

POULTRY.

Winter Eggs.

BY M. MAW, WINNIPEG.

The winter production of eggs is an important item in the poultry account, and should be looked after carefully and prepared for if you wish your hens to show a good balance on the profit side.

Like cows, hens need educating in this branch of their industry, and a great deal of care and attention is required in selecting only those hens that moult early and commence laying in the fall and early winter, weeding out the old-style fowls that lay a few eggs in the spring, sit all summer and mope all winter. A great deal of blame for this state of affairs is traceable to the surroundings: generation after generation of fowls badly housed, badly fed, allowed to drag through a miserable existence till death claims them, has caused many a fine breed of fowls to deteriorate back to the wild instincts of their ancestors, and only lay a few eggs when nature inclines them to raise a little family. The above specimens, commonly known as the old dung-hill breed, have still many admirers, and on several occasions I have been told by men who had advanced ideas in other lines, that they preferred the "dung-hills" to any of the new-fangled breeds of poultry. Well, these men only talked—they never really valued their poultry and preferred the "D. H.'s" because they cost nothing to keep, being never fed, brought up to steal their way, and when caught in the garden or grain-bin, if the missile thrown at them happened to do its duty, the loss was small. But the majority of farm-yard flocks have been greatly improved during the last few years, either by exchanging "D. H." eggs with kind neighbors who had improved stock, or by purchasing a cockerel from some pure-bred stock and by so doing laying the foundation for better size and larger egg capacity. Unfortunately, many who improve their flocks in this way seem satisfied with the results, and allow the flock to deteriorate for years after. This is wrong. A pure-bred male bird of any of the leading varieties will imprint his qualities on all the offspring, but the cockerels from this mating must not be used—they are only grades. It is better to mate the best pullets with the original cock, and so bind the good qualities that for years they will produce stock equal to the first crop. But inbreeding causes loss of size, and the vital properties seem to weaken. The best and only successful way is to use pure-bred males only; if possible get fresh blood every year or every second year at the outside, and be sure it is pure. The first cross cockerels are usually grand birds both in appearance and size, often larger than the sire, but useless for breeding purposes.

What has this to do with winter eggs? Everything. Without the proper material it is only waste of time to try. If you have a flock of early hatched pullets and year-old hens that you can separate from the rest of the flock, pen them up in a good comfortable building with plenty of light, be careful to avoid draughts, but have a ventilator if your house is warm. In feeding, make the hens work for their feed. In the early morning give them a warm mash composed of house scraps, stiffened up with bran, shorts, or any other material that you can get. See that they do not get enough to load up their crops. Throw some small grain in a litter of straw (screenings will answer best) and they will work all day to get the last grain. Hang up a cabbage or a turnip so they will have to jump to get at it. At night give them a plentiful feed of hard grain, but not more than they can eat up clean. A box with grit, oyster shells, and cut bone will complete the outfit. Give fresh water every day, throwing out what they have left at night if the house freezes, and see they have a place to dust in. If these rules are followed your hens will lay during the winter months, and continue during the summer months, thus doubling the egg production, and leaving a large margin of profit. If all who are trying to make their poultry a success would keep a strict account of cost of feed, number of eggs laid, when laid, value received for eggs and stock, give system adopted, and if known, causes for either success or failure, it would prove very instructive and interesting reading, and when published in the ADVOCATE would open the eyes of many who can't see any profit in keeping poultry.

Experimental Hen Feeding.

At the New York Experimental Station pens of Leghorns and Cochins were fed experimentally to ascertain whether a diet of whole dry grain or a diet partially of crushed and moistened grain gave the best results. Bulletin No. 90 gives the following summary of results:—

1. Two lots of laying hens, of large and small breeds respectively, having their grain food only dry and whole, ate more food at greater cost per fowl and for the live weights than did two similar lots having about 35 per cent. of their grain ground and moistened.
2. A pen of Leghorns, which had for the year 37 per cent. of their food ground and moistened grain, produced eggs at a greater profit than did an exactly similar pen fed whole grain.
3. Of two like pens of Cochins, the one fed whole grain produced eggs at much less cost than did the pen having ground grain, which result is attributed partly to the exercise assured in feeding whole grain.

4. With the kinds of whole grain ordinarily available it is not possible to feed a largely grain ration having as narrow a nutritive ratio—that is, containing as large a proportion of the nitrogenous food constituents—as is perhaps necessary for best results from laying hens.

5. By using some of the highest nitrogenous by-products (such as cottonseed meal, pea meal, gluten feed, etc.) with ground grain, it is possible to feed a somewhat narrow ration without feeding an excessive amount of meat.

6. With hens fed similar rations, when the hens of smaller breeds give only the same egg yield as the hens of larger breeds, the eggs are more cheaply produced by the smaller hens, but taking into consideration the cost of raising and the ultimate poultry value of the hens, the profits will be equally or more favorable for the larger hens.

GARDEN AND ORCHARD.

Paying Hours in the Orchard, Nursery, and Garden.

BY PROF. E. E. FAVILLE, NOVA SCOTIA SCHOOL OF HORTICULTURE.

"All things come to those who wait,
But, alas! oft times they come to late;
To men of brains or men of muscle,
All things come to those who hustle."

The above few lines are suggested to the mind of the writer in reading in the last issue of the ADVOCATE a short note calling the attention of the fruit growers to the too often practiced error of leaving the orchard as soon as fruit is packed, and waiting for the next picking season to roll around, forgetting, seemingly, the many essential and paying duties that should be performed in that same orchard during late fall and early winter months. One cannot help but observe the thrifty fruit grower counting on his next year's crop, and in doing so is hustling about and rightly attending to the many necessary needs of the orchard, nursery, and garden. The former should be undergoing thorough inspection, dead or decaying limbs pruned with judgment, and surface left exposed protected with a covering of paint or mixture of shellac and alcohol; rough bark scraped off and surface treated with a solution of washing soda and soap mixed; decayed fruit caught in branches, refuse accumulating among fallen leaves carefully raked into a pile and burned, thus removing the too often hibernating resorts of insects and their eggs, destroying thereby fungous growths resting as winter spores in waiting for the warm days of spring so as to break open and spread havoc among the fruit trees, causing apple scab, rust, black-knot, etc. If possible, in young orchards, and often old ones as well, shallow plowing should be practiced just before the ground freezes for winter, covering up rubbish, placing earth in a condition to be acted upon by frost, leaving a fineness of soil in the spring helpful to surface-feeding roots. When an orchard or locality is affected by the common pest, the "canker worm" (which feeds upon the young leaves), remedial measures of prevention should be taken at once to prevent the wingless female from climbing the trunk of the tree and depositing its eggs among the branches during the sunny days of late fall and early winter. This may best be done by binding the trunk of the trees with tarred paper six or eight inches in width, the outside being covered with a mixture of printer's ink. In German orchards "Excelsior" is used beneath the bands next to trunk, thus stopping any liability of insects passing under the band. This method has proven to be very practical. An excellent mixture, which is being used with best results in fruit sections of Nova Scotia, is composed of one pound of resin to one and one-half pints of castor oil, mixed by heating, forming a cheap and exceedingly sticky mixture, resisting water and lasting for a long time. There being two broods of canker worms, fall and spring, the bandages should not be removed until leaves begin to form in the spring.

In the nursery may be found opportunities for busy hours—last spring's root grafts need hilling or banking up with earth. In fact, all the young trees in the orchard should have a mound of earth ten to fifteen inches in height placed at base of trunk to keep out mice, to protect the roots and serve the purpose of stiffening the young tree against wind, preventing opening about collar where water is liable to find its way thus injuring roots. This is of especial importance to young transplanted stock. Every fruit grower or farmer should have a root cellar, as they are cheap in construction and invaluable. A root cellar is really a cave constructed by sinking a pit five feet in depth, in a dry location (better on side hill), placing posts at sides and ends, boarding up roughly the sides and top and covering the whole with earth, leaving door in north end, or, if adjoining a building, place ventilation opening at the top, ventilating at night time, never during the day. On the grounds of the Nova Scotia School of Horticulture one of these cellars is in operation, and during the winter months the temperature does not vary more than one or two degrees, acquiring a temperature a few degrees above the freezing point, keeping in excellent condition roots, grafts, cuttings, scions, etc., for spring use. Forest leaves should be gathered for packing scions in before snow comes, and the seedlings of apples, plums and cherries for root grafting should be placed in earth or sand in the cellar, bearing in mind the staid rule that "a root

should never become dry." The best seedlings' roots will be found in those nurseries or grounds where subsolling has been practiced, thus permitting the top root to penetrate freely, forming a smooth, strong growth of root. Now is a good time to put up grape cuttings in pits. Having made the cuttings of two buds, cutting just below the lower bud and an inch above upper bud, these, having been prepared and tied in bundles, should be placed in pit with butts toward the surface, covering with about three inches of loose earth, placing leaves and boards on top of this, and in the spring removing the leaves permitting the heat of the sun to callous the butts of the cuttings so that the lower ends will start first.

The garden for vegetables should be spaded up before it freezes, not raking down smooth, but letting the frost get in its work, producing fineness of soil. This same method can be carried out with equally good results on the grounds of the proposed new lawn. A top dressing of well-rotted manure on the rhubarb plants and the asparagus bed before the snows should always be made. To the compost heap add refuse from vegetable produce, burning everything that will spread weeds. In the fruit garden the old canes of raspberry taken out and burned, the old wood of gooseberries as well, and after ground has frozen hard enough to bear a team and wagon, mulch the strawberry bed with mulch, evenly distributed, not too thick, remembering that this mulch should be left on until severe frosts are all over in the spring, thus preventing alternate thawing and freezing so injurious to plants. Above have been enumerated a few of the many things that the fruit culturist has to see to at the end of the season's crop in order to make way for a proper return the coming season. The more "hustling" the better, bearing in mind that "out-door housecleaning" is as essential to health of orchard, nursery, and garden as "indoor housecleaning" is essential to health of its inmates.

Ontario Entomological Society.

The annual meeting of the above was held at London, on Nov. 27-8, when addresses were delivered by Prof. C. C. James, Deputy-Minister of Agriculture for Ontario, and Prof. Fletcher, Ottawa; papers being read by Messrs. Fyles, Lyman, and Fletcher. The local attendance was not large, but the membership is increasing. The Society continues to do steady and useful work. The following officers were chosen for the ensuing year:—President, J. Dearness, I. P. S., London; Vice-President, H. H. Lyman, Montreal; Secretary, W. E. Saunders, London; Treasurer, Wm. Balkwill; Librarian and Curator, J. Alston Moffat; Directors.—Division No. 1, James Fletcher, Ottawa; No. 2, Dr. Bethune, Port Hope; No. 3, Gamble Geddes, Toronto; No. 4, A. H. Killman, Ridgeway; No. 5, R. W. Rennie, London. Editor Canadian Entomologist, Dr. Bethune; Delegate to Royal Society, J. D. Evans, Trenton.

QUESTIONS AND ANSWERS.

[In order to make this department as useful as possible, parties enclosing stamped envelopes will receive answers by mail, in cases where early replies appear to us advisable; all enquiries, when of general interest, will be published in next succeeding issue, if received at this office in sufficient time. Enquirers must in all cases attach their name and address in full, though not necessarily for publication.]

Veterinary.

CARRIES JAW.

J. E. DAWSON, Oxbow:—"I have a four-year-old mare that had her jaw injured with a tight halter when she was two years old; there has been a running sore on the jaw ever since. I think the bone is injured, as the pus discharged smells bad. The sore breaks out at intervals. Please prescribe a remedy. What food would you advise for her?"

[It will be necessary to open the part and remove, with forceps, all detached and partially detached pieces of decaying bone. Afterwards dress daily (using a syringe for the purpose) with the following lotion: Corrosive sublimate, one dram; muriatic acid, two drams; alcohol, four ounces; water, eight ounces. Wholesome food of any kind is suitable. W. A. DUNBAR, V. S., Winnipeg.]

POSSIBLY GLANDERS.

"INQUIRER," Oxbow, Assa:—"I have a horse, twelve-years old, that commenced to discharge yellowish pus from the left nostril about the 20th of Aug. last. I thought he had a cold and continued working him for about two weeks; then I rested him for three or four weeks, and he seemed better and discharged very little. Then I worked him a week, and he is discharging the same as before. The discharge was very offensive at first, but I don't find any bad odor at present. There is a lump about the size of a large filbert between the bones of the lower jaw on the left side close to the jaw bone, but not on the bone. The membrane lining the nostril looks natural; there are no sores or inflammation that I can see. The discharge has only been from the left nostril. The horse has not coughed any; he is in good condition, feels well and looks well. What do you think ails the horse? What shall I do for him?"

[Some of the symptoms are suspiciously indicative of the contagious disease known as glanders; while some of the other appearances you have mentioned are those generally observed in connection with "nasal gleet" or in decaying teeth.