A Weekly Page of Poultry Hints to You

Here is a Department Full of Bright Ideas For Readers of the Home and Farm Magazine Section.

The following is the second of a series of articles by Harry M. Lamon, Senior Animal Husbandman in Poultry Investigations, Animal Husbandry Division of Bureau of Animal Industry of the United States Department of Agriculture, on the natural and artificial incubation of hens' eggs.

SYSTEM and care in the management of sitting hens will produce a large number of chickens at a comparatively small expense. Even with the best of care, some hens prove to be fickle mothers and cause trouble and loss in hatching by breaking their eggs, leaving their nests, or trampling on the chickens when first hatched. Most hens of the general-purpose breeds, such as the Plymouth Rocks, Wyandottes, Rhode Island Reds, and Orpingtons, make very good mothers. The heavier class, or meat breeds, including the Brahmas and Cochins, make good sitters, but are inclined to be clumsy on the nest. The Leghorns and other Mediterranean breeds are very nervous, and usually do not make good mothers.

Where only a few hens are set, special quarters are not necessary, but where many are used a separate room should be provided for the sitters. Portable nests are frequently furnished for the laying hens, so that broody hens can be moved in them to new quarters. Of the various styles of nests used for sitting hens, the following has given satisfaction: 15 inches square, 15 inches high, with a board 6 inches high in front to prevent nesting material from falling out. The nests may be arranged in tiers, with a hinged front, which makes a platform for each tier when open. A large number of hens may be set in this way in a moderate-sized room. When using a bank of nests, such as that which has just been described, it would be well to place 3 or 4 inches of damp earth in the bottom of each nest. The nesting material is next put in, and may consist of hay, chaff ,or straw. Pack this material down firmly, and shape a circular nest out of it, which should be slightly deeper in the center than at the edges, as a nest so shaped will prevent the eggs from rolling out from under the hen and becoming chilled.

How to Set a Hen.

As the time approaches for the hen to become broody or sit, if care is taken to look into the nest, it will be seen that there are a few soft, downy feathers being left there by the hen; also the hen stays longer on the nest when laying at this time, and on being approached will quite likely remain on the nest, making a clucking noise, ruffling her feathers, and pecking at the intruder. When it is noted that a hen sits on the nest from two to three nights in succession, and that most of the feathers are gone from her breast, which should feel hot to the hand, she is ready to be transferred to a nest which has been prepared for her beforehand. The normal temperature of a hen is from 106 to 107 degrees F., which varies slightly during incubation. Dust the hen thoroughly with insect powder, and in applying the powder hold the hen by the feet, the head down, working the powder well into the feathers, giving special attention to regions around the vent and under the wings. The powder should also be sprinkled in the nest. The nest should be in some quiet, out-of-the-way place, where the sitting hen will not be disturbed. Move her from the regular laying nest at night and handle her carefully in doing so. Put a china egg or two in the nest where she is to sit, and place a board over the opening so she can not get off. Toward the evening of the second day quietly go in where she is sitting, leave some feed and water, remov the board from the front or top of the nest, and let the hen come off when she is ready. Should she return to the nest after feeding, remove the china egg or eggs and put under those that are to be incubated. If the nests are slightly darkened the hens are less likely to become restless. At hatching time they should be confined and not be disturbed until the hatch is completed, unless they become restless, when it may be best to remove the chicks that are hatched first. In cool weather it is best not to put more than 19 eggs under a hen, while later in the spring one can put 12 to 15, according to the size of the hen.

Care of the Sitting Hen.

If several hens are sitting in the same room, see that they are kept on the nests, only allowing them to come off once a day to receive feed and water, the feed to consist of corn, wheat, or both. If there are any that do not desire to come off themselves, they should be taken off. Hens usually return to their nests before there is any danger of the eggs chilling, but if they do not go back in half an hour in ordinary weather, they should be put on the nest. Where a large number of sitters are kept in one room it is advisable to let them off in groups of from 4 to 6 at a time. The eggs and nests should be examined and cleaned, removing all broken eggs and washing those that are soiled; in the latter case the soiled nesting material should be removed and clean straw added.

Nests containing broken eggs that the hen is allowed to sit on soon become infested with mites and lice, which cause the hens to become uneasy and leave the nest, often causing the loss of valuable sittings of eggs. In mite-infested nests, the hen, if fastened in, will often be found standing over rather than sitting on the eggs. Many eggs that are laid in the late winter and early spring are infertile. For this reason it is advisable to set several hens at the same time.

After the eggs have been under the hens from 5 to 7 days, the time depending somewhat on the color and thickness of the shells—white-shelled eggs being easier to test than those having brown shells—they should be tested, the infertile eggs and dead germs removed, and the fertile eggs put back under the hen. In this way it is often possible to put all the eggs that several hens originally started to sit on under fewer hens and reset the others. For example, 30 eggs are set under three hens at the same time, 10 under each. At the end of seven days we find on testing the eggs from all the hens that 10 are infertile, which leaves us 20 eggs to reset, which we do by putting them under two hens, and have the remaining hen sit over again after she has sat only seven days. In this way considerable time can be saved in one's hatching operations.

Types of Incubators.

There are many different types of incubators on the market, all of which are of one of the following types: Hot air, hot water, or mammoth machines. Both "moisture" and "non-moisture" incubators are made in the different styles of hot-air and hot-water machines. The small machines are heated either by burning kerosene oil or gas, while the heat for most of the mammoth machines is supplied by a coal stove, although gas is also used to some extent. Gas burners require much less attention than oil heaters, but a supply of gas is not available in many localities where oil may be purchased. Electricity is also used for heating, both in small incubators and in mammoth machines.

Hot-Air and Hot-Water Machines.

Hot-air and hot-water incubators are used successfully throughout the country. The water in the tanks of the hot-water machines should be emptied after the last hatch, which also prevents freezing when stored in a cold climate. The hot-water incubator will hold its heat longer than the hot-air machine, in case the lamp should go out; but the possibility of such an accident is too slight to be worth considering where the incubator receives proper attention.

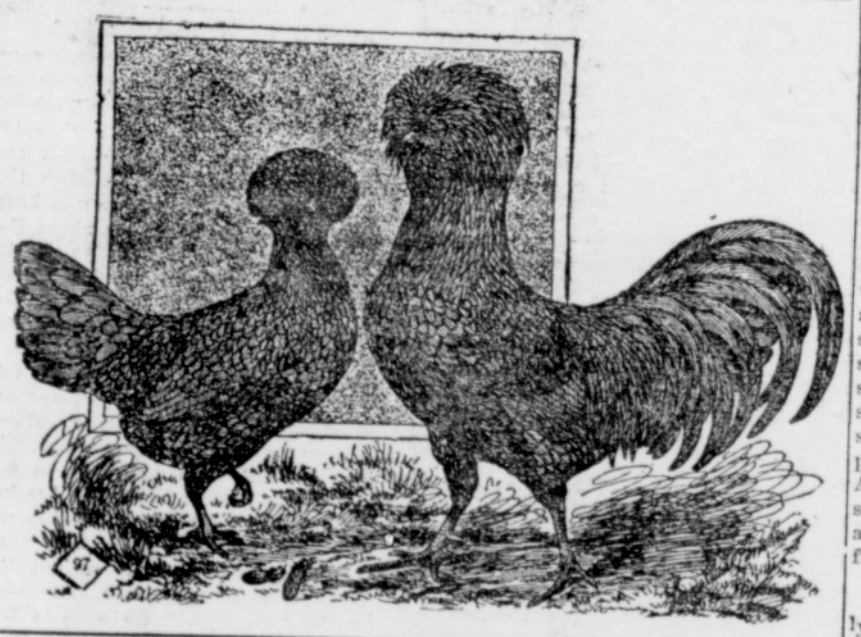
The mammoth machines are used extensively both in the day-old chick business and in custom hatching. Their capacity runs from 1,500 to 10,000 or more eggs, as the machines are built in sections of about 2,000 eggs each, the size varying in different makes. When an incubating capacity of less than 3,000 to 4,000 eggs is desired, individual incubators of 50 to 400 egg capacity are generally used.

Thermostat.

The part of the equipment of the incubator which controls the regulation of the heat is called the thermostat. Thermostats depend on the principle of expansion and contraction caused by changes in temperature. They are fastened in the egg chamber and connected by a free rod to a bar, on the end of which hangs the damper. Some thermostats regulate the size of the flame as well as the position of the damper. Regulation of the temperature of the incubator depends directly on the efficiency of this instrument, so that it is necessary to have one of a reliable make. Bar thermostats are made of a combination of metals, such as steel, zinc and aluminum. The wafer or disk thermostats, which contain some fluid used for expanding and contracting the disk, are also used, their efficiency depending entirely upon the material used in their construction.

The Thermometer.

There are two styles of incubator thermometers, with various modifications; one is placed on the egg tray, while the other is hung directly above the eggs. The thermometer should be used according to the manufacturer's rules, unless there is a very good reason for making a change. Where the thermometer is placed on the tray, or is laid on the eggs, some operators prefer to have the bulb come in contact with two eggs, so that it may record the temperature of at least one fertile egg. It is advisable to test the thermometers once a year with a clinical thermometer, which may be secured from a physician or at a drug store. This can be done by putting both thermometers in warm water, heated at about 103 degrees F., which should be kept stirred, taking care to keep the bulbs near each other and at the same level in the water; if correct, the incubator thermometer will register the same as the clinical thermometer. The position of the thermometer in the egg chamber affects the proper temperature at which to operate the machine, as a difference of an inch in height in some egg chambers will mean at least a degree of difference in temperature. The thermometer is usually placed in the front of the egg tray, so that it can be easily read.



Bearded Golden Polish

THIS variety is more than 100 years old. It is supposed to have originated in Italy and was bred to a degree of perfection in the Netherlands, from where it spread over Western Europe and to America. The name Polish came from the first belief that they originated in Poland.

On account of lacking certain economic qualities they have not become widely popular. The White Crested Blacks were the first variety, but Dutch breeders developed the beautiful Silver and Golden Polish, some with crests and some with both crests and beards, the type shown herewith being of the crested and bearded variety. Their plumage is generally golden tan in color, each feather edged or laced with brilliant black.

They are very gentle and thrive well in confinement in favorable climates where the soil is dry. The hens are excellent layers of large, white-shelled eggs, and produce a number of them; so that for a home flock that will be a delight to the eye as well as a producer for the table, the Golden Polish will be found both pleasurable and profitable.

The hens are non-sitters, so that their eggs must be hatched by other hens or by artificial means. The chicks are rather delicate, but if kept dry and intelligently fed will thrive and grow in the most satisfactory manner. They should never be reared in large, open spaces, as their crests prevent them from seeing the swooping hawk in time to avoid capture.

In size these fowls compare with the Leghorn and weigh about the same. They are very fine-boned and carry a larger proportion of meat in comparison to offal than most other breeds. The legs are blue, or, in old specimens, white; the skin is white, and each fowl has a round protuberance on its skull, from which the feathers of the crest grow.

PROVIDE PLENTY OF SHADE.

SHADE is necessary to provide a place where the birds can get away from the direct rays of the sun, thus inducing a better growth and preventing sun-burning and slow feathering. Natural shade is by far the best, wild forest growth or cultivated orchards making ideal shade. In the absence of trees or while they are making sufficient growth, the planting of corn, sunflowers and castor beans, or some such quick-growing, leafy plant is desirable. There is probably no better place to rear pullets than the cornfield. Artificial shade may be constructed by stretching cheesecloth or burlap over a frame, or by making an elevated platform covered by boards.

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