posters, flowers, and any other items that add aesthetic appeal to the display. This class will be judged on attractiveness, quality of product, arrangement and appeal to customers, and should be a display from which honey would be sold.
\$25 \$20 \$15 \$12 \$10 \$8
- Display of light extracted honey in standard honey jars, assorted sizes, 25 to 50 pounds.
\$12 \$10 \$9 \$8 \$7 \$6
- Cut comb honey in plastic boxes, all sides visible. Six packages of approximately one pound.
\$12 \$10 \$9 \$8
- Round or square section comb honey, six packages, with top and bottom of comb visible.
\$12 \$10 \$9 \$8
- Light bulk comb honey, six 2 or 2 1/2 pound jars
\$8 \$7 \$6 \$5
- Dark bulk comb honey, six 2 or 2 1/2 pound jars
\$8 \$7 \$6 \$5
- Light extracted honey, six 1 pound jars
\$10 \$8 \$6 \$5 \$4 \$3 \$2 \$1
- Dark extracted honey, six 1 pound jars
\$10 \$8 \$6 \$5 \$4 \$3
- Sealed honey, white, brood size frame (9 1/8" x 17")
\$7 \$6 \$5 \$4

30 93RD ANNUAL MISSOURI STATE FAIR

11 Sealed honey, white, shallow-depth honey frame
(5 3/8" or 6 1/4" x 17")

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

12 Candied honey, six 2 pound jars, produced in 1994-1995

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

BEES AND BEESWAX

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

\$12 \$10 \$8 \$6

14 Queen and her bees, with emerging brood, in one-frame observation hive. One 5 3/8" or 6 1/4" frame of honey permitted above bees if desired. Identification of Race preferred.

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

Division B

APICULTURAL PRODUCTS

Amount offered in this Division by State Fair \$78

15 Art designs in beeswax, 1 to 3 items of molded or sculptured beeswax. Minimum total weight must exceed 1 pound.

\$20 \$15 \$10 \$5

16 Beeswax Candles, six candles that are either molded or dipped. Minimum length of 10 inches.

\$10 \$8 \$6 \$4

Division C

Honey-Group Competition

Amount offered in this Division by State Fair \$382

Any Missouri local beekeeping association may exhibit in any one or all classes listed below. All entries will be governed by the same rules as apply to individual competition. However, premium money will be paid to the local beekeeping association responsible for the entry, and ribbons will be awarded to the individual preparing the entry. Only one entry per class per individual will be permitted, however, other individuals may enter the same class from the same local association. A Grand Champion Ribbon and \$25 will be awarded to the association winning the largest amount of premium money in Division C. In the event of a tie the Grand Champion Ribbon and money will be awarded to the association that has won the most blue ribbons. Further ties will be broken by proceeding to the next lower ribbon until a winner is determined.

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

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

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

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

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

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

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

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

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

21 Light bulk comb honey, six 2 or 2 1/2 pound jars

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

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22 Light extracted honey, six 1 pound jars

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

23 Dark extracted honey, six 1 pound jars

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

24 Yellow Beeswax, approximately 3 pound cake not over one year old

\$12 \$10 \$8 \$6

Division D

HONEY COOKERY

Amount offered in this Division by State Fair \$302

Special: A Champion Ribbon and \$25 will be awarded to the outstanding exhibitor in the Honey Cookery Division the winner will be decided on total ribbon points; 4 points for 1st; 3 points for 2nd; 2 points for 3rd; and 1 point for 4th. In case of a tie, the exhibitor with the most total points on the score cards will be the winner.

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

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

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

26 Honey Fruit Cake, recipe attached

\$12 \$10 \$8 \$6

27 Light Honey Cake, recipe attached

\$10 \$8 \$6 \$4

28 Dark Honey Cake, recipe attached

\$10 \$8 \$6 \$4

29 Box of Assorted Honey Cookies, 1 pound (six kinds). Recipes attached.

\$10 \$8 \$6 \$4

30 Box of Assorted Honey Candies, 1 pound (six kinds). Recipes attached.

\$15 \$12 \$10 \$8

31 Loaf of Honey Whole Wheat Bread, recipe attached.

\$10 \$8 \$6 \$4

32 Loaf of Honey Quick Bread, recipe attached.

\$10 \$8 \$6 \$4

SCORE SHEET FOR JUDGING APIARY PRODUCTS

EXTRACTED HONEY

(Classes 3, 8, 9, 18, 22, 23)

1. Degree of Density.....	20 points
Above 18.6% moisture.....	0 or Disquality
18-18.6.....	10
17-18.....	15
16-17.....	20
15-16.....	15
below 15.....	10
2. Freedom from crystals.....	10 points
3. Degree of cleanliness and freedom from foam (clarity).....	20 points
4. Cleanliness and neatness of containers.....	10 points
5. Flavor and aroma.....	20 points
A. Absence of: Off-flavor, overheating, and fermentation	
6. Color.....	10 points
7. Appearance and suitability of containers.....	5 points
8. Accuracy and uniformity of volume.....	5 points
Total points possible.....	100 points

COMB HONEY AND SEALED HONEY FRAME

(Classes 4, 5, 10, 11, 19, 20)

1. Uniformity of appearance/Neatness of cut..... 20 points
(Ragged edges, parallel cuts, four-sided cut, and uniformity of size of cut)
2. Absence of uncapped cells..... 10 points
3. Uniformity of color..... 15 points
4. Absence of watery cappings..... 10 points
5. Cleanliness of section and/or frame
(freedom from stain and foreign matter)..... 15 points
6. Freedom from granulation and pollen..... 5 points
7. Uniformity of weight..... 15 points
8. Total weight of entry..... 10 points
- Total points possible..... 100 points

BULK COMB HONEY

(Classes 6, 7, 21)

1. Neatness of cut..... 15 points
Ragged edges, parallel cuts, four-sided cut,
and uniformity of size of cut
2. Absence of watery cappings, uncapped cells,
and pollen cells..... 15 points
3. Cleanliness of product..... 20 points
A. No travel stain, specks of foreign matter,
flakes of wax, foam and crystallization
4. Uniformity of appearance..... 25 points
5. Density, flavor and appearance of liquid part..... 20 points
A. Density determined as #1 under extracted honey
6. Uniformity of volume..... 5 points
- Total points possible..... 100 points

CANDIED HONEY

(Class 12)

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

BEE SWAX

(Classes 13 & 24)

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

BEE IN OBSERVATION HIVE

(Class 14)

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

STORE DISPLAY

(Classes 2 and 17)

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

ART DESIGN IN BEE SWAX

(Class 15)

1. Color between straw and canary yellow..... 25 points
2. Cleanliness (free from honey and impurities)..... 25 points
3. Novelty of mold or sculpture..... 25 points
4. Neatness of workmanship..... 25 points
- Total points possible..... 100 points

BEE SWAX CANDLES

(Class 16)

1. Color between straw and canary yellow..... 25 points
2. Cleanliness (free from honey and impurities)..... 25 points
3. Freedom from cracking, shrinking and marks..... 25 points
4. Neatness of workmanship..... 25 points
- Total points possible..... 100 points

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P.M. _____

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A.M. _____

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A.M. _____

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P.M. _____

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A.M. _____

P.M. _____

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A.M. _____

P.M. _____

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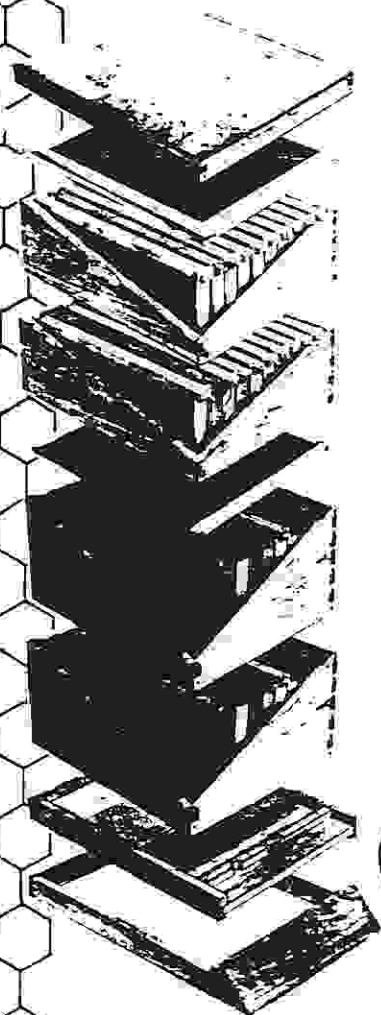


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HONEY BOARD SPONSORS BUSINESS MANAGEMENT PROGRAM IN MINNESOTA

The National Honey Board, the Minnesota Honey Producers Association and Dr. Marla Spivak, assistant professor and extension entomologist from the University of Minnesota have teamed up to offer a business management program for honey producers, producer/packers and packers this December. Program attendees will participate in a series of seminars covering developing specialty honey products for the upscale market, doing business in the 1990's and beyond, conducting successful honey promotions, comparing successful commercial beekeeping management systems and more.

Edward D. Barlow, president of Creating the Future, Inc. is the keynote speaker for the program. Barlow is a sought-after lecturer who has worked with business and industry, government, associations, education and agriculture leadership. He is recognized for his ability to relate influences of a changing world to a variety of industries. Some of the organizations Ed Barlow has spoken to include National Association of Farmer Cooperatives, Produce Marketing Association, John Deere Company, American Farm Bureau Federation, National Association of Retail Dealers of America and the U.S. Chamber of Commerce.

The program will be held at the Crown Sterling Suites adjacent to the Minneapolis airport the first weekend in December 1995. It's not necessary to be a member of the Minnesota Honey Producers to attend. For information, call Conrad Legatt, Vice President, Minnesota Honey Producers Association at 612-252-9963 (evenings) or call Sherry Jennings at the National Honey Board at 1-800-553-7162.

FILES FOR CLUTTER CONTROL

by Dorothy Heieie, University Extension Consumer & Family Economics Specialist

Do you have drawers and boxes filled with papers? Have you had to turn your office (or the house) upside down to find an important paper?

Whatever your home business, it's important that you be able to find particular letters, bills and other papers quickly, and that your working environment be somewhat organized.

One way to control clutter is to have a good filing system. You may now have a file cabinet where you stash papers. But if you can't find something, it's not a good filing system. You must be able to file and find.

But not everything must be filed. There are four things you can do with a piece of paper--toss it, refer it (pass it along to someone else), act on it or file it.

Thus, to sort your papers, you need on your desk an "in" box or basket for incoming mail, plus separate boxes, a vertical file, or file folders, marked: **Action** (for bills to pay, letters to answer); **Home** (for non-business), and **To File**.

For filing, you will need:

- A file cabinet (a file box will also work if you don't have many papers).
- Hanging file folders or manila folders (8 1/2 x 11") and dividers to go into the file box or cabinet. Also labels.
- A file index--list of every file folder in your cabinet. This is the most important part of your filing system, as it helps you find.
- A wastebasket for what's not filed.

To set up your files, first work on your file index. It helps if headings and subheadings are both alphabetized and numbered. For

example:

9. File Index (The file index is always first. Laminate it if possible.)

10. Accounts Payable

10a. (May have a sub-heading for each company you deal with.)

11. Accounts Receivable

12. Addresses

13. Bank, etc, etc.

You might start out using major headings and add the others as needed. There needs to be a file folder (manila or hanging) for each heading or subheading you choose. Label each.

Next gather up all your papers. Pick up one. Which folder should it go into? (Study your file index.) It could also go into Action or Home boxes on your desk. If a paper doesn't fit any, make a new folder--or toss. Reach for your next paper and do the same until all papers are filed or thrown away. Good Luck! Don't you feel organized now?

Using a computer for your business may cut down on the amount of paper crossing your desk, but it won't eliminate the need for a good filing system.

"There is no 'correct' order, no right way to do things--whether setting up a file or a workroom or planning time--unless it is correct for you." Stephanie Winston

QUICK NEW ENGLAND BAKED BEANS

1/2 lb. bacon, diced

1/2 C. chopped onion

3/4 C. honey

4 tsp. dry mustard

1 tsp. salt

1/8 tsp. cayenne pepper

4 C. cooked and drained small white beans

In a skillet, saute bacon and onion until onion is tender; remove from heat. Stir in honey, mustard, salt and cayenne. Layer half of beans in 2-quart covered baking dish; spoon half of honey mixture over beans. Repeat layers. Cover and bake at 325 degrees 1 hour or until honey mixture is absorbed. Note: prepare in advance to allow flavors to develop.

CHICKEN SALAD SANTA ANA

6 oz. chicken breasts, sliced into 2-1/2 x 1/2 inch strips

1/2 C. Honey of a Dressing, divided

1 Tbsp. vegetable oil

1/2 C. thinly sliced sweet red peppers

1/2 C. thinly sliced onions

1/2 C. thinly sliced mushrooms

4 quarts packed spinach leaves

1/4 C. sliced radishes

Marinate chicken in 1/4 cup dressing at least 2 hours or overnight, refrigerated. Drain and reserve marinade. Heat oil in non-stick pan and stir-fry chicken until juices run clear. Add pepper, onion, mushrooms, and reserved marinade; stir-fry one minute. Add spinach leaves and toss in pan until barely wilted. Add radishes and toss to mix. Serve with remaining dressing.

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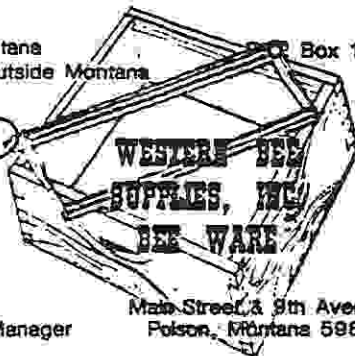
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HONEY OF A DRESSING

1/3 C. red wine vinegar
 1/3 C. honey
 1 tsp. dried oregano, crushed
 1/2 tsp. salt
 1/4 tsp. ground pepper
 1/8 tsp. cayenne pepper

Combine vinegar and honey; mix well. Stir in remaining ingredients.

HONEYED SWEET POTATO BISCUITS

2 C. unbleached flour
 1 Tbsp. baking powder
 1/2 tsp. salt
 1/4 C. shortening
 1 Tbsp. grated orange peel
 1 Tbsp. grated lemon peel
 3/4 C. sweet potatoes, baked until tender, peeled and mashed
 1/4 C. honey
 1/2 C. (approximately) milk

In a large bowl, mix flour, baking powder and salt. Add orange and lemon peels, sweet potatoes and honey; mix well. Add enough milk to make soft, but not sticky, dough. Turn out onto floured board and knead 3 to 4 times. Pat to 1-inch thickness and cut out 2-1/4 inch rounds. Place on ungreased cookie sheet and bake at 400 degrees 15 to 18 minutes or until lightly browned.

TEXAS STYLE HONEY BARBECUE RUB

4 boneless beef top sirloin steaks, (4 oz. each)
 1/4 C. honey
 4 cloves garlic, minced
 2 tsp. salt
 2 tsp. medium grind black pepper
 2 tsp. ground mustard
 2 tsp. chili powder

Rub each steak with one tablespoon of honey. Combine remaining ingredients and rub onto steaks. Let stand 20 to 30 minutes. Barbecue or broil to desired degree of doneness.

OLD-FASHIONED OATMEAL PIE

3/4 C. honey
 2 eggs, beaten
 3/4 C. quick cooking rolled oats
 3/4 C. coconut
 3/4 C. currants or raisins
 3/4 C. chopped walnuts
 9-inch pie shell
 whipped cream

Combine all ingredients except pie shell and whipped cream; mix well. Pour into pie shell. Bake at 350 degrees 40 to 50 minutes or until filling browns and knife blade inserted near center comes out clean. Cool. Top with whipped cream and serve.

HONEY-CRANBERRY OAT BREAD

2/3 C. honey
 1/3 C. vegetable oil
 2 eggs, beaten
 1/2 C. milk
 2 C. flour
 1 C. quick cooking rolled oats
 1 tsp. baking soda
 1 tsp. baking powder
 1/2 tsp. salt
 1/2 tsp. cinnamon
 1 C. fresh cranberries
 1 C. chopped nuts

Combine honey, oil, eggs and milk; mix well. Combine flour, oats, baking soda, baking powder, salt and cinnamon; mix well. Stir into honey mixture. Fold in cranberries and nuts. Spoon into three 5-1/2 x 2-1/4 inch prepared loaf pans. Bake at 350 degrees 40-45 minutes or until toothpick inserted near center comes out clean.

WEATHER IDLES BEES

(from the Wall Street Journal)

If you're feeling stung by supermarket produce prices this spring, blame bees.

California, which produces some 55 percent of the nation's fruits and vegetables, has been hammered by some of the century's worst weather. The rain, wind and cold pounded budding crops in the state's prime growing areas. But even more hurtful, say agricultural experts, were the storms' impact on the state's 500,000 commercial bee-hives.

Like surfers, bees prefer sunshine. "They don't fly when it rains, when the wind blows or when the temperature drops below 55 degrees," says Eric Mussen, an apiculturist, or bee expert, at the University of California at Davis. Instead, when the weather turns foul, bees head home, holing up in their hives.

Some 50 California crops, from almonds to pumpkins, rely on bees to carry pollen back and forth, fertilizing blooms. No bees-no fruits and nuts, says Mr. Mussen.

"From the bees' perspective," Mr. Mussen says, "this was a lousy spring." It may be even worse for grocery shoppers.

Take almonds, one of California's major crops. Last year, according to Blue Diamond Growers, a cooperative representing about 4,000 California almond growers, the state produced about 730 million pounds of the nuts, which sold wholesale at \$1.70 a pound. This year, William Wright, Blue Diamond's director of North American sales, predicts the crop will drop to 430 million pounds, and the wholesale price will shoot up to \$2.50 a pound. "We had rain day after day, and the bees didn't like getting their little stingers wet," Mr. Wright says.

Same with California's cherry

production, which will drop to about 550,000 boxes from 3.8 million boxes last year. Rain swept California in mid-March, the prime blooming season for the state's cherry trees.

"The bees would have done their work if the weather cooperated," says James Culbertson, manager of the California Cherry Advisory Board.

Even bees are bugged by the bad weather. Mr. Mussen says he pulled the roof off a hive during a rainy day two weeks ago to show a group of sixth graders how bees live. A bunch of angry bees flew out and stung him. "I don't think bees like hanging around indoors in crummy weather any more than anybody else," Mr. Mussen says.

MURPHY'S LAWS

by George E. Zinsmeister

from September, 1979 *American Bee Journal*

Have you ever wondered why your smoker tends to go out when the bees are most agitated or why your swarms cluster on higher branches than anybody else's? Have you ever felt that there must be some universal principle, some basic law, some fundamental reason why things go wrong despite all the precautions you may take to avoid such unhappy consequences? Wonder no longer! There is such a principle from which engineers, administrators, and other professionals have for years received consolation whenever some project went sour--Murphy's Law. Since Murphy's Law is universal, it most assuredly applies to all aspects of beekeeping and to all beekeepers, from the one or two hive hobbyist to the largest commercial operator, from the rank beginner to the seasoned veteran. No one is immune!

In its basic form, Murphy's Law is deceptively simple as are most important universal principles--If anything can go wrong, it will. But from this simple principle, one

can deduce corollaries plus some other basic principles which I have deduced over a period of time based on observation and analysis of my own beekeeping experiences as well as the experiences of others.

MURPHY'S LAWS OF BEEKEEPING

A. The Basic Laws

1. Bees are smarter at beekeeping than beekeepers.
2. The greatest myth of beekeeping is that bees are kept.
3. A honey bee colony under the most carefully controlled conditions will do as it well pleases.
4. The joy of beekeeping is maximum among those whose expectations are minimum.

B. The Fundamental Laws of Colony Management

1. "Management" in beekeeping means that the bees manage to survive in spite of the beekeeper.
2. The easy solution to a beekeeping problem is readily apparent immediately after you have implemented a difficult solution.
3. A shortcut in beekeeping will make the problem worse in half the time.
4. In any bee management system, what you fail to do has significantly more impact than what you do.
5. The positive result of doing nothing in a beekeeping dilemma is the satisfaction that at least you didn't make the situation worse.
6. Any explanation of a beekeeping manipulation which is presented so clearly and thoroughly that it cannot possibly be misunderstood will be.
7. If in doubt about what to do with a beekeeping problem, do nothing--the problem might go away.
8. Evaluations of methods for swarm control, queen introduction, comb honey production, etc. are subject to interpretation as follows:

What it says

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What it means

It might work if tried.
It worked once.
It worked twice.

If you're a fool, you can get it to work.

9. The practice of wrapping hives for wintering in northern regions is highly beneficial for warming the beekeeper.

10. There is a greater probability of rain on the day you plan to work with your bees than either on the day before or the day after.

C. The Laws of Swarming and Swarm Control

1. Everybody else's bees swarm on lower branches.
2. Swarming starts in earnest when you run out of hive bodies.
3. The important long distance phone call you have been waiting for all day will come when you first discover a prime swarm in your backyard.
4. A sure way to reduce the frequency of observed swarming in your apiary is to never look up when visiting the apiary.
5. Swarming can be completely eliminated by keeping chickens instead of bees.

D. The Laws of Queen Rearing and Introduction

1. A queen can be found most easily when there is no need to find her.
2. You will discover a beautiful brood pattern in a hive you thought queenless the day after you order an expensive new queen.
3. The vigor of wild drones to mate with your queens is proportional to your desire to maintain the purity of your strain.
4. The difficulty of introducing a new queen increases with her worth.

E. The Laws of Stinging

1. One's reaction to bee stings increases with one's claim to be unaffected by them.

2. A bee veil tied with special care is incapable of keeping out an angry bee making special effort.

3. Stingproof gloves are not.

4. The frequency of stinging incidents in a community does not increase with the introduction of an apiary in the community, but the bees take over the job of stinging from the wasps, hornets, yellow jackets, etc.

5. Anklebones and knuckles secrete pheromone-like substances which are especially attractive to angry bees.

F. The Laws on Beekeeping Knowledge

1. A complete knowledge of beekeeping is impossible--the more you learn, the more you learn that there is more to learn.

2. What you know you don't know about beekeeping increases with what you do know.

3. When you finally understand honey bees, they change.

4. Your absolutely brilliant idea for revolutionizing beekeeping was tried by Langstroth in 1851 and surfaced at least three times in bee journals since then.

5. At least two experts have completely opposite recommendations on any procedure in colony management.

6. The practical value of government-sponsored research in beekeeping goes down as the size of the grant goes up.

G. The Laws on Equipment

1. The tendency for a smoker to go out is proportional to the agitation of the bees.

2. The probability of forgetting an essential piece of equipment on a trip to an out-apiary is proportional to the distance to the apiary.

3. Cloudy, windy weather is a direct consequence of putting on a bee veil and lighting a smoker.

H. The Laws of Honey Production

1. The volunteers always show up just after the honey is extracted and bottled.

2. Honey jars are always returned without lid liners.

3. When bottling X jars of honey, you will find you have X-1 lids.

4. The highest wholesale price for honey will occur just before or just after you market your entire supply.

5. You can make money from beekeeping--about twenty cents an hour.

L. The Laws Especially for Beginners

1. Honey bees supplied to experienced beekeepers are more gentle than those supplied to beginners.

2. The question, "How do I get started in beekeeping?" is most often asked just after package bee suppliers become completely booked up.

3. Package bees invariably arrive at the post office on Saturday afternoon just after the last delivery.

You may have more laws and corollaries of your own, but I'm sure that almost everyone can recognize some of these laws at work in their own operations.

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