

of the house attached to upright roof supports and just 13 inches from the floor. The nests will be situated under the windows.

The chickens this year have been raised in 20 colony houses, brooding being done under hovers, each house being divided into two compartments. The chickens were fed, after first giving them a drink, on hard-boiled eggs and stale bread. As they grew their ration was changed to cracked corn, wheat and oats, ground meal and green bone, as well as some chick food. Out of 3,000 purchased at a day-old, 2,600 have been raised, many of the fatalities which did happen being due to lack of shade, which was overcome by moving the colony houses to the orchard. This farm will be watched with interest, as difficulties will increase with increased stocking with birds, and 100 acres of poultry is rather a novelty in this country.

Points in Building Poultry Houses.

With the approach of autumn, many will be looking over their poultry houses with a view to remodelling them, or pulling them down and building new. Houses should be built according to the size of the flock to be kept, and never should the mistake of overcrowding be made. The floor space which a hen requires depends upon several things according to the Macdonald College poultry bulletin.

1. The breed of the hen. Some hens require more space than others.
2. The nature of the food and how fed. Hens that are fed hard grains in the litter during the winter will acquire all the exercise necessary without much floor space, for the getting of food entails considerable effort.

3. Ventilation. The house poorly ventilated will not accommodate so many hens as the house that is properly ventilated. A few years ago, when poultry houses were kept warm instead of being ventilated, it was thought that each hen should have between 8 and 12 square feet of floor, and in all probability she did, but the same breed does better now in the house properly ventilated, with 4 square feet of floor space than her ancestors did with 12. In other words, the more air admitted, the more birds can be accommodated.

When engaged in the work pay particular attention to the roosts.

The American breeds require about 9 inches per hen of roosting space. If more than one roost is required, place the first about 10 inches from the wall, and the others from 18 to 20 inches apart. Roosts should not be placed too high. Between two and three feet from the floor is high enough for most breeds. High roosts give trouble in that the heavier birds are not able to reach them, and the jumping down sometimes causes bumble foot and kindred diseases. Roosts should never be constructed on the ladder principle, but where more than one roost is required they should be placed on the same level. Where roosts are placed one higher than the other, there is considerable commotion every night as the hens are going on to the roost. Weaker hens usually go to roost first, and of course take the top places. The strong, vigorous hens going later also wish for the top seat, and displace those already roosting. This occurs every night. To get rid of this trouble place the roosts on a level.

Roosts should not be large; the round edge of a 2 x 3 inch scantling is large enough. Round cedar poles serve the purpose very well, but the splitting of the poles causes cracks in which vermin harbor. Roosts should be made movable, so that they can be cleaned easily. It is a good plan to hinge the roost to the wall, and to have it raised in the daytime or when cleaning out. The roosting quarters should always be on the warmest side of the house, or at least farthest away from the windows. No ventilation should be admitted near the roosts; sometimes where nights are especially cold, a cotton screen is let down in front of the roosts. This is an advantage, as it keeps the roosting quarters a little warmer; but the custom of boarding up the roosting quarters is not good if the sunlight is shut out.

Whether dropping boards are an advantage or disadvantage is a disputed point among poultrymen. They consist of boards built into a platform under the roosts and should be placed 10 to 12 inches lower than the roosts.

A convenient width, says the bulletin, is 20 inches for one roost and 3 feet for two. Dropping boards require cleaning at least once a day if the place is to be kept neat and clean. In cold houses where everything freezes, a dropping board is a nuisance, and many poultry keepers are discarding it. A farmer's poultry plant can do without a dropping board, and the house can be

kept just as clean and more presentable with less labor. Those, however, who have time to clean the board and who prefer using it, should have it cleaned twice a day, and covered with sawdust or some other good absorbent.

The number of nests required in winter differs from that needed in summer, fewer being necessary. Usually one nest to every six hens will be found sufficient, and in cold weather fewer nests mean fewer frozen eggs.

By all means have plenty of light in the house. Houses should be so constructed that the sunlight may reach every part of the interior. Sunlight promotes health and kills bacteria. The variation in temperature between day and night must be considered. Too much sunlight unduly heats the house during the day time, and the more glass there is the cooler the house is at night. No rule can be given, but roughly speaking about one-third of the front of the house might be of glass. All windows should be arranged with the larger side upright.

Build with as few nooks and corners as possible, as all these little places are easily filled with dirt from the dust and litter scratched about by the hens. Cleanliness is necessary to success with poultry.

Ventilation has always been a serious problem and on this the bulletin gives a few hints which are good.

The various systems used in ventilating stables and other buildings have been tried again and again in connection with poultry houses. So-called ventilators have never given best results. The trouble seems to be that where artificial ventilation is introduced, the evil effects overcome the good. Ventilation by means of a window or cotton front is generally used for changing the air in the poultry house. Where the house is practically tight on three sides, the window or the door can be opened and the air in the house changed without affecting the poultry. Hens must have pure air, but this pure air can be obtained through the windows and cotton front, and if there should be dampness in the house some simple arrangement must be made to allow the fresh air to enter. To assist ventilation, the straw loft is often used. Poles, wire fence material, or anything sufficiently strong can be stretched along the ceiling. The straw will absorb the moisture from the atmosphere of the house, thereby keeping it dry. It will also help to keep the house warmer in winter and cooler in summer. Through the straw a little fresh air may be allowed to circulate from an opening at one end under the gable, or there may be an opening at both ends if the straw be thick enough. When

The Red Mite.

Not only the amateur, but many poultry-keepers of fair experience, at this season of the year are considerably perturbed at the rapidly declining egg yield and the general run-down appearance of their stock.

Though this may in many cases be only due to the usual process of moulting, in far too many instances it is the direct result of the evil depredations of that prince of hen parasites the Red Mite ("Dermanyssus Gallinae").

Many who keep poultry are sufficiently alive to the welfare and productiveness of their flock, and may be content on finding evidence of the existence of lice to provide dust baths or apply one of the many preparations sold for their destruction.

Many insect powders prove valuable in certain cases, by closing up the breeding organs of the louse and so suffocating them, but these would not necessarily destroy mites.

They make it considerably uncomfortable for them for the time being and compel them to leave the hen, but for a short time only, then to return and breed in great numbers at an early opportunity.

The red mite, owing to its peculiar and stealthy habits, is far too frequently overlooked.

Unlike the louse, it does not live in the feathers and upon the bodies of the fowls, but hides in crevices and under the roosts and nest boxes during the daytime, whilst the birds are outside, to await their return and engorge itself on the blood of its victim whilst sleeping at night.

The natural color of the so-called red mite is actually grey. It is only when engorged with blood like the mosquito that it becomes red.

Owing to their vicious and stealthy habits the red mites are in many respects worse than lice, and poultrymen should do everything in their power to destroy them should they once get their hen-houses infested.

Not only is it next to impossible to get hens to lay that are occupying badly infested houses, owing to the fact that the mites are sucking from the hen the nourishment that would in the ordinary course of events go to the production of eggs, but at this season of the year they are far more disastrous, the hen needing all she can get from her food in order to grow a good early covering of feathers and make a winter layer.

It will be readily seen how these parasites may affect the productiveness of the birds for months to come and consequently the profits from the flock.

On examination of the houses it is well to note that though only a few mites may be visible on the surface, vast numbers will be concealed in every crack and crevice. In some cases becoming so overcrowded as to overflow their hiding places, appearing in hordes upon the exposed surface.

One of the most effective remedies known is a 5 per cent. solution of crude carbolic acid, or for a simple remedy easily prepared at home take the following:

Boil one-half pound of common hard soap in one gallon of soft water. When dissolved stir in two gallons of coal oil.

This will make a thick creamy solution and can be made ready for use at any time by adding ten parts of water to one of the solution. Apply with whitewash brush or spray pump.

The spray should be directed with special care into all holes, cracks, crevices, joints, nest boxes and other hiding places of the mites.

The first spraying with this solution will kill all mites and eggs that it comes in contact with, but some will escape so that a second or even a third application is generally needed to destroy all traces.

It is well to give a day's interval between the second and last application as some mites may have been carried outside on the birds.

Remember that it is in the warm summer months that these pests are particularly in evidence, and that if you desire to save your birds and ensure a winter's egg yield now is the time to get busy.



Her Pets.

poultry is situated in part of another building, the straw used for feeding or bedding purposes will benefit the poultry if stored over them. Never, however, have a tight ceiling. There must be sufficient space for the air to pass from the poultry house into the attic. Where the poultry pen is placed in one corner of the stable near the stock it is difficult to keep the pen dry. A tight partition between the poultry house and the stable is an advantage, but a straw loft with an opening above the poultry compartment is almost a necessity. By all means have the poultry house on the side with the southern exposure, and do not be afraid to give plenty of ventilation through the window or door.

Cock birds are an unnecessary expense in the poultry at all times of the year other than that in which eggs are being used for hatching. Besides the expense of housing and feeding, a great loss occurs annually through partial incubation of eggs which if the eggs were not fertile would not occur.