

merely tacking a strip of queen-excluding zinc over the entrance of the hive, the bees can continue their work, but the queen cannot depart. There is some controversy concerning the ability of bees to accomplish the best results when forced to go through the queen-excluder, but the chief harm we have seen from this is the loss of occasional loads of pollen.

Methods of preventing swarming, or of reducing this impulse, should be studied and practised, but this is not within the scope of this paper, and we shall not elaborate upon this one topic.

3. The provision of winter stores by judicious fall feeding.—This is very necessary for successful bee-keeping. It is our opinion that no colony should enter the winter without at least thirty-five pounds of honey alone, besides the weight of the hive and frames, and forty-five pounds would be better. By examining the colonies in the fall, it can be found if they have sufficient stores, and if not, they should be fed granulated sugar dissolved in water, in accordance with directions for feeding published in the bee journals and in books on this subject.

4. Proper winter protection consists in covering the hive with an extra cover so tightly that there will be no chance whatever of wind blowing into it, closing the entrance to an opening perhaps one-fourth by three inches, and either protecting the apiary by sheds or windbreaks on the windward sides, or, for this north latitude, placing bees in cellars or caves, or burying them. It has been demonstrated recently, that, in burying bees for the winter, a sandy soil is an important and desirable feature. It appears that the porosity of such soil permits of a certain amount of needed ventilation.

5. Stimulative feeding in early spring can be made to build up a strong colony in time for fruit blossoms. The increase of the large colony thus produced, will be devoted to storing nectar, especially during the white clover flow.

It is an easy matter for a small bee-keeper to try stimulative feeding for a few colonies, and learn for himself if the practice pay sufficiently to be continued.

6. The keeping of individual hive records is one of the very important items in home apiary improvement. The hives should be numbered and a note book should be carried in the pocket for the purpose of making records of any point worthy of note, as soon as it occurs,

Even the honey sections placed within the supers, should bear the respective hive number upon each. This is for the purpose of comparing the actual production of different hives in regard to the amount of daubing with propolis, the fullness of the cells and sections, the number of bee ways left open, the whiteness of the cappings, and other points, besides the very important one of the actual annual yield from each colony. It will be found that there is individuality of the colony shown in each hive of all the various races, besides the temper or activity of the bees comprising the same. The important bearing of this, is to produce queens and drones from those colonies that show especially good qualities, such as giving the least trouble with burr combs or propolis, and which produce the fullest sections, with the neatest, whitest honey cappings. Some colonies may be found to do well in quantity stored, but the comb honey may have a watery appearance, due to the liquid coming into contact with the capping. Some colonies of bees avoid this, and make the entire section snow white in appearance. Every pound of honey taken from the hive should be recorded under its respective number in a note book, and **THE PROPAGATION OF QUEENS AND DRONES SHOULD BE FROM COLONIES THAT ARE MOST DESIRABLE IN EVERY REGARD.** The idea of select DRONES may not have apparent value or appear as forceful to some persons as the subject justifies. Much stress has been given to the subject of large or handsome queens. Recently the tendency is towards apiary improvement by producing queens from colonies which are making unusual records in honey production. This is right. This method means to select queens of the most desirable kind, and it is only proper to go a step further and permit the production of drones in only such colonies. In all weak or undesirable colonies the drone comb should be entirely removed, and we have even gone so far as to set full frames of drone comb in the middle of the brood chambers of desirable colonies for the purpose of producing an abundance of drones from such. Also, when the formation of queen cells is commenced in full colonies, it is possible to destroy these, and set into them queen cells from those that are more desirable; or at least remove the larvae from the queen cells of colonies which

may not have good records, and the larvae from these to obtain a stock of age from bees for home maintaining premises, and of queens upon the honey produced and such may wish to

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