

"You're going to stink, but you can choose your stink."

— *Therese Oneill*

Clearing bees out of supers is a necessary prelude to harvesting honey. There are many ways to do it, as explained in [Spinning Gold](#). In recent years, I've become a fan of using a fume board to accomplish the task. This method only requires one trip to the bee yard, takes about five minutes of waiting and is pretty reliable, at least at my place.

Fume boards can be purchased for around \$20 at your local beekeeper supply store, but a fume board is a dead simple device that is dead simple to make. If someone is the slightest bit handy, they can easily make and use them. Things don't have to be complicated to be worthwhile.

Parts

There are only three parts to a DIY fume board, not counting nails and some glue:

1. A wooden frame. One six-foot 1x2" piece of lumber works just fine for one fume board. The outside dimensions should align precisely with the dimensions of your hive boxes: 9-7/8 inches by 16-1/4 inches for 10-frame equipment and 9-7/8 inches by either 13-3/4 inches or 14 inches for 8-frame equipment (depending on the manufacturer). If you've made any "medication shims" to provide space for Varroa mite treatments, you've already made exactly what you need. If you choose, you can join the ends using rabbet joints or finger joints as you would for hive bodies and supers, but since the final product isn't load-bearing and won't endure lateral stress, simple butt joints work just fine (one piece butted against the other). Once nailed in place, the cover will ensure that everything stays square.
2. A triangular piece of felt or similar material, cut to nicely align with the inside-dimensions of the frame. The craft section of Wal-Mart has what you need. This will be



This well-used fume board is made from 1x2 lumber, felt and metal flashing. Neither craftsmanship nor aesthetic appeal are required!



glued to the cover so it doesn't necessarily have to be one continuous sheet.

3. A piece of metal flashing exactly the same dimensions as the outer edge of the frame. You can get a ten-foot roll at a Big Box DIY store, enough to make six fume boards. Make sure that the width of the roll is at least as wide as the narrowest dimension of the frame. Cut the piece to fit with tin snips/aviation snips.

Put it together

To assemble, join the corners of the frame using nails and glue. Nail or staple the metal flashing to the top of the frame, ensuring that the corners are perfectly square before doing so. Use some fabric glue to fasten the felt directly to the underside of the metal (within the inside of the frame). Caution: the metal flashing has sharp edges. You may want to wrap the edges with duct tape or something similar to prevent slicing your fingers when you handle the fume board.

Stink it up!

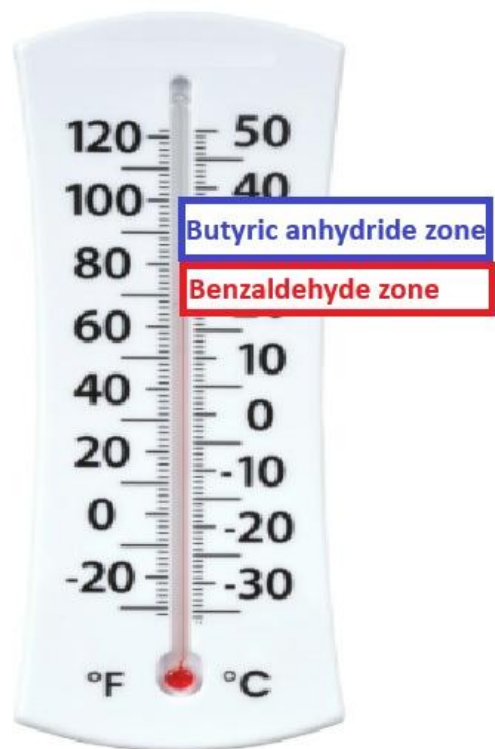
Now you have a fume board but it isn't ready to use quite yet. You'll need to apply stinky stuff to the felt. Great-grampa may have used carbolic acid, which was very effective but also very dangerous (risk of burns to skin) and easily tainted honey. Now we have safer and equally effective (when properly used) alternatives.

One type is based on benzaldehyde and has a somewhat pleasant almond smell. It works well at cooler temperatures, e.g. in the 65-80°F,¹ but not so well at hot temperatures. Versions of this are sold as Bee-Quick and Honey-B-Gone.

The other popular type is butyric anhydride, which has a distinctly noxious odor. Remember Canton, NC, before they closed the paper mill and cleaned up the Pigeon River? It has that sort of olfactory impact. Definitely not the smell of roses. Bee Go is a well-known brand. Butyric anhydride works very well for clearing supers when the temperature is 80-100°F.² That is more likely the temperature we'll have when we extract around here on a June or July afternoon.

Regardless of your choice of stink, the process of using a fume board is the same.

1. Put a couple of tablespoons of stinky stuff on the felt surface of the fume board. Don't use too much!!! Overexposure will confuse



The common substances used to stink up fume boards are temperature-sensitive. The sweet-smelling stuff (benzaldehyde) works best in cool temperatures while the nasty product (butyric anhydride) is more effective in hot weather.

- the bees and make them stay put rather than leave.³
2. Set the board in the sun for a while so that the metal will warm up and help evaporate the stinky fluid on the felt underneath.
3. Smoke the hive a little to encourage the bees to get on the move.
4. Remove the outer and inner covers as well as the queen excluder, if present.
5. Set the fume board over the topmost honey super.
6. Set your timer for five minutes.
7. After five minutes, remove the fume board and check to ensure that the bees have fled the topmost super.
8. Remove the topmost super, putting it safely aside and covering it with a towel or something similar so that bees cannot reenter.

¹ Joe Graham, ed., *The Hive and the Honey Bee*, (Hamilton, Illinois: Dadant & Sons, 2015), p. 534.

² Ibid.

³ Ibid.

9. Repeat steps 5 to 8 with the next super in the stack.
10. To increase efficiency, use several fume boards in stepwise fashion in a row of hives, removing a super from one hive while waiting for the bees to clear the next.

Important to note...

If the bees rush out of the hive and/or all aggregate outside the entrance, you've used way too much stinky stuff or left it on the hive for too long. The objective is to clear honey supers one at a time, not to clear out the whole hive.

Likewise, use of too much substance will leave your comb and equipment smelling like stink. Extreme overuse can impart the smell to honey. Your clothes, hair and body may also pick up the distinctive smell.

One may ask, "Why not just use a towel and apply liquid stink to that, instead of using a fume board?" That would work with respect to clearing supers, but would greatly increase the chance of getting the smell on your hands and your clothes. Plus, it would put the liquid-imbedded fabric directly in contact with comb and woodenware, increasing the likelihood that the stink would linger for a very long time.

Storage

If you value your relationship with your family, you will not store your fume boards as-is in the back of your bedroom closet. Wrapping them in a heavy-duty trash bag, or several, would be a good move. I store mine in my barn, placed face-to-face to help keep the smell contained, but they still significantly stink when I pull them out for the next year's harvest.

Try it!

Due to their ease of use and quick turnaround time, fume boards would be a great tool for bee buddies to share amongst themselves or bee clubs to loan to members. Make a few, try them out, then share your assessment with friends!

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