Fall Management

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The survival of honey bee colonies through the winter depends on proper management in the fall. Survival is greatly increased if:

1. The colony has a large population of bees (6 frames or more) and a productive queen.
2. There are sufficient honey stores that are properly positioned in the hive. You should have two frames of honey and pollen on each side of the cluster (in the bottom hive body) and a full hive body of honey above the cluster.
3. The hive is properly ventilated. A common cause of winter death is not cold but moisture. Bees in the winter cluster are very active (feeding, generating heat, rearing brood, etc.) and a by-product of this activity is moist air. Warm moist air rises to the top of the hive where temperatures are cooler. If there is no escape route for it, the water condenses and rains down on the bees, chilling them. You can create top ventilation by either propping up the inner cover slightly or by boring an auger hole in an upper portion of the top hive body.
4. Varroa mite levels are low. Routine mite surveys during the summer months should have been performed and if high varroa levels were detected, colonies should have been treated to reduce mite populations. In the fall, if you find yourself with high mite loads, treatment can still be performed but make sure you look closely at product labels and pay attention to temperature restrictions.
5. The colony is free of American foulbrood or advanced cases of European foulbrood, Nosema and other diseases.

If the above conditions are met, then the hive is a likely candidate to survive the winter with some basic care. Marginal strength colonies aren't as likely to survive winter. You can combine smaller (or queenless) colonies together to increase their chances of survival.

Fall management recommendations:

1. If your colonies are light on food stores you can feed colonies a 2:1(sugar: water) syrup early in the fall when it is still warm and bees have time to cure the syrup before forming their winter cluster. Feeding should be completed as early as possible and no later than the third week of October.
2. Entrance reducers should be in place by the third week of September to reduce draft and prevent mice and shrews from entering the hive. Metal reducers should be used this time of

year; mice will easily chew through wood and plastic to get into a hive. Make sure you install reducers on a warm day when any creatures that have made it inside the hive are out foraging. You do not want to lock a mouse inside the hive.

3. Wrap/insulate colonies during early to mid-November after the temperature drop to freezing at night. You can buy ready-made wrappings from honeybee equipment suppliers or make your own. Tarpaper and black plastic are two of the most commonly used materials for homemade hive wrappers. Simply cut the paper or plastic to the correct size and wrap it around the hive. Secure it in place by using staples, ropes, tie downs, or very strong tape. If you want to add extra insulation you can place foam boards or other insulating material between the paper/plastic and the hive. Make sure the wrappings are not covering either the top or bottom entrances. Fiberboard or styrofoam can be placed over the inner cover for added insulation, just make sure that there is a groove cut in it or it is propped up in a way to allow bees to exit the hive.
4. Double check to make sure your hive moisture is controlled. If venting is not enough, you can add a quilt board (hive body filled with an absorptive material like newspaper, wood shavings, etc.) or you could use an absorptive board above the inner cover made from Homasote or soundboard. Finally, you could also raise hives up off the ground to allow for air flow beneath the hive (plus there is the added bonus of less snow shoveling).
5. Construct wind breaks and weigh down outer covers. Wind breaks can be made using any material including snow fencing and hay bales and should be situated so that the break takes the brunt of any prevailing winds. Outer covers can easily blow off during winter storms exposing bees to the cold. Make sure they are secured with a rock or ratchet straps.