Beekeepers of ten need to introduce a new queen into a hive. The receiving hive should always be queenless. Cage introduction is most common. A caged queen, of ten a mailing cage, is put into a queenless hive and released a few days later. This is the method most commonly described in beekeeping books and web sites.

However, cage introduction is probably not the best method. LASI research shows that direct introduction with smoke can give 100% acceptance. It is also simple and quick because it is unnecessary to open the hive to introduce the cage, or to uncork the cage a few days later to release the queen.

Direct introduction with smoke is simple. A queenless hive is set up and left queenless for a few days. The entrance is then smoked heavily, using more smoke than would be used to open the hive for an inspection. The new queen is immediately placed at the hive entrance and allowed to walk in. A simple way to do this is to remove the cork from the queen cage and to place the cage at the entrance. The queen can also be introduced directly onto the top bars or via the inner cover hole. Direct introduction can be used to introduce both virgin and mated queens and into both large and small colonies.

In one LASI trial, 3-day-old virgins were introduced into nucleus hives of 5 medium-depth Langstroth frames with bees and brood on 2-3 frames, after 1, 2, 3, 4, 5, and 6 days of queenlessness (13 hives per day). Hives were checked and any queen cells were removed before queen introduction. Virgins were held in wooden 3-hole mailing cages with attendant workers and fed honey. Each hive was smoked through the entrance and onto the top bars. The amount of smoke was several times more than used to make a regular hive inspection. The queen walked out of her cage onto the top bars and the covers were replaced. One day later the hives were