

inches wide directly under the perch and sprinkle with sand, to facilitate cleaning. About two-thirds of the droppings will be left upon this, hence the house will not need to be cleaned more than one-third as often, as the boards can be taken out and cleaned with very little trouble. We leave the hallway and doors four feet wide to allow a wheelbarrow free access to all parts of the building, which will make the various duties devolving on the attendant much lighter than if obliged to carry feed and straw in, and droppings etc. out through a small door and hall scarcely wide enough to get through without turning flat ways, as nine-tenths of the poultry houses in the country are at present constructed. Our house is now complete and next comes the more difficult task of selecting the breed to be kept.

(To be continued.)

Poultry Keeping.

Poultry, as often kept on the farm, afford neither profit nor pleasure. Why is this? Because so little attention is given them either in breeding or care. As a rule farm fowls are not as good as they should be. Now there is no place where finer fowl can be raised than on the farm. Instead we find a great many poor ones. No pure blood introduced for years. Very often allowed to roost in the trees or any place they can find, having no house of their own. Small wonder so many say their fowls do not pay. How can such breeding and care be expected to pay? We would not expect to realize very large profits from our other farm stock if handled in that manner. That there is a profit as now kept shows us there is good ground to walk on, with a chance for as large profits as can be got from any other department of farm work.

Which variety shall we keep? is a question often asked. That just depends upon what you keep fowls for—whether for eggs only, for meat, or the two combined. If for eggs, the Leghorns and Black Spanish are the best. The eggs of the Leghorn are smaller than those of the Spanish, but the birds likewise are smaller, requiring less to keep them; so that the weight of eggs produced for food consumed will equal and I think surpass the Spanish. As it is always necessary to kill off the older birds to make way for a certain number of pullets yearly, flesh value must also be taken into account. The Leghorn matures very quickly, and young or old are much superior to the Spanish for the table.

If a table fowl alone be wanted, the Plymouth Rock, Dorkings, Brahmas, and the French varieties will be found suitable; the selection of one variety being based on whether fitness for the table at an early age, plumpness from a month old to full growth or large size is wanted.

For a general purpose farm fowl, the Plymouth Rock is superior to all others. I have tried many varieties, but have found none to compare to it. In this opinion I am borne out by the leading authorities in America. They are hardy, clean-legged, no feathers to clog with snow, combs and wattles medium sized, are of a vigorous, lively nature, good layers and excellent for the table, from two months old to full maturity. They are one of the plumpest birds at all ages that is to be got.

There are sitters and non-sitters. This latter quality is not natural, but established by careful breeding for man's convenience, so bear in mind, if you cross breed them—even two non-sitting varieties—you get sitters. So while a bird in its purity may be either a sitter or non-sitter, a cross-bred bird will always have the incubative quality developed.

In the erection of poultry houses a few general rules must be observed. These are warmth and plenty of light and ventilation. Without these your house, no matter how costly, will not be suited to the wants of its feathered inhabitants. Make no double walls with a space between them, as they form harbors for vermin. The best inside wall is lath and plaster, which leaves no seams for vermin to lodge in. Make all nests, perches, etc., movable, which greatly facilitates cleaning the house out. Use plenty of whitewash on the walls and kerosene oil on the perches and in the corners and joints of the nest boxes. It is a good plan to take nests and perches out of doors in the spring and cover them with a heap of dry straw and set it on fire, the scorching will purify

them and rid them of all disagreeable inhabitants. Save carefully the manure. It is very valuable for all crops, especially roots, wheat, and the garden. Buy a book on poultry. Subscribe for one of the many excellent poultry journals. Go to a poultry show. Get a setting, or a pair of birds of some pure breed from a reliable dealer. Care for them as you would your well bred sheep, cattle or horses, and if in six months you have not got what fanciers call the "hen fever," you certainly have no love for the beautiful.—JOHN MORRISON, JR., Oban, in *Watford Guide*.

The Apiary.

For the CANADIAN LIVE-STOCK JOURNAL.

Foul Brood.

MR. EDITOR,—As I understand this disease is giving trouble and making progress in certain sections of the Province, and as I have no doubt many of the readers of the LIVE-STOCK JOURNAL who keep bees to some extent are not readers of the bee journals, and therefore do not see what is said on the subject, I think it will be well to copy the following paper from the *American Bee Journal*, by N. W. McLain, of Aurora, Illinois. I have no personal experience with the disease, and hope never to have, but it is well to be posted in regard to it, and prepared, not only to detect, but to deal with it in some form. What Mr. McLain here recommends is not only simple and easily applied, but, as he says, has been successfully tested in several bad cases. It is certainly worthy of a trial at least. I would, therefore, recommend every reader of the LIVE-STOCK JOURNAL having bees to be on the watch for the first appearance of the disease, and to carefully preserve this number of the JOURNAL for reference, so that the remedy could be applied at once. Many farmers keep a few colonies in order to get honey for family use, and partly because they like to have a few bees about the place; now those are just as likely to become diseased as if they had a hundred, and the trouble is, when the bees die out, they do not know what is the matter, and may leave the hives lying about where other bees have access to them, and so unconsciously spread this trouble. The specialist gets it. He has no idea where it comes from, but most likely it is from those old hives that would have either been cured or burned, if the true state of things had been understood. A very successful specialist some years ago, got foul brood into his apiary. He burned hives, combs and everything up and commenced again, but since that he says he never lifts a comb of brood from a hive without watching for this disease. One with little experience cannot be expected to detect it unless it becomes so far advanced as to be offensive. I will therefore state what will be a sure guide. When a colony swarms, the old queen goes with the swarm. There is therefore a period of from two to three weeks that there will be no eggs laid in the hive. If then those brood combs are examined three weeks after the old queen has left, and if sealed brood is found, it is suspicious, and should be examined with the point of a pen knife; or it can be detected in that case by there being a little hole in the centre of the capping as if made by the point of a pin. The cure as given by Mr. McLain is as follows:

"Take of soft water, 3 pints; of dairy salt, one pint. Use an earthen vessel. Raise the temperature to 80°, Fahr.; do not exceed 90°. Stir till the salt is thoroughly dissolved. Now add a pint of warm soft water in which has been thoroughly dissolved four tablespoonfuls of bicarbonate of soda (use the crystal). Stir thoroughly. Add to this mixture sufficient sugar or honey to sweeten it, but not enough to perceptibly thicken it. Now add $\frac{1}{4}$ ounce of pure salicylic acid. Mix thoroughly. Let this mixture stand for two hours, when it becomes settled and clear.

"Treatment.—Shake the bees from the combs, and extract as clean as possible. Now thoroughly atomize the combs, using the mixture and a large atomizer. Return the frames to the colony.

"If there is no honey to be obtained from the fields, feed honey or syrup to which has been added 3 tablespoonfuls of the mixture to each quart of honey or syrup. Stir well. The honey just extracted may be used without injury to the bees, if the mixture is added; but no more should be furnished than is consumed. Atomize the colony two or three times more, simply setting the frames apart so as to direct the spray well over the combs and bees—not brushing off the

bees; three or four days should intervene between the times of treatment. The last may be given on top without removing a frame.

"As a preventive, apply on top of the frames, or in any way by which the bees may get it. Also burn old dry bones to an ash, and pulverize. Mix up one gallon to each 50 colonies in the apiary, of the above mixture, adding enough sugar or honey to make it very sweet (say two or three times as much honey or sugar as would be a proper quantity for use in the atomizer). Stir in a full half-pint of the powdered bone ash. Place this gallon of mixture in, say four shallow vessels—perhaps bread-pan feeders with floats on the top—and stand these four in different parts of the apiary. You will be surprised at the rapidity with which the depleted colonies will recuperate and grow strong again. If you fear that the exposure of sweets in the apiary will induce robbing, the mixture can safely be fed the customary way on top of the frames in the hive.

"I would recommend that you give the entire apiary one application of the mixture prescribed for cure, as this treatment frequently prevents the presence of the disease where it was not before possible to detect it. The quantity prescribed for use by means of a large atomizer is sufficient to treat 150 colonies. Not reckoning the sugar or honey used, the cost will not be more than 15 cents. I have prescribed this treatment with entire satisfaction and uniform success for the past two years. I will mention the facts in two or three of the apiaries for which I have prescribed this treatment:

"1. Number of colonies in the apiary, 46; number apparently diseased, 13; number actually diseased, 28; disease so far progressed that the stench was very offensive in the yard; bees crawling out of the hive to die by tens of thousands; effect of treatment apparent in one day; a permanent cure in each case.

"2. Number of colonies, 60; serious cases, 38; combs black and putrid; a few had already been burned; effect of treatment apparent at once; a permanent cure in each case.

"3. Number of colonies, over 150; number of colonies diseased, 60; bees swarming out; stench from hives nauseating; combs black and rotten; brood putrid; whole apiary treated; disease immediately arrested; effect of treatment on affected colonies instantaneous, even on apparently hopeless cases; every colony cured; disease eradicated, leaving no trace behind. Colonies all soon became strong, healthy and prosperous. For the purpose of further experiment, the combs of healthy and diseased colonies were exchanged; combs from the diseased colonies being given the healthy colonies, and the combs of healthy colonies placed in diseased colonies. The treatment was applied to both alike. In every case the disease would immediately disappear, and in many cases the diseased colonies were soon more populous and prosperous than those which had no disease, and had been undisturbed. This treatment, which is simple, cheap, and easily and rapidly applied, seems to be efficacious in the most virulent forms of foul brood, and seemingly furnishes immunity from the dreaded scourge.

F. MACLEOD.

Innerkip, Ont.

Horticultural.

For the CANADIAN LIVE-STOCK JOURNAL.

Preparation of Fruit Plantations for Winter.

BY E. D. SMITH, WINONA.

Eternal vigilance is the price of good fruit. If we wish to have a full crop the coming year, we can do much to assure it in the present month of November. Bank up all the fruit trees with fine earth to prevent ravages by mice. Be sure not to make a harbor for them by making banks of sods, weeds or rubbish of any kind. Pack the mounds with shovel and there will be no danger from mice except around fences, where snow drifts higher than the mound. Tramp the snow around these when it gets above the mounds, or encircle these trees with tarred paper high enough to be above the banks. Tarred paper can only be put on satisfactorily when the air is above freezing point.