

## POULTRY YARD

### Eggs Used for Incubation

M. A. Jull, B. S. A., Poultry Expert  
for British Columbia.

Together with the selection of the breeders, a careful selection should be made of the eggs laid by the breeding stock. A poor egg, even from one of the best breeders, should not be used. A poorly-shelled, an unevenly-shaped egg, or one otherwise lacking in qualities which make up a good egg, should be discarded. The normal egg is one of average size, weighing about one and five-sixths or two ounces, with a smooth surface and an even shape, being slightly larger at one end than the other. An examination only of the external appearance of the egg is not sufficient. An egg may appear "le all right, but when tested or candled, it may be found to be absolutely worthless.

There is nearly always a percentage of eggs from any flock which have never been fertilized. There may be also broken yolks, "blue" or "green" eggs, "blood yolks," and broken shells. None of these, of course, are satisfactory for incubation. A "buttermilk" egg is one which, when candled, presents a coarsely spotted appearance, and does not seem to contain in proper proportion all necessary constituents. A "green" egg can only be detected by testing. Generally at its small end it presents a greenish appearance. It is claimed that such an egg is produced by fowls which consume excessive quantities of green food where whole grains and mash are lacking. "Blood" yolks are distinctly red in color, and are not desirable. These eggs are often rejected by cold storage firms when they candle their eggs before storing.

Poultrymen would save a great deal if they would test their eggs before putting them in the incubator and take out all eggs which could not, under the best conditions, produce chicks. Every egg which does not produce a chick is a loss. If abnormal or faulty eggs are used, chicks hatched from them may lay faulty eggs. To breed strains that will lay the best of eggs, it is important to select and incubate only the best.

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WANTED—Cheese makers the coming season to sell subscriptions to Farm and Dairy, Peterboro, Ont. Good cash commission for each subscription taken. Write Circulation Manager, Farm and Dairy, Peterboro, Ont. for sample copies for your patrons. Samples sent free on application.

### Artificial Incubation

Robert Smith, Lambton Co., Ont.

The most complex problem that has ever confronted the poultry business is that of artificial incubation. From time immemorial artificial methods of incubation have been practised. The ancient Egyptians and Chinese put their chicks and duck eggs in their ancient incubators. This machine consisted of a box covered with manure, certain writers tell us that the results were excellent owing to the steady and dry climate. But these incubators have long since faded into the past and "the wooden hen" is now a suitable piece of furniture for the hen-house. Artificial incubation is being practised successfully by a great many breeders in all parts of our broad Dominion. Men who raise chickens by the hundred and with only a small capital have proved that the system is a success if properly operated. But there are hundreds of farmers and small breeders who are meeting with sad failures, not because of unwillingness on their part, but because of inexperience. To these I would like to tell my experience, as I feel that it may contain some points that will enlighten some of our inexperienced fowl workers.

#### THE BREEDING STOCK.

The vigor of the egg germ is a strong factor in producing strong chicks. Weak germs will invariably result in delicate chicks, if chicks at all. "Begin right." The great men tell us that this must be heeded in this case at least; weak germs produce delicate constitutions that may follow the fowl throughout its life. Select well built hens or well developed pullets that are healthy and vigorous; mate to a well developed cockerel or a healthy cock, not one with his feet and comb frozen or having some other ailment. Give wholesome feed, have plenty of variety and fresh grit, etc. Guard against lice. Exercise is very important and is absolutely necessary at this period.

#### OPERATING THE INCUBATOR.

At the outset wash the incubator out thoroughly with a solution of soda ash to disinfect. Then close the machine and light the lamp, using the best grade of kerosene. A poor oil will result in a charred wall and blackened chimney. Let the machine run till the thermometer reaches 100 degrees; allow it to run for half a day till the wood is thoroughly heated. Set the incubator in a room where the temperature is as uniform as possible. Many make a fatal mistake by setting it in the kitchen; the sudden change at night will result in a lowering of the temperature in the machine, which often proves fatal. Set the machine against a wall from the wall to avoid jarring. Adjust the regulator and then don't meddle with it.

#### THE EGGS TO SET.

Select medium sized eggs; avoid small and off-shaped eggs. Place as many in the tray as possible. Little turning is necessary up to the fifth day. Test the white eggs carefully on the fifth day; it is better to leave brown eggs till the seventh day, testing a few out on the fifth to give the others more room. I would like to call the attention of Farm and Dairy readers to a new test called the Magic egg tester, the price of which is two dollars. With this tester the eggs may be tested before being put into the machine and the only strong germs need be selected. The strong germs are as a rule males, the weaker germs females. The tester will more than pay for itself in one year.

Moisture and ventilation are much talked of features. The operator must use his or her judgment on these points, since situations differ largely. A moist room, such as a cellar, would require different ventilating to a dry parlor or a bedroom. Watch the cells

carefully. Moisture may be added by placing a pan of water or a damp Bannel rag in the machine.

#### THE HATCH.

The operator must give the machine special attention at this critical period. A large number of chicks may be saved by a little extra attention and proper treatment. A very frequent complaint is that of chicks pipping and dying in the shell. This difficulty may be overcome to a large extent by assisting the chicks out of the shell. Experience proves that most of the chicks that are strong enough to break the shell are strong enough to live if given timely aid. After the egg has been pipped for some time and the chick seems unable to free itself, break the shell gently away from the beak and leave it alone for an hour or two. If it still seems incapable of freeing itself, take away the remainder of the shell, being very careful not to injure the chick on doing so, as they sometimes bleed to death when handled roughly.

One cause of weakness in brooder chickens is the sudden chilling caused by falling from the hot tray into the nursery, which is several degrees cooler. The chicks should never be admitted into the nursery until thoroughly dry. This may seem somewhat difficult to accomplish, but the following method proves entirely satisfactory: Tack screening or common mosquito netting along the end of the tray where the chicks obtain access to the nursery, leaving a small hole at the corner next to the door large enough to admit a chicken. Hang a heavy cloth across the door, admitting as little light as possible. Very few chicks will find their way into the nursery when the cloth is across the door. A small portion of the curtain move a small portion of the curtain at the nursery entrance end of the machine. The chicks that are dried will be able to walk and will come immediately to the light and fall into the nursery. When they all get down close the curtain. If desired, a small space may be left uncovered at the opposite end of the incubator to draw the chicks away from the nursery entrance.

When the hatch seems to be nearly through, take any eggs that are left and place them under hens, if you have hens setting. These chicks are seldom strong enough to live if they do not pip till the rest are nearly all hatched, and are often crooked and weak legged. If they hatch under hens, be careful of life when placing them with the rest of the chicks, as you will have enough to contend with without lice.

Remove the tray and leave the chicks in the incubator for 48 hours, keeping the temperature between 90 and 100 degrees. Do not feed any during this time. After chickens have been removed wash out the incubator thoroughly before the droppings become dried.

We have had both hot air and hot water incubators and could see little difference in results. The hot water machine has the advantage of being easier to regulate, as it will maintain the heat for several hours.

Geese do not relish tall, woody grasses, which have become tough. In a wild state they devour large quantities of roots or grasses and aquatic plants, which they dig from the banks and borders of streams and wash free from earth in the shallow water. Domestic geese generally feed upon pastures, preferring moist, rich localities where the grass is kept short and sweet by constant feeding and rapid growth.

A vigorous male is attentive to a dozen or 15 hens under ordinary circumstances, while if at liberty and kept vigorous, he will attend to twice that number.



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