

The house is covered with roofing paper, and placed on two 2 x 4-inch scantling, 8 ft. long for runners. The door is covered with thin white cotton, which admits all the light that is necessary. After building the 12 houses there was enough lumber left to make six brooders.

In the course of his remarks he said that he devoted five acres to apples, from which he got 350 barrels a year ago, and 500 barrels last year; one acre each to grapes, strawberries and raspberries, and half an acre to tomatoes, besides raising all the grain and alfalfa required for four horses and two cows, and leaving plenty of pasture for them; and it will be of interest to know that, in his experience, chickens do not touch small fruit when they are hopper-fed on free range.

Mr. Clark said in reference to bees, that more people should learn to handle them, as there is nothing more profitable, as his eighty-five colonies produced last summer four thousand pounds of clover honey and seven hundred pounds of mixed honey.

MORE ON BREED TYPES.

On Wednesday evening Mr. Card was again called upon to give another illustrated talk, this time taking for his subject "Breed Types." He said that birds should be bred so that every breed should be distinct in its own type. A Rock should be a Rock, and a Red a Red; there was entirely too much long-backed Rock, Rhode-Island Red, Orpington. He also stated that the hens that were making egg records were not usually show birds, although they are pure-bred. He strongly emphasized the foolishness of a great many disqualifications, that are often very trifling, and many, many times keep an extra fine bird from getting the prize, when a \$1.50 bird steps in and carries off the blue ribbon. If you can do anything to overcome disqualifications, do it, as it is hard to draw the line between faking and grooming.

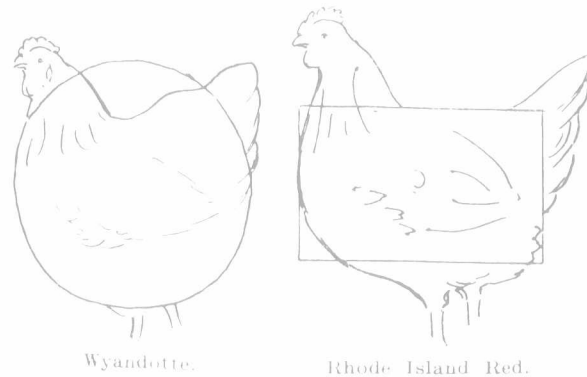
During his talk Mr. Card made some sketches of the Asiatic and French breeds, Games, White-faced Black Spanish, Black Hamburgs, and many others, showing clearly the distinctness in type between these various breeds.

COLONY METHODS.

F. C. Elford told of the methods of "Housing, Feeding and Breeding" followed at Macdonald College, which was not an experiment station, in the true sense of the word, although their two main objects were to build up laying strains, and keep up vitality by trap-nesting, and show the Quebec farmer that there is money in poultry, with small outlay in cost and labor.

In housing, the idea was to show that with such simple tools as the hammer and saw, one could house his birds at \$1.00 per hen; and such houses were in use at the College, made of single boards, on runners 6 x 8-inch cedar, with one window 3 1/2 x 5 ft. made to slide. These houses are 12 x 8 ft., and accommodate 25 birds, including three cockerels. The houses were drawn up in a row in winter, to lessen labor. The weather was too cold to allow of the use of the curtain front, so fresh air was admitted through hole opening into straw loft. When outside temperature was 24 below zero, it was 20 inside, and they seldom had frozen combs, as the houses were dry and birds healthy.

The speaker here said that the question of feeding with them was rather a serious one. Owing to the high price of grain, they had been feeding part wheat, corn and buckwheat, but as wheat was \$1.75 to \$2.00 per bushel, they were going to feed more corn; dry mash was also fed in the hopper, composed of bran, and any other suitable available ground grain; beef scrap was before them all the time, and table scraps made a valuable addition. Another interesting feature was the description of the combination nests, which are 6



ft. long and 1 ft. 5 in. high and wide, and although they do not keep accurate individual records, they keep you posted on the hens that are laying. From three hundred and fifty pullets, and the same number of old hens, they are getting from 254 to 273 eggs per day; and the usual gap in egg production in the months of November and December was filled by 150 February-hatched pullets, which laid about 70 eggs each, and are now moulting.

MAKING A NEW BREED OF POULTRY.

Mr. Card came before his audience again, and told them how he made a new breed of poultry. In his opening remarks he said that every true agriculturist should be a fancier. It had always been his ambition to make a new breed, and now he had done it, and called it the White Laced Red Cornish. In the producing of this breed he had used as a basis the Brahma, Wyandotte, Red Cornish Indian, White Cornish Indian, and a Japanese breed, and his finished product was an egg-and-meat producer, with a small comb. He pointed out some of the fundamental principles underlying the making of a new breed of poultry, one of which was the keeping of accurate records of experimental matings made in the autumn, from birds with the greatest stamina and vigor, always avoiding the weak ones. Another point of great importance was the necessity of observing the habits of the individuals, so that none but the active, vigorous ones would be used. The first hen out in the morning and the last to roost was the one he liked. Mr. Card brought this unusually instructive and interesting talk to a close, by telling how he had practiced a system of line breeding similar to Mr. Fletcher's system.

POULTRY HOUSES OF THE FUTURE.

Mr. Robinson dwelt at considerable length upon "The Poultry Business of the Future," which he said depended largely on the development of a permanent poultry culture which we would have to study, to see if it would be permanent or not. The object in keeping poultry was to be furnished with eggs, meat and feathers. The reason of the lack of progress in the poultry business was due to its having been worked along too intricate methods; but now people were beginning to realize this, and see the folly of it, and were getting back to simple methods practiced long ago. In combining these simple methods with the good results of modern scientific experiments, an ideal condition should be reached, and in all likelihood would make the basis for future methods. Things always go wrong when we wander too far from nature; for example, when fowls are confined in small yards and pens, we treat them like caged birds, forgetting that they are land birds, but when they are given natural surroundings, as orchards and grassy fields, they are satisfied, and in turn give satisfaction to the owner.

If more people in towns and villages would start keeping enough hens to supply their needs, it would be a great benefit to the country, as a flock of 24 hens could be kept up indefinitely on a town lot, by renewing it with fresh stock from the country. This would be an advantage to the farmer, by increasing his sales of stock, and encouraging him to eat more eggs and poultry. He stated that we would see greater production on the farms in the next ten years, because we are coming to the condition when we must combine the raising of products, and poultry fitted in well with other branches of farming. In this way we will get away from encouraging exclusive poultry plants, which are illustrations of carrying specializing too far. Every farmer should consider the possibilities of his land, and use it as a basis to get most out of it. As a final word, he said that farmers should keep nothing but pure-bred stock, and trade male birds, and the producer to get full value for his products should co-operate.

Mr. Elford was the last speaker of the session, and took up the subject of "Co-operation," directing his remarks particularly to the Eastern Canada Poultry-producers' Association, which is based on a system of grading the produce into three classes, as follows: Selects, first and second. Eggs are graded thus: Selects—To consist of strictly new-laid eggs, weighing not less than twenty-four ounces to the dozen; clean, of uniform size and color, packed in substantial and neat cases, having clean fillers. No. 1—To consist of new-laid eggs, not less than twenty-two ounces to the dozen; clean, fairly uniform in size and color, packed in substantial neat cases, with clean fillers. No. 2—To consist of new-laid eggs, packed in substantial cases. During the months of November, December and January, the weight clause to be reduced by two ounces. Grades of dressed poultry: Selects—To consist of specially-fattened chickens, extra well fleshed, and of superior finish and appearance, unbroken skin, without blemish, straight breastbone, and neatly packed in packages that hold one dozen birds. Each package to include only birds of a uniform size and color of flesh and legs. No. 1—To consist of well-fleshed chickens of neat appearance, straight breastbone, no disfigurement; packed in neat, strong boxes. No. 2—To consist of fairly-fleshed chickens; packed in neat, strong boxes. The term "chickens" in these three grades means all birds under seven months of age.

Professor Wallace, of the Chair of Agriculture and Rural Economy in the University of Edinburgh, after visiting British Columbia last year, has purchased 65 acres of uncultured bush land in the Chilliwack district, at \$10 an acre.

GARDEN & ORCHARD.

Why is Co-operation Not More Successful Among Farmers?

Address delivered by James E. Johnson, Manager of Norfolk Fruit-growers' Association, before the Short-course Class in Fruit-growing, at O. A. C., Guelph, 1910.

The key to the great future of success with our farmers lies in true, systematic co-operation. It is just as much necessary for farmers to join together for their mutual benefit as it is for any other body of people in the world, and nearly everybody else is working in co-operation with others of like occupation. It is necessary to organize, to have written by-laws, and to elect the most interested growers as officers of the organization. The best business manager obtainable should be engaged; the manager may not necessarily be one of the members.

It is regrettable that farmers' organizations, up to the present time, have not been more successful, and we must profit by the mistakes that have been made. There are several reasons why farmers' organizations have not been more successful, the chief of which I will explain to you:

1. Because, as a class, farmers, up to the present time, have not learned the necessity of running their farms strictly upon business principles, as is customary for a business man to run his business. The farmer's duty, as he sees it, is to till the soil, grow and harvest the hay, grain and other products, and take care of the stock, sell all above what he requires for his own use for cash, and with the cash purchase necessities, and try to put aside a little cash each year in the bank. Usually he does not keep any other book than the bank passbook furnished to him by the bank. Business men, as a class, do not run their business in this way. They have learned that it is necessary to keep books, and in these books to have accounts of every branch of their business, so that they are able to determine their profits in each department. Some farmers keep accurate books for their farms. Such ones find it a pleasure to do their farming in this businesslike way, and are good organizers of farmers' co-operative associations; and if members were all of this type, as far as the membership is concerned, it would, without a doubt, be quite satisfactory.

2. We should, as farmers, try to educate ourselves as to business methods, and we will then learn that farm books are necessary to insure success.

3. Jealousy on the part of individual members, generally caused by suspicion.

4. Farmers are more self-supporting than any other occupation, and this has given them considerable independence, but they have been accustomed to managing their own affairs, and not paying large profits, salaries or commissions to anyone, if they know it; and what are considered large profits by the farmer are looked upon as small profits by the business man. Therefore, when farmers get into business co-operatively, very often they look for a manager who will do their work for the least money, rather than one of experience. I know of several instances where men have accepted positions as managers of associations at a lower rate of commission or salary than they knew they could afford to take, but, in order to get fruit-growers' associations started, they accepted the positions, to the detriment of both the associations and themselves. The manager soon finds that the fruit business is not one of pleasure, and when he demands more pay, there is always someone in the association who is willing to do it at the same old price, which causes a change in the management. A manager's position is a hard one—far harder than that of a general in an army, as the general only has his own army to look after, but the manager of a fruit-growers' association has his own army to look after, and also the enemy, as some farmers rather erroneously term the apple-buyer. A successful manager will get the growers and the apple-buyers upon a better understanding with each other, and make it a pleasure for them to do business with each other, to their mutual benefit. Apple-buyers and growers are both working at the present time to their disadvantage by not working co-operatively with one another.

5. The lack of education along co-operative lines, and the necessary experience in the purchasing of supplies and the growing and packing of the very best quality of apples.

6. The packing of apples is often very unsatisfactory. We should try, as far as possible, to have each member's apples packed in his presence, so that each can see for himself the quantity of No. 1, No. 2 and cull apples that come out of his orchard.

7. Farmers have been in the habit of receiving cash for their apples when delivered at the railway station, and they like to receive their cash soon after making the delivery; so my advice would be to sell in the fall of the year, at pack-