

Brooders and Brooding.

Having raised chickens by both natural and artificial means, I have settled definitely in my mind the fact that we can raise better poultry and more of it by the brooder than by the hen. I mean by this that we can raise not only a larger quantity, but a better quality. Brooder-raised chicks are superior in growth, development, shape and plumage to those raised by hens, and I can give many reasons why this is so, reasons which cannot help but be apparent to the unprejudiced poultryman. I consider an incubator superior to the hen for hatching, yet I think a good brooder superior to the hen, for raising chicks, in a greater degree.

Let me caution all against buying cheap brooders, for they prove very expensive in the end. Out of the many brooders made and advertised, there should be no trouble to select a good one. I do not advocate any particular make of brooder, yet I will try to give a few points which a brooder must contain to make it a success. I have no use whatever for an outdoor brooder, unless it is used indoors, and then why not use an indoor brooder, because it is cheaper, and there are some requirements in an outdoor brooder that are unnecessary and would only be obstructions if used indoors. During the month of March, when we ought to raise the bulk of our chicks, an outdoor brooder cannot be used at all; and in April and May there are some days when it is impossible for chicks to run outdoors. Imagine confining 50 to 100 chicks in a brooder three by four feet, for two or three whole days when the weather is stormy, and expecting them to do well. And during these days the feeding would have to be done in the brooder, which is absolutely a bad idea, for the brooder should only be used for supplying sufficient warmth for the chicks, and not a place for feeding them.

In a properly constructed brooder the floor should be built as near the ground as possible. It should be capable of supplying sufficient heat. The heat should be mainly top heat, with just sufficient bottom heat to keep the floor dry. The temperature under the hover should be 90° for the first week, and after that should be gradually reduced, but not too quickly. The chicks will tell you if you have the temperature incorrect, for if they are too cool they will huddle together, and if too warm they will crowd to the door with their mouths open, gasping. And if the door is open they will get out of the brooder altogether. But if the temperature is just right they will go around chirping, happy and content. Remember that overheating is just as injurious and will cause bowel trouble just as quickly as a chilly atmosphere.

I have made a small house, 6x10 feet, with windows enough to admit sufficient light. In a corner of this house I place the brooder, and after the chicks are three days old I give them the run of the house. On fine days the chicks are allowed the run of the yard at the back of the house. In stormy weather the chicks are kept in the house. At the end of six or eight weeks the brooder is removed and roosts placed in the house, about a foot high. For food for the first two weeks, I use bread soaked in milk (squeezed as dry as possible), millet seed, cracked wheat, and rolled oats. Fine grit and water are kept before them all the time. After the second week I feed them a mash composed of bran, shorts, oatmeal and cornmeal damped and mixed into a crumbly (not sloppy) condition, wheat, oats, and cracked corn. Be careful not to overfeed. Small chicks will commence to scratch as soon as hungry, and they should be kept at it.

It is needless to say that attention to details is necessary to success. Clean the brooder frequently, and keep the surroundings in a sanitary condition. Get the chicks out on the ground as soon as possible, if but for a few minutes every day.

Perth Co.

PERRY F. DOUPE.

Fresh Eggs in Winter.

The farmer's wife who goes out to the henhouse and carries in her apron full of fresh eggs feels proud, and justly so, of her good management, for she has solved the question, "How can I make my hens lay in winter?"

We hear people say sometimes, "I don't know what is the matter with our hens—we feed them well, they have a warm house, and yet they won't lay." My friend, don't blame the poor hens, just blame yourself. There is some reason why they don't lay. Perhaps your henhouse is situated where the beautiful rays of the sun never penetrate. Or perhaps you think it is too much trouble to look after them right. But when eggs are from 20 to 24 cents a dozen in the market, it pays to take a little trouble.

What a treat is a fresh egg in winter, and what an amount of nourishment it contains! The invalid cannot afford to do without eggs, even though they are scarce and dear. If properly cooked they will agree with a very delicate stomach. A soft-boiled egg is very digestible. One way to cook an egg nicely is to pour boiling water into a tin dish, put in the egg, stand the vessel on the back of the stove, where it will not boil, for five minutes precisely. Then your egg is just delicious.

But to come back to the question, "How do you manage to make your hens lay in winter?" Well, it is not very hard if you just know how, and are not afraid of work. You must have patience, perseverance and grit. The hens must have grit too, though not of the same quality. You must give them lime and ground bone to make shells for the eggs. Give them plenty of

clean water, and a dish of warm skim milk every morning. You must feed them regularly even if the weather is stormy. Buckwheat and wheat are good for them. You must have some ashes or road dust where they can gain access to it without going out in the cold, for them to take a bath in. They need some vegetables also. They are very fond of cabbage. Give them a sheaf of wheat occasionally; let them thresh it themselves. Watch how they enjoy it, how actively they go to work. Now, I want to give the women a little advice; the men need not read this, it is for women only. I suppose you have a quarter of beef at least, hanging in your shed, and some more salted down in the barrel. Of course your husbands are good providers. Now, when you go out to get a piece to cook for dinner, don't be miserly. If there are six in the family altogether, cook enough for seven or eight; who knows but a stranger may drop in. Well, you cook your meat and sit down to your dinner, but the visitor fails to appear. Never mind, the meat won't be wasted, though there is some left. When you go to clear off the table, gather up every scrap of meat you can find; take a sharp knife and cut it up in small pieces. Now take it out to your feathered enjoyers, and it will do you good to see how they enjoy it. They will almost try to thank you for it, though their language is a little hard to understand. They just love meat. Some one may say, the men especially, that it is a waste to give meat to the hens, that it would be more economical to warm it up for the next day. I answer: It is not wasted, the hens will pay you for it in fresh eggs. Doesn't it seem as if our feathered boarders are a little fastidious or touchy? If we don't vary the bill of fare sometimes, if we don't give them their hash or mash—warm and well seasoned with pepper—if we don't keep their rooms warm, well lighted and very clean, What happens then? Why, they refuse to pay us. Our egg supply is cut off. If we want eggs we must give biddy a variety of food, a good large place for scratching or taking exercise in, and neither overfed nor underfed her.

Prince Edward Island.

MRS. ANNIE RODD.

Winter Production of Eggs.

SUMMER CONDITION THE SECRET OF SUCCESS.

Can hens be made to lay in cold weather? How often we hear this question asked. My answer is yes, if you surround biddy with everything you can to make it look like summer to her. Then laying is easy, and you will have hardly a day without eggs. In summer, insect life, green food, grit, sunshine, dusting and exercising places are all free as pure air. You have all seen hens trudge behind a plow waiting for worms or grubs to turn up for her. During winter all such supplies are replaced by pork or beef scraps, or livers, hearts and lungs bought from the butcher, cooked and chopped up, and fed once or twice a week. Raw meal is more laxative and requires closer watching. Milk and linseed meal are good substitutes for meat, but the latter when not laxative is very fattening. Sweet milk can hardly be overdone, though if it should form her exclusive diet, biddy's eggs would have pale and clouded interiors. Be "megum" in all things, as Josiah Allen's wife says.

[ED. NOTE.—Last winter the eggs's flock was doing fairly well in turning out winter, when someone recommended feeding skim milk. We took the advice, and in less than a week every hen had stopped laying. We were told by many poultry-keepers afterwards that they had learned the same lesson. Since that time we have fed milk sparingly if at all to laying hens. It is all right for the growing chicks.]

Every third day vegetables are boiled and fed warm. My usual combination is potatoes, with a few carrots and onions, a pepper pod and a slice of salt pork. My chicks think they are getting their beloved onions, but I know they are also getting carrots to help secure those golden yolks, just as popular and beautiful as golden butter. When cooked, the vegetables are skimmed out and mashed, have their liquor added, and the whole thickened with shorts or mixed meal. Clover chaff is fed dry or placed in a pail on top of my mixed meals, where it gets first benefit of my scalding water. Then the whole is allowed to steam a few minutes. It is surprising how green the chaff particles become, and what a strong odor of hay tea even such simple treatment yields without any trouble of boiling. Biddy needs grit as much as human beings do, only hers is of a different kind. My grit for chicks comes from the lake shore, the small gravel. Coal ashes with their clinkers rapidly disappear before my hens. To give our hens appetite, many substances not directly valuable may become indirectly so by creating a desire for something that is more essential. So much food goes to create animal heat, that it is much cheaper to provide some heat. This you can easily do by warming their grain in the oven. A soft, warm, easily-digested mess is given early in the morning, meal being the basis one day, vegetables the next, and meal with clover chaff and table scraps every third. Oats, barley and wheat ground together can be highly recommended as pudding material.

I know a man, rather well-to-do, but not posted on hens, who lost many one winter. Being asked what he fed, he replied "corn." "Do you warm it?" "No, but I shovel in lots to them." That is a good way to kill hens. Put plenty of straw on the floor for them to scratch in, and be sure to have plenty of

windows to let the sunshine in. If they are dirty and fly-specked, wash them. A neighbor once asked me, "What do you wash your henhouse windows for, anyway?" "To let in the light, of course."

The roosts are painted with kerosene or rubbed with onions. Dust or plaster should be scattered over droppings, which should be often removed, and sulphur occasionally shaken into the nests. When biddy surveys a vermin-infested house, we can imagine her saying, "Give me liberty or give me death." A request which must and will be answered one way or the other before long. Many times have I labored over the problem of keeping poultry and their quarters clean, till my mind and both arms ached. Such is the close connection of organs that activity of one helps activity of the other. A hen scratching around till dark is the one that will drop an egg next day. An eastern writer gave chopped straw as the main secret of winter egg production. This drew out some discussion on how he fed it, till he explained that the straw only covered the scattered grain and made the hens scratch for it.

Leghorns closely resemble those wild fowls still found in Java, and yield, by unanimous assent, most eggs in a year.

If you will follow these few instructions you will not be without eggs in the even the coldest weather. Your hens must be young, free from disease, and kept in a clean house. They will twitter and sing all day long. You feel like saying with Uncle Jacob, "De singin' of birds am sweet, but de cacklin' of hens on yer own roosts has a heap mo' expression."

FARMER'S WIFE.

What the Press Thinks of the Farmer's Advocate.

"It is a magnificent production."—*Clifford Express.*

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"The souvenir Christmas number of the Farmer's Advocate is one of the best all-round farm journals we have ever had the pleasure of perusing."—*Creemore Star.*

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"The Farmer's Advocate has issued a Christmas number that, typographically and artistically, is a credit to the leading organ of the Canadian agricultural community. The character of the preparation matter evidences painstaking work in its preparation, and the fine class of paper and the cuts which profusely illustrate the number show that expense has not been spared in putting it in the subscribers' hands in a most attractive form."—*Montreal Gazette.*

"The Wm. Weld Co. have issued a very handsome Christmas number of the Farmer's Advocate, that excellent farm journal published in London and Winnipeg. It is printed on fine book paper, and contains many portraits of eminent agriculturists in the Dominion, as well as views of well-known stock farms, groups of live stock, etc. The letterpress is also of exceptional interest and altogether the number is a credit to its enterprising publishers."—*Chronicle, Ingersoll.*

"The Christmas number of the Farmer's Advocate for a number of years past has been one of the best and most interesting numbers that reaches this office, and we feel certain that the thousands of readers of this excellent farm journal will agree with us that this year's Christmas issue beats all previous ones in many ways. It is full of interesting and instructive articles from the pens of some of the best writers and deepest thinkers on the continent, touching almost every subject, and the illustrations are particularly numerous and fine. There is no extra charge for this issue to regular subscribers of the Advocate, and this issue alone is worth the full price of a year's subscription."—*Aylmer Express.*