POULTRY.

FALL WORK WITH INCUBATORS AND BROODERS

Now is the time to get your incubators and brooders well cleaned and put away for next season. The incubators should be well washed with some disinfectant. The lamp flue should be cleaned; if necessary, scrub it, in order to get out that oily, black soot; if you do not get it clean, you may have trouble with a smoking machine next season. Take the burner off the lamp and give it a good cleaning; throw away the old wick and dump out the oil; it may be too dirty to burn in your lantern, but it is good to go over the perches in the poultry house. Leave the lamp sitting under the machine or in some other convenient place, but do not attach it to the incubator. It may not do much harm, except that you will have a little more trouble in getting your machine in running order when starting next season.

Look over the felts in the top and bottom of your machine; if they are very dirty, or the moth has eaten them, you had better look about for some new material, so that you can have it handy when you want to fix up your machine.

Give your brooders a good scrubbing and airing in the sun. It is well to disinfect, with a five-per-cent. solution of carbolic acid, every inch of the brooder. Should the hover need a new cloth, get one ready.

Put your brooders under cover if you can. They will shed water better next summer if you do.—[Prof. W. R. Graham, in the Canadian Poultry Review.

Mr. J. W. Clark, of Cainsville, Ont., the well-known poultryman, farmer and Farmers' Institute worker, has been engaged by the Pennsylvania State College to take charge of their short courses in poultry during December, January and February.

Modern Ideas in the Housing of Poultry.

SIMPLICITY IN POULTRY-HOUSE CONSTRUCTION.

In no branch of agriculture has progress been more marked, of recent years, than in poultry-housing. The old, elaborate provision for maintaining hothouse temperatures has gone down stream, and the modern poultry house is a model of simplicity. It aims at dryness and light, rather than excessive warmth. Excepting, perhaps, a few of the large-combed varieties, fowls can stand a pretty low temperature, so long as the air is well charged with oxygen, and excessive moisture and drafts are avoided. It is not at all necessary to have double thicknesses of boards, except on the north side, though all cracks should be battened. An earth floor, if on a dry location, is as good as any other, but whatever flooring is used, care should be taken to prevent drafts across it, either above or below. Drafts under a tight floor will seriously lower the temperature of the room, without contributing a particle to the ventilation. They cause, in fact, a sheer waste of heat.

For the ceiling of the poultry house, Prof. Graham, of the Ontario Agricultural College, has recommended a foot layer of straw spread over some loose boards or scantling. He finds that it not only keeps the pen warm, but also dry, while the dust which accumulates accounts for freedom from vermin. By this, we do not mean that the hens in a house so ceiled would be protected from lice, but that the mites had not, in the three years' experience at the O. A. C., infested the straw loft itself. Of course, a house with this straw ceiling requires the usual roofing above.

But it is in the provision for light and ventilation that the most remarkable change has been made. The problem is how to ventilate without drafts, and light the apartment without making it too cold. A large area of glass chills the inside atmosphere, without contributing one iota to the ventilation. It has recently been found that a good deal of light may be admitted, and sufficient fresh air, as well, by having an open space, which may be protected on cold days and at nights by dropping a frame on which ordinary factory cotton or muslin has been stretched. Through the meshes of this muslin the impure air gradually passes out and the pure air passes in, without causing perceptible drafts, while the moisture given off by the bodies of the fowls is partly removed by the diffusion of air, and partly, no doubt, evaporated throught the fibre of the canvas. Strange to say, the temperature in these curtain-front houses is little or no lower than in others with an equal area of glass pane. The reason for this, presumably, is that less heat is wasted by conduction through the fibre of the canvas than there would be through a solid-glass pane. It is hard for many to understand that heat can pass through a solid, air-tight pane of glass, yet that it does is proven by the fact that a bottleful of boiling water, tightly corked, and placed in a freezing temperature, will quickly become congealed.

The muslin curtain evidently passes off less heat by conduction than does the glass pane. True, the curtain also allows heat to be lost by the exchange of warm inside with cold outside air, but as the exchange secures the provision of fresh pure air, it is not objectionable; indeed, it is absolutely necessary with any system of ventilation that does not especially provide for warming the intaken air. But, without going further into details, which have already been amply explained through these columns, it is enough to note that up-to-date poultrymen now adopt the muslin-curtain idea as a matter of course, although in most cases they also have a limited area of glass window, in order to admit more light than would be admitted by an all-curtain front. This is the more necessary because the curtain tends to become more or less filled with dust. For this reason, it should be occasionally changed. It has been urged that hens require, for best results, two compartments, a warm one for roosting, and a bright, airy place for scratching. While this is still deemed advisable, a modification of recent years is to construct only one room, but in the back of this to have a curtain, which may be dropped on cold nights, so that the roosting fowls will be virtually confined in quite narrow quarters, that their bodies will keep warm, but which will not entirely exclude the surrounding air, as a solid board partition would do.

As for number of fowls in a pen, that depends, of course, on several factors. A fairly good rule is 6 square feet of floor space per hen, with an average roosting space of nine inches. If the number of birds is very small, the pen should be relatively larger, on the principle that a 6 x 6-foot cell would be more cramped for one man than a room 24 x 12 would be for a family of eight. As a rule, it does not pay to keep large flocks of poultry together. Twenty-five or thirty should be the limit. Two moderate-sized honses are better than one large one, and safer in case of vermin or disease.

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STRAW LOFT AND OPEN-FRONT HOUSE IN QUEBEC.

Editor "The Farmer's Advocate":

We keep 200 laying hens, consisting of Barred Rocks, White Wyandottes, Silver-laced Wyandottes, Rhode Island Reds and Black Minorcas.

Our poultry house is what is called the single house, 100 feet long by 12 feet wide. This is divided into five pens, containing the five different breeds. This house is single-boarded, with the addition of two thicknesses of felt paper, and clap-boarded. One-slant roof, side walls, 8-ft. front, 4-ft. 6-in. back; ten windows, two to the pen, 2 ft. 8 by 4 ft. 10; sliding panes in windows for ventilation. After two years' use of this house, which was not altogether satisfactory on account of the moisture collecting on the roof in cold weather, and then dripping in warmer, we lathed on underside of rafters and packed with straw, which entirely did away with this trouble. Any further extensions in the way of poultry houses with us will be with peaked roof and straw loft, as this is the best system of ventilation and preventive of dampness that we know. Our experience with single-board houses has been very satisfactory, providing they are tightly built, with the exception of the front, to avoid drafts. We prefer open fronts with sliding doors or windows to curtain fronts.

The one essential point in an ideal poultry house, with us, would be the peaked roof and straw loft. Outside of this, we think there are several different plans or styles of house that will give good satisfaction, varying from warmly-built to cold houses. Have the air in poultry houses pure and dry; then it may be either warm or cold, but you will be sure to get eggs if you have suitable stock for egg-production. One point in favor of the single-board cold house that will appeal to the farmers of limited means is that the expense of this house is very small and will certainly give good returns for money invested.

Brome Co., Que. A. P. HILLHOUSE.

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MODERN POULTRY-HOUSING AT O. A. C.

Editor "The Farmer's Advocate":

We ordinarily keep about 600 breeding fowl. These represent such breeds as Plymouth Rocks, Wyandottes, Orpingtons, Rhode Island Reds, Leghorns, Minorcas, Brahmas; also two breeds of geese, Toulouse and Embden; Pekin, Rouen, Indian Runner and Cayuga ducks.

As probably many of your readers already know, we have several kinds of poultry houses. To describe the most satisfactory, as far as our conditions are concerned, I would say that one-third of the front of the house is of glass and two-thirds of cotton. The cotton is attached to frames. In the construction of the front of the house, I think it advisable to have the first two feet next the ground of boards. To my mind, this is necessary, owing to the fact that some days in the winter when the curtains are up there are strong winds, and if one is not around to let the curtains down, the hens are apt to get chilled by direct drafts. If the first two feet are of boards, the hens will get in the lee of this, and thus escape the wind. We have found the cheapest kind of cotton to be the most satisfactory, from a ventilation standpoint. Ten-ounce duck or heavy cotton has not proven very satisfactory. We believe in straw lofts, i. e., the ceiling is covered with rails or boards which are laid four to six inches apart, and these in turn covered with straw. Straw appears to keep the house dry, or absorbs the moisture. For the walls, we simply use single-ply boards, and cover the cracks with battens. The houses that are artificially heated would probably give more egg production, but where one is to keep the house tight to maintain a higher temperature, due to the heat radiated from the fowls, we have found it to be unsatisfactory, both from health and egg-production standpoint.

I presume that the ordinary farmer should keep between 50 and 100 hens. To do this, he would require a house, for 100 hens, 50 feet long and 12 feet wide, or 40 feet long and 15 feet wide. I would recommend straw lofts, curtain and glass fronts combined, as described above, and single-ply boards. Where one puts too much money in a house, it is much more difficult to get paying revenue on the capital invested. A poultry house requires to be dry, well-ventilated, also light, and, if possible, free from direct draughts.

W. R. GRAHAM.

Ontario Agricultural College, Guelph.

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ADVANTAGES OF COLONY SYSTEM.

Editor "The Farmer's Advocate":

I keep 200 layers, and raise from 300 to 500 each year. I keep Buff Orpingtons, and find them the best all-round fowl I have tried. Have had Rocks, Wyandottes, Leghorns, Games, etc.

I have two poultry houses, 60 feet long by 13 feet wide. Each house has four pens, and a feed-room at one end. The building is on a cement wall 8 inches thick and 6 inches above ground. The buildings are 5 feet high at back and 8 feet at front, and covered with roofing paper. The walls are studded around with 2 x 4 hemlock scantling; on this is placed common sheeting covered with building paper, and then shingled with cull shingles costing $1.00 per thousand. They are laid 5 inches to weather, costing, for shingles, 75 cents per 100 square feet. This, I claim, is much cheaper than siding. Every pen has a large window in front side, 3 ft. 4 in. by 6 ft. 10 in. Windows run up to roof, and slide back inside when not in use. I use the window for ventilation, using cotton on a frame hinged at top of window, hooking it up inside when not used. I use earth floors in one house and cement in the other; if the soil is hard and dry, the earth floor gives as good results. I have had experience with single-board houses, using large colony houses for wintering hens in, with good results. These houses can be built very cheaply, and will answer a twofold purpose, namely, for running hens in during winter months, and rearing young stock in summer. They should be built 8 by 10 feet, with pitch roof, where straw can be placed in peak for ventilation. Wire netting 4 feet wide can be fastened in peak to hold straw in place. A small door may be cut in gable at each end near peak. This will give the best of ventilation. These colony houses should be placed on runners, so they can be hauled where wanted.

An ideal poultry house for a farm flock would be some of these colony houses, comfortably built, 8 x 10 or 10 x 12 feet in size, with a good-sized window in one side. Each house would hold from 15 to 20 hens. If a farmer had 100 hens, he would require 5 or 6 of these houses. They could be placed in a row, if desired, in any convenient place, and banked around with manure during the winter. Along about the first of July the hens should be disposed of—at least 75 per cent. of them—and these houses will be ready for hauling out in the orchard and the young stuff placed in them, keeping them in for a few days till they get to know it is for them. When the wheat or grain is off the fields, haul these same houses out to the field, and let the chickens pick up the waste grain. They will be strong and hardy if treated in this way.

J. W. CLARK.

Brant Co., Ont.