

Soils and Crops

Address communications to Agronomist, 73 Adelaide St. West, Toronto.

The Growing Pullets, Their Care and Management.

Upon the care and management of the growing pullets, from the time that they leave the brooder house until they are put into laying quarters for the winter, will depend very largely their capacity for early winter egg production, and the consequent profit which can be realized from them. Each autumn, altogether too many underdeveloped pullets are put into winter quarters, with the result that they never develop thoroughly, and in consequence never make good winter layers.

The three essentials to proper care of the pullets at this stage are good range and shade, a well balanced ration, and comfortable housing.

It is impossible to place too much emphasis upon the necessity of free range for growing pullets, for without this the probability of their maturing before weather conditions make it necessary to put them into winter quarters, is very small. Ideal range is to be found in an orchard, or more especially when it has been seeded down with alfalfa, clover, or buckwheat. Failing this, however, almost any dry, well drained land may be utilized for this purpose, but the more growing green feed and shade that are available, the better. In the event of there being no shade whatever, artificial shade must be provided, either by means of canvas or sacks, or by putting up shelters of branches. If the quantity of growing green feed is limited, cut green feed must be supplied in large quantities, as this is a most economical feed for growing pullets. On farms where corn or sunflowers are grown for ensilage, it is an excellent plan to turn the pullets into it as soon as it is grown sufficiently to provide shelter. The backyard poultryman who raises only a limited number of pullets can profitably plant a small patch of Jerusalem artichokes, or sow either corn or sunflowers in the yard, and by so doing will provide not only shade for his young stock, but also a valuable source of green feed.

Like all growing stock, pullets consume large quantities of food, and in feeding them, nutritive value, palatability, and economy must be considered. From the age of two months, until they go into winter quarters, their self-feeding habits should be kept before them constantly. This mash should consist of equal parts by weight of cornmeal, bran, shorts, ground oats, and beef scrap. Better results will be obtained if in addition to this dry mash, a semi-wet mash consisting largely of chopped green feed be given twice a day, even when plenty of growing green feed is available. The chopped green feed for this mash may consist of mangel tops, alfalfa, clover, cabbage leaves, corn tops, sunflower tops, etc. Two parts by weight of this green feed should be mixed with one part of dry mash (composed of cornmeal, buckwheat meal, and barley meal in equal quantities), and the whole well mixed with half a part of milk, and fed in troughs. If any one of the three ingredients of this dry mash is not available, it may be replaced by the dry mash used in the hoppers.

In addition to the above mentioned feed, a hopper of good mixed grain and a plentiful supply of milk, if possible, should be kept constantly before them.

A dog is a poor garden fence. It is cheaper to build the regular kind.

While there are but three months of the year, November, December and January when the heavy 300-pound and heavier hog enjoys any prestige over his lighter rival of 180 to 225 pounds in regard to price. During those months they sell around ten to twenty cents per hundred above the lighter variety. The remaining nine months the heavy hog suffers a serious jolt, dropping from five to sixty-five cents below. It would appear, therefore, he was losing favor, too, as feeders are learning that it requires more corn to produce the third hundred than either of the first two.

I considered the method followed by my father an ideal one. Our hogs were farrowed in April. They ran at large in the orchard, where they grew rangy upon the roughage that they were able to salvage for themselves. Wearing them in season they reached the fattening age at corn husking time. It was my father's practice to husk corn by hand. In unloading at the crib he always sorted the corn by hand, throwing the large sound ears to the crib, leaving the small and the very choice ears for seed then driving over to the hoghouse where he scooped the soft and mucky corn overhead to be fed to the hogs.

While this method consumes a little extra time, it fills the crib with sound, uniform ears, free from silk or husks, to be ground into feed during the winter months.

Before the low grade corn had been consumed and when the husky porkers had reached a weight of approximately 200 pounds, they were loaded into the wagons, taken to the station and shipped. Of all farming operations, that resembled the finding of buried treasure more than anything else.

We feed the remainder of the soft corn to the sows and when that is

gone draw upon the crib corn for the remainder of the winter and spring.

The late-hatched cockerels will not bring high enough prices to make them very profitable, but as capons they will make a very desirable size for the season when capons are in demand from New Year on until broilers come again. You can get a good price for your late cockerels thus and at the same time have a much greater total product. While I think it pays to sell the very early cockerels as broilers when the price is high, it is a lot of trouble to rear them while small only to have two pounds each to sell. With the late cockerels they may be kept until, for the same care as the little chicks, we get from eight to twelve pounds to sell.

The new implements for caponing are much better than the old sets and the work can be done easier and with more certainty. Directions come with the sets and the operation is not difficult nor very cruel.

July Garden Planting.

There are some varieties of garden truck which must have the entire season in which to mature. These will not be ready for use until autumn, but the early planted, early maturing garden truck, or those which are fit for use before their maturity are now ready for use and will soon be gone. It is now time to plant more of these for fall and winter use.

Winter cabbage plants should be set out during the first part of July. If you have not grown your own plants, be sure and purchase plants of the winter variety, as the keeping qualities of earlier strains are not good.

String beans, peas, beets and sweet corn are all fit for table use before they reach their maturity. A planting of these now will insure a good supply for table use in the fall. Probably there is more Golden Bantam sweet corn seed used for July plantings than any other kind. There are several varieties of string beans which may be planted as late as July, as nearly all kinds are fit for use in six or seven weeks from date of planting. Beets, too, will be fit for use in about the same length of time as the string beans, therefore there are many varieties of them which may be sown in July, but many gardeners believe the long and half-long kinds to be the best to sow for fall and winter use. These varieties may be sown even as late as the very last of July or first of August.

Don't forget a patch of turnips. They are good as fertilizers, good for the stock and nice for the table. With the exception of one or two of the very early sorts, almost any variety will do when sown in July.

In July, too, should be sown the winter radish. This, as its name implies, is the radish which keeps for winter use. There are a number of varieties of these and they may be had in three colors—rose color, white and black.

Swiss chard, kale, kohlrabi, corn salad, endive and parsley are some of the other things we may plant in July in our garden. These are perhaps not as commonly grown as some of the other things in our garden, but you will want them again, once you become acquainted with them. Swiss chard and kale are used as greens while young and tender. Later the midribs of the Swiss chard are cooked like asparagus or made into pickles. Corn salad, endive and parsley are used in salads and in garnishing dishes. Parsley is also often used in soups. Kohlrabi must be used while young and tender. Later the bulbs become tough and woody. These bulbs, while young and tender, are sliced and cooked like turnips and are very appetizing.

Brockville, Ont.—A new Canadian record for mature cows was made by Queen Beulah, a Holstein cow, owned by Dr. H. G. Clark of Brockville, which in 305 days gave 957½ pounds of butter from 21,284 pounds of milk.

The Prevention of Swarming.

In an experiment looking for the prevention of swarming, conducted by the Bee division of the Dominion Experimental Farms, no entirely successful method of manipulation was found when the old queen was left in the hive. Previous investigations had indicated that the method of dequeening and requeening at the commencement of the main honey flow was the most promising. In addition to the prevention of swarming, the greater productivity of the young queen supplies one of the essential factors for successful wintering, namely, a strong colony consisting mainly of young bees. It also makes the colony more valuable the following year. In the experiment spoken of, the Dominion Apiarist reports that the colonies were examined every eight, nine or ten days after the commencement of the honey flow from clover and those found to contain larvae in queen cells (a practically sure sign that the colony will swarm) were treated by removing the queen and destroying all occupied queen cells. At the next examination, nine days later, the occupied queen cells were again destroyed and a young queen of select parentage introduced to each treated colony. It was revealed that a nine or ten-day period between the removal of the queen and the second destruction of the queen cells was better than an eight-day period, as the bees occasionally built cells over drone larvae after the eight days, while if left for eleven days a swarm might issue. This method required but two manipulations to prevent swarming and at the same time requeens the apiary.

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Poultry

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Preparing Land for Root Crops.

The land on which roots are to be grown should be free from excessive moisture and should be in a good state of fertility. For this reason it is best to follow a clover crop. Two methods of preparing land for root crops have been followed at the Experimental Farm, Nappan, N.S. The one that has given the best results is to top-dress with barn-yard manure on the clover aftermath at the rate of 15 tons-per acre on a three-year rotation. Plow the clover-math under with the manure to a depth of from four to five inches. Top work with double cut-away disc-harrow the remainder of the season. In the spring, as soon as the land is fit to work, give it one cut with the cut-away harrow to loosen the soil, then cross-plow and follow again with the cut-away two or three times or until satisfied that the manure is thoroughly mixed with the soil and that a good seed bed is prepared. Put the smoothing harrow over once to level the land and make it easier for drilling.

The second method is similar to the first except in the time of applying the manure and is used when manure is not available in early autumn. Proceed with the preparation of the soil as directed in the first method and apply the manure either during the winter or the early spring if the fields are level. If the fields are sloping or the soil is of a gravelly, open or porous nature do not apply the manure in the early fall or winter, but just before cross-plowing in the spring, otherwise part of its value may leach away.

In the first method the big advantage is that the manure is applied previous to the rush of work in the spring. Furthermore, it is incorporated with the soil more thoroughly than in the second method, and is worked up toward the surface in the spring instead of being worked down, as is the case in the second method. As root crops, such as turnips, swedes and potatoes, are shallow feeders, this is an advantage, as the plant food is more available for the crop. In the case of mangels it is not so essential that the manure be near the surface, as they are deep feeders.

In preparing land for root crops it is necessary to keep in mind the requirements of the crop being sown as well as the requirements of the soil on which the crop is being sown. Turnips, turnips and swedes are able to supply themselves with potash when grown on fertile soil, but they cannot appropriate the combined phosphoric acid of the soil. Therefore, on exhausted soils the use of phosphoric manure is essential in order to get a full crop; superphosphate or basic slag is recommended and should be applied at the rate of three hundred to four hundred pounds of superphosphate or five hundred to six hundred pounds of basic slag per acre, the amount depending upon the fertility of the soil. Mangels, on the other hand, have a greater capacity for drawing food from the soil, including nitrogen, potash and phosphoric acid, consequently, an application of nitrate of soda, say two hundred pounds to the acre, in addition to the barn-yard manure, will, generally speaking, give a full crop.

To insure a maximum root crop follow clover; till the soil thoroughly to incorporate the manure well with the soil; give a light application of nitrate of soda, superphosphate or basic slag; cultivate well during the season to conserve the moisture and to prevent growth of weeds.—W. W. Baird, Supt. Dominion Experimental Farm, Nappan, N.S.

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The Gentle Art of Vacationing

By Katherine Gregory

There are many times a year when every normal human creature (and now and then a creature not so human) longs for a change; when routine becomes insufferably just because it is routine, and in spite of the apostle we are distinctly weary in well-doing and ill-doing, too. It is not merely the "skidding" instinct, nor yet the "sweet-do-nothing" languor that the vacation taken, many a bill of doctor or psycho-analyst might be forestalled. If one is very wise, or very wealthy, one may get the habit of the winter or early spring holiday. But there is at least one time in the twelve months when every one feels like claiming a vacation, and like planning it out with a clear and cheerful conscience—and that time is here.

Few things are funnier or more suggestive than the reactions of various people to their summer outings. There are those who never fail to make a mistake. Perhaps they miss the essential train or boat at the outset—or else they find that their chosen hotel has changed management—or that their traveling companion has suddenly developed into impossibility. Sometimes they spend all their money the first week and return home in humiliating haste. Sometimes they are afraid to spend their money, and never really break loose at all. The result is the same—comedy or tragedy, their vacation is a failure. And humorously or pathetically, they bewail it all the autumn.

Quite as trying are the people whose vacations are invariably a success. Having mapped out the holiday themselves, they feel honor-bound (or isn't it pride-bound?) never to admit disappointment. These are they who smile glumly as they describe a small mountain resort where they have passed two entire weeks of rain, or a fishing trip where (as we learn from others in the party) not a single minnow was sighted, and even the laurel had disappeared along the banks. Alas and alack! these are also they upon whose advice we ourselves were once deluded into trying some marvelous economical seaside hotel, where we soon discovered the mosquitoes had found a happy hunting ground, and the butter and eggs (unlike Caesar's wife) were not quite above suspicion. We recognize these professional optimists after a few seasons, and when we see them sauntering along Main Street in September we surreptitiously slip around the nearest corner. For, after all, there is nothing more irritating than habitual discontent!

Freedom from the Familiar.

Most of us look back upon a few radiant vacations, with many dull ones in between. Most of us are frankly eager to find some recipe for crowding as much cheer and as little disenchantment as possible into the space at our disposal. And obviously, there must be a different recipe for each type of person. For the first requisite of a vacation is that it shall vacate—that it shall free us (does not the word mean just that?) from the too familiar scenes and routine of life. If it does not do this it is not quite a vacation, although it may have all the

Marketing Dairy Products.

The time has arrived when the products of the dairy farm must be merchandised. While the conclusions of our scientists have clearly demonstrated the absolute need of an abundance of milk, of milk products, in the human diet, the fact still remains that milk substitutes are still being distributed where the products of the dairy should be sold.

There is at least one reason for this. These substitute products are brought to the attention of the public in an attractive manner. The sanitary conditions under which they are manufactured are emphasized. The neat package in which they are sold is visualized on billboards and the printed page. The best artists are employed to bring together every device of form and color in order to make the public believe that here is a class of products that should be in every respectable home.

While the dairyman has the advantage of the scientist's testimony, he has failed to use this testimony in making his appeal to those who buy the product. Consequently our dairy markets are suffering. The present dairy-market situation is the result, not of an over-supply so much as it is an under-demand. The Canadian dairyman can help his cause much through the most insistent preaching of the virtues of his product.

Washing Day in Iceland.

Washing is hard and trying work except, perhaps, to the Icelanders, who clean their clothes in what is really a natural laundry.

About a mile and a half from Reykjavik, the capital, is a stream. First it is warm and then very hot water. It is always ready for use. A portion of this boiling stream has been enclosed by iron rails in such a way as to form separate receptacles, through which the hot water flows. Into these the women thrust their clothes, where they are boiled and cleaned. Next by are sheds where the garments are dried and ironed.

Why Not Teachers of the Player-Piano?

Now that the player-piano has come to be regarded as one of the foremost instruments in the spreading of the gospel of music, and now that it can count amongst its devotees in Canada thousands and thousands of music lovers, is it not time that something was done in the way of instructing students in the proper playing of the player? Of course it is realized that to play the player-piano acceptably, not the same amount of tuition and effort on the pupil's part is necessary as in the case of an ordinary piano. Yet, to get the most out of the player, a student requires instruction. And to give the proper instruction, qualified teachers are necessary.

The old idea that all one had to do to play a player was to sit down, insert the roll and pump has largely disappeared, and it is seen now that to give a reasonably good interpretation of a number, one must not only understand the various devices with which the player piano is equipped, but also know something of musical terms, musical appreciation and the art of music generally.

Ernest Newman, the well-known writer on musical topics, thinks that teachers of the player-piano are necessary to that instrument's welfare. "It may be a little exaggeration to say," he says, "as I sometimes say in self-exculpation, when I have given a particularly bad performance on the instrument, that it takes as long to acquire a first-rate piano player technique as it does to acquire a first-rate hand technique; but it is not so very much of an exaggeration. You need only a very slight acquaintance with the piano-player to realize that it is anything but a mechanical instrument in the sense that you have only to set it going and it will do all the work for you. If it were a machine in that sense it would be the same under everyone's hands, and under the same performer's hands to-day, to-morrow, and the day after. But we all know that it behaves differently with different people and with the same person from day to day or from hour to hour. Each particular instrument has a personality of its own—a personality as variable as that of the ordinary human being. That is at once its attraction and its charm. It is annoying to have it behave so capriciously; but it behaves capriciously only because it can do what is ostensibly the same thing in a hundred different ways; and the possibility of it being made to do it in the one way that is right. A machine it undoubtedly is, to a large extent; but it is a most sensitive machine, and its sensitiveness can be controlled to beautiful uses."

The Guinea Fowls.

The Guinea hen is a good layer, but on account of the wild, gamy flavor, the eggs do not have an extensive sale for table use. However, by turning the eggs into broilers or roasters, a considerable profit will be derived. The flesh is the nearest substitute we have for wild game.

The laying season starts in early April and continues until October. One hen will lay as many as 120 eggs in a season. In the early part of the season it is not advisable to let the Guinea hen hatch a brood, as she is of too restless a nature and will not give her young the proper attention; but after the first of July, on account of the warm weather, she will be more quiet and can be safely trusted with a brood.

It requires four weeks for the eggs to hatch. The hen always hides her nest in some very obscure place. As she comes off the nest she gives a shrill cry, and by that the hiding place can be discovered. All the hens of a flock are likely to lay in the same nest. In taking away the eggs they should not be touched with the hands, for if the hen discovers that the eggs have been touched she will desert the nest and hunt another place. If the eggs are removed with a stick she will not leave the nest, even though the eggs are taken out nearly every day.

It is claimed that a cross of the Pearl and White Guineas will produce a carcass closely resembling that of the English grouse. If rightly cooked, the meat of even an old bird will be tender and delicious, the young bird is unsurpassed as a broiler or frier. The dressed Guinea has a round, plump body, good-sized breast and small bones.

Guineas will pair if the sexes are equal. They generally lay between ten o'clock in the morning and two o'clock in the afternoon.

Until well feathered, young Guineas are delicate and tender. It is not advisable to hatch before June. The Guinea cock-bird cares as much for the young as does the hen, and guards them during the day and hovers them at night.

The male bird is larger than the female, has larger wattles and helmet, is more aggressive, and has a different call. The hen makes a noise sounding like "cuckoo, cuckoo, cuckoo," while the male cries "Tink, tink." The cry of the Guinea is a warning to the rest of the poultry, and they at once hide until the alarm ceases.

Guineas do not scratch like other fowls, and therefore are safe to have in the garden. They should be given their freedom, as they do not thrive in confinement. The Guinea is of a roving disposition, and one of the best-known destroyers of insects.

THE CHILDREN'S HOUR

Choosing Your Life Work.

Our life work should produce the maximum of two things: first, of personal enjoyment and second, of service to the community. Every boy before he makes a choice of vocation should clearly realize this. The wise selection of business, profession, trade or occupation to which his life is to be devoted, and the development of full efficiency in the chosen field, are matters of deepest moment to him and to the public.

The unfortunate thing in the past has been that so many boys have not made a definite choice of a vocation, but have taken the first "job" that offered and just drifted. Then in after years have found themselves burdened with a yoke. The yoke of uncongenial work, of distasteful environment, of inefficiency, of the knowledge that they are only half the man they should be either in personal development or public service. How may the boy avoid being burdened with a yoke in later years?

In the wise choice of a vocation there are three broad factors: (1) a clear understanding of himself, his aptitudes, abilities, ambitions, interests, resources, limitations and their causes; (2) a knowledge of the requirements and conditions of success, advantages, and disadvantages, compensations, opportunities and prospects in the different lines of work; (3) true reasoning on the relations of these two groups of facts.

Exercise care when leading a horse through a low doorway. A blow on the top of his head will frequently cause poll evil. This ailment is very difficult to cure, and usually requires veterinary attention.

Work that is not finished is not work at all; it is merely a blotch, an abortion.