

be swallowed by the birds who pick the dung or eat the grains which have been soiled by it.

If a fowl dies, and there is any reason to fear that it has suffered from diarrhoea of fowls, the birds ought to be at once taken out of the poultry yard, and isolated from each other. The poultry yard and the fowl-house should also be thoroughly cleansed, the dung removed, and the walls, perches, and floor washed with plenty of water, a rough broom or brush being used for the purpose. The water employed in washing should have a little sulphuric acid in it, in the proportion of half an ounce of acid to each pailful of water. When ten days or so have passed away without there having been a death, it may be concluded that the disease has disappeared, and it will only be necessary to preserve the isolation of those particular birds which manifest depression, prostration, or somnolency.

These simple means will suffice to arrest the progress of the contagion and to hinder its return: applied at the outset, they would reduce the losses to insignificance.

Professor Galtier, writing in *La Gazette des Animaux*, and commenting on those instructions says: "The advice given by the consulting authority appears to me to be entirely inadequate to the circumstances of the case. I believe that if poultry were attacked with diarrhoea it would be necessary to apply sanitary measures of a very decided character."

The measures which should be recommended would be isolation, sequestration, change of place, it may be the sacrifice of the diseased birds, the burial of the dead bodies, and disinfection. All infected poultry yards should be sequestered, and diseased or suspected birds should be interdicted from association with others. It would be necessary to separate the ailing birds, and, on occasion, to sacrifice them: also to remove those which are still healthy and transport them to another well ventilated place. In this way the disease might be arrested by preserving the healthy animals from contagion.

When such a course is possible, the infected places should be abandoned altogether, the diseased animals should be got rid of, and the healthy birds should be removed and watched, so that they which fall ill may be taken away. The sale and exportation of even healthy poultry which comes from farms where the disease rages should be forbidden. The dead birds should never be eaten, but should be buried either in the ground at a convenient depth, or in the dung hill. In the latter case it would be well to sprinkle over them a little common phenic acid, or a solution of sulphuric acid.

When the poultry house and the poultry yard are clear of the disease, when the contagion has ceased, and the infected places have been abandoned, it will still be necessary to disinfect the poultry yard and fowl house, as well as the tools and utensils which have been polluted, not omitting the air of the fowl house. The dung which has been dropped should be sprinkled with a solution of sulphuric acid, which, according to Mr. Pasteur, is the best disinfectant. For this purpose it would be necessary to employ a solution of at the least from twenty to thirty of acid to 1,000 of water; and objects which are capable of being submitted to such an operation may be lightly singed.

The building, after having the objects contained therein and the walls wetted, might be exposed to the fumes of sulphur, then aired well for a whole day, and on the following day, the birds might be brought back to the place thus disinfected.

In order to prevent the infection from spreading to neighboring poultry yards, it would be well if the farmer whose birds have been attacked by the disease would inform the proprietors of the locality of the trouble he has had, in order that they may keep a watchful eye over their own poultry.

Nests for Hatching.

Now is the time when preparations for hatching early chicks is in order. The making of desirable nests for incubation is of considerable importance to the final result of bringing forth strong chicks from the eggs. The nest must combine within itself the conditions of warmth, moisture, and freedom from vermin. Much has been said and old has become this "nest" story to veteran breeders, though many new beginners will look to some of the "old ones" to help them with advice, etc. through the medium of reliable journals.

The making of desirable nests is of primary importance to successful hatching of eggs. A series of experiments with various styles of nests have met with the very best of results, by making nests suitable for every kind of season, as follows:

Take a "cracker box" remove, or leave on, the top, take out one end to within four inches of the bottom of the box; in this box place sawdust, as coarse as possible, two inches deep; saturate the sawdust with water, though not to excess, pour on the top of it one ounce of carbolic acid; then place thereon, one inch deep, well pulverized, dry earth, or well sifted coal ashes: on this place clean straw, cut short, to prevent the hens feet from catching in it to the injury of eggs: hollow the nest only enough to prevent the eggs from rolling out in front; sprinkle some pulverized sulphur through the straw, and you are ready to give the hen possession. Place her on the nest, at night, on some worthless eggs for a day or two, and, if necessary darken the box by hanging a cloth in front, until she sits steady, when you find her returning to the nest promptly on being permitted to leave it, place the eggs you desire hatched under her, and those also at night. Nine eggs will hatch better this season of year than thirteen. The carbolic acid and sulphur will keep away the vermin from hen and nest, and also assist in the corrosion of the shell, enabling the chick to break through easily. This may all be some trouble to you, but, remember you cannot raise nice chickens without this, and other, trouble and care, and above all, a love for this very trouble and the chicks.

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Rotations of Crops.

As bone-dust was used as a manure for turnips long before chemists recommended phosphoric acid, so rotations had become the custom of farmers long before the reason for their adoption was discovered.

De andolle was, if I remember, the first to investigate this question. After a good deal of research he came to the conclusion, that every plant arriving at maturity, left behind it, on separation from the soil, a certain quantity of excrementitious matter, positively injurious to plants of the same sort, but entirely innocuous to plants of other sorts. One would have thought that the simple consideration of a meadow or pasture would have shown him the absurdity of his theory; but even now, I observe from hints dropped here and there, that the excrementitious theory is not quite exploded.

I do not imagine that the more thinking part of the agriculturists were ever deluded by De Candolle's specious doctrine. They, as it has often happened in like matters, *felt* the real reason for an alternation of crops, rather than thought it out. They saw that wheat after wheat produced a badly nourished grain, and a weak spongy straw, and they jumped to the conclusion that the second of the two crops had not found enough to eat in the soil. Simple enough, but about the right idea, after all. There, doubtless, was enough to eat in the soil, but it was not properly cooked. Hence fallows came into vogue. Not, as it is sometimes thought to be, land "in fallow" meaning land lying idle, but land ploughed, harrowed,