POULTRY.

HATCHING CHICKENS BY NATURAL MEANS.

Anyone can set a hen, and the veriest tyro may often find his efforts rewarded by a fine clutch of fluffy chicks. Think not, however, that there is nothing to learn about the art, or no helpful suggestions to be offered. In a bulletin, last year, by the Massachusetts Board of Agriculture, appeared quite an exhaustive article on "Hatching and Rearing Chickens by Natural Methods on the Farm." It was prepared by that prince of American poultry-writers, John A. Robinson, author of that excellent manual, "Poultry Craft," and it is surprising how many practical suggestions Mr. Robinson finds to offer on this single subject. Part of the article we reproduce in this issue, retaining the balance for publication at a later date. It is all well worth reading:

A leading manufacturer of incubators is my authority for the statement that there are in the United States and Canada about one hundred and thirty concerns manufacturing incubators and brooders. Many of these are small establishments whose separate output is comparatively insignificant, but the aggregate output of these small factories must be very large, and there must be fully two-score of concerns manufacturing on a large scale, the largest turning out hundreds of incubators and brooders daily. Though the total production of these machines for the hatching and brooding of chicks is greater now than ever before, it has for years been large; and when we consider that a well-made incubator ought to last for a good many years, it would seem that the increasing number of incubators and brooders sold must indicate a general substitution of artificial for natural methods of hatching and rearing chicks, and the early advent of the era, to which some enthusiasts in artificial methods look forward, when the hen will have nothing to do but produce eggs. The incubators and brooders sold do not necessarily represent hens put out of commission as mothers. To just what extent they actually displace hens it would be impossible to determine, but where they are most used, their service is either in supplementing natural methods or in lines which could not be developed on a large scale by such methods.

Thousands and thousands of the cheaper machines will hatch well only while new, and under the most favorable circumstances. Thousands of poultry-keepers who buy good machines never learn to run them satisfactorily. They may continue to use them experimentally for some years, but in the end they go back to natural methods as easier and better for them. And the question, Which is the better method in the end? comes to a question of circumstances and of the aptitudes of individuals. Some people can do so much better with artificial methods that they prefer them under any circumstances. Some can use either method successfully. Others get their best results by natural methods. So, natural methods continue to be used, and used very extensively, and, further, the competition of methods has, without doubt, served to give a better general understanding of the weak points of natural methods and the best ways of treating them.

The operator of incubators and brooders soon finds that these mechanical contrivances are not self-operating. He has to tend to them constantly and carefully, and give a great deal of thought to what at first seemed the trivial matter of putting into practice the few simple directions for operating which accompanied the machine. He learns in time (if he succeeds) that, to have his machines work well, he must, in working with them, be methodical and regular, and, as far as possible, furnish conditions of operation which are favorable.

NATURAL METHODS WITHOUT NATURAL LOSSES.

The farm furnishes as near an approach to purely natural conditions for the production of poultry as we can have for domesticated fowls, yet it is a most exceptional farm that offers conditions which admit of leaving the poultry—particularly the young poultry—to itself. In a state of nature, the tendency is, for such creatures as fowls, to maintain themselves in about the same numbers on the same area year after year. This means that the great majority of the young produced must succumb to their natural enemies or to the rigors of natural conditions before reaching maturity. Now, though the domestic hen may be far more prolific of eggs than her wild counterpart, she is also an expense to her owner, and his profit upon her is measured not by the number of eggs she may lay, but by the difference between the value of her produce and the cost of her keep. In the hatching and rearing of chicks come the heaviest losses of most poultry-keepers on farms, and, to a very great extent, these losses are not necessary, and could easily be avoided. To avoid losses, and make the most of natural facilities for hatching and growing chicks, systematize the work.

QUARTERS FOR SITTING HENS.

Provide for the sitting hens exclusive quarters, and for the hens with chicks coops of substantially the same size and type, and a piece of land of such extent and character that the chicks have all the advantage of range and freedom without being so much scattered that the work of looking after them four or five times daily is too laborious.

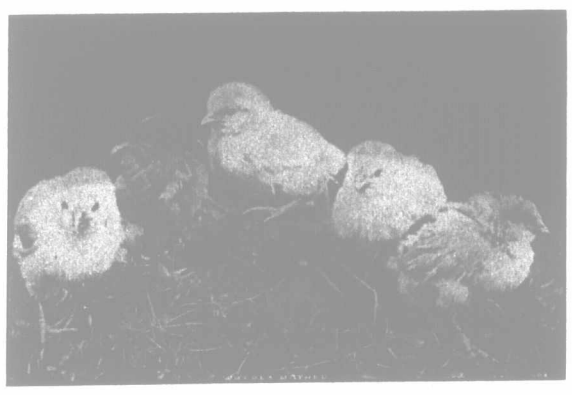
If this is done, and a reasonable amount of attention given the chicks up to the weaning age, losses up to that point should be small, and the stock on hand at that stage much better developed than when the work is not so thoroughly done.

When any considerable number of chicks is to be hatched by hens, it is advisable to set as many hens as possible at the same time, and preferable to have a certain day of the week for setting hens, and set none at other times. This simple little point of practice introduces at once an element of regularity in the work which would have a marked influence all through, even if no other effort to secure regularity were made.

Make the nests in banks or tiers, built up like shelving in a store, or perhaps more graphically described as resembling a sectional bookcase. The nests need no back, for they are placed against the wall. The fronts should have covers of slats, or of a board just wide enough to leave space for air above and below it. Each cover should be the length of a section, opening and closing all nests in one section together. The covers should be hinged at the bottom (leather hinges will do), because they must be fastened when closed, but, if hinged at the top, they must be fastened to keep them open as well. Besides this, the cover-front, hinged at the bottom, may be used as a running-board in front of the nests, if so desired. For ordinary hens, nests should be twelve inches square, inside measurement. For nesting material, use short, fine hay or broken straw, and shape the nest well with the hand. If the nest is not shaped before the eggs are put in it, and the material well pressed down, eggs are likely to be broken during the first days of incubation.

SELECTING SITTERS AND EGGS.

Set only hens that are evidently in good health, and give the preference to those in fair flesh. Set no hen that is not easily handled after



Where's Mother?

dark, or that will fly from the nest if approached by daylight. To have hens that are healthy, quiet and easily handled means freedom from a large portion of the usual losses in the early weeks of the chick's life, as well as during incubation.

Select for incubation, eggs of uniform size and good form and color. If, for any reason, it is desired to set some eggs larger or smaller than the average, sort the eggs and give the special sizes to separate hens. The rule of thirteen eggs to a hen is a good one to follow if all nests are twelve inches by twelve inches. Some hens can cover more, but, for a reason which will shortly appear, the number of eggs should be adapted to the smallest hens in the lot. If nests are of different sizes, the largest nests and hens may have more eggs, though fifteen is as large a number as it is advisable to give any hen.

REGULAR ATTENTION.

Have the hens come off for food and water daily. If a large number of hens are set at the same time—all the apartment will contain—they may all be let off together and the nests closed while they eat, drink and dust themselves. If the floor is of earth, without too much broken droppings in it, no special dusting box need be provided. The food should be corn or other hard grain, corn preferred, and the whole corn used rather than cracked corn. For the first few days the hens should be watched closely, to prevent fighting. After they become used to the place and to each other, the attendant may let them out, close the nests, and leave them until time to return them to the nests—twenty minutes to half an hour. In returning hens to the nest, make no effort to have the hens go back to the same nests. On the contrary, if any are noticed which persistently take a certain nest, return them to another. By doing this, all eggs have the same treatment. A hen that, if on the same eggs continuously for three weeks, would make a poor hatch, is never on one nest long enough to specially affect the eggs in it, and the results are better average hatches and a larger total hatch.

Dust the hens with an insect powder when setting them, again about the tenth day, and again about the nineteenth day, just before the eggs begin to pip. After the hens return to the nests, remove the droppings before they are broken into the floor, and the place will be free from the peculiarly offensive odor too common where hens are sitting.

TEST THE EGGS.

Test the eggs the seventh day, and again the fourteenth day. A metal chimney for testing, which may be used with a common lamp, may be purchased at any poultry-supply house. An infertile egg remains clear throughout the period of incubation. A fertile egg, at the seventh day, shows quite opaque, with the air cell at the larger end sharply defined, and in the same position with reference to the shell as the egg is turned before the light. If the germ is dead, but the egg not yet decomposed, the dead germ may show as a dark or bloody spot in the opaque contents of the egg. If the egg is rotten, the line of the air cell will remain horizontal as the egg is turned before the light.

Unless fertility is exceptionally good, enough eggs will be taken out at this test to release one or two hens, the eggs from their nests being used to fill others, and they either reset with the next lot or returned to the laying pens. If the eggs were fresh when set, there will rarely be rotten eggs to take out at the first test. The test on the fourteenth day discovers most eggs that will not have full-formed chickens at the end of the period of incubation, and it is important that these should be removed, for the rotten egg is the egg that breaks, and broken eggs not only make a nasty mess to clean up, but injure the chicks in the eggs which are soiled, and thus reduce the prospects of a hatch. Unless an unusual number of eggs should be taken out at the second test, it is as well not to double up again.

After the eggs begin to pip, keep the hens on the nests until the hatch is complete. This will usually be in thirty-six hours. Look into the nests enough to see that things are progressing right, to clear away shells as they accumulate, and to see that no chick is smothered by an empty shell capping the egg containing it. If a hen is so restless that she tramples her chicks, exchange her for a quieter one from a lot set later.

When the chickens are all dry, remove them from the nests to coops previously made ready for them, giving each hen from twelve to twenty chicks, according to the season. Select as mothers the hens that are in the best condition and most thrifty-looking.

TIMELY HINTS.

Editor "The Farmer's Advocate":

The farmer will do well these days to spend a little time on his henhouse. Later on, other duties will aborb his attention. Now is the time to go over the whole henhouse as carefully as he can. No nook or cranny can he afford to neglect, as robber-pests seem determined to take up quarters any place where they can find an undisturbed resting-place. Every particle of dust should be brushed down, and a liberal spraying of coal oil applied. A second or a third spraying may be found necessary, and when this is followed by a thorough whitewashing, the farmer may look forward to the warm days feeling that he has a good start on the lice. A few hours' work now will materially reduce the mortality among his matured fowl, and go a long way towards giving the newly-hatched chickens a good start. Further, provision should be made for the hatching season. If incubators and brooders are used, these should be examined in thorough detail and made immaculate for the fostering of the new life soon to be entrusted to them. If natural methods are followed, then nests and all accommodations should be provided for the brooding biddies. Obvious as the necessity for such preparations seem to be, it is astonishing how few make them. Failure in these particulars cannot be made up in any way, and will mean, at the end of the season, the doleful wail, "Hens don't pay." Hens cared for do pay, but, in the poultry business, as in all departments of farm-life, the law of cause and effect holds its place, and the farmer reaps as he sows. J. K.

Wentworth Co., Ont.

A VALUABLE BOOK PREMIUM.

I received your premium book, "Cattle, Breeds and Management," in good condition this morning, and am very much pleased with it, indeed. It is like others have said who have obtained one of your premium books for new subscribers, "It is far more than I expected." Wishing you every success. A. G. AULD.

York Co., Ont.