

FROM US TO YOU

The Economy Of Scale

Kim Flottum

Editor, Gleanings in Bee Culture

IHAVE a friend who last year finally came to the realization that it was better for his operation to run 35 colonies well, than to run 62 colonies poorly. It took him about 23 years to figure that out. Let me backup a bit.

For years Tom* has had honey accounts in several stores in towns around his home here in northern Ohio. To keep those accounts he has to have honey all year... there's no running out in March and wait until June for these stores. Nope. They don't want to be looking for new suppliers two or even three times a year. If you get in, you better stay in.

And Tom definitely saw the advantage in doing things this way. He had steady sales every month, a contracted price, and was paid on time, every time. It was a sweet set up for his stores and for his operation. But Tom is just a little bit hungry. He wanted as much return as he could get out of this setup so he wanted to produce all the honey himself. This meant he could make the best margin and the most profit, he thought. I couldn't blame him, really.

But there's a saying in beekeeping: if you want 60 producing colonies, you need to have 75 colonies under your care. That's because every season there's always some that don't produce enough surplus honey to harvest. Why? If you've been at this for even a little while you already know there's a hive full of reasons why. But even though some colonies don't produce they still need food and queens, medication and new foundation, and more food, and winter prep. Basically, they need the same amount of work and cost as much to manage as the producers do, but don't give anything in return.

To be sure, some colonies die because they were neglected and didn't get fed on time, medicated on time, requeened on time, or just plain visited on time. Some die because of serious reasons...floods (they didn't get moved), bear damage (the fence didn't get put up), extreme winter weather (they didn't get packed), pesticide poisoning, vandalism or theft. And some, well, some just die for reasons only God and the bees know.



Buying several thousand dollars worth of packages every year cuts into profits

So Tom needed to have about 75 up and running colonies every year to make sure he had 60 really productive colonies every year, so he could supply all of his customers all of the honey they wanted all year long, every year.

Tom has a full time (plus) job, responsibilities at church, activities at school with the kids and work to do around home and often had to give up something...there's seldom enough hours in a day to do it all.

Let me quickly run through Tom's season. Each spring Tom would start with about 55 – 60 colonies, having a 20 – 25% loss each winter from any of the reasons already mentioned. As a matter of routine he checked each colony for trouble as soon as he could in the spring, mostly. That was provided he could get to the yard they were in, which wasn't always the case. Those that were hungry got fed as often as he could get back to them. Every colony was given a pollen substitute patty then, too. This was to help them build in the spring so they could take advantage of those early tree-

honey flows...maples, locust, willows and red buds. He'd harvest this early crop about the end of May, and when returning supers, make splits, if he had the time (this was iffy every year because the early crops were susceptible to the weather and might be late), and often it was a race between harvesting, extracting and returning before the colonies would build up big and swarm. Sometimes he didn't even get to harvest at all because there's a major holiday right about then and family and gardening activities take their toll on time and energy.

As a result, there's always swarms. Always, no matter how on top of things Tom is, there's always swarming, so there's another colony that won't produce, or won't produce much anyway. And if swarm colonies aren't requeened, who knows what the result will be...maybe no queen, or a queen of questionable heritage. And if queens aren't readily available from his nearby supplier to requeen that swarmed colony, well, there's another trip to the beeyard later.

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Spring splits all had to be moved to a different yard so the foragers wouldn't fly back to the parent colonies. Another trip.

Speaking of beeyards, Tom keeps 10 locations going, and usually uses eight or nine every season. It seems that by the time you pull deadouts, consolidate survivors of about equal strength, move splits away from parents, move some for special honey crops in an area, lose one or two yards to urbanization some years, maybe one for awhile to high water from a really wet spring (and even one to a grass fire once), then group all the new packages together, yards keep moving around so having access to extras is a good idea. But that means lots of travel and lots of planning when making trips. Even though the most distant from home is less than 10 miles, there's still lots of travel...and fuel costs, and what Tom calls windshield time. And you know, you can be just fine in one yard, and at the next one you go to only 15 miles away, it's raining. Delays or cancelled work don't make days any shorter, the job any easier, or production any better.

Running 75 or so colonies did give Tom an advantage in purchasing power though. That many colonies means he has to buy the jumbo container of...well, just about anything he buys. The initial outlay is expensive, sometimes crushingly so and cash flow from the business isn't immediately available so he borrows from the paycheck side of his life. But by buying in bulk the cost of nearly everything at the colony level is greatly reduced, keeping his production costs, per colony, in line. Of course this allows him to remain competitive when pricing his honey to sell, which is the name of his game.



Too often there wasn't enough time to fix old equipment, so Tom just bought new equipment because it was faster.

But there's never enough time to do it all right, and every season there are colonies, sometimes whole yards that simply don't get the attention they need. From mid-February until late November, Tom works as many nights after work as he can, weekends, vacation time, holidays and a sick day or two just so he can stay close to being on time with his management jobs. Perhaps you can imagine what his family thinks about all of this...and his boss at work.

Tom harvests at least three times a season, and sometimes four if the honey Gods are smiling and he can find the time to pull the honey, get help to extract, and get supers back on. His family helps out when they can, but school activities during the spring and fall often get in the way, and even though one son is old enough to help during the summer, it isn't a full time job, and he needs money for college and has another job. Tom's wife is a saint, and an incredible whiz with numbers. She takes good care of the book keeping and business side of the operation, but getting her hands in the honey isn't what she signed up for when they got married, and thanks, but no thanks when it comes to bees.

Losing 20% to 25% of his bees every winter, and having to replace them every spring is a real drain on the profit side of this operation. That level of loss isn't uncommon here though. Varroa mites, viruses and long, cold winters take their toll. Before varroa was a problem 15% winter loss was the standard, so it hasn't gone up much, but it is a huge overhead expense that means less profit or a price increase in just about everything by

about 20% or so. Some years even more. Give or take.

So Tom spends his time running pretty much full speed just to keep even with the demands of his customers. He absolutely has to have the 60 pounds or so of honey from the 60 colonies or so he has to keep his business afloat. He routinely sells about 3000 to 3500 pounds a year. And to do that he needs to keep 75 or so colonies going.

But two years ago this balancing act of time, money, family, work and luck crashed and burned. Winter losses due to extreme weather (bees simply starved because winter temperatures were so cold for so long), serious varroa problems because the last treatment due on after the brood was gone didn't get done, nor did early spring feeding and treatments didn't get done because winter just held on and on and on...and then it rained and rained and rained. In the end, fewer than half of Tom's colonies got winterized, and even fewer got any attention until late spring. By the time he finally got around to all the colonies 55% of the 70 colonies he had going into winter were dead, and more than half of those that remained had swarmed. Clearly, it was time to reevaluate his position. He had only 38 colonies in good enough shape to probably survive the summer, and half of those wouldn't produce any honey that season. He was, simply, out of business. Unless, that is, he begged, borrowed and stole from anywhere to get new bees back in those empty boxes. Nope, he thought, he'd had enough. Time to scale down.

So he picked up all the empty equipment. Moved his colonies to only three yards,

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resigned from the least productive two thirds of his accounts because he knew he wouldn't be able to fill them, and spent the rest of the season nursing those that needed fixing, and harvesting from those that were producing, even though it wasn't a remarkable season, honey-wise.

But you know what Tom found? Because he now had only three yards he spent a lot less time traveling, less on fuel, and he didn't get stuck once all season. Because the yards were relatively close to each other, if the weather was workable at one it was at all three so he didn't have to make extra trips. He found that he could get everything he needed in his truck to visit all three yards so there weren't extra trips for that either.

Because there were fewer colonies to check he caught problems sooner ... queenlessness, early signs of disease or mites, other pest problems...so they didn't get out of hand, or do major damage before they caught his attention. And because there were fewer colonies he was able to be proactive on

several fronts, like replacing failing queens, getting fences up on time, keeping the weeds down, and getting equipment repaired before it fell apart.

As a result he spent far less money on replacement queens, far less money on medications, far less money on replacement colonies during the summer and early fall. And more of his splits took, queens took and colonies thrived. A higher percentage of his colonies took on a productive role rather than remaining place holders in the beeyard.

Harvesting was easier because the disparity between yards was greatly reduced...all three made about the same crops at the same time, rather than spread out all over the season. So he had to harvest only twice in the summer. Of course there was less variety than previously, but there was more honey per hive simply because each colony was getting better care.

Because there was less diversity and more uniformity in everything, his family time and

other activities got more attention because he could plan his time better. Before, if it wasn't pouring rain it was bee time, no matter the other plans, because he was always behind and needed to get something done, or fixed. You can bet his family was glad.

As it turns out, Tom's 35 colonies made almost as much honey as his 75 had made the previous year. Tom spent less money taking care of his bees. He spent less time but smarter time and had better colonies as a result, and made almost as much money. He wound up losing some of his accounts but as a result spent less time taking care of marginal customers and was able to focus more on his bigger and more profitable customers.

The moral of the story is simple. And you already know what it is.

The economy of scale can be a deceptive master.

**The names of the innocent have been changed to protect the guilty.*