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25 Years of SUPER Reading!

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from all corners of the world





Ron Miksha with his son Daniel - and his wife, Erika.



Less Stress; More Fun – Comb Honey Beekeeping

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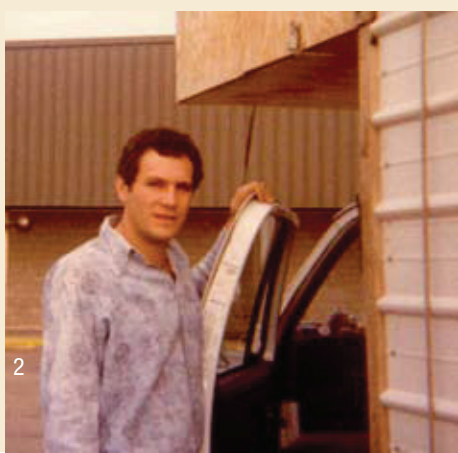
THE EARLY YEARS - MIGRATORY BEEKEEPING

For good reasons, much is made of the effects of stress on honey bees. Monoculture diets; midnight hijackings and transports to distant climates; artificial fortified meals and chemical desserts; community apiaries with ten thousand neighbour colonies. The stress is real and the bees are sometimes dying from it. And so are the beekeepers. The harsh competition of commercial honey

production defies the natural order of both man and bees.

I recognized this many years ago. I wasn't much more than a child when I set off navigating a huge lorry loaded with haphazardly stacked bee boxes. From Pennsylvania, in eastern North America, my destinations included Florida citrus groves, Wisconsin dairy farms, West Virginia apple orchards, and expansive Saskatchewan cattle

ranches. A lot of landscape would glide past my bee veil every few days. Occasionally I would awaken from a curled position on the seat of my truck, not sure if I was in Canada or the USA, not certain if I had packages of live bees or supers of empty combs in the box behind me. Admittedly, it was fun, challenging, exhilarating. At age twenty. Eventually, for a variety of reasons, I stopped trying to earn a living from bees.



The early Years - Migratory Beekeeping

1. Pulling honey in 1978 in Saskatchewan
2. Ron with his home-made bee package van.
3. Installing package bees, 1980.
4. Bees on sweet clover in Saskatchewan, 1980.
5. Supering bees in Saskatchewan, 1980.
6. Supers full of honey ready for lifting on to the truck, Saskatchewan, 1980.

BEE FARMING



Above and right: Migratory beekeeping - the long inter-state drives, 1965 and 1980.



Away from commercial beekeeping, I had things I never had before – time and money. But no bees. So, almost immediately, I bought a dozen hives. A few years later – still drawing funds from a new career – I bought a farm out on the boundless Canadian prairie. With the help of an older brother, we added five hundred hives to the farm. “Whoops”, as they say. Back in the bee business. But this time, I hoped, it would be a more thoughtful honey farm. I was thinking of producing comb honey.

I have often believed that if girls were the only beekeepers (and no boys allowed), there would be a lot more comb honey in the world. Boys - myself included - are enamored by loudly clanking, whirling machinery. Shortly after getting his first hive, a boy will start shopping for an extractor. It shakes all over the floor, and it slings honey out in gooey gobs. Such fun! Then there's the uncapper. When I was a kid, I fell in love with a Bogey - the Bogenshutz - that a neighbour beekeeper owned. I was so envious. It had whips and chains with sharp little hooks. If you dropped a frame into Bogey the wrong way, pieces of wood were ejected through the slot where your hand had better not be. Who could ask for more?

If you go commercial, you'll probably get a huge lorry that drags a trailer. Perched like a king on that trailer would be a forklift. And you'll need it - commercial guys move their hives a dozen times a year - whether they need to or not. Moving half-ton pallets of bees at midnight is immensely pleasurable. At harvest, each deep honey super can weigh a hundred pounds, so it's nice to have another forklift in the warehouse, too. Finally, that warehouse has to be big - with tall ceilings for stacking those 700 pound drums of honey.

GOING FOR COMB HONEY

Compare this to the pastoral art of making comb honey. Combs weigh a few ounces. Harvest tools - a shiny knife and a hive tool - can rest in the palm of a hand. If you choose to listen to Mozart while packing, you

can actually hear the second viola - it's not competing with the howls of a wax spinner. So, why don't more people make comb honey? Besides the obvious - most beekeepers are boys and most boys like noise - there are a few other drawbacks. Typically, consumers prefer liquid honey. To sell your harvest, you still might need to melt, press, whirl, or squeeze your combs to get runny honey. You may need to educate consumers about the superior taste and naturalness of comb honey. But the biggest impediment to a world full of comb honey producers is the fact that comb honey beekeeping is really, really hard.

Halfway through his 1976 British Handbook of Bee-Keeping, Herbert Mace announces: “I deliberately refrained from giving details about the production of comb honey in the first part of this book because it is, in my opinion, a mistake for beginners to attempt what is admitted to be the most difficult thing to accomplish satisfactorily.” When he says, “the most difficult thing to accomplish satisfactorily” he is including piloting a space shuttle and settling a three-year-old for a nap. Comb honey making is hard. So, this is fair warning – although the beauty of a perfect honey comb is unmatched in the world of food, and although no honey product is closer to the pure and natural sweet that bees intended for us to eat, making comb honey is not for the easily discouraged. But if you really want to know beekeeping – and if you are up to the challenge – honey combing is a noble pursuit.

In this article, I hope to encourage beekeepers – male and female - to make comb honey. I'll try to give a few tips. But there are smarter people than I who have written some great books on comb honey beekeeping. I will simply suggest a beekeeping alternative and write a few words of encouragement to those of you who like bees more than machines.

One of the most famous figures in

modern beekeeping was Dr Richard Taylor. He taught philosophy - he literally wrote the book on Metaphysics, a text still used on campuses in introductory philosophy classes. Away from the campus, his passion was his comb honey bee farm. From 300 hives he produced 20,000 combs a year. He kept his overhead low - just one old truck and no paid help. Besides what he termed the “intrinsic beauty of comb honey” he cited the low overhead of the enterprise as its main attraction. Without a lot of equipment, Dr Taylor netted an extra thirty thousand dollars a year for his summer-time efforts, back in the 70s and 80s. Not bad for a professor's hobby.

Over 50 years ago, in American Bee Journal, philosopher-beekeeper Taylor advocated the plastic round comb system. Plastic round comb sections were invented by Dr Wladyslaw Zbikowski, a retired physician, born in Pennsylvania, educated in Poland, but keeping bees in Detroit, Michigan. Dr Z may have got his idea from an earlier similar system, devised in 1880, that used glass rings nested in sawdust. Dr Z's 1954 invention is very similar. According to Richard Taylor, Dr Z was not a promoter and soon several identical, competing frames were sold, including Cobana and Visi-chek. Dr Z finally sold the idea to Tom Ross, a retired Ohio architect, who submitted the plan for patent in 1980. That patent has long since expired and a number of other models using plastic containers that the bees fill right in the hives have been developed - including the Vac-Pac, Hogg Cassette, and Bee-O-Pac of North America, and the Pohl Rounds of Hungary. All of these products are plastic.

I'm not a huge fan of plastic, but the only viable alternative is a wooden-box system. For generations, wood was the ‘traditional’ material for comb honey boxes. But the wood had to be soft, pliable, bendable –

BEE FARMING

able to wrap around the wax foundation and securely house the comb of honey. For this, in North America, a beautiful native deciduous tree we call Basswood (aka Linden, Lime, or *Tilia americana*) is sliced up. Early last century, basswood comb honey squares were being filled by the millions and old-growth basswood trees were being felled by the thousands. Sadly, this same tree provided much of the whitest and nicest honey for those boxes. To me as a child growing up in a family producing basswood honey, this seemed rude. So, now we are using plastics instead. A huge advantage with these modern systems is that the bees fill the same container that the consumer eats from – there is no processing (beekeepers never touch the honey). Packaging – though tedious – is as simple as snapping a couple of lids on the finished honey comb you've pulled from the hive.

READ ALL ABOUT IT.

You'll not need much else to start making comb honey. You'll need the hives you have now, your knife for harvesting, plus the round comb equipment for easy production. But you'll also need wisdom. If you want to get serious about comb honey production, spend some time on-line or at the library.

HERE ARE HONEY COMBING BOOKS TO LOOK FOR:

For sheer delight, read any of Dr CC Miller's books. CC (as the former physician was always called) wrote the book on comb honey beekeeping a hundred years ago. His *50 Years Among the Bees* is a classic in beekeeping literature, but CC's techniques and advice are often no longer relevant. Nevertheless, he was a keen observer of honey bee society and CC clearly explains how he produced 300 sections per hive on a regular basis after he moved west to Illinois from the Pittsburgh area. About the same time, another Pennsylvania beekeeper, WC Harbison, moved to California and began producing comb honey by the train-car load, shipping it from San Diego County to New York City in the 1890s. He tells his story in *Bees and Beekeeping; A Plain Practical Work; with Directions on How to Make Bee-Keeping a Desirable and Lucrative Business*. Once you get past the title, you've almost finished his book. In 1917, George DeMuth, an agri-scientist, explained comb honey in *Comb Honey*. Later, Eugene Killion described a complicated system of comb honey production which made him the most successful American beekeeper of the 1940s. You can read his autobiography, *The Covered Bridge*, or his manual, *Honey in the*

Comb, still available from some bee supply companies. Dr Roger Morse published *Comb Honey Production* in 1978, a great book which covers everything comb. Miller and Morse wrote the best of this bunch. This brings us back to the philosopher-beekeeper, Richard Taylor. He also wrote some fine books.

Undoubtedly, the best books on comb honey beekeeping are Dr Taylor's series from the 1970s which include *The Joy of Beekeeping* and *How to Produce Beautiful Comb Honey*. After a half dozen pages of 'whys and wherefores' as he calls them, Taylor eschews philosophy and focuses on the nuts and bolts of comb honey production. Among his key elements are suggestions on how to crowd the hive while maintaining swarm control. This is the heart of comb honey production.

I'LL TRY TO SUMMARIZE SOME OF HIS STEPS:

- Using only your strongest and best hive(s), reduce the colony (from two or three deeps) to single story as the main honey flow is starting.
- Find and cage the queen. Later, you could requeen this hive with a young locally-bred queen by slipping out the old caged queen and inserting a new (caged) queen. Meanwhile, you have broken the brood cycle. By caging the queen, swarming is stalled although the bees may still raise new queen cells, which you'll need to monitor.
- Leave mostly sealed brood in the single box with the caged queen, moving the unsealed brood to other, weaker hives. This increases the strength of your poor hives – but be sure all your colonies are pest-free and disease-free or you'll be scattering trouble amongst your bees!
- Stack your comb super(s) on the single-story hive, which should be boiling with bees.
- Remove finished supers so the combs stay fresh and clean. As needed, you may want to pull individual frames and combs, or rotate the positions of unfinished combs. Watch for the end of the season, reducing unfinished sections to a minimum so you're not stuck with partial combs.

There is much more you need to know: more on swarm control, comb-baiting, equipment assembly, hive build-up, harvesting, honey handling. If you can't get a copy of Taylor's book, you will find more about his techniques on our website: www.summitcombs.com. We've posted a number of useful ideas and suggestions about comb honey production there.

SOME HONEY COMBING FUNDAMENTALS TO KEEP IN MIND:

- Comb honey making requires an intense nectar flow, which might not be available in your area. Slow flows result in thicker wax and less uniform sections. When the flow tapers off, it may also result in unfinished combs.
- Comb honey making requires a densely-populated hive. Swarming is a frequent by-product of this condition. DeMuth (*Comb Honey*, 1917) says, "Any manipulation for swarm control is based upon a single principle - a temporary disturbance in the continuity of the daily emergence of brood." So you need smart management to crowd the hive without causing swarming.
- Avoid granulation. Dr Eva Crane (*A Book of Honey*, 1980) noted that honey processed through extractors and pumps is more likely to crystallize than identical honey left in the comb. But comb honey can nevertheless granulate - we once had a problem with this. Rock solid honey is still honey – we even have friends who prefer crystallized combs. But most people don't and customers may think the honey is "old". So, avoid granulation sources like aster and canola, if you can. Freeze your harvested honey combs. We built a huge walk-in freezer and we keep the thermostat set at minus 20 Celsius.

I can't say that comb honey beekeeping removes stress from bees and beekeepers. But it can be less harsh than typical commercial beekeeping - especially if smaller apiaries, bees situated in permanent sites, young queens, locally adapted genetics, and serious monitoring of diseases and pests are included in your management.

BEE FARMING

Comb honey sells well to people who taste it. Everyone else – most of the world's population – have no idea what they are missing. If you help your bees make comb honey, you will probably become a teacher of nutrition and a promoter of healthy food alternatives in order to sell your crop. On the retail level (including farm-gate, roadsides, and farmers' markets) a 200 gram (7 or 8 ounce) honey comb should sell for \$10 or more. A friend sells about 300 combs at \$15 each from the boot of his car every year while parked outside a green grocer's. He also sells some nice mild liquid honey,

which is his main draw. At your favourite market, check the prices of top quality foods – cheeses, olives, nuts – and you'll notice similarly priced gourmet items. For the beekeeper, a fair price grosses \$200 to \$300 for 15 pounds of comb production. But it is a hard-won profit.

After all this, you may be wondering if honey combing is worth the trouble. The answer gets back to your feelings about your bees and beekeeping. If you want to make and sell a near perfect food and if you want the challenge of the most difficult sort of beekeeping, then you should give it a try.

Dr Richard Taylor, the metaphysics professor at Cornell University - supreme advocate of comb honey beekeeping - would have encouraged you. In addition to developing into a more fastidious beekeeper, Taylor said the most compelling reason to produce comb honey was the simplicity of the equipment. Thinking like a boy, he once said, *"You only need the pocket knife you had as a child."* Certainly, if you are considering beekeeping and you are not thrilled about the extracting business, you need to view the enterprise from the comb honey perspective.



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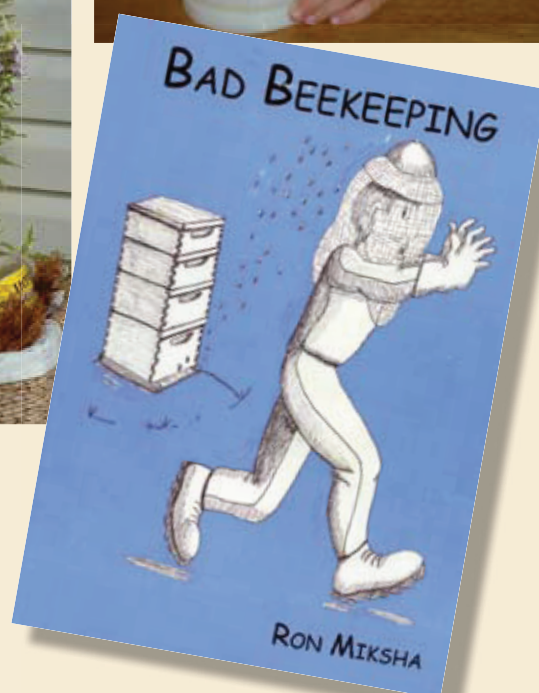
Comb Honey Production

1. Reducing hives to single boxes just before the flow
2. The use of new frames improves bee health.
3. Strong hives with frames full of round plastic section frames.
4. The stronger the hives the better the harvest.

BEE FARMING

**Comb Honey Production**

5. The stronger the hives the better the harvest.
6. Harvesting the honey.
7. The honey harvest couldn't be easier - all you need is a knife!
8. Combs in different stages of production.
9. Crates filled with beautiful round combs.
10. A store display ready for delivery.
11. Daniel enjoying the finished product.



A full account of Ron's earlier years in beekeeping can be found in his excellent book, *Bad Beekeeping*, published in 2004. He also has a beekeeping blog on his website www.badbeekeeping.com/ Ed.

