

## REDUCTION IN BEE LOSSES

(Source: USDA Handbook No. 335)

Observation of the following precautions can significantly reduce bee losses from pesticide poisoning.

### GROWER COOPERATION

The grower should use a pesticide only when needed. The benefit of the material should outweigh the harm it does to bees. The value of the bees as pollinators should be considered, as well as the effect of the pesticide on them. The effect of the pesticide on the pollinators of other crops in the area should also be considered. A pesticide aiding one crop could seriously reduce production of another one in the area.

Select the right pesticide. All pesticides are not equally hazardous to bees. Some pesticides will kill an entire colony, some will weaken it, but still others are safe. Select the pesticide that is least hazardous to pollinators and that will control the harmful pests.

Apply granules or sprays rather than dust. Granules are, in general, harmless to bees. Sprays drift less than dusts.

Use ground equipment. Airplanes discharge pesticides at higher altitude and with greater turbulence than ground machines. This increases the likelihood that bees in flight will come in contact with the pesticide or that it will drift onto adjacent crops or into apiaries. Time the pesticide application. The safest time to apply pesticides is when bees are not working plants. Treat at night or at a time of day when bees are not in the field.

Avoid drift of the pesticide. Bees cluster on the hive entrance on hot days and nights where they can be exposed to drifting pesticides. Wait until the night is sufficiently cool for the bees to move inside. Colonies can be damaged by fumes of some

pesticides, such as parathion, azinphosmethyl, malathion, and benzene hexachloride. Notify the beekeepers near areas to be treated so that they may move or otherwise protect the colonies. However, notification is not a release of responsibility.

### BEEKEEPER COOPERATION

Select safe bee locations. Place colonies away from agricultural areas if possible, away from fields routinely treated, or at least where they will not be subject to drift of the material from the treated field.

Identify the colonies. Post owner's name, address, and telephone number in a conspicuous place in the apiary. Let the nearby growers know where the bees are located so the beekeeper can be notified.

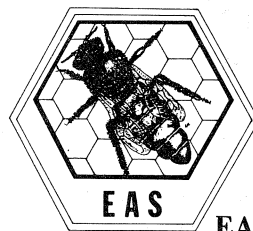
Know the pesticides. Be acquainted with pesticides likely to be used in the area and their potential hazard to bees.

Confine the bees when hazardous materials are applied. Beehives can be covered with plastic sheeting that will confine the bees and exclude pesticide sprays, dusts, or fumes. Since heat builds up rapidly under plastic exposed to the sun, confinement can only last for a few hours after dawn on warm days. This may be long enough to protect the bees from some materials.

Hives can also be covered with wet burlap for a day or more, even during the hottest weather, and the bees will not suffer from lack of air or water. The hives should be covered at night when all the bees are in the hives. During the day the burlap should be soaked with water at least once every hour.

Relocate the colonies if they are likely to be repeatedly exposed to hazardous pesticides.

Bees are valuable to the grower. Try to convince him of their value to him and of the importance of protecting them.



# EAS JOURNAL

EASTERN APICULTURAL SOCIETY OF NORTH AMERICA, INC.

DECEMBER, 1975



## GREETINGS

At this beautiful and joyous time of the year,  
we would like to take this opportunity  
to wish our many friends  
A very Merry Christmas and a Prosperous New Year

*From the Officers  
of the  
Eastern Apicultural Society*

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## THE FOOD AND DRUG ADMINISTRATION'S PROGRAM FOR HONEY<sup>1</sup>

Sam D. Fine  
Food and Drug Administration  
Public Health Service  
Department of Health, Education and Welfare  
Rockville, Maryland

It is indeed a pleasure for me to once again speak at your annual convention in the great State of Texas. If memory serves me right, I last talked with you at a meeting in College Station in the 60's, when I was the Director of our Dallas District. I have been asked to speak on FDA's program for honey. My remarks will be confined primarily to the adulteration of foods, including honey.

As most of you are aware, one element of the overall mission of the Food and Drug Administration is to protect the public from adulterated foods. The 1906 Food and Drugs Act was the first step taken by this nation to prohibit the sale of adulterated or misbranded foods in interstate commerce. The Food, Drug, and Cosmetic Act of 1938 defines a food as adulterated, among other things, if any valuable constituent has been in whole or in part omitted or abstracted therefrom, or if any substance has been substituted wholly or in part therefor. It makes no difference what the substance is that has been

added to or taken from the product. The substance may be as beneficial or more beneficial than the original article. The point to remember is that a substance recognized as a valuable constituent in a food cannot be omitted, abstracted, or substituted for, in whole or in part.

The Act aims at guaranteeing consumers that when they purchase a certain article they know that they are getting what they pay for. Our regulatory programs are geared to ensure that foods are safe, pure, wholesome, unadulterated, and honestly and informatively labeled.

Our effectiveness in protecting the consumer depends to a large extent on our ability to identify and remove from the market place those products suspected or known to be violative. In our surveillance of the food industry for adulterated foods, we rely heavily on factory inspections and the examinations of products. Factory inspection is the basic tool used by FDA to determine whether goods are in compliance with the Act, and also to obtain evidence to support legal action when violations are found. Our factory inspection program keeps tab on the industry to determine the status of compliance with the law.

Although inspectional observations often provide the basic evidence if any violation exists, most of our legal actions are associated with the collection and analysis of official samples. Additionally, investigational samples are collected during the course of an inspection to demonstrate the type of violation noted or suspected. Samples of raw materials and finished products provide the necessary key to establish routes of adulteration.

Since FDA cannot give equal attention to all of the products subject to the laws we enforce, we have to develop programs to give attention to those products, or categories of products, which in our opinion are of the most importance to the consumer from the standpoint of health, public decency and the pocketbook. Often it is a monumental task just to acquire enough information to make such a decision.

In administering those sections of the law that deal with economic frauds or cheats, there are a great many judgmental factors which must be applied, such as determination of the seriousness of the violation to the consumer, validity of analytical methodology, and the likelihood that we can present convincing testimony in a court of law should our

<sup>1</sup>Presented at the Sixth Annual Convention of the American Honey Producers Association, San Antonio, Texas, on January 16, 1975.

of nest destroyers is now comparatively rare in the countryside - the badger. A badger will destroy a dozen or more wasps nests in a single night.

All too often the beekeeper himself is the cause of robbing within the apiary. Undue exposure of combs, dropping of scraps of comb or dribbling honey around a hive entrance - and crowning tragedy, failing to ensure that supers being cleared for extraction are fully bee proof. Then, of course, the whole process of uncapping and extraction, if carried on near the apiary can just about send the most docile of colonies crazy. The urge of the bee is always to seek whatever food source it can find. Some beekeepers leave out extractors, ripener and cappings to be cleaned up by the bees. This will not readily induce robbing, provided that they are left to the bees until they themselves are finished with them. Remove such attractive sources of food and the bees will go on the rampage until they find another.

Therefore the best cure for robbing is prevention - but then prevention is not always in the beekeepers own hands. No matter how careful he may be personally robbing can be detonated by some other factor. How then deal with it? The old advice of draping cloths soaked in carbolice over the hive entrance is just about useless. If you can identify the robbing colony, switch them around - this brings robbing to an immediate halt. Failing that it is better to remove the robbed colony to

another site well away from the reach of the robbers, and close its entrance down to a bee space. Put a hive with one of two old combs on its site so as to make the robbers abandon their pillaging and not extend it to another colony."

(Editor's note: Do we here in the United States have this problem with wasps and if so how is it handled?)

### DR. BAY RESIGNS

Dr. E.C. Bay recently resigned as chairman of the Entomology Department, University of Maryland. Dr. Bay came to Maryland in 1971 from Univ. California at Davis. He joined our beekeeping meetings on several occasions and awarded certificates at several of the short courses. Many beekeepers will recall his talk at the winter meeting two years past about his major entomological interest, the natural control agents of mosquitoes. He is well known for his work on using fish to control mosquito larvae. However, Dr. Bay is leaving us to move to Washington State where he will be Superintendent of Western Washington Research & Extension Center, Puyallup, Washington. We wish him well in his new position on the west coast.

Dr. Allen Steinhauer is now serving as acting chairman of the Entomology Department.

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\*Of which \$2.00 is subscription to Journal.

## PRODUCING YOUNG BEES FOR SPRING

Due to rather mild winters in New Jersey the past few years, many beekeepers have wintered colonies of honey bees that normally would not have survived in the colder, longer winters which we have experienced in the past and may experience again. That does not mean that the beekeepers problems have disappeared. We have had to face some new problems in the last five years that we did not have to contend with in the past. First, was the change from DDT to Sevin and various other pesticides and insecticides that are much more detrimental to bees and it has had far reaching effects on all beekeepers. It has reduced bee population in the hive during the summer months, the size of the cluster of young bees going into the winter, and the surplus of honey the beekeepers could extract. Worse yet, it has reduced the winter food supply so severely that unless the bees are fed, they die in winter or early spring. Second is the fact that there are a lot of new beekeepers who have taken up beekeeping to avoid paying the high prices of honey and sugar in the stores. This along with increased building has reduced the amount of flora available from which the bees can gather nectar and pollen.

What can we do to correct some of these problems? If the beekeeper can get more protection from pesticides and insecticides, which is slowly but surely coming, we could maintain high colony population which would increase the amount of bees in the field and the amount of pollen and nectar collected. Next, we need to utilize all surplus land available by planting pollen and nectar producing plants. It shouldn't be too hard to convince the local officials or service organizations to cooperate with or even to subsidize some of these planting programs. It would fit in well with the ecology groups and would also beautify the cities and towns of this State.

Unfortunately, many of us are faced with the prospect of small and starving clusters for the remainder of the winter and early spring of 1975. What can we do? We can start feeding colonies. Supplementary feeding at this time will help keep colonies light on stores alive and help other colonies build up for the spring and summer honey flow. The three main types of feeding to consider are: First, a heavy sugar syrup, which can be fed when the temperatures stay above freezing. If you feed sugar syrup, it should be as concentrated as possible. The second method is dry sugar feeding. It may be used at any time of the year. One way of feeding dry sugar is to put a single sheet of newspaper over the frames allowing a 2" open space at the front of the colony. Place two or three pounds of sugar on top of the paper, then place the inside cover with the deep side down. This will enable the bees to consume the sugar easily. The last method is the feeding of hard candy (or fuller candy). This is a simple candy made

from sugar being dissolved and then boiled in water. It is boiled until a drop of candy, that has been cooled in cold water, becomes hard and brittle. When this piece of candy is placed in the mouth, it becomes slightly soft and tough. At this point the candy should be poured onto a waxed surface that has a ¼" border, and as the candy hardens it should be scored with a knife so it can be broken into small pieces. It is then place over the frames and under the regular cover where the bees can consume it. Feeding should commence as soon as possible for colonies that are light on stores, and by mid-February or March 1 for those with enough stores; and should continue until there is a continuous source of both pollen and nectar available in your area.

Colonies having about 60 pounds of honey in the fall (1st of November), by the middle of March will have used 35 to 50 pounds of their surplus in raising young bees for the spring and early summer honey flow.

If a colony of 30,000 bees produces 50 pounds of honey during early honey flows, then a colony of 60,000 bees will produce approximately 115 pounds of honey during the same time, all other factors being equal. The smaller colony of 30,000 bees will gain in population and become more efficient in honey production for later honey flows. The full strength colony will produce a surplus crop throughout all the honey flows. So you can readily see the loss of honey if your colonies are not fed and up to full strength in time for the early flow.

J. C. Matthenius, Jr.

## ROBBING - The Autumn Hazard

(taken from the Scottist Bee Journal 8/75)

"There is no doubt that Autumn is the period of the year when the beekeeper is most likely to find his weaker colonies being robbed - and in really bad cases a full scale war being waged between the major powers in his apiary.

First of all, however, few of the textbooks deal with one of the most difficult forms of robbing to which weak colonies are exposed - and it is particularly rife this year. That robbing is carried out by wasps. Wasps can easily overcome even a fairly strong nuc, while a two or three frame nuc, or a small swarm is easy prey to them. Once they have overcome the colony they not only pillage the stores, but they devour brood and bees as well. There is little that the beekeeper can do save narrowing the hive entrance down to a one-bee space and, perhaps for a time closing the hive up altogether, or moving it to another site. I always have jam jars with jam and water, or some stale beer half way up, a jampot cover with a hole punched in the middle, placed all around the apiary at this time of the year. These account for large numbers of these insect tigers. I also try to seek out and destroy as many wasps nests as possible. It is a great pity that the most efficient

actions be contested. The institution of legal action by FDA is not a hit or miss operation, but rather is a carefully planned program.

The problem of adulterated honey which presently is of concern to your industry is not a new one. Near the turn of the century, Dr. Harvey W. Wiley of the old Bureau of Chemistry in the Department of Agriculture, and the father of the 1906 Food and Drugs Act, directed a group of scientists that carried out an extensive series of analyses to determine the extent of adulteration of honey. They found that three types of syrups were commonly used in the adulteration process in those days. These were commercial glucose syrup or solutions of commercial grape sugar, cane sugar syrup and invert sugar syrup. Methodology was subsequently developed by Dr. Wiley and his team to allow the agency to cope with that type of adulteration. In fact, in 1913 we fought and won a case in the District Court of the Eastern District of Pennsylvania, which involved a contested seizure of honey which had been adulterated with invert sugar.

Today we are faced with a situation where modern manufacturing technology can produce syrups very similar to honey. This technology appears to be more advanced than the current analytical methods known to us, although work is being carried out on the development of more sensitive methodologies.

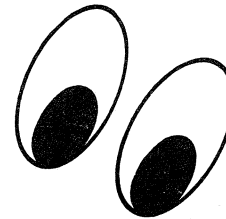
FDA considers that honey is the nectar and

saccharine exudations of plants gathered, modified, and stored in the comb of honey bees. Honey is levorotary, and contains not more than 25% water, not less than 0.25% ash, and not more than 8% sucrose. The carbohydrate composition of American honey has been reported as containing an average of:

dextrose (glucose)	31%
levulose (fructose)	38%
maltose	7%
sucrose	1.3%
other sugars	1.5%

It is evident that the most likely adulterants we would expect to find in honey based on this carbohydrate composition are syrups that contain both dextrose and levulose, which are naturally present in honey at 31% and 38%, respectively.

Invert sugar is a mixture of dextrose and levulose in equal amounts produced by the hydrolysis of sugar (sucrose) by treatment with an acid or an enzyme. Commercially, the hydrolysis is usually not carried to completion, and the final product is a syrup consisting principally of sucrose, dextrose, and levulose in the approximate proportions of 2:1:1. Honey adulterated with significant amounts of commercially prepared invert sugar can be identified by the high sucrose content and the dextrorotary optical activity as opposed to levorotary activity of natural honey. On the other hand, completely inverted syrup in which all of the



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sugar (sucrose) is converted to dextrose and levulose can be added to honey without appreciably changing the composition or the optical activity.

When invert syrups are prepared by acid hydrolysis they contain appreciable amounts of hydroxymethylfurfural (HMF). The HMF content of good quality honey is low; however, it increases when honey is exposed to heat or prolonged storage. Our Bureau of Foods is currently working with Dr. Jonathan W. White, Jr., USDA, in exploring the possibility of establishing an action level for HMF in honey, which will provide us one more regulatory tool in dealing with the problem of adulterated honey.

Glucose syrups are principally mixtures of dextrose, maltose, dextrans and other polysaccharides in varying proportions. Honey adulterated with significant amounts of glucose syrup can be identified by the optical rotation activity, since dextrorotation would be indicative of adulteration with glucose syrup.

Dextrose-levulose syrups are a relatively new type syrup in which dextrose from corn syrup is converted by an isomerization process to levulose. They are sometimes referred to as high-fructose corn syrups or invert syrup from dextrose. The carbohydrate constituent levels of honey are quite similar to the carbohydrate constituent levels of dextrose-levulose syrup. The extent of isomerization can be varied to yield syrups with varying proportions of dextrose and levulose. Consequently, a syrup having approximately equal amounts of dextrose and levulose can be added to honey without making any significant change in composition or optical rotation.

The results of a preliminary investigation at the New York State Agricultural Experiment Station at Cornell University indicate that analyses for sodium and potassium ion content may be useful for detecting adulteration of honey with dextrose-levulose syrup. The ratio of sodium to potassium was found in this study to be much higher in dextrose-levulose syrup than in honey. Limited analyses have indicated that the sodium content of honey is approximately 1/40th the potassium content, whereas dextrose-levulose syrup contains 10-20 times as much sodium as potassium. It is our understanding that the Fitelson Laboratory in New York is pursuing this approach under contract with the honey industry. If these findings can be validated, a high sodium/potassium ratio would be considered indicative of adulteration of honey with dextrose-levulose syrup.

We are also working with the Department of Agriculture to determine what progress USDA scientists may be able to achieve in the near future toward a solution of the problem of detecting adulteration with dextrose-levulose syrup, and whether Dr. White and other experts can support regulatory action against the adulterations with sucrose, corn syrup and invert sugar, using a

combination of currently available analytical methods.

As with any adulterated food product, FDA will take regulatory action against adulterated honey any time we are able to develop sufficient evidence to sustain our position in the event of a court contest. In this regard, I would urge each of you here to report to us any specific instances of suspected adulteration of honey which come to your attention. We are prepared to follow up on such information and will take action where it is warranted.



#### E.A.S. MEETING SCHEDULE

- 1976 Meeting  
V.P.I. & S.U., Blacksburg, Va., Aug. 11-14.
- 1977 Meeting  
University of Delaware, Newark, Del., Aug. 17-20
- 1978 Meeting  
Ohio.
- 1979 Meeting  
Ottawa, Canada (if approved)

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#### AMERICAN HONEY SHOW

The American Honey Show is now set for January 20 through 22, 1976 to be held in conjunction with the annual meeting of the American Beekeeping Federation. This year the Show-Meeting will be held at the Benjamin Franklin Hotel in Philadelphia as part of the Bicentennial celebration.

Dr. Berthold, the Show Chairman, reports that the response by various members of the beekeeping industry has been excellent, and that the sponsorship of the silver bowl first prizes have all been subscribed for. The various classes of competition and their sponsors are as follows: Best in Show - Dutch Gold Honey, Lancaster, Pa.; Water White Honey - R.B. Willson Inc. N.Y.; Extra White Honey-York Bee Co., Jesup, Ga.; White-Honey - Sioux Honey Assoc., Sioux City, Iowa; Extra Light Honey - Diamond International Corp., Irvine, Calif.; Light Amber Honey - Golden Blossom Honey Inc., N.Y.; Amber Honey - A. I. Root Co., Medina, Ohio; Comb Honey - Hubbard Apiaries, Onsted, Mich.; Chuck Honey - Sandt's Honey Company, Easton, Pa.; Creamed Honey - Dadant and Sons, Hamilton, Ill.; and Beeswax - Delaware Valley College Apiary Society, Doylestown, Pa.

Judges for the Show will be three well known members of the beekeeping profession: Dr. Alfred Dietz of the University of Georgia, Mr. Jack

Matthenius, New Jersey Department of Agriculture, and Mr. Joe Parkhill, Arkansas Apiary Board.

Participation in the Honey Show is open to all beekeepers whether members of the American Bee Federation or not. Any one interested in entering their apiary products in the show, but who do not yet have an application, may obtain one by writing Dr. Berthold, American Honey Show Chairman, c/o Delaware Valley College, Doylestown, Pa. 18901. All beekeepers are encouraged to participate in the show so that the beekeeping industry can make a good public showing during the Philadelphia meeting.

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**EASTERN APICULTURAL SOCIETY  
General Rules for All Shows**

1. All entrants, whether or not they attend the conference, must be registered with and have paid the registration fee to the Eastern Apicultural Society.
2. Only one entry in each class may be made by any one family.
3. Identifying labels on entries are forbidden.
4. Entries can be registered Wednesday 8:00-9:00 p.m. and Thursday 8:00-9:30 a.m. (Under EACH SHOW HEADING we should be consistent by specifying PRIZE ribbons.)

**BEE SWAX SHOW**

- Class 1 - Single piece, 100% Beeswax, 1 lb. or more.
- Class 2 - Candles, dipped, 1 pair, 100% Beeswax.
- Class 3 - Candles, molded, 1 pair, 100% Beeswax.
- Class 4 - Candles, fancy, 1 pair, 100% Beeswax.
- Class 5 - Candles, novelty, 6 assorted, containing Beeswax.\*
- Class 6 - Novelty, Beeswax with additives permitted.

**Special rules:**

1. All entries etc. OK as is.
2. All entries etc. OK as is.\*
3. All entries etc. OK as is.

**Score Points:**

- No. 1-2-3 OK
- 4. Absence of cracks and shrinkage.

**HONEY SHOW**

- Class 1\* 3 jars of Honey, Extracted, Colorless.
- Class 2\* 3 jars of Honey, Extracted, Light colored.
- Class 3\* 3 jars of Honey, Extracted, Amber, extra light color.
- Class 4\* 3 jars of Honey, Extracted, Amber, light color.
- Class 5\* 3 jars of Honey, Extracted, Amber color.
- Class 6\* 3 jars of Honey, Extracted, Dark.
- Class 7 3 section boxes of Honeycomb, capped, light color.
- Class 8 3 section boxes of Honeycomb, capped, dark color.
- Class 9 3 plastic boxes of Honeycomb, capped (cut comb).
- Class 10 3 jars Honey, Extracted, Finely Granulated.
- Class 11 3 jars Honey, Chunk.
- Class 12 1 frame of Capped Honey, shallow super, for cut comb.
- Class 13 1 frame of Capped Honey, shallow super, for extracting.
- Class 14 1 frame of Capped Honey, deep super, for extracting.
- Class 15 3 containers, identical, novel shape, Honey filled.
- Class 16 1 gift box, novelty, Honey filled.
- Class 17 1 shadow Box or Niche Display of Honey.

\*Queen Line Glass Jars in Classes 1 thru 6 and Class 10.

**Special Rules:**

1. All jars must contain one pound of Honey.
- 2-3-4 OK
5. All entries etc. etc. during period August '75-August '76.

**Score Points:**

1. Density OK as is.
2. Absence of crystals.
- 3-4-5 OK as is.

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**WEST VIRGINIA BEE QUEEN**

The 1975 Miss West Virginia Bee Queen is Debbie Jo Burdette of Sissonville, West Virginia. Debbie Jo is 18 years old and is currently attending Marshall University where she is majoring in Secretarial Science. Debbie Jo was crowned September 19, 1975 at Cedar Lakes during the West Virginia Beekeepers Fall Conference.

Gus Douglas, Agricultural Commissioner for the State of West Virginia did the honors of crowning Debbie Jo. Mr. Max Turner, of Turner's Record Shops and past president of the association presented Debbie Jo with a beautiful trophy.

Debbie Jo has many appearances coming up in the near future including television, radio, fairs and parades.

First runnerup was Miss Rhonda Kay Amos, 18 years old of Cowan, West Virginia.

Each contestant was required to write and recite a 250 word essay on Honey.



**NEW JERSEY  
HONEY QUEEN**

Congratulations to New Jersey's newly elected Honey Queen, Natalie Hinterlack (photo at left). She is a real honey. Natalie lives with her parents in Swedesboro, N. J., she is a Freshman in Cumberland County College, Vineland, N. J. majoring in Special Education. Natalie is 5'5", blond, blue eyes and weighs 118 pounds. She likes horseback riding, skiing, swimming and beekeeping. Lots of luck in the coming year to our new Honey Queen.

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## PENNSYLVANIA BEEKEEPERS TO WELCOME ABF CONVENTION TO PHILADELPHIA



Serving as official hostess for the upcoming ABF Convention in Philadelphia is Miss Sharon Burt, Pennsylvania Honey Queen. She will represent her state in the competition for the American Honey Queen title. A native of Benton, Pa., Sharon is a drama graduate of the Pennsylvania Governor's School of Fine Arts. Active in church and 4-H work, Sharon is a participant in her family's beekeeping and honey business.

Beekeepers and honey packers will find a full program of sessions and events at the 1976 ABF Convention, which will be held in Philadelphia, Pennsylvania during the third week of January of the Bicentennial year. They and their families will also have opportunities to walk the streets trod by Colonial patriots and to visit historic buildings. The Benjamin Franklin Hotel, site of the Convention, is within walking distance of several shrines of our Independence.

### Pennsylvania State Beekeepers Are Hosts

The Pennsylvania State Beekeepers Association will be the official host organization for the Convention, with members of various county beekeeping organizations serving on various subcommittees. Under the chairmanship of Paul G. Cummins of Conshohocken, Pa., the PSBA Convention Committee has been meeting monthly during 1975 to make plans and draw up a schedule of activities.

While regular meetings were held early each month throughout the year, a special meeting was convened on September 29 at Ralph Gamber's Dutch Gold honey packing plant near York. With

much of the groundwork already completed by committee members from the counties adjacent to Philadelphia, the gathering at York, located in central Pennsylvania, enabled a score of chairmen and committee workers from across the state to make reports and offer suggestions as plans were finalized.

### Convention Program

The major item on the agenda was the session schedule, which will permit ABF officers and committees to meet on Sunday, January 18, and Monday, January 19, ahead of the general sessions slated for Tuesday through Thursday, January 20 through 22. Time and facilities are also being provided for various councils and regional associations to meet during the convention week.

W.W. "Bill" Clarke of Canton, Pa., program chairman, has lined up a roster of speakers who will cover topics ranging from the current state of Afro-Brazilian hybridization to the use of been venom therapy in medicine, as well as discussion sessions that will appeal to backyard beekeepers as well as honey packers concerned with honey adulteration and regulation of packing facilities.

A calendar of events for women was discussed by Linda (Mrs. Dyson) Fisher of McVeytown, chairman of the ladies auxiliary program, and her co-chairman, Bess (Mrs. W.W.) Clarke.

### Honey Show

Dr. Robert Berthold of Delaware Valley College, Doylestown, Pa., is serving as superintendent of the honey show, with co-chairmen Paul Ziegler and Jack Matthenius. While they hope that the honey show will attract entries from all over the nation, they urge that EAS members who have the least distance to transport entries, will submit apiary products for judging. Bob Berthold notes that the trophies this year are silver Paul Revere bowls, which are particularly appropriate for the Bicentennial, based as they are on the classic design by America's famous patriot-silversmith.

### Honey Queen Competition

An aspect of the Convention that will appeal to the general public will be the selection of the 1976 American Honey Queen. Serving as Pennsylvania's official hostess, and competing for the national title will be Miss Sharon Burt, the Keystone State's honey queen.

### Sightseeing Tours

A variety of walking and motor tours will be available to convention-goers and their families, ranging from candlelight tours of historic Society Hill homes, through visits to Independence Hall to bus trips to nearby Valley Forge. Ralph Gamber has arranged a special bus tour on Friday, January 23, the day after the general sessions end. This will include a visit to Dr. Johnathan White's USDA honey research laboratory in suburban Philadelphia, a ride

through the picturesque Pennsylvania Dutch country of Lancaster County, with glimpses of the Old-World lifestyle preserved in the Amish subculture, and winding up at the Dutch Gold honey processing plant near York. As a special preview, Ralph Gamber gave the Convention Committee a personally-guided tour through his new facilities, said to be the largest and most modern honey processing plant in the East.



### METRIFICATION -

#### How Soon Before It Arrives?

The latest issue of Bee World (Vol. 56, No. 3, 1975) has an interesting article on beekeeping equipment and the metric system ("The metrification of beekeeping equipment" by G. Walton). The metric system is the measurement system used by 9/10ths of the world with only the U.S. & British Commonwealth countries using the Imperial system. It is a much easier system to use

because it uses base 10 and lacks unusual measures like foot, pound, yard, etc. Although the U.S. Congress is still debating metric, most of the British Commonwealth countries are switching.

This is important to beekeepers because of our so-called standard hive measurements. If you use equipment from several manufacturers you realize that there are small differences. The differences are not drastic as in other countries where two, three, or more hives of different designs are in use. Our familiar Langstroth hive is popular around the world but not as common elsewhere as in the U.S. Recently, too, the major bee manufacturers in the U.S. have been describing problems in obtaining wood of proper size to continue making equipment of current dimensions.

It is time the U.S. went metric. It will be costly especially in industry where new tools and equipment must be made. Any conversion should be arranged over a period of years. New Zealand beekeepers with the New Zealand Ministry of Agriculture and Fisheries as advisors changed to a single set of standards for the Langstroth hive. Two factors, bee space and equipment interchange were especially considered as well as lumber industry conversion. Proposed dimensions were even tested for an entire season. The article should be a useful guideline for the U.S. beekeeping industry when it goes metric.



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