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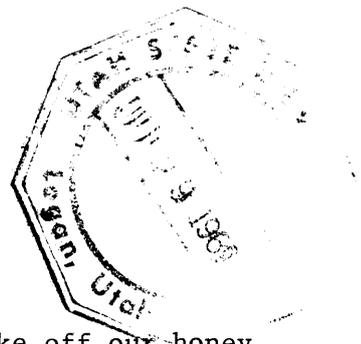
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BEES: HOW TO WINTER COLONIES

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We should start getting our bees ready for winter when we take off our honey crop. At that time we should reduce the amount of hive space to the needs of the colony during the approaching winter. We must make sure we leave enough honey for your bees to last them until new nectar starts in the spring. In addition to sufficient honey and pollen reserves, successful wintering requires a vigorous, productive queen, a high population of young bees, freedom from diseases, some protection from the weather, and a location where the entrance cannot become closed by water or mud. Early September is about the right time to check our bees for these points. This gives us enough time to make any necessary adjustments.

Food Reserves

Bees do not hibernate but remain active all winter. Honey is the source of energy they use to generate heat which they conserve by forming a cluster. A strong two-story colony should start the winter with at least 50 to 60 pounds of honey. More honey is required if our colonies rear brood late in the fall, than by those that stop brood rearing earlier. In addition to honey, each colony should have the equivalent of two full combs of pollen scattered through the hive. Since bees start brood rearing long before fresh pollen is available, they must store pollen in the fall. Should they run out of pollen before fresh supplies are available, brood rearing slows down at the time when it should be increasing rapidly.

The upper hive body should contain not less than 40 pounds of honey in dark combs. Sealed honey should be on the outside, and there should be a small area of empty cells for the active center of the cluster. The lower hive body should have 20 to 30 pounds of honey on the outside and combs of pollen in the middle. There will probably be some pollen in the upper hive body too. Bees usually form their cluster in the lower hive body and eat their way upwards and backwards. If the bulk of the honey is below, with empty space above, bees will be moving away from the food instead of toward it.

Young Queen and Young Bees

The importance of having a productive queen in the fall and spring seasons cannot be overemphasized. A young, vigorous queen will lay the eggs in the fall that will supply the young bees necessary for wintering. Colonies that are below average in population, or have uneven, scattered brood, or less brood than is the average in other colonies, generally contain poor or failing queens. Old and worn out queens do not have needed strength to live through the winter and to rear lots of brood in the spring. A queen that is more than one year old in the fall tends to cut down her egg laying too

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soon before winter sets in and thus there may not be enough young bees produced for most successful winter colony survival.

We should examine the bees in early September to make sure that there is no disease and that the queen is laying well. If she looks old and worn, or if her brood pattern is spotty, we must replace her immediately. A new queen introduced at this time will be able to furnish the necessary young vigorous bee population for winter.

Protection from Weather

Our last operations of the hive in the fall should be made enough in advance of cold weather to allow the bees to seal the cracks and crevices of their hives with propolis. Most of Utah is in a zone where colonies do not really need packing during ordinary winters. However, they do benefit from packing if the winter is severe. Because we have no way of accurately forecasting the severity of an approaching winter, most commercial beekeepers pack every fall.

Heavy, thick insulation is not necessary. Most beekeepers place their hives in rows side by side and back to back with about 50 colonies in each unit. A single thickness of roofing paper covering 4 to 5 inches of straw on top and between the rows is commonly used. On a small scale we can provide all the protection the bees need by wrapping two or three colonies in black roofing paper. Give the bees a small upper entrance which allows moisture to escape. Heavy packing prevents the sun from warming the hive enough to allow the bees to move to more honey. Our bees do not warm up the whole inside of a hive, so heavy insulation cannot really hold the heat in. A colony having plenty of honey reserves and young bees can withstand very low temperatures.

Strong winds blowing directly on a hive will do more damage than low temperatures. For this reason some kind of wind protection is of benefit. When possible we should place our bees where natural windbreaks exist; in groves of evergreens, along fences, or next to buildings. It is well to face the hives south and, if possible, place them on a gentle south or southwest slope to take advantage of winter sunshine.



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