

POULTRY YARD

The Problem of Incubation

Prof. F. C. Elford, Macdonald College, Que.
Does the question of artificial incubation get more complex each year, or is it the more experience one has the less he is really sure of? It is a fact that from six to ten years ago I felt I was better qualified to tell how to run an incubator than I am to-day. Then I could improve on so many factors' instructions in so many ways; now I am inclined to think the man who made the machine should have some credit for knowing how to run it. Then, if certain conditions gave a good hatch once I was sure it would do it again. Now, I am sure of nothing, still, not many of us would care to do without artificial incubation. It has come to stay, and more people each year will hatch by artificial means. So it may be possible that we cannot know too much about the wooden hen.

The first thing to ensure a successful hatch of livable chicks is the breeding stock. It may be possible

chicks that require very little doctoring because they are not predisposed to every ailment that chickhood is heir to. The young chick has enough to battle against without inheriting a weak constitution. No weakling should be allowed in the breeding pen, better kill on sight and bury than that their eggs should be used to breed from. The secret of keeping up the vigor of the flock depends largely on vigorous culling out, not only once a year but every day. A bird that has been seriously sick, though cured, should never be used for breeding.

BREED FROM HEALTHY STOCK

I was at a show recently when an exhibitor who had taken first prize with a cockerel was explaining the good points of the bird to some friends. He said that the bird had never been on real well, it having had almost every disease known, but he had pulled it through and was going to mate it with his best breeding pen. The man who received eggs from such a pen would pay dear if he got them for nothing. True the bird looked well at the time or he would not have taken first place, but granting he was cured and it was not stimulating foods that kept him there, it would be no surprise if his chicks developed

industry. A flock without constitution is worse than no flock at all, and no matter how good our incubators are the results will not be satisfactory.

The selections of eggs may also affect the hatch. In picking out the eggs for selling it is well to get as uniform a lot as possible. Do not take none that are over large or too small, in fact, take only those that are normal eggs, discarding all others. See the illustrations of sample eggs on this page.

About the incubator itself I must say only a few words. There are good and bad incubators and the best is always the cheapest. The inferior machine will always be a worry and disappointment. The good machine under reasonable treatment should give fair results. Machines have not brains and should not be blamed for every failure. Give them good eggs and follow instructions accurately and a good machine will do reasonably good work.

DO NOT EXPERIMENT

We have been making a few experiments, but the work of a year or two is not sufficient to permit one to draw conclusions. I am of the opinion,

instructions accompanying the machine are the best guide for the first year or two at any rate, and even then be careful about trying new ideas.

In operating our 20 machines last season, the incubators that were run according to the manufacturer's directions gave a better hatch throughout the season than those that were testing experiments, and no experiments were tried. A fairly wide range of hatchability was seen in the various makes, also in the different machines of the same make. Taking the season gave 23.3, while the highest was 74.5. March gave the highest fertility of any month in which hatching was done. February, the lowest. March, April, May and June came in order named. During these four months the average fertility was 82.2 per cent.

Renew Your Subscription Now.

Hatch Chicks by Steam

Small "Wooden" are heavy and assure big hatchings. Well-built, reliable, practical. Don't use. Catalogue free. GEOR. H. STAM, Box 510 Quary, Ill.



DOES YOUR POULTRY PAY? If not, Poultry Pointers, the boiled down monthly journal, can help you. Best writers and top-point articles. Special—two years for price of one, 4 cents, silver or stamps. POULTRY POINTERS, Box C, Farewell, Mich.

CANADA'S CHAMPION BARRED PLYMOUTH ROCKS

At Toronto, 1908, we won 1st, 2nd and 3rd cock birds; 1st, 2nd and 3rd hens; 1st, 2nd, 3rd and 4th challenge cups. Our birds scored 20 points, all our birds shown only 21 points. 100 cockerels for \$2 each. 21 hens \$2 each.

JNO. PRINGLE, London, Ont.

242 EGG STRAIN (Kulp)

Brown Leghorns from the biggest brood and biggest layers of big eggs (up to 32 per doz.) and best business strain in America. Hardy, handsome and profitable; lay earliest and longest. Send orders early for guaranteed fertile eggs at \$2.00 per doz. Circulate free.

BRANT POULTRY YARDS, Brantford, Ont.

SINGLE COMB BLACK MINORCAS

Marvelous in size, shape and color. Forty eggs per week. Eggs in season. Bred from best laying strains in America. L. R. Ford, Carter, Pa.; T. Remer, Ohio; T. McGinnis, Pa.; J. R. Ford, N.Y.; Mulshall to \$3 each; Eggs \$2 per setting.

GEOR. E. BARCLAY, Popular Hill, Ontario

Sample of Good Hatching Eggs

Always select well-shaped medium sized eggs to incubate. Such will give the best results.

for a good old broody hen to have a good hatch and rear almost every chick and still the eggs be laid by unhealthy hens; but even such a hen is a rarity, and no incubator should be expected to hatch chicks from such eggs. There are so many things that might interfere and prevent a good hatch that it is not always easy to locate the exact trouble.

THE TEST OF SUCCESS

A good hatch does not always mean success. The final test is in the percentage of chicks raised to a selling age or to a healthy maturity. The parent stock, the incubator, the brooder, the feed, etc., must all take their share of the responsibility. But the man that has the constitutionally strong healthy flock finds that under ordinary conditions his eggs hatch well and produce livable chicks.

Sample of Unsuitable Eggs for Hatching

Ill shaped eggs such as illustrated above should never be used for incubation purposes.

any of the diseases he had had. If good hatches are desired, be on the safe side and have eggs from parents that are constitutionally healthy.

Whether the winter layer will give a higher per cent. of fertility and a better hatch than the bird that is idle throughout the early winter months is a question worth considering. My experience has been that the well-matured pullet that has constitution sufficient to lay without forcing during the unnatural season is the best able to produce a good chick. Last winter we found that the winter layers of both pullets and year-olds gave an average of 82.8 per cent fertility and 59.4 per cent hatch, while the non-winter layers of both pullets and year-olds gave 80.4 fertility and 55.8 per cent hatch. The latter chicks not being as strong as the former. Two years ago the fertility came out about even, but the heavy layers gave a larger per cent. of healthy chicks. It might be well to add that these were not kept in warm houses, nor forced. The houses were cold but dry and the birds had plenty of fresh air and exercise. From 1,750 chicks hatched from the same flock, 1,500 grew to maturity. The reason for the small mortality was, the parent stock had for several generations been bred from healthy stock, and the conditions in which they were kept.

FOUNDATION OF SUCCESS

This is the part of incubation of which we hear the least, and yet this is the foundation of the success of the

KEEP YOUR STOCK FREE FROM LICE

WITH DR. WILLIAMS' DRY LICE DRESSING



Lice on Horses.



Lice on Cat's Tail.



Lice on Sheep.



Lice on Poultry.



Lice on Hogs.

If you know that someone was robbing your hen roost night after night while you sleep, you are doing all you can to destroy them if you are doing both day and night, and the last injury to anything but the vermin.

We claim superiority of quality for our products, which have been thoroughly tested and compounded under the direction and formula of the well-known Dr. J. C. Williams, who discovered that excellent preparation DR. WILLIAMS' FLY AND INSECT DESTROYER. Get the genuine, a scientific preparation, backed by a PHARMACEUTICAL.

It's a house enemy, a chicken friend, and a money maker for you. To be had of all dealers who handle DR. WILLIAMS' FLY AND INSECT DESTROYER. If they cannot supply you, write us.

THE F. WILLIAMS CO. MORRISBURG, ONT. MADRID, N.Y.

It is desirable to mention the name of this publication when writing to advertisers

Black Watch

Chewing Tobacco

The big black plug.

2269