sections, from allowing too much cool air to enter them.

To secure the best results, we should acquaint ourselves with all the minutia know whether what we propose will bring us the best results, or prove a disadvantage to us in securing the most honey and money for our labor.

Borodino, N. Y.

The Plant-Louse on The Wax-Plant.

HOW TO DESTROY IT.

The following clipping from Gleanings will be found of interest.

Prof. Cook:—I send you a small box in the same mail with this. It contains a leaf of the hoya, or wax-plant, on which there is some sweet deposit; also a twig of the same plant with the little insects that produce this deposit. The plant has not been out of the office, where it runs up one window for several years. The insects were all alive when placed in the bottle but I fear they will be dead ere it reaches you. It was handed to me at Boonville by Capt. Tolioferro during our State convention of bee-keepers, and we were all curious and anxious to know whether the deposit is honey-dew, the name of the insect, or species, etc. Please examine, and report if already discussed in the journals.

MRS. J. M. NULL.

Miami, Mo., Apr. 12.

(Prof. Cook replies:)

In response to the inquiry sent by Mrs. Null, let me say that the sweet substance on the leaves of the hoya, or wax-plant, is genuine honey-dew, and the insects sent in the accompanying bottle are genuine plant-lice In these the nectaries—the black tubes which project from the back—are very long, as is also the spyglass-like ovipositor. The beak or sucking-tube, is always long in plant-lice, and it is through this that the lice suck the sap and life from the plants. The sweet substance, or honey-dew, comes from the tubes or nectaries, and, in many cases, that from these plant-lice is wholesome, delicious, and no injury to honey, which it helps to produce.

The remedy for this plant-louse evil is the kerosene emulsion, which should be made as follows; Dissolve in two quarts of water, one quart of soft soap or ½ lb. of hard soap, by heating to the boiling-point, then add one pint or kerosene oil, and stir violently for from three to five minutes. This is best done by pumping the liquid into itself through a small nozzle, so that it shall be thoroughly agitated, This mixes the oil permanently, so that it will never separate, and can be diluted easily at pleasure by simply shaking or slightly stiring after adding the water to dilute it. I have often stated, that it is not necessary to use so much soft soap, but that it is better, as it insures a perfect emulsion even upon dilution, and the soap itself *is* an insecticide, and valuable, aside from its emulsifying powers. I have also stated, that, in using soft soap, a quart of water would do, I prefer, however, the two quarts, as the emulsion is more sure; and the thinner material permits more ready and more speedy dilution, especially in cold weather. I have always placed soft soap first, as most farmers have it, and convenience is very important in such matters. A farmer will make and use an article when all the ingredients are at hand, whereas he would not do so had he to go and purchase them for this express purpose. The agitation should be violent, but need not be long. We have formed a perfect emulsion in one minute, even with cold water. This emulsion should be diluted by adding an equal quantity of water. Shake well, and apply to the plant by the use of a syringe or force-pump, like the Lewis or Whiteman. It kills all the lice, but does not injure the plants.

Many readers of GLEANINGS will be glad to know that this kerosene emulsion is a sure cure of cattle, horse, and hog lice, and also sheep-ticks. For the lice, scrub the animals with the emulsion diluted with one-half its bulk of water. We use a brush, and do it thoroughly. The cost for a full-grown cow is not more than five cents and five minutes of time. It kills nits as well as lice, and seems to brighten the hair. I think the scrubbing with this soap solution is excellent for the skin, and thus we do more than kill the lice. For sheep we dip the animals in the emulsion, diluted with one half its bulk of water.

A. J. COOK.

Agricultural College, Mich.

PROMOTE BROOD REARING.

The experienced apiarist manages to have but little honey in his hives at the beginning of the surplus honey flow. By uncapping the cells, and placing the combs in the center of the brood nest it is used for brood raising. If some hives contain more than can be used in this way, probably others will be lacking in stores and an exchange of combs may be made. Worker combs from box hives may be fitted to frames and use in place of old combs, which may be cut out, rendered into wax and the frames refilled. Whenever I have tried the plan of getting foundation drawers between frames containing full combs, I alway get irregular combs. Colonies that contain a large amount of stores at the beginning of the honey harvest will store only about half the surplus they would if the brood nest had been judiciously enlarged. The entire stores may be used for brood rearing and when the surplus cases are put on frames containing eggs should be placed at the outside of the brood chamber. (J. H, ANDRE, In Farm Home.

Report from St. Thomas.

MR. ED. HEAL writes us as follows:—Gents, my first swarm for 1891 came out to-day at 2 p.m., about two weeks later than last year. Yours truly,

ED. HEAL.