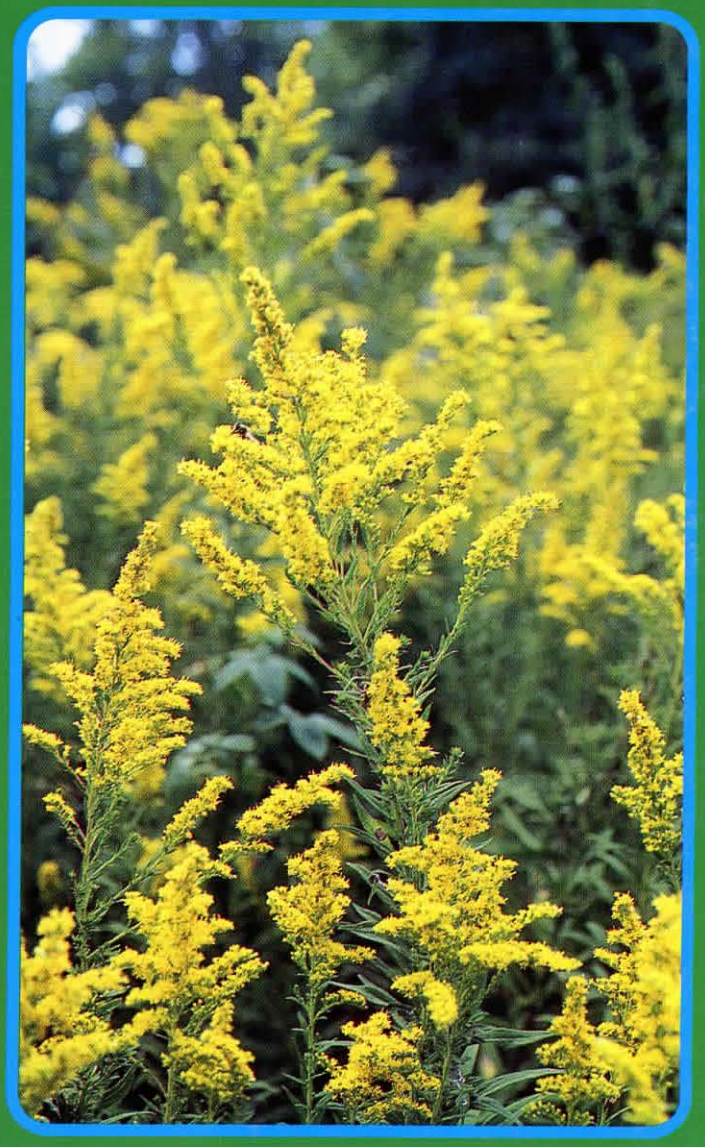
OCT '91

GLEANINGS IN BEE CULTURE

INSIDE . . .



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Columns

Departments

Cover – Autumn brings the goldenrod, with mature, bronze-like plumes and rich, full-bodied flavor. The sight and smell carry across the fields and meadows on fall's first chill wind. Riding high on stately stems, this golden flag signals the beginning of the end. It is the last true treasure of the year.

Photo by Kim Flottum

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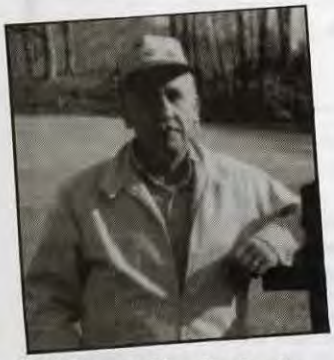

Dick Bonney, New England's First Honey Bee Extension Agent Pg. 556

Features

INNER·COVER

There is (at least) one tried and true way to increase honey sales, and that's to give people an easy and trouble free way to use honey. Simply put, give easy-to-use recipes that have honey as the sweetener and people will use honey. Give a way to make good food, and at least some people will make good food.

If you don't think this is true explain the dramatic increase in television cooking shows (admitedly all on P.B.S.), and the popularity of magazines that feature foods and cooking and recipes.

With this in mind, we decided, several months ago, to publish a cook book with recipes that only used honey as a sweetener. Not, we admit, an original idea. Many have been published over the years, most good, some not (that's a less than perfectly objective opinion, I agree).

But we, actually I, wanted more. I'm not the world's greatest cook. In fact, I may be the world's worst cook. So I wanted to publish a book that could be used by less-than-T.V.-perfect cooks *and* had some practical information on honey. Like what lots of varieties of honey taste like (the difference between clover and star thistle is night and day), and how to use them.

We looked at lots and lots of honey cookbooks and folders, and nobody, but nobody, put together all the information we gathered.

And then we talked to a whole bunch of people who actually, routinely, use cookbooks, and found out what works and what doesn't when using a cook-book when cooking.

So we made it fold flat, (a spiral type configuration), but we made it so you can actually read the **binding** while it sits on the shelf. But there's more. The cover is water resistant (yes, you can wash it off when sticky), the inside paper is recycled and there are color pictures of recipes, honey and more inside. There's exactly 100 pages, information on how to cook with honey, how to pick exactly the right variety, and the right color, even a little history about the A.I. Root Company - The Home Of The Honey Bee.

If you're interested in buying one of these books, there will be lots of information in the November issue, but most beekeeper's already know how to use honey (right?).

We're interested in selling this book to people who don't know diddly-squat about honey, but want to – that's the perfect market for this simple, but effective cookbook.

Yes, this has been a purely commercial announcement. But the folks who read this magazine aren't the only audience we want to reach.

What we want to do is give the rest of the world a good and tasty reason to find a beekeeper (or go to a grocery store) and buy a jar of your honey. However, if you have a friend or neighbor who would be interested, I'd be happy to send one right out.

•

There's a meeting in Missouri this month. Nothing new, I guess. I think beekeepers have more meetings than anyone I know. This one's big, though. Lots and lots of power sitting around the table. People who want to draw up a National certification ruling. (Read more details on page 568). The goal, as I understand it, is to certify beekeepers, not bees. Something you've read about on these pages before.

They promised to send me a copy of what comes from the meeting, and I'll tell you all about it as soon as I can. Meanwhile, the old saying holds true..... "Somewhere, somebody is holding a meeting right now that will affect you for the rest of your life, and you couldn't make it" Stay tuned.

Continued on Page 564

A Purely Commercial Announcement

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!

1091

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NEXT MONTH

The November issue of *Bee Culture* will make history, and you absolutely *must* see it to believe it.

Our Weekender Jeff Ott, has spent months collecting every bit of available information on every available honey extractor on the market.

Whether you have five colonies, or 50, or 500, this report gives more information on honey extractors than you thought existed – Dadant, Maxant, Cowen, Cook & Beals, Kelley – every maker and every model – strong points, weak points – read and decide for yourself. Side by side, each model is compared – and you can make the best decision for your budget and operation.

Read History. Read a Beekeeping First right here – Nobody's done it before because nobody could – *Every Extractor* – next month!

The Weekender doesn't stop there, though. In December he tackles Uncapping Machines with the same enthusiasm, tenacity and thoroughness. And in January – Woodenware – the biggest, and toughest assignment of all.

Be sure you don't miss these 'First Ever' reports on beekeeping equipment. Nobody, but nobody has ever, or will ever, undertake a series like this. If you have even a passing interest in beekeeping equipment, you won't want to miss these three exciting, informative and 'First Ever' reports.

But of course there's more. Our Honey Plant expert has put together an entire year's garden of honey plants for a spring to fall profusion of bloom, color, and honey bee helpers next month. *Plan Ahead* has everything you need for a beautiful yard, and a honey bee heaven next year.

And, don't miss the return of Ann Harman and her regular cooking column – *Home Harmony.*

And there's more, so much more there's not enough room here to tell it all – so don't miss the November issue and explore *Every Extractor Planning Ahead* and *Home Harmony* – right here, next month! □

MAILBOX

■ Bad Backs . . .

Quoting from one of your recent articles. "There are two kinds of beekeepers – the kind that have bad backs and the kind that *will* have bad backs."

Paraphrasing that – there are two kinds of beekeepers – the kind that produce a lot of honey and have bad backs, and the other kind.

Roger Wernicke
Pensacola, FL

■ More on Inspectors

This letter is in reply to Richard Taylor's article in the July issue of your magazine.

There are several comments that I would like to make about this letter.

He indicates that New York's Department of Agriculture has put a bill in the legislature to impose a registration fee on the unknowing industry. I wonder if he researched his facts about the department not consulting with industry, before he published in a national journal. If not, I think he should have. Second, he says that he has "no reason to doubt that the measure will be routinely enacted into law" There is no routine enactment of law unless the industry prefers not to be involved in the legislative process. The last time I checked ours is still a representative form of government. Most states conduct public hearings before passing bills with monetary impact.

I agree with him that American Foulbrood (AFB) is not the threat it once was. However, we speak in generalities. There are some parts of the country where AFB is a significant problem, up to 15% of the inspected colonies. I also hear occasionally of commercial, migratory operations with high levels of AFB. This tells me that these operations, or their employees, do not use the "highly effective" Terramycin at all, or at least not at the right time. Could it be that these beekeepers do not know how to recognize AFB? I have found it so in a few cases.

Chalkbrood is, I think, more of a problem than appears from the letter. It is common, here in Washington, to find two to five percent of our migratory colonies with one half of a comb to two combs of chalkbrood in the late summer and fall. The beekeepers report that this sometimes has been observed all summer. These colonies are experiencing a severe problem, if you convert brood loss to dollars.

There is still a lot to be learned about feral colonies. I talked with an 80 year old beekeeper here a few years ago, who said he took down hundreds of bee trees over the years. He told me that he did not find disease in those trees. A shocking remark. I have known persons to take down bee tress and remove bees from walls, and not find any disease, in an area where managed hives had 15% AFB. So I'm not sure that it has been proven that feral nests pose a far greater threat than manufactured hives.

In my opinion, it is not the task of inspection programs to eradicate AFB or any other disease of honey bees. Our purpose is to be a neutral party to reduce the incidence of diseases, to promote the welfare of bee colonies and the industry, in support of local, regional and national agriculture. And I will add, to facilitate the interstate movement of colonies to insure availability for crop pollination.

Budgets are being strained these days. What a perfect opportunity for industry and regulatory officials to sit down and discuss such bizarre ideas as program effectiveness, cost effectiveness, cost impact on industry, short and long term planning, colony quality, research needs and the general economic climate.

Does the industry in the readers' state have an advisory committee which interacts with the department of agriculture? Why Not? Industry needs to become involved in the governmental process. If it doesn't, it will be left behind as state governments try to respond to the needs and concerns of other agriculture groups willing to be involved.

Have inspection programs outlived their usefulness? I think not. Do such programs need to change? I think so. But industry needs to participate in that change, not just stand around in their meetings and complain generically about unresponsive or irresponsible government. Without an interactive process, government can't read the minds of beekeepers, and beekeepers certainly won't know what government is thinking, or how they must respond to the many interest groups they do hear from.

James Bach
President
Apiary Inspectors
of America

•

Years ago and at my request our Texas State Bee Inspector went through my bees and found nothing noteworthy. Since then I have discussed aspects of beekeeping with him and other entomologists and read most of the books on problems of beekeeping.

However, much of what I have learned came from master beekeepers who helped me through my bee problems and in turn allowed me to help them replace bottom boards, and damaged boxes, balance brood and stores, medicate, feed, pull honey, extract, place mouse guards for winter. All re-

Continued on Next Page

MAILBOX

quire judgement tempered by the multitude of constantly changing circumstances.

Fortunately, I belong to the Williamson County Area Beekeepers Association, where there are many knowledgeable beekeepers who are very helpful to those with questions or problems.

I have no desire for an inspector to go through my bees. I maintain vegetable oil-sugar-terra patties on the broodnest from September through May. I boil used equipment for ease in repair and repainting. I do not believe that is is practical to attempt to maintain colonies free of foulbrood spores. I'll accept its presence and deal with it until fully resistant bees are developed. It's the same with mites, keep oil on the bees and replace losses with survivors. And, replace damaged, drone and black foundation.

Bob Sullivan
Austin, Texas

■ Room With A View

I have a honey bee hive set up next to my house with a one inch pipe going from the hive through a wall of my home and into my study. In the study I have a glass enclosed frame for observation. But I don't know how to get the queen into this enclosure to lay her eggs. I would appreciate any assistance that you might give.

Steven Mihelich
Paw Paw, MI

Editor's Note: This question is asked more often than one would imagine. The queen will not leave the brood nest to lay eggs in the single frame because it is isolated from the rest of the brood and away from the food stores. Further, it would be difficult, if not impossible for the workers to maintain broodnest temperatures in this small unit. And, there would then be two brood areas, separated by the pipe. If the queen stayed in one area for any length of time, the other area could possibly begin to raise another queen from any eggs present. Having said all this, some beekeepers have had success with this procedure, for reasons unknown, at least to me.

■ New Group

We are pleased to inform you that on November 25th, 1990, the Latin American Association of Beekeepers (A.L.A.D.A.) was created.

In the World Congresses of APIMONDIA held in Argentina (1973), Greece (1979) and Mexico (1981) some steps were taken to found the same, but due to different reasons, A.L.A.D.A. was not formed yet.

During the last World Congress of APIMONDIA which took place in Rio de Janeiro, Brazil, more than a hundred Beekeepers met with the purpose of carrying out their Latin American integration. The general objectives of A.L.A.D.A. were outlined; stating that it should group all the Latin American and Caribbean first grade institutions of Beekeepers.

After several meetings with delegates of different countries in Brazil and Argentina it culminates with the so called "Montevideo Instance" with the firm object to institutionalize A.L.A.D.A. During two days the statutes which were to govern its obligations were discussed and adjusted. Delegates from different countries attended such meeting, and guarantees of several others which for different reasons could not send delegates.

After approving the statutes, Uruguay is proposed and elected unanimously first country headquarters of A.L.A.D.A.

The first and fundamental task which this Directive Council wishes to perform is to transform A.L.A.D.A. in each country, in the institution to propel the integration of all the beekeepers, associations, cooperatives, public and private organizations related to beekeeping so as to turn it into a permanent forum of discussion of proposals for the global development of the beekeeping sector. If this is done on a national level, the results will serve as an example and will allow to project ourselves with sufficient credentials to establish he objectives of A.L.A.D.A. in the region.

We are at your disposal for any information or explanation on A.L.A.D.A.

Juan Carlos Queiruga
Daniel Baazurro
A.L.A.D.A.
Av. Uruguay 864 = C.P. 11.100
Montevideo Uruguay

■ EAS Resolution

At the recent EAS Annual Conference held in New Bern, North Carolina on July 24-26, 1991 the following resolutions were adopted.

WHEREAS, research, teaching and extension education apiculture is important to continued progress and development of beekeeping, and

WHEREAS, state regulatory activities in apiculture are critically important for assisting beekeepers in maintaining healthy and prosperous bee colonies, therefore

BE IT RESOLVED, that the membership of EAS endorses, a vigorous and continued support by the EAS Board of Director's to local, state and provincial beekeeping individuals and organizations in their effort to maintain financially healthy support for beekeeping teaching, research, and regulatory activities, and

BE IT FURTHER RESOLVED, that EAS respond in writing and/or personal appearance where appropriate at the request of any individual or organization for help in support of continued apiculture extension, teaching, research and regulatory functions in the states and provinces in the EAS territory.

Resolution #2:

WHEREAS, beekeepers have experienced heavy colony losses due to tracheal mites, and

WHEREAS, Africanized bee arrival in the U.S. represents a high possibility of negative effects on beekeepers and our industry, and

WHEREAS, beekeepers produce products such as honey and beeswax, enjoy the hobby of beekeeping and use their bees to pollinate a wide variety of plants that supply us with food and fiber, therefore

BE IT RESOLVED, that EAS encourage the immediate passage of federal legislation that will provide funding for research on honey bee mites and Africanized bees along with increased support for educational and regulatory activities in apiculture, therefore

BE IT FURTHER RESOLVED, that individuals and local and state beekeeping associations join EAS in encouraging the passage of legislation that can provide additional funding for apiculture at federal and state levels to help address these significant challenges faced by beekeepers.

Dewey M. Caron
EAS, Chairman of the Board

MAILBOX

■ Moving Bees, Easily

I've found a method to successfully move a beehive several hundred feet. Take a super with drawn combs and place it where the original hive stand was.

I had a hive sitting in my brother's orchard, and he wanted it moved. I moved it out of the orchard and placed a super with several drawn combs in it's place. The first day there was a cluster of bees back in the old stand, so early in the morning I took the cluster with the two or three frames of bees and carried them back to their new stand, shook them off and returned the frames with comb to the old stand.

The next day there were some bees back but not as many. So I carried them back to their new area. The next day there were some bees back but less everyday till about the fourth day.

After that they quit coming back to the old stand. Then I removed the super with several combs in it, and the bees knew where they belonged.

J.T. Wickey
Mansfield, MO

■ Propolis Preparation – in Detail!

In the August issue of *Bee Culture*, Clifford Jackson of Trention, SC, wanted information on preparing propolis.

I feel the answer given did not give enough detail. We clean and save the propolis from our honey boxes and frames only before storing away for the winter. We put down a piece of plastic on a flat table to catch the propolis and then pour this into an empty 3# coffee can. The propolis is washed with cold water, and the wax, wood chips, and dirt come to the top and are skimmed off. The part we want is heavier and stays on the bottom of the can. When you are sure your product is clean enough, the water is poured off and the propolis is placed on clean cloth to dry naturally using no heat. This can then be placed in the freezer until you are ready to finish processing. We find the best way to take propolis is in capsules so we wait until cold weather and crush it into small pieces and fill 00-000 capsules taking one or two per day.

Sunstream Bee Supplies, P.O. Box 225, Eighty Four, PA 15330, publishes a supply catalog which includes numerous books on health foods. They also have a pamphlet on "How to Process Propolis for Personal Use". You can buy the 00 capsules there also.

Kleber J. Minich
Natrona Heights, PA

■ Any Takers?

I have kept bees for a few years and I enjoy it very much. Your magazine has provided me with a lot of information and enjoyment. However I have two suggestions for articles.

I see lots of ads for different breeds of bees. I know opinions on the best breed will differ greatly but could you tell us what traits different bees are known for. Is there a very gentle bee? One which supposedly winter exceptionally well: Are some better for comb honey? When I order queens I either order Italian because I've heard of that breed or I order at random with no knowledge of what I am getting.

Second, how about an article on how to interest customers in comb honey? I have produced some this year. Richard Taylor said the market is there if you educate people about it. I honestly don't know any uses for comb honey other than eating it like candy.

Thank you for your magazine. I find it invaluable.

Wayne Kartchnen
Farmington, UT

■ Measured Nectar

I have been struck how few bees visited their watering pan, even on warm spring days. I wonder if a recent observation provides an explanation.

During what passes for hot weather here in Western Washington, my bees have been visiting their watering pan in large numbers. Then about the middle of August I began feeding them sugar syrup (in a top feeder) with which to build up winter stores. Even though the weather was just as hot, they suddenly nearly abandoned the watering pan. Presumably the hive was getting all the water it needed from the syrup.

I wonder if this phenomenon permits a beekeeper to get a rough measure of how much nectar is coming into the hive in the spring? If the bees are not getting much water from that being provided, might that mean that a substantial nectar flow is in progress?

Dan Hendricks
Mercer Island, WA

■ Bad Rap!

I recently purchased a gallon of "After the Fall" apple juice produced in Brattleboro, VT. It was O.K. as organic apple juice goes. The label on the jug has organic written all over it, along with statements like: "Not treated with daminozide, pesticide or chemical sprays". And then just to the left of this statement reads: "No honey No preservatives No artificial flavors"

Now of course the power of association and the power of advertizing coalesce here in an interesting way. First of all they could have said "no sweeteners" which would have been more accurate and less accusatory by singling out honey as a possible sweetener. But the fact that honey is lumped in with preservatives and artificial flavors seems to me a bit deliberate, the end result being more than a derogatory insult to a very natural and pure product like honey.

It seems that the National Honey Board should at the very least write a letter of inquiry and urge them to change this type of advertizing. I also think that honey producers should write letters of protest, again urging them to change their unfair advertizing. Why didn't they single out maple syrup or corn syrup or the many other

Continued on Next page

MAILBOX

sweeteners used in producing beverages?

Their address: After the Fall Products, Inc. Brattleboro, BT, 05301.

Vincent Kay
New Haven, CT

■ WY Beekeepers Support NHB

The Wyoming Beekeepers ASsociation held their annual summer meeting on August 4, 1991. By unanimous decision, the Wyoming Beekeepers Association want to state that they are in support of the National Honey Board Referendum. To this date no Wyoming Beekeeper has taken a refund.

The Wyoming Beekeepers Association want to continue the Honey Board Program and to end the refund provision of the Honey Board Program.

Donald K. Bryant
WY Beekeepers Association

■ Questions?

1. Does anyone know how to make beeswax crayons? Are there molds available, etc?
2. I would like to find a source of bleached beeswax?
3. How can I tell if beeswax is pure or not?

Gerhard Guth
P.O. Box 131
Auburn, NH 03032

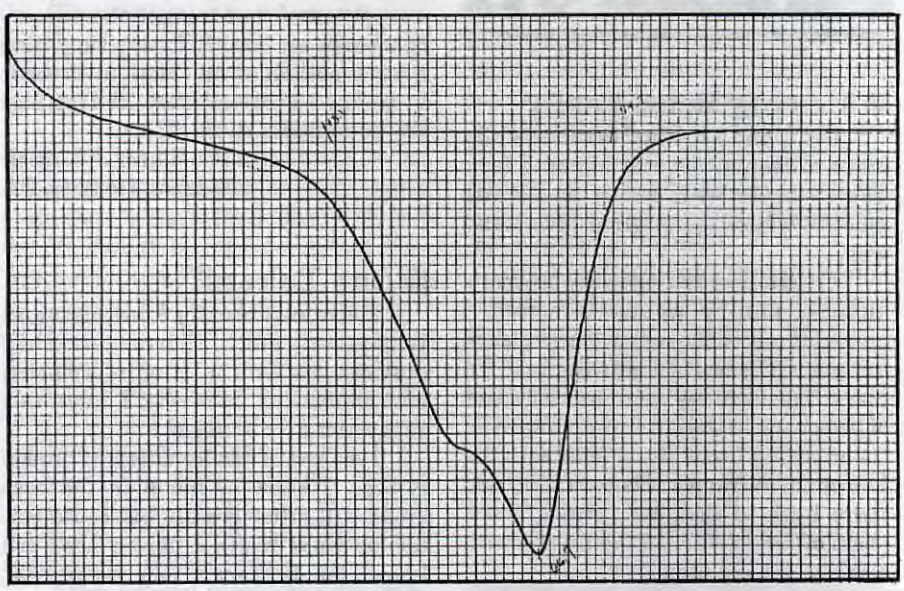
Editor's Note: I'd be interested in an answer to the crayon question, because it is often asked and I've never found a good answer.

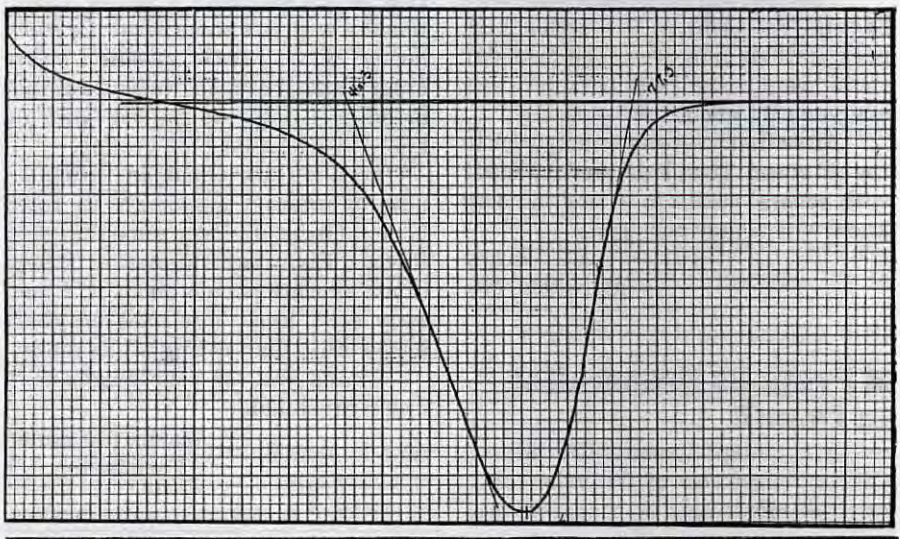
"Bleached" beeswax has been chemically treated, and may be less than satisfactory for candles. Several outlets exist for ultra-strained wax, however, that are as pure and white as you want. The A.I. Root Co. is only one.

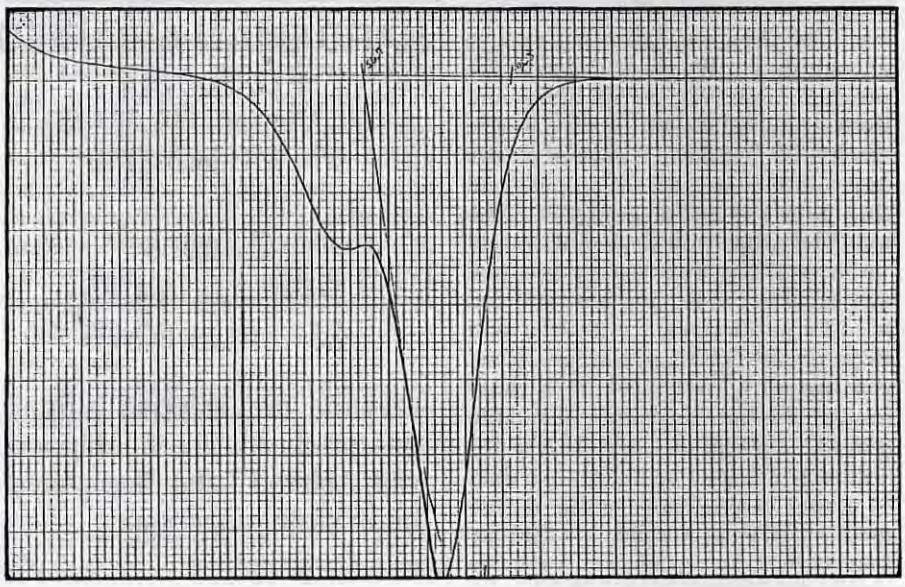
It is difficult to tell if a wax is pure beeswax (not mixed with other waxes), but one method exists that I know of.

A sample of wax is melted, and the heat required to melt it initially, and then keep it melted is measured. Below are three graphs that show this. The first is pure beeswax, with a value of 66.7. The second shows a blend of beeswax and paraffin, with a value of 65.5. The third shows pure paraffin, with a value of 67.0. These numbers aren't temperatures, but only indicators. However, they are accurate in showing pure vs. mixed wax.

These tests are expensive, however, and most beekeepers don't have access to the equipment required.





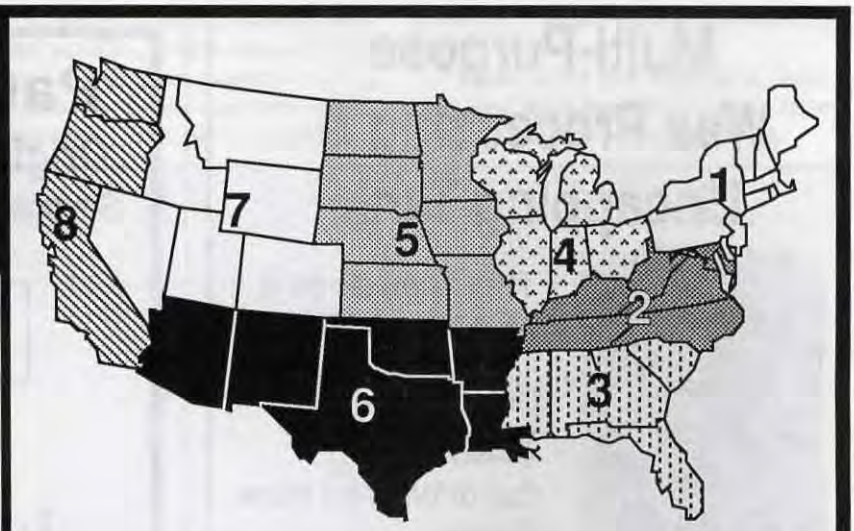


OCTOBER Honey Report

October 1, 1991

REPORT FEATURES

Prices shown are averages from many reporters living in a region. They reflect a region's general direction. The range lists highest and lowest prices received across all regions.



	Reporting Regions								Summary		History	
	1	2	3	4	5	6	7	8			Last	Last
Extracted honey sold bulk to Packers or Processors									Range	Avg.	Month	Yr.
Wholesale Extracted												
44.90	44.90	42.83	52.77	32.20	42.60	42.00	44.96	40.43	30.00-53.00	42.30	42.10	43.91
60 # Am.	42.46	39.04	45.55	31.80	36.73	41.00	40.15	37.30	28.80-57.50	39.75	40.14	39.75
55 gal. Wh.	.61	.58	.52	.56	.60	.58	.56	.55	.45-.65	.576	.537	.48
55 gal. Am.	.54	.53	.50	.53	.57	.48	.52	.48	.43-.74	.519	.497	.47
Case lots — Wholesale												
1/2 # 24's	19.79	20.11	27.75	17.31	15.64	21.75	15.66	22.97	15.60-26.40	20.16	18.78	-
1 # 24's	28.94	31.34	33.20	28.21	25.46	30.12	31.18	29.80	22.80-42.00	29.55	28.66	27.83
2 # 12's	26.41	29.39	32.14	25.85	23.81	28.75	27.50	27.39	21.00-41.88	27.19	26.00	25.98
12 oz. Bears 24's	26.68	28.10	29.16	24.42	22.00	25.19	28.40	22.70	13.50-38.40	26.48	25.94	-
5 # 6's	30.12	24.76	30.54	29.28	26.23	38.90	26.50	27.82	22.00-38.90	28.35	29.18	26.70
Retail Honey Prices												
1/2 #	1.17	1.20	1.15	1.01	.91	.97	1.10	1.13	.75-1.75	1.10	1.03	1.11
12 oz. Plas.	1.55	1.57	1.65	1.46	1.22	1.35	1.60	1.47	1.09-1.99	1.50	1.44	1.42
1 #	1.65	1.74	1.76	1.73	1.46	1.74	2.05	1.71	1.20-2.25	1.70	1.65	1.63
2 #	3.03	2.45	3.30	3.25	2.57	3.00	3.15	2.65	2.29-4.09	3.02	2.86	2.91
3 #	4.12	2.76	5.37	3.95	3.33	4.22	4.29	3.99	3.00-5.99	4.13	4.09	3.77
4 #	5.78	4.87	5.75	5.52	4.79	4.83	4.97	6.25	4.00-6.49	5.29	5.00	4.72
5 #	7.04	6.00	5.78	6.62	5.46	6.27	6.11	6.47	5.95-8.75	6.37	6.41	6.12
1 # Cr.	2.12	2.00	1.71	1.79	1.56	2.15	1.89	2.41	1.39-4.50	1.99	1.95	1.73
1 # Cb.	2.60	2.31	2.07	2.94	2.49	1.97	3.04	3.57	1.95-4.12	2.62	2.75	2.26
Round Plas.	2.37	2.10	2.49	2.13	2.14	2.22	4.14	2.50	1.89-4.00	2.37	2.29	2.09
Wax (Light)	1.52	1.19	1.25	1.44	1.11	1.15	1.15	1.16	1.00-1.95	1.29	1.27	1.26
Wax (Dark)	1.18	1.12	1.10	1.07	1.02	1.10	1.05	1.00	1.00-1.25	1.09	1.09	1.07
Poll./Col.	34.00	24.17	25.00	30.00	25.00	30.00	24.65	27.88	20.00-35.00	29.11	28.00	26.63

MARKET SHARE

FLASH! Late September rains may have saved the honey crop in parts of the country that needed it most. Perfectly timed for the goldenrod and aster flows, it also helped many legume crops that hadn't been previously cut and let go to bloom.

Too much rain, both early and late season in the southeast washed the season away, while the Dakota's remained spotty.

Latest word is the 10-15% drop predicted last month may only be a 5-10% drop this month.

So we're not perfect, yet.

Region 1

Sales continue to steadily, but slowly increase, as the population increases, replacing farm land. Prices steady, even with the recession, but not generally keeping up with C.O.L. Colony conditions generally good, even considering the drought, but fall crop depends on rain, which seems to be adequate.

Region 2

Sales beginning to increase, along with prices as weather cools. Specialty crops pretty much a bust, and regular crops spotty. "Average" crop is the best there is, generally.

Region 3

Sales steady, increasing and in some cases already sold out. Production all over the road – disaster or not at all in some places, terrific in others. Fall flows appear adequate, and exceptional in more northern areas.

Region 4

Sales doing well, expecting to increase, prices steady and following buyback. Drought the main motivator here, most of the region dry, dry, dry. Some areas had late rain to help fall flows, so overwintering stores might be adequate.

Region 5

Sales steady to improving just a bit as the weather cools. Prices steady, too, reflecting, for the most part buy-back rates at the large producer level. Production down due to rain and cool weather, and fall flows spotty.

Region 6

Sales appear steady, along with prices, but neither are exceptional. Production average way down this year. Weather, pesticides and fire ants all taking their toll. Africanized honey bee concerns just beginning to mount, and possibility of quarantines likely – making queen and package sales, and pollination difficult.

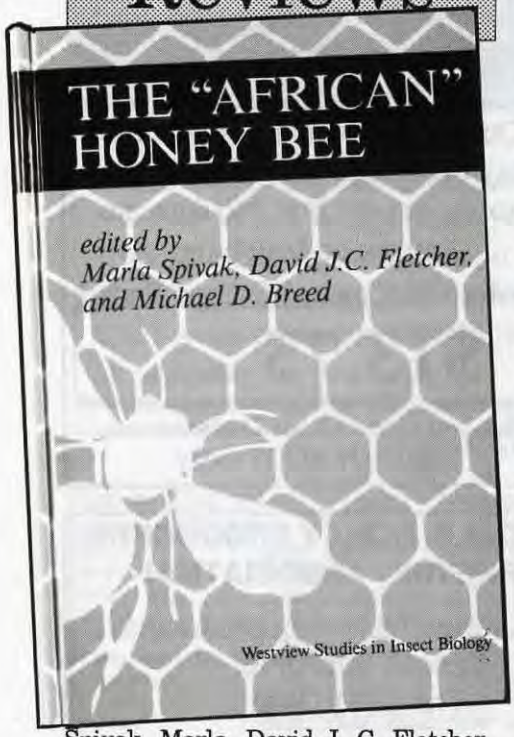
Region 7

The mountain states seem unaffected by most of the world. Good rains and weather have helped production and sales and prices, as always, doing well. Colonies in good condition with fall flows the best in years. Some areas still not up to average, with too little moisture (or too much) and mites still taking their bite.

Region 8

Prices steady for this time of year, may be rising a little to reflect buyback. Sales strong, both retail and wholesale. Industrial sales increasing too, and more anticipated. Northern areas have had an abundance of mixed weather – hot and dry in the east, cool and wet on the coast – all in all confusing. Southern areas improving since drought let up a bit this year. But more rain still needed.

Book Reviews



Spivak, Marla, David J. C. Fletcher, and Michael D. Freed. *The African Honey Bee.* 1991. Westview Studies in Insect Biology. Westview Press, Boulder, CO.

The African Honey Bee is the first book to comprehensively review the scientific literature on *Apis mellifera scutellata*, the African, or Africanized honey bee of the Americas. As virtually all beekeepers know, this bee population, characterized as having high rates of swarming and absconding, a rapid colony population increase plus a rapid and often prolonged expression of defensive behaviors, is also commonly called the killer bee by the popular press.

The book has 19 chapters written by Africanized bee experts, divided into five sections. Several authors contributed material to more than one chapter with Baton Rouge, USDA researchers Tom Rinderer (four chapters) and Rick Hellmich (three chapters) leading the way. Each of the three co-editors produced a chapter in addition to collaboration on an introduction chapter.

The book is heavy on text with few charts or diagrams and even fewer photographs. The cover is an unattractive green color but the book otherwise is well done. Random checking of text, references and index showed a high degree of accuracy.

Unfortuately, a few things are not in this review. There is no contribution from Orley Taylor (in the introduction, the co-editors state "a couple [of] important investigators were unwilling or unable to deliver promised chapters") and information on the bee in Central America/Mexico (except chapter 7 on costa Rica) is not included.

It is inevitabe in a multi-authored book that there are going to be contradictory statements. Such is the case with this text. There is no consensus among authors as to the best solution to the "Africanized bee problem." The co-editors cite the differences of opinion as a strength of the book in their introduction but it may confuse some readers who look for a single or simple answer to Africanized bees.

It is unfortunate that the book title is *The African Honey Bee.* Only one chapter (Chapter 4 by co-editor Fletcher) employs the term African bee. The population is referred to as Africanized honey bee (and the process as africanization) everywhere else in the book. The two chapters in the Systematics and Identification section have Howell Daly using Africanized (Chapter 2) but Glenn Hall (Chapter 3) names bees by continents of origin. Hall uses the term africanized bees to refer to bees of "European maternal lines hybridized to African males."

This book brings together a wide range of studies, including some research not previously reviewed in English. For researhcers and biologists that have heard little or much about Africanized bees, this book is a valuable reference source. It is a benchmark of what we do and don't know about the africanized ("African") bee. For beekeepers, it may be too costly since it will not help improve their bottom line.

However, it is an excellent review and provides and indepth look at the most unique phenomena called the Africanized bee.

– Dewey Caron

Nature's Golden Treasure Honey Cookbook. Joe Parkhill, Country Bazaar, Rt. 2, Box 287, Berryville, AR 72616. 198 pg. HC.

Although this book has been around awhile, recent interest in honey by the general public has increased demand for information on its use. This book does that. It has basic information on bees and beekeeping, some info on honey itself and a bit of honey history.

There are a few pages of skin treatment recipes and other folk remedies using honey. Mead and honey vinegar are also discussed.

Food recipes explore the entire gamut – from salads to beverages – in an easy-to-use format. Although most photos are black & white, there is some color used. All photos are tastefully done.

In the back are several pages of charts and information on nutrition, substitutions, conversion and equivalents. An excellent index is also included.

Binding is a hidden spiral hard cover which allows easy flat folding and page turning.

The only short coming, if you consider it that, is, that like most cookbooks using honey, little explanation is given on what honey to use for the recipe. A minor point, perhaps, but the more information the public has on honey, the more likely they are to purchase it.

Honey Cookbook is a gold mine of cooking information, and well worth the price.

– Tom Brotherton, Chef
& Kim Flottum

How To Keep Bees & Sell Honey 12th Edition. Revised by Doris Pharris, President, Walter T. Kelley Co., Clarkson, KY 140 pg. soft cover.

Doris Pharris, President of the Walter T. Kelley Co. has undertaken the monumental task of revising the popular book *How To Keep Bees and Sell Honey*, originally written by Walter T. Kelley.

One of the best known beginner's books for many years, it eventually became dated and needed additional information to be useful for today's beekeepers. This revision has added a great deal, including the new mites.

Much of the work has not been changed, however, because some things don't change. The style and format are similar to the original, as are many of the photos.

There is a unique and definitely regional approach to beekeeping in this book that provides a balance to other, more northern U.S. produced books.

New to this book is the 'How To Grow Queens section, updated by a local queen breeder and added to the book. This section is actually a revision to Kelley's 'Raising Queens' book long out of print, but the two together make a well-rounded text.

Definitely for beginners, *How To Keep Bees and Sell Honey* should be purchased both for its basic information, and the tradition and history of the Kelley company and this text.

Kim Flottum

Shimanuki, Hachiro, and David A. Knox. 1991. *Diagnosis of Honey Bee diseases.* USDA, Agriculture Handbook No. AH-690, 53p. soft.

Apiary inspectors and beekeepers must be able to recognize bee diseases and parasites and to differentiate the serious diseases from the less important ones. This handbook describes laboratory techniques used to diagnose diseases and other abnormalities of the honey bee and to identify parasites and pests. Emphasis is placed on the techniques used by the U.S. Department of Agriculture Bee Research Lab. Included are directions for submitting, through APHIS-PPQ or State regulators, samples of suspected Africanzied honey bees for identification of subspecies. Also included are directions for sending diseased brood and adult honey bees for diagnosis.

RESEARCH REVIEW

DR. ROGER A. MORSE

Cornell University • Ithaca, NY 14853

"DCA's, varroa mite control, and sugar"

It is suggested in the report cited below that "climatic conditions possibly play a much larger role in the formation of congregation areas than previously thought." The author observed a drone congregation area (honey bee mating area) in Perth, Western Australia where drone comets (a group of drones pursuing a queen) flew close to the ground. Two comets with an estimated 200 drones each were seen at head height. One comet flew after a butterfly about one meter off the ground. "Individual drones were also seen flying randomly at knee height within the drone congregation area" (It is not uncommon for drones to follow other insects or even small birds that fly into a drone congregation area. This has been reported by several people.)

The different physical features of the landscape in the vicinity of the area are described and apparently lead to this special report. A nearby hill apparently created an air turbulence that caused the queens and drones to fly closer to the ground than normal. Honey bees are not native to Australia but were brought to that continent from Europe. Under normal circumstances, the European queens and drones in Australia behave as they do in Europe and North America and fly at a height of from six to sixty meters.

The author of this paper has done much research with drone congregation areas in South Africa where he has also seen drone comets close to the ground. He states, "The height at which the drones flew in Australia is more similar to that of *A. m. scutellata* in South Africa than with their European counterpart" *A. m. scutellata* is one of the African races.

I would be interested in hearing from beekeepers who might know about drone congregation areas where drone honey bees consistently fly close to the ground. Such an area would be useful for research purposes. I am not aware that anyone has reported such an area in North America.

•

Over 200 researchers from around the world, but primarily Europe, gathered in Belgium about a year ago to discuss honey bee diseases. The proceedings for that meeting have just been published. They cover a wide range of problems. Varroa mites were foremost in the minds of most of those who attended but several papers also discussed tracheal mites, nosema, viruses, wax moths, and other pests, predators and diseases.

During the past few years good methods of controlling varroa mites in the short range have been developed. At this meeting I was pleased to hear much more about the basic biology of varroa and other diseases than had been evident at similar meetings a few years ago. Researchers are now reporting information that might lead to natural methods of control that would reduce our dependence on chemicals and the high cost of routine treatments. Some progress in finding honey bees that are naturally resistant to some of the diseases that plague the industry was reported. Progress in the right direction is being made.

There is no indication on the copy I have before me as to the cost or where copies of these proceedings may be obtained. I presume inquires should be directed to Professor O. Van Laere, State Research Station for Nematology and Entomology, Merelbeke, Belgium.

•

U. S. Department of Agriculture figures indicate that the per capita consumption of sugar in this country is still increasing. The total amount of sugar eaten has risen from 118 pounds per person per year in 1975 to 137 pounds today. I have talked to several people about this but no one has a good explanation as to why consumption continues to increase. It has been suggested that people are more fat conscious than they are concerned about sugar.

Honey consumption remains about the same, roughly one pound per person per year. This too, is not clear to me. It seems we get a great deal of favorable publicity, especially through the use of honey in prepared foods such as cereals. Perhaps we are not delivering the right flavor?

References:

Tribe, G. D. *A drone congregation area in Perth, Western Australia.* South African Bee Journal 61: 83-86. 1989.

Ritter, W., O. Van Laere, F. Jacobs and L. De Wael, Editors. *Proceedings of the International Symposium on Recent Research on Bee Pathology* September 5-7, 1990. R.U.G. State University, Ghent, Belgium. 224 pages. 1990.

Economic Research Service. USDA. 96 pages. June 1991. Sugar and sweetener, situation and outlook yearbook.

INSPECTOR
In The Land of Enchantment

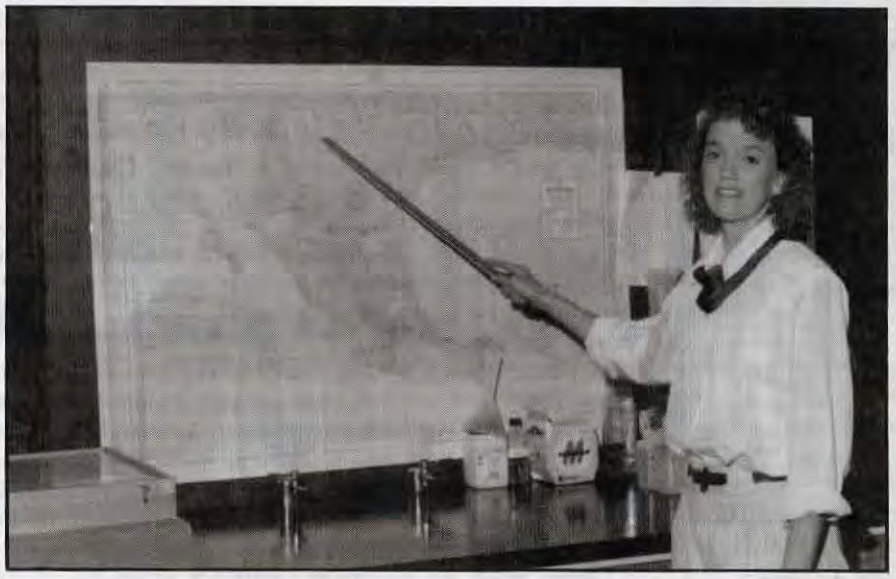
New Mexico's State Inspector works with both commercial and hobby beekeepers equally well.

LYNN TILTON

New Mexico nematologist Marjorie Lewis is the first to admit that her original plans didn't include becoming the state's chief apiary inspector. "I wasn't persuaded to take the job. I kind of got volunteered," she says during a visit at her lab on the New Mexico State University campus in Las Cruces.

Her education is in plant pathology. And her husband, Brad, is an entomologist with the university.

So what's the biggest challenge facing New Mexico's commercial beekeepers, all 48 of them? "Economics!" Marjorie explains. "Our industry is associated with crop growing areas, which are along river bottoms."



Marjorie Lewis points to her Southwest Domain

She adds that New Mexico's agriculture is limited to river bottoms because the average rainfall in The Land of Enchantment is a scant seven inches per year.

This means all cropmen, including beekeepers, must be aware of all economic conditions. It also means that beekeepers face an additional challenge: responding quickly to spray alerts.

That's where Marjorie's office plays a particularly vital role. "There are three of us working with beekeepers, but our total time amounts to just a half-person. I inspect the southern part of the state, Greg Watson is in the Albuquerque area and Patrick Montgomery is over by Texas at Portales. The other two are primarily nursery inspectors, and I'm primarily a nematologist."

Nonetheless, Marjorie seems to have excellent rapport with state beekeepers. Says Nelson Clayshulte, a third generation beekeeper, whose family runs 4,000 hive, "She does an excellent job of warning us of spray dates. If we ever have a problem, she gets right on it."

He adds that he had been out of state when Marjorie came on the job. "She was in place when I returned. It was easy to accept her as the inspector. She knows her stuff about bees and doesn't try to get official with us beekeepers."

New Mexico's chief apiary inspector is quick to explain that she learned directly from Bob Campbell, the previous inspector. She also emphasizes that commercial beekeepers are highly cooperative. "Most of our problems involve hobbyists. It takes a lot of time to educate them concerning diseases.

"As I said, all three of us bee inspectors represent only a half person total. I do all the bee lab work and paperwork, but only 10% of my time is spent in the bee industry."

That explains why her office has no official production figures. "We have virtually no migratory beekeepers. Pollination is done locally, and only two commercial beekeepers move into New Mexico during the season. One's from

Marjorie watches while Nelson Clayshulte (center) and Steve Reich look for problems.

Colorado and the other's from Arizona"

So what problems face New Mexico? "We've not detected any varroa mite infestations, but trachael mites have been reported in several counties." The chief apiary inspector is quick to point out that tracheal mites are not a widespread problem.

"But beekeeping has a low profile in New Mexico agriculture," she says. "Most commercial operators sell bulk, although they also retail out of the home with the typical 'Honey For Sale' sign.

"We're isolated and protected from national problems. Once we clean up an infestation it stays cleaned up. Reinfection is slight, providing the individual beekeeper is alert."

Marjorie points to a wall map of Mexico, Texas and New Mexico. On it she's placed markers of reported Africanized bees. She's charting the progress of that long-term threat to the bee industry, but doesn't expect it to soon become a New Mexico problem.

She adds that her office has good relations with commercial beekeepers. She then calls John "Tuffy" Clayshulte, to set up a photo session for this article. Within a few minutes, it's arranged to meet Nelson, and employee Steve Reich, fifteen miles south of Las Cruces at a beeyard along the fabled Rio Grande. "His family has always been real cooperative. They're willing to help me out, and Tuffy tells me when I've screwed up."

She notes that lines of communication are open both ways. Thus her office is able to respond to individual problems and to notify beekeepers when spraying is scheduled.

"She takes good care of us," says Nelson while Marjorie suits up to inspect. "In the spring she regulates alfalfa sprays and keeps up on any mite problems that could develop."

Nelson points to the chain-link fence with the heavy-duty chain and lock. "The fence is up because of vandals. They don't steal hives, but tip them over after they get drunk enough to ignore bee stings"

The commercial beekeeper notes that increasing population is a real problem in New Mexico. Homes and bees both have to be near water. New Mexico's limited water areas provide a real challenge for beekeepers.

"We're losing yards all the time to subdivisions," Nelson admits. "The state's so dry we're limited on where we can keep bees. There is no water on the mesas away from rivers."

Thus, the challenges that face New Mexico beekeepers cause them to work closely with the state inspection office. "Marjorie's been really good. She's better than most inspectors in the past. She's enthusiastic, thorough and helpful. She's willing to help."

He notes her office keeps all yards registered so beekeepers can be warned of spray dates. Since it's a two-way street, New Mexico beekeepers cooperate with their state apiary office.

Mite control, also crucial, is handled quickly. "She gets right onto them," Nelson adds.

Earlier in the visit, Marjorie noted that varroa mites were found in a package of bees from a Texas supplier. She emphasizes that alert beekeepers are the best defense against new problems entering the state.

What's in New Mexico's bee industry future? Says Marjorie, "There are definitely some challenges with urbanization. And the Africanized bee has been reported downriver in Brownsville, Texas. Other than that, it looks pretty rosy.

As a beeman, Nelson is undecided about the threat of the Africanized bee. "Some guys in Mexico like them better than the European bee. Others say they can't be worked."

Well, whatever the challenge Africanized bees will present when they arrive, Nelson and other beekeepers know they've got a bee inspector who really cares, even though Marjorie and her crew of two represent just a half-person. □

"Fences are to keep people out" says Nelson.

FOOTHILLS HONEYS

This Oregon beekeeper keeps busy with a little bit of everything.

KEN OLSON

It's the big white metal warehouse that you first notice when approaching Foothills Honey Farm. It's a two-story building housing George Hanson's processing equipment, woodshop, and a mountainous supply of barrels, hives and supers. As you get closer you notice the bees inspecting the cracks around the doors and windows, diligently seeking spaces wide enough to gain unlawful entry. A fine mist from a hose keeps the bees away from the big roll-up drive-through door. To the right of the driveway a heavy-duty fork-lift, and a white, 22 foot Volvo truck stand in the shade of a few large maples.

Hanson has arranged his hives and nucs neatly on the hillside beyond the yard surrounding his home. The hives' uniform height, their fresh white paint, and the precise positioning – four to a pallet – resemble somewhat the tombs of a military cemetery.

As I approached Hanson's office, he gently kicked the door open for me – he was on the phone and couldn't talk at the moment. I couldn't see him until I was within a step of the door. He motioned me in and gestured, inviting me to the couch for a moment. In front of him lay a smattering of bills and papers, letters, flyers and magazines.

"Be with you in a minute," he said covering the mouthpiece and turning toward me. "I've just got two more bills to take care of and that should do it."

"Would you be able to take some honey to town with you when you go back?" the friendly young fellow asked without turning around in his chair to see me.

"Well," I said, "I can take some, all right, but I only brought my car. How much do you have in mind?"

"Twenty drums, this trip. You don't think you could haul that in your Volkswagon?"

George Hanson has around a thousand hives on fifteen acres on a gently sloping hillside about forty miles northeast of Salem, Oregon. This beautiful area of Clackamas Country supports farms of corn, berries, fruit, and various grains and grasses.

Hanson, his wife Susan, and their two sons keep busy producing honey, renting colonies for pollination, processing honey for other beekeepers, trucking colonies to CA, WA, the Oregon mountains and into central Oregon, and throughout the Willamette Valley. He's been in the business full-time now for twelve years, and enjoys it immensely.

"I taught school for seven and a half years," he says, "I enjoyed teaching a lot, enjoyed the kids, liked the subject and all that goes with it, but I found that at age 28 I was making the most money I would ever be able to make. I was at the top of the pay scale and had nearly forty years left to develop my career. I was too ambitious and too creative to tread water that way."

Running the hives around the country takes Hanson into unfamiliar

Hanson hauls hives to CA, ND, WA, and all over OR. "I used to clear maybe $300 at the end of the month when I was teaching. Now $300 doesn't buy one tire for my truck."

Hanson respects the needs of the farmers. "The farmers insist on a pollination process that keeps unwanted pollen out." These six-frame nucs are just the right size for the specialized pollination Hanson does.

George Hanson, beside a pallet of bees. He uses migratory covers, faces his colonies at 180° on each pallet. Spacing between colonies is the width of two abutting cover tops. There are no individual bottom boards, but the pallet serves as the bottom for all four colonies. Brood is in the bottom two deeps, honey supers above. Colonies are held on the pallet by wedges, seen on the bottom, each holding two colonies. Pallets are about 3" 4" longer than the colonies to provide ventilation while moving.

territory now, places far beyond the four walls of the elementary school he left behind. Now he goes to the alfalfa fields in ND, the almond orchards in CA, to the fruit trees up the Columbia River Basin, and seems willing to go to wherever he's called.

"I usually take a truckload of colonies up into the mountains for the fireweed, but that doesn't always pan out. Some years the fireweed peters out and bees come out negative. Two years ago was that way. Hardly made anything. Last year, though, the fireweed was a lot better, there was some gain in it."

It's not always the fireweed itself that's unpredictable. His headaches include marauding bears and humans that find his remote hives. "People do about as much damage as the bears," he says.

Hanson has developed a discerning taste for good eating honey, for average honey, and honey best suited for baking. "The best honey from this area is berry honey," he says. Especially raspberry. "That's real fine honey, but the marionberry and the other berries are excellent, too."

Hanson has found, like many other beekeepers in Oregon, that he has to earn his money in many different ways, and this results in great demands on his time. "This business will eat you up," he says with a sigh. "I'm on call 24 hours a day. A farmer will call me up and want his hives delivered this afternoon; another farmer, clean on the other side of the county, will want his taken out of his field by tomorrow. And some of this work has to be done at night. It makes quality family time hard to find."

In addition to renting colonies and selling his own crop, he processes honey for other beekeepers. This service produces a few dollars, and he teaches a class for beginning beekeepers at the community college, and coaches soccer at the high school for additional funds.

With the diversification that Hanson finds necessary to survive in the honey business, he must move his hives several times during the year.

"I think each hive takes about six or eight moves each year. That's doing a lot of moving, especially if you're talking about hundreds of hives each move. And all that moving is hard on the bees, hard on the boxes, hard on the equipment, and it takes its toll on me."

Forklifts stand at the ready, now, just outside his warehouse. Within minutes Hanson could start the Hyster and load his truck. He keeps his colonies on pallets, " just like all the bigger operators do."

George estimates each hive body has a life of about ten years. "That's a guess, though it's real hard to say exactly. I have bought used hives, see, not knowing how old they were when I got them. They break up and fall apart after two or three years. I can't really tell how many years they've got in them."

The weather in this country cuts the life of the box down, he explains. "There's so much rain and damp weather in this area, the wood just doesn't hold up like it would in drier climates."

Turning to the pollination feature of his business, Hanson said, "I'm the only person in this area that does pollination as a business." His clients are vegetable farmers in the Willamette Valley trying to develop new strains of squash, carrots, cabbage, and mustard.

"It's very important to keep the pollen pure. The farmers need guarantees that no stray pollen from wild plants – like the wild carrot, for example – contaminate the hybrids. That requires close monitoring and meticulous care."

Continued on Next Page

Hanson processes honey for several beekeepers in Oregon. "Oregon has always been pretty much a marginal state for honey production, especially since they reduced the vetch crops in recent years." Hanson supports his family by diversification, the key to success for many beekeepers.

An infrared light heats the wax to the melting point. The chain conveyor takes the wax to the compression chamber.

FOOTHILLS ... Cont. From Page 537

Hanson uses six frame nucs, made by taking frames of brood from full-strength hives in March and April. "We try hard to maintain an absolute equalization plan. That's very hard on the bees, though, in fact, many of the nucs simply don't make it." It's specialization that costs dearly in terms of mortal bees. Hanson introduces a new queen to each nuc and about the time the farmers need the bees, the nucs have developed brood from the new queen.

"Management is so very critical, I just can't emphasize it enough," he says.

Hanson's eyes light up when he tells of his beginnings, a story not much different from many beekeepers' stories. "I bought an old ramshackle house shortly after I married," he muses. "In the backyard a bunch of bees were flying in and out of a wooden apple box someone had nailed a lid on and had cut an opening for the bees to traffic through.

"I had a student in class whose grandmother spoke Russian, and the grandmother, the boy said, knew about keeping bees." The teacher asked the grandmother to come over and make adjustments to a new hive. The unfortunate thing about it was, this was September, and within a month the bees had starved to death.

"I felt so bad about those bees dying, to make amends I bought two packages of bees the next spring. Within a year I had 25 hives, some from collecting swarms, some from outright purchases, some from people giving me abandoned hives or hives they didn't want anymore. It's amazing how you can pick up hives if you let people know you're interested."

Some of these hives were not in very good condition. "It's laughable now," he says. "Some of those old hives were rotten, some were broken and falling apart with bees coming out of every corner, and I had hives of every color – blue, red, pink, black. And you should have seen the insides!"

Now, Hanson has a spacious woodshop area in his warehouse, over his honey processing area, but doesn't use it to make the bee furniture, though. "It's hard, extremely hard, to turn a dollar on the woodwork. It's far better to purchase wood wholesale from someone specializing in that part of the industry."

George especially enjoys opportunities to meet other beekeepers. They swap ideas, and sometimes borrow colonies, offer advice, trade stories and tell tales that provide them chances to laugh together. Beekeepers have a knack for telling stories, and an insatiable thirst to hear them, Hanson discovered. "I enjoy stories of bears the most, and you'd be surprised how many beekeepers know a good bear story or two. That, and trucks getting stuck. Beekeepers do the darndest things with their trucks to get them struck, then they do the darndest things to get them out"

Returning to the bears – "I'm going to write a book someday about all these bear stories I've heard."

He also likes stories beekeepers tell about their beginnings. "Nearly everyone talks about how the rains set in and the hives sank in the mud. They talk about trying to lift colonies out of the muck .You can about imagine what happens when the bottom boards stay behind and the bees rush out the bottom." All beekeepers start with mistakes and find experience to be an effective, though difficult teacher, he muses.

Hanson obviously has learned tons of strategies since his early apple-box days.

"Most beginning beekeepers get caught up in the business much too quickly," he says. "People get 'bit by the bug' and off they go. Very few realize the equipment they're going to need, and the dollars it's going to take to keep their enthusiasm going. First thing they know, they've got twenty hives or thirty and they don't have a truck or trailer to haul them, then accidents happen. They become sour or discouraged and lose interest, then."

Many, many beginnings fall by the wayside, he notes, which really is bad for the industry's image and reputation. "To keep bees properly, to really care for them right, a person has to devote hours and hours of time in addition to spending considerable money for their upkeep."

Pretty soon I heard an engine start. I turned in time to see black billows of smoke turning skyward from the Hyster's exhaust pipe. The young fellow at the wheel was about to load twenty drums of honey onto his big volvo truck. □

FOUNDATIONS

O.B. Wiser

My first hive was the result of *the* constant haranguing of my parents, and it was, in truth, a bribe to shut me up. So the June evening my Dad put me in the old 1947 Willey's Jeep Station Wagon to go get the hive, I was ecstatic.

Dr. Paul Jameson was an awesome man, old with a mustache and spectacles. His love and caring could be felt even before he opened the door to his home to one anxious boy. We went into the backyard, and there it was, my first beehive (it cost my Dad $100, which he made me pay back in honey sales over the next few years).

It was love at first sight, as we smoked and placed the three story, eight frame, silver beehive in the back of the Jeep Wagon. I had a heavy beehive, something called a super and all those things called frames.

My first summer was spent in pure bliss. I opened the hive every day and took out every comb. By fall the bees had had it with the budding, snoopy, beekeeper. The honeymoon was over and in my 12th year my heart was broken and I was in despair.

That next spring, however, a miracle occurred. As I played one street over from where I lived, a swarm came roaring down

Bendamier Circle, scattering dogs, cats and kids in every direction. All but one ran. I walked right into the swirling mass. This was my swarm and no way was it going to get away from me.

The chase was on, as I jumped over fences, stepped on petunias and got scratched by rose bushes, chased by barking dogs and yelling neighbors. But nothing could slow my pursuit. Around and around I went over a wood fence, and up the ditch. I was so turned around I did not know where I was until I recognized the old fence rim on the next fence I was to jump. It was my own home. Those bees were heading into my own backyard, right next to our goat pen and the pigeon coop.

You see, the three story, eight frame hive was still standing on top of the brick stand I had made in back of the pine tree. There were 125 bricks in that first hive stand. It was what we call seismic. No earthquake would have budged it. And then there was the landing board – the first and only one I ever built. You know, the one with an 18" slanted board leading into the entrance of the hive. A B-52 could land on it, but bees never used it.

What I beheld was a giant swarm swirling about and covering the old abandoned hive. My swarm had come home. I was spellbound as they made the mad dash into every hole in the hive. I sat next to them watching waves of little soldiers move into my abandoned hive.

Replacing Comb that broke out during extraction because of loose wiring is a reall pain – and a real expense.

It was then I became intimately acquainted with another 'foundation' in my life – beeswax foundation for the hundreds of frames I had to make. I was baffled at all the different kinds of foundation available. There was medium brood foundation and 3/4 depth foundation. There was seven sheets to the pound and six sheets to the pound. There was crimp wire foundation and there was plain. And much later, something came along called midrib plastic foundation. Over the years, I have used or picked up every basic idea developed or conceived about foundations, including the total comb made out of aluminum and dipped in wax. It always reminded me of a radiator and it belonged inside a hive about as much as the radiator of my Ford truck.

> "My first summer [with the bees] was spent in pure bliss."

Well, if that was not enough, there were all these different ways to put foundation in with wire, and all the different patterns I found in the *ABC & XYZ of Bee Culture.* I was confused, and then I asked a couple of beekeepers and everyone had their *own way of wiring.* There were the devices for putting in "four little eyelets" of metal so the wire would not cut into the wood. There was the "bent nail" program and, of course, there was the "no wire at all", plan.

I tried them all, and I mean all of them over many years and judged the results decades later in the hives. But it was not until 1974 that I attacked the question of "Which foundation and which wiring method was the best scientifically?" My trial and error rapidly proved several failures, as comb flew out of the frame during extraction or sagged in the center, or simply fell off the wires on a hot day.

First of all, I want to tell you about my mistakes and the money I wasted. I always figured those guys who make frames and drill four little holes in each end bar must know what they were doing. So, I just made a frame wiring jig with thread spools and crank to bend the side bars in and threaded away. But when I let off the pressure, the wire bit into the wood but it seemed O.K. Of course, the wiring method was four parallel wires back and forth. Well, within one year the wire eats into the wood and the wires go slack and you end up with a comb that slips off to one side, and sags in the middle. Not too great a comb.

I'll never forget the excitement of buying my first 10,000 eyelets and the tool to put them in with. I had solved the problem, right? Wrong. Boy, it takes forever to stick those little eyelets in, but then the idea is the wires will not affect the wood – at first! Just give the wire and weight of the honey a few years and the whole eyelet bites into the wood. Then there was the obvious sagging in the center of nearly every comb, with the tell-tale result of drone cells and transitional cells right in the center of the comb.

Later, I added a triangle wire across the four parallel wires to support the center. The wire would come from the top of the side bar and go through two holes in the center of the bottom bar and back to the other side bar top. I got the idea right of *The ABC Book*. Alas, it just took a bit longer for the comb to sag, but sag it did and I was never short of lots of drone brood in each comb.

Back in the early 70's, the great and wonderful solution to all foundation problems made its debut – plastic midrib foundation with metal cleats on the edges. Then there was a myriad of other plastic products with different patterns and some that actually had the total comb made of wonderful plastic. Beekeepers all rubbed their hands with delight. "Ah" they said, "no more paying a soon-to-be brain-dead person to wire thousands of frames" (actually, after 5,000 frames most human brains tend to atrophy).

I was one of the first beekeepers in line for my very expensive box of plastic foundation. With relish I popped the sheets into the specially made frames to hold them. Eureka! The final word in foundation and wiring solved in one stroke – or so I hoped.

It is true, putting this type of foundation into frames is faster, and less expensive in the initial installation costs, but that is where the advantages seem to disappear.

> "Wiring thousands of frames will make anybody's brain atrophy."

I am a behaviorist and I recognize bee behavior has taken millions of years to proceed to what we have today. We are not likely going to change those inbred actions. Do bees really accept a foreign substance like plastic in their hives?

Here are the problems I have experienced in the last 21 years. Bees do not jump for joy at a full box of plastic foundation and scream as they madly go to work making comb on it. In fact, you have to more or less force them up on it or lure them with good all-wax combs. If you make the mistake of putting new boxes on a strong hive when there is not a gangbuster honey flow on, well, they chew the h— out of it. And not just at the bottoms and around the bottom wires like they do wax-wired foundation.

What they love to do is chew all the wax off, in large patches on one side of the frame, so you end up with all worker cells on one side and mostly drone cells on the other. More than likely, the bees eat down to the plastic and they really get carried away and polish it up so bright and clean that no bee will ever build on that spot again, leaving a gleaming white island in the center of the comb. They seem to love to do that little trick right in the center of the frame so the most important part of the comb is ruined.

It really ticks me off, even today, when I pull a frame out of the brood nest and on one side it is all even capped worker brood and the other side is empty or mostly drone comb. You cannot throw it away because of all the good brood, so it stays there one more season, wasting good worker brood laying-space and ticking off the beekeeper. By the way, what this basic concept means is once you get plastic foundation, it will always be there to remind you of this little problem.

Now, I used to be a migratory beekeeper, and I've moved bees in the dead of winter to go to California's almonds. Of course the weather may be far below freezing, and it is in these most pleasant of situations another wonderful trait comes out — the different shrinking factors of cold wax and plastic make it possible for the wax to separate from the plastic when bounced by a forklift while loading the truck with the wonderful result of wax peeling off the comb. Mice too, take advantage of this separation factor when they peel the comb off the plastic with ease, leaving shiny plastic behind.

Then, finally, when you try to reclaim the wax from your old combs by boiling them in the usual hot water, plastic does a wonderful thing in the vat. It crunches up like a school boy's spitwad and traps more beeswax in its crinkled mass than it could have given up. It shrivels and folds on itself like a spider in a hot frypan. It is a glorious experience to pick out these wonderful wads of wax and plastic before you put the slum gum into the wax press. I will

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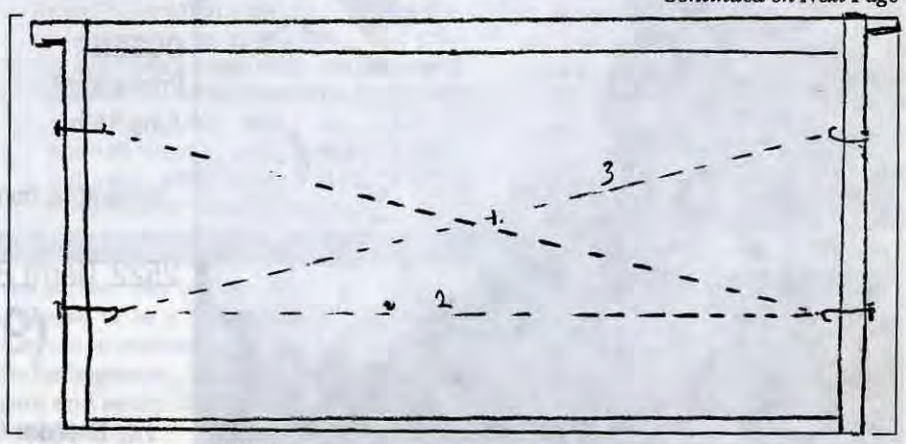


Criss Cross Wiring Method
All Nails *Cement Coated.* Frame Nail = Berry Box Nail 1-3/8" x 1/66" Head 3/16 *Cement Coated, #3D Blue Lath, Side Bar 3/8" thick.*

FOUNDATIONS ... Cont. From 541

never forget the first time I took a bunch of combs to be melted up at Otto Stewarts and he started cursing me and the combs when he realized half of them were plastic. It is a lot of extra work to melt them.

So, I have tried them all – both foundation and wiring methods. It wasn't until 1978 I finally took an even more scientific approach and asked one of my students, who had access to a $30,000 computer (and who was a NASA engineer) to help. He put all the different variables into the computer with all the angles and stress factors, tensile strength of wax, temperature variables, and everything else he could come up with. He ranked all the different methods from worst to best and just as I already knew, parallel wires, using non-wired, reinforced foundation was at the very bottom of the list. Something about a parallelogram having the lowest structural strength, as compared to a triangle or hexagon with the highest strength.

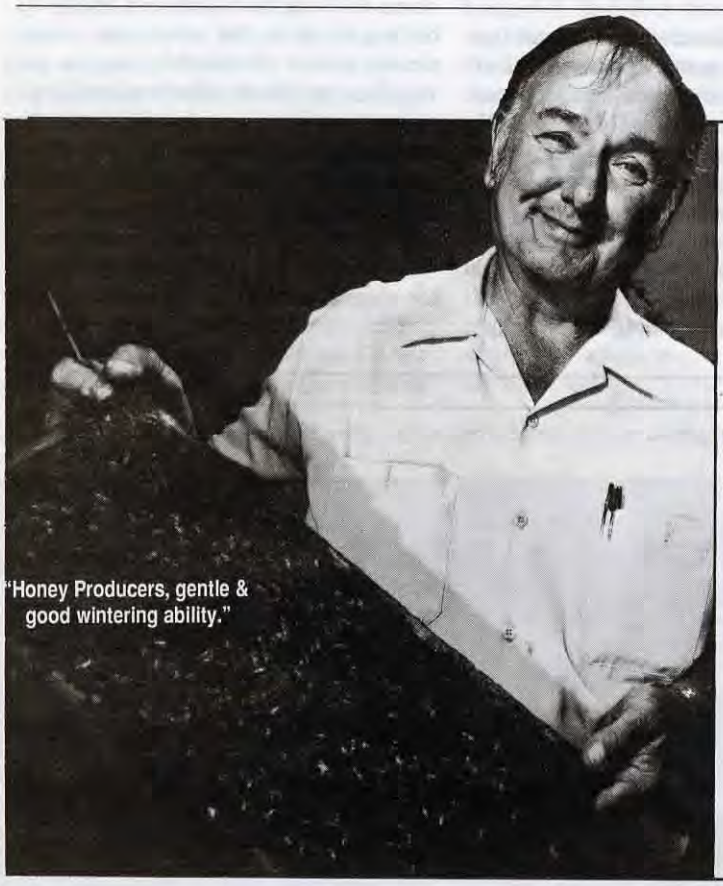
It was clear the more triangular supports there were, the greater the holding power, so the single most effective wiring method would have to be what we call the criss-cross method. It must, however, be wired on bent #3D blue lath nails and strung using a compressed endbar method that will add tightness to the wire when released.

The foundation that was best was no real surprise either. One type stood out far ahead on all counts. Of course, Crimp wire, reinforced foundation was the clear choice on structural strength, and the best was those that were six sheets to the pound.

I did not understand all the Trigonometry and physics Rick used to explain the reasons behind the computer's choice, but he made it clear that when crimped wire, reinforced foundation is coupled with criss-cross wiring method, a maximum strength comb is produced. My own experience indicates you are looking at frames with a lifespan of a quarter century or so. The *wires* are still tight after you run them through the wax boiling process after all that time.

So you see, bees are the ultimate foundation of my life. But running a close second is the wax foundation I chose to be the foundation of my bees' home. One simply has to weigh the different factors against cost and time and make a decision. As for me and my bees, we will adhere to crimped wire medium brood foundation on criss-cross wire, with side bars that are 3/8" thick and won't bend with time – and I learned that the hard way.

And for anybody out there who thinks there is a faster wirer than my jig (I can crank out 10 frames in 3-1/2 minutes, or about 25 seconds a frame), I have always wanted to have a world championship wiring contest before I die. But alas, only lumber jacks get together to see who can chop down a tree the fastest. The wiring jig is the secret, of course, **and my automatic wax embedder.** But then, that's another story. □



"Honey Producers, gentle & good wintering ability."

THE BEEKEEPER OF BARRANCA PATOPILAS

CHARLES S. RAU

This Mexican Beekeeper has solved all of his problems with ingenuity, cunning, and common sense.

Batopilas is an old, small, silver mining town located in the state of Chihuahua, Mexico. It was established in the mid-1600's by the Spanish, and rumor is it had electricity before Mexico City. The town is located at the bottom of Barranca Batopilas, at an elevation of about 1650 feet.

Barranca is Spanish for deep canyon, or gorge, and Barranca Batopilas is one of five or six major canyons that make up Mexico's famous Copper Canyon, often compared to Arizona's Grand Canyon. But if you put all the major Barrancas together into a single canyon, it would be four or five times larger and in some places almost 1,000 feet deeper than the Grand Canyon.

I was on my way to Batopilas on a photography assignment, and an hour and a half after I started my trip from AZ the bus I was on stopped at a small roadside restaurant near the upper Urique river for a quick breakfast. While drinking a cup of coffee I struck up a conversation with on the my fellow passengers, Antonio Cobo Alonso. I don't speak fluent Spanish so I was lucky he spoke good English. He told me he was a retired chemical engineer and recently had returned to Batopilas where he had grown up.

On the rest of the trip he was a wealth of information about the area and pointed out many sights along the way. During our journey I asked what he planned on doing during retirement and he said he was going to raise bees for honey production. I told him I had been keeping bees in the southeastern part of AZ for about 12 years, and as you might expect, we talked about bees off and on until we arrived in Batipilas. He then invited me to come and see his operation while I was in town.

Batopilas has a quaint charm with friendly people and dirt and cobblestone streets. Cowboys on horseback, donkeys carrying loads of firewood and Tarahumara Indians in traditional dress are common sights in town. It gives the feeling of stepping back in time about 100 years.

The town is located along the banks of the Batopilas river and has its own hydroelectric plant for electricity. The region is semi-tropical and was near the end of the summer rainy season when I visited There was a profusion of flowers blooming in the area and all the plant life was a lush, beautiful green. Outside of town there were blooms of Bird of Paradise, catsclaw acacias, mesquites, palo bianco, queen's wreath, san miquelito, and Mimosa. In town limes, oranges, mango, figs, bananas and papayas were growing in people's yards. It was definitely good beekeeping territory.

My new friend rents the second story of what was once an old hotel and uses the back yard of the building for his workshop, storage space and honey house. When asked how he became interested in beekeeping, he said he read Spanish versions of *The Hive and The Honey Bee* and *The ABC and XYZ of Bee Culture.* They were also the source of information for making almost all of his own equipment. Though I hadn't thought about it, there wasn't a beekeeping supply store in town, and as far as he knew, there weren't any within several hundred miles.

"Besides," he said, "it would be too expensive to buy all my hive bodies, frames and other equipment and ship them to such a remote area. Besides, I like to build things myself when I can," he said.

When I visited he was in the middle of extracting so my tour began

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One of Senor Alonso's apiaries near the Rio Batopilas,

and one of his jumbo boxes and a frame.

BARRANCA ... Cont. From Page 547

in his honey house – a small enclosed room at one end of the backyard. His equipment was simple but effective – an extractor, a cappings tank and strainer, and a settling tank and bottler.

I was impressed with his extractor which he made after reading about the concept in a beekeeping book. It was a 16 frame radial, made from a 55 gallon drum, steel channel-iron pieces welded together, a couple of bearings, some pulleys, a fan belt and the sprocket assembly from an old bicycle.

He demonstrated its operation and even though it was operated by a hand crank, you could let it coast like a bicycle and keep it revolving at the correct speed by simply giving the crank short, quarter turns. He said he could extract all day long and his arm would not be tired because he did not have to turn the extractor all the time to keep it revolving. If you have extracted honey with a hand-crank machine you'll appreciate that comment.

He also showed his bee boxes and frames. He makes all his frames and boxes in Chihuahua City with a special saw setup he designed, and brings them to Batopilas to be assembled. He uses one 'jumbo' box, as he calls them, for the brood chamber and medium boxes for his honey supers.

His jumbo boxes measure 16" x 20" x 12" deep, a little deeper than our standard boxes. Medium supers are about an inch deeper than our 6-1/2" boxes. His frames are also larger but still incorporate appropriate bee space. All wood for his boxes is 22.2 mm (7/8") thick.

He uses 10 frames in the brood box and nine in his honey supers, without frame spacers. He finds it easier to uncap thicker combs from the medium boxes when using nine frames. He doesn't use queen excluders, but because his brood box is so large the queen rarely moves up.

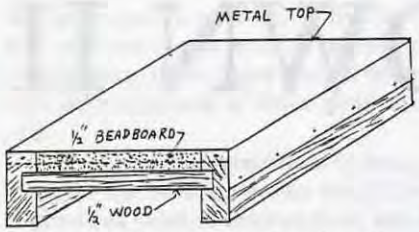
All hive bodies have box joints which fit together so well all he uses is white wood glue and a homemade clamp to put them together. He gets this remarkable fit because of the special saw setup he designed and uses, I asked why he doesn't use nails and he handed me a completed box and asked me to see for myself. Even when placing it on its side and trying to rock it back and forth – it didn't budge.

"That is why I don't use any nails," he said.

He does use nails as well as glue on his frames. But he uses a special jig he made to assemble the frames because of their tight fitting joints. When complete, they were as good and strong as any I've see. He uses plain wax foundation which he wires with an electric embedder he had made. Foundation comes from a supply store in Guadalajara shipped to the town where he sells his honey, still a good distance away.

He paints his hive bodies whatever color of inexpensive enamel paint he

Senor Alonso assembling one of his medium supers.



The homemade cover using beadboard.

can find. He also read that having individual hives painted different colors helps the bees not to go into the wrong hive. He also places each hive randomly in his apiaries to avoid drifting.

His cover was another unique piece of equipment. It has two side pieces and a back piece, but on top there is a half inch piece of wood set into grooves with a half inch thick piece of expanded polypropylene (beadboard) on top of that. The whole thing is covered with a piece of metal from a discarded offset printing plate. He said the insulating property of the beadboard was equal to about two inches of wood. He doesn't have to worry about winter cold, but this thick cover does help with the hot summer sun. The cover slides onto the top super which helps hold it in place.

He uses a commercially manufactured veil, smoker and hive tools.

He started his business by purchasing a few hives of Italian bees, and now has about 75 hives with plans to increase to 500 in four years by making divides and capturing swarms. He wants to start raising his own queens to replace old queens and for divides. His apiaries are about two kilometers (4.4 miles) apart, placed along the river. He gets about 50 kg (110 pounds) of honey from each hive in a year, and with the mild, frost free winter there are some flowers blooming every month. However, the main honey flows come in February - May and September - October, the best being April and May.

Senor Alonso's homemade 16-frame radial extractor.

He knows of at least 25 major flowers bees get honey and pollen from, but the most important are mesquite, palo blanco and virorama.

He sells most of his honey to bakeries and wholesalers in the city of Chihuahua, a 10 - 12 hour drive from home in his truck.

On my last night in town he invited me to his house for coffee and we spent an enjoyable evening talking more about beekeeping. During our conversation the subject of the Africanized bee and the bee mites came up. I asked if was worried about the Africanized bee and how it might affect his new business. I thought it might be a problem because of the climate and his proximity to the river, a known migration route of these bees. He said he didn't know much about this new bee, but he didn't think they were in the area because his bees were still fine.

Once he started raising his own queens, he planned on requeening twice per year if necessary to keep productivity up.

He had little background on the mites, but said his bees seemed healthy and were doing well. I ended the evening, and my visit, by promising to send information on both of these pests, and thanking him for showing me his fine operation.

A long time ago I heard someone say you could meet beekeepers almost anywhere you go. And, like most of us Senor Alonso was friendly, hospitable and he liked to share experiences and information on bees, and beekeeping. I am, understandably planning another trip to the area, and already I look forward to seeing new friends in Batopilas. □

Charles Rau is a beekeeper in Portal, AZ. He has contributed cover photos for *Bee Culture*, and is a regular contributor to the Honey Report.

GROW YOUR OWN II

JAMES L. TABOR

Soil Preparation and Tillage Techniques.

The mention of bee pasture to most beekeepers conjures up images of vast fields of clover or other prolific nectar producers. It's not necessarily so.

There are any number of nooks and crannys and other small plots that can be pressed into use for bee pasture. Consider planting clover on a freshly graded ditch on or near your property, or the site of an old building which has been torn down or on an area from which a pile of rocks, fire wood or trash has been removed. Any clearing with little or no vegetation is a good candidate for low-input bee pasture.

Perhaps you have a fallow garden plot. If so, you can "kill three birds with one stone" by growing one of the clovers. Nitrogen will be added to the soil, weeds kept in check and nectar provided for your bees. And who knows, a neighbor or nearby farmer might be willing to accept some of your bee pasture seed to provide ground cover for an area being graded or cultivated.

Don't forget the local highway department, either. When they are building a new road or regrading the right of way of an old one they, too, might accept proffered legume seeds for plantings to stabilize the soil.

Is there an abandoned gravel pit within a mile or two of your apiary? If so, you are in luck. Some of the best stands of sweet clover I've seen have been in and around an area where sand and gravel have been removed.

Two other small plot bee pasture winners are the ground over a septic tank's leach field – an ideal environment for ladino; and an area where leaves or brush have been burned. Since clover likes a high pH and generous amounts of phosphorous and potassium, wood ash is a made-to-order amendment. Keep in mind, though, even a good thing can be overdone. So if the ash on a burn site is heavily concentrated it should be spread out. As a matter of fact, the germination of seeds can be inhibited when planted areas are dressed too heavily with lime.

Actually, the opportunities for developing mini bee pastures are only limited by your imagination. But as numerous as relatively small plots may be it is unlikely that most beekeepers with an average sized piece of property will be able to totally satisfy his bee pasture demands. Still, every additional source of nectar and/or pollen, no matter how modest, does make a contribution to the total pool of available sources and enhances diversity, always a worthwhile objective.

Fortunate, indeed, is the beekeeper who can supplement these small bee pastures with a acre or more of tillable field.

BEFORE PLANTING

Before any effort to establish bee pasture begins, no matter the size of the plot, take a soil test to determine pH and any nutritional deficiencies the soil may have. Most Extension Services and commercial laboratories that analyze soil will, if requested, make recommendations for specific crops when submitting soil test results.

For an introduction to liming, an excellent source of information is the USDA's four page Fact Sheet: AFS 4-5-4. This easy-to-read publication can be obtained from the USDA Office of Governmental and Public Affairs, Wash., DC 20250. Frequently, County Extension Services will have copies on file.

It includes a chart which specifies the amount of limestone needed to raise the pH of various types of soils by half point increments.

LIMING Since pH is so critical to growing most legume bee pasture a look at the impact and application of lime is in order.

If only a few thousand square feet are to be limed or fertilized a conventional hand-pushed lawn and garden spreader will do very nicely. Sometimes a slightly larger unit, which can be pulled by a garden tractor, is available from a local equipment rental store. For bigger jobs a large tractor-drawn spreader might be rented from a nearby farmer.

When several acres or more are to be limed the easiest and most economical way is to hire a lime spreading service. Usually you can get a line on these companies through a farm supply store or the Cooperative Extension Service. At a price of $36/ton (current southern Maine price), they broadcast the lime directly on your fields with a special 14 ton capacity hopper truck.

When purchased wholesale in 80 lb. bags lime costs $63 per ton and at retail, the price of an 80 lb. bag is in the neighborhood of $3.00. It should be noted that the sweetening quality of hardwood ash is about 30 to 70% of that of ground limestone.

When a seedbed has a low pH and needs to be limed, application should be made in the fall prior to planting in the spring. A year in advance is even better.

EQUIPMENT Depending of course on the amount and kind of bee pasture one wants to cultivate, the equipment needed can consist of a spade, hand rake, hand cultivator and a coffee can with holes punched in the bottom for a seeder, or it can be a full complement of farm implements, including a tractor, plow, disc harrow, rototiller, drill, drag, roller, and mowing machine and tractor drawn rake. Usually, it's something inbetwen, and other things besides.

Of course there are several options for equipment acquisition – buy new, buy used, rent, lease, build it yourself or even borrow if you have a good friend who isn't reluctant to share gear with you.

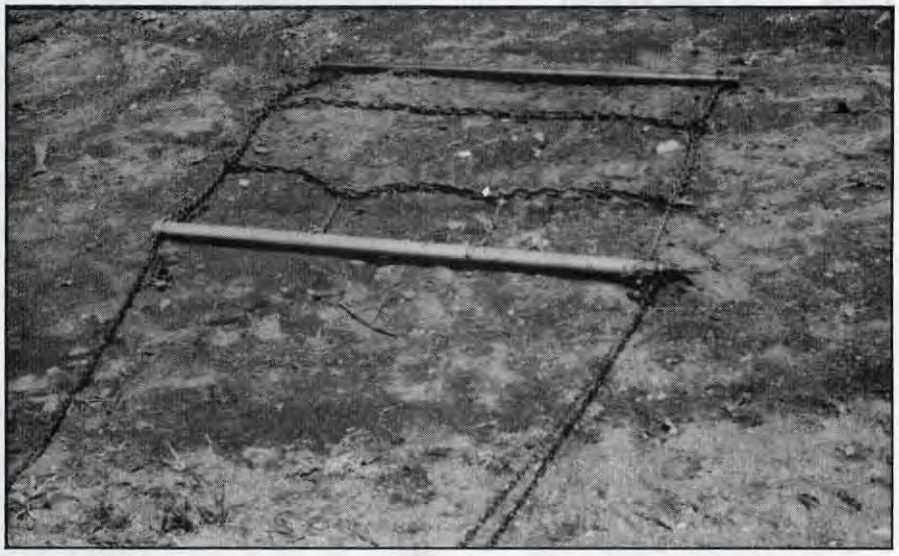
The financial investment in equipment for the beekeeper who would like to grow bee pasture can run from just a few dollars to a lot, lot more. Let me tell you about what I have bought, and what I've made and at what cost. Starting at the bottom of the scale, I do, indeed, use a rake and a coffee can for seeding small plots. For the "big spenders" who might not want to bother to make the coffee can seed dispenser, Ortho puts out a small, hand-held plastic seeder called "The Whirlybird" This unit, which can also be used to broadcast fertilizer, holds about a quart and a half of material and sells for around $12.

The centerpiece of my equipment is an ancient 8N Ford tractor which I bought for $2,000. The last 8N came off the assembly line in 1952. This ageless model is particularly good for an amateur like myself because it is easy to service and maintain and parts are readily available. Furthermore, it has a three point hitch and a power take-off.

I also picked up a Clark disc-harrow for $100 that was probably an antique when the 8N was new. I sank another $15-20 into it for repairs. I also have a second-hand single bottom plow in first class condition that I got for $150, and a brand new Bush Hog ($500) for mowing, rounds out my major purchases. Some years ago I did buy a manually operated Cyclone seeder – the type that hangs from a strap around the shoulder and holds 20 to 30 pounds of seed. The current price for Cyclone's

A garden size roto-tiller, can do enough to take care of an acre, or two or three, if you have the energy and time.

The author preparing a seedbed by reduced tillage technique.



Pipe and chain drag used for levelling harrowed ground and working seed into a prepared seedbed.

Log roller used to compact seedbed.

Continued on Next Page

Alsike frost seeded 30 months before on a harrowed field with sparse cover.

GROW ... Cont. From Page 551

model 1C1, a similar unit with a plastic hopper, is about $32.

I have had no experience with a tractor drawn drill seeder, however, the hand operated Cyclone seeder, which lays down a 16 to 18 foot swath of clover seed, is a very convenient method of seed distribution even on a multi-acre plot.

One piece of equipment that I don't own which can be used in soil preparation for bee pasture is a rototiller, either a small garden type or the large unit designed for farm use.

In the home-made equipment category is a tractor-drawn roller, fashioned out of an oak log (my son says it looks like something Fred Flintstone might have made), and also a pipe and chain drag. I probably put a total of $25 to $30 into nuts and bolts hardware for both. While neither is much to look at they both fill the bill to perfection. Incidentally, I've been told that a section of cyclone fencing or an old bed spring make good drags, too.

Birdsfoot trefoil the second year after it was seeded on a plot of canola stubble that had been broken up with a disc harrow.

PLANTING PREPARATIONS

Basically, there are three cultivation methods for bee pasture – conventional tillage, reduced tillage and no tillage.

Conventional Tillage. The soil and sod is dispersed and shattered to bury or mix plant material into the tilled layer. It is further pulverized, leveled and firmed up. On small plots this is done with a roto-tiller or cultivator, or even a spade and rake if you're sufficiently energetic. To prepare larger plots a plow or roto-tiller, harrow and drag are required.

Drainage is an often overlooked problem. Heavy, wet soils do not support many legumes. Plastic drainage pipe can be the answer.

This conventional way of cropping, even though it entails more work and expense than reduced tillage and no tillage is by far the most predictable and dependable. After a piece has been turned over in the fall it is – depending on its size either harrowed, roto tilled or raked over once again in the spring before planting.

Reduced Tillage This method of soil preparation merely breaks up or disturbs the surface of the soil prior to seeding. To do this use a small roto tiller, cultivator or sometimes even a rake for small plots. For bigger areas use a harrow or large roto tiller.

Chances for success with reduced tillage are greatly improved if any vegetation growing on the parcel is first cut. As a matter of fact, the less ground cover the better. When using this technique with frost seeding (described next month) the bed must be worked up in the fall.

For spring planting till as early as possible after the frost is out of the ground while it is still moist and easy to work.

Harrowing requires no special expertise. Just set the tandem gangs of discs at their maximum angle and go to it. Criss cross your plot as many times as necessary to break up the surface so that your seeds will be able to make contact with the soil.

While I have had no success with reduced tillage on sod when planting buckwheat, canola or birdsfoot trefoil, it is a good way to cultivate bienneial yellow and white seed clover, alsike and ladino clovers.

I've had mixed results with Hubam clover. Apparently, because it's an annual the root system doesn't always develop fast enough (in what is apt to be a less than ideal environment), to support adequate growth to always permit blossoming by August.

No Till As the name implies, No till is essentially broadcasting seed on an undisturbed bed, preferably bare ground or soil with very little cover.

Of the three options for raising clover, no till is the least successful. However, on bare ground or a burn site the sweet clovers plus alsike and ladino will usually do well when frost seeded.

I've never been able to get the sweet clovers to "catch" at all on undisturbed stubble but I have had some limited success with the other two, if not in the year of seeding then in subsequent years. There are, however, two caveats that are critical – you must have soil with a pH and other characteristics that are optimum for the species, and ground cover should be cut close before seeding and kept closely cropped after.

Obtaining Seeds Most farm supply stores in my area stock alsike, ladino and buckwheat seed during the spring and summer months but the sweet clovers – particularly Hubam, and canola and birdsfoot trefoil are not as readily available. Obviously, this pattern will vary considerably in different sections of the county.

Even though a supplier might keep a good inventory of seeds during the growing season, stocks are often low or even nonexistent during the winter months when one might want to obtain a supply for frost seeding. Conse-

Canola Report

Canola should be planted in the fall in all areas of the U.S. except the extreme North.

Below are a few reminders which may help with canola planting this year:

Field selection and seed bed preparation are very important. Fields that are rolling and have good internal and external drainage usually produce the best yields. Canola does not like water logged soils, and like alfalfa, will not survive under these conditions. Prepare the seedbed carefully, it should not be cloddy nor have an excess of plant residue that will interfere with seed and soil contact.

Canola can be planted with a drill or airflow equipment, drill preferred. Plant four to six pounds of seed per acre with a drill, slightly more for broadcast. The soil should be firmed before drilling or after broadcasting with a roller or cultimulcher. Seed should ideally be placed one-quarter to three-quarters of an inch deep in the soil.

Plant canola about six to eight weeks before the first expected hard freeze; approximately September 1. Canola should have about six to eight true leaves to achieve maximum winter hardiness.

Choose fields with good fertility levels. Canola like corn, soybeans and wheat yields best on fertile soils. Fertilize according to the soil test. Nitrogen applications are typically split with 20 to 30 pounds N applied in fall with P, K and other micro nutrients if needed. The remaining 110 to 120 pounds of N are applied top dress in the spring when the canola plants are thawed and the

However, in the far north winter hardiness is a problem and canola must be planted as early in the spring as possible. This means bloom occurs later in the summer, providing an added nectar source. Fall planted canola blooms in April or May, providing a wonderful build-up crop, as well as a surplus of rapidly-granulating honey.

Popular varieties include (in order of productivity):
North – Ceres, Falcon, Cobra
Midwest – Ceres, Cobra, Falcon
Southeastern – Bingo, Ceres, Allz
High Plains – Cascade, Cobra, Ceres

For more information on large scale Canola production contact the Ameri-Can Seed Co., 7664 Moore Road, Memphis, TN 38119.

quently it is wise to find a seed supply well in advance of when needed. Although seed life in not unlimited most species will remain viable for several years if stored in a dry, relatively cool environment (See list of seed suppliers below)

Sweet Clovers Rates required for biennial yellow and white sweet clover and annual Hubam are identical but there is considerable diversity of opinion on the proper amount to sow.

Recommendations run from 10 to 20 pounds of seed per acre. Factors that affect seed requirements are how and when it is broadcast, soil conditions, age of the seed, whether it is scarified or not, and the percentage that is hard shell.

It is interesting to note that approximately 5 to 15 percent of most clover seeds have a tough outer shell which allows them to remain viable for decades. It has been found that even after 50 years some will germinate if conditions are right i.e., they become scarified, (the coat is broken), the soil temperature and moisture are supportive of growth.

When frost seeded on land the surface of which has only been disturbed or chopped up, a seeding rate of 16 to 20 pounds per acre is appropriate. But with conventional tillage, 10 to 14 pounds per acre will usually give good results. For 1,000 sq. ft. this rate roughly translates into four to five ounces.

Alsike When seeding on a harrowed or roto tilled seedbed, broadcast seven to nine pounds of seed per acre. With conventional tillage use four to five pounds per acre, or roughly 1-1/2 to two ounces per 1,000 sq. ft.

Ladino With three quarters of a million seeds per pound, the rate for a conventionally prepared seedbed is only two pounds per acre or about 3/4 ounces per 1,000 sq. ft. Use 50% more when reduced tillage if used.

Canola Approximately six to seven pounds per acre or about 2-1/2 ounces per 1,000 sq. ft., is the accepted rate. (See box.)

Buckwheat The generally acknowledged seeding rate is 75 pounds per acre or 1-3/4 to two pounds per 1,000 sq. ft.; however, I have seen a figure as low as 60 pounds per acre.

When broadcasting seed, some people automatically assume that the more that is laid down the better, but in most instances this is not the case. In fact, too much buckwheat or canola seed is almost always counter-productive, particularly if the objective for growing is blossom or seed production. When individual plants are over crowded, they are apt to be small, blossoming is inhibited and the flowering period is somewhat curtailed.

Birdsfoot Trefoil If you can overcome its reluctance to germinate, four to six pounds of seed per acre or 1-1/2 to two ounces per 1,000 sq. ft. should do the job.

Now that we've covered what to grow, the equipment you'll need and how much to plant in the areas you have available, next month we'll finish 'Grown Your Own' with the techniques needed to be successful. □

SEED SUPPLIERS

Canola:	Early's Farm & Gard. Cent. Box 3024 2615 Lorne Ave. Saskatoon, Sask. S7K 3S9
Yel. & White Sweet clover alsike, ladino, buckwheat & birdsfoot trefoil	Caudill Seed Co. (50 lb. only) 1201 Story Ave. Louisville, KY 40206
	T.D. Smith Rt. 2, Box 137 Bokchito, OK 74726
Hubam sweet clover	W.H. Anton Seed Co. P.O. Box 667 Lockhart,TX 78644
Mixed yel. & white sweet clover, alsike, ladino, birdsfoot trefoil, buckwheat	Higgins Apiary 3801 U.S. 50 Hillsboro, OH 45133

Beauty and the Bees

B.A. STRINGER

"If you see autumn flowers, as yellow as gold, growing on the top of tall rods, you may be pretty sure they belong to this family (the Goldenrods)" said A.I. Root in the 1901 *ABC of BEE CULTURE.* The honey is described as golden yellow, of heavy body, and "not of finest flavor", although the flavor apparently improves upon ripening. The pronounced aroma is also said to sweeten in time. The honey granulates quickly with a course grain. While the main value of goldenrod is the provision of winter stores for the hive, a surplus honey crop is harvested in some area.s

Goldenrod is a tall, perennial herb growing up to five feet in height. It blooms from late July to frost, producing nectar and pollen for colony winter stores when little else is in bloom. There are about 125 species of goldenrod, most of which are native to the North American Continent, and are particularly abundant in the northeast. They are adapted to all soil types, but only those growing in moist soils have been reported as valuable to bees. When these plants have been transplanted to dryer areas, they have not then attracted bees – however the data to support this is in question, and opposite results have been reported. Early blooming varieties appear to be little used by bees, perhaps because there are many other plants blooming at those times.

There are differing opinions on the actual contribution of goldenrod to the nectar stores of the hive, and the plants seem to be used by bees in some areas while ignored in others.

Mr. Root commented, "Bees are almost incessantly humming over the flowers in some localities; while in others they seem to pass them entirely unnoticed."

Mr. Frank Pellett, of Iowa, believed Goldenrod's good reputation may be due to plant abundance rather than the high nectar secretion of individual plants. The concentration of sugar in the nectar has been found to be about 30%, and some contend that high temperatures are necessary for a good nectar flow.

E.F Phillips, apiculturist at Cornell University in New York, thought the value of goldenrod was probably exaggerated. He noted in 1928, "In many places they are the most conspicuous flowers in fall and get credit for honey which probably comes mainly from the aster."

Goldenrods provide food for other creatures besides bees. The leaves are relished by deer, rabbits and upland game birds, while the seeds are eaten ay small mammals and several kinds of songbirds all winter long. Although generally regarded as a weed, Goldenrod also comes in numerous cultivated versions suitable for the ornamental garden. This is especially true in Europe.

The plant's botanical name, *Solidago,* is derived from Latin *solido,* to make whole, alluding to the reputted healing qualities of the herbs.

Goldenrods grow easily from seeds and the tall varieties may be readily propogated from pieces of the extensive rhizome system.

As for planting Goldenrod for honey, Mr. Root summed up his feelings this way in 1901 – "A patch of goldenrod might have a place on our honey farm and perhaps with cultivation it might do better and give a sure crop in all localities; but as it is only a common weed on our farms, I would hardly favor a general distribution of the seed." □

DICK BONNEY

The First Extension Entomologist With Sole Responsibility For Bees, Beekeeping And Pollination Activities In All Of New England

Dick Bonney gave up a high tech job, life in the suburbs and a long commute to the city routine to live off bees. His beekeeping life has not been the straight road you might imagine.

In Cinnaminsion, a New Jersey suburb of Philadelphia, Dick Bonney was in the computer business, developing air defense systems. He was a weekend, three colony backyard beekeeper. In the Spring of 1978, he gave it all up to move to a beautiful farmhouse and property along the Deerfield River on the Mohawk Trail in Charlemont, MA. He didn't retire – included in the move were 20 colonies and the determination to carve out a niche and make a living off bees.

The 20 eventually grew to 50 colonies but never to his 200 goal. He found he had to scatter apiaries since only 6 10 colonies could be maintained at any one site. Happily, he did find the bee business good. Dick "couldn't keep up with the demand" for honey. He developed outlets to his honey in grocery stores, restaurants and to health food outlets.

An anticipated honey outlet, the tourist trade, did not materialize, however. The farm property located right in the middle of the Mohawk Trail in historic Charlemont, MA, should have been ideal for tourist sales. The expanding honey sales business however was not to tourists but it was largely repeat customers, the majority locals.

Dick found honey was not pushed at locations catering to the automobile tourist. It was "not in keeping with the Indian theme" of the region and interstate highways funnelled many potential visitors further northward in New England.

Most of Dick Bonney's honey sells during the fall. He has a 20 frame Maxant radial extractor and heated settling tank. After extraction, honey is stored in 60's. He bottles from a modified 40 gallon jacketed tank. The honey he produces is of mixed heritage. It is dark amber in color with a very pleasant aroma and taste. His price ranges from $1.60 for a one pound jar to $6.50 for a five pound jar. He fills gallon jars for $14.00.

Dick has come to know bears. One morning a mother bear with two cubs, within 100 feet of the house, visited his beehives. That was three years ago when winter feed was so reduced bears were coming into towns throughout the western part of the state.

Bear problems first occurred when Dick rented his bee colonies to pollinate blueberries. Blueberries are common on barren mountain top locations in the Berkshire Mountains of western MA. Such sites are isolated and bear damage can be common.

Today Dick fences his apiary sites against bears. Since sites only support a few colonies each, this means a lot of maintenance of bear fences. Although once active in moving colonies for both blueberry and apple pollination, he now leaves pollination to the "younger beekeepers who have more help available, and stronger backs."

Dick found it difficult to produce enough honey to supply the local demand so he bought from other beekeepers to supply his markets. But there is little profit in buying and reselling honey. Faced with the need for many small apiaries widely scattered and the difficulty of making much profit on pollination rentals, the bee business looked like a lot of work for little income. So how did he survive? He found he could teach others to be beekeepers and sell them the supplies to get started.

In fact, Dick became a specialist in just that. He has tried many types of teaching situations. His typical course is a six - eight week bee school offered in several locations in the three state area of western MA, southern VT and southern NH. Dick enjoys teaching and is good at it. According to Dick there is "not any better way to learn than to teach". He is a certified Eastern Apicultural Society Master Beekeeper.

Course fees are modest – $5.00/ Saturday session or $30 for a 6-8 week course, which includes hands-on experience when possible. With the instruction Dick found the students eager to buy his bee supplies. To keep customers coming back he produces a newsletter "The Aware Beekeeper" that continues the educational effort.

His interest in bees and teaching beginners has led to his writing a book *Hive Management*. The book, recently published by Garden Way, is a practical approach "to help beekeepers get past the beginning." Dick found individuals who start and then who gain some experience didn't have a good source book to help expand their basic knowledge and practice. His book, as explained in the preface, is "intended to explain the reasons for many practices that we follow without understanding why we do them."

Shortly after moving Dick went to the Entomology Department of the University of Massachusetts to find out why nobody was teaching beekeeping following retirement of Dr. Shaw several years earlier. He offered his services. He started out teaching in Continuing Education and now beekeeping is once again a regular spring course offering at the University.

On his twice weekly trips to the campus to teach, Dick began doing extension activities, initially without pay. Now he is the first extension entomologist with sole responsibility for bees, beekeeping, and pollination activities in all of New England. What is

By Dr. Dewey Caron

remarkable is that he has been appointed apiculturist in a state that has suffered massive cuts to State, University and extension budgets. How did he accomplish this? He persuaded industry – grower groups like the cranberry and fruit growers and the beekeepers – to pay half his position. The remainder is matched by extension funds.

In his extension role, Dick hopes to get more sideline beekeepers interested in pollination as well as continue his work with starting individuals as beekeepers. Now he has a whole state to work with. He is also interested in exploring the concept of "fixed land honey production." He feels some 15 or so plants could be planted in land now vacant or underutilized that can provide bee forage the entire season. This will expand the resource base and strengthen nectar and pollen resources of our bees.

With some 18,000 colonies needed annually for cranberry pollination, Dick Bonney plans to work on pollination. Wild bees still play a role in fruit and berry pollination. With emphasis on LISA (low-input sustainable agriculture), more growers could benefit from bumble bee and wild bee pollination according to Dick. Growers are still going to rely on beekeepers for the bulk of their pollination needs and beekeepers need to provide quality pollinating units.

Dick is a member of the Massachusetts Department of Food and Agriculture Beekeepers Task Force, formed out of concern over mite introductions from migratory bee colonies used in pollination. The Task Force is a mechanism for the beekeepers to voice their concerns to regulatory officials. One topic they are discussing is a possible apiary inspection/registration fee. The task force is helping to shape and focus the responsible governmental agencies in development of a reasonable fee proposal. The task force "has been effective in providing beekeeper input" in Dick's opinion.

Dick Bonney

From beekeeper to honey salesman, to educator, to extension specialist, Dick Bonney has found a different lifestyle. With several activities he has been able to support himself and family with bees. He wouldn't trade the bee business and go back to computers for anything. Dick Bonney likes bees and educating others about then. They have been good to him and he intends to continue to share his knowledge and experience to help others. □

All Together in 1994

Speaking of meetings, it's not too early to start planning for the January extravaganzas held each year by the Honey Producers and the Federation – this time in Nashville, TN and San Diego, CA, respectively.

Both promise to be entertaining informative, educational – and expensive. More expensive than many can afford. That's a shame, isn't it? Good (but different) speakers and programs at each and most regular folks have to make a choice – which one is best (or which one can I afford?).

I've covered this subject before, certainly, but this time I've gone a bit further than just comment (complain?) on the existence of two, when one would be far better.

The history and politics of these two groups aside, the reason they both exist is to improve their respective bottom lines. They want things better for their members – and the members themselves want things better for beekeeping and the businesses they pursue.

But the economic reality of attending two meetings from the perspective of speakers, many attendees, vendors and the places they are held is rearing its ugly head.

"This concept is supported by the USDA ARS, the Apiary Inspectors of America, and The National Honey Board. It has a strong backing, and should be seriously considered"

It is time, in my opinion to put an end to this expensive duet, and to arrange *the* meeting to end (or begin) all beekeeping meetings.

But there are others who share this opinion. I am not alone. The USDA ARS has said, in so many words, that travel funds are dwindling, and will continue to do so at an alarming rate for the next few years. Those people certainly won't be able to travel hither and yon to lecture and speak. The USDA wants a single outing per year – that's one.

Another group that holds annual meetings of their own, but must travel again to these annual confabs if they want to partake is the Apiary Inspectors of America.

They, too, are having budget problems, travel restrictions, personnel cuts They, too, solidly support the idea of a single meeting. They would plan their once-a-year fling to coincide with the other meeting, save money *and* attend the best of all meetings. That's two.

The National Honey Board has endorsed the Mega-meeting idea also, and have gone so far as to commit to having one of *their* meetings to happen at the same time, so they, too, would save money and time. That's three.

Discussions with *some* of the Honey Producers, and Federation people indicate a willingness to at least discuss the issue, but the powers-that-be of both groups have either remained silent, or decided the issue should not be considered at this time.

So, as the saying goes – let me cut to the chase.

1) The economic situation for everyone in the beekeeping industry – beekeepers, suppliers, packers, pollinators – is tightening, and will continue to do so. This includes the peripheral groups, too – Research, Extension, Regulation, and the Honey Board.

2) Because of this, and the convenience of time and effort these groups *all* support the concept of a single annual Mega-meeting.

3) Many vendors who attend these meetings, and many who don't because of the cost, support a single event to increase the number of attendees and reduce both their cost and the price of their products.

4) The two major groups, the guys who will, or will not make this happen are already looking to 1994 for their meeting plans. They will have preliminary information by their January meeting.

5) It would take that long to get the other groups to arrange their schedules to accommodate this plan, but they are all ready, willing, and able to do so.

Therefore – Right now is the time to act. This month I propose that representatives of these two groups contact me so we can organize a feasibility meeting to be held in time to see if a '94 Mega-meeting is possible.

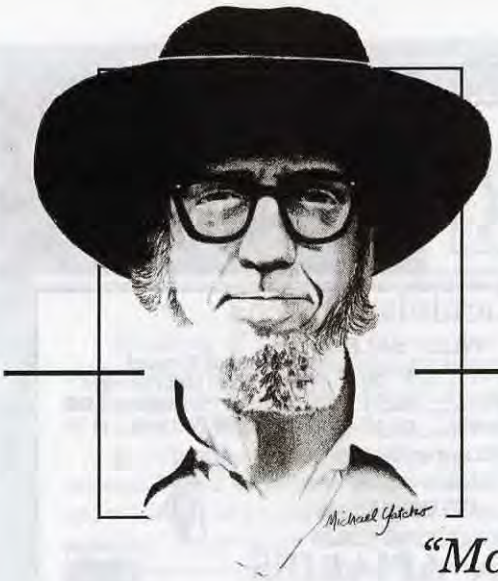
I believe it is possible, it is supported by many decision makers in the industry and it makes simple economic sense. Further we have three years to make it happen.

If it doesn't, if these powers-that-be choose not to see past their short-sighted plans it won't be because we haven't tried.

But it wouldn't hurt if you tried, too. Drop Bob Brandi, the Federation President a postcard and let him know how you feel. His address is Mr. Bob Brandi, 1518 Paradise Lane, Los Banos, CA 93635, (209) 826-0921. And don't forget Richard Adee, President of the Honey Producers. His address is Mr. Richard Adee, President, American Honey Producers, P.O. Box 368, Bruce, SD 57220 (605) 627-5621.

All Together in '94

Kim Flottum



BEE TALK

RICHARD TAYLOR

Box 352, Interlaken, NY 14847

"Make money selling honey – Here's how!"

This should be a good time to talk about selling honey. Of course not many people go into beekeeping just to make money. The pleasures of the craft are apt to be the main reward, and those who do not know how to do it are likely, sooner or later, to lose interest in their bees.

I'm going to skip over the basics, having to do with making sure the honey is well strained, free of beeswax particles, neatly labeled, and so on. Anyone who does not have enough basic sense to know those things already is not going to get very far. I am going, instead, to talk about some things I have found useful, and perhaps some things that have proved not useful, things you might not otherwise think of and that you are not likely to find in the bee books.

I have, for example, not found it useful to sell honey through grocery stores. I moves very slowly there, and it is about the worst way in the world to sell comb honey. Roadside stands, on the other hand, do very well with honey, especially comb honey.

Of course the best way of all to sell honey, if *you are well situated for it,* is to have your own roadside stand. That's what I do. I live on a scenic road, near a very large lake. Lots of tourists go by. And my little honey stand has become known far and wide. If you do this, then it is essential to have signs up and down the road. I have small signs two miles away in each direction, then larger signs to catch the eye as motorists draw closer. People make their own change, and I have no significant problem of theft. I appeal to their better side by making clear my trust in them. Several years ago I started putting a little pad of paper there, with pencils, so they could add up what they owed, and have been delighted to find, along with their figuring, lots of appreciative notes. Very few people have any desire to steal. What everyone wants more is a sense of self worth.

No matter how you offer honey for sale, it is important to convey an impression of abundance. Have a lot of it on display. For example, if your display of honey has only one section of comb honey, then you are likely to find it is still there at the end of the day, but if you pile it up, a couple dozen or more, then it will catch the eye and sell.

Don't let anyone tell you there is not a market for comb honey. It may catch on slowly at first, but it does catch on, and you will not be able to meet the demand. I never have. But it is essential that you live in an area of good strong honey flows. Sections that are not filled up nice and full do not sell at a decent price, and the supers must not stay on the hives very long, lest the sections become darkened with travel stain. Stay away from comb honey unless you are in a primary area.

A lot of people do not know what comb honey is, having never even seen it. I would guess that maybe half of those that stop at my stand are puzzled by it. So a few years ago I began sticking a little message on the back of each round section. I also had this message printed up, on a larger format, and a pile of these is always on the stand. This vastly increased my sales of comb honey, possibly doubling them. I offer it here, and readers may use it or modify it as they wish. It is a simple matter to reproduce it in quantity with a copier, and most copy centers can also adjust the size. A single small drop of rubber cement, from any hardware store, will stick this message to the back of a

What Is Comb Honey?

It is the only sweet in the world that is neither made nor processed by man. The bees build their delicate comb, and fill it with honey, in the very container you purchase.

Honey that has been extracted from the honey comb and strained is not the same. Usually it has been heated, to retard granulation. If it is commercially packed, then it has been heated and filtered as well. It is good, but not as good as comb honey—the most exquisite delicacy to be found anyplace in nature.

Put comb honey on anything you wish to sweeten, or eat it as is. The wax won't hurt you; in fact, though it has little nutritional value, it is good for you in other ways. It is your guarantee that the honey mingled with it is the perfection of what honey should be. *—Richard Taylor*

To use: Remove covers—top and bottom—run a knife around inner edge of container to let honey comb drop out onto a dish.

round section. That simple improvement in packaging was probably the best idea I ever had for selling comb honey.

Here is a suggestion about glass jars that might be of use. It has saved me a lot of money. You have perhaps noticed that a standard canning jar, pint or quart, has a lid the same size as a five-pound honey jar. These jars can be picked up by the boxful at yard sales. People give up canning and set their accumulation of jars out in their yard sales. You can pick up hundreds of them this way. About a dollar a dozen is the usual price. And the bee supply company can sell you the lids. The quart size is a three-pound jar. So for the trouble of washing them nice and clean, you get an enormous bargain in glassware, just right for honey.

That same quart size, taking the same size lid, is also common for other food products, like mayonnaise. Many towns now have recycling centers, and these jars get turned in there by the hundreds. A friend of mine supervises the recycling center near me, and she sees to it that the jars useful to me, with the standard opening, accumulate in a big box there, mine for the taking. I need only put them through the dishwasher, with a big reduction in my costs. And of course the goal of the recycling center is met in the most direct way possible.

With a few unorthodox approaches, a sideline beekeeper can do very well making some money from his bees. Even if you do nothing more than set honey out on a table in your front yard, or on your porch, you will in time build up a trade. Or take it to your place of work. This always succeeds. The advantage of the sideliner is that such a beekeeper can always find novel approaches and cost cutting ideas, and can sell honey that is quite different from usual store honey. You won't get rich, but what you earn from your bees will certainly not be insignificant. □

QUESTIONS? ANSWERS!

Richard Taylor

Winter Company

Q. I have 15 colonies started last spring from package bees. Because the season was so poor, only about half have built up to any strength. The rest are about the equivalent of four frame nucs. What should I do?

Ron Colwell
Spring Mills, PA

A. I would wait until October, when the fall flows are over, and then unite any weak or underweight colonies with the heavier ones. Come spring you can divide them back to 15 colonies, and hope for a better year.

Honey Dew Honey

Q. We got a lot of honeydew this year, which is very thick, dark and odd tasting. We do not want to retail it. What should we do with it? Now the fall flow is about to begin. Will the bees mix the goldenrod honey with honeydew?

Margaret Zwies
Pittsburgh, PA

A. Honeydew, as well as any off-flavored honey, is best left on the hives for the bees to build up on the following year. Honey left on the hives is never, in my opinion, really wasted. Sometimes honey having honeydew mingled with it is acceptable for baking. With respect to the fall flow, or any honey flow, bees will seldom gather honeydew when nectar is available to them.

Ferment Fear

Q. I sometimes need to feed sugar syrup when I divide a colony and natural nectar sources are not in bloom. My problem is that the sugar begins to ferment in the feeder before the bees get it consumed, even though I make it as thick as possible. Is this harmful to the bees? And can it be prevented?

Jack Torkelson
Greenbrier, TN

A. Sugar syrup is apt to begin fermenting if the weather is very warm. This is apparently harmless to the bees. One way to reduce the problem would be to feed smaller quantities at a time.

Swarm Season?

Q. The bees are clustered all over the front of my hive. Does this mean they are going to swarm?

Joe Robeson
Ulysses, NY

A. No, not during this time of year. Such clustering means either (1) that the colony is very populous, or (2) that there is a dearth of nectar in the fields. Strength of adult bee population in a hive does not by itself lead to swarming. What is more directly related to swarming is congestion of the brood nest, that is, lack of space in which the queen can lay eggs. It is very common for bees to cluster outside the hive in late summer, when there is little nectar, but very uncommon for them to swarm then.

Requeen Now?

Q. I am considering requeening my three hives this fall. Would I risk getting mites by purchasing queens from the south? Or should I just leave the hives alone and see what happens? The queens in these hives are going into their second winter.

Ralph Schofield
Rockland, MA

A. I think the risk of getting mites by introducing queens is minimal, but does exist. A good way to reduce this risk is to remove the attendants before introducing the queens. I would, however, suggest waiting until spring to requeen, as it is very much easier then. You also have a better chance in spring to determine whether the queens were accepted, and to try again in case they were not.

It's all in the Timing

Q. Every August some of my colonies become extremely aggressive, so it is difficult to work with them or harvest the honey, even though they have been quite manageable until then. How come?

Duane Waid
Covert, NY

A. This is caused in the Northeast by the cessation of honey flows prior to the blooming of goldenrod. Harvesting supers in August can leave the colony with virtually no honey at all for their brood, at a time when no nectar is coming in. This puts the colony under a severe stress, and the bees react accordingly. One solution is to harvest the honey before August, and then not again until after the goldenrod flow.

Questions are welcomed. Address to Dr. Richard Taylor, Box 352, Interlaken, NY 14847, enclosing stamped envelope for reply.

GLEANINGS GLOBE

OCTOBER, 1991 ALL THE NEWS THAT FITS

Glosser to California

APHIS CHANGES ADMINISTRATORS

Assistant Secretary of Agriculture Jo Ann R. Smith today announced that she will name Robert B. Melland and Lonnie J. King as acting administrator and acting associate administrator, respectively, of USDA's Animal and Plant Health Inspection Service.

"Effective Sept. 8, I am asking Bob Melland, currently associate administrator, and Lonnie King, currently deputy administrator for veterinary services in APHIS, to serve in these positions," said Smith. "Both will contribute strong leadership in maintaining and strengthening current APHIS programs." APHIS is charged with protecting U.S. agriculture from foreign animal and plant pests and diseases. Smith noted that in addition to his duties as acting associate administrator, King will continue to serve as deputy administrator for veterinary services.

James W. Glosser will leave his position as administrator of APHIS on Sept. 7 to become Assistant Dean in the School of Veterinary Medicine at the University of California at Davis. Glosser will serve in a dual role as a faculty appointee and as a USDA representative in international agricultural health. The focus of his assignment will be on enhancing the marketability of U.S. agricultural products in the global marketplace.

Melland assumed the duties of associate administrator of APHIS in June 1990. He has been with USDA since August 1987, first serving as special assistant to the assistant secretary and later as deputy assistant secretary for marketing and inspection services.

Before joining USDA, Melland was a special assistant to Senator Mark Andrews (R-N.D.) from 1985 to 1987. Prior to that the was director of the North Dakota Office of Management and Budget. A native of North Dakota, he attended Jamestown College in Jamestown, ND, and Concordia College in Moorhead, MN. He served in the North Dakota Senate from 1966 to 1982.

Ass't Sec. of Ag. Jo Ann Smith

Lonnie King has been deputy administrator for veterinary services in APHIS since August 1988. Before beginning his government career in 1977, King was in private veterinary practice for seven years in Dayton, OH, and Atlanta, GA. He had a variety of assignments with APHIS until he left government service in 1987 for a position with the Washington, DC office of the American Veterinary Medical Association.

A native of Wooster, OH, King received his bachelor of science and doctorate of veterinary medicine degrees from Ohio State University. He earned a master of science degree in Epidemiology from the University of Minnesota while on special assignment with USDA in 1980. King also received a master of public administration degree from The American University, Washington, DC in May 1991.

HONEY BOARD MEETS IN PORTLAND, OR

Fall Meeting Out West

The National Honey Board and Nominations Committee meetings will be held in Portland, Oregon, Oct. 27-30.

The National Honey Board cordially invites all interested beekeepers and industry members to attend the fall meeting. Board meetings are held in various parts of the country to allow the opportunity for industry members in many regions to see the Board at work.

For an agenda or other meeting details, contact Tina Tindall at the National Honey Board office. 303-767-2337.

MID-US HONEY PRODUCERS TAKE STAND

The Mid-U.S. Honey Producers Marketing Association held its annual meeting in Pierre, SD on August 23, 1991. This single Association represents over 18 million pounds of honey produced in an eight state area. During the meeting members did an in-depth analysis of world honey crop conditions, the cost of production, market status, and other pertinent factors relating to supply, demand and price. From that evaluation came the conclusion that the Mid-U.S. Honey Producers strongly encourage their members, and any and all other honey producers to ask 60 cents per pound, FOB producers dock for the 1991 honey crop.

Beekeepers – Send In Meeting Notices 60 Days In Advance

MEET THE HONEY BOARD DIRECTORS

The National Honey Board consists of 13 members shown attending the Board's annual meeting. Pictured are: (front row) Melissa Hart, William Gamber, John Milam, Richard Adee; (second row) Hans Boedeker, Mike Ingalls, Bruce Beekman, Binford Weaver, Neil Miller; (third row) Bill Merritt, Harry Rodenberg, Stephen Klein, Dwight Stoller.

FEDERATION MEETS

Now is the time to begin to prepare for the American Beekeeping Federation's Honey Show, says Show Chairman Rick Sutton.

The Honey Show is a feature of the annual convention of the American Beekeeping Federation, which is set for Jan. 17-21, at the Red Lion Hotel in San Diego.

Preparations are also being made for all other aspects of the convention. According to Convention Chairman Troy Fore, topics and speakers are being selected the for the program,

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LOGO DOING WELL

The National Honey Board's Honey Bear Service Mark Program, launched in 1988, was designed to reward food manufacturers who use substantial amounts of honey in their products. Qualifying products earn the use of the Honey Board's lovable honey bear logo on their packaging.

The program continues to gain momentum. To date, over 130 products have been approved to use the logo.

Land O'Frost, Searcy, AR, has qualified to use the honey bear logo on its new Honey ham, Honey Turkey and Honey Cured Turkey Breast products which are distributed nationwide. "We felt the honey bear logo would reinforce the quality image of our products; what better association than with the National honey Board?", said Michael Turk, marketing manager at Land O'Frost. "The honey bear logo helps differentiate Land O'Frost products from its competitors," he added. "When we decided to launch new honey based products, there was never a thought given to using imitation honey flavoring. It had to be real honey."

"How can we let our customers know we use the 'real McCoy' – 100 percent pure honey?" Munchies, Inc. of Arlington, VA, felt the honey bear logo was the anwer for its Wheatzels whole wheat pretzels sweetened with honey. "I saw the honey bear logo in a trade magazine and it really caught my eye," said company representative Chris Fautz.

The National Honey Board logo complements the packages of products which use substantial amounts of honey.

"We've had a lot of positive feedback from both consumers and retailers about the logo."

Honey-Butter Products, Inc., Manheim, PA, has been making Downey's Honey Butter since 1942. "We were in the process of planning packaging changes when we heard about the honey bear logo," said spokesperson Kevin Sadd, the third generation of his family to run the company. "We wanted to emphasize the health benefits of our product and felt the real honey message fit in with the image we wanted to project – that Downey's Honey Butter is a plain, simple and healthy product."

Ellie Conlon of Proctor, WV, had a special interest in the honey bear logo. In addition to operating ThistleDew Farm, which makes Honey Mustard, Conlon and her husband Steve are beekeepers. "I want to see honey become a household word, something people will realize enhances many foods and food products" said Conlon. "Honey should not be something that just sits on the shelf."

Eight-in-One Pet Products, Inc. has been in business for 102 years – "a century of caring," a representative Joe Nasta said. The company manufactures 300 products which are marketed in pet shops nationally as well as in England, Singapore and Germany; 21 of these products, including 14 varieties of Ultra-blend Honeybars, have been approved for the honey bear logo. "We expect Eight-in-One's new Honeybar products to be the biggest thing in the pet shop," said Nasta. "The honey bear logo reinforces what we want to say about our products: they're pure and natural."

"We've had strongly positive feedback on the honey bear logo – it helps communicate the message that our products use pure honey," said Jon Lewallen of Cook Family Foods, Lincoln, NE. The logo appears on Cook's Classic Honey ham. "One customer told us we should make the logo as big as possible."

Support these products and others which use substantial amounts of honey.

SEND MEETING SCHEDULES TO CALANDER AT LEAST 60 DAYS IN ADVANCE.

Display Index

Bears and More Bears

John Bruce

I once had some bees up in the mountains for the fireweed honey. I had taken them back down an old logging road that was grown up with bushes. There was a clear spot at the end where the logs had been piled to load.

I had a forest permit that allowed me to use a bear fence, so I set it up after the bees were in place. The brush and weeds were thick and high right up to the cleared area. It was a thick bed of small rock and pebbles, so very little of anything grew there. I put the posts up first and then strung the electric wire on the inside of the pen (it was easier that way, as I had a clear place to unroll the wire). I put up three wires and fixed the charger and battery in an empty hive.

About a week later I went back to see how everything was going. A young boy was with me who was interested in bees. He had thirty hives and wanted to see how I worked with bees in bear country.

When we reached the site supers were all laying on the ground and the fence was gone! I straightened up the yard, as there was some breakage, some combs shattered, and a couple of hives tipped over.

When this was finished I began to try to reason out just what had taken place. I found where the bear had come up through the high weeds and hit the fence. The only way it could have happened was that the bear was running and hit the fence – the shock only made him go faster, probably the top wire was shocking his neck. Anyway, he charged through the clearing dragging the wire (I had used barbed wire). If he reared up with the middle wire, that explains how the wires took all the supers off the hives (they had not been glued down that much, yet).

We went into the brush, following the torn-up weeds until we found the wire hung up on brush and stumps. When we examined the wire we found a lot of bear hair and blood in the forward loop.

It took a long time to untangle the wire and get it back to the bee yard. We put it back up and then discovered the battery was dead because it had been shorted out on the lower wire when the fence had been torn out.

The boy was very excited about all this and wanted me to get a battery – he was afraid the bear would come back. I told him *that* bear would never go near the bee yard again as long as it lived. I never did put another battery on the fence, and nothing ever happened.

Later I met an old bear hunter who chased bear with dogs in that same area. As near as we could figure his dogs were after the bear that hit the fence. The bear, being pressed by the dogs had ventured out of his usual route trying to elude them, and had run into the wire.

Another time I was working bees in northern California, around Mt. Shasta, and had a crew of young men with me. Five of us went to a yard which had a trailer load of bees in it that we were going to make increase from, to send back up to Washington state.

When we arrived there were about thirty hives which had been torn apart, with hive bodies and supers splintered, brood eaten out of frames, and just a terrific mess! The ranger tried to tell us a deer was responsible for it (some ranger!). Who ever heard of deer eating brood combs, and chewing up queen cages?

While we were working I showed the boys that it *had* been a bear, and some of them became nervous about that. But I convinced them they were safe, and so we got back to work.

One of the boys, who was more nervous than the rest, came to me and asked about taking a short nature break. The highway ran just below the site, and the bees were in a field used for hay. A small distance above us the forest got thicker so I told the boy to go up into the woods.

The rest of us got back to work when all of a sudden we heard him yell! Then he bust out of the bushes, running with his pants down around his ankles. He would make four or five strides, trip and roll over, get up and the same thing would happen all over again, yelling all the while. We caught him and got him quieted down. I asked what had happened, he rolled his eyes with a scared look on his face and said hoarsely, "There's a bear up there – I heard him!" We had been laughing so hard at the sight he made and this retort only set off another gale of laughter.

I said, "If there was a bear up there, he is in the next county by now, with all the noise you made – and he's just as scared as you are" ■

BOTTOM·BOARD