

there is any truth in physiology the nitrogenous food is necessary in brood-rearing for both workers and brood. As to feeding sugar syrup for wintering I have already expressed myself against it in our journals, and I do so again here and now. Of course it is admissible under some circumstances, and I have no doubt bees will winter and spring very well upon it if they have plenty of it of good quality in proper form along with pollen more or less. Some bee-keepers extract pretty closely during the fall flow of honey in order to feed syrup for winter, and this I emphatically condemn for more than one reason. The sugar feeding, besides carrying with it greater risk in wintering, produces suspicion amongst consumers (unjust no doubt) and tends to lower the honey market. If, however, by a premature and unexpected cessation of the honey flow the bee-keeper finds his bees in the fall very short of stores the feeding of syrup in part instead of all honey is both prudent and permissible. Whichever kind of food is supplied them for winter, let it be good in quality and abundant in quantity, as this is certainly a prime factor in successful wintering. And if there is to be any feeding done let it be done early so that the feed may be properly stored, cured, and capped; and also, so that the bees shall not be disturbed later on in the fall when they ought to be quiet. It is a mistake to disturb the bees much in the fall. The more quiet they are, and the less worry, work, and excitement they are subjected to in the fall, the better they will winter and the longer they will live in the spring. As soon as the honey season is over and the cool weather begins contract the entrances to the hives so that they will not be worried in defending themselves against invaders and the heat better retained, and fix them up comfortable and warm till they are put into winter quarters, which ought to be done before the cold weather of winter sets in.

WINTER QUARTERS.

The prime requisites of winter quarters for bees are darkness, dryness, and a proper temperature, which ought to be from 45° to 55° say up to the middle of February and a few degrees higher from that off. During the fore part of the winter and up to the time they usually begin to brood in February the temperature that best conduces to quiescence of the bees is the best temperature whether it be 45°, 50°, or 55°. It will range somewhere between these figures depending upon the hive ventilation, quilt protection, humidity, etc. After brooding commences, the temperature of repository ought to be raised a little, and more ventilation of the repository will be required for the reason that the

bees will require more oxygen in the active work of brooding, and the consequent increased consumption of food.

As to hive ventilation, from extended experience I am in favor of very free lower ventilation with warm quilts of wool on top. These retain the heat and allow the moisture to escape.

There are other points of much importance in wintering, but this letter is quite long enough already.

ALLEN PRINGLE.

Selby, Lennox Co., Sept. 12, 1886.

On motion of Messrs Webster and Macpherson the thanks of the association were tendered Mr. Pringle for his able and opportune paper.

DISCUSSION.

DR. MEACHAM, ODESSA.—Said that the fact of water being in a cellar did not make it damp and cited instances where the air was as pure and dry with six or eight inches of water standing in the cellar for months as also other instances where no water ever stood in the cellar and it was nevertheless always damp.

THOS. IDYLE, CLARKSBURG.—Asked how it was to be found out in the fall whether a queen was fertile or unfertile.

He was replied to by W. Couse in the following words, "inspect the brood chamber and if brood is found in fair quantities it may be inferred that the queen is all right."

ALSIKE CLOVER.

DR. MEACHAM ODESSA.—Asked what were the advantages which alsike clover possessed as a honey plant.

The president said that Bokara clover would grow in damp moist places where the other clovers would die and was a more abundant honey source than white clover. One of its chief advantages being that it was a storage crop.

COMB HONEY.

EDWARD LUNAN.—Asked "In the production of comb honey, can we not dispense with separators and still obtain satisfactory results."

WILL ELLIS, ST. DAVIDS.—Said "that he could not work without separators and did not think the ordinary bee-keeper could do without them. With their use but little watching is required and nice straight combs are built."

W. COUSE.—Had raised comb honey for three years, as did also Dr. Thom, and the former did not find any bad results from the non-use of separators.