Cheese and Butter Makers' Convention.

The Cheese and Butter Makers' Convention, held last March at the Ontario Agricultural College Dairy School, Guelph, was undoubtedly one of the most helpful gatherings, to those who attended it, ever held in the Province. Coming at a time just before the factories opened, the live subjects were brought to the front and discussed by some of the brightest and best makers in Ontario in a way to teach many lessons which were eagerly desired. It has been thought wise to hold a similar meeting this coming March at the same place. It is to be held early in the month, probably on the 5th inst., but a card dropped to Professor H. H. Dean, at the O. A. C., Guelph, Ont., will bring the intelligence of the correct date, which is not yet finally decided.

Cost of Milk Production at the O. A. C.

To the Editor FARMER'S ADVOCATE:

SIR,—Please correct the statement in ADVOCATE of February 1st in reference to the loss on food fed to a cow at the Ontario Agricultural College. The loss was $2.69, not $26 as reported. After charging this cow for all the food eaten, and selling her butter at 20 cents per pound, she made a loss, as stated, of $2.69. Your query, "Dairy farmers, what are the cows in your herd doing?" is a very important one—one that ought to stir up the minds of your readers who are keeping cows with very little knowledge of what they produce or how much it costs to feed a cow during the year. I may add that the *food cost* of a pound of butter for our herd (19 cows milking) was 12.8 cents for December, 1896; whereas in December, 1895, the food cost was 18.8 cents per pound of butter. We are hoping to materially reduce the food cost of cheese and butter for 1897. Who will co-operate in this matter, and give others the benefit of their experience?

H. H. DEAN.

Dairy School, Guelph.

POULTRY.

How to Make Hens Pay.

1.—How many hens do you consider it wise to keep on the average 100-acre farm, and to what age?

2.—With a view to eggs, table birds or both, what breeds or crosses would you recommend as likely to give most general satisfaction?

3.—What plans would you suggest for improving an ordinary farm flock of mixed fowls, such as selection or "weeding out," new breeding birds, setting of eggs, etc.?

4.—What period of the year is it advisable to retain male birds with the flock? How about numbers together?

5.—By what means do you secure the best eggs for hatching?

6.—What treatment would you suggest for a pen of breeding hens (from which the eggs are to be set) during the latter part of winter and spring?

7.—What sort of a house do you recommend with regard to (a) size, (b) location, (c) warmth, (d) sunlight, (e) ventilation, (f) dust bath, and (g) watering, and to what extent should fowls run out in winter?

8.—How do you manage to keep hens free from lice and disease?

9.—What foods or mixtures do you recommend for (a) egg production, (b) fattening, (c) how often would you feed per day, and (d) what value do you place on green bones, and vegetables, and sunflower seed?

10.—How many eggs per year should a good farm bird lay to be profitable, and at what age should broilers be sold?

11.—Should turkeys, ducks or geese be allowed to run in the same house with hens; if not, why?

12.—What is your idea of keeping turkeys, ducks or geese on the average farm, and how do they compare with hens as to profit, etc.?

1. I am of the opinion 100 hens on a 100-acre farm is enough; or I would prefer *fifty* good ones to one hundred poor ones. No hen, unless an exceptionally good winter layer, or a rare mother to chicks, should be kept over two years. The plan I pursue is, after the second winter to market in May or early June when poultry is scarce.

2. My experience teaches that cross-bred fowls are hardier than pure-breds, and equally as good layers. However, if two non-sitting breeds are crossed, or if a non-sitting breed and any breed that will sit are crossed, the progeny in both cases are likely to be sitters. Cross-bred fowls mature early, lay usually with less care, and have an inclination to sit more than pure-bred fowls. For eggs the following breeds are good: Leghorns, Minorcas, and Andalusians, and are all non-sitting breeds. For both eggs and meat the Plymouth Rock and Wyandotte are the leaders. These two breeds are the best all-round fowls in the market. For crosses I would recommend Plymouth Rock pullets mated to Leghorn cocks. Wyandottes and Leghorns make fine broilers and are good layers, but perhaps are a trifle small for roasters. For first-class roasting fowls, mate Brahama pullets to an Indian Game cock.

3. Never use any male that is not pure-bred, nor one closely related to any stock in breeding pen. Select your best winter layers that do not show an inclination to sit often, and mate to a male from good laying strain, being careful that he is well-proportioned, or, in other words, would dress well for market. Select your male for utility rather than fancy. Mate ten or twelve of your best hens to this male, and set ONLY these eggs.

4. Male birds should never be allowed with the flock during the months of June, July, August, and September, and better if not among the flock only during breeding season, which is the months of March, April, and May. One male is enough for any farmer, and unless an exceptionally good one, it is, perhaps, wise to dispose of him after breeding season. A number of males running together is a waste of food and capital, as well as a hindrance to egg production, and also an injury to the keeping qualities of eggs. Infertile eggs do not spoil when exposed to heat.

5 and 6. The breeding pen should consist of ten or a dozen females and a pure-bred male, placed in a roomy pen with an outdoor run. They need plenty of exercise, with good food. Feed liberally with vegetables and meat, and not too much grain. Great care should be exercised not to bring about dysentery.

7. Allow 6 sq. feet of floor space for every hen. (b) Location should be dry and inclining to the south or south-east. (c) The house should be warm enough not to freeze the fowls' combs. (d) One-third of the south side of the house is enough sunlight. (e) Opening and shutting the doors usually admits plenty of fresh air in cold weather, and in warm weather the doors may be left open during the *day*. Ventilators are usually drafty at night and cause considerable disease. (f) Have a sandy loam floor and the hens will have a complete dust bath. If not, make a box 2½ feet wide and the length of your window, and fill with road dust. Do not use ashes, as it mars the beauty of the plumage and renders the fowls unsightly. (g) Fountains are nice, except when they freeze, full of water, which they are apt to do in winter unless emptied every night, and you are almost sure to neglect it sometimes. I have found a pan 12 inches square and 2 inches deep placed on a box 1 foot above ground, and the box fastened between the partition of two pens, answers well. It is easily cleansed and waters two pens. (h) Nests are most conveniently arranged under the droppings board under the roost. By this plan eggs can be gathered from the walk, and avoids all disturbance of going among the fowls. They should be made movable, so as to be taken out and thoroughly cleansed. When fowls have access to a barnyard, it is well to let them out on warm days, but never to allow their combs to freeze, otherwise I prefer keeping them inside.

8. Remove all droppings once or twice a week, paint roosts with coal oil every week in summer and every two in winter. Give plenty of exercise and pure water, together with wholesome food. NEVER set a hen in the henhouse.

9. (a) At present I am feeding equal parts by measure of cooked turnips, bran, and oats, with a little corn meal. Formerly I fed peas, barley and oats, but as my hens are most too fat I have done away with the peas and barley. I like to feed half cut steamed clover and half roots, instead of clear roots. I allow one pound of meat or cut bone daily for every sixteen fowls. The above is scalded and fed warm in the morning. At noon I give a few handfuls of oats, wheat or barley, well covered in litter; about 3 o'clock feed again in litter, this time buckwheat; and before going to roost fill up the troughs with buckwheat, and take up what is left. This is the only method I know of where, with certainty, every hen has had all she wants to eat. (b) Feed in the morning scalded bran and corn meal in the proportions 1:3. At noon give one pound of meat to every sixteen fowls, and at night give all the corn they will eat. (c) Green bone is excellent food for laying hens or growing chicks. Vegetables are a very essential portion of the winter ration. Sunflowers are very fattening, and perhaps when fed in the early fall have a tendency to advance the moulting period.

10. Every hen should lay at least ten dozen eggs per year. Broilers should be sold when they reach a weight of 1½ to 2 lbs. each, or from ten to twelve weeks old.

11. To obtain best results hens should have a house by themselves. Ducks are very noisy at night and disturb the hens. Furthermore, they create an odor which is not agreeable to the well-being of hens. They are sometimes quarrelsome. Geese are somewhat similar to ducks, and are sure to get too fat if fed with hens. Turkeys are very quarrelsome, and usually devour the most delicate morsel in the food. They will not stand confinement.

12. Turkeys can be made profitable by feeding in winter mainly on bran and roots, with a little whole grain, and after harvest being turned on the grain fields. Ducks to be profitable need to have a ration of ground grain rather than whole. Feed plenty of vegetables and meat, mixed with about half of ground oats and corn meal. A little whole grain should be given at noon. Never feed a duck after it is ready for market, which is when it becomes fully covered with feathers, or about at the age of ten weeks. Geese need a large amount of vegetables in winter, and in summer plenty of short, juicy grass, with plenty of water.

Hastings Co., Ont. W. R. GRAHAM.

An Experienced Poultryman Testifies.

1. On a 100-acre farm 50 to 80 hens could be kept profitably. A farmer generally keeps more in summer than in winter. Hens should never be kept over three years old, unless some very valuable breed is desired to be retained, as some hens are more valuable than others for egg production, etc.

2. Undoubtedly the white and brown Leghorns are the best for egg production, but the Plymouth Rock, Wyandotte or Houdan is the best for table and eggs combined. The Light Brahma comes early to maturity, and is an excellent winter layer. A cross between the Indian Game and any of the Asiatic breeds makes the best table fowl I have ever tried, being large, plump and tender.

3. By getting a pure-bred cock of any desired breed, and crossing with the common fowl—but there is nothing like the pure-bred fowl for egg production—the breed can be improved by selecting your best hens and setting their eggs.

4. I retain my male birds with the hens nearly all the time. They say that eggs will keep better unfertilized, but I question if the hens will lay as well. This is a disputed point. One cock to 12 or 14 hens of the heavy breeds is about the number I use, but of the non-sitting varieties two dozen can be kept with each cock and the eggs be all fertilized if the male bird is young and vigorous. The feeding has a great deal to do with the eggs being fertile.

5. By feeding a variety of food such as oats, buckwheat, barley, and wheat. Do not let the hens get too fat. Keep them in exercise all the time by scattering the grain amongst the litter, and make them scratch for it. Give them plenty of green food. Well-cured green cut clover is an excellent egg producer, and the hens are very fond of it. Plenty of skim milk is also a good thing. Plenty of ground bone, oyster shells, etc., to form the shell.

6. Do not let them get too fat; give them plenty of albuminous food, and see that the nests are well filled with cut hay or some other thing that will keep the eggs at the proper temperature, and see that the hen does not remain too long off the eggs in cold weather, as they soon get chilled. Sprinkle the hen with insect powder, and also the nest before setting, so there will be no danger of lice on the young chicks when hatched. Sulphur is also a good insecticide, and a little in the food is good.

7. I have a house 24 x 12, with four windows in it facing the south, in which I winter fifty hens, and have never had any disease of any kind. I let them out very mild days, and even when the mercury is very little above zero, if the sun is shining. If they are kept warm at night that is the great secret. Have two ventilators that I can open and shut at pleasure. Keep a dust bath filled with road dust, coal ashes, etc., in which I put sulphur and a little carbolic acid. Always give plenty of skim milk and pure water. In very cold weather, I warm the water. I have been getting eggs all winter from the early hatched pullets, and expect them all laying very soon.

8. Perfect cleanliness. Clean out the droppings at least once a week. Sprinkle plaster of Paris over the floor, which fixes the ammonia, and barrel the guano away for future use in the kitchen garden. I consider the hen manure equal to Peruvian guano for growing onions, etc. I have grown the first prize onions at our local shows with it for years, and very little does (I overdid it at first and burnt them all up). By using whitewash of quicklime, in which is incorporated one ounce of carbolic acid to the pailful, annually or semi-annually if necessary.

9. I feed boiled potatoes mixed with shorts, and a spoonful of cattle spice in it or a little pepper, in the morning, oats or barley at noon, and a little wheat at night. Every farmer should have a bone cutter; you can get one for $7 and $10. I consider they will pay for themselves in a few years. They cut up green bones when broken with a hammer, which are invaluable for winter egg production when eggs are worth from 20 to 25 cents per dozen. For fattening sunflower seed is also good. I use chopped corn or peas mixed with boiled potatoes, shorts, and a little cattle spice, and shut them up.

10. I have had Leghorns lay as many as 200 eggs annually, but as a rule they are non-sitters; 100 eggs will be about the average, if you let them hatch when they wish. You cannot raise chickens and have eggs also. I cannot get sufficient hens to sit to hatch all the eggs I want. The earlier you can get chicks on the market the better prices you will get. Feed all they can eat until two months old, when they make good broilers.

11. Turkeys, ducks, and geese should never be kept with chickens. Turkeys are very hardy and require very little shelter; if free from wind, an open shed will do in winter. So also are geese, but my ducks I always put in at night, with a good, comfortable bed of straw. Ducks often lay in February, and lay very early in the morning. Turkeys are very hard on young chickens, and should never be allowed near them. I consider on every 100-acre farm a farmer might raise profitably fifty turkeys, the same number of geese, and 100 ducks. I have done it and made it pay, as the most of the food required for the two former is when they are young; after they are six weeks old they can forage for themselves on grasshoppers, etc. Ducks are omnivorous and will eat boiled vegetables mixed with a little bran or shorts, and keep fat. They are as good and even better at catching grasshoppers, crickets, etc., than young turkeys.

12. I consider that $100 a year can be made from turkeys, geese, and duck on a 100-acre farm, with very little trouble or expense even at the low market price at which they have been recently selling. One of my reasons for saying so is that they require so little food until they are put up to fatten in the fall, although young ducks can be profitably forced for the early market even at three months old. One of my neighbors raised 100 turkeys last year on a 100-acre farm, and sold them for $1 each, and fed them in the fall for only about a month, so you see that paid well.

Wellington Co., Ont. MR. JAMES ANDERSON.

"Blood will tell" in fowls as in other animals, therefore it is wise to carefully select the layers of eggs to be set, and mate them with what will most probably sire the desired class of fowls.