POULTRY

Attention to Breeding.

When man first domesticated the fowls of the jungle he had no thought of the wonderful things that were to develop from them through the science of breeding. It is altogether likely that the first distinct breeds came into existence gradually and as a result of the differing conditions of the countries in which they were raised. It is believed the first fowls domesticated were those of India. From that point they were taken east, north and west. In the beginning they had all one general set of characteristics. But in the course of time the fowls of China developed in one way, the fowls of India in another and the fowls of the various countries of Europe in other ways. At first no attempt was made by man to direct this development, that being a result of place and conditions. So at the beginning of poultry history we find a few distinct breeds that have since been named after the locality from which each came. Thus, from the north of Asia we have obtained the Langshan, from the south of Asia the Brahma, and from Europe the Leghorn and the Dorking. These were pretty good breeds, when we remember they were the result of breeding without an object. During the last 70 years a great many new breeds have been created by fanciers, who appreciated the possibilities locked up in the fowls and which might be brought out by selection and breeding. Doubtless the coming hundred years will see an enormous increase in the number of distinct breeds of poultry and a general improvement in the special points for which each is bred.

Every farmer should be a breeder to a considerable extent. He may not originate new varieties, in fact should not waste his time in trying to develop these, but he can do the same thing, in fact, that is, develop a strain of birds of more than the common value. Many of the breeds we now have are no better than the ones out of which they have been developed, their distinctive markings in color and form being about the only qualities their parents did not possess. But the farmer may well develop strains that will prove earlier maturing, better laying, healthier birds than were their immediate ancestors. The laws of breeding are to be studied to advantage and when understood will open the way to both pleasure and profit. The neglect of the laws of improved breeding is responsible for much of the poor stuff now to be found on our farms. We have to say, however, that there has been a great improvement in the last ten years, at least in the matter of meat producing birds.

The farmer that has a flock of 10 hens can well afford to adopt some regular system for his breeding operations. If he has eggs in view he can adopt a system of culling out all of the poorest egg producers from year to year. By so doing he would in a course of years have at hand a flock that would be a paying investment. Yet there are farms on which the hens have not improved for half a century, principally because there has been no care taken at all in the breeding. The eggs for sitting have never been selected, and the result has been a reproduction of the average quality of the flock. Attention to the matter of breeding will pay every person that expects to raise fowls.

Grading Up the Flock.

There are several ways by which a farm flock can be kept up to a very good standard of excellence for practical purposes, by just a little effort of the keeper, said J. H. Robinson in an address before the Massachusetts State Board of Agriculture. Thus, where it is the practice to take the eggs used for hatching from the general flock if, besides reserving his best pullets, the keeper weeds out all the decidedly inferior ones, and uses only well developed males, any one of which would be considered a desirable breeder, the stock cannot go back very rapidly, even though, as we have seen there might not be enough of the product in any year from the best birds to strongly impress their quality on the flock.

It is such selection as this, accompanied by selection of the largest eggs for hatching, that is practical on most farms where some special attention is given the matter of making poultry profitable. It is doubtful whether any marked progress was ever made by such methods, but they are a long way in advance of leaving it all to nature. At best, these methods are crude; their use under the condition described is illogical.

The logic of such a situation requires that a poultry keeper who realizes the importance of reserving his best fowls to breed from, should make sure that it is only the eggs of his best hens, fertilized by his best males, that are used for incubation. The logic of the situation requires that a poultry keeper who thinks it worth while to select the best eggs for incubation should, sooner or later, come to consider it necessary to know that these eggs were from hens possessing the other qualities prized, and fertilized by males most suitable for mating with these particular hens. Selection is not complete if it stops short of the separation of the fowl selected—unless the whole flock is select—a thing which does not often happen.

Profit in Young Animals.

The profit in beef and mutton production lies in the young animals. There was a time, but that was many years ago, when the big boned steer that weighed 1,800 to 2,000 pounds was looked for by the buyers of beeves, but now the animal that is sought by the butchers is one that weighs from 1,200 to 1,500 pounds. We have long since found out that the cheapest meat is made on young animals, and the money thus invested is soonest ready to be turned over. Not only is the money tied up longest in old animals but the cost of producing meat on them is so great that our best beef feeders are no longer attempting to do that. The method advocated now is to keep the animals growing right along from birth to the period when they weigh what the market demands. Steers are now ready for the market at two years old or under. If all the animals shipped to the stockyards were of this kind there would not be much complaint about poor returns in stock breeding and beef making. A good many farmers are still trying to make profitable beef on old steers. But the young steer is the only animal that gives us any promise of a profit.

Roots Versus Silage.

In Europe the use of roots in stock feeding is quite universal especially in those countries that are too far north to permit of the extensive growing of Indian corn. But in the United States root raising for cattle has never been very popular, for the obvious reason that it is very much easier to grow corn than roots. We have talked this matter over with stockmen in the West and their verdict is uniformly that roots cost too much, except when grown and fed in a small way, in which their use is justified as a laxative rather than a food. Careful experimenters have shown that roots cost about three times as much as corn to grow, basing the comparison on the dry matter. Corn in the form of silage is one of the best and cheapest foods for stock. It has been regarded as a dairy food par excellence and as a milk maker. But it is equally good for beef making, and some of our leading cattle raisers are now building silos to enable them to make the best use of the corn crop.

The Hog's Digestive Apparatus

A subscriber writes us that in killing hogs he finds it a disadvantage not to know the names of the different intestines and that such information would be especially useful to him when making a post mortem examination, with a view to determining the cause of death. He states a fact that should be apparent to all and we are much pleased to have the matter brought to our attention, as the information asked for should prove instructive to the readers of this department. Starting at the back of the mouth we come to the pharynx or "swallow" which is the entrance to the "gullet" or oesophagus, the tube leading the food to the stomach. The pig's stomach is simple like that of the horse and has but one compartment although there is, as in the horse, a trace of two compartments denoted by difference in the color of the lining membrane of the organ, which in the pig has a capacity of one and one-half to two gallons. The alimentary canal is continued from the stomach, in the abdominal cavity, by a long tube doubled on itself a great number of times and which terminates at the posterior opening of the digestive apparatus. This tube is the intestine. Its first portion is called the small intestine and its last part the large intestine. The small intestine is some 56 feet in length and the large intestine 16 feet. On leaving the stomach the first portion of the small intestine is known as the "duodenum" which is short and curved. It is followed by the "jejunum," then by the "illium," and then by the "caecum" commonly known as the "blind gut" or "water bag." The large intestine now commences with the "colon," which is a large sac describing three turns from right to left and three turns from left to right, then insinuating itself between the duodenum and the pancreas. The latter part of the colon is called the "floating" colon and ends in the rectum or "end gut." The large intestines are 18 feet long. The liver which is an accessory organ of the digestive apparatus, has in the pig three well-marked lobes, the middle one of which carries the gall bladder. In the pig a portion of the pancreas is situated under the loins, between the large tuberosity of the stomach and the last curve of the colon; the other portion will be found in a fold of the duodenum. The spleen is familiar in appearance to any man who has slaughtered a pig, but even scientists have not yet decided the nature of its functions in the animal economy. When making a post-mortem examination of a pig note the appearance of the lining of the gullet and stomach. After death the lining of the stomach has always a pink portion and a lighter portion and the lining is easily stripped off the pink portion. If this portion has taken on a livid hue inflammation has been present; if it is covered with dark red or purple spots, poison or cholera may be suspected, and the latter disease is also characterized by ulcers on the lining of the large intestines. If the small intestine is black, examine for a twist or knot or for one portion telescoped into another or for some foreign body which has lodged and caused mortification following acute enteritis (inflammation). The liver should have a healthy color and should not be very flabby or brittle. If it is greatly enlarged there was either congestion of the liver (acute), indicated by presence of much blood, or chronic congestion (hepatitis), indicating a long-standing disease of the liver. In all liver disease we find as a rule staining from bile which gives the membranes a yellow color. This is chiefly noticeable in the membranes of the eyelids, but may affect all of the membranes of the body as in jaundice. In hog cholera, in addition to red spots and ulcers upon the lining membrane of the intestines similar spots may appear upon the liver, kidneys and lungs. If lung disease was present the light pink color of the healthy organ will have given place to dark or bright red, and if pneumonia has been present the lungs will appear and feel like liver and sink in water. If pleurisy was present the lung will be found stuck to the chest wall and fluid is usually present in the chest cavity. In bronchitis the air passages of the lungs will be found to contain more or less mucus and even pus. Abscesses in lungs or elsewhere usually denote tuberculosis or actinomycosis.—A. S. Alexander in Farmers' Review.

Killing Peach Borers

Last winter I sent you an article on the care of peach trees. One statement I made was that we were not so much troubled with borers as before the cold winter of 1898 and 1899, which froze so many trees. The "so much" was left out, making it read "we were not now troubled with borers" which might be misleading to beginners, causing them to neglect hunting them out. The fact is, they are very bad this spring, especially in trees on low flat land or on grassy ground and need to be hunted out with care. Where the trees were not gone over last fall, there is quite a brood of very small ones. They have not done much harm as yet, but will greatly injure the trees if left in. Not many have yet burrowed deep into the bark, but most of them are still clinging to the bark outside and biting the bark, causing a mass of gum to hang around the tree. If this is scraped off it will carry most of the worms with it. Keeping the borers out of the peach trees is very essential to the health of the trees.

A wax for the protection of injuries to these can be made thus: Heat in an old kettle two quarts of rosin, one of propolis or refuse beeswax and a tea cup of old lard. Melt thoroughly and stir just as hard as can be without running over. Then with a swab daub this onto the injured tree while very hot. It will protect the wound for months or until the bark grows again. If you do not have the old propolis or dirty beeswax the rosin will do alone if softened with grease. If made too soft the bees will stick to it and this will kill many. After the soft wax is put on earth can be rubbed on it and this will keep the bees off; but it is better not to have it too soft. We hunt out a number of trees and tie strips of cloth to them to mark them for treatment, and when we have a number of trees ready we treat all with the same batch. Caution must be used in melting the wax, as it is very inflammable, and, if allowed to run over, will quickly take fire.—Mrs. L. C. Axtell, Warren County, Illinois, in Farmers' Review.

A Bird Nursery.

Andrew, head waiter at the Tuttle House, Savin Hill, is a southern man, and extremely fold of birds, says the Boston Evening Globe. Robins this year have been unusually prolific, and the young birds in attempting to fly from the nest in many instances fall to the ground and are caught by cats, which destroy not a few of them. Andrew conceived the idea of putting a box with slats on one side on the top of a pole, where he placed many of the rescued birds. Their parents come regularly to the temporary prison and feed their progeny, who in a week or two are able to fly and are released. Quite a colony of young robins has been cared for this summer, and there are still some in the box waiting for their wings to grow and liberty to come.—Exchange, 1903.

We have great faith in the loyalty of people to the interests of agriculture when its needs are intelligently presented and those representing it are sincere in their efforts for it.