

From Sideliner to Full-time: How One Iowa Beekeeper Successfully Made the Switch

by MARY AND BILL WEAVER



In just five years, Iowa beekeeper Jason Foley went from his first nuc of Russian bees to a decision, in 2015, to give up his secure job with a financial firm and go full-time with the bees. Even though he gave up a retirement plan, benefits, vacation time, and a 4½ day work week at his former job, he does not look back.

Today, Foley singlehandedly runs 450 mating nucs in June, July and August, rotating them twice a month. He ships his Russian queens throughout the U.S., and also makes and sells nucs and packages of Russian bees.

He hustles. Come fall, he readies all his hives for the cross-country trip to almond pollination, working with two friends to hire and fill a semi load. "This year, I sent 153 hives to California," he noted. During the winter, starting with raw lumber, Foley constructs and sells hive bodies and supers in quantity, using the scrap wood to make entrance reducers, telescoping covers, inner covers, and bottom boards. If the scraps don't end up in a piece of equipment, then they go into the wood stove to heat the shop. It makes for a satisfying life.

Foley bought his first Russian nuc from Iowa/Minnesota Russian bee breeder Manly Bjalk. Besides being interested in beekeeping, Foley also hoped his new hive would help his neighbors. He lived in an area of Des Moines that had been laid out in 1.7-acre lots. His neighbors had used their extra space to plant gardens and fruit trees, but with minimal harvests so far. Foley figured the problem was lack of pollination. He was proven right. The first year his bees were on site during the tree fruit bloom, his neighbors found themselves with limbs breaking from the weight of all the pollinated fruit.

The second year, he split his lone hive and purchased two more Russian queens, giving him a grand total of three colonies. The next year, with additional splits, his hive numbers hit 15. "The local bee club asked me to start raising queens to provide to club members," and that business quickly took off.

By 2014, Foley was running a gauntlet all week between his daytime financial job and his evenings, Friday afternoons, and weekends spent with his bees producing Russian queens

for an ever-expanding, enthusiastic clientele. "My hobby was consuming my life."

It was time for a change. Using money from his retirement account, Foley moved out of Des Moines, purchasing 11 acres in a river valley as the new location for his growing business. "We built a log cabin and a pole building," he recounts, "and set it up just the way we wanted it. There is open space for my queen breeding, and plenty of protected area nearby for my 9 to 11 drone source yards."

The move was a success. Today, Foley can sell every queen he raises, and has enlisted the help of the Coy family in Mississippi to help meet the demand for Russian nucs and packages, particularly early in the season. "Last year I bought in 150 Russian nucs from Coys to resell, and this year I added 300 packages to keep up with the demand," he noted.

Foley's hives come back from almonds in late March or early April. Almond pollination is an important part of his business because his hives come back with about a month jump on the season, compared to hives wintered in Iowa. "They're bursting with bees, have a lot of brood, and also have been raising drones," he explained. "Here in Iowa," he continued, "You can't trick the bees into making boys when it's too cold. Having those drones is crucial for a queen-rearing operation.

"By early May I can make my first grafts, with a good population of drones available for mating, and by mid-May I can start rolling out queens." Foley produces and sells queens to his enthusiastic clientele through June, July and August. "It's not your typical queen-rearing season, but it's what our climate here in





A view of Foley's large mating yard. Drone-source yards are spaced from ½ mile to 1½ miles around it.

Iowa will allow." Despite the lateness of his queen-rearing season, Foley is consistently able to sell all the queens he can raise.

"I shut down queen rearing in August," he continued. "Temperature-wise, I could go another two months, but here in Iowa, by late August, in the river valley, we have huge populations of bee predators — dragonflies, hornets, and wasps. By August, too, as I watch the 20 hives I can see out my window here on the farm, I can see a collection of blue jays and cardinals swooping down from the branches to grab bees, returning to the branches to eat them, then swooping down again.

"Queen bees exiting the hive are so slow, they're prime pickings for any hungry birds out there." Because of the increased predation, where earlier in the season Foley was getting 75 to 90% success on queens returning from mating, "by late August I'm down to a 40% return."

In addition, there are problems with growing hive beetle populations by late August. "Small mating nucs can be prime territory for hive beetles," Foley explained. "When I'm regularly removing queens, the mating nucs become a bit demoralized, and don't defend themselves against hive beetles as well.

"So I wrap up queen rearing in late August and start to think about pulling honey, extracting, and selling honey at the state fair. I don't focus on honey production. I kind of shoot myself in the foot for that with the queen rearing because I'm constantly knocking colonies back. So honey is not a key focus for me, but I do produce and sell some honey."

HOW DO YOU FILL BOXES FULL OF BEES FOR ALMOND POLLINATION WITH RUSSIANS?

Russian queens are known to curtail brood rearing sharply in the fall. Yet for almond pollination, a beekeeper needs big populations of bees.

For this reason, some commercial beekeepers avoid them, believing they won't have their boxes full of bees when almond pollination time comes.

Not to worry, explained Foley. He has been successfully raising the big populations required for almond pollination for five years. "Russian queens do cut back in the fall, but only if you don't keep mass-feeding them. The trick is to keep throwing in syrup and pollen patties, even if the hive already has adequate stores. Not syrup OR pollen patties. BOTH syrup and pollen patties. With these available constantly, all fall, you can trick Russian queens into continuing to lay to produce the large populations required for almonds."

WHY RUSSIANS?

When Foley made the decision to start keeping bees, it was in the winter time. "I had all winter to read up on bees and start watching webinars and figure out the nuances. As a new beekeeper, I was a little timid about handling miticides and checking for diseases. I had heard Russian bees had good mite resistance and were hardy for wintering. I had also heard that some beekeepers, though not all, claimed Russians could be aggressive. As with anything in the beekeeping world, on any topic, there are people with strong opinions on both sides.

"I decided I wouldn't mind wearing more protection to have the perks of mite resistance and hardiness. So, I went with Russians right off, because of what I had read, and what suited me. I loved them so much that I never veered off.

"My first nuc was so docile that even though I got it home after dark, I was able to take the frames out and hive it without getting stung. It grew so quickly and wintered so well that I decided not to try anything else. Over the years, I've had a chance to work in other people's apiaries with Carniolan, Buckfast, and Italian bees, but I've never come across anything I've liked better than my Russians."

Are Russians really more aggressive? "In spring and summer, my Russians bees are docile," noted Foley. "I work my bees in those seasons using only a veil and smoker. No gloves are needed. They do show a little more aggression in the fall, so I suit up when I work them at that time of year."

With mites, Russian bees have proven their value to Foley over the years. "Don't misunderstand me," he



Heart-shaped beeswax soaps Foley produces are sold, along with a variety of beeswax candles, in the homestead store, at farmers markets, and at the Iowa Honey Producers Association's booth at the Iowa State Fair. Most beeswax is sold in value-added form as candles.



"This was a happy mistake this past year when I was marking queens. She moved on me as I was trying to do the dot, and I stopped to take a picture of her when the dot turned into a heart," explained Foley. "I corrected it after the photo by giving her a second shot with the marker pen."

noted. "Russians are not mite-free. There is no mite-free bee out there. The breed is a tool to keep your hives alive and healthy. But they really do a pretty good job of reducing your mite loads."

How good? Consider this. Before Foley began sending his bees to almonds (where the holding yards usually treat all hives), Foley was treating a given yard only every other year! "Say bee yard A would have a few mites in August, and I decided to treat it. Bee yard B, at the same time, might have a 1.2% average. I would not treat that. But the next year, bee yard B would have 3% mites. Then I would treat it. I treated my yards, on average, every other year" — an advantage that could make mite-beleaguered beekeepers using other breeds of bees sit up and take notice! Currently, the one treatment a year performed by the holding yard in CA is the only treatment his bees need.

To saturate his mating area with Russian drones and keep his genetics pure, Foley gives free Russian queens to other beekeepers who have hives within a mile of his mating yards. "Anybody I've talked to who is a Russian queen breeder gives free queens to nearby beekeepers. It just makes sense when you have a specialty product.

"I try to have plenty of drone source yards, located ½ mile, 1 mile, and 1½ miles distant from my mating yards. I learned at the University of Florida Master Beekeeper program that studies show that queens like to fly one mile for mating, but drones only fly ¼ mile to a drone congregating yard." Foley also regularly exchanges genet-

ics with his Russian queen breeder friends "so I'm not getting inbred queens from only mating 'kissing cousins.'"

BUT DON'T RUSSIAN BEES COST A LOT MORE?

The answer to that question is yes and no. Yes, Russian queens are a bit pricier. "Beekeepers are frugal, and Italian and Carniolan queens do cost less, in the \$25 to \$30 range, with discounts if you buy more," continued Foley. "By and large, you can get Russian bees in the \$35 to \$40 range. I sell mine for \$38, but if you buy a larger quantity, I give discounts like most others do."

But with packages and nucs, Russian bees, surprisingly, cost no more than Italians or Carniolans. "I sell my packages and nucs for the same price as Italians and Carnies go for. Actually, my nuc prices are lower than a lot of other guys with more common breeds of bees. I don't understand why everybody doesn't get Russian nucs and packages."

THE LIFE OF A QUEEN BREEDER WITH NO EMPLOYEES

Foley's days follow a predictable, if unrelenting pattern. He can't miss a beat in his complicated dance with his mating nucs and hives. "Every Sunday, Monday, Tuesday and Wednesday in queen rearing season, I'm doing these exact same jobs. Mondays are spent running to UPS, FedEx and the post office to drop off shipments. I have the envelopes, boxes and labels prepped the night before. I've also learned to write the number of queens ordered on each package so I don't have to recheck that at the last minute. I buzz into town and drop off deliveries. Cus-



These queens have been marked and caged out in the field.

tomers who live less than two hours away come to pick up orders. I also harvest the cells from the hives and place them in an incubator."

On Tuesdays, Foley sets up cell builders. First he knocks strong hives down to one deep, makes sure the queen is not there, and adds a second empty box. "I look for frames without the queen, shaking in extra bees. I leave the cell builder in the original location and take the remaining boxes and bees to a new spot. This gives me a free split, and I make increases that way. The cell builder gets a fresh batch of feed, empty frames in the top deep, and all the foragers that have left will collect there later in the day,



Foley sells about 800 to 1200 packages and nucs each year.



Wood that can't be used to make bee equipment heats Foley's woodworking shop through the long Iowa winters.

leaving it overflowing with bees. I leave the hive alone, queenless, for 24 hours to get the bees in a frenzy for making queens."

Wednesday is grafting day at Foley's Russian Bees. "I collect frames of larvae out of my best hives, and I'll spend hours and hours grafting hundreds to thousands of larvae onto JZBZ cell bars. I like to do wet grafting [placing a drop of royal jelly in the bottom of each cup before grafting the larva]. Since I don't have employees, this gives me extra time so the larvae don't dry out. I'll end up with 800 to 2000 grafted larvae, depending on needs, and let the cell builders have them to build into fat juicy cells over the next five days."

Thursday, Friday and Saturday are spent in Foley's other bee yards, checking the bees, adding supers, and doing normal beekeeping work. Sunday is harvest day. "I work with my wife sometimes. I go through half the mating nucs — 225 every single Sunday. I fill the syrup containers and harvest and mark the queens. Any weak or failing nucs get taken back to the barn and refilled with fresh bees and food.

"For small orders I put workers in with the queen and affix the cages to some hardstock in a vented envelope. For larger orders I usually suggest both workers in the queen cage and some running around loose in the box to access the feed and water. TYPICALLY, commercial orders in the in-

dustry just have loose worker bees running around. I tried this hybrid way of packing it and have had huge success with survivability in transit. I don't charge for this, and for some people it isn't what they want. Ultimately I'll make up larger shipments any way my client desires. With the traditional method you might see a 2 to 3% loss of queens in shipping. I know that's pretty darn good to only lose 2 or 3 queens every 100 you send, but it starts to add up through a season. For the hybrid way of shipping, I might only see 2 or 3 queens lost the entire summer. To me, it's a no-brainer. I would choose the 'hybrid' method every time."

ADVANCED BEEKEEPING EDUCATION

In the spring of 2013, two years before he took the plunge into full-time beekeeping, Foley received a SARE grant to study artificial insemination at the University of Florida with Sue Cobey, who had been brought in as a subject matter expert. While there, he learned about the 5-year Master Beekeeper program the University of Florida offered. "A lot of colleges have a one-day program," he explained, "but Florida wanted to drive that education home by stretching it out."

The next year, he enrolled in the program. "The first year is a general test to show that you know something about bees and requires that you have kept bees for at least one year. Each subsequent year becomes increasingly more difficult for testing along, with course work that has to be performed back home. Course work is a combination of readings and public service outreach/education. For each level of advancement beyond the entry exam, they have an award for the student who has performed the most course work and highest test scores." All four subsequent years of the program, Foley received that Beekeeper of the Year award.

WINTER INCOME

In winter, Foley turns into a one-man cutting and assembly line to mass-produce hive boxes. "I start with the raw lumber — full, wrapped bundles of wood from the mills — and process that down," he explained. "To make the best use of my time, I'll spend 3 to 4 days doing a single cut, as I cut hundreds and hundreds of boards into thousands of the right size pieces to make deeps and mediums." To be efficient at this requires a lot of repetitive, but quite peaceful, work.



To make the bee equipment he sells to the public, Foley starts with full, wrapped bundles of wood from the mills.

After he's finished all the cutting, Foley runs the cut sides and fronts through specialized machinery in his shop to efficiently produce fingers on each side of a box part at a single pass. At a router table, he then sets up a special cutting bit and cuts all the box handles. Finally, he cuts all the frame rests on still another machine.

"At the end of 3 to 4 weeks of this rather mundane repetition, I'm ready to spend days and days nailing boxes together in my wood-heated shop," while the icy Iowa winds howl outside. Foley produces 500 to 800 unassembled boxes, in addition a few hundred hive kits to sell, plus another 50 to 100 boxes for his own operation. "I also build migratory pallets and various other woodenware for myself and others," he noted.

Winter is also when Foley can make good use of his commercial art education, and his prior work experience in that field, to design the artwork for his various honey and creamed honey labels, business cards, the decorative advertising wrap for his truck and trailer, brochures, etc.

"I studied marketing for my commercial art degree, where I learned how to present a company to the public. I built the website myself. I can put pictures on it and operate the web store without paying an outside company to manage it for me." Foley even bought an inexpensive machine to make laser etchings. "I know enough about the graphic arts to use the software at my disposal to 'talk' to that

\$400 machine so I can mass-produce laser-etched products without paying the much higher price (\$3000+) for a Glowforge."

BUILDING HONEY HOUSE EQUIPMENT

Winter is also Foley's time to save big by building machinery from scratch. Using inexpensive parts, he can save thousands of dollars. "Being frugal is very important in the beekeeping world. Everybody is looking for ways to do things cheaper," he noted. He has been very successful at this. "I'm not a certified mechanic by any means, but I've gone ahead and built my own honey pump, cappings spinner, and box lift.

"For the honey pump, I got a gear pump, picked up an electric motor at Harbor Freight, a belt at the hardware store, and some bolts." Then he bought wrought iron steel and started welding the parts together. "With a cost of about \$600 in parts, I built a honey pump that would normally sell for \$1,500 to \$2,000."

To make his own cappings spinner, Foley said, "I had an old extractor I didn't need anymore. I got some punched metal with lots of fine holes in it and welded this inside the old extractor basket. I can throw my cappings in there and spin them. The cost was basically \$50 for some metal, plus an old extractor I had no use for anymore. To buy a capping spinner would have cost \$1,700 to \$4,500.

"To build a business, you need to take all the skills you have and put

them to work," Foley noted, and that is exactly what he himself has done with his beekeeping business, which is made more stable by the fact that he relies on a number of "egg baskets" to produce his income.

After a decade of high school teaching, **Mary and Bill** spent 15 happy years running a wholesale vegetable growing operation. The beekeeper they hired to pollinate their squash seemed to be having such a good time working his bees that Bill said, "Why should he have all the fun? Let's get ourselves some bees." Several years later, the Weavers had built up to 600 hives, moving them for spring and summer pollination and bottling all their own honey, in addition to many hundreds of barrels purchased from Midwestern beekeepers.

Mary has been writing for beekeeping and vegetable growing publications for 40+ years, with Bill as photographer.



Foley completed the rigorous 5-year Master Beekeeper program at the University of Florida starting in 2015, and received their Beekeeper of the Year award all of the years he was eligible.