

How I Use the JZs BZs Plastic Queen Cage: Featuring the Get Acquainted Window

By Joe Lewis



JZs BZs plastic queen cage

Plastic candy tube cap and fork

JZs BZs (sometimes just called by the letters J Z - B Z) queen cages work well for introducing queens and making nucs. I have been using them for the last eleven years with excellent results. Any queen that I receive in a wooden, 3-hole, Benton or skinny, wooden California cage is usually transferred into a JZ BZ cage for introduction. It is that important to me!

I first learned about the JZ BZ cage in January 2008 by talking with Jim Paysen, the inventor of the cage and the owner of the JZs BZs Honey Company that makes it (and lots of other plastic ware for beekeeping). I met Paysen at the 2008 National Bee Conventions in Sacramento and we had a long discussion about his invention and its technical details. For some reason few folks seem to know about the get acquainted window and particularly the bar that can be broken out to convert the cage so it has the get acquainted window. The only website that mentions how to use the cage is the Dave-Cushman beekeeping website from the U.K. <http://www.dave-cushman.net/bee/queenintrojzbz.html>

Some details are also given in the Carroll County Maryland newsletter of September 2014 summarizing a presentation I gave there. <http://carrollcountybeekeepers.org/newsletters/2014-September.pdf> The info is on pages 7 and 8 of the article titled "*Honeybee Words of Wisdom*".

Tips for using the JZ BZ cage: The best queen introductions with the highest rate of success are slow introductions that give the bees a chance to acclimate to the queen.

- For slow introductions leave the plastic cap over the candy tube until you are ready to allow the bees to start eating out the candy.
- If there is no plastic cap for the candy tube, cover the candy tube opening with a small piece of duct tape. Double this to 2 layers of duct tape to be sure as I have seen bees eat through a single layer of duct tape in a couple of days.

- When you are ready to start the introduction, remove the plastic cap or the duct tape from the candy tube opening and let the bees eat out the candy.
- At this time, open the Get Acquainted Window by removing the breakout bar before inserting the new queen in the hive --- providing you want to use it and you are ready to allow workers to enter.
- Note: Use of the Get Acquainted Window is optional, but is a great tool. Employ it by breaking out the small, plastic, removable bar. A fingernail or flat object works fine for this task. The bar is on the blunt end of the cage --- the opposite end from the candy tube and bee loading door. When the break out bar is removed the window still acts as a queen excluder, keeping the queen inside, but letting the worker bees, a few at a time, come and go from the cage, thereby transferring the queen pheromone throughout the hive before the queen is released.



Removing the breakout bar

Bee loading door and locking mechanism

(the candy tube has not been loaded with candy in these photos)



The get acquainted window after the breakout bar is removed

- Check back in about 3 days to make sure the queen is released. If not released, you can probably release her safely providing the bees aren't attacking the cage and trying to ball her. A lot depends on the conditions and the nectar flow.
- Keep a few cages in your bee suit pocket whenever you go to check bees and you will be ready when you suddenly find emerging virgin queens in your hive or you need to move a queen safely.

For queen introduction procedures do your own research and figure out the risks. Queen introductions can be challenging and the topic deserves serious study. Experimentation and short cuts can be cruelly disappointing. While this article is not a complete "how to" on queen introduction, some additional information for your consideration follows.

Most beekeepers understand there are a lot of variables in queen introductions. Generally the hive to receive the queen must have no queen or queen cells present. The absence of viable eggs or larva for making a queen cell is also an advantage (more details below). Ideally, the hive should be queenless for 24 hours prior to introduction. When conditions are good however, and a nectar flow is in progress, a few hours may be enough. Generally later in the summer or during a nectar dearth waiting a day or two is better.

Another guide I use is this: the brood used to make a nucleus colony for subsequent queen introduction should have the brood separated from the queen above an excluder for 5 days before its removal. This is to ensure that there will be **no eggs for the bees to select** to rear their own queen and furthermore, **no larva available under two days old**. Taking this action results in a situation where the hive has fewer and less desirable larval options and may be more likely to accept the new queen when she is presented.

To learn more about queen introductions and why slow introduction is important please refer to the chapter on queen introductions in the book "**Better Queens**" by Jay Smith. Smith, who knew C.C. Miller and the queen rearing greats of 120 years ago, wrote extensively on queens. His book is available from the Bush Farms website (Michael Bush).

Another good source of queen information is the Vimeo presentation by Bill Bundy located at <https://vimeo.com/22004601> titled "A Practical Guide to Requeening". (Mr. Bundy was formerly a professional queen rearer in Virginia.)

Some additional points regarding queen introductions:

- Queen introduction can be a risky business and more so after the main nectar flow is over. There are no guarantees for success, but a slow introduction is less risky. Before and during the main nectar flow the risks in queen introduction are reduced and introductions can be faster.
- Positioning the cage: Position the JZ BZ cage horizontally with the candy on top and slightly slanted upward. This ensures that any dead bees will fall away from the candy tube. I recommend putting the cage in the upper part of a brood frame near brood, but in an area where the cells are empty. If this is not possible, do the best you can.
- Do not press the cage into honey or you may risk drowning the queen!
- Do not place the cage directly under a feeder jar where there is any possibility of sugar water or syrup dripping on the queen. When I insert the JZ BZ cage in a 5 frame nuc I remove the feeder jar lid from the hole in the nuc cover, carefully use a hive tool to expand the space between the frames and quickly slide the cage between the frames, moving it away from the hole. I always put the cage in blunt end first, candy tube on top. If there is excess room between the frames causing any danger that the cage will fall to the bottom of the nuc box, I use my hive tool to hold one of the frames gently but tightly against the cage.



Candy tube cap and fork - separated

Fork re-inserted into get acquainted window

- The JZ BZ cages don't automatically come with the candy cap and fork. These have to be ordered separately. If you don't have the fork and want to re-use the cage you can always put a piece of tape across the get acquainted window until you are ready to open it.
- If you receive a bulk shipment of queens with the queens in JZ BZ cages there will be no attendants inside the cages, just bulk bees outside the cages, but in the shipping box. If you need attendants inside the cages, because you can't use the queens right away, carefully open the bee loading door and keep a finger over the hole so the queen does not escape. (Even better, do this indoors or inside your car or truck.) Then use your other hand to grab a worker (nurse) bee by the thorax and shove her headfirst into the opening, replacing your finger over the hole until you are ready to close the door. In a short while you will become fearless when grabbing bees (gently) while wearing nitrile medical gloves and only rarely will

you get stung. Here is a fun idea for the next bee conference or annual gathering or bee club picnic: a timed, nurse bee loading contest using JZ BZ cages!

About the Author: Joe Lewis keeps bees in Maryland, USA. You can learn more beekeeping tips from him on YouTube under the topic of Sustainable Apiaries through Nucleus Colonies and Beekeeping 357. Joe Lewis has no financial interest in JZs BZs Honey Company.

My sincere thanks to Dr. Kirsten Traynor who reviewed this article and reminded me that bees could make a viable queen out of a 3 day old larva (3rd instar) in extreme situations. I normally select mostly or exclusively capped brood for nuc making, but I believe aging the brood five days provides some insurance against having some rogue eggs hidden away. I think by doing some aging at least we can create a factor in our favor: no highly viable, best choice, newly hatched larva available for the bees to select for emergency queen rearing. When making nucs I am not all that concerned about older larva, but I am concerned about those under 2 days old. I only use this method (which I call the "Doolittle plus 5") after the main nectar flow is over. I have found that earlier, in-nectar-flow nuc making does not require quite as much maneuvering and delay. This article originally published as a letter to the editor in the July 2017 issue of American Bee Journal.