

sequence of a fatty degeneration of their organs having taken place. I have not sufficient data before me to trace the several results to their respective causes, except in some of those cases in which a fatty degeneration of the ovaries had taken place."

The researches of our author and his coadjutors have led to the conclusion that food rich in saccharine matter, when taken in large quantity by animals, acts injuriously on their reproductive powers. Among other instances may be mentioned that of a well known breeder who, with a view to the improvement of the condition of his herd, added molasses to the dry food he gave. This soon improved the appearance of his animals, rendering their skins supple, and increasing their weight; but it was accompanied by an influence he had never expected; for his stock, which had always realized high prices as breeding stock, now, with very few exceptions, proved to be valueless for that purpose, male and female being alike sterile. Such of the herd as had not been copiously supplied with molasses continued to maintain their character for breeding, while it was thought that others, even after the molasses had been withheld, that their procreative powers continued to be seriously impaired. It has long been known that saccharine substances are excellent food for fattening purposes, and it is probable that the injurious tendency of sugar among breeding stock arises from the fatty degeneration of the ovaries which it produces. It is said that similar results occur among human beings; and that the negroes in the sugar plantations lose all power of reproduction during the sugar harvest, and are permanently influenced, though in a lesser degree, by the juice of the cane, which they are so fond of chewing. It is also affirmed that the reproductive power of the negro increases as the area and growth of sugar diminish.

The moderate use of salt is well known to be beneficial to stock on this continent, especially in parts remote from the ocean, and by some it is held to have a powerful effect on the breeding power of animals. Boussingault, the eminent French agricultural chemist found that bulls, which in their food receive a large addition of common salt, show a greater inclination to cover; and Roulin states that the females of our domestic animals are rendered less productive by want of salt. Large quantities, however, of this substance must not be given, especially to animals giving milk, as in that case it would impair the power of secretion. The formation of milk is intimately connected with the reproductive powers. Its secretion is dependent upon the activity of the mammary glands; and these are either under the direct influence of the breeding organs, or else they sympathize very closely with them. Those animals which breed with the least difficulty yield generally the best supplies of milk, and produce the most healthy and vigorous offspring. However much we have succeeded in improving the symmetry, aptitude to fatten, and early maturity of animals, it must be confessed that we have done so, in very many instances, at the expense of constitution, breeding capability, and milking properties. To check these injurious tendencies, which among pedigree stock seem to be increasing, we must have recourse to a more natural system of feeding and management.

"The general system of diet must be looked upon as taking its share in influencing the reproductive functions. When the fall of rain has been small, and the herbage more than usually parched, we find unusual difficulty in getting ordinary farm stock to breed. A dry dietary is very unfavorable for breeding animals, and very much retards successful impregnation. * * * Little is as yet definitely known as to the comparative influence of different kinds of food upon breeding animals, but the information we possess leads us to desire further evidence. We know that the healthy sera of such animals, with few (if any) exceptions, contains a large proportion of albuminous matter, in the form of vitellin and albuminate of soda; and it follows as a natural consequence, that unless these bodies are present in the food, although they may be supplied for a time by exhausting the animal system, still his career cannot long be maintained without prejudice to the animal and disappointment to the breeder. The presence of phosphorus is also essential, and it has been observed that food rich in phosphorus, such as the leguminous seeds,—peas, beans, vetches, &c. are especially valuable in promoting the fertility of breeding animals. It may also be stated that although a moderate supply of fatty matter is desirable in the food, still it should be limited, so as to prevent any unhealthy accumulations of fat in or about the breeding organs, and it should always be accompanied by food rich in albuminous matter. There are many curious and important points of enquiry involved in matters forming this interesting paper (of which the above is only an outline), that it is hoped will receive due attention both from practical and scientific men.

Poultry Yard.

Roup in Fowls.

THERE is a disease which is alike the bane of the poultry-keeper and the poultry-editor, in fact we hardly know which of the two suffers the most severely from its ravages, but are inclined to think the latter, is almost the worst off, inasmuch as roup is not always present in any particular poultry yard, but the editor of the poultry department is perpetually opening letters asking for the remedy of frothy eyes, swollen faces, and all the other symptoms of this disease. We have therefore thought it desirable to devote a certain amount of space to the consideration of the roup, its causes, its consequences, and, we wish we could add, its cure. Roup is essentially a disease affecting the lining membrane of the nostrils and the passages communicating with them. It commences with the symptoms of an ordinary cold. The fowl sneezes, and at each shake of the head a small drop of fluid is jerked from the nostril.

If the disorder goes on unchecked, the discharge from the nose assumes a thicker character, and the bird, not possessing the luxury of a pocket handkerchief wipes it away on its feathers at the base of each wing. As the discharge thickens, it is apt to become purulent and offensive, and from its tenacious character it is unable to escape through the nostrils; consequently it distends the nasal cavity, causes the sides of the face to swell, and forces its way through the tear duct to the front angle of the eye, which also becomes swollen and affected by the acrid character of the discharge, which in this stage becomes exceedingly offensive. From the peculiar conformation of the nostril of the fowl there is but little opportunity for the discharging discharge to escape, and the internal swelling sometimes goes on to so great an extent, that the animal becomes blind. In the purulent or offensive stages of the disease we have but little doubt that it is infectious, but do not regard it as being so in the earlier stages.

At first roup is only a severe cold, and may be induced by any causes which give rise to that complaint. Exposure in an open show pen; travelling in an unsheltered basket; roosting in a cold, damp house; especially if these causes are combined with deficiency of good wholesome food. In the earlier stages warm housing conjoined with good feeding, especially if the food be rendered a little stimulating, will soon effect a cure. The condition of the fowls may be improved by a little green vitriol put into their drinking water.

In the advanced and purulent cases roup is the most troublesome of poultry diseases in the way of treatment. The bird may be strengthened by good living and a little iron administered as a tonic, but medicine seems to have little influence on the disease. We have tried injecting a solution of sulphate of copper and other lotions into the nostrils, but without much effect. Some persons have given the fowls capsules of the balsam of copaiba, as this medicine has a peculiar specific effect on mucous membranes, such as those that line the cavities of the nostrils, and good effect has followed from its employment, a capsule being given twice or thrice a day. Unless a fowl be very valuable, we should strongly advise its being killed, if very roupy, as it will never pay for the trouble attending its treatment, to say nothing of the risk of its infecting the other fowls.

In, roup, as in all other diseases, prevention is better than cure, and it so happens, that when fowls are warmly sheltered, fairly fed, kept in clean houses, and not overcrowded, roup seldom or never makes its appearance, except in one or two breeds that certainly seem more subject to it than others. The Black Polish and Silver-pencilled Hamburgs seem more liable to contract it than most other varieties.—*The Field.*

WHAT AILED THE CHICKENS.—A subscriber of the *Agriculturist*, says that he lost several valuable chickens in a mysterious manner. One after another drooped and died. Their rumps appeared much inflamed, and a post mortem examination disclosed the cause. The chickens had swallowed kernels of Indian corn, which had swollen so large that they could not pass off. The obstruction of this passage caused inflammation and death. Young chickens cannot mash kernels of grain in their gizzards. Their feed should be fine.—*Id.*

NATURAL HATCHING.—The hens of all kind of gallinaceous fowls sit for 21 days; ducks of the usual kind, such as Aylesbury, Rouen, and others 28 days; Muscovy ducks, 30 to 35 days; geese, 30 to 35 days; Guinea fowls, 28 to 30 days; turkeys, 28 days; pea hens, 28 to 30 days. With a view of obtaining more eggs in a given time from a fowl, many writers suggest to prevent the hen from sitting by cooping her up in a dark place on a low diet. Nothing can be more cruel than to force nature without giving that necessary rest which overwork requires. Already the domesticated fowls lay many more eggs than wild ones between their hatchings, and, by a judicious housing and feeding, can be made to lay still more; but then it is absolutely necessary to allow her to recruit her strength by a rest of 21 days on her nest, and a liberal poulaceous diet, as the laying of eggs, and more particularly of large ones, is attended with considerable pain, as is evidenced by the difference of sound hens utter before and after their laying, also from their uneasiness whilst on their nest. Besides, domesticated fowls are naturally of a sociable disposition, and to separate a hen from her companions, and to keep her on a low diet when she requires rest and nourishing food to recruit her strength after she has become exhausted from the pain of laying and the drain on her constitution, by the rapid formation of eggs, is the height of cruelty, and would surely not be practiced were breeders aware of the injury they do the health of their hens. *Geyelin's Poultry Breeding.*

The Apiary.

Management of the Apiary for February.

BY J. H. THOMAS.

THE management this month should be about the same as for January. Stocks that require feeding should be constantly attended to, for if neglected a day or two after the usual time of feeding, they may perish, as it frequently happens that all the honey stored by stocks that require feeding, is consumed by this time, and they depend wholly upon what is fed them. They should, therefore, not be neglected. Stocks that are not housed, should be visited occasionally, in order to keep the passage for ventilation free from snow or ice.

From communications received from all parts of the Province, both east and west, we learn that many more are housing their bees this winter than formerly. This is a move in the right direction. Those who intend to make bee-keeping profitable must winter their bees in comfortable quarters. The winter has been favourable so far, and the prospect is fair for early swarms. Those who have hives to make would do well to attend to it at once, especially if moveable comb hives are to be used. They should be well and correctly made.

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The only wax work that's of any account is got up by the bees.

VENTILATION IN BEE HIVES.—Bees in winter do not apparently suffer from cold even when many degrees below the freezing point. Their great enemy is damp. I have known hives from which the bottom board had fallen and which were fully exposed to the air, winter well, while others carefully tended lost thousands of bees, and yet both had sufficient stores. Hives made of thin boards are bad quarters for bees, unless well ventilated, and for the simple reason that when such are exposed to the weather, they part rapidly with their warmth in cold weather, and unless carried off by currents of air, the moisture from the bees condenses on the inside and then congeals, and this process will go on until the comb next the sides is involved, and the bees are consequently huddled together in an ice-house. When combs are thus frozen or kept steadily exposed to an atmosphere of moisture for some time, they will mould whenever the weather becomes warm. It often happens that the principal portion of the honey is laid up in the outer combs, and if these are frozen, the bees cannot get their food, and may thus starve with food abundant, but locked up by frost.—*Ohio Farmer.*