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absence of light, an hour's time may be lost in the process going on. It is apparent that a great deal of time, millions of bees are formed. When the bees are exhausted, these change into spores.

of either heat or depression on these bees are in a double sense. Americans at times use of drugs in this way for foul brood. I use this preventive knowledge that they are a strong hive by to resist the germ of the spore stage. Infections enable the bees, the effect is, most noticeable — the trouble develops. This is, in my eyes, rare, and this can be advanced stage by of all internal fit- tingly disinfecting re is certain. All sort of perfection. t, the hive is dis-

more malignant and insidious disease, compared with which either form of foul brood is a mere bagatelle. This Isle of Wight disease in all its stages is like the pestilence which walketh in darkness, as the evil has such a hold before its presence is fully recognized that trying to cure it is mere child's play.

STRONG COLONIES FOR SPRING

Indexed By F. L. Pollock.

In our northern climate the period for breeding up before the honey-flow is short. Seeing that it takes nearly a month to produce a field worker from the egg, and that clover does not usually begin to yield until about the middle of June, eggs laid later than the last of May will be of little use for the main honey-flow. Breeding also seldom begins to any extent until the latter part of April, and it will be seen, therefore, that there is little more than a month in which to bring the colony from its winter condition to its full strength. This is really not long enough and the bees need all the help that can be given them.

To get strong colonies in the spring, it is necessary to begin the autumn before and have strong colonies in the fall. The more bees in the hive in November, the more there will be in March, and in the early weeks of spring a prolific queen is not so much needed as plenty of bees. Almost any sort of queen will lay more eggs than her bees can take care of in April.

At that time of year, it is a question of a comparatively small force of bees having to keep a large quantity of brood warm, and nothing in the world will help the colony so much as a warmly-protected hive. Where bees are wintered in the cellar, paper wrappings will help, but nothing is quite so good as a well-packed chaff hive, in which

the colony remains all winter and up to the honey-flow—and then they may as well stay there through the summer and up to winter again. The chaff hive keeps them cool in summer as well as warm in winter, thus having a tendency to retard swarming. It is very rare for a chaff hive to be robbed, even though it contains only a weak nucleus, for robbers dislike to venture into a long, dark tunnel like the bridged entrance to a packed hive. Another very great advantage is that before the honey-flow a good queen will fill practically every frame with brood. In my packed hives I commonly find by the first of June even the outside frames next the hive wall filled with brood. This leaves no place to put the white honey in but in the super. Later in the season the queen lays much less vigorously, and leaves plenty of room in the brood chamber for winter stores gathered during the fall flow, if there is one, or fed to the colony by the bee-keeper, who will provide sugar syrup, which is cheaper and better than clover honey.

Ten-Frame Hive Preferred

Other things being equal, I consider a protected ten-frame hive more than equal to a twelve-frame hive without protection. It will produce as large a force of bees, and when the honey-flow comes, the brood chamber will contain a solid mass of bees and brood, leaving no storage room but in the super.

However, twelve frames can be used for brood, even in the ten-frame hive. I put on the extracting supers at fruit-bloom time, with excluders under them, and at the same time I raise two frames of brood into the super, replacing them by frames of foundation in the brood chamber. This foundation will be drawn out and filled with eggs in a few days, making actually twelve frames used for brood-rearing. This also produces two more extracting combs per colony,

a Annual Report, the January issue of that foul brood is going over wide areas. and its ravages are here drastic measures resorted to. Section 3 what I have already destruction by fire in places where the bees in its virulent or recovered." Where opportunities that d," they, too, are very pleased to find thus resolved to go after. ery are, unfortunately from a far