

Adding Beeswax for Comb Building: The Wade Wax Method

The Experiment

Last summer, Dave Wade of Sturbridge, MA (Worcester County Beekeepers' Association), started an experiment to see if he could get his bees to draw out comb from wax added to frames. The idea was to facilitate comb building later in the season than is typically productive. As we know, they start winter prep after the summer solstice. Wax production decreases which can leave colonies without enough comb for their winter stores or even brood for winter bees.

The Results

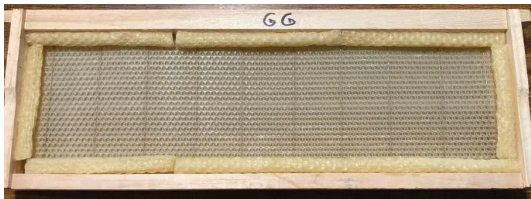
This experiment proved fantastically successful. Dave spent time experimenting with different wax materials (e.g. foundation sheets, cappings, and burr comb) as well as different application methods. Following is the method he found most effective.

Potential Benefits

- | | |
|--|---|
|  fill in empty spaces |  take advantage of later flow |
|  honey-bound recovery |  surplus new comb frames for future use |
|  longer season for construction |  potential for greater honey production |
|  improved efficacy for splits |  ensure colonies plentiful winter resources |

How It Works

Use slices of wax foundation (sans wires) to make "rolls." Fold them in half the long way, twice. It helps to use a tool such as a skewer, small dowel, or pastry knife to get the folding started. Rolling is fine too. Use pins (all metal or clear/white glass heads) to hold them in place on the frame. For wax foundation, pin through the roll and foundation into the roll on the back side. You'll be able to remove the pins once the bees begin to use the wax. Dave uses wax foundation with wooden frames and did not have experience with plastic foundation or frames. The following pictures are from his work.



This frame was placed on Sep 2, 2024.



It looked like this on Sep 7, 2024.

Dave said, *"Be aware, when any wax was placed on the face or on the outside of the frame, some of it stayed there unused. In addition, if the wax was compressed too tightly, or pressed too firmly into the surface, it was not used. The bees apparently could not grab it with their mandibles."*

Sources

Wade, Dave. Helping Your Bees Draw out Comb. YouTube, [NC State Apiculture](https://youtu.be/bj60t74xc9s?si=bmfJl7grOSH0H83P), 2025. <https://youtu.be/bj60t74xc9s?si=bmfJl7grOSH0H83P>

Wade, Dave. Adding Beeswax to Make Honeycomb. [American Bee Journal](https://www.americanbeejournal.com), vol. 165, no. 6, Jun. 2025, pp. 636-59, www.americanbeejournal.com.

Wade, Dave. Adding Beeswax to Make Comb. NH Beekeepers Association Annual Cookout, Muster Field Farm, Sutton, NH.

A few notes from Virginia & Vicki

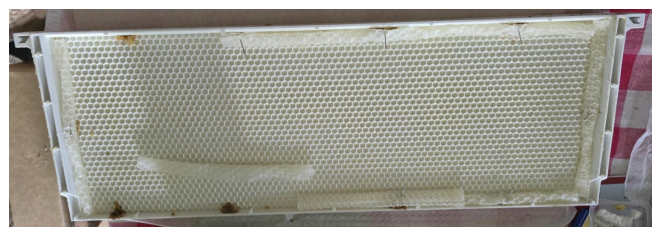
We attended Dave Wade's presentation at the NH Beekeepers Association cookout on July 26, 2024. We found his experiment compelling and left the event heading straight to one of our beekeeping supply sources (BusyBeezzz in Hooksett, NH) to purchase wax foundation.



We rolled wax to fill a new medium super for one of Virginia's colonies and a new shallow honey super for Vicki's colony.

Here's what we found:

- Vicki's frames are wooden with plastic foundation. The plastic foundation did not prohibit Dave's method in any way. Simply use a metal thimble to push the pins into the wood (will need to pin both sides separately)
- Virginia's frames are plastic with plastic foundation. This was a bit of a challenge since the pins cannot pierce the plastic frames. We experimented with burr comb scrapings (uncleaned), balled it into putty-like pieces and found that it worked really well under the wax tubes as a substrate for the pins.



"putty" from burr comb scrapings

Results

Our apiaries are approximately 2.66 miles apart (as the crow flies).

- Virginia's apiary is located in Campton, NH (N43° 48' 10.8", W71° 41' 40.8"); two frames in one colony and super with six frames in another colony placed July 28, 2025
- Vicki's apiary is located in Campton, NH (N 43° 50' 22.628", W 71° 41' 23.517"); super placed July 31, 2025



Pictures at both apiaries taken August 9, 2025.

more **A few^notes from Virginia & Vicki (& Dave Wade)**

Sunday, August 10, we attended the Essex County (MA) Beekeepers Association Meeting that took place at the home of a friend of Virginia's (actually used to be Virginia's house) in Derry, NH. We were invited and were excited to attend because Dave Wade would be presenting at the meeting.

We listened again to his presentation but this time from the very beginning. Following are a few facts that Dave presented that didn't make it into our first set of notes:

- Worker bees can produce 8 flakes of wax about every 12 hours.
- Bees move wax around.
- It takes about 10lbs of consumed honey for the production of 1lb of wax.
- Wax production cuts way back after springtime.
- Sandwich a medium super with wax-added frames just above the bottom brood box.
- Production is prioritized in the middle of the super, so move unbuilt frames to the center as they fill up.
- For acquiring built comb to store, put one wax-added frame at a time in the center of the second brood box.
- It is possible to give the bees too much wax; they will make a mess. Adding more is preferable to starting out with too much.
- Potential future uses for built comb:
 - bear attack
 - to strengthen a weaker colony
 - to gift to a beekeeper in need
 - to replace over-used comb
- Store sealed in a cool, dry place, out of the sun.
Totes with gaskets can work well to keep out wax moths, etc.
- Dave uses wax foundation in his frames and for adding wax. He gets his wax foundation with wire from Mann Lake. *It is less expensive without wires (which you don't need if you are not using it for foundation).*
- Dave is now experimenting to see about adding wax to aid with capping.
- He agrees with Langstroth who asserted that wax rich is preferable to wax poor.
- Scientists want Dave to color the wax he had to be sure where it is used. He's more interested in getting the job done and helping northern beekeepers.
- Dave hopes beekeepers will try this out and share their improvements or ask questions. He is looking forward to possibly presenting to PBBA in the winter.