

percentage of eggs from any flock which have never been fertilized. There may be also broken yolks, "green" eggs, "blood yolks," mottled and cracked shells. None of these, of course, is satisfactory for incubation.

NATURAL INCUBATION.

On many farms the number of fowls kept is too small to warrant the use of an incubator. On such places the chicks are hatched by the hen, and for such as use this method the remarks in this chapter are intended. When setting hens, it is important that the proper surroundings be provided. Where good eggs are used and poor hatching results are secured, this can often be attributed to poor accommodation.



An egg-tester. When using this type of tester, it is dangerous to hold the egg against the tester too long, as sometimes the extreme heat will kill the egg-germ.

To get the best results from sitting hens, the nest should be large and roomy, and not too far from the floor. A box, about 18 inches square and about a foot deep, should be half filled with moist earth or an upturned sod, and care taken to hollow out the earth somewhat in the centre. Experiments have proved the superiority of nests composed of moist earth over nests which are of dry earth, sand, or ashes. The moist earth approaches nearest to nature, and helps to retard evaporation of the egg content during incubation. See that the earth in the corners of the box slopes towards the centre, so that the eggs cannot roll out of the nest and get chilled. Then place a small quantity of fine-cut straw, hay, or excelsior in the nest. Care should be taken that sufficient straw or hay be placed in the nest, so that the moist earth does not chill the eggs.

The room where the nests are placed should, contrary to general instructions on this matter, be well lighted, but cool. This can be secured by having the nests placed in a room where the windows face the north, if possible, and lots of room should be provided for exercise when the hen comes off. Many cases can be recorded of hens forsaking the nest, and even dying, through lack of room to move.

Yearling or older hens are more reliable than pullets as sitters, and are preferable whenever possible. Hens or pullets that are of an excitable disposition should never be used as sitters. In the Rhode Island districts, where millions of chicks are hatched yearly by the natural method, it is the custom to specially mark and keep hens that show good hatching power and ability.

Medium-sized hens are best for incubation purposes, because they are less liable to crush eggs than if large heavy hens are used. Even with hens the hatching period varies. A hen that frequently leaves the nest will not hatch out chicks as quickly as a hen that broods closely, and only leaves the nest probably once every two or three days.

A dust-box should be provided, and should be at least 8 inches deep, and filled to within 2 or 3 inches of the top with earth or road-dust mixed. A handful or two of powdered sulphur sprinkled in the dust-box is also helpful.

The proper time to set a hen is after dark. Place two or three infertile eggs in the nest beforehand. It is advisable to have these warm, if possible, especially early in the season, as a hen will often take a dislike to stone-cold eggs. Sometimes it is advisable to place a basket over the hen when sitting, and remove this after the first day. When sitting hens are attended to at regular intervals, it is not necessary to coop a hen up in this fashion. Allow them to come off when they feel inclined, and if they do not come off daily, then they may be lifted from the nest. This should be done carefully, and as follows: Lift out both wings first, and then gently lift with both hands pressed to the sides of the hen. If the wings are not opened out, an egg or two is often cracked by being lifted up with the hen, and then falling on the eggs in the nest.