

Over \$2.00 per Head Profit--Eggs 50c. per Dozen.

The first thing to consider is a good warm house, well lighted, and kept perfectly clean. The next is to procure some good stock of whichever breed you fancy. Pure-breds pay far better than scrubs. As to management of them to attain the best results, feed a warm mash at daylight in the morning, consisting of bran (half), shorts (quarter), chopped oats (quarter), and into this mix a pot of boiled vegetables--turnips, small potatoes, cabbage or any scraps you happen to have, which should be boiled the day before and warmed up in the morning before feeding. Don't give them all they will eat of this, or they will only stand around idle. Just feed a light breakfast, and about half an hour afterwards go round again, hang up troughs, and scatter a few handfuls of screenings or oats amongst the litter to start them to work. The best litter is oat straw; keep the floor covered with it to the depth of 4 to 6 inches, and scatter all grain in this to make them scratch. At noon I feed cabbage and turnips, and three times a week cut bone. For supper, I feed about 4 o'clock in afternoon, to give them time to scratch grain from amongst litter. Feed all the wheat or barley they will eat up clean, sending them to roost with a full crop.

The amount of feed required for a pen of fowls cannot be stated exactly, as no two breeds require the same amount. The best plan is for the attendant to handle his birds as he goes his last round at night. If he finds them getting too fat, cut down the morning mash and feed oats at night for a few days, when they will start laying again. The secret is, feed as much variety as possible; keep them working; scratching is their natural way of procuring their food. The more you can make them scratch the better results you will obtain. Keep sharp grit of some kind before them all the time. This is important, as fowls require grit to grind their food. Keep fowls free from vermin by supplying them with a dust bath placed in front of a window where the sun shines. Coal oil the roosts about once a week, and change litter in nest boxes. Follow these directions carefully and you will be rewarded with an abundant supply of eggs when prices are at the top notch. My pullets started laying on November 14th, and have kept it up steadily. I have great demand for fresh eggs at fifty cents a dozen; that is the time they pay. I had a clear profit of \$2.11 a head on my poultry last year, and had to buy everything. Where a farmer could raise his own grain, has all the straw he requires, can raise all vegetables, has milk, which is a complete feed in itself for poultry, should with all these advantages be able to make his poultry pay at least \$2.50 a head--one of the best paying branches on the farm.

GEORGE WOOD.

GARDEN AND ORCHARD.

Small Fruit Growing on the Farm.

BY B. GOTT.

(Continued from page 62.)

GOOSEBERRIES.

The gooseberry is raised either from seed or from layers, and is indigenous to this country. By studiously crossing it with some of the best old English sorts we have produced some fine strains of growth and quality. Our stock is now very good for almost every purpose. A good strong clayey loam seems to be the soil that suits it best, and yet in every case we have to be very careful of excessive growths of mildew. The ground should be well worked and kept clean. The young plants or bushes must be procured from a reliable nurseryman, and may be two years old and well rooted. They may be planted in separate open places or in rows four feet apart every way, and kept thoroughly clean and vigorous. The pruning may be done late in the fall or early spring, and consists of cutting or thinning the internal growth and cutting back the young shoots one-half yearly. Fungus and insects, especially in our climate and conditions, are very apt to attack them in their early growth. Against these a war must be kept up most determinately. For fungus a well-prepared kerosene emulsion must be used. It is made as follows: Take four quarts of kerosene oil, one-quarter pound of common bar soap, and two quarts of boiling water, and mix thoroughly. When using take one quart of this emulsion and mix with nine quarts of water, and apply. This is also the best application for roses. For insects use incessant vigilance and insecticides composed of powdered white hellebore in the proportion of one large tablespoonful to ten quarts of water.

Varieties.—*Triumph*—Fruit fine and large; very fruitful and hardy; no mildew. *Industry*—Fruit large, red, fine and good; plant hardy and very vigorous. *Whitesmith*—Large and fine; English sort of first quality. *Pearle*—New, most prolific bearer, and very fair quality. *Columbus*—Large and fine foliage; good and promising. *Downing*—Fruit large and whitish-green; good grower.

These are all good substantial sorts, and afford a good variety to suit all tastes and circumstances. If I were asked to select the two best, we could not go astray on *Pearle* and *Industry* for family uses.

CURRENTS.

Though I need not say much about currants, yet on account of their great value I must give them a place. They are not particular as to soils,

doing well in almost any soil if well drained. Procure from reliable sources good strong two-year-old young bushes, and plant them in the spring or fall, in a plot provided for them, four feet apart every way, and keep them thoroughly attended to. The pruning, general management, insect pests, etc., are all similar to those of the gooseberry and may be treated similarly. In color and quality of fruit they are of three classes, viz:

Red: *Prince Albert*—Very large, light red; bunch long; plant strong and fine. *Eclipse*—New, fine and good; very hardy and promising. *Fay's Prolific*—Very large in bunch and berry; plant very hardy. *Cherry*—A good old sort; very large fruit, and profitable. *Wilder*—New, large and fine fruit; very promising. *Red Cross*—New; one of the largest and finest of the new ones.

White: *Grape*—Very large and beautiful; best table sort out. *Dutch*—A very good old sort; fruit pure and fine. *Versaillaise*—New and good in bunch and berry.

Black: *African Queen*—New, very fine, large and promising. *Lee's Prolific*—Good standard sort and very productive. *Saunders*—New; fruit fine and good; very promising. *Prince of Wales*—One of the latest, and well reported.

These are all the most promising and profitable sorts of these various fruits at present offered to the public. Not that they include the whole list of new fruits so offered, for they are very numerous, but we could not recommend them all for the farmer's home garden. I greatly love the farmer's garden, and I hope that what little I have here tried to do to help and prosper it will be acceptable, and so a great service to our most beloved country and its people.

APIARY.

A Study in Bee-Keeping.

BY A. E. HOSHAL, LINCOLN CO., ONT.

Without considering the value of their products, and to obtain which usually is the principal if not the sole object for which bees are kept, there are other advantages to be derived by the agriculturist from their existence. Every farmer knows the degenerating effect among animals of what is called inbreeding, but how many there are who do not understand nor recognize this same principle in the vegetable kingdom, or perhaps sometimes even know that such a thing as the male and female principle exists in plant life at all, and that before a plant can conceive to bear seed it is necessary for the fecundation of its bloom to take place. Many if not most of our plants are perfect flowering; that is, their flowers each contain both stamens and pistil, and so are capable of fertilizing themselves, which is accomplished largely by the wind blowing or jarring the pollen from the anther on the stamens, and, assisted perhaps by gravitation, bringing it into contact with the pistil and thereby causing the plant, as it were, to conceive. This, however, it will be noticed, is the closest kind of inbreeding, and, as in the animal so in the vegetable kingdom, has a decidedly degenerating effect. True, the winds do, more or less, blow the pollen from one flower to another, but in doing so it is much more liable to be brought into contact with the pistil of the flower from which it is blown than with that of any other. In the visits of the bee and other honey-gathering insects, which in their search for honey carry the pollen on their bodies directly from one flower to another, we have not only a great help in the fertilization of the bloom on our plants, but also the most perfect distribution of pollen from one blossom to another which nature affords; and hence, also, in this is to be found the most potent factor which we have in preventing the inbreeding of our plants and its consequent degenerating effects.

In fruit-growing districts at times many and bitter are the complaints concerning bees destroying certain varieties of ripe fruit through their breaking, as is claimed, the skin of the fruit and sucking its juice. This to my mind is a decided mistake. That they do suck the juice from broken overripe or decaying fruit I admit, and in doing so they are acting as scavengers and not as destroyers; and just in proportion as they succeed in keeping the juice of decaying fruit from coming in contact with that which is sound do they help in its preservation. Upon this same principle we remove a decaying apple from the barrel, in order that those next to it may not become affected thereby. I do not mention this nor the part which bees perform in the fertilization of plant bloom so much as an inducement for any one to keep them as I do to place it against those prejudices with which occasionally they are beset, and to show that in obtaining a honey crop we are filling a niche in the economy of nature which is of benefit to every agriculturist, and in doing so we neither impoverish his soil nor rob him of that which is to him of any value.

For many bee-keeping has a kind of peculiar fascination which they either cannot or do not resist; others again are looking to it with a view of adopting it as a side issue to add a little to their income, as well as having in it a kind of outdoor recreation; while, again, others are considering the advisability of adopting it wholly from a dollar and cent point of view. For all these bee-keeping has its special advantages, and will yields its returns if intelligently pursued. However, let me remind all that among those who have tried modern systematic bee-keeping a very large percentage have failed. This may seem somewhat discouraging to those

who are contemplating giving it a trial. It will be found, however, that either one or more of the three following causes have been accountable generally for these failures: (1) The neglect of those concerned to study up and thoroughly post themselves concerning that which they have undertaken. (2) On account of the pressure of other work, neglecting to give the bees that attention which they require just at the time they need it. (3) Not getting started right.

I am asked, "Is Canada adapted to bee-keeping?" In reply I ask, "Is it adapted to dairying?" and you cite me to those who are successfully engaged in it. My reply is similar, and I cite you to those who are engaged in bee-keeping, and if they are intelligently prosecuting it, their record is my reply. Localities vary greatly, even within short distances, in the succession, character, and quantity of their flora. These all effect the details in the management of our bees, and also the amount of honey obtained; but the localities which will not ordinarily support with profit at least a limited number of colonies of bees, when rightly handled, I believe are few.

Successful honey-producing is the obtaining of our product at the least cost per pound, and not necessarily the obtaining of the largest yield per colony. This statement means about this: a given apicultural field or area (this probably would be a tract of country enclosed by a circle say five miles in diameter, the apiary being its center) will yield a certain amount of honey, how can it be gathered at the least cost per pound? Can it be done by placing in this field say 100 colonies of bees, and through expending a considerable amount of time and labor to have them do their best, obtaining from them say 100 lbs. per colony; or is it done by placing, instead, a greater number of colonies in this field, say 200, and through expending less time and labor upon them, obtaining but 40 or 50 lbs. per colony? From this illustration it is not clear that obtaining the largest possible yield per colony does not of necessity mean the production of honey at the least cost per pound.

QUESTIONS AND ANSWERS.

[In order to make this department as useful as possible, parties enclosing stamped envelopes will receive answers by mail, in cases where early replies appear to us advisable; all enquiries, when of general interest, will be published in next succeeding issue, if received at this office in sufficient time. Enquiries must in all cases attach their name and address in full, though not necessarily for publication.]

Legal.

SALE OF CATTLE.

FEEDER, Huron Co., Ont.—"I sold cattle to a drover, to be delivered at a station on a certain day, but on that day the roads were almost impassable on account of a snowstorm, and I did not deliver the cattle. Was I bound to deliver the cattle on that day, and am I liable for damages for the non-delivery?"

[As you contracted to deliver the cattle on a certain day, you were bound to deliver, if it were at all possible, and we think you could not successfully contend that it was impossible. It being difficult would not excuse you, and we suppose you could have taken them over on the previous day and kept them near the station ready for delivery. The purchaser being a drover, you were bound to consider that it was probably essential that the cattle were required for shipment on that day, and probably with other cattle, possibly just in time to make a connection with a certain railway or steamship. The drover is therefore entitled to damages to the extent of his actual loss occasioned by your default, and, of course, the loss might be very trifling or very considerable, according to the circumstances.]

TOWNSHIP ELECTION.

ELECTOR:—"1. A member of our Township Council is assessed as owner of a property rated in the last revised assessment roll at \$135.00. Is this sufficient property qualification to qualify him as a member of the Council? 2. Is a person enabled to attend and vote at council meetings, notwithstanding insufficient property qualification, after notice of proceedings to unsent? 3. What proceedings are necessary to have him unsent?"

[1. No. 2. Yes. 3. Application to the court by way of petition to have his election set aside; such proceedings to be commenced within six weeks after the election or within one month after the acceptance of office by the person elected.]

LINE FENCE.

WENTWORTH:—"A and B are owners of adjoining farms, the west part of the line fence being A's. Recently A sold a portion of the east part of his farm for school purposes, the part sold being alongside of B's part of the old line fence. The school agrees to keep up all its fences. What portion of the fence between the part of the land now owned by A and B should be kept up by each?"

[The fact that the school keeps up all its fences makes no difference as to the legal position of A and B as to their own present dividing fence, and each must, therefore, keep up his fair proportion; and such proportion, in the absence of special circumstances, would be one half each of all of the line fence lying west of the school property.]

HOLIDAYS:—"Would you please answer through your paper the following question: How many holidays can a farm hand have in a year?"

[Aside from any special contract such a servant cannot absolutely claim any holidays. He is bound on statutory holidays and Sundays to do the usual