

in such vigorous condition that, when the eggs were incubated in the spring, the lowest percentage of fertile eggs in any hatch was 85 per cent., and it ran up as high as 100 per cent., with an average of 92 per cent. Of the eggs set, 50 per cent. were hatched, and of the chicks hatched, 88 to 90 per cent. were raised.

WATERED WITH SNOW.

Next, as to "refreshments." It being difficult if not impracticable to keep water before them in the houses, maintained, as they were, at such a low temperature, the hens got none all winter, but had to drink (or eat) snow instead. It seemed to agree with them, for when water was first given the egg yield fell off, though this was probably due to the fact that they drank too much and became chilled.

A SIMPLE SYSTEM OF WINTER FEEDING.

The system of feeding was as simple as the houses. In one of the hoppers, wheat bran was kept always before them; in another, grit, meat scrap and oyster-shells. About an hour before going to roost, each pen of 25 hens was given a feed of about three quarts of grain, from which they filled their crops, and scratched out the rest next day. The quantity of the grain feed was regulated by how closely the hens picked up the previous day's supply. When, by kicking about in the litter, an odd grain was discovered here and there, it was assumed that the previous feed had been about right. The object was to avoid overfeeding, while giving the hens enough to scratch for to prevent them from getting discouraged.

MAKING EGGS INTO POWDER.

Reference was recently made in a commercial report from J. S. Larke, of Australia, to the process of desiccating eggs, said to have been devised at Melbourne, whereby shell and moisture could be removed, and the yolk and albumen converted into a powder, and so preserved for food. It was intimated that the process would likely make its appearance in Canada. As a matter of fact, something of the kind was actually tried at Stratford, Ont., several years ago, and, we are advised, turned out an utter failure. Nothing has been done since in that connection, and the building, which was specially fitted up for the purpose, was latterly converted into a laundry.

APIARY.

DRAWBACKS TO CO-OPERATION IN MARKETING HONEY.

Editor "The Farmer's Advocate":

It is only by request that I state my views on this subject. I hesitate doing so, lest someone may say that I have an "axe to grind" in discouraging such. On the contrary, however, could it be made a success, it would not only be of benefit to the producers, but to others, who, as myself, make a business of buying and selling honey. I need not now state what advantage there would be to the latter; it will be time enough for that when those who are advocating it can show that it would be practicable. So far as I have heard or read, nothing definite has been given as to the working plan, only citing what has been obtained by other co-operative associations, more particularly in connection with the apple industry. Apples and honey are two different things, and co-operation in the sale of the latter is quite another problem, and the writer is of the opinion that it will never be made a success. With apples, outside markets are practically supplied only in carload lots. Co-operation enables every producer, by combining together, to supply, and reap the benefit accruing from this. It would be an exceptional thing to reap any benefit from the sale of honey in this way. There are, I suppose, not only in Canada, but across the line, as many carload producers as there are carload buyers. In unlooked-for places, you will find merchants who buy apples only in carload lots, whereas, with honey, I have known merchants, in much larger places, who prefer buying what they require from their wholesaler, rather than have a shipment of even one hundred pounds direct, because the demand is small. With honey, the carload producer does not require the help of an association to sell his honey, and to the smaller producer there would be a loss in freight if shipped to some central point for distribution. If we take apples, again, as an example, as those who are advocating co-operation do, it is an easy matter to grade them, and when packed by an association according to Government standards, it is a decided advantage to the merchant to buy from such an association; and, as a consequence, better prices are obtained, and every member of such an association is benefited in proportion to what he supplies. It would be impossible to have a satisfactory grading of extracted honey. I do not mean of the kinds of honey, but rather the quality, when gathered from the same source. Those who are familiar with

honey know that there is a great difference in it, even when gathered from the same flowers—from the miserable, unripe stuff, to that which has been fully ripened in the hives before extracting, and a producer of the latter would hesitate in including his along with some, which, while perhaps it could not be classified with the best, would be much inferior to the best. A prospective buyer should have a sample of what he is getting from a co-operative association of honey producers, and, for obvious reasons, they would be in a worse position to sell from such than would a private individual. One great gain that accrues from co-operation in selling apples is that a buyer can, if he so wishes, have a carload of any particular variety. From what has been said about selling honey in carload lots, there would be no gain in this way from co-operation in the sale of it. It is an easy matter, this co-operation in the sale of apples. The consumer is waiting for them, the merchant is on the lookout for them, and a co-operative association have them, or know that they will or will not have them. Not so with honey; "any old time" will do for it, unless for that in the comb. The production of honey is so uncertain, and, what a producer will have to spare after supplying the home market is likewise, as I have found from experience in buying it; so that a co-operative association would not be of much value some seasons. I do not think any co-operative association could do more for beekeepers than is being done by those of our number who get reports from beekeepers, and then, from these, estimate the value of it, or, rather, what it should sell for. A co-operative association for the sale of honey should be able to supply it in any size package or container required. This would mean a suitable building with facilities for bottling. This is a business in itself, and the man who would be competent to take charge would be hard to get, for the simple reason there are so few of them that would be free to take a position of this kind. As I said before, the sale of honey would largely be in small lots, therefore collections could hardly be made on delivery, as when selling a carload of apples. This would mean the keeping of books, with the consequent proportion of loss from bad debts. R. F. Holtermann hit the nail well on the head when he said, "The co-operative company practically become middlemen, and had to meet expenses and risks of business men." In the face of such, the majority of beekeepers would prefer, I think, to sell their own product and take their own risks. If "The Farmer's Advocate" can suggest any way of bringing the buyer of honey in touch with those who have it to sell, and who do not take "The Farmer's Advocate" or any other journal on honey-production, it will be doing more for the beekeepers of this country than any co-operative association can possibly do. If I am correctly informed, I paid as much as three cents per pound more the past season than some sold their honey for, and then had to let orders go unfilled.

Huron Co., Ont.

G. A. DEADMAN.

CONCERTED EFFORT ESSENTIAL TO SUCCESS.

Editor "The Farmer's Advocate":

The co-operative marketing of honey would be as desirable for the best interest of the honey producer, and likewise for the consumer, as has been the case with the co-operative handling of fruit, and why should this be doubted, simply because the one has passed the experimental stage and has proven a success, while the other remains untested. Could the Department of Agriculture aid in enforcing some rules of grading and marking at central points that would become standard, the way would at once be opened for an unlimited growing trade with the Northwest, which would change our present conditions as greatly as that which has taken place in the fruit interests. You may ask why beekeepers do not work together along these lines. One reason is that but few are looking forward to any change from old methods, and those who do are not situated closely together that they may take advantage of it, and they are men who have worked up satisfactory arrangements for selling their own crops, yet feel the necessity and are willing to aid in improving the general condition.

Middlesex Co., Ont.

F. J. MILLER.

MUCH FOR LITTLE.

We beg to acknowledge, with many thanks, the beautiful Bible sent as a premium for obtaining two new subscribers. It is really surprising how you can send such gifts for so little. We find the paper a real treasure in our home, and could not well get on without its valuable helps. A happy and prosperous New Year to "The Farmer's Advocate and Home Magazine" staff.

Perth Co., Ont.

J. S. PATTERSON.

Get after the new names. As long as the supply lasts a copy of the 1907 Christmas number goes free to every new subscriber. There are still some on hand, but the stock is being rapidly reduced. First come, first served.

GARDEN & ORCHARD.

NOVA SCOTIA OFFERS 10c. BOUNTY FOR NESTS OF BROWN-TAIL MOTHS.

At the Nova Scotia Fruit-growers' Convention, Prof. M. Cumming, Provincial Secretary for Agriculture, announced that his Department would, from December 20th, until June 1st, 1908, pay a bounty of ten cents (10c.) for every nest of the brown-tail moth containing caterpillars which are picked and subsequently destroyed, either by the Nova Scotia Agricultural College authorities, or by the several men whose names are mentioned below. It is recommended that any who find nests of these caterpillars should put them away securely in a box of some kind, and, when they have gathered together a sufficient number, forward them, by express or mail, in a secure box, to the Agricultural College at Truro, or to Mr. Morten, Principal Academy, Digby; H. G. Payne, Granville Ferry; F. C. Johnson, Bridgetown; R. J. Messenger, Bridgetown; G. H. Vroom, Middleton; S. C. Parker, Berwick; C. Percy Foote, Lakeville; R. W. Starr, Wolfville. These men are authorized to examine specimens, after which to destroy them, and send report to the Agricultural College, Truro. In addition to the bounties, the Department will pay the expenses of either mailing or expressing the brown-tail moth nests to any of the above gentlemen, or to the College at Truro. It is understood that this bounty will not be permanently continued. It is merely a temporary measure, decided upon in order, if possible, to insure a complete eradication of this pest from the Province, and will be discontinued after the present season.

The hearty co-operation of school teachers and citizens of all classes, in its efforts to destroy the brown-tailed moth nests, is asked on behalf of the Department of Agriculture by M. Cumming, Secretary for Agriculture, Truro, N. S.

PLANTING AN APPLE ORCHARD.

By Linus Woolverton, Grimsby, Ont.

A correspondent writes: I contemplate next spring setting out a considerable sized apple orchard, and would be most grateful for any practical suggestions that you would be good enough to favor me with. Some points upon which I desire information are the following:

1. What varieties of winter apples would you recommend?
2. What is the quickest means of getting a bearing orchard?
3. If by grafting, what stock would you recommend?
4. What distance apart would you recommend?
5. Would you recommend fillers? If so, what varieties? I propose planting my orchard in the County of York. The soil is clay loam, in some places with a gravel bottom, in others it will require drainage.

In the central part of Western Ontario, between the Georgian Bay and lakes Ontario and Huron, a good apple orchard, of well-chosen varieties, properly pruned and carefully cultivated, is, without doubt, one of the best assets of the farm. In planting an orchard, the selection of varieties is of the first importance. Many of our old apple orchards, planted by our grandfathers with an eye to home markets and home uses, were of so many varieties that it is impossible to make up a car lot of any one kind for export; indeed, it often happens that a large portion of the packages have to be filled out by using two kinds, all of which materially lessens the selling prices. The ideal orchard should either in itself, or in combination with neighboring orchards, have enough trees of each variety to enable the shipper to make up a whole car lot of a single kind; or, at most, of two kinds at one time.

While winter varieties are, perhaps, the most desirable, especially where sales are made to travelling buyers, yet for an independent grower who can make his own shipments, and give attention to varieties in their proper season, it is well to begin the end of August or early in September with Duchess and Alexander, which may now be forwarded to distant markets in cold storage, and bring good prices if carefully packed in bushel boxes.

Then about the middle or toward the end of September the progressive apple-grower would harvest and ship two very choice varieties, the best of their season, the Blenheim and the Gravenstein. Strange to say, neither of these has been widely grown in Ontario, but the writer has grown enough of both to enable him to speak with confidence concerning their merits, and to consider the trees both hardy and productive. The Blenheim is one of the few British apples that succeed in Canada. It is a perfect apple, subject to scarcely any kind of blemish, and attaining a rich orange color in the package, which renders