Advanced Introduction Technique for hard to introduce or high value queens

Many beekeepers know that some races or lines of bees are harder to get introduced than others. Russians have a reputation as a tough bee to introduce. We have found that once we get Russian "blood" into the hive our troubles are mostly over, at least for that hive. This is usually the case with any line or race of bee that is completely unrelated to the hive you are introducing into. We often use the following technique for hard to introduce and high value queens. We have never lost a queen with this technique. The biggest down side is it takes much more time and labor.

The first step is to build a split, weaker hive or nuc made up of only about 4 to 5 frames of emerging bees and nurse bees with at least one frame of stored uncapped honey or an internal feeder (preferred). For the sake of clarity, we will call this an introduction nuc. The idea is to build a queenless colony of bees that is not aggressive or defensive toward the introduction of a new queen.

On the day of introduction, we start early but while the field force is flying strong. In short, we want the field bees to be in the air, not in the hive. Stripping field bees off of your introduction colony is fairly simple. The bees do the most of the work for you.

For this technique, we make our splits or nucs like we normally do but instead of moving the split or nuc to an out yard immediately, we move them to another part of the same yard for a short time of at least 2 hours. Of course, there are other factors to consider such as a cold snap, extreme heat or if you have a small hive beetle problem. Make sure to restrict the entrance especially if there is a dearth. We sometimes screen or block the entrance down to a small single bee sized restriction to keep robber bees from entering while at the same time letting the field bees fly back to the old hive. If you have an old hive with bee leaks pull out your duct tape and seal up these unintended entrances. Place an internal frame feeder inside this newly made introduction colony and fill it with light syrup to simulate a nectar flow. Place the uncapped honey frame or feeder next to the first frame of brood/nurse bees. For at least 2 hours leave this colony alone. During this time, any field bees left will fly back to the donor hive and leave you with mostly nurse bees and emerging brood. This is also important time for the hive to develop the sense it is queenless.

At this point we need to talk about making a push-in introduction cage. You make these very useful tools with #8 (1/8th inch) hardware cloth. Cut out a 3-1/2 inch square piece. Cut it so that you can fold down 3/4-inch sides with no gaps in which a queen can get out or worker bee can get in. The idea is to create a screen box or cage that holds the queen and emerging bees on a section of comb. If done correctly, the queen will actually start laying in some of the empty cells. Providing you place the cage and queen over some cleaned out empty cells.

2 hours after building your split, weaker hive or nuc, lift out one of the center frames of emerging brood from your queenless. Try to find a spot as close to the center of the frame that has a range of different type of cells (emerging brood, empty, pollen, honey) in an area about 2 inch square. This will be the place in which you will place the queen under the push-in cage and press the cage into the mid rib of the comb.

An additional piece of equipment that we often use at this point is a fiberglass window screen inner cover. Not only do we find these inexpensive, easy to use, great for checking the condition of the hive, and for collecting propolis but are also a very useful tool while introducing the queen. Here is why. By the time you receive your queen she will have most likely lost some weight and will be able to fly if not clipped. By using a screen inner cover laid over your hands as you remove the queen from the shipping queen cage and place her under the push-in cage you will be able to provide some assurance she will not fly off. It is easy to have several screen inner covers stuffed into a plastic garbage bag and ready for use. We regularly switch them out to harvest propolis and keep the screens clean enough to use as introduction tools.

After placing the queen under the push-in cage, put the frame in the middle of the introduction colony. Close it up! Now is the best time to move this colony to an out yard preferably made up of only other introduction colonies and without any full strength hives.

For most introduction technique it is often said that the colony should not be opened for so many days before checking for queen acceptance. With push-in cage introduction we have never had any trouble checking the status of the queen daily and actually prefer to do so. We take a permanent marker and mark an arrow on the top-bar of the frame in the direction of the push in cage. We can get in and out with no smoke and with little disturbance, if done during the sunny part of the day. We do not release the queen until we see two things. First, we want to see eggs. Second, we need to see a peaceful attitude by the worker bees on the outside of the push-in cage. If we see bees biting and clustering on the screen we do not release the queen. If this goes on for more than three days, we most likely have another accepted queen or mature queen cell in the hive. In any event, the workers think they are queen right and are not going to accept the new queen. At which time we try another introduction colony or add more emerging brood, nurse bees and move this split to strip off the field bees again.

If you follow this technique you will most likely get an acceptance even for tough queens. After letting this introduction colony build for a couple weeks, you can insert it into a queenless hive, add brood or nurse bees to it. If inserting this into another hive you shouldn't have any trouble. Just make sure it has been queen less for 24 hours and if you want to play it extra safe strip off the field bees from the hive that the nuc is going into. Most of the time, the bees that that are going to cause any trouble will be the field force. Which is another reason it is best to do introductions during a honey flow. The field bees will be in the field and are not too interested in anything else. They will come back with a crop full of nectar and will accept and be accepted by another hive.

Another very important follow up point needs to be noted. Especially with Russians, SMR's and Instrumentally Inseminated queens you need to go back into the hive after the queen is accepted and shake all the bees off of every frame every five days. After shaking the bees off, look closely for queen cells and kill them. This can usually be stopped after a couple five-day cycles have been accomplished and no queen cells have been found . Some of these types of queens do not require this extra step but we have found that most do. The number of times you have to go back and cut the cells can vary but experience tells us that two to four cycles is the standard. Eventually, the queen will be accepted and her own brood will start to hatch, which is further assurance that she will stay in the hive.

There are many variations of this type of introduction. You can experiment with it and get the same results. Or you can simply follow this method closely and you will have great success.