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 first 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.

IN TAKING up the problems of incubation, a brief study of an egg will help us to understand the reasons for some of the rules for handling eggs during incubation. The shell of an egg is porous, consisting of an outer and an inner layer, under which are two membranes, separated at the large end of the egg, which form an air cell. This air space, which is about as large as a 10-cent piece in a fresh egg, increases in size directly in proportion to the evaporation in the egg. Under these membranes and surrounding the yolk is the white, or albumen, which contains 78.4 per cent of water, 20 per cent of protein, and 1.6 per cent of mineral matter. Two coiled membranous layers of dense albumen, called chalazae, connect the opposite sides of the yolk with each end of the shell and tend to lessen its movement and regulate its position in the egg. The germ spot, or blastoderm, a semiopaque spot from one-eighth to one-sixteenth of an inch in diameter, is located on the upper surface of the yolk and always remains uppermost in the egg.

Care of Eggs for Hatching.

Strong, fertile eggs are the prime essential in good hatching; these are obtained only from stock properly mated and kept under the best possible conditions to secure health and vigor. Eggs from over-fat breeding stock do not usually produce a large percentage of strong chicks. If breeders are confined, they should be fed a varied supply of grains, meat and green feed. The green feed assists in keeping fowls in good breeding condition. Free range is usually an important factor in the production of hatchable eggs, as it is much easier to keep up the vitality of stock handled in this manner than in birds that are yarded. From 8 to 12 females of the American or general-purpose class and 12 to 15 of the Mediterranean class can be mated with one male, depending on his age and vitality and where the fowls are yarded, but this proportion may be increased where the birds have free range. Abundant ventilation in the house is also a great help in keeping the stock in good breeding condition.

Eggs to Be Discarded.

Abnormal, small, and poorly shaped eggs should be discarded. Do not set eggs which have thin or very porous appearing shells. Eggs should be set when fresh, if possible, and it is not advisable to use eggs for hatching which are over two weeks old, although stale eggs will frequently hatch. Selecting uniformly large eggs for hatching, which are of the same color, is one of the quickest ways to secure uniformity in the offspring and increase the size of the eggs. Dirty eggs should be cleaned by rubbing lightly with a damp cloth, but care should be taken not to rub off any more of the natural bloom of the egg than is absolutely necessary. Duck eggs usually require washing, which does not appear to injure their hatching qualities. Eggs for hatching should be collected two or three times a day in freezing weather to prevent chilling. Broody hens allowed to sit on eggs in the laying nests all day may hurt the hatching qualities of the eggs. Eggs in large numbers are generally kept in a cabinet or turning rack, for convenience in handling, in a room where the temperature is between 50 degrees and 60 degrees F., if possible, although they will stand considerable variation. It is not necessary to turn eggs kept only for a few days, but it is advisable to turn eggs daily which are over a week old. Various commercial turning devices are sold by poultry supply companies, or the eggs may be kept in cabinet drawers and shuffled about with the hands by removing a few eggs from the trays. Commercial egg cases are sometimes used for holding eggs for hatching.

Eggs from different varieties of the same class of poultry may be incubated together, but it is not advisable to mix eggs from the Mediterranean or egg breeds, such as Leghorns and Minorcas, with Plymouth Rocks, or Orpingtons, as the eggs from the smaller breeds often hatch a little earlier than those from the larger breeds. Neither the hen nor the incubator will hatch strong chickens from weak germs or from eggs which have not received proper care.

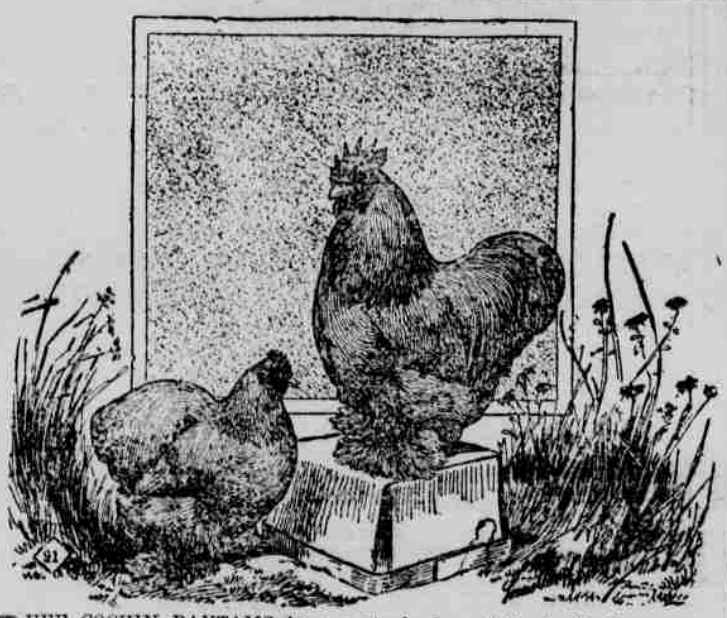
Methods of Packing Hatching Eggs.

Eggs for hatching are shiped extensively over long distances successfully, but in many cases the shipment appears to affect the hatch. Setting eggs for shipment are packed in several different ways. One of the best methods is to use a common market basket well lined on the bottom and sides with excelsior. After wrapping the eggs in a thin layer of paper and enough excelsior to make a ball of about 3 inches in diameter, pack them tightly in the basket, then put on a covering of excelsior, and over all sew a piece of strong cotton cloth, or the cloth can be pushed up under the outside rim of the basket with a case knife. The latter method of fastening the cloth is much quicker than the former and just as effective. Eggs are also shipped safely almost any distance by packing them in a stiff pasteboard carton or box made for this purpose, the space around the egg being filled with either chaff or bran. This package is then placed in a basket, the bottom and sides of which are lined with excelsior, and the spaces at either end of the box are packed with the same material. On top of this package is placed more excelsior and all is covered with cloth, as previously mentioned. Extra stiff cardboard cartons made to hold from one to several settings are used in which to ship eggs. These cartons or egg boxes are fitted with a handle for carrying, similar to that on a market basket. Bushel baskets are commonly used to ship orders of from 10 to 12 sittings of eggs, the manner of packing and covering being the same as mentioned in the first method. It is customary to rest eggs for hatching for about 12 hours after they are received to allow the germ to regain its normal position before the eggs are placed in the incubator.

Period of Incubation.

The period of incubation varies somewhat with conditions; so that a hatch may run one or two days over in some cases, due to an accident during incubation or to a low temperature throughout that period, while, on the other hand, it may come off earlier. If through any accident the eggs are chilled or overheated, it is advisable to continue the hatch, testing the eggs after a few days to determine the extent of the damage. Chickens have been hatched from eggs left out of the incubator all night, as well as from eggs which have been subjected to a temperature of over 110 degrees F. for a short time.

Buff Cochin Bantams



BUFF COCHIN BANTAMS have a famous pedigree. It dates back to the breeds originally owned by Chinese emperors. In fact, they were first exported from Peking when the Anglo-French expedition, in 1860, sacked the summer palace at that city.

Specimens were taken back to England, where their similarity to the large Cochins led breeders to try to breed them in duplicate of the larger bird, except for size. The color was changed in the process and the number of toes was reduced from five to four. The result has been a complete success.

They are very small, males weighing twenty-six to thirty ounces and females twenty-four to twenty-six ounces. They are great pets, and are heavy layers of fair-sized eggs, considering the hen's diminutiveness.

The hens get broody, sit and rear their chicks and are such careful and successful mothers that there is a steady demand for Cochin Bantam hens in large numbers to be used by breeders of large fowls expressly for use in rearing chicks.

The Buff Cochin Bantam chick matures rapidly, and there are many instances on record of pullets hatched in March maturing and laying early and then becoming broody, sitting, hatching and rearing a brood of chicks in the same year.

Buff Cochin Bantams should be literally a ball of feathers, rounding in every section, the legs and feet being profusely covered; and the soft feathers of the thighs, termed the fluff, are so loose and full as to make them appear to be a continuous mass of feathers right down to the ground.

In color they are rich, golden buff, the shade of a new gold piece, and whenever exhibited, this color, combined with their wonderful shape, is bound to claim the attention of all.

For Heavy Egg Production.

In breeding for heavy egg production, market purposes or the show room, it should ever be kept in mind that the primary and most essential characteristic of a good bird must always be a sound constitution and plenty of vitality and vigor. Without these qualities it is impossible to have first-class stock. Constitutional vigor and vitality may be put as the second fundamental requsite in the successful practical breeding of poultry.

In all kinds of breeding operations, whether for utility purposes or for the fancier's show pen, or for the purpose of experimentation in the field of heredity, the first selection of birds for the breeding pen should be made on the basis of their general constitutional vigor. No bird which shows signs of weakness in this fundamental regard should ever be used for breeding under any circumstances. If such a bird is used the breeder eventually will have to pay the penalty.

The Care of Eggs.

The perishable nature of an egg is too little understood. Dampness, heat about 60 degrees, strong odors, drafts, delay in marketing, are factors which very quickly destroy freshness and good quality of eggs.

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