

with foundation or empty combs. Should a swarm issue just before or in the main season this method would be wrong (but with me at beginning of the main season all swarming is done and the bees never think of casting a swarm while the honey is pouring in *en masse*). Here I find Mr. Hutchinson's plan for comb honey in the right place. Now, the main thing is to give the bees plenty of empty cells to store the honey being gathered from the field, but of course the bees can build combs too, at this time with advantage.

It is important that you give a swarm no more frames than it can quickly fill to the bottom-bar. In this way only can you get good combs free of drone-cells. If once comb-building has stopped the bees will build more or less drone combs when they begin comb-building again. Later, if you want to enlarge the brood-nest, it would be a mistake to give starters, as foundation or empty combs should be given now. One or more frames with starters between brood or empty frames will give bad combs every time. Swarms of young bees having a young fertile queen build the nicest combs I ever saw, and I prefer them to combs of built-out foundation in every respect.

W. Z. Hutchinson says: "When bees are gathering honey in the fields, there are times when they may build combs to advantage, but when they get their honey from a feeder, paradoxical as it may appear, they must have combs in which to store it, if the work is done at a profit."

This is exactly my experience, but I do not see any paradox in it. The bees need every time a certain number of pounds of honey to build a pound of comb (may be they get some as a side produce by feeding young larvae, but I cannot prove this yet). But if they bring honey from the field and are allowed to build combs at the same time, the stimulated energy overbalances the loss of honey for comb-building. By feeding the bees the stimulated energy needed for building combs will cause a feeder to get empty sooner, but they cannot fill it again, and so the amount of honey used by the bees for comb-building appears at a loss.

In one of the bee periodicals a writer says, that "natural swarms only should be allowed to build combs; never made-up swarms." Why this? Have your made-up swarms under the same condition as in natural swarming, and it will build combs in the same way and to same advantage as natural swarms. Such has been my experience the past eight years. The so-called artificial swarming is unnatural, and, in fact, no swarms at all.

The impulse of building combs will arise in the spring, as soon as the weather is favorable and some honey is coming in. It is important to allow bees the satisfaction of this impulse. But now we meet with some difficulty, because at this time and in this condition the colony will build drone-combs mostly. In times of the old straw hive it was customary to cut away the combs under the brood in early spring, and Doctor Dzeirzon, too, recommended this, and thereby was the energy of the bees stimulated very much, resulting in more brood. The only trouble was, that the bees built drone-combs. But today we can give to the colony in springtime as soon as the weather is favorable, some foundation, and no drone combs can be built, but the bees can secrete wax because the foundation does not contain wax enough for building out the combs to their proper depths. For this I take out empty frames or those having honey in them in the spring and give foundation on the side of the brood (in our climate).

Further, the comb foundation is of great value in order to get as much honey as possible in a good honey flow. In sections we get more honey by full-size foundation than by starters, and still more, if it is possible to give empty combs in the sections. If the honey flow is not very good, the difference will be a very small one; the better the honey flow, the greater the difference. This is clear enough: the young bees cannot build the combs fast enough for storage room for the honey which the older bees are bringing from the field daily. So the foundation is of value, if we work for extracted honey and have not empty combs enough.

The question is not against the use of foundation at all, but to use it where it is to advantage and not to use it where it brings no profit but rather damage.

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Perseverance an Important Factor.

IN any line of business, the man who uses a reasonable economy and has the ability to give fair management and the perseverance to hold on, will in a great majority of cases, make a success; while, on the other hand, the one who rushes into whatever he has undertaken with a spasmodic endeavor to win all at once, as a general rule wastes his energies and often fails for sheer want of perseverance. The editor of the *Industrial Gazette* has observed that the man who starts in to do a day's work, and attempts to do as much in one hour as ought to be done in two, will usually find it necessary in a short time to take a rest, and while he is resting will