

**Gathering Summary:  
Managing an Organic Beehive,  
by Veronica Honthaas,  
February 23, 2011**



Summary by Catherine Haug; photos as noted

*(Photo of Honeycomb with Bees, right, from Flathead Beekeepers Club Facebook Page.*

See also [Photo Gallery for Managing an Organic Beehive](#) for more photos from this event)

## Introduction

Ronny provided a list of resources; see ‘Ronny’s Resources’ at the end of this summary.

Back in the 1980s, she lived at Happy’s Inn, and took a class at FVCC on beekeeping. However, she refused to use chemicals and her bees did better than others because, in her location, they were far from agricultural chemicals. When she moved to Badrock, she gave up her bees until two summers ago, after finding only 5 bees in her garden.

She discussed colony collapse disorder (CCD) and probable causes of this devastating problem to hives. Neonicotinoides (pesticides), mites, virus and fungi are at the core of the debate (see ESP posts [Honeybee Colony Collapse Disorder Explained?](#) and [More on Honeybee CCD Discovery](#), for more on the controversy).

While these do indeed play a role, Ronny believes the beekeepers also play a role. Modern beekeeping by hobbyists and commercial operations is not much different than factory cow or chicken farming (CAFOs):

- use of chemicals: antibiotics, fungicides, mite poison;
- queen bees don’t come from where they will live, and they are artificially inseminated, limiting genetic diversity. “What is needed is a promiscuous queen.”

She notes that a good part of what she will present is controversial.

She passed around a sample honeycomb for us to examine, feel and smell (mmm).

## Three rules or requirements for organic hives

In Ronny’s terms, treatment-free organic is not the same as standardized ‘organic’. These rules define her meaning:

1. No treatments & no sugar water. Standardized Organic allows use of essential oils as pesticides, etc.. However a sickly hive is not meant to survive; a 10% loss is normal.
2. Right genes for your area - the ones that have survived there through generations.
3. Naturally sized (small) bees. This is controversial. Commercial beehive cells are 5.4 mm; small bee cells are 4.7 - 4.9 mm, a historic size for wild bees. “Regress” your hive back to where they should be (size and health-wise).

## Bee Genetics

It is widely believed that honeybees are not native to the Americas, but rather were brought here by Europeans. This belief keeps the bees off the endangered species list. However, Ronny believes there are native honeybees, and a recent discovery of amber (petrified honeycomb) in Arizona lends credence to her belief.

Breeding unnaturally large bees has resulted in 'bad' genes and weakened immune systems. Transporting bees around the country to pollinate big orchards has exposed them to toxic agricultural chemicals, and unnatural stress.

Bees should be good for about 2 years, but many commercial hives are burned at the end of one season, then start fresh the next season - a wasteful practice.

What is needed is to reintroduce the genetics of wild bees. A particular wild bee may not be any better, but take a chance. Additionally, instead of shipping bees to where they are needed, each area should keep their own bees that are adapted to the area as 'home.'

## Cell size

Bees will naturally grow to the size of the cell. When the cells are smaller, the worker bees can cap (cover) the cells containing the larvae faster. That leaves less time for mites to infect the brood; thus less mites.

In the late 1800s wax foundations were produced, with hope of helping hives grow faster. Initially, these had cell sizes that were too small. Over time, the cell size of the foundations became too large. Bu the 1940s the industry was committed to larger bees and embraced the theory that 'bigger bees could collect more nectar and pollen' for more honey. Bigger bees have larger space between the plates of exoskeleton, which makes them more vulnerable to mite infestations, and then the queen is susceptible.

## Wild bees

Get the wildest bees you can. Start looking when hiking; an old snag may harbor hives. See "Catching Bees" section of this document. Contact the bee club when you spot a swarm (see links on ESP site, right-hand column under Gardening & Ag Links).

One concern is the ethics of taking a wild hive; Ronny does not do that. Instead, she only captures swams.

## Managing Hives

General recommendations:

- Don't use the standard frames; 4.9 mm foundation (or no foundation at all) is best for regressed bees
- Let the queen decide on hive size - unlimited brood nest
- Don't steal as much honey. If a lean year, don't take any, as the bees will need the honey to survive

## Stings

Use of ibuprofen and eating bananas can invite stings. Keep an epi-pen in case of allergy to stings (requires a prescription)

To treat stings: gently pull it out rather than scraping. Baking soda in water, honey, and plantain herb applied topically are all good treatments to remove poison from the sting.

## How to regress cell size

Western Bee in Polson, is a great place to get most hive equipment, but you cannot order recessed bees from them at this time. You can order them elsewhere, but since they come from a warmer, southern climate, regressing them yourself might be a better option.

Bees will grow as large as the foundation cell size. If left to their own devices and not placed on large cell foundation, they will regress themselves over 5 - 10 years. Helping larger, more disease-prone bees to downsize faster may be the best plan to enhance their survival rates. Encourage this by stepping down the cell size of the pre-made large cell foundations; with luck, this may happen in one season, or up to 3 years:

- ▶ Year 1: Start with Mann Lake PF100 (Perma Foundation), with cell size of 4.95 mm. These are plastic foundation and frame in one, to be used with 9 5/8" (24.45 cm) standard hive bodies. Ronny showed a sample frame of this type.
- ▶ Year 2: Replace the Mann Lake with 4.9 mm foundation, which is available everywhere.
- ▶ Year 3: Remove the foundation and let them build their own.

Or, you may get lucky and find a truly wild swarm that is already small sized bees.

## Catching Bees

(photos by Veronica unless noted otherwise. See [separate file](#) for more)

Options:

- Use a **gunny sack** (get one without pesticides)
- Use a **swarm bucket** (see photo, right): a 5 gallon can on a pole, with a lid operated via a cord, and takes two people to operate. Stick it up into the tree; when they go in, pull the lid shut.



- Use **bait hives** (see photo, left), with a pheromone or a dab of lemon-grass oil added as bait. Ronny brought two different examples, both made from sonotube, & closed at one end. Two types:

- Prefitted with 2 Mann Lake PF100 frames. Cover the round hole in the lid with 1/2" hardware cloth to keep birds out.

- Prefitted with top bars; wood lid has a slot at least 3/8" wide for entry.

- Ronny painted her bait hives with a blue low VOC latex paint (least toxic choice).

After catching them in the trap, move them to any standard hive (Lang, Warre, Top Bar), with smaller PF100 or other small-cell foundations (see 'How to regress Cell size,' above).



### Discussion concerning construction of the top bars:

(Photo, left, is a grooved top bar, from [Western Bee](#))

Ronny's samples were made of a square bar with a chamfered trim board (triangle shape) nailed to the first board.

Another type has a popsicle stick inserted in a groove in the square board, secured with Elmer's glue.

**Discussion regarding top-bar hives:** Roger H. shared photos of the top bar hives he constructed. (photo, right, by Roger H.; for more photos, see [separate file](#)). From Roger:

“When I made this one I drew scale drawings of the whole thing. My top bars are 1/16 of an inch per side wider than some. But being around bees in lang hives and in the wild for many years, I find that they build nest in some very odd places, and I doubt that they pay that much attention to 1/16th of an inch.”



## Audience Q & A's

### Q: What about bears...

**A:** Put an electric fence around the hive. Also to keep out raccoons and skunks. Use at least 3 strands with bottom strand about 10" above the ground.

### Q: How discourage wasps from the trap?

**A:** They probably won't want to enter the trap.

### Q: If you have wasps, is that a problem?

**A:** Yes. They can attack the hive. Get wasp traps that don't attract bees. Be sure to catch the queen wasp - early, in May.

### Q: How transfer from trap to hive?

**A:** Remove lid; remove frames slowly and carefully. Then, again slowly and carefully, transfer to hive. Or, if using top bars, do same thing - slowly and carefully is the key. And you want to be sure to get the queen.

### Q: How do you recognize the queen?

**A:** If you order them, they will be marked with a colored dot. But wild bees aren't marked; the queen has much longer abdomen, and the other bees will be herding and protecting her.

Drones are even bigger, with really big eyes.

In a hive, look for fresh eggs - little tiny white dot, like the point of a pin in size.

**Q: Do you smoke them?**

**A:** Use as little smoke as possible. The more experience you get, the less smoke you will need.

**Q: Where do you put the hive?**

**A:** Not in the garden. You want morning sun, and some afternoon sun is also good.

The entrance should face S or SE; they need a flight path that is not near a walkway.

You also need to provide a water source, such as a birdbath or pond, close enough that they will find it right away.

**Q: How far can they range?**

**A:** 1 - 2 miles, if desperate.

**Q: What are good plants to have in your yard?**

**A:** Clover, roses, annual ryegrass, and any flowers. Also herbs, especially those that don't bloom until late summer such as lavender or sage.

They don't like calendula

They do like alfalfa, which provides nutrient to soil and the bees. But watch the seed: you don't want GMO alfalfa.

**Q: What about used hives?**

**A:** These can be infected. Ronny uses them, but scrapes them out good and then lets them cure in the sun for a week or so.

Also wax foundations are remade from used ones and may be contaminated. That's why it's best to encourage them to make their own.

**Q: When can you harvest honey?**

**A:** Decide how big the brood nest is to be. After it reaches that size, leave one full large box of honey. The rest you can take.

Take it as soon as they have winter stores, but best to give a little more time; September or later.

## Ronny's Resources

### Local Persons & Organizations

- Doug & Veronica Honthaas, 892-0280
- Julianne Valentine 857-3186, a local expert, has lifelong experience with bees
- Flathead Bee Club has a Google group and a Facebook page (You can find these links in the right-hand links column of the ESP website, under Gardening & AG Links).

## Books & Websites

- *Idiots Guide to Beekeeping*, by Dean Stiglitz and Laurie Herboldscheimer: A great beginners book (see Amazon for more: [www.amazon.com/Complete-Idiots-Guide-Beekeeping/dp/1615640118](http://www.amazon.com/Complete-Idiots-Guide-Beekeeping/dp/1615640118))
- Organic beekeepers group, Dee Lusby (Arizona): [pets.groups.yahoo.com/group/Organicbeekeepers](http://pets.groups.yahoo.com/group/Organicbeekeepers)
- Michael Bush: (Lots of info)
- Principles of Beekeeping Backwards, by Charles Martin Simon: [www.beesource.com/point-of-view/charles-martin-simon/principles-of-beekeeping-backwards/](http://www.beesource.com/point-of-view/charles-martin-simon/principles-of-beekeeping-backwards/)
- [www.charlesmartinsimon.com](http://www.charlesmartinsimon.com) (books, etc. by Mr. Simon)
- You Tube ([www.youtube.com](http://www.youtube.com))

## Other References

### ESP Articles

- [Photo Gallery from Managing an Organic Beehive \(Feb 23, 2011\)](http://essentialstuff.org/wp-content/uploads/2011/03/Bee-OrganicHives-photos_022311.pdf)  
([essentialstuff.org/wp-content/uploads/2011/03/Bee-OrganicHives-photos\\_022311.pdf](http://essentialstuff.org/wp-content/uploads/2011/03/Bee-OrganicHives-photos_022311.pdf))
- [More on Honeybee CCD Discovery, Oct 30, 2010](http://essentialstuff.org/index.php/2010/10/30/Cat/more-on-honeybee-ccd-discovery/)  
([essentialstuff.org/index.php/2010/10/30/Cat/more-on-honeybee-ccd-discovery/](http://essentialstuff.org/index.php/2010/10/30/Cat/more-on-honeybee-ccd-discovery/))
- [Honeybee Colony Collapse Disorder Explained?, Oct 10, 2010](http://essentialstuff.org/index.php/2010/10/10/Cat/honey-bee-colony-collapse-disorder-explained)  
([essentialstuff.org/index.php/2010/10/10/Cat/honey-bee-colony-collapse-disorder-explained](http://essentialstuff.org/index.php/2010/10/10/Cat/honey-bee-colony-collapse-disorder-explained))
- [Saving the Honeybee, April 26, 2009](http://essentialstuff.org/index.php/2010/03/21/Cat/more-on-bees-other-pollinators)  
[essentialstuff.org/index.php/2010/03/21/Cat/more-on-bees-other-pollinators](http://essentialstuff.org/index.php/2010/03/21/Cat/more-on-bees-other-pollinators)
- [Gathering Summary: Pollinators & Their Habitat, April 22, 2009](http://essentialstuff.org/index.php/2009/04/25/Cat/gathering-summary-pollinators-and-habitat)  
([essentialstuff.org/index.php/2009/04/25/Cat/gathering-summary-pollinators-and-habitat](http://essentialstuff.org/index.php/2009/04/25/Cat/gathering-summary-pollinators-and-habitat))
- [Honeybees, Apr 15, 2009](http://essentialstuff.org/index.php/2009/04/15/Cat/honeybee-be-mine/)  
([essentialstuff.org/index.php/2009/04/15/Cat/honeybee-be-mine/](http://essentialstuff.org/index.php/2009/04/15/Cat/honeybee-be-mine/))
- [Video: Honeybees & Colony Collapse Disorder \(CCD\), Mar 31, 2009](http://essentialstuff.org/index.php/2009/03/31/Cat/honeybees-ccd-film/)  
([essentialstuff.org/index.php/2009/03/31/Cat/honeybees-ccd-film/](http://essentialstuff.org/index.php/2009/03/31/Cat/honeybees-ccd-film/))
- [Honeybees in the Ecosystem: Event Summary, Mar 16, 2009](http://essentialstuff.org/index.php/2009/03/16/cinecom/honeybees-ecosystem/)  
([essentialstuff.org/index.php/2009/03/16/cinecom/honeybees-ecosystem/](http://essentialstuff.org/index.php/2009/03/16/cinecom/honeybees-ecosystem/))

### Other websites

- Western Bee Supply, Polson ([www.westernbee.com](http://www.westernbee.com))
- [Great Plains Nature Center, on Honeybee \(www.gpnc.org/honeybee.htm\)](http://www.gpnc.org/honeybee.htm) also has info on other pollinating bees
- [National Sustainable Agriculture Information Service on Native Pollinating Bees \(www.attra.org/attra-pub/nativebee.html\)](http://www.attra.org/attra-pub/nativebee.html)
- Mann Lake: [www.mannlakeltd.com](http://www.mannlakeltd.com)