

that it is good policy to try to treat breeding stock. As a general rule, it is unwise to breed from birds that are not healthy, although there are exceptions to this rule.

W. R. GRAHAM.

Poultry Dept., O. A. C.

The Incubator and Brooder on the Farm.

We have noticed several advertisements of incubators, used but one year, for sale cheap by farmers who have tried them and decided to go back to hens. We have interviewed some of them, and find that in every case the dissatisfaction is not from inability to hatch chicks with the incubator, but to raise them after they are hatched.

Failure to raise the chicks is due chiefly to two things; first, for fear of scaring the purchaser out, most poultry supply companies put the number of chicks which a brooder will accommodate away beyond its real capacity (if chicks are crowded a large number of them will die). Second, a beginner does not understand the needs of a chick as a hen does, and he makes several mistakes. He usually feeds the chicks as soon as they are hatched. The chick gets from the egg enough nutriment to last it 48 hours if necessary, and even longer, and should never be fed or given water till at least twenty-four hours old. Up to that time it should be allowed to pick up coarse sand or fine grit, but no food. At first they should be fed every two hours, as much as they will eat in five minutes, the feed placed in flat dishes or small wooden troughs, and removed at the end of that time. As they grow older they should be fed more at a time and less often, till at four weeks of age they may be fed what they will eat up clean three times a day. They should be fed chick food or cracked grain, dry. They should have access to clean water.

The temperature of the brooder should be watched carefully, and the chicks not allowed to get too hot or too cold. To save the expense of many brooders, some successful breeders take a number out of the brooder as they grow large enough to crowd, and place them in a small coop made of a dry-goods box, which is kept warm by a gallon jug of warm water wrapped in old woollen cloths. If the boxes are kept in a building while the chicks are less than a month old, or even out of doors after the weather gets warm, these boxes heated by hot water will raise chicks successfully without lamp-heated brooders. A woman of our acquaintance went through the last season in this way without losing a chick.

Most people are surprised to find that experienced breeders think they are doing well when they bring twenty-five chicks to maturity for every hundred eggs set. Count the eggs set under hens for a season and the birds matured, and you will find that they do no better. Don't expect too much of the incubator. The fact that one can hatch all his chicks early and so get winter layers, is an advantage in favor of the incubator.

W. I. T.

For What Purpose are the Poultry Association Grants?

The passing of the estimates by the Ontario Legislature would be an opportune time to do a good stroke of work for the rank and file of poultrymen, by instituting a much-needed inquiry into the uses to which the Eastern and Western Ontario Poultry Associations put the two thousand-dollar annual grants expected again from the Provincial treasury.

In the 1903 report of the Western Ontario Association, we find in the financial statement an item of \$1,913.65, prizes paid for the Winter Fair (Guelph), besides sundry other expenses in connection therewith. Similarly in the accounts of the Eastern Association we find the sum of \$1,395, cash paid for prizes, most or all of which we presume was for the Ottawa Winter Fair. It would be interesting to know how much of this aggregate amount of \$3,308.65 (of which \$2,000 was public grant) went to the substantial encouragement of the Canadian poultry industry, and how much to line the pockets of a few fanciers of non-utility breeds? In the prize-list of the Ontario Winter Fair, December, 1904, prizes were offered for no fewer than 82 breeds of fowl. Among these were included eight varieties of Polands, five of Hamburgs, six of game bantams, and thirteen of ornamental bantams, besides Houdan, Creve Cœur, La Fleche, Sultan and Japanese Silkies, each of which is entitled, under the regulations, to as much prize money as Plymouth Rocks or Wyandottes, excepting, indeed, that provision is made for an extension of prizes in numerously-entered sections. Thus prizes were awarded for the best cock, hen, cockerel and pullet, of \$2, \$1, and 50 cents, respectively. In sections where there were between 12 and 19 entries (inclusive), the prizes were \$3, \$2, \$1, and 50 cents; where there were twenty or more entries, prizes were \$4, \$3, \$2, \$1, and 50 cents. As the entry fees were 50 cents apiece in each case, an excellent chance was afforded the professional exhibitor to make pretty good money exhibiting a lot of rare varieties, which for all

practical purposes might better be out of the country. Nor is this all. Prizes of \$2, \$1, and 50 cents, respectively, were offered for four varieties of pheasants; and of \$1.50 and \$1 for 43 classes of pigeons, besides smaller amounts for rabbits and birds. A somewhat similar condition obtains in the prize-list of the Eastern Ontario Poultry Show.

We are familiar with the arguments advanced in justification of these prizes for non-utility breeds, that they are necessary to "draw attendance," to "stimulate an interest in poultry," etc. Passing them by as unworthy of reply, we submit that the explanation of this squandering of money on fads is found in the desire of a few fanciers to enrich themselves through funds ostensibly devoted to agricultural purposes. It seems to us time to put on the brakes by the Provincial Department of Agriculture, making its grant contingent upon a revision of the prize-lists at the Provincial shows, with a view to restricting the excessive



Why the Hens Don't Lay.

number of breeds recognized, and insuring for the utility breeds some of the money that is now being diverted to the encouragement of poultry fads. Referring to this matter, a correspondent says: "As it is, cheques might be written out and handed to certain men before the shows, and much expense and trouble saved, for these men will get the money anyway." As for the farmer, he is supposed to be tractable, to pay his quarter and admire the useless but beautiful birds which win prizes that his money pays for. By cutting down the premiums on the rare varieties, money would be available for more and larger prizes in the utility classes in which the farmer is interested, to the great advantage of the poultry industry.

Selecting Eggs for Hatching.

A number of important points have to be attended to by poultry-keepers who raise their chicks in the incubator, if satisfactory results are to be obtained. Of course there are incubators and incubators, and the modes of working one make may be very different from those of working another, but in every case there are certain fixed principles upon the observance of which depend the chances of success. One of these golden rules relates to the selection of the eggs which are destined to yield live chicks. This is, needless to say, a point of first importance, not only in regard to incubators, but also in regard to hatching by nature's method, for it is a very great mistake to suppose, as some poultry-keepers are inclined to do, that one egg is the same as another, and that no great discrimination is therefore



Spring Pets.

needed in selecting a supply for incubation. It may be safely laid down that an egg cannot be too fresh when placed in the tray or under the hen. Many breeders seem to forget, or, at any rate, overlook, this fact, and seldom think of straining a point to have the total number of eggs needed made up quickly, and started on the hatching process as soon as possible after they are laid. In making a selection abnormally large eggs should be avoided, as in many instances these contain double yolks, and are, therefore, most unsuitable for hatching purposes.

APIARY.

The Farmer and His Bees: No. 2.

Everybody is, or should be, familiar with the saying, "Anything that is worth doing is worth doing right," for it is one of the rules to which there are no exceptions—it even applies to the keeping of a few hives of bees by the average farmer. The only right way to keep bees is to keep them in movable comb hives, whether there be only one colony or one hundred kept. If the farmer with a colony or two in box hives decides he has not the price or inclination to provide them with proper lodging, the next best thing for him to do is to sell them, or else change his mind; and to persuade him or convince him that the latter is the better alternative, is what the writer wants to do. It may strike the man who is busy with his farm work that it is a lot of extra work running bees properly—more than he has time for. This is where he thinks beyond his knowledge, for a colony of bees in a proper hive, and properly managed, need not have more than a few hours' attention during the busy season. An expert beekeeper can manage two or three hundred colonies without help when he has them in hives where he can see what they are doing, whereas if they were in box hives he would be unable to do anything with such a number. A very little reading and study will give the farmer all necessary knowledge for the management of a few hives, so that he can have his swarming (the bugbear of the farmer-beekeeper) when it is most convenient for him, or not at all if he doesn't want any increase. With box hives there can be no control of swarming—the bees have it entirely in their own hands (or wings), and come out when they are ready, regardless of the fact that their owner may be half a mile away in a hayfield, hustling to get ahead of approaching rain. And when a colony has swarmed seven or eight times, as these big colonies in box hives sometimes do, Mr. Farmer decides that bees are a bother, and take more time than they are worth, especially when he examines his numerous small swarms in the fall and finds only one or two with enough honey to make it worth while brimstoning them (the only way he knows to get the honey from them), and, perhaps, none with sufficient to carry them through the winter. With movable comb hives all this is changed. He can have control of swarming, as stated above, can take his honey off without killing a bee, and can, if his colony is light in the fall, put enough honey back into it in five minutes to winter it safely. Think it over, Mr. Farmer with a few bees, and you will probably conclude that you can't afford to keep your bees in the old way any longer. If you don't come to this conclusion, then think it over again, for you've made a mistake somewhere.

F. F.

GARDEN AND ORCHARD.

Top Grafting.

Mr. C. A. N., St. George, Ont., asks: "About how large an apple limb can one profitably cleft-draft? What is the best time to graft? Would you advise top-grafting 25-year-old Greening and Seek trees with the Hubbardston and Nonsuch variety?"

Ans.—I would not advise top-grafting good, thrifty Greening or Seek trees with any other variety. The Greening is certainly one of the leading varieties for market or home use, and the Seek also is not inferior to Hubbardston, although Hubbardston is an excellent variety. Top-grafting may be done any time now after severe frosts are over, and is sometimes practiced as late as the first of June, although it is best to do it in April, before growth starts. Most any size of limb may be grafted, but the larger the limb removed the more severe will be the check to the tree, and the greater the loss of valuable wood. The most satisfactory size is one about an inch in diameter. This is large enough to accommodate two scions, which is sometimes an advantage.

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Bridge Grafting—Girdled Peach Trees.

R. W. S., Forest, Ont., writes: "We have a nice orchard of three-year-old peach trees, which have been badly girdled by mice during the winter. About sixty of the trees are girdled all around, and about forty more partly girdled. Will peach trees graft like a pear or apple tree?"

Ans.—The peach tree may be grafted the same as the apple or the pear. Your best plan, if the trees have been entirely girdled, would be to put in three or four bridge-grafts in each tree. The scions for this bridging should be strong shoots of last year's growth. They should be cut with a bevel on each end, so as to bring them in close contact with the wood when inserted just underneath the bark. All that is necessary is to insert the scions above and below the girdled part, so as to bridge over the injury and convey the cambium from the top to the roots. After the scions are inserted, the injured parts should be covered with grafting wax; or, if the injury is close to the ground, it is best to bank up with earth, so as to cover all of the girdled portion. Banking with earth may be all that is necessary for those partially girdled, but where the injury extends at least one-half way round the tree, it would be better to insert one or two bridge grafts.

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