AUG '91

GLEANINGS IN BEE CULTURE

INSIDE

ROOT™
PUBLISHING

Over 116 Years of Publishing Experience

THE A. I. ROOT CO., Publishers
623 W. LIBERTY STREET
MEDINA, OHIO 44256

SUBSCRIPTION RATES: United States, one year, $14.40; two years, $27.00. **Newsstand Price: $1.95.** All other countries (U.S. Currency only), $7.50 per year additional for postage. Send remittance by money order, bank draft, express money order or check. Published monthly. Change of Address: Return completed form contained inside issue. Articles are solicited. *Opinions expressed by the authors are not necessarily those of the publishers.*

Advertising: For information on placing display advertisements, contact our Advertising Dept. 216-725-6677 Ext. 220.

POSTMASTER: Please send form 3579 to: The A. I. Root Co., 623 W. Liberty St., Medina, OH 44256. Tele. 216-725-6677.

Columns

Departments

COVER ... Chicory (chichorium sp) *is a weedy perennial, often found growing along roadsides and in recently disturbed areas. The light blue flowers (rarely white) appear from early July through mid August. Young leaves are used in salads and have a mildy spicy or tangy flavor. The root, especially of older plants, can be dried, ground and used as a supplement (added to), or substitute for coffee.*
Chicory is not a mayor honey plant, but occasionally it is so plentiful it certainly adds to the bounty each year. The flowers have a creamy white pollen, and though not favored by honey bees when more attractive plants are in bloom, will draw as many as 10-12 bees at a time when little else is available.

Sammataro photo

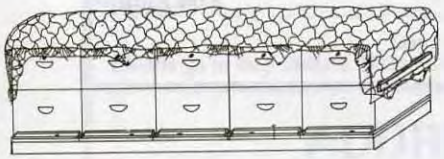
AUG '91

CONTENTS

(ISSN 0017-114X) Vol. 119, No. 8

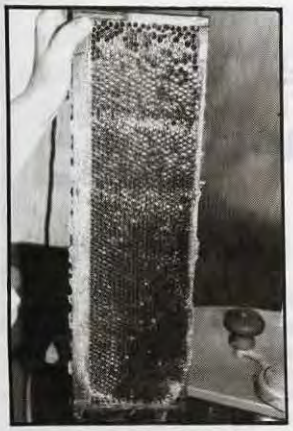
118 Years Continuous Publication by the Same Organization

Features



Overwintering Pg.430

Help A Scout Pg. 433



The Weekender – Extracting Pg. 436

INNER·COVER

A Weighted Democracy

For the last five years our industry has supported the creative and ambitious activities of the National Honey Board. Voted into existence just after my appearance here (purely coincidental, I assure you), the Board has done all that was expected on a fraction of the funds normally needed. With only a couple of gaffes along the way they have generally exceeded expectations in every arena.

Remember, though, just what is meant by "The National Honey Board", because there is more to this group than a quarterly newsletter, the news releases you read here and almost everywhere, and all the rest of the 'public image' they have.

First, there's the Nominations Committee, a group of 40 people who represent beekeepers from all over the U.S. It's their job to pick the Board members and they do it without the fanfare and recognition of the better-known Board they choose. More importantly it is the Nominations Committee that decides the future of the Board by picking the people who make the decisions.

Being on this committee is voluntary in that members aren't paid for their time. Their travel expenses are covered though, but they miss time away from work and family – they do 'volunteer'

Once selected, the actual Board members (there are 13 of them) make the decisions on how things get done – starting with selecting the 'staff' These are the folks who answer the phone and the mail, send out releases (and write them), take care of the paper work for assessments and all the Federal foolishness necessary to meet the spirit and letter of the law. The Staff includes the Chairman, Industry Relations, Creativity, Export Program, Meeting Arrangers and all the rest. Currently there's 11 full time people working for the Board.

The Board also makes decisions on the budget, the advertising program, the planning committee ... well, you get the picture. The National Honey Board and all of its facets is a complex and complicated machine with a thousand parts and pieces. And they need to all fit and mesh and work together, which they have managed to do, pretty much, for five years. The Honey Board has done the job it was designed to do.

But now, the Honey Board's future is *not* in the hands of the Planning Committee, the Nominations Committee, the Industry Relations Department or any of the rest – the decision is up to you, as a honey producer.

On page 424 is a sample of the ballot honey producers will use to vote on 1) the continuation (or not) of the Honey Board program and 2) whether or not the 'voluntary' assessment portion of the program should become mandatory. A negative outcome of the first question makes the second a moot point.

There's two things to consider here. First, *any* honey producer can vote. If you produced a crop last year you can vote. It's that simple. But yes, of course there's a catch. You must be able to prove you produced honey – with sales receipts, ASCS records, etc. And if you claimed an exemption you can't vote. Remember though, proving you sold honey may make you liable to the IRS if you didn't report those sales on your tax return for last year.

I'm told that over 90% of all assessments collected come from ASCS offices, who are first handlers of record for most U.S. honey. The rest comes from packers and the like.

So, if you made honey and can meet those requirements you can vote to 1) continue the Honey Board; and if so, whether or not you want the assessment to remain voluntary.

There has been significant controversy regarding this election over the last year or so, and there's more to the 'who votes' than you might suspect. The "number" of people who vote is important, but the "amount of honey" they represent (produced last year) is also important. One million pound producers carry more weight (yes, that's correct *and* a bad joke) than a whole bunch of us 500 lb/year hobbyists. Which, I guess, is probably the way it should be. After all, the big guys pay most of the bills and in theory get most of the benefits from the Board's work.

One last point. Voting is for the month of *August only*. Don't forget, don't delay and VOTE!

Kim Flottum

Reader Assistance

To subscribe, simply fill in the form below and enjoy the exciting features awaiting you this year — Insurance Regulations, Smoker How-To, Requeening Tips, Inspections, Feeding, Pesticide Protection, and Wintering. It's all here — every month!

891

☐ Please Renew ☐ New Subscription ☐ Send Sample

☐ **2 Years - $27.00** ☐ **1 Year - $14.40**

Foreign Postage — $7.50/year additional for Foreign and Canada.
Find my enclosed check, or charge to my Credit Card.

Name _____

Address _____

City _____ State _____ Zip _____

Please check one.

☐ Visa
☐ MasterCard
☐ Discover

Signature _____ Expiration Date

Send remittance and form to:
Gleanings in Bee Culture, Subscription Department, P. O. Box 706, Medina, Ohio 44258

ADDRESS CHANGE

If you are moving, please fill in the form below so we can process the change without undue delay. Also, if you have 2 addresses during the year (i.e., winters in Florida and summers in Connecticut), let us know which months you spend where and we can pre-program your address change so you will find us waiting when you move — No Delays, No Fuss!

FOR PERMANENT CHANGE:

Name: _____

Old Address: Street _____

City: _____ State _____ Zip _____

New Address: Street _____

City: _____ State _____ Zip _____

FOR TEMPORARY CHANGE:

Name: _____

Address No. 1: Street _____

City: _____ State _____ Zip _____

Circle Appropriate Months: J F M A M J J A S O N D

Address No. 2: Street _____

City: _____ State _____ Zip _____

Circle Appropriate Months: J F M A M J J A S O N D

Send to: The A. I. Root Co., Subscription Dept., P. O. Box 706, Medina, OH 44258

- *Gleanings in Bee Culture* is available on microfilm from: University Microfilms, Inc., 300 N. Zeeb Rd., Ann Arbor, MI 48103. Second Class Postage Paid at Medina, OH and additional offices.
- Circulation figures may be obtained by contacting the advertising department, the editor or the subscription department. Circulation is monitored continuously by Arthur Andersen and Co., an international accounting and auditing company.
- We encourage letters to the editor on any subject whether appearing in the magazine or not. Direct your letters to: Editor, P. O. Box 706, Medina, OH 44258. We reserve the right to edit letters for content and length, but will avoid this if possible.

POSTMASTER: Send Form 3579 to:
623 W. Liberty St., P.O. Box 706, Medina, OH 44258-0706, (216) 725-6677 • FAX No.: (216) 725-5624

NEXT MONTH

September is National Honey Month, and you should be getting ready for any special activities now. Contacting local media early for stories, coverage or whatever is necessary for good exposure, and P.R. for honey.

Fairs are always big in the fall, and we'll take a look at how two groups do at fall festivals or County Fair booths. A few things to watch out for, and some good ideas – Fair Time, next month.

We've also got the first of an excellent two-part series on land based honey production. Not the regular bit on what plants to grow and why, but rather soil preparation, seeding and maintenance afterwards. Time to get you going this fall for a fast start next spring. This will help the backyard gardener, or the 100 acre farmer.

Plus, weighing hives is a critical activity so you know if you need to feed or not – and we've got the technique down pat – and perfect. No more guessing, no more 'hefting'. Do it right the first time.

Plus, another industry profile, making mead – the first of a two-parter by an experienced mead-maker.

Fairs and Festivals, weighing hives and making mead, industry profile, regular columns and all rest, plus a surprise or two – all here Next Month! □

MAILBOX

■ Smart Swarm?

I had something happen this past May that I have never read nor heard anyone talk about. I have five hives of bees in a row in my back yard, and I'm still learning about them even though I have kept bees a little over 40 years. They always do something you do not expect.

No. three hive swarmed, I caught it and put it in a new hive. Then I went thru #3 and removed all the queen cells but one. Three days later I received a call to pick up a swarm. I returned home with the swarm and put them in a super with drawn comb. I was going to kill the queen and add that swarm to one of my comb honey hives. The bees then did what I feel is very unusual. About 6:00 that evening, they began swarming about 10 feet off the ground. My daughter and I watched what happened. This new swarm's hive was about 15 feet from the row of the other bees, and they went into #3 hive, which only had a queen cell. There was no fighting and the hive is doing real well. I've never before heard of something like this.

I believe bees communicate among themselves. How else would that swarm know that they could go into that hive and not be killed. Maybe some one has a good answer.

Carl L. Hartman
Wichita, KS

■ Warm Hive Suggestion

In regard to the letter in the "Mailbox" June *Bee Culture*, Charles F. Yonker. His idea is good, but why doesn't he just turn the hive around 180 degrees for the summer, saves him painting twice a year. Can be done when he inspects his hives.

Gerhard K. Guth
Auburn, NH

■ To Dr. Morse...

First of all, thanks for all your good articles through the years in *Bee Culture*.

Second, regarding your article in June '91 *Bee Culture* on *Major U.S. Honey Plants*. A very major contributor here in the mid-Hudson Valley is Knapweed (*centaurea sp.*). It may not be a major U.S. plant, but *I'd* certainly miss it!

Jim Lawe
Red Hook, NY

■ Caught in the Act

I have seen bees fly out of the hive carrying all sorts of things, of course, but I got a real shock the other day when I saw a bee carrying a white something *into* the hive! What could it have been? Then I remembered that this was a recently hived swarm and I had marked the queen white when I spotted her during an inspection. I must have caught her returning from a mating flight. On two subsequent days I saw her fly out and return several times. The weather had been cloudy and cool most of the time with few sunny afternoons suitable for mating flights. I had only one other swarm hive in my yard to provide drones and no other hives in the vicinity, so far as I know. I presume this caused her to have to make so many flights. I would have missed the spectacle entirely had I not marked her soon after hiving the swarm.

Following the instructions, after marking her I didn't return her to the hive for a while to permit the smell of the paint to dissipate. I just put her in the queen catcher and into my jacket pocket for a while. When I tried to release her onto the bottom board, however, she wouldn't walk out. Had she been chilled, maybe? I took her inside and warmed her with a heat lamp for awhile, until she resumed her previous lively running around. Then when I again offered to let her out onto the bottomboard, she left and ran right into the hive. While using the heat lamp, I kept her in my hand so I could be sure I wasn't overheating her.

Dan Hendricks
Mercer Island, WA

■ Rebuttal!

Once again I see the same misleading information. And I quote – "Young queens lay more eggs,have greater populations, lay later in the fall and earlier in the spring, head colonies that are less likely to swarm and in general do all those things that lead to GREATER HONEY PRODUCTION (my emphasis).

What is distressing is that hobbyists and newcomers will accept this as gospel because it was printed in a prestigious Bee Journal.

I would like to rebut each of the statements above, in turn.

Young queens lay more eggs. More than a queen three months old, six months, five years old? Bees know if a queen is not laying enough eggs for the survival of the colony and will supersede her if deficient.

Most queens lay more eggs than an overwintered colony can feed and cover during the colder days and nights of early and mid spring.

Have greater populations. How this can occur: A young queen, introduced into the colony in the spring has the same limitations of "population" as an overwintered queen. That is, that it takes from two six to feed and cover one larvae. For an over wintered five pound colony (which is average) at best, *any* queen would have to lay only one egg about every five minutes. Or she could lay the 7500 eggs needed to keep the house bees occupied, in a couple of days and rest for the next 18.

Continued on Page 421

MAILBOX

It isn't until there have been several cycles of emergence that the queen will start laying eggs in the quantities of a thousand or two a day. After a 20 day period this larger group of bees emerge, and the queen could lay five to 10 thousand eggs a day, and you'll see eight to 10 frames of brood at a time.

When a new queen is put into the hive before at least five brood cycles have emerged to cover and feed more larvae, there is no way that the population can do anything except decline. The new queen needs time to be released, accepted and start to lay. She can lay 10 eggs a minute but until the force of bees in the colony reaches the point, OR the weather warms to the point, that more larvae can be fed and warmed, the colony with the young queen has to lag behind the population of a colony headed by an overwintered queen.

Lay later in the fall and earlier in the spring. If you want to REDUCE this year's honey crop in hopes of getting a bigger crop NEXT year by putting in a new queen in the spring, be sure you know the odds.

Head colonies that are less likely to swarm. A bee colony is NOT likely to swarm if the queen is substandard or failing.

In general, do all of those things that lead to greater honey production?

In light of the above, I assume that that is a fallacy.

Austin A. Knox
New Milford, CT

■ More Warm Colors

In 1975 I increased my five colony home-yard by 20, using splits, purchased nucs and packages, and swarms for each 10 frame, two deep colony.

With a Television Broadcast Engineering discipline, my "purist theory" resulted in the south-end of each hive body being painted white; the north-end, black; and the sides a forest-green.The hive bodies on each stand had a perfect north-south alignment.

The green sides provided early-morning and late-afternoon warmth, while the white front reflected the heat of mid-day. Theoretically, the black-end facing north would provide some warmth from reflected rays of the surrounding area.

After the first frost in the Fall of 1975, the two deeps of all 20 colonies were reversed 180 degrees to have the black-end facing south. Very laborious, to say the least. The 7/8" hole below the handgrips on the white-ends were corked, while the 1/2" hole on the black-end of the top deeps were uncorked to permit ventilation and access for the bees in the event the bottom board entrance became plugged with bees, or snow. The theory of the black-end providing additional sun absorption and warmth seemed viable as all colonies survived the winter.

Unfortunately the winter of 1976-'77 was devastating in our area, as during seven weeks from mid-December to February, the temperatures did not rise above freezing, and four of the seven weeks, we didn't see it above zero°F. My yard experienced almost a 50% loss. The question persists today whether rotating the bottom deep to have the black-end, south, and/or wrapping the colonies would have resulted in less loss.

For the winter of 1977-'78, the colonies were not reversed from the white-facing-south summer configuration, but were wrapped on three sides with black roofing paper, held in place by wood lath strips tacked to the sides of the hive bodies. The white-ends remained facing south, with the corks removed to provide ventilation and access for the bees on warm days. We experienced no loss of colonies wintered that year.

Subsequent out-yard deep hive equipment was painted a totally forest-green color, and the yards were selected and set-up to have a brush- or tree-line on the west or northwest side to provide a natural windbreak. These outyards were never wrapped and had normal survival rates when enough honey was left on the colony to survive the winter.

The white-green-black deep hive bodies were an attractive color combination for the home yard, and functional. But, natural wind-breaks, and/or wrapping along with top ventilation, is less labor-intensive. As my "Pennsylvania Dutch" (German) forbears would have said, "Vee get too soon alt, und too late shmardt!"

Carl C. Egolf
Newport, NY

■ No Net Nonsense!

I was enjoying the warm and fuzzy article on Dwight Harris in your June issue when the part about driving a load of bees in March from CA to IA without a net jumped off the page. It is unthinking actions like this that will eventually require lead and follow cars, flashing lights, hazmat permits, etc., etc., ad nauseum, when moving bees.

In Winnemucca, NV, bee trucks are met at the entrance to the truck stops and given time to turn around before the Sherrif is called. No bee trucks allowed – period. And no wonder, with no-net trucks allowed to roam the highways.

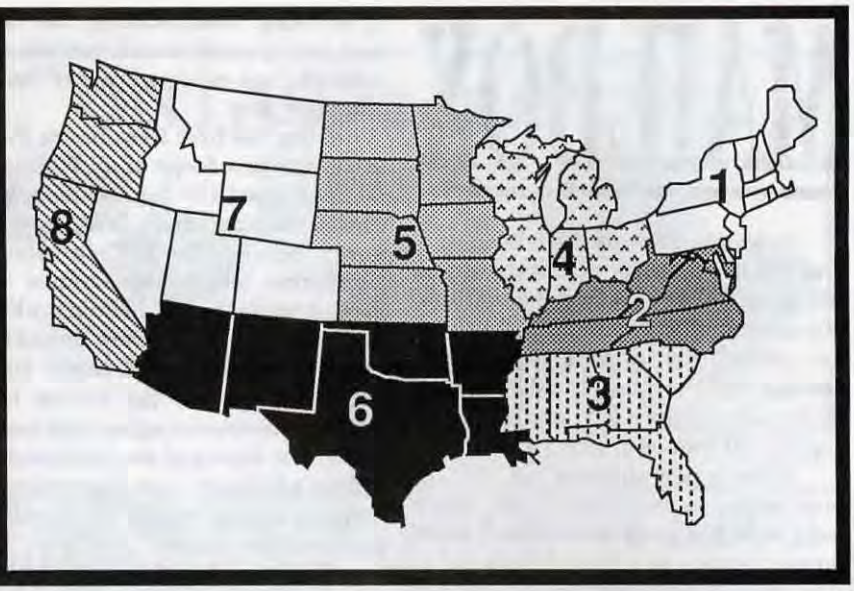
You did a disservice to your readers, and to the industry by *not* cautioning bee-haulers about the safe way to move bees.

John Miller
Grackle, ND

AUGUST
Honey Report

August 1, 1991

REPORT FEATURES SUMMARY: R=Range of all prices; A=Average prices across all regions; LM=Last month's average; and LY=prices one year ago.



	Reporting Regions								Summary		History	
	1	2	3	4	5	6	7	8	R	A	LM	LY
Extracted honey sold bulk to Packers orProcessors												
Wholesale Extracted												
60 # Wh.	45.60	44.13	56.40	40.47	42.00	41.75	48.10	42.67	32.40-56.40	44.39	42.03	45.18
60 # Am.	48.50	41.93	40.00	42.90	42.00	40.00	40.00	39.33	32.40-52.00	41.46	38.37	40.77
55 gal. Wh.	.67	.55	.54	.54	.56	.52	.55	.53	.45-.74	.56	.51	.55
55 gal. Am.	.63	.46	.44	.52	.58	.48	.52	.49	.40-.65	.51	.47	.51
Case lots — Wholesale												
1/2 # 24's	20.10	19.52	15.05	18.76	16.47	21.75	15.60	20.90	15.05-22.80	18.66	20.18	–
1 # 24's	29.85	29.00	25.68	26.97	28.07	29.10	32.40	28.89	22.80-34.25	28.77	29.76	28.96
2 # 12's	29.93	27.40	25.20	26.50	24.75	29.40	27.80	29.48	22.20-32.10	27.40	28.23	26.44
12 oz. Bears 24's	28.46	26.21	24.00	24.00	24.80	24.98	28.50	25.28	20.80-34.25	26.29	26.06	–
5 # 6's	31.47	25.85	26.68	29.92	28.40	29.90	26.50	26.95	25.00-38.50	28.45	29.00	28.28
Retail Honey Prices												
1/2 #	1.13	1.16	1.07	1.15	.91	1.22	1.10	1.34	.83-1.99	1.16	1.10	1.17
12 oz. Plas.	1.61	1.50	1.58	1.40	1.13	1.45	1.41	1.35	1.11-1.75	1.47	1.47	1.48
1 #	1.68	1.74	1.60	1.71	1.54	1.65	1.98	1.66	1.29-2.25	1.70	1.75	1.65
2 #	3.33	3.01	2.85	4.00	2.69	2.85	3.20	2.66	2.19-4.00	2.95	3.04	2.81
3 #	4.30	3.97	4.13	3.99	4.04	3.95	4.27	3.95	3.50-4.50	4.05	4.05	3.97
4 #	5.58	5.10	4.87	5.05	4.79	4.90	4.90	4.75	3.99-5.99	5.08	5.03	4.67
5 #	7.32	5.98	6.37	6.63	6.29	6.05	6.23	6.24	5.75-8.75	6.50	6.25	6.02
1 # Cr.	2.53	1.75	1.89	1.64	1.72	1.95	1.91	2.18	1.25-3.50	1.97	1.98	1.80
1 # Cb.	3.12	2.23	2.25	3.25	2.98	2.22	2.57	3.08	2.00-4.25	2.66	2.62	2.57
Round Plas.	2.23	2.17	2.00	2.25	2.29	1.10	4.00	1.95	1.10-4.00	2.19	2.37	1.93
Wax (Light)	1.10	1.18	1.23	1.36	1.25	1.13	1.09	1.11	.90-1.40	1.20	1.39	1.48
Wax (Dark)	1.00	1.08	1.10	1.05	1.10	1.00	1.05	.98	.85-1.20	1.04	1.15	1.45
Poll./Col.	33.50	24.17	27.50	30.00	15.00	25.00	30.00	28.00	15.00-40.00	27.97	28.78	25.60

MARKET SHARE

Rain. Too much; too little; too soon; too late; too often; too . The weather has made, or broke production this year. Early predictions were for a 5-10% increase over last year's crop. Now, 5-10% below. Reliable sources predict the domestic crop sold by October 1! Save your "Locally Grown" stuff for high prices this winter!

Region 1

Sales steady to improving somewhat, a minor reflection of the region's economy. Bees in good shape with losses down and production up. Prospects for good crop strong, and demand increasing proportionately.

Region 2

Honey sales steady to improving, especially for new and specialty crops. Prices are holding and should be increasing as season progresses. Rain has been spotty, some places too wet, others dry. Colonies in good shape generally, but need good fall flow.

Region 3

Sales steady and prices holding well. Expect prices to increase later, as new crop shows up. Some specialty crops (citrus & gallberry) not their usual selves this year, so watch for shortages. Mites still causing high losses in isolated areas.

Region 4

Sales generally good, and prices increasing pretty much across the board due to increasing costs, decreasing support and better demand. Drought causing serious problems in more northern areas, late rains may help. Southern areas doing well. Fast spring, easy winter and low losses a real boom this year.

Region 5

Sales, and prices seasonally slow, but prospects are encouraging. At least for those who will make honey. Too much rain, or not nearly enough have reduced crops all over the region. Bumper crops in NW areas, SE low and slow.

Region 6

Sales steady to slowing a bit, but prices holding steady to increasing. Weather hot and dry mostly, which should keep production at about last years level.

Region 7

Honey sales steady and prices doing well. Moisture has increased this spring (too much in some areas) so summer flows should be good. Colonies in good shape generally, especially those that didn't move earlier and that were treated for Tracheal mites.

Region 8

Northern areas experiencing the mixed blessing of moisture, and cool weather, increasing sales and demand, and reducing production. Southern areas doing better than last year, slightly. Entire region doing better overall, an amazing turn of events.

VOTE NOW

Do you favor a continuation of the Research, Promotion and Consumer Information Order for Honey?

A "YES" vote on this question means you are *in favor of* the continuation of the Research, Promotion and Consumer Information Order for Honey.

A "NO" vote means you are opposed to the continuation of the Research, Promotion and Consumer Information Order for Honey.

Do you favor termination of the *refund of assessment provisions* of the Research, Promotion and Consumer Information Order for Honey?

A "YES" vote on this question means you are *in favor* of the termination of the refund of assessment provisions of the Research, Promotion and Consumer Information Order for Honey.

A "NO" vote means you are opposed to the termination of the refund of assessment provisions of the Research, Promotion and Consumer Information Order for Honey and desire to continue to offer producers and importers the opportunity to request and receive a refund of assessments paid.

TO PRODUCERS AND IMPORTERS OF HONEY AND HONEY PRODUCTS

This is a Referendum on the Research, Promotion and Consumer Information Order for Honey (Order).

You are being asked to indicate whether or not you favor (1) continuation of the Order, and (2) termination of the refund of assessment provisions of the Order.

This Ballot Sample shows the exact questions that will be asked on an official ballot and outlines the eligibility requirements for voters.

If, after reading this, you determine that you are an eligible voter, and did not receive an official ballot, obtain one immediately from your County ASCS office, complete the ballot and return it promptly. ***BALLOTS RECEIVED AFTER SEPTEMBER 6, 1991, WILL NOT BE COUNTED.***

REFERENDUM PERIOD

August 1, 1991, through August 31, 1991, is the referendum period during which honey producers and importers may vote on the Honey Research, Promotion and Consumer Information Order (Order). At issue in this referendum is whether or not honey producers and importers are in favor of the Order and in favor of termination of the assessment refund provisions.

ELIGIBILITY REQUIREMENTS

Any person who produced or imported honey into the United States during the period January 1, 1990, through December 31, 1990, and who is now a producer or importer of honey, is eligible to vote.

1. Under § 1240.201(h) of the Order, an "eligible producer" means any person who produces, or handles, or produces and handles honey or honey products and *who does not claim an exemption from paying assessments during the representative period* and who: (1) Owns or shares in the ownership of honey bee colonies or beekeeping equipment resulting in the ownership of the honey produced; (2) Rents honey bee colonies or beekeeping equipment resulting in the ownership of all or a portion of the honey produced; (3) Owns honey bee colonies or beekeeping equipment but does not manage them and, as compensation, obtains the ownership of a portion of the honey produced; or (4) Is a party in a lessor-lessee relationship or a divided ownership arrangement involving totally independent entities cooperating only to produce honey who share the risk of loss and receive a share of the honey produced. No other acquisition of legal title to honey shall be deemed to result in persons becoming eligible producers.

2. Under § 1240.201(i) of the Order, an "eligible importer" means any person engaged in the importation of honey and/or honey products and who does not claim an exemption from paying assessments during the representative period. Importation occurs when commodities originating outside the United States are released from custody of the U.S. Customs Service and introduced into the stream of commerce within the United States. Included are persons who hold title to foreign-produced honey and/or honey products immediately upon release by the Customs Service, as well as any persons who act on behalf of others, as agents or brokers, to secure the release of honey and/or honey products from Customs and introduce them into the current of commerce.

3. Any business unit, partnership, family enterprise, corporation, association, or estate may vote. Each such entity is entitled to one vote.

4. Proxy voting is not authorized, but an officer or employee of a corporate producer or importer, or an administrator, executor or trustee of a producing estate may cast a ballot on behalf of such entity.

This is a sample ballot only. *DO NOT USE.* If you need a ballot, see your county ASCS office.

NEW VIDEO

Finally, a technically accurate video that takes you through the step by step procedure of instrumental insemination. The photography is excellent with exceptionally clear close-ups of critical aspects of the operation. This 19 minute, color VHS video (also available in 16 mm film); **The Instrumental Insemination Of Honey Bee Queens** is packed with information. The presentation is interesting as well as informative and appropriate for an audience with varying levels of beekeeping experience.

The video is available with a German or English sound track. Translated from German some of the terminology is imprecise. For example the word "cannulas" is used in reference to syringe tips. The vaginal opening is referred to as a "wrinkled bulge" and the valve fold is not mentioned. These minor discrepancies are understandable in the context used.

Accompanying the video is a written text with valuable information that will serve as a reference for important details. The text presents background information on breeding and mating control in addition to emphasis on the importance of preparations, coordination of rearing of queens and drones and taking the appropriate hygienic measures. Equipment and material needs are discussed as well as graphic descriptions of semen collection and insemination of the queen.

In the laboratory you are shown the required preparations for instrumental insemination. Helpful guidelines and suggestions for pre-care of virgin queens and drones are presented. Emphasis is placed on the timing of rearing and care of drones, an often overlooked step. Sterilization, another critical element, is demonstrated.

The Schley instrument, a top of the line, precision machined device with a micromanipulated syringe, is featured. Semen is collected with clear close-up footage including advice on how to avoid mucus plugs. The technique of semen homogenization by centrifugation is demonstrated. This advanced technique is becoming more widely used as the advantages it offers to a breeding program are realized.

The new perforated sting hook is used in this video to open the sting chamber of the virgin queen. The insertion of semen is clear and precise, though more emphasis could be placed on bypassing the valve fold.

The video provides an excellent and accurate summary of what is involved, the basic steps of the procedure and helpful advice. It is an effective teaching aid though may be insufficient if used as the only source of instruction to teach yourself. The process of instrumental insemination appears easy in this video because of the expertise displayed. Proficiency in this technique requires long hours of practice. It is a difficult technique to learn from a book or a video because of the precision and attention to detail that is required.

Professionalism in content and photography is essential and clearly displayed in this new video. Selection and controlled mating provide the tools to attain major accomplishments in bee breeding. This is viewed as the best potential long term solution to the current problems of parasitic mites and African bees facing the beekeeping industry. With this increasing interest, it is imperative that information is presented in an accurate, interesting and easily understandable format. The new German video, **The Instrumental Insemination Of Honey Bee Queens**, satisfies this long overdue need. □

For information on obtaining this video, write Honey Bee Insemination Service, 7417 Hayden Run Rd., Amlin, OH 43002.

RESEARCH REVIEW

DR. ROGER A. MORSE

Cornell University • Ithaca, NY 14853

"Grooming and Housekeeping: Keys for Disease Control"

Honey bees have a great number of systems that protect them against pests, parasites, and predators. The microbes and animals that may cause problems for honey bees range from microscopic viruses to large animals such as bears. A beehive is, afterall, a great collection of potential food, including honey, pollen, brood, wax, and the bees themselves. Those that can break through the honey bee's defense system, and rob it, may have a grand feast.

In recent years, researchers who study honey bee behavior have shown that bees may specialize in certain tasks. There are, for example, undertaker bees that specialize in removing the dead (Visscher, 1983). Some bees are water collectors and may do that task for their whole field life (Robinson, Underwood, and Henderson, 1985). More recently, Kolmes (1989) made observations on bees that groom other bees. Using observation hives, he found that 999 workers out of 1171 did not groom other bees while he was watching them. There were 132 bees that were seen grooming others once. However, he observed 20 bees that groomed other bees six or more times and he called these bees "grooming specialists" The papers cited in this paragraph are only a few of the many that have been written lately that show this strong division of labor.

We have known for many years that the Africanized honey bees in Brazil have some resistance to varroa mites. We find varroa in every colony where we search for them in that country. However, the mite populations never become very high and no one in Brazil treats their bees for varroa mites. (There are no chemicals registered for varroa control in Brazil. Ed.) The good news is that the resistance appears to depend on a very simple mechanism. The Africanized bees appear to keep varroa populations low by grooming and removing the mites from the colony (Moretto, Goncalves, and De Jong, 1991). This past winter we found a colony of American bees in Florida that is apparently resistant to varroa mites in the same manner (Morse, Miksa, and Masenheimer, 1991). We have not yet perfected a bioassay system which could determine how strong this resistance is. The observations we have made indicate the bees remove and kill the mites through grooming.

The original host of *Varroa jacobsoni* is the Indian honey bee, *Apis cerana*. This is a bee much less than half the size of our European bees but with much the same biology. Varroa mites are also found in every colony of the Indian honey bee whenever one searches for them. However, they never become numerous. Peng and her associates (two papers in 1987) report that the way in which the Indian honey bee resists varroa is through grooming and removing the mites. Koeniger and Muzaffar (1988) reported that *Apis dorsata*, the giant Asian honey bee resists another species of mite that infests it in much the same manner. All of this is reminiscent of the famous and often cited paper by Rothenbuhler and Thompson (1956) that demonstrates that some honey bees are resistant to American foulbrood because of good housekeeping and their ability to remove dead and diseased larvae from the hive.

The important message from all of these papers and the observations they contain is that honey bees have a great number of methods of resisting pests, predators, and diseases. A colony's success often depends upon the degree to which these specialized efforts are developed. There is also great variability between colonies. We are aware of this because there are differences in aggressiveness, honey production, size, etc. When colonies vary in this regard they may also vary in their ability to resist disease. All of these facts suggest that it is only natural that resistance to diseases, including those caused by mites, should arise.

The problem now is for us to find these resistant colonies. Resistant bees are something every beekeeper should search for. When colonies are treated with pesticides and drugs there is no opportunity for natural resistance to show itself. However, as healthy feral and abandoned colonies are found it is worthwhile examining them for any potential they may have.

The knowledge we have at present gives me hope that within a few years we can select and breed new bees resistant to the major honey bee diseases. Hopefully, we can do away with many of the pesticides and drugs we are now using to keep bees healthy. However, for this to be successful it must be a cooperative effort with many beekeepers and researchers involved.

References:

Koeniger, N. and N. Muzaffar. *Lifespan of the parasitic honeybee mite, tropi*laelaps

clareae, *on* Apis cerana, dorsata *and* mellifera. Journal of Apicultural Research 27: 207-212. 1988.

Kolmes, S. A. *Grooming specialists among worker honey bees.* Animal Behaviour 37: 1048-1049. 1989.

Moretto, G., L. S. Goncalves and D. De Jong. *Africanized bees are more efficient at removing* Varroa jacobsoni*-preliminary data.* American Bee Journal. In press.

Morse, R. A., D. Miksa and J. A. Masenheimer. *Varroa resistance in U.S. honey bees.* American Bee Journal. In press.

Peng, Y. S., Y. Feng, S. Xu and L. Ge. *The resistance mechanism of the Asian honey bee,* Apis cerana Fabr.*, to an ectoparasitic mite,* Varroa jacobsoni Oudemans. Journal of Invertebrate Pathology 49: 54-60. 1987.

Peng, Y. S. C., Y. Feng, S. Xu, L. Ge, and M. E. Nasr. *Response of foster Asian honeybee (*Apis cerana Fabr.*) colonies to the brood of European honeybee (*Apis mellifera *L.) infested with parasitic mite,* Varroa jacobsoni Oudemans. Journal of Invertebrate Pathology 49: 259-264. 1987.

Robinson, G. E., B. A. Underwood and C. E. Henderson. *A highly specialized water-collecting honey bee.* Apidologie 15: 355-358. 1985.

Rothenbuhler, W. C. and V. C. Thompson. *Resistance to American foulbrood in honeybees. I. Differential survival of larvae of different genetic lines.* Journal of Economic Entomology 49: 470-475. 1956.

Visscher, P. K. *The honey bee way of death: necrophoric behaviour in* Apis mellifera *colonies.* Animal Behaviour 31: 1070-1076. 1983.

THE QUEEN AND YOU

Sue Cobey

Timothy Lawrence

The mother of all bees in the hive, the queen's major function is to build up and maintain the colony population. She is an efficient egg layer, producing up to 2000 eggs a day during the peak season.

The queen mates with 10 to 20 different drones early in her adult life. She may take several afternoon mating flights over a period of several days, mating with several different drones during each flight. Normally a queen will mate between five and 10 days after emergence and begin oviposition (egg laying) two or three days after mating. She will store five to six million sperm in her spermatheca to be used over her lifetime. Once the queen begins laying, she will not mate again.

The workers pay greater attention to the queen after she has mated. A constantly changing court of young worker bees attend the queen, feeding her and antennating her body. The queen's body is covered with queen substance pheromone produced by her mandibular glands. During this activity the bees pick up the "royal scent". The changing of the court allows the bees to distribute the queen pheromone among nestmates. This acts to inhibit workers from developing their ovaries and laying unfertilized eggs.

The queen moves over the combs looking for cells which have been cleaned by house bees. She is able to recognize the difference between worker cells and drone cells and will selectively release sperm as the eggs pass out of the oviduct, fertilizing them. When a drone egg is laid, no sperm are released. Remember, worker bees are female and develop from fertilized eggs and the male, drone bees, develops from unfertilized eggs.

How the queen is able to determine when to and when not to fertilize eggs has been a topic of debate over the years. It is assumed that the cell size difference between the smaller worker cells and larger drone cells is recognized by the queen and stimulates her to release or not to release sperm with the egg. In the late 1800's many scientists thought the queen was able to recognize cell type by instinct and would fertilize eggs dependent upon her "free will"

In the early 1900's it was hypothesized that the smaller worker cells put pressure on the queen's abdomen causing sperm to be squeezed out of the spermatheca to fertilize the egg in a worker cell. This theory was proven erroneous by known biological facts and studies of the queen anatomy. Scientists determined that it is impossible for sperm to be released by applying pressure to the spermatheca of the queen. This theory was further dispelled by observing behavioral traits of the queen. Queens were found to lay fertilized eggs in worker cells in which the cell walls had not yet been completed and to lay fertilized eggs in queen cells that are very wide compared to worker cells. Obviously, in these situations there is no pressure applied to the queen's abdomen.

Queen behavior studied by Dr. N. Koeniger in Germany revealed that queens examine worker cells before depositing eggs. The queen stops and puts her head and forelegs into the cell where she remains for an average of three seconds. After this cell inspection the queen deposits an egg, and goes on to inspect the next cell and lays another egg after the inspection. Queens were also observed inspecting drone cells before oviposition. During the extensive observations of this research, it is interesting to note, oviposition without cell inspection was never observed.

The queen appears to recognize the type of cell by size and her inspection stimulates her to lay a fertilized or unfertilized egg. There is indication that the queen's front legs are involved in measurement of cell diameter. Koeniger found that queens with their forelegs removed continue to lay eggs though cannot differentiate between cell sizes. The eggs laid were both fertilized and unfertilized and were not laid in the proper cells. These experiments led Koeniger to conclude that the queen recognizes drone cells mainly by her forelegs during cell inspection. It is assumed that fertilization of the egg is

"A close look at Oviposition"

prevented by a specific stimulus of the drone type cell size. A lack of this stimulus in worker cells appears to cause the queen to lay fertilized eggs in worker cells.

Queens definitely prefer to lay in dark comb that has been previously used for brood rearing. If given new comb the queen will usually lay in all the dark comb first and move on to the new comb as a last choice. If you use wired foundation, the queen will usually skip the newly drawn cells where the wire is embedded.

The oviposition rate of the queen is dependant on many factors. Population size, seasonal fluctuations, variable weather, the supply of available resources, all play a major role in determining the egg laying rate of the queen. The genetic makeup of the bees and the conditions in which the queen is reared also greatly influence this. The egg laying rate is effected by age as well, older queens tend to slow down in their egg laying activities and will lay a higher percentage of unfertilized drone eggs compared to young queens a year old or less. Once again we see the importance of the queen and the fascinating role that she plays in the colony's survival strategy and success or failure. □

WINTERING THE EASY WAY

I used to work for a commercial beekeeper with 10,000 hives in California. He sold his extractor when I was there because he never used it. By "proper" management, his bees never swarmed, or stored honey. That's fine for a Pollination and Package producer, but not for the honey producer. The *Key Is Wintering,* in short...

1) Don't super too soon in the spring. Make sure the *second* brood chamber is filling with honey before adding a super.

2) Don't add a second super until the first is almost full (capped). This needs to be adjusted to areas where more than 60 lbs. of honey is produced. The goal is to end the honey flow in the fall with a full box of honey in the *second* brood box – full means side to side, top to bottom. And if it isn't full, feed or replace empty frames with full ones. This means not being greedy when you pull honey, and maybe even putting some frames back on. Only the best frames should be kept and the best honey fed back.

Now ... for the secret of wintering bees in cold climates.

Supplies. Bales of good, dry wheat straw, rolls of heavy felt building paper,

O.B. Wiser

3' wide by 2" mesh chicken wire, (you may also use 5' wide chicken wire), wood cleats 16" x 3" with two #7 box nails for each to nail to the hive, and finally, 1-1/2" galvanized roofing nails. These supplies cost money, but with the exception of the straw and the building felt, the rest is a one time investment, and I am still using the same felt after six years. I carefully store all materials in a shed when not in use.

Before I tell you how to use the materials, I want to tell you why I use them. One picture would be worth a thousand words and I wish you could be with me the first week of April when I unpack my bees. I used to hate with a passion the first spring check. It was horrible to see the five story hive of August reduced to only two frames of living bees and piles and piles of dead ones, smelling up the hive and no honey. It was terribly depressing. (Of course, I know you don't dread checking your bees in the spring.)

When February comes a certain feeling of helplessness used to come over me because there was nothing I could do to forestal the starvation and winter burn taking place, (I know you have never opened hives to see dark greasy bees slowly moving about, the frames soiled with feces and a pungent smell reaching for your nostrils). Well, you say, that is the way it is. Or maybe that is all you have ever seen.

Well I dread spring, too, but now for a completely different reason. First, I only have a 3-5% loss and those are almost all due to queenlessness. But what is really bad is the 95% that are left are so full of bees I am at a loss as to what to do with them to stop swarming. You see, I don't want any more colonies. I have had to resort to supering in *April* and take the chance of having a super of dandelion honey on 80% of my bees. I was so used to beekeeping with half-dead hives in the spring, I just assumed one had to be short on bees. But even though I'm scrambling every spring now, I know what it is to have a 50% loss, and I learned the hard way.

How to winterize. With your bales of straw (eight bales per 200 hives), tar paper rolls, chicken wire, roofing nails, cleats, entrance reducers and, of course, a knife and tin snips, you are ready to start packing your bees. The *best time* is to start in September and finish in mid-October. By myself, I can pack 200 hives in a weekend, in six-seven hour days. You want to work during the warm days of fall so the straw will have time to become *super* dry, and the tar paper will mold to the straw. If you wait too long and do it in cold weather, the tar paper is stiff and much more likely to be torn by the wind. Of course, the sooner the packing is on, the sooner the bees start saving honey.

Arranging. There are two ways to arrange your colonies for this technique. First, place them back to back, in rows of five, 10, or 15 long; or, place them in single rows five, 10, 15 long. You may pull them apart in the spring, but I leave mine pushed together in single rows all year long. I've noticed no problem keeping them together, and even pulling honey is O.K. I should note my hives are on car windshield pallets and are sitting even.

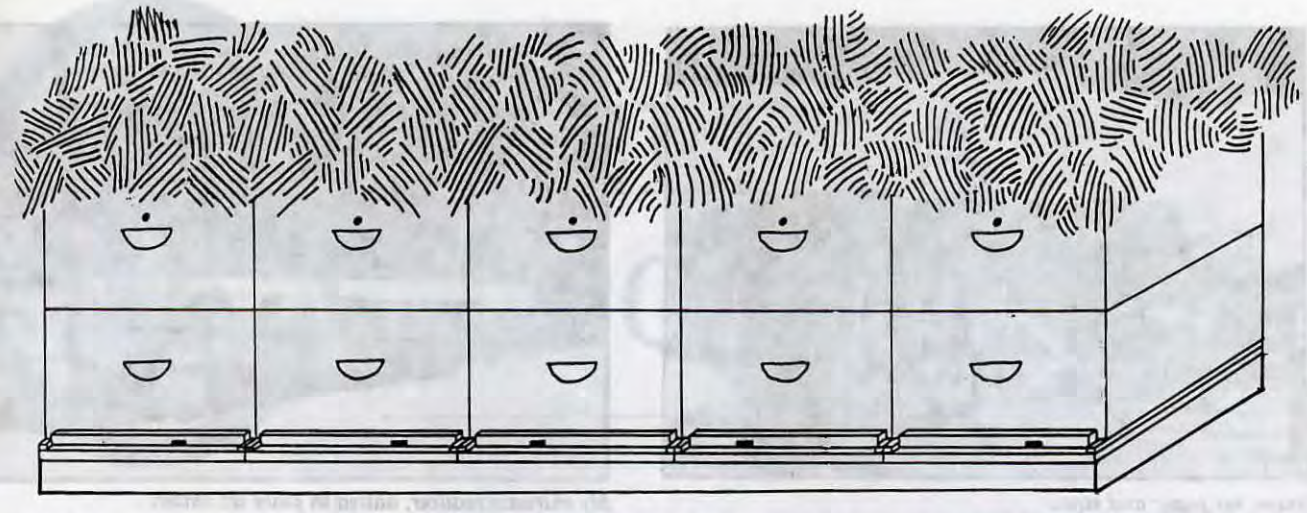
Packing. If your bees are in a double row, back to back, you'll need five foot wide chicken wire instead of three foot wide. And the first time out, you'll have to cut the wire and paper to lengths of five, 10 or 15 hives. After that, they'll be precut and ready to use.

The Procedure

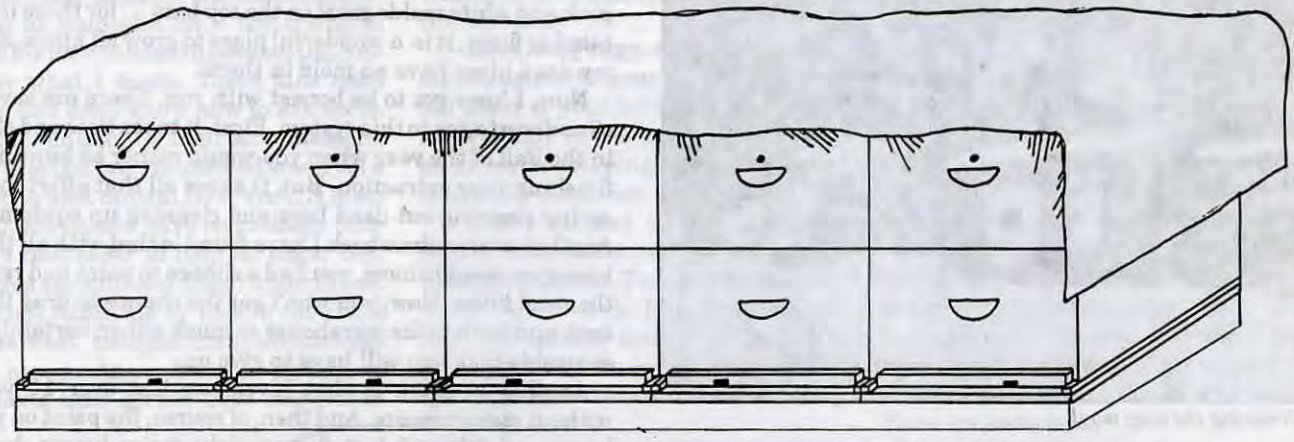
1) Place the 16" x 3" cleats with nails in at the ends of each row.

2) Spread loose straw over hive lids, two three inches thick, or more, and even out lid heights with straw.

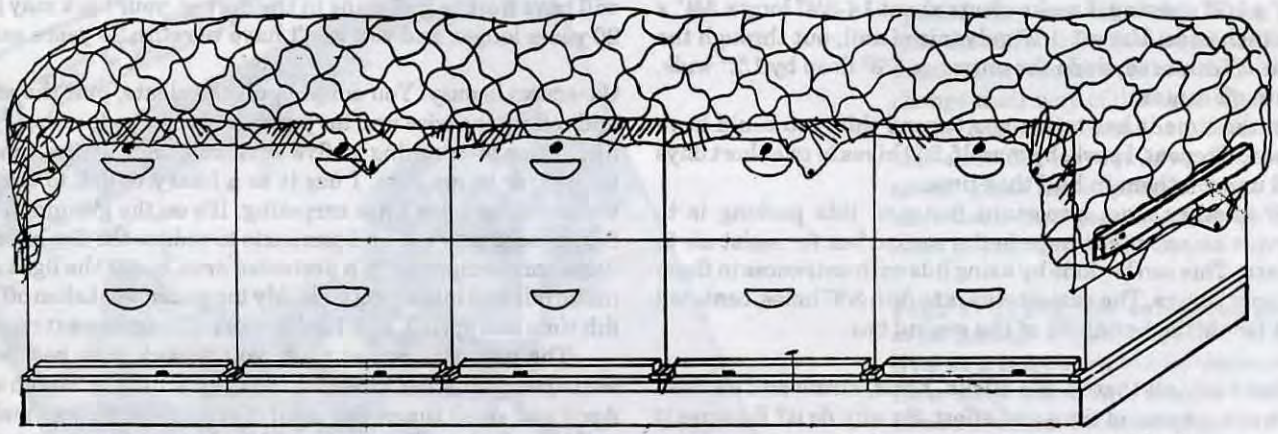
3) Take tar paper roll and pull about three feet off the roll to cover the outside end hive side walls all the way to the bottom board. Then, roll down the row



First, put your colonies together in rows of 5, 10 or 15. Then cover them with 3"-4" of wheat straw (oat straw works well, too). Even off colony heights with straw.



Cover the straw with roofing felt (tar paper) that reaches to the pallet (hive stand) on both sides. Make sure the paper reaches over the front about 1-1/2". Note upper entrance.



Cover entire works with poultry netting, fastening both ends with cleats, and hold-down nails along the way. Don't forget entrance reducers.

of hives and cut at ground bottom board level at the *other* end of the row. The tar paper should overhang slightly the front of the hives and have 1-1/4" overhang at the back of the hive. Paper should cover both ends of the row. If you're using back-to-back hives, do the same thing with the second row, with an overlap of tar paper in the center.

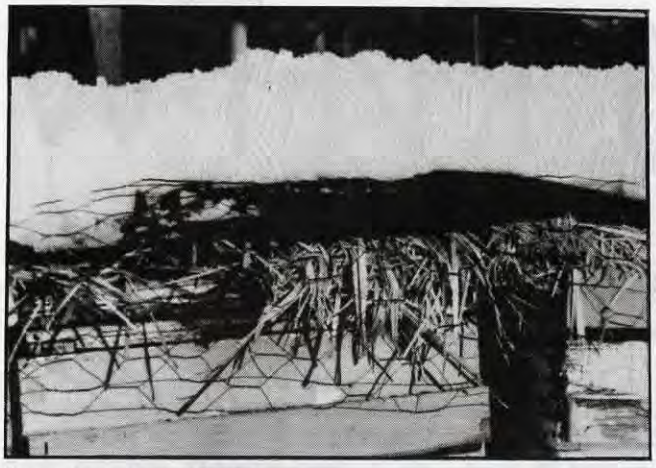
4) Take your chicken wire and follow the same procedure as the tar paper. Use something heavy to hold the wire down while you are rolling it out and cutting.

5) Take the wood cleats and tack down the first end, adjusting wire so it has slight overhang (one-two inches) on the front. Then go to the free end and pull the wire *moderately* tight and cleat it down, too.

6) With a pocket full of roofing nails and a hammer, walk down the front of the row and put a nail in every other hive, about two inches below the lid, and hook the wire. There should be very little tension ... this is only an anchor point.

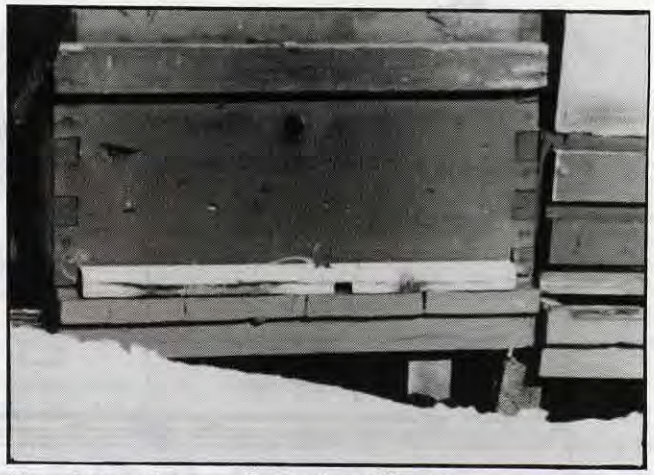
7) Nailing down the back requires one nail in every other hive, too. Also, at this point, slightly stretch the wire to snug

Continued on Next Page



Snow, tar paper and straw

Wintering the easy way!



My entrance reducer, nailed in place off center.

it up, and fold it down on the corners, like making a bed.

8) This is most important. You must *reduce the entrance* to 3/8" x 1/2" opening. I make cleats about 14-3/4" long x 3/4" x one inch wide. Use a 1-1/2" galvanized nail, put through the cleat off centered, dado the entrance 3/8" deep by 1/2" wide, again off center.

In the time it has taken you to read this, you could have done it. I repeat, I pack, by myself, 200 hives in two short days and unpack them in half that time.

8) Another most important factor of this packing is to provide an *upper entrance* in the second box for moist air to escape. This can be done by using lids with entrances in them or inner covers. The easiest way is to drill 3/8" holes, centered just below the handhold of the second box.

Some say all these little sticks, holes, straw and chicken wire are a waste of time and effort. So why do it? Because it is *cost effective*. Consider the reduction of losses to mice alone. The entrance reducers alone pay the cost of packing by stopping mice. It also helps the bees move down into the bottom box by keeping drafts off the bottom in the spring.

Careful research conducted on wintering has provided some helpful information. Upper entrances are vital to colony health. When a slightly warm day comes along in the winter, the bees have quick access to the outside, where a bottom entrance may never be used on those short warm spells in the winter. But most important is the ventilation. Damp, water-laden air is allowed to escape the hive and I believe it is drawn toward the super-dry straw like a sponge. Without this upper entrance, the most interesting black, pink and white molds grow on the top bars ... for those interested in fungi, it is a wonderful place to grow all kinds. Even my dead hives have no mold in them.

Now, I have got to be honest with you. There are several ***disadvantages*** to this system. First, it takes time and effort in the Fall of the year when you would rather be hunting or finishing your extraction. But, it saves all that effort in the spring cleaning out dead bees and cleaning up equipment. Another *serious* drawback I have found is that with all those losses you used to have, you had a chance to paint and repair the dead hives. Now, you won't get the chance to drag them back and forth to the warehouse so much either, certainly an enjoyable task you will have to give up.

Another problem is that hives can last over 10 years without major repairs. And then, of course, the paint on your boxes and lids will last five to eight times longer due to protection during winter, reducing your wintertime enjoyment of painting equipment. And, perish the thought, you will have time to go fishing in the Spring, your back may last 20 years longer and you won't have to retire 20 years early.

Unpacking is easy. You simply pull the cleats, pull the nails and roll up the wire and tar paper and color code rolls, if you like. Orange meaning a five hive roll, etc. Straw can be burned, or in my case, I use it as a heavy mulch to control weeds where I don't use carpeting. It's on the ground in the Spring so it gets wet and compacts to reduce the fire hazard. Store this equipment in a protected area, out of the light and materials will last a long time. My tar paper was taken off the 6th time last spring, and I'll use most of it again next month.

The paycheck comes when you unpack your bees with anticipation instead of dread. To open a hive in March and April and smell the sweet smell of strong active bees makes it all worthwhile. To see over 90% of your hives strong and sweet smelling may be a shock ... but you'll get over it.

I learned this packing method the hard way, and you may have better or more expensive ways to accomplish the same thing ... like going to California or Florida in the winter. Well, I tried that, too, but that's another story.

Whether you have five or 5,000 hives and you overwinter in a cold climate, this method of protection is cost effective. Try it on a couple, or a couple hundred hives this month for this winter. It's worth every penny spent and every minute taken. And I learned *that* the hard way. □

HELP A SCOUT

RICHARD F TRUMP

Yes, they need our help. And I'm referring to *Boy* Scouts, not bee scouts. If you have assisted the scouting program as counselor for a boy trying to earn his merit badge in beekeeping, you know what I mean. These kids need help, and don't know how to ask for it. Neither do many of their scoutmasters.

The last boy I counseled was from a troop in east central New York. A town of 20,000 should have no problem finding a beekeeper to help an eager boy. But his scoutmaster didn't know of one. The boy found me by luck, a thousand miles west, because his grandparents live here in Ames, Iowa. In a series of sessions that spread over more than two years, he earned his badge. Now he is far more interested in honey (and where it comes from) than he was when this started.

Here is my suggestion: Contact the scoutmasters in your community and tell them of your interest. Ask if they have a copy of the merit badge pamphlet on beekeeping. It is a 56-page booklet for beginner.

But I suspect that reading the pamphlet is not the best way for a scout to begin with bees. Far better, he should watch you at work. He should see you fire your smoker and open a hive. He should know the components of a hive, the difference between sealed honey and sealed brood, the difference between workers, drones and the queen. After he has watched you for a while, he may be ready to handle a loaded frame and pick up a drone.

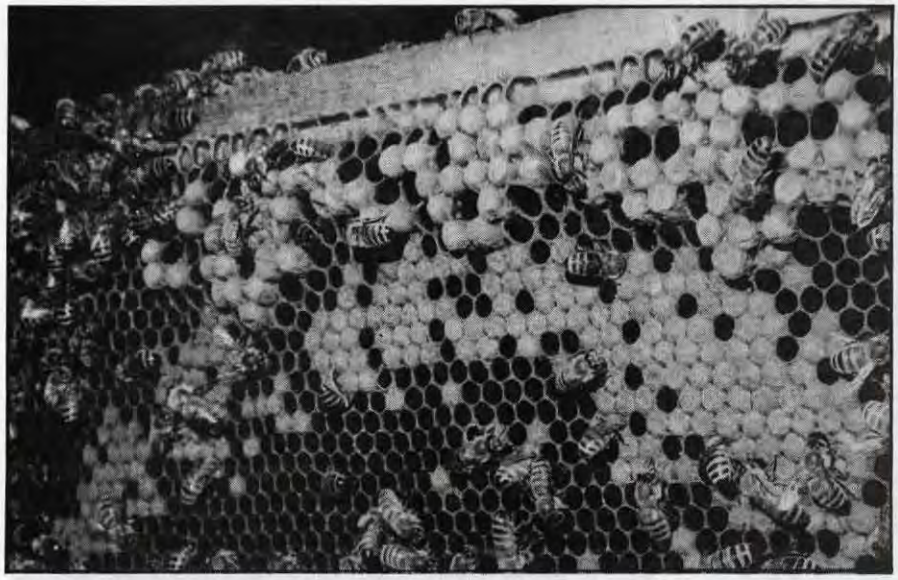
After a couple of sessions in the apiary, he will be much better equipped for reading the pamphlet. Although it is a good little book, there are some unfortunate statements – so many, in fact, that I asked two other beekeepers to read it and offer opinions. Herb Spencer and Lloyd Stanley have both had a lifetime's experience with bees, and both have counseled scouts. They agreed with nearly all of my criticisms and came up with a few of their own. Here are samples...

Page 5 "They are the only insects that can be domesticated ..." In my opinion they are still wild. When you take them from a hollow tree and house them in a modern hive, they don't change their way of life. And when one of your colonies swarms, it lives in a tree just as it did in your hive. "Domesticated" gives the impression that they have been changed. They haven't, at least in any significant way.

Page 7 "If the bee can store gathered honey..." And page 39: "If you live in a northern state, the honey flow may start in June ..." Honey flows out of the extractor spigot, not out of the flower. Bees gather nectar, then convert it to honey. We beekeepers are responsible. We talk about the honey flow when we *should* talk about the nectar flow.

Page 11 "Often she (the new queen) may have to fight and kill queens that have already hatched." Often? The manual properly says in the pre-

Continued on Next Page



Pictures showing the distinction between worker brood and drone brood will help a beginner. But being shown the real thing is much better

In addition to showing a scout the castes of honey bees, ask him to show you! "Is that a queen or a worker or a drone?"

Seeing you work will get a scout off to a better start than simply reading about beekeeping.

ceding sentence that after emerging, "the queen gets out, then destroys any remaining queen cells." Isn't one destruction enough? Also, queens don't 'hatch', but rather *emerge* from a cell. Eggs (and ideas) hatch.

Page 12 "She (the worker) never stops working until she dies." By keeping stop-watch time on marked bees in an observation hive, Martin Lindauer found that workers spend a good deal of time resting (or at least not working). The myth about forever working obscures an important aspect of efficiency in the colony. As Lindauer says in the 1961 edition of *Communication Among Social Bees* (Harvard University Press, 1961), "The loafers in the beehive are reserve troops, employed at critical points in the labor market. This is especially true for temperature regulation and food gathering."

Page 30 "Never use equipment from diseased colonies until it is sterilized." No explanation about how to do it.

Page 33 " ... practice this clipping procedure with some drones first. When you think you can do it well, practice with a few workers before clipping the queen." Better, I believe, to practice on a few more drones!

Page 34 "If you see bees flying around the hive corners or entrances with a quick, sneaky motion, suspect robbery. These robbers act as if they expect to be jumped at any time. They're shiny and sleek ..." How many shiny sleek robbers have you seen?

Page 48 "To keep mice out of your hive you can use entrance screens of half-inch hardware cloth." Is half-inch really small enough? Young deer mice are skinny. (I realize that if quarter-inch screen is used, you have to check occasionally to know whether dead bees are blocking the entrance.)

Page 52 "Never use honeydew for winter stores." Good advice, but how to you know it's honeydew?

Page 54 "Beekeepers who have nondescript black bees and find wax worms in their live colonies usually requeen with an Italian queen. They may add a pound of Italian bees to destroy the worms."

A moth infestation underway on a weak colony is not easy to stop, even by a pound of *descript* Italians. And for my benefit, I wish they would provide a photograph of bee that is *non descript.*

•

There is, however, a lot of good advice in this pamphlet. For the original edition the writers consulted the work of some highly qualified persons: Ralph Parker, E.J. Dyce, M.H. Haydak, J.E. Eckhart, Roy Grout, and Russell Kelty – as well as Dadan't *First Lessons in Beekeeping* and Root's *Starting Right With Bees*. It is easy, however, for writers to distort unintentionally the ideas that they review. For the 1983 edition additional writers, editors, and critics were apparently involved. If you believe I am being too fussy in my criticism, ignore it. Expend your energy helping a scout! Here are a few ideas on helping a beginning Scout ...

One suggestion is to emphasize the *why* of your advice. The kids I have helped seem reluctant to ask questions. You'll have to assume that they are curious, that they want to know. Here are a few question that they *should* ask:

Why should you wait till evening to hive your bees? Because they will then settle into their new home and work routine more quickly. When they fly out in the morning they are more likely to get their bearings during an orientation flight and find their way home.

Why don't you wear gloves? (If you do wear gloves, the reason is obvious.) You are more awkward with gloves, more likely to mash a bee, more likely to drop a frame. And if your gloves are stung, you won't know it. The alarm pheromone builds up and the bees become more aggressive. (Blowing smoke on your gloves will help hide the odor.)

When you were stung, you blew smoke on your skin where you were stung. Why did you do it? To mask the odor of the alarm pheromone.

Why do you stuff your trouser cuffs inside your socks? Bees that are on the ground tend to crawl up on any support. Your feet and legs are good support. Better to keep the bees outside. (I prefer the stuffing method to using elastic bands because bees can crawl up under your cuffs part way. They are blocked there, and if they are squeezed by your movements, they sting. Your Scout should also know that most of the bees' natural enemies are dark colored. That's why light colored clothes are better than dark. Also, plant fibers (cotton) are more "friendly" than animal fibers (wool).

You said there's too much honey in the brood nest. Is that really bad? It suggests that there's a shortage of storage space in the supers – or that the bees are having trouble getting up there with the nectar. A crowded brood nest may lead to swarming.

Why did you switch the positions of those two brood places? You moved the second one down to the bottom. The second one was pretty well loaded with brood, where the queen was. Now there is plenty of empty space above, and she'll move up. She is much less likely to move *down*. The change helps prevent swarming.

Your hives are in a crooked row, and the spaces between them aren't even. Why is that? When the hives are in a straight row, evenly spaced, foragers coming home with food may go in the wrong hive. We call it *drifting*.

Is that bad? Yes. The drifters are likely to go in the stronger hives, where there is heavy flight traffic. The strong colonies and usually the end colonies get stronger, and the weak colonies continue to get weaker.

You said that hole in the inner cover is for feeding the bees. Why do you feed them? Good question, because generally the bees feed you. We give them diluted honey or sugar syrup ... (Tell him how you do it; also how you feed a pollen supplement. Be sure he knows that this stimulates brood rearing ... and why you want a strong population of workers at the start of the nectar flow.)

You don't seem to like drones; what's bad about drones? Why do you blow smoke on your bees? Are all bees as gentle as yours? Will the bee that just stung you really die? What do you do if you see a swarm leaving one of your hives? Why does that queen have a spot of paint on her back ...

Perhaps kids are afraid they will ask dumb questions. I am convinced, however, that they are curious and that they appreciate answers. (That last question, the one about paint, would lead to a comment that by using a sequence of colors for the years, the keeper is able to decide more easily when he should requeen a particular colony.)

Many beginners make one of two mistakes using smoke. Either they stand too far away or they nearly suffocate the poor insects.

•

While checking the library for the pamphlet, locate other books about bees, preferably books about the nature of honey bees rather than about management. Three examples are Richard Taylor's *The Joys of Beekeeping,* Edwin Way Teale's *The Golden Throng*, and Richard Trump's *Bees and Their Keepers*. You probably won't agree fully with any of them. That's because you are a beekeeper.

Finally, when your scout is coming along well with his assignments, tell him that you would be willing to bring some of your equipment to a troop meeting and answer questions. If this works out, ask your scout to assist in some way, while wearing a veil. Also, take some snack crackers and a jar of honey along. And a portable observation hive would be the final touch! □

To order a copy of the merit badge booklet contact Boy Scouts of America, Irving, TX 75015-2079. Mine cost $1.50 at the regional office in Des Moines. After becoming familiar with it, particularly the list of requirements, I gave it to our library. They had other pamphlets but not beekeeping. Valuable items like that get lost.

THE WEEKENDER

EXTRACTING

JEFFREY L. OTT

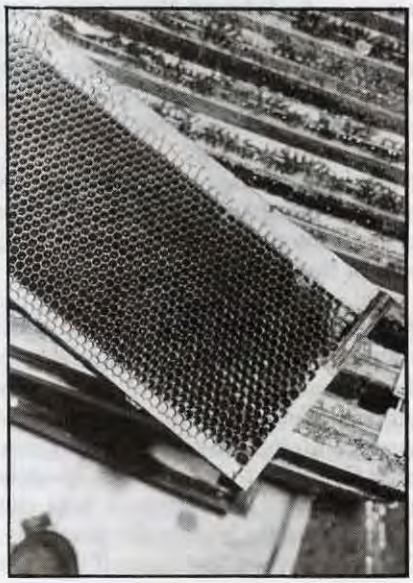
There are many pleasures to be had in beekeeping – the thrill of hiving a large swarm, the smell of warm wax and honey when the hive cover is popped, and the satisfaction of putting in a hard day's work in the bee yard. However, for many, whether hobbyists with one or two hives or commercial beekeepers with thousands, the greatest joy is the sight of golden honey pouring from the bottom of the extractor. This is what it has all been about – Spring feeding, requeening, supering and harvesting. The honey that pours from your extractor is the product of thousands and thousands of little lives and many hours of labor.

Last time we managed to get supers of capped honey home, and now they are sitting in the garage (or basement, or wherever). The lights are off and you have one window cracked open a little at the top to let any straggling workers outside. Now what?

There are several pieces of equipment that anyone producing extracted or liquid honey should have. They are, in no particular order, an uncapping knife, something to catch the cappings in, an extractor, a strainer and a bucket. These are *the* basic pieces of equipment, and, in one form or another are in every beekeeper's honey house. As your operation grows, your equipment will too, but most Weekenders don't have lots of equipment (we may have what our spouses deem *necessary,* but never too much equipment...) and we usually don't have a lot of time either. And, what's available is usually late at night after the other chores are done and everyone else has settled for the day. Actually, I enjoy this time. It's quiet and peaceful.

The first item to consider is your uncapping knife. Available are three styles of uncapping knives: The electric, the steam and the cold. Of these the cold knife is the least expensive. You use this knife by heating it in hot or boiling water and then cutting off the wax cappings. Between

This is what your honey super should look like. The capping will extend past the edges of the frames, easing removal. All frames will be capped and ready to go.



Uncapped frames will have nectar that's not yet honey. It will be high in moisture and, if extracted will decrease the quality of your product. ***Do not extract those frames!***

frames, you should put the knife back into the water to reheat it. It is possible to speed the process a bit by using two knives. Simply reheat one knife in the water while you use the other to uncap.

While the cold knife is the least expensive, the steam knife is perhaps the most complex. It works as well as any other type, but you must have some sort of steam generator to create the steam that heats the knife. Buying a steam generator and the steam hose required will cost additional money.

Probably the most popular knife used by hobbyists is the electric style. The principal is the same – a heated knife blade cuts through the wax cappings faster than a cold blade. This knife uses standard household current to heat the knife. The more expensive are supplied with adjustable thermostats to control the temperature of the knife. This is good because it will keep an over-heated blade from scorching the honey it comes in contact with.

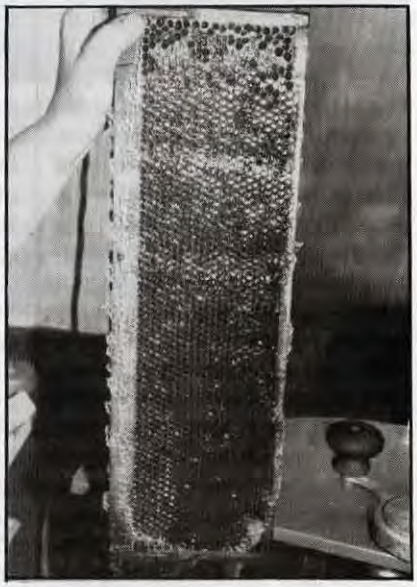
Speaking of scorched honey, some beekeepers will not use a heated knife at all, because of the possibility of this occurring. They use a serrated "bread" knife to slice through the cappings. It is by far the least expensive of all methods, and can be used year-round in the kitchen, unlike most of the honey processing equipment we acquire. If the serrated knife you use is flexible enough, you can uncap the low spots on the frame, instead of using a cappings scratcher.

Before you can use the knife, you will need to have some sort of container to catch the cappings that you cut off. There are several products available from the bee supply companies that you can buy, but you can use just about anything, from a kitchen colander and a pot, to a five-gallon bucket. Ideally, whatever you use will catch the cappings and let them drain for a night or two. The honey that comes off the cappings is good and can be added into the rest of the extracted honey.

Uncapping is a straight forward job, and gets easier after a few frames of practice. Set a frame of honey over the cappings basket on a support of some type. Hold the top of the frame tilted away from you. Start at the bottom of the frame with the knife edge resting on the top-bar across the frame to the other side. With a back and forth motion, cut from the bottom of the frame to the top. Because the frame is angled so, the cappings and honey will drop into the basket. Be careful to keep your

Cappings, once removed should fall into a container that will let the honey drain through some type of screen or filter. This shows a frame (upper right) resting on a cross bar over a holding tank. The cappings are resting on a filter.

A perfectly uncapped frame. Cappings have been removed top to bottom, edge to edge. There were no sunken areas on this frame, but had there been, a fork or cappings scratching would have been used to remove the caps.



Reversing frames in a tangential extractor. This model holds either two shallow frames, or a single deep frame in each basket. It is commonly called a 3/6 extractor. When running, make sure the extractor is balanced, fastened to the floor (most come with attached tie-down holders) and that frames are emptied one side at a time. Old foundation (used two or three seasons) is much less likely to 'break' when spinning than first year foundation.

Continued on Next Page

fingers back to avoid cutting yourself. Occasionally the knife will come out of the cappings and if you're not careful, it'll take the tip of your finger off on it's way by. The least that it will do is burn you if you're using a heated knife, so, just be careful.

After you've finished one side of the frame, turn it around and cut off the cappings on the other side. This is where it pays to use nine frames in a honey super because the bees will draw the comb out farther and it is easier to cut off all of the cappings. If you started with foundation and used 10 frames to a super, you can still use the knife, but you may have to work at getting all the cappings off. In the low spots, use a fork or a cappings scratcher to scrape off the wax cappings.

Take the frame that you just uncapped and place it in the extractor. Repeat this until your extractor is full of uncapped frames. You should load your extractor according to the extractor's design and/or manufactures instructions. If you don't have enough frames to make a full load, balance out the extractor with the frames you do have. A spinning extractor is like your washing machine during the spin cycle. If it is out of balance it will walk across the floor, especially if it has a motor. If your extractor is hand powered, it will make a tiring job even more tiresome as you try and keep it on the floor while cranking.

Learning how long to stand there and crank is a bit of an art. I hate to admit it, but the frames I extract in the first load or two are spun longer than the later loads during the same night. A good gauge is by the sound of the honey hitting the sides of the extractor. It sounds like rain falling. Keep spinning until you don't hear it "rain" anymore, maybe as long as 20 minutes, usually closer to 10 or 12. Then, any additional spinning you can accomplish is "honey in the bank"

There are several pointers to keep in mind while extracting. Warm honey extracts faster and easier than cold honey. If possible extract as soon as you get your honey home, it will still be warm from the hive. If you can extract during the heat of the day, this will help. However, there are two problems with this, one being – what Weekender has time in the middle of the day to extract? The other is, if the nectar flow has stopped, and you extract during the heat of the day, be prepared to draw the attention of honey bees. If doors or windows are left open, you'll find bees in the supers, cappings and extractor before you know it. I've found, however, that Weekenders usually extract after dark, and usually later in the night. This avoids the hungry bees, but how do you warm the honey to extract it better?

You have several options (why should this be different than anything else in beekeeping). You can choose not to worry about it – certainly the least troublesome, but it will cost you in honey, and make extracting a bit harder. You can heat your extracting room, which is just plain costly. You can stack your supers over a light and turn it on. This reportedly works, but I'd recommend getting one of those bulbs that are made for trouble lights. The supers always drip honey and I can't imagine that honey dripping on a hot bulb is very good for the bulb. Or, you can use an extractor heater. This simple, but effective device, made by Acra Electric Corporation, wraps around your extractor and heats it up, thus warming the frames resting inside. It costs less than heating the entire room and you don't have to worry about a bulb burning away under a stack of supers. It still will cost you a little in electricity, but you'll extract more honey and the job will be easier.

The reason behind all of this heating is because warm honey filters faster than cold honey. You do not have to super-heat honey. Actually, all that you're doing is 'warming' it - no more than 100-120°F. More

What Kind Of Extractor

There are two extractor designs on the market today, the Radial and the Tangential. Someone might include the Merry-Go-Round extractor as a third type, but it works on the same principal as the radial.

So what is meant by radial and tangential? If you were to thumb through a beekeeping supplies catalog, you'd quickly find that one meaning of a radial extractor is that it generally costs more. Most beekeepers start out with a tangential and work their way up to a radial as their operations grow.

Actually the name refers to the way in which the frames of honey are set into the extractor. If the frame is set in with the comb facing the axle and the outside of the extractor wall, then it is considered a tangential. If the frame sets radiating from the axle like the spokes of a wheel, then it is considered a radial.

TANGENTIAL: Place the uncapped frames of honey in the extractor with one side facing the extractor wall. After the extractor has been loaded, close the lid and begin to spin the extractor, slowly at first, then building speed. Remove about half of the honey from that side. If you spin too long, or too fast you risk breaking the comb as the weight of the honey on the inside pushes through to the outside. After half of the first side is empty, stop the extractor and flip the frames, so the unspun side is facing the extractor wall. Start spinning this side, slowly at first and then faster as the honey leaves the comb. Keep this side spinning until it stops "raining" against the extractor sides. Stop again and reverse the frames in the extractor and spin the first side again until it stops "raining" Remove this load and start the next.

RADIAL EXTRACTOR: Radial extractors are really time savers. You don't have to stop and reverse the frames. Place the uncapped frames of honey in the extractor with the top bar against the extractor's outside reel, closest to the extractors' wall. This takes advantage of the natural upward slope built into the comb by the bees. After the frames are loaded, close the lid and start cranking (or start the motor up). You can spin frames radially faster sooner than you can with a tangential. Spin until it quits "raining", and unload.

Most radials can be adapted with a motor, which is really a time saver, Expect to pay for that luxury. And it is so very nice to uncap one load while the other is spinning out – without all that sweat on your brow and that ache in your arm.

Let the honey drain continuously from the extractor as it spins. A build-up inside will hinder basket movement. The honey should drain through at least a course strainer to remove large wax particles, wood splinters, bee parts and the like.

You can store course filtered honey in any container, but remember the weight factor. This five gallon pail (commonly called a '60') is ideal, but it does weigh 60 lbs.

than that and the wax particles in the honey begin to melt, destroying the uniqueness of the honey, leaving it bland or even burnt tasting.

After the honey leaves the extractor, it should flow through a strainer of some type to remove the larger bits and pieces of wax, wood, (or if you don't use a queen excluder, brood, which should never have gotten this far in your processing anyway. If a frame of honey has brood in it, it should be returned to the hive above a queen excluder this time and let hatched).

Several types of strainers are available for you to use. I recommend that you use either a stainless steel strainer, or one made of nylon. A 'plated' strainer has the tendency to rust after the first season. If you plan on entering your honey in a contest, don't use cheese cloth to filter it through. Cheese cloth leaves small bits of lint that the judge will quickly find. It also has the tendency to crystallize quicker, for the same reasons.

If you want to strain it even further, after it has run through the course strainer, let it run through a finer mesh filter. These too are available from bee supply outlets.

What ever you use to filter your honey, you will have to stop and clean it occasionally. Just pick a convenient stopping place and stop the honey from the extractor. Remove the strainer and run them under hot water. They clean quickly and easily. After shaking the strainer dry, put it back in place and away you go.

After straining, the honey should be placed into a holding container, such as a closable five gallon bucket. Actually, any container will do, as long as it is clean and sealable. Honey weighs just about 12 pounds a gallon, so don't fill something up that you cannot handle.

If you need to stop for the night, or for any short length of time, you can without too much concern. Just make sure you close up everything and unplug anything that's heated. If you extract in an area where bees are liable to get to, bee-proof all your equipment and clean up any spills or messes. Not only will you avoid bees, but other pests too.

After all of this extracting, you're left with three by-products: Empty, sticky supers and frames; sticky extracting equipment, and sticky, wet, cappings. Put your supers and frames back on your colonies and let the bees clean them up. Some beekeepers place them out in the bee yard and let the bees rob them out. Don't do this. It just gets a lot of bees needlessly killed during the feeding frenzy that follows and may lead to robbing of weaker colonies

Take your sticky equipment and hose it off outside, with lots and lots of water. Clean it up and then water down the ground. This will dilute the honey that's been washed from the equipment and avoid drawing the attention of all and any neighborhood bees.

After the cappings have set and drained for a day or two, you can put them into a solar wax melter and melt them down. When the cappings melt, they separate from the honey and collect in the pan, with the wax floating on top of the honey. This honey *is not fit to eat*, but can be fed back to the bees.

You can buy or make special "uncapping's baskets" for your extractor, too. Put the wet (honey filled) cappings in these baskets and spin them in your extractor. Any honey remaining in the cappings will be spun off leaving almost dry cappings and usable honey. Melt the wax and eat the honey. One final idea about cappings is to place them into a Miller type feeder on top of a hive. The bees will feast on the honey and leave dry wax flakes behind.

Extracting can be a tiring, but very rewarding activity. If this is your first time, it very well may be the high point of your season. It can be a joy to do and a great activity to share with your family. After all, there's not much that can compare to the delight in a youngster's eyes when they taste warm, sweet honey flowing from the extractor's gate. And it doesn't make any difference how old they are.□

SELLING HONEY AT FARMER'S MARKETS

Customers want fresh, locally grown products, and you can capitalize on that at a Farmer's Market

Producing honey is not all there is to beekeeping for most of us. There remains the task of profitably marketing the crop, and small-time beekeepers often sell at least part of their crop at the retail level. This means using one or more types of food markets – grocery stores and Farmer's Markets, for example. Grocery stores are often used by commercial honey packers with the ability to continuously supply a standardized pack year round. Smaller producers usually find selling honey to grocery stores, particularly chain stores difficult because they can't keep honey on the shelf year round.

An alternative to grocery stores, (who tend to extract a hefty percentage of your profits) is a Farmer's Market. My experience with both has shown me the obvious advantages of the latter.

To sell honey or other certified produce at the Shasta (CA) Farmer's Market, in Redding, you must obey some well defined and rigidly enforced rules. These include selling outside market hours (8:00 - 11:00 a.m.), price collusion among sellers, clearly posted prices, and selling only your own, certified produce (although you may sell for up to two other growers on market days).

Our Farmer's Market has an agreement with the Mt. Shasta Mall which provides a corner of the parking lot, gives us publicity and shares the cost of insurance. The Mall provides display space for signs promoting the Farmer's Market.

We average about 12 booths because we are located away from the densely populated Southern CA area, which is also far more agriculturally oriented than we are. Presently we have only a few processed food sellers and no sellers of fish, meat or crafts. This suggests possibilities for future expansion.

Some Markets have permanent stalls in a building or have some kind of overhead protection. Although we don't have structures, some sellers erect large umbrellas or collapsible shelters during selling hours. While the chances of rain in summer are minimal, during late summer the temperatures become uncomfortable and some kind of shade is welcome. Most sellers arrive before the 8:00 a.m. opening time to set up tables, unload produce from trucks and arrange displays. Purchases are weighed on scales certified by a County Inspector. Some sellers also have prepackaged produce as I do with extracted, chunk and cut comb honey.

The Redding Farmer's Market sells mostly fresh produce – tomatoes, lettuce, beets, sweet corn, okra, cucumbers, peppers, potatoes and other vegetables depending on the season. Tree fruits include cherries, peaches, pears, apples, persimmons, nectarines and apricots. Raspberries and strawberries find ready sales, too, as do table grapes.

My honey sales have grown stead-

Larry Goltz, author and former *Bee Culture* Editor sells his honey at the Shasta Farmer's Market in Redding, CA. If you're in the neighborhood, try some of his 'thistle' honey. It's worth the trip.

ily during the two years I have been selling at the Redding Market. Last summer I had chunk and cut comb honey in addition to the usual bottled extracted honey. I limit bottles to one pound and five pound jars, but sell larger sizes when someone orders in advance. Our best crop of premium table grade honey is from the yellow star thistle (*Centaurea solstitialis*). I emphasize this particular honey by posting signs and labeling containers. It is a distinct selling point that "thistle" honey is locally produced. My label, bearing my brand name **Shasta Gold** also has a reference to "Produced in Northern California" This geographical "plug" is not only for local reference but appeals to the numerous tourists – a staple to the Redding economy. One of my most unusual honeys, and most popular while it lasted, was a beautiful red-pink shaded product from fields of strawberry plants grown by a commercial nursery in northern Shasta County. My bee yard from which this honey was gathered is in an alfalfa area but since it was cut before bloom the only accessible nectar source proved to be the strawberry fields – some two miles away.

I receive requests for honeys which I cannot produce – orange blossom, clover, sage and fireweed, and I have to tell these customers I can sell only what I produce. I try to turn them on to our premium star thistle honey, with varying success. How often have I smiled conspiratorially when a fellow honey "connoisseur" offers advice about the gastronomical delights of blackberry,

Continued on Next Page

Cut flowers sell readily at the Redding market.

The greater the variety offered at a farmer's market the better the sales are likely to be. Your honey may be what is needed to add to the diversity of a farmer's market near you.

The Redding Farmer's Market is located in a corner of the local mall parking lot which allows ample space and safety for merchants and customers.

Husband and wife teams are common at markets, involving both in growing the produce and its selling.

buckwheat, eucalyptus, rabbit-brush and other assorted honeys. "Everyone to his or her own tastes", I mutter to myself as they walk away, satisfied at having imparted some words of wisdom to a provincial who apparently never strayed beyond the insular life of northern California.

Of course Farmer's Markets, notably the roadside or open air markets are not limited to the types defined as Certified Farmer's Markets. But the main advantages of almost any Farmer's Market for the honey producer with limited output is easily identified – and that's the profit margin. In grocery stores where I have sold honey the usual percentage of gross sales charged by the store is 20 to 30%, quite a cut considering the low profit margin in honey. Most farmer's markets have a much lower cost of doing business than grocery stores and are usually more amenable to displaying honey in a permanent location than are food chains. When contacting a farmers market be sure to point out that honey is an *excellent* complement to the usual fruits and vegetables sold. An expanded line of locally produced merchandise can only add to the appeal of the market.

> "A Farmer's Market is the perfect place to try new products. You'll get immediate feedback"

And don't be intimidated by the presence of other brands of honey. Yours may have greater appeal because of color, price, nectar sources or a million other reasons. Most important of all, selling *your* honey at a nearby farmer's market is a unique opportunity to promote *your* product – certainly a contrast to having your product overwhelmed by the plethora of national brands on display at the nearest grocery mall in town.

Selling honey at Farmer's Markets may not be for everyone. It requires patience, and the ability to personally promote your product. Even having these qualities you may simply not have the time – understandable, considering the selling season coincides with the busiest time of year in the bee yard.

And, your product must meet certain standards of quality. Since you are likely to be present it will be *you* who answers complaints about quality, packaging, price or service. I've come to know certain repeat customers and enjoy socializing as part of the job. In fact, talking about honey, bees and beekeeping is an integral part of direct marketing, whether a sale is made or not. No such opportunity exists when selling to a grocery chain. On the store shelf your label is the only contact between you and your final customer.

> "When you're face to face with a customer, any 'complaints' will have to be dealt with. There's no insulation, and no where to hide."

The farmer's market is an ideal testing place for new products and packaging. I receive immediate and frank opinions and reactions. And specialty products can do well here, too. I can remove squares of cut comb honey from the freezer, carry them to the market in an ice chest and have them in the customers hands before the comb is thawed. Customers come to the market seeking unique specialty items not available at most of the commercial food outlets – and you can capitalize on that market. □

By Definition

By definition, a California Certified Farmer's Market (CFM) is a location approved by the local County Agricultural Commissioner where agricultural products may be sold by certified producers directly to consumers. CFM's may be located almost anywhere unless prohibited by local ordinances. A certified farmer's market may be operated by one or more certified producers, by a non-profit organization or by a local government agency. In California 54% of all CFM's are located in parking lots, 26% in closed streets and the remaining 20% in other locations. An important feature of markets is the availability of adequate off-street parking and safety for buyers and sellers.

The Shasta Growers Association charges five percent of the sales made as the fee for selling each time. The State average ranged from three - 10%. There is also an annual membership fee of $15.00. In addition, the seller must be certified annually by the County Agriculture Department. There may be a fee for this also.

On average, 24 growers sell at each Certified Farmer's Market, but this number will vary with the season.

A 1990 survey of CA Markets showed average gross receipts were $214,000 per market. Annual liability insurance premiums for each market averaged $820.00. Statewide, average customer attendance averaged 1147 per market.

Stall fees averaged $11.00 per stall, or 54.4% of gross sales per market.

ROAD SIDE MARKET-ING

PATRICK SLATTERY

Last fall soon after their honey crop was harvested, Tim and Carol O'Brien had it all sold.

No, they didn't give it away at wholesale prices.

Instead they received top dollar through ***roadside marketing.*** This means of selling honey makes apiculture worth their time and effort, say the O'Briens. In the process it allows them to enjoy the autumn season while meeting a steady stream of interesting people.

The O'Briens live in Elkader, a small town in Clayton County, Iowa. They've lived here for 14 years. Both originally from Dubuque, they were attracted to picturesque northeastern Iowa during their "back-to-the-land" homesteading days in the 1970's.

Shortly after resettling here Tim landed a job as a surveyor for the county, and has stuck with it. Carol's been at home with the kids – Cedar, Willie, Seamus and Molly – who range in age from 13 to 6. Currently she's a part-time college student, working toward a degree in ag economics, with a special interest in small, rural enterprise.

In their earliest days of beekeeping the O'Brien's went from one to 125 colonies – "definitely the wrong way to go about it," recalls Tim. Today, they've scaled back to about 40 hives, and even that number they find is sometimes too much with a young family.

Ten years ago, with a crop harvested and no clear idea about how to sell it, Carol came up with an idea. One fall day she noticed the large number of cars pulling into a scenic rest spot along Hwy. 53 – Iowa's Great River Road – overlooking the Mississippi river town of Guttenberg, about 25 miles from their home. The next weekend they put some bottled honey together and spent a day pedaling it at the location. They enjoyed the experience, and came home with enough money to consider the outing a success.

SELLING IS LOCATION, LOCATION, LOCATION

In subsequent years the O'Briens have refined their sales approach at this spot, and now can pretty much count on a steady clientele. The majority of those on the Great River Road in fall are out to see the fall colors. Many of them, notes Tim, are flatlanders from Iowa or Minnesota out to see the panorama of fall colors provided by the area's hardwood trees. In addition, a lot of their customers are foreigners, especially Orientals. The O'Briens are tapping a niche market. "Most of these people never purchase honey any other time of the year," says Carol. "They're out on a lark, having a good time traveling. It's strictly an impulse decision for them to buy our honey."

The O'Brien's set up a neat little display of bottled honey on a card table with an umbrella overhead. They wash the car before coming and have a bouquet of fresh

The O'Brien Family

flowers on the table. They set up extra lawn chairs so customers can sit down to visit and talk bees. A lot of oldtimers have memories of their fathers keeping bees, says Tim, but most people know next to nothing about beekeeping.

The question the O'Briens are asked most often is, "Do you have any cone (sic) honey?"

The O'Brien's emphasize that their honey tastes special because it's raw and untreated.

Carol likes to hand out crackers with honey samples on them from a squeeze jar. Tim, on the other hand, doesn't like to mess with this added sales touch. What's most impressive about the O'Brien's marketing is the prices they charge.

Here's what they received last year: half pint (3/4 #) – $2.00; pint (1-1/2 # – $3.00; quart jar – $5.00.

"The only customer resistance they received, notes Carol, was from mostly older people who eat honey regularly, and know what honey sells for in supermarkets. At the season's end the O'Briens ran out of their own honey, and purchased additional from a local beekeeper. Carol bumped up the pint and quart prices to $3.50 and $6.00 respectively, and to her surprise didn't meet additional customer resistance.

The O'Brien's pack all their honey in new canning jars purchased from a local supermarket. Used jars, they've found, aren't worth it, except perhaps for quart containers. New jars cost about 40¢ each. Their peak fall honey sales, note the O'Briens, are the first three weekends in October. Sundays are always better than Saturdays, they add. In total they sold $3,600 worth of honey in 1990, putting in 24 days at their roadside market stand to do it. That averages out to about $150 per day. But their best single day of sales totaled $460.

As a young family living on a single income, the O'Brien's say their honey money allows them to advance a few steps beyond living on the economic edge. Carol says their annual autumn windfall makes it possible for her to forego working outside the home at some minimum wage job.

The O'Brien's don't intend to expand their beekeeping operation, but rather their aim is to do a better job with what they have.

Their only possible new short-term strategy, they add, is to buy some additional equipment in order to produce some of that "cone honey" their roadside customers keep requesting. □

FARM MARKET SELLING

R.T. EDWARDS

Like it or not, the moment you decide to sell your honey, you become a salesperson. Selling, then, is your business.

When you market your honey, you must consider where and how you can sell your products, including packaging, location and price.

Since you've decided to try your hand at a farm market, some decisions have already been made ... like where, how and when. Price depends on competition, costs and what the market will bear. You may not be able to afford the price common at a market. Then, don't sell, or make sure you can convince customers more really means better.

But once decided, things can get scary if you haven't had lots of experience talking with people. However, if this stops you from ever starting you will never know whether or not you could, in fact, actually sell your honey.

If you want to boost your confidence, here's what you need to capture the attention and the respect of anyone who walks by looking, or looking to buy.

First of all, appearance is going to shape the mental impression of the person you contact from the very beginning. Your look should be in harmony with your customers' expectations. Beekeeper's don't usually wear suits, but they don't wear rags, either. So, before starting, go to the farm market and see what other venders, and the customers, are wearing. Then you can dress for the part.

Second, be prepared. Not only for selling honey, but for talking 'bees' Too often though, you'll talk more 'bees' than sell honey. Know when to steer a customer away from one and to the other. "I sure enjoy bees, but I like eating honey even more, have you tried my sunflower honey?" is one good way to turn a talker into a buyer.

Once you have talked with a few customers you will realize that showing is much better than telling.

And always remember to answer the *unasked* questions ... how do I eat it? Can I cook with it? Is it 'pure'? Can my kids eat it? Do you have the kind I had when I was kid ... The questions are endless, but anticipate them all.

And always, always have as many kinds as possible – light, medium, dark, mild, strong, comb, creamed ... the more the better.

One good way to get a customer to commit is to have them select two (only two) types (light vs. dark; mild vs. strong; clover vs. soybean) and let them taste both. Then, simply ask, "Which one would you like to take home?"

Farm markets are about as close to the "good ole' days" of producer/consumer negotiations as you'll ever get. If you're persistent, just aggressive enough, and have a good product – you'll do fine. □

OLD → NEW Transferring Bees

STEVE TABER

When I was just starting out back in 1940, I bought five box hives, called 'gums' and transferred them into Langstroth hives. These gums were purchased for the standard price in those days of $1.00 each. They were made of one foot wide planks, 2-1/2' tall. The top was a plank cut from a 14" wide board and nailed on. Inside, six inches down from the top were two cross sticks, nailed in place for the bees to cluster and build their combs. There were three entrances made by sawing three "V" shaped notches at the bottom of one of the planks. There was no bottom board.

For the previous 60 years or so there had been a general campaign to get beekeepers who used "gums" to change to movable frame hives so they could be tended to properly and inspected for disease. A USDA Bulletin had been published on "Transferring Bees Into Movable Frame Hives", so I obtained a copy and transferred the bees into prepared hives.

Standard 10 frame Modified Dadant Shallow box with a comb of brood and frames of foundation above a French hive with no combs built in frames. The size is of the bottom box is Dadant, full depth and it holds 12 frames.

Two general methods were suggested. The first was to take the cover off the 'gum' and place a standard hive body equipped with frames with beeswax foundation in its place. Then, all you had to do was wait until the bees moved up and into the supers. Of course I couldn't wait that long, so I chose the other method, which was to "drum" the bees from the combs, then to cut the combs out carefully, tying them into empty frames.

To "drum" bees, means to beat on the side of the hive with a hammer for several minutes. This causes the bees to run and fan and leave the combs, clustering outside the hive. The government pamphlet said that at first the bees would be angry, but as the drumming continued any stinging would cease and the combs would be almost bee free. Well I tried it, and it worked just like the pamphlet said it would and I successfully transferred the five box hives.

Now then, the reason for all this nostalgia is that I've become involved with nearly the same thing again. One of my friends had bees he no longer wanted and he gave them to me. Two of the hives had contained frames with foundation but the bees had died and wax moths had destroyed the combs. Then swarms had entered the hives and built combs the way they wanted, which was not inside the frames.

I am presently bee poor, meaning I have only a few hives that can be worked normally and I am in no position to turn down free bees. One of the free hives was a Standard Dadant Hive with 12 frames about 11 inches deep. The other was in a six frame Dadant deep hive. Many French beekeepers use this Dadant deep hive and I don't know why, exactly, since it weighs a ton. But then I am just an American living here.

The easiest and least messy way to transfer bees from a box is the first method I described, and I used it on the two hives with combs built across the frames instead of in them. These hives had originally died and then been replaced by swarms which had moved in. If you have hives like this, assume the bees died from disease and give them a dose of terramycin first. Then, put a properly prepared box, with frames containing foundation on top ... and wait. Examine the colony every week or so to see if the bees have started moving into your added box. I started my project in mid-April and I cheated a bit by adding a comb of young brood from another hive. By mid-May the bees were well up into the new box. When I spotted the queen on the new combs in the box I added an excluder *under* the new box to prevent her from going back below, ever again.

I also feed the bees terramycin for three to four weeks until *all brood below the excluder has emerged.*

By then Iwas into my honey flow and had to add new boxes to hold the queen, brood, bees and honey.

As soon as possible, if you're doing this, remove the old box with all the old combs, placing the new equipment on the old location. The old combs need to be examined and inspected very carefully for the presence of disease. If you are unqualified to do this job, remove the combs, place them in a plastic bag and take them to a qualified person for inspection.

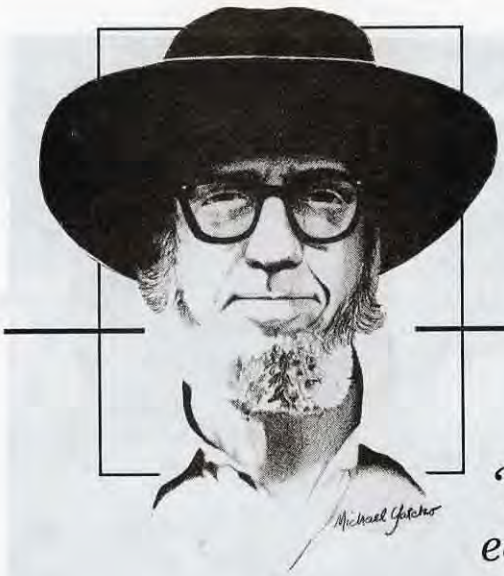
In my case, I expect to find disease because one of the other hives the same beekeeper gave me had some AFB. Now to me this is good news, because it most likely means these bees are somewhat resistant to disease because they're not

dead!

One cautionary note about drugs and bees and honey. I said to feed the bees terramycin because you should expect them to have disease. It is illegal to feed terramycin, or any other drug to bees four to six weeks before the beginning of the honey flow. My interpretation of this is that it is illegal to remove any honey from this hive for human consumption.

The danger of getting drugs into honey which is to be eaten by people is real and must be carefully monitored. Drugs to control pests and diseases of bees are a blessing, but they are not to be abused. Honey for human consumption must be kept free of any drug residue. Today, the country of Denmark prohibits the use of *any* drug by beekeepers, I wouldn't want to keep bees in such a situation. □

Standard 10 frame MD Shallow box with a comb of brood and frames of foundation placed above a five frame Dadant French hive with cross built comb. Cleats nailed into place below standard box prevent robbing.



BEE TALK

RICHARD TAYLOR

Box 352, Interlaken, NY 14847

"Harvesting comb honey is a relatively easy process, but you need to keep a few simple rules in mind"

I want to talk about harvesting honey. It is an aspect of beekeeping rich in possibilities for screwups and headaches. I'll describe how I do it, together with some specific suggestions.

I use the traditional two-way bee escapes. There are other bee escapes on the market, requiring the bees to go through a kind of maze through which they find it difficult to return, and I am told these work fine. Someone gave me a couple, and I mean to try them out, but I haven't yet. I don't like bee blowers, mostly because they splatter honey around in the bee yard. And of course they are fairly expensive. I've never used fumes, and somehow do not like the idea. Bee escapes work fine for me.

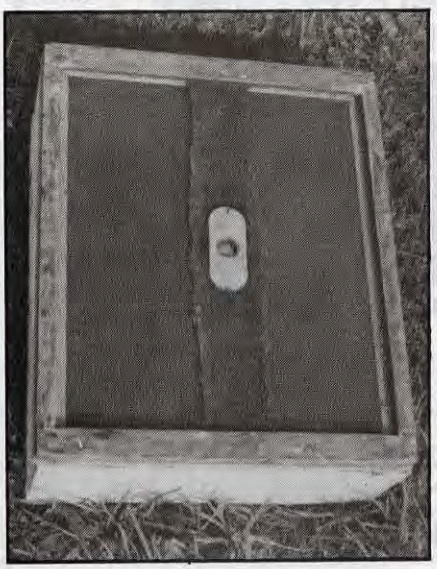
A natural way to use a two-way bee escape is to pry off the inner cover, set the supers off to one side, replace the inner cover on the hive, insert the bee escape in the inner cover hole, replace the supers and then replace the outer cover. But there are lots of things wrong with that procedure.

First of all, don't remove the inner cover. Leave it right there, stuck down on the supers. Otherwise, you are very likely to create a crack through which the bees can re-enter the super, and this you absolutely must prevent. And there is no need to lift the supers off the hive. Way too much work.

I use escape screens, like the one illustrated. This is just like an inner cover, except most of the surface is screen – heavy eight-mesh screen. Fly screen is okay, but the heavier screen is better if you can get it. These escape screens are easy to make, and ten or so are enough for 50 or 60 hives, since you don't need to take honey off all the hives at once. And you need only one two-way escape device per screen. Having two is no significant improvement.

The advantage of the screens, rather than standard inner covers, is that the bees vacate the supers much faster. The honey above is also kept dry, in case you get rain before you get the super harvested.

An escape screen.



To use, lift up the supers you want to harvest and put the screen below. Then square up the hive with your hive tool.

I pry the super, or supers, from the hive below, pull them towards me about an inch or so, tilt them up, slip the escape screen under them, lower the supers down onto it, then square everything up with my hive tool. It all takes but a minute, and there is no significant lifting. The heavy supers are merely tipped up, as shown in the picture.

The inner cover remains firmly in place. The hole in the inner cover is covered with a scrap of asphalt shingle, so that no bees can get up under the cover and find their way back into the supers through there.

When I have slipped escape screens under all the supers of all the hives I want to harvest, I go back and make sure there are no cracks or holes. If there is one, it is easy to spot, for a few bees will gather there – a dead giveaway. I tape over any such leak with a bit of masking tape. That's all you need. You don't need duct tape.

I leave the escape screens there for two nights, by which time the supers

are pretty well empty of bees. It doesn't hurt to leave them longer, really, but I like to get them off and back to the honey house before anything can go wrong, especially since I produce only comb honey. I don't like to have beautiful comb honey sitting on the hives unprotected from ants, moisture or whatever.

Some of the supers may still have a few bees in them. I have never understood why some do and some do not. Anyway, I stack them on my little truck, in such a way that any bees can fly out, and by the time I get home there will not be more than ten or twenty bees in a dozen or so supers. There, the supers are stacked in my honey house, near a screen door, and the few bees still remaining soon gather on the screen door and are easily liberated.

In time the escape screens get pretty well covered with burr comb, but that doesn't matter, since they never get completely covered. So long as there is any significant area of open screen, through which the bees can communicate, then they work very well. The little springs in the two-way escapes become gummed up with wax or propolis, too. They are easily cleared with a piece of wire or, better, a big safety pin bent out straight. I've got some I've been using for over thirty years, and they still work perfectly.

The bees won't leave a super if there is any brood in it, even if it is just a tiny patch of drone brood. But you can easily ascertain the presence of brood when you tilt the super up to put the screen under it. If there is brood, it will be near the bottom and clearly visible. Brood in supers is never a problem with comb honey anyway, or at least, I never find it.

When you bring the supers home you should assume the presence of wax moth eggs. This is not too serious in the case of extracted honey, but even a small infestation can render a lot of comb honey totally worthless unless dealt with. The moth that is attracted to comb honey is the so-called lesser wax moth, of which I suspect there is more than one species. It is about the size of the common clothes moth.

With this in mind, I try to get the comb honey out of the supers within a day or two, and all neatly stacked up on the big table in my honey house. The round sections are removed from the supers, four sections at a time, still connected by foundation, and placed neatly, row after row, on sheets of plywood. Ten supers will result in an impressive stack of comb honey, about sixty sections to each layer, and four or five layers high. Each such layer must be supported, by blocks of wood at the sides, so that no weight of the upper layers can bear down, even slightly, on those below; otherwise, you will get a lot of drizzling, ruined comb honey.

The comb honey can remain stacked there for a week, provided no ants or mice can get to it. Meanwhile, as I find the time, I pack them. This consists of scraping the excess foundation from the round sections, and putting on the covers. There is no propolis to scrape from round sections. If I suspect pollen in the cells I can easily check for it by holding the doubtful sections to the light. It is very seldom that I get any plug of pollen in them.

Next the sections go into my deep freezer for a couple of days. I bag them, 12 to a bag, in the plastic bags the super markets now use for groceries. So they cost nothing. I make sure there are no holes in them, then fasten the openings with twistems, as they are called – little flat strips of paper with a wire in them.

My tiny freezer holds only twelve such bags, but that's enough, since the honey remains in it only a couple of days. This is long enough to get the temperature down close to 0°F, which will kill any wax moth eggs or larvae, and the larvae are at that point too small even to be visible. So if you deal with the comb honey this way, you will never see any trace at all of any wax worm damage. It is the perfect solution to the problem.

The reason for bagging the sections is, or course, to prevent condensation of water on them when they are brought from the freezer. Any moisture condenses, instead, on the bag.

It is all a pleasant and orderly procedure, and requires only the very minimum of equipment. There is nothing resembling a machine in my honey house – only a pocket knife, a large table, the little freezer, and the plywood sheets and blocks I use for stacking the honey up. I go out there more or less when I feel like it, and while packing comb honey takes time, it is to some extent time of my own choosing, and I can listen to some pretty good public radio programs while I'm out there. □

[Questions and comments are welcomed. Please use Interlaken address, not Medina, and enclose a stamped envelope for a response.]

QUESTIONS? ANSWERS!

Richard Taylor

The Tower

Q. When I harvest my honey I have to lift each super off, place the inner cover with bee escape on the hive, then lift the super back onto the hive, etc. This involves a lot of lifting. Could I not just put a bottom board in the middle of the apiary, put an inner cover with bee escape on this, then pile all the supers on this, making sure there are no cracks above the bee escape for bees to get back in?

Jim Gearhart
Nevada, OH

A. No. You would find the supers full of ants when you went back to get the honey, probably earwigs and other vermin too. But there is no need to do all that lifting. See BEE TALK, this issue, for a better way.

Not Quite Done

Q. When not all of the round sections in a super are properly filled, how do you deal with the unfinished ones?

Maurice J. Walsh
Limerick, Ireland

A. Those that are nearly finished can be kept for home consumption. Those that are barely started can be replaced in a super for the bees to finish. It is important that the least filled ones go to the center of the super and those farther along to the outside.

Drone Trap

Q. In April I had two hives bodies with a medium super on top. Later I found brood in the super so I put a queen excluder under it. After that I found all the bees in the super above the excluder dead, and many of them stuck in the excluder half way through the openings. What happened?

Doug Shafer
Alton, MO

A. When you added that excluder you trapped all the drones in the super above it, and they perished trying to squeeze through it. It is absolutely essential, when adding an excluder under any super with bees in it, to leave some kind of hole or crack for the drones to escape.

Late Start

Q. There was a lot of late-summer swarming in my apiary in 1990. Was this due to tracheal mites?

Paul Niemeyer
Malden-on-Hudson, NY

A. No. It was due, apparently, to the weakness of the early honey flows followed by strong late flows. Tracheal mites do not seriously affect a colony once it has rebuilt its population in early summer, until cold weather returns and the bees are again confined for long periods to the hive.

Ease of Use

Q. What is the best and most efficient pollen trap made?

J. T. Wickey
Mansfield, OH

A. What you want in a pollen trap, I think, is ease of use rather than efficiency. That is, you want one that requires no dismantling of the hive in order to harvest the pollen. You do not want a trap that removes *all*, or nearly all, the pollen from the bees as they enter the hive, for the colony needs pollen to sustain its population.

Propolis Harvest

Q. How does one harvest and prepare propolis in sufficient quantity to market it?

Clifford Jackson
Trenton, SC

A. Propolis is a by-product of honey production. It accumulates in the honey house whenever an effort is made to keep it separate from beeswax, as it always should be, since it is a pollutant in beeswax. Even small quantities, of ten or twenty pounds, are marketable, and quite valuable. The main precautions in gathering it are to keep it free from paint scrapings, dirt, bits of wire, tacks, etc.

Editor's Note: Some beekeepers have made devices specifically designed to 'catch' propolis. Some replace sides of supers with boards with several lengthwise saw cuts in them which the bees fill with propolis. others use screen on the inside top. These devices are then 'cleaned' and the nearly pure propolis harvested.

Mean Doesn't Mean Good

Q. I have had aggressive colonies that were poor honey producers, but it nevertheless still seems to me that the best producers are also the most aggressive. Is there any connection?

Doug Allison
Lawrenceville, GA

A. Like you, I have had testy colonies that were not good honey producers, but it also seems to me that the best producers are more often than not the cross colonies. Scientifically conducted tests have yielded no clear correlation, however.

(Questions are welcomed. Address: Dr. Richard Taylor, Box 352, Interlaken, NY 14847, enclosing stamped envelope for response.)

GLEANINGS GLOBE

AUGUST, 1991 ALL THE NEWS THAT FITS

Watch This Development

LABEL LAWS CHANGING

Recent crackdowns on food labels by the Food and Drug Administration are just a taste of what consumers can expect with upcoming changes in food labeling regulation, says a nutritionist at Ohio State University.

Lydia Medeiros, state nutrition specialist with the university's Ohio Cooperative Extension Service, says large-scale changes in food labels will take place under the Nutrition labeling and Education Act of 1990. The act covers any food governed under the FDA – that is, just about everything except meat and poultry and products containing them. This includes honey. Final regulations will be published by November 1992, and manufacturers will begin complying with them by May 1993.

"That's a relatively short time frame when you're talking about government action," Medeiros says. The regulations include:

• **Health claims made on food labels.** Any health claims will need substantial backing – they can't be based on one or two studies. The FDA will also define terms such as "light", "reduced", and "low-fat." To be able to use those terms, manufacturers will have to be sure their product meets the FDA standard.

• **Nutrition information.** All FDA-governed foods will include nutrition information on the label, including total calories and calories from fat. Also included in grams will be the amount of total fat, saturated fat, cholesterol, sodium, total carbohydrates, complex carbohydrates, sweeteners, fiber, total protein, and certain vitamins and minerals. Now, the only food labels required to carry nutrition information are those that make nutritional claims, such as diet foods, or those on foods fortified with additional nutrients, such as many cereals.

• **Serving sizes.** All labels will include serving size and number of servings per container. In addition, the FDA will determine standard serving sizes for 159 foods, in accordance with nutrition guidelines. For example, the standard serving size for bagels could be a half bagel instead of a whole one, since that's what some diet plans use as a serving size.

"The whole idea is to make labels more practical for consumers," Medeiros says. In a Gallup Poll conducted in December 1989 for the International Food Information Council, only two percent of Americans said they used food labels and packages as a source of nutrition information – magazines and newspapers were most frequently cited. When the new regulations take effect, food labels could be seen as a more reliable source of nutrition information than they have been, Medeiros says.

The new regulations won't cover items, such as spices, that don't contribute much to the average diet. They also won't apply to foods governed by the U.S. Department of Agriculture – meat, poultry, and foods that are more than two or three percent meat or poultry. That might get confusing for consumers, Medeiros says.

"That means that a cheese pizza is covered by the FDA, but a pepperoni pizza is under the USDA," Medeiros says. "Plain spaghetti sauce is an FDA concern, but spaghetti sauce with more than two or three percent meat is under the USDA."

The USDA is reviewing its guidelines and has said it will try to match the FDA's regulations as closely as possible. Problems might come about in terms like "low-fat" or "low-cholesterol," Medeiros says. Meats naturally have more fat and cholesterol than many other foods. Even meats lower in fat and cholesterol than other meats might not meet FDA standards for those terms, so the USDA might develop its own standards for such claims on meat and poultry items.

APIMONDIA STILL A GO, POLITICAL UNREST ASIDE

In light of the continuing political unrest in Yugoslavia, we have received several requests seeking confirmation on the seat of Split for the 33rd Apimondia Congress.

The issue has been looked into during the Apimondia Executive Council meeting held in Zagreb on 9th May 1991 together with the Yugoslav Organising Committee, and the Executive Council resolved that the Congress take place regularly in accordance with the programme announced.

Furthermore, the Executive Council reckoned that the participation of those (researchers, beekeepers and apicultural operators) who are interested in the topics addressed by the working sessions of the Congress should be further urged.

It should also be mentioned that over 300 reports have been submitted and more than 50 firms have booked stands at the ApiExpo '91; therefore, a large attendance to this important event by the whole beekeepers' world should be ensured.

In this respect, we are therefore extending a warm invitation to all Apimondia member Associations so that they may effectively promote the Congress and ensure the success we all expect.

SEND YOUR NEWS TO THE GLOBE

Mead Makes Advances

ULTRAFILTRATION MAKES MEAD BETTER

Using new techniques to produce honey wine, or mead, Cornell University food scientists believe they have overcome technical problems that have compromised the drink's production and flavor for thousands of years. Their method could save a whole year of aging time in the production cycle of the wine and may lead to a much larger market for honey-based wine, they say.

The Cornell methods involve either flash-heating honey for 30 seconds to denature proteins in the honey or using ultrafine filters to separate them out. Otherwise, the proteins in honey cause unappealing haziness in mead. Both of the Cornell methods produce high-quality, clear colored mead without the characteristic off-flavors normally associated with the drink, the scientists said.

C.Y. Lee and Robert Kime enjoy the product of their research.

To produce mead using conventional methods, honey is boiled for up to an hour before fermentation to break down the haze-producing proteins. An adverse effect of the prolonged boiling, however, has always been a harsh, bitter, hay- or rubber-like flavor. To mask such off-flavors, mead is traditionally over-sweetened and aged until the harshness fades; that usually takes eight months to two years.

"We believe this technique may open up the way for mead to become a more popular wine with consumers," said C.Y. Lee, a professor of food science and technology at the New York State Agricultural Experiment Station in Geneva, NY. "Mead represents an all-natural product, made without any additives or sulfites as are traditional grape wines."

To produce mead from flash-heated honey, Lee's colleague, Robert Kime, heated a honey solution for 30 seconds at 215°F and then instantly cooled it to 45°F using a "tube and shell" heat exchanger.

Lee, Kime and sensory expert Mark McLellan, an associate professor of food science and technology, discovered that they could produce an even better-tasting mead without any heating by using a process called ultrafiltration (UF) – separating out the protein by using a superfine filter that can separate large molecule-sized particles.

"We found that the filtered honey solution produced a smooth, clean mead without any undesirable aftertaste," says Lee. "In fact, all 15 taste panel members consistently rated UF mead the highest."

Kime, a research support specialist as well as this year's New York State Beekeeper of the Year, manages 150 hives himself which produce about 20,000 pounds of honey a year. He adds: "The mead we produced was such a superior product that two companies have already purchased $12,000 UF units to make it and already, they can't keep up with the demand." Those companies are Odin's Mead in Greenwich, NY, and Dancing Bear Meadery in Ostrander, OH.

NEWEST COUNTRY IN EUROPE (POLITICS PERMITTING) ALREADY HAS BEE STAMP

Slovenia has already issued its first stamps celebrating its independence from Yugoslavia. The republic has said that it will have full sovereignty by late June.

Linn's Stamp News (an apiphilateley magazine received a photocopy of a sheet of 52 stamps and two labels inscribed "Republika Slovenija" (Slovenia Republic) from Alexander D. Kroo, secretary general of the International Association of Stamp Catalog Publishers.

In a letter to Kroo, Schwaneberger Verlag, publisher of the Michel stamp catalogs, said that the Slovenian items were charity labels. The publisher added, though, that immediately following Slovenia's declaration of independence, these stamps will be the first official issues of Slovenia.

The stamps are denominated in vinarjev and lipi, probably the new currency for the republic.

The denominations and designs are a cot of arms, 10v; a bee and hive, 20v; another coat of arms, 50v; a column capital, 75v; a leaf, 80v; another coat of arms, 1 lipa; the Carinthian dukes' coronation chair (also shown on a 1976 Austrian stamp, Scott 1033), 2 lipi; and a map, 5 lipi. The labels also depict a map.

Slovenia issued its own stamps in 1919 and 1920 before stamps were issued for the kingdom that later was to become Yugoslavia.

MORE EXPORTS

The U.S. could do much more to expand agricultural exports than just negotiate a new GATT agreement. Clearly this country should support GATT (General Agreement on Tariffs and Trade). But, the United States needs to concentrate on developing competitive export strategies. All this according to Richard Gilmore, President of GIC Agricultural Group, an agricultural consulting firm specializing in research, investment ventures, trade and marketing. Then, regardless of the GATT negotiation outcome, the U.S. will be better equipped to increase its world market share.

Gilmore lists these key strategies for boosting our agricultural exports: sell more high value products; focus on high growth markets; and sign more free trade agreements.

The U.S. government already has made significant progress toward a long-term competitive position for agriculture with the 1991 Farm Bill. Its flexibility promotes efficient, market-based production while moving away from the outdated price support structure of the past. Now there is need to find new markets.

"The high growth markets for U.S. agriculture are the developing, newly industrialized and former centrally planned economy countries, not the traditional GATT members," Gilmore explains. Most Eastern European countries already enjoy "most favored nation" status with the U.S. thus have virtually the same access to our markets as do the members of GATT.

Through free trade agreements, the U.S. may create a more liberal trade environment. Gilmore speculates that the U.S. –Israel agreement of 1985 may have served as a catalyst for our successful agreement with Canada, and if a trade agreement is signed with Mexico, other "outs" may want to join the "ins." He believes that "in sheer numbers, these bilateral agreements may do more for U.S. agriculture than we could ever expect from any changes in GATT."

Although Mexico is now a member of GATT, a bilateral agreement with that country would eliminate virtually all trade barriers and ultimately, benefit other developing countries seeking greater access to the U.S. market.

The U.S. should not wait for a new Gatt agreement, Gilmore concludes. Whatever the turn of events in the diplomatic arena, there is much our government and private business can do now to improve farm exports.

CALENDAR

☆ ARIZONA ☆

The American Bee Research Conference will be October 7 & 8, 1991. The research conference will be held in the Meats Lab auditorium at the Campus Agricultural Center of the University of Arizona. Everybody is welcome to attend, and scientists from all countries are invited to present papers.

Since many people like to travel on Saturday to take advantage of low air fares, there will be a social mixer on Saturday night (Oct. 5) and other activities scheduled for Sunday. We plan to have field trips to points of interest on Sunday morning, the American Association of Professional Apiculturists will meet Sunday afternoon, and the business meeting for the American Bee Research Conference will be Sunday night. The Saturday mixer and the meetings on Sunday will be at the Lexington Hotel Suites.

The research conference will begin Monday morning and end about 2:00 p.m. on Tuesday. The group will share a buffet or dinner on Monday night.

For more information contact John Harbo (504) 766-6064, on registration, presentations or lodging.

☆ FLORIDA ☆

1991 Florida Beekeepers' Institute 4-H Camp Ocala will be held August 23-25, 1991. It is sponsored by Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida.

August 23, starting at noon – Check in at Camp Ocala; Open Hive Demonstration, oriented toward the Beginner; Beekeeping fair, an informal exchange of ideas on various topics. Bring your gadgets and ideas!

August 24 – Introduction and Remarks by Dr. Tom Sanford, Extension Apiculturist; open-hive demonstrations, including – open-

BOTTOM ... Page 460

We talked further and it became obvious that Dave was a classic *bee haver*. Apparently in his two seasons of hive ownership he had actually opened his hives only three times, and then but briefly. He had never pulled frames from the hive bodies and had no idea what eggs or larvae looked like. He wasn't even sure if all the frames in the two hive bodies were fully drawn. I suggested that since it was a nice day we could go out right then to one of my hives and look at a few of the things he had never seen, eggs, larvae, drones, the queen, and so on. He could get an idea of how his hive should look right then. He agreed, though not enthusiastically, and we went to the bee yard. Though I had given him a veil to wear, he would not come any closer than ten feet from the hives, and when I walked towards him with a frame he backed away. I finally realized that he was afraid of the bees.

I closed up the hive and we moved away from the bee yard. After a few more minutes of conversation, Dave left, and has never returned. My guess is that with no honey to speak of in the hives, the colonies didn't make it through the ensuing winter, and Dave is still not really sure why. □

Display Index

A Classic Bee Haver

Richard E. Bonney

Dave first called me one morning in the early spring. He told me that he and his son Donnie, age 12, were eager to get started with bees. Could they come over and chat for a few minutes? Sure, come ahead, I'll be here all day. Dave arrived a little later, alone. We talked for a while, and it was obvious that he knew nothing about bees. He again assured me that he and his son were both very eager to get started. Where was his son, I asked. The answer wasn't clear. There was mention of sports, of music lessons, and of other commitments, but I finally deduced that Donnie was still in bed. He really thought bees were great, though.

We talked for a while and I tried to convey to Dave the importance of learning about the bees before actually trying to keep them. I told him of the various workshops and classes that were available in the area and encouraged him to attend one of them. But he was pretty busy and did not think he would have time for a class, but that there would be no problems. He was perfectly willing to read a book, and, since he was a quick learner, if I would just take five or ten minutes and tell him everything he needed to know, he would be all set. I gave a mental sigh and we then proceeded to talk about the available books. He picked one to buy, but my subsequent conversations with him suggest that he never read it.

Dave finally decided that he wanted two hives, and we set a time for him to come back the next Saturday to buy his equipment. I explained that the package bees would be coming later.

On that Saturday, Dave arrived. I noticed as he drove in that a boy, presumably Donnie, was in the car, but Dave appeared at the barn alone. As we got his equipment together, Dave kept telling me how eager he and his son were to get started and what a great experience it was going to be for the boy. I mentioned that I had expected to see Donnie that day. Before Dave was able to respond, the boy appeared from the car and asked what was taking so long. Dave introduced him and said "Hey, Donnie, isn't this great? We'll take all this home, put it together, paint it, and in a couple of weeks we'll come back for some bees." Donnie's response was to turn and trudge back to the car, looking totally disinterested. Dave didn't seem the slightest bit fazed. We got everything together, loaded the car, and they were on their way.

Two weeks later, the big day – package bees were in. Dave arrived in the middle of the morning, one of several who arrived more or less simultaneously. Considering his previous disinterest, I was a little surprised to see Donnie come to the barn but decided it was because of the number of people around and the feeling of excitement and expectation that was in the air.

Their turn came. I picked up a package of bees and offered it to Donnie. His reaction was one of complete revulsion. He turned and headed for the car, empty handed. Dave took their packages and left. Though Dave came by for equipment several times during that summer and the next, I never again saw or heard anything of Donnie.

As the second season moved along, Dave came by a couple of times for additional equipment. He wanted one of everything, even though he seemed to have little understanding of the equipment he was buying. If it was in the catalog, then he must need it. Each time that he came he told me how well his bees were doing. They were really packing away that honey. This in itself was interesting because that particular season was not a great one. Most beekeepers were reporting sparse crops. September came and I had a call. Dave wanted to reserve the rental extractor for the coming weekend. With his usual exuberance he told me how great everything was going and how much honey he would be taking off. On Saturday he showed for the extractor. In addition to the extractor, he bought several cases of jars plus some additional equipment for extracting and handling honey.

The next day, Dave arrived back with the extractor. Hesitantly, he asked if he could return the jars and some of the equipment he bought the day before. I started asking questions ... and the story unfolded.

Dave had two hives. Each had three honey supers in place which Dave had assumed were chock full of honey. This assumption was apparently based on hope and optimism, since Dave had not had either hive open all summer, except to put on the supers in the early season. In fact, each hive had a little honey in one super but the rest was mostly undrawn foundation. As he described it, the bees seemed to be living largely in the second hive body. The bottom hive body was empty.

Continued on Page 458

BOTTOM·BOARD