

in the comb. Honey being something that I am particularly fond of, I asked about it, and was told that it was "homemade," and that, besides supplying all that could be used on their own table (which, to judge from the performance at the table that night, would be no small item, especially if they often had visitors like myself), they sold about \$50 worth of honey per year, "and," the owner added, "I am satisfied that this is one reason why my orchard bears so well."

The writer is satisfied of this, too, and if six or eight stands of bees—which is what my host kept—will give the results cited, with practically no trouble whatever, certainly one is justified in concluding that it pays to keep bees.

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POULTRY.

Dry Feeding of Poultry.

Dry feeding of chickens and adult fowls, as opposed to mash feeding, is being seriously recommended by many expert poultry-raisers. Their great point is, that by this method they are approaching closer to nature's ways, and thus promote the health of the fowl. This matter was well covered by A. F. Hunter, Suffolk Co., Mass., in an address before the Poultry Institute of Ontario. The Prairie Farmer makes these extracts, touching on the matter of dry and wet feeding:

A farmer in Illinois tells his experience in feeding, and how he came to adopt the dry-feeding method. He says: "After reading much upon the subject, I concluded the greater part was nonsense, and I now fully believe that inside the next ten years feeding poultry in every stage will be much simplified. I have had some experience in growing hogs, and did considerable experimenting with feeding. I found that by using ground mixed grain, fed dry, I could grow a prettier, more shapely and firmer-fleshed hog than by feeding a slop."

"Nothing under the sun fed in its natural state will blow up a pig to such an extent as a rich slop, and no pig so fed will have the fine symmetrical appearance of one that is fed more in accordance with nature. I fully believe the slop-feeding is destructive of the digestive organs of pigs, and also fully believe the mash business for chickens and hens gives the same unfortunate result. Any mash will begin to sour soon after being eaten and subjected to the heat of the body, and this too-early souring of the food in the crop, before it is properly passed on to the gizzard and intestines, is the foundation of sour-crop and bowel trouble. I will guarantee you that if cracked or whole grain is given regularly (and not in spurts now and then), examination of the crop at any time will not reveal that sour smell so frequently noticed in mash-fed pens."

"When dry-fed, a chick will not gulp down a great amount of the food at one time, and I fully believe that, with dry feed moistened with saliva, it will not sour nearly so quickly as if it is moistened with hot water or milk. If my method of feeding will grow good, healthy Plymouth Rock pullets to weigh 7½ to 8½ pounds in seven or eight months, I believe that pullet is in a better shape to lay, and, if continued on dry food, will, at two years of age, lay as many or more eggs than a mash-fed chick and hen; and not only this, but the eggs will be larger and more fertile, and when you come to sell the carcass it will have both a better appearance and better weight. I know the eggs I am getting now are better in size, color and shell than any I ever bought; I mean 35 to 50 per cent, better in quality, and this I attribute to my having adopted the dry-feeding method. I am certain that dry food properly fed means health, with no sour crop and no bowel trouble."

"When I began dry-feeding I had never seen an article upon the subject. I knew I could do better with hogs on dry food, but had never studied why. I knew I had too much to do, was too busy with the farm work to grow chickens with mashes. I planned my year's campaign before a chick was hatched; that is, the best of grain, sweet milk before the chicks all the time, beer scraps also, and charcoal accessible all the time, with clover-hay chaff for litter, and good range. I have experimented with dry feed for chicks for two years—the past year for all ages of poultry—with the best of success."

Here is another writer's argument: "Well-bred chicks are naturally hardy. Chicks born of strong, hardy parents, come into the world about

as well fitted for the battle of life as anything we know of. Given half an opportunity, fed within the bounds of reason and common sense, and properly brooded, it seems almost impossible to kill them. They have an ample coat of down which protects them from almost all kinds of weather for short periods."

"Given a well-regulated brooder, they will cheerily run out into an almost zero temperature, and apparently be as happy and contented as though it was warm, summer weather, and they certainly grow much better than when placed in what some call better conditions."

"Fed improperly, or kept at too warm a temperature, or when they are so unfortunate as to have had weak parents on one or both sides, the reverse conditions seem to be the result—they are about as delicate, puny and unsatisfactory atoms of mortality as the world produces."

"By closely studying nature's methods with chicks, we find that the mother hen, leaving the nest when the chicks are from one to two days old, does not have the chance to lead the way to a dough dish, and fill them up with an indigestible mess of dough. On the contrary, she starts out on a hunt, and, if she is undisturbed, she makes a good display by nightfall, and has succeeded in filling the crops of her numerous family."

"If we could dissect those crops, we would not find a scientifically-prepared mixture of one to four, or one to five, or sixteen to one, or any other startling array of chemical combinations. Instead, we would find a bug or two, a worm, some seeds that we may have carefully planted in the garden a day or two ago, together with a variety of weed seeds, and plenty of grit."

"This composite mass has been gathered together in ten or twelve hours' time, with a liberal sprinkling of exercise thrown in, and if the weather conditions are favorable, and the mother hen does not drag the youngsters around through



A Garden at Eagle, Alaska.

the wet grass too much in the morning, she usually comes out at the end of the season with as many full-sized chicks as she started from the nest with."

"Your mash-fed chicken gets up in the morning, waits around an hour or two until the feeder gets ready to bring along a bucket of hot or cold mash, which is thrown down on a board or trough, and a wild scramble begins. Each one gulps down what he can reach; the weaker gets a little, and the stronger gets the bulk of the food."

"If the mash is hot it raises the temperature of the birds above the normal, perspiration is started, and this opening of the pores of the skin paves the way for a chill, and the foundation of colds and croup is laid. The food goes through the crop with very little change, except fermentation, and the extra work of preparing the food for digestion is thrown upon the gizzard and intestines, whereas the saliva of the mouth and kneading of the crop should have done quite a little towards softening and partly digesting it."

"But, it is objected, the fowls won't eat it. This is true. They will not eat the dry mash for a day or two when they have been brought up on the wet-mash ration; but, brought up on a dry mash, they eat it freely and whenever the appetite prompts, and it never stands before them sour."

David Baskerville, of Boisvevain, Man., contributes to "The Farmer's Advocate," Winnipeg, the following recipe, which he says is a "sure cure" for egg-eating hens: "About one pint of vinegar to a gallon of mash or damp chop, mixed and fed. Two or three feeds of this will cure the worst egg-eating biddy on record."

GARDEN & ORCHARD.

Insects Mentioned in the May Fruit Crop Report.

By Dr. J. Fletcher, Ottawa.

In the Fruit Crop Report up to May 31st, by Mr. A. McNeill, Chief of the Fruit Div. of the Dominion Department of Agriculture, several insects are mentioned which have given trouble, and have been the cause of considerable loss in various parts of the Dominion. There are four insects mentioned, with the suggestion that those who suffer from them should write for information to the various institutions where official entomologists are employed. These insects are the Woolly Aphis, Crown Borer, Tree Borer and Leaf Roller. The Editor of "The Farmer's Advocate," always on the alert to secure useful information for his readers, has asked me to send him for publication a short note upon these insects. Unfortunately, I find there is some doubt on Mr. McNeill's part of exactly what insects are intended by the writers, and he has merely quoted the names used by his correspondents. Through the courtesy of Mr. McNeill, however, I have been able to find out from the context in some of these reports what insects were most probably intended.

The WOOLLY APHIS is undoubtedly the Woolly Aphis of the apple, although a woolly aphid on the plum and cherry is spoken of from British Columbia. For many years the Woolly Aphis of the apple has been an unimportant pest of the fruit-grower in Canada, but during 1905 it was conspicuously more abundant than it had been, for many years, and it would appear, from the correspondence of the Fruit Division, that the insect is showing indications of increase in some districts. There are two forms of the Woolly Aphis, one of which occurs on the roots of apple trees and related plants, such as the mountain ash and hawthorns, and the other, which attacks

the branches and stems. In both cases gall-like swellings are caused, which injure the trees, and in crevices of which the eggs of the insects are laid. The form which occurs most commonly in Canada is that which clusters on the trunks and branches, where it may be seen during the summer and autumn in white, woolly masses, particularly on the shoots at the base of neglected trees. The root form is by far the more injurious in the United States, and everywhere is by far the more difficult to control. The plan which has given

the best results is to uncover the infested roots and dig in tobacco dust around them. Bisulphide of carbon has also been used, by making a hole within a few inches of the infested roots, pouring in a small quantity, and then covering the hole up quickly. These treatments of the root form are seldom necessary in Canada, and the clusters which appear on the trees in summer and autumn can easily be destroyed by spraying them forcibly with kerosene emulsion, diluted with hot water, applying the spray as hot as it can be conveniently handled, and holding the nozzle close to the colonies.

CROWN BORER.—There appear to be two insects referred to by correspondents under this name, and, fortunately, the remedy for both is the same. The crop attacked in all instances was strawberry, but neither of the insects is the true Crown Borer of the Strawberry (*Tyloderma fragariae*). British Columbia and Nova Scotia reports referred to the Black Vine Weevil (*Otiorynchus sulcatus*), which has been doing harm in those Provinces during the last three or four years. In Ontario the ordinary White Grub was the culprit. Both of these insects do most harm in old strawberry-beds, and the best way of fighting them is to adopt the one-crop plan, which is now much used by fruit-growers. Mr. Macoun, the Horticulturist of the Experimental Farm, tells me that he has tried this plan, and that it is, in addition to being a good remedy for these insects, also a paying operation, for he gets far better berries, which bring better profits than the rather larger crop of smaller berries. The young runners are planted in spring, and by the first autumn matted rows, two feet wide, of good strong plants have formed, from which the crop is picked the following summer, and the beds are