

safe to place much reliance upon that fact, for there are, comparatively, but few such colonies at this season, and hence the necessity of extra protection. Besides, a colony may be very strong in numbers just after being set out of the winter repository, and in the course of a very few days be very weak in numbers. This may be due to the fact already noticed, that the depopulation sometimes goes on very rapidly after the old bees have once begun active exercise on the wing.

I have found the following an effective and inexpensive method of spring and fall protection for the bees: I make "skeletons" of rough lumber larger than the hive, so as to set loosely over it, slanting back a little so as to shed the rain, and fill or pack the spaces all round with chaff or sawdust. Above the frames are placed, first the summer quilt, and over this the winter quilts or sawdust cushions. Movable roofs—shingled or otherwise—may be made to fit over the skeletons to keep all dry and warm. These can be lifted off at any time when necessary to examine the colony. They also answer as shades in hot weather.

The honey gathered in May comes mostly from fruit bloom. The maple, willow, alder, dandelion, etc., yield more or less according to season and locality. But the apiarist need not count on any surplus in May. When they get enough to support themselves and their brood through this month they do very well. Often they do not get enough for that, and must be fed, I had occasion one season to feed my bees right up to the clover bloom, which commenced that season about the 10th of June. There is sometimes more danger from starvation about the first of June than during the winter. Between the fruit and clover bloom there is little flora in Canada to fill the gap, and at this time the colonies short of stores must be watched, especially should the season be unpropitious. A full colony of bees freely breeding will consume more food per diem than a novice would imagine, and under such circumstances, when there is no honey coming in, such a colony would very speedily get away with a dozen pounds of honey and starve. Nor will the average colony of bees breed freely when no honey is coming in, and the supply on hand is all deficient, unless stimulated by daily feed. And this brings us to

SPRING STIMULATION,

which has both its advocates and its opponents. They are both right and both wrong, inasmuch as feeding to stimulate brood-rearing is, under some circumstances proper, and others improper; sometimes wise and sometimes otherwise.

When the colony has plenty of stores and a good queen, stimulation is entirely unnecessary—perhaps worse than useless. But when a colony is backward when it ought to be rapidly coming forward—from shortage of stores, inferiority of queen, or other cause—artificial stimulation is useful. A little liquid food, supplied daily (in the evening to prevent robbing) will have a magical effect in hurrying up such colonies.

The prime object in spring management is to get every colony strong in numbers by the time the clover honey flow commences, and not much before that time. As this particular period varies with season and locality, no amount of chronological calculation will enable us to hit the mark every time. I find, however, that in this district it is pretty safe on an average to make the middle of June the objective point of time. But it is well to remember that it is much better to come out with your working force a little ahead of the flow than behind it.

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FERTILE QUEEN INTRODUCTION.

THE art of queen introduction may be explained by considering the subject under two heads or cases—*a*, A stock of bees queenless; *b*, A queen subjectless. A stock of bees may become queenless naturally or accidentally, or may be made so artificially. Among the former cases a queen leaves the hive and is then subject to the dangers of being destroyed by birds, insects, or reptiles, or it may miss its way or it may not be hived, &c. It may die of old age or disease, or may become a prey to some parasite. The weather, the time of year, or a lack of drones may be against the successful union of the sexes, and so make the queen useless and worthless—merging into so-called fertile workers.

Amongst the reasons for artificially depositing the queen may be mentioned the desire for a queen of greater prolificness, bees of greater amiability or other qualities, or of a different race.

When bees discover that they are queenless (either artificially or naturally so made) they at once set upon the work of raising a queen from any worker larvæ not more than three days old, provided virgin queens are not being raised. If they are rendered queenless while eggs or larvæ less than three days old are in the hive, and they begin to raise queens or build queen cells upon those, it is difficult to queen them, but still this is possible. The queen cells should be allowed to develop until a day or two before the queens are likely to hatch, and should then all be cut out—*i. e.*, the queen cells, and the place brushed