

## Drawing Comb - by Joe Lewis

**In The Merry Month of May:** May is a great time to get your comb drawn out, whether you are starting new packages on fresh foundation, expanding to a second deep, a fourth medium super or just getting some drawn comb for future years honey production. The nectar flow in May is a powerful tool utilized by young bees to make those wax glands flow. The three sets of wax glands under the worker's thorax send out the little slivers of wax, needed at the rate of about 80,000 just to draw out one deep frame of comb!

When it comes to comb I have made my share of mistakes and I suppose there is no better way to learn nor any more expensive way either! Go ahead and experiment; make some of your own mistakes, but let me share some tips and opinions on comb.

**Drawn Comb:** Clean, light colored, drawn comb is one of the most valuable commodities a beekeeper owns. Changing it out, rotating out your oldest combs would be like giving your body a new liver – a life extending procedure of huge importance. In the hive the comb is a filter and absorption mechanism for impurities, chemicals, and pesticides, etc. If you have ever treated your hive with Camophos, Chek-mite, or other mite-killing pesticides, your combs have certainly retained these substances and it will affect the health of your colony, your queen's longevity and your drones' fertility. Unfortunately it is the "Rule of Unintended Consequences". Hopefully by now you have switched to a totally organic approach to beekeeping – a move that our hobby should have embraced far earlier.



**Get the Chems Out:** But some beeks are still treating with chemicals. At my last visit to a beekeeping supply store, a novice beekeeper was asking the store owner about Chek-mite strips, and the supplier was readily selling those to him and telling him how to use them! Amazing.

**Every 2<sup>nd</sup> Year:** Many commercial beeks are replacing their combs every second year, or 50% of the comb each year. Other beeks have moved up their replacement schedule from every 5<sup>th</sup> year, to every 3<sup>rd</sup> year. The old days of keeping drawn comb in your hive for 20 years are history.

**Real Wax Foundation:** As Dennis Miller says, there is no substitute for real wax foundation. That is why he will not sell anything else. The bees do like it better. My preference is the crimped wire version. I have given up on the special side support pins (at 5 cents each) and at the suggestion of Lloyd Snyder, now I only use bobby pins (at about 1 cent each). In the dead of winter I use my wire cutting pliers to cut off the side of the bobby pin that sticks out so far, making much less intrusion into the space eventually to be filled with drawn cells. The amount of lateral support given by these improvised pins is almost double that of the standard support pin, so I believe it is far better. While 4 holes in the sides of the frames are standard (for inserting wire support), I think putting support pins in the 2 center ones is sufficient.

**Plastic:** If you use plastic, whether it is Pierco, Permament, or Rite-Cell the bees will accept it better if extra wax is painted onto the surface. Some studies have shown that acceptance rates are almost as good with extra wax as foundation made of 100% wax. Other controlled experiments show that bees will consistently have a higher acceptance rate when plastic foundation is placed in wooden frames. But the extra wax is the real secret to success.

**Duragilt:** This crossover foundation has a plastic base, but a good imprinted layer of wax on top of it. If there is no nectar flow (after June 15<sup>th</sup> in this part of the Eastern Mid-Atlantic Broadleaf Forest region) the bees will often remove the wax from your Duragilt, put it somewhere else, and never draw out comb on the plastic base. When this happens I remove the frame and give it a good coat of wax to try again the next year.



*Rite-Cell*

**Newbies:** If you are new at this, please don't think you can draw out comb from foundation on a 9-frame spacing without some risk. The risk is cross comb and burr comb. Always draw out comb initially on a 10-frame spacing and the following year you can put it in your honey supers on a 9-frame distribution. The 9-frame spacing of course encourages the bees to draw out the cells wider making uncapping much easier at extracting time. I have been counseled more than once on this point by local, long-time beek, Ray Lowman, an expert in extracting procedures! Remember, just because the beekeeping supply catalog sells it, does not mean you have to use it, especially if you don't understand the unintended consequences.

**Moving Comb Up, Foundation Down:** One way to get comb drawn quickly is to put a frame of foundation between two frames of brood. This has little danger after the weather has warmed, but if done too early in the season it can be a disaster, as splitting the brood nest has serious risks. Using this technique when the brood nest has fully expanded, however is a good way to boost comb drawing. Moving that displaced comb up one level has the added advantage of getting the brood nest to expand upward. Many experts recommend against the use of a queen excluder at this point, knowing that the beek can always put brood up above a queen excluder later and convert any drawn comb to honey production at a later point after the brood has hatched out.

Here's hoping all your comb comes out straight!

- Joe Lewis -



*Duragilt*



*Pierco*