For The Canadian Bee Journal.

Limiting the Brood Space During Harvest.

ON page 311 in your comments on Mr. G. B. Jones' interesting article, you say: "One point in connection with this subject which your arguments go to prove; is that where there is very little fall pasturage, bee-keepers should invariably confine the queen to a very small brood space during the honey harvest, so that a large number of useless bees may not be raised to become consumers at the close of the harvest." Thus you have stated in a single sentence a conclusion which there is a small volume of facts to establish, besides the facts argued by your correspondent. Indeed you strike at once upon the key to the problem of the most successful bee-keeping in nearly every portion of the Northern States and Canada! And if bee-keepers understood the matter, as they surely will ere long, there would be a radical change in our methods as well as in the kinds of hives that we would use. There are some parts of this country as well as, possibly, a few localities in Canada, where there is usually a continuous honey flow throughout the season, in which a large brood nest is desirable, and we never can have too much brood or too many bees. But more than nine-tenths of our bee-keepers do not reside in these favorable localities, and it is clearly manifest that more economy is required for successful bee-keeping in the less favored localities.

This economy can all be brought by the proper control of brood raising. Now, who can tell us what is proper and what is not in regard to brood raising? The editor says—"the queen should be confined to a very small brood space during the harvest." How small a brood space? This is a vital and all-important question, next after the advisability of contraction of the brood nest, that is now admitted by all the ablest producers of comb honey in this country to be necessary to the best results. Some have advised to confine the queen to only one brood comb; some to three, five and six L. frame, so that it seems to be by no means settled how much contraction is advisable. After 8 years of experience, in which I have gone over this ground fully and repeatedly, I have decided that it does not pay to carry the contraction too far; that about 800 square inches of brood comb space, or the equivalent of 6 L. brood combs is the best, taking all things into consideration. For the past four years I have used a small brood chamber seven inches deep, containing large enough for the queen from the first of June to the first of October, but too small by half for breeding up in the spring. It is also just right for a swarm to give best results in comb honey. For spring breeding I use two stories with protection, and am able to get both stories full of brood by June 1st, when I have all the bees needed to gather the crop of white clover—our source of honey. The queen is then smoked down into the lower storey, a wood-zinc queen excluder put in, then the section surplus, and then the upper storey containing part of the brood. In a short time the brood all hatches out and the combs will be filled with honey and sealed up. The work in the sections goes on at a wonderful rate, and the largest yields of comb honey any where reported this side of the rocky mountains, as well as some of the finest, was obtained by this practice.

After the comb honey is removed the upper storey may of course be extracted if there is a prospect of fall honey; but this year I left it for the bees, setting nearly all the full stories down upon the queen excluder after removing the sections. In a few colonies the queen had the full range of both stories, the queen excluder being removed. Now for the result which will doubtless interest Mr. G. B. Jones. The colonies in which the queens had full range eat up most of their honey in the upper storey, and had to be fed for winter, but those that had the queen excluder between the stories came through to October apparently as strong in bees, but the upper stories were still as full of honey as they were when the sections were removed. It seemed the bees would not break into the sealed stores above the queen excluder, while in the hives without the queen excluder there was a little bood raised in both stories and the honey mostly used up. There had been possibly more brood reared in the hives not having the excluders, but if there had been, there were no more bees in these hive than in the others on 1st Oct.

A good friend of mine wrote me not long since that he thought a queen excluder a "nuisance," and was unable to see any advantage in a hive so shallow as to necessitate a queen excluder, in working for comb honey. But if it is best to resort to a contraction of the brood nest in comb honey producing, then a queen excluder is the cheapest and the best mode of effecting the contraction in connection with a proper size and shape of hive. This system of operating hives also obviates the building of burr combs as completely as it is possible to avoid them with thick top bars, or any other known way of preventing burr combs. Many colonies will not build a