

the start, while others say, wait for two years and then cut down. Both parties agree that in after years clipping should be frequent. A third party, and practically this seems to include about all the growers, allow their hedges to reach three or four feet in height and then begin to shorten in. The latter, I believe, is not the proper plan, but if majorities are always right I must be mistaken. It is a strange fact that, after incurring all the trouble and expense of starting a hedge, most persons make a failure by neglecting to shorten in properly. Then it is in order to blame the nurseryman, or the particular kinds of plants, for the failure. My own plan is to shear several times during the season, and thus secure a hedge at all times ornamental, and eventually useful as well.

Planting Walnuts.

Black walnuts or acorns should be placed in moist sand as soon as gathered, and allowed to freeze during the winter. In the spring they may be planted in rows three or four feet apart. The black walnuts may be transplanted, as they crowd each other. The acorns, however, are transplanted with difficulty. The oak grows much slower than the walnut, and therefore you would lose your labor if planted together. Therefore, plant them separately by all means. Walnuts should be planted about three or four inches deep. Acorns one to two inches deep. Plant in exact lines for ease in cultivation.

Adulteration of Honey and Sugar.

We have frequently urged the manufacture of sugar, from the products of our own soil, as a matter of economy. Why should we pay to other people our hard-earned cash for commodities that we can profitably grow and manufacture for ourselves? Our own farmers, laborers and manufacturers have the first claim on us for encouragement of their industry and any profit to be made. There are yet other reasons, and powerful ones, in favor of our growing and making our own sugar and honey. For our health's sake we should see to it that, as far as in our power, all the food that our families use be pure, unadulterated, and free especially from all admixtures which are criminal to health.

We confess we do object when we buy sugar to get, instead of the pure article, a mixture of glucose, copperas, sucrate of lime, and acid—dissolved tin, with some sugar added just to disguise the stuff; and such is the refined sugar manufactured in the United States and sold wholesale to us Canucks. The syrup, even the golden syrup, is a similar compound.

This is not all. G. A. Galbraith, in the *Country Gentleman*, complaining of honey adulteration with glucose, says:

"Unless this practice of adulterating honey with glucose is stopped—unless we have the strong arm of legislation to protect us—I fear the days of profitable bee-keeping are over, and our market both in Europe and America will ultimately be ruined. Glucose is the chief article used in adulterating honey. Glucose is manufactured from corn-starch by boiling the starch with sulphurous acid, afterwards adding lime; the glucose always retaining more or less of these, and sometimes copperas and sucrate of lime are found in it. The results of Kedzie's analysis proved table syrups to be made of glucose, one of the fifteen containing 141 grains of sulphuric acid (oil of vitriol) and 724 grains of lime to the gallon, and these had caused serious sickness in a whole family."

Adulterated!—causing serious sickness!—containing a large portion of oil of vitriol! Such is the character of the sugar and syrup that we purchase for daily use. What remedy? A very simple one. Let us Canadians make our own sugar—sorghum, beet-root, be it what we find most suitable to our soil and climate; but let us have Canadian-grown and Canadian-refined sugar, and we will at the least know what our food is.

Beware of Summer Drought.

The great difference between the climates of Britain and this continent necessitates a corresponding difference between the times of sowing and planting in the old country and the new. Our season of sowing must be later, and our season for the growing and maturing of our farm crops is shorter, and the result of this is lighter crops of grass and cereals. And not only are there fewer measured bushels of grain to the acre, but also there are fewer pounds of grain to the bushel here; there is more husk and less meal or flour. We can do somewhat to remedy the effect of these unfavorable circumstances, and thereby add to the produce of our farms in grain and fodder. A drought in summer, especially an early drought, is a great cause of light crops. The tender grass and grain plants are deprived of that nourishment which they so much need; and they grow weak, stunted, without sufficient vital strength to bring forth abundant crops. Now, though it is out of our power to prevent a drought, cannot we do something to mitigate its injurious effects? A very efficient means to prevent its baleful results on our crops is to get the start of it by sowing as early in spring as the state of the weather and the condition of the soil warrant us in doing—so early that before the dry season produces its injurious effects the ground will be shaded by the growing crops, protected from the wilting, scorching rays of the sun, the foliage of the crops already being pretty well grown. Springwheat and oats are, as a rule, most productive, and yield the heaviest grain. To this rule there are exceptions some years, but they are only exceptional seasons. In order to attain this earlier growth, and a partial immunity from the effects of the drought, early sowing, though profitable, is not by itself enough; to obtain the full benefits of early sowing the ground must be well prepared, and the seed sown when the seed bed is as dry and warm as possible; and water-cuts opened when necessary, so that no stagnant water be permitted to remain, and scald and kill or injure the seed or growing plant. If the land be at all heavy or tenacious it would be much improved by fall plowing. The mellow friable condition of the seed bed has a great effect on the germination and growth of cereals and grasses, and we need scarcely add that for early growth and good crops the soil must be in "good heat" as well as mellow. By these means—with the warmth and fertility of the soil, and the proper cultivation, and the early sowing, an early vigorous growth and seasonable covering of the soil with the shade of a luxuriant foliage may reasonably be expected. And when the ground is well protected from the drought, the cereal plants will thrive uninterruptedly till matured. We must not lose sight of the fact that, whether we sow early or late, a rich and well prepared soil is essential to the growing of a good crop. How to keep our lands up to a remunerative point of fertility is one of the most important points for our consideration. While some fields and some farms produce from twenty to twenty-five bushels per acre, other farms as well situated produce but half that quantity. For early sown grain a top dressing of land plaster has been found very beneficial. It nourishes the tender plant and promotes more vigorous growth. Even if land plaster be not a fertilizer, it at least has the property of fixing the ammonia from the atmosphere, and thereby conveying the nourishment so much needed by all plants in early growing. In fruit growing, as in all branches of farm and garden husbandry, farmers should always endeavor to produce crops of the very first quality. They, and they only, will pay for the labor and expense attending their growing and leave a fair profit. The receipts for products from portions of land of equal natural fertility is not unfrequently as high as twenty-five or even fifty per cent.

Poultry.

Hatching Chickens Early.

Sitting hens are certainly annoying, where this desire is nearly constant, yet I have seen the time when the first broodiness of a hen was hailed with great joy. On some occasions, especially with amateurs, early chickens are desirable, and that is when the birds are intended for exhibition. Where eggs alone are the desideratum, a constant broodiness among the hens is intolerable. To avoid this, the non-sitters should be cultivated. It is really trying, when eggs are at 30 or 35 cents a dozen, to find the majority of your hens down with the sitting fever at midwinter. Yet the larger breeds will do it, no matter how great the emergency. Broodiness is contagious, and where once introduced into a flock of Brahmas, it is likely to affect all alike. The infusion of Leghorn blood remedies this evil to a great extent, and increases the production of that of eggs. When sitters are required for early chicks, the Brahma mother, by all odds, is to be preferred, not only from the fact that she is a steady and persistent sitter, but for many other good qualities that she possesses above all others. According to my experience the light Brahma is the more tractable, being more quiet. The Partridge Cochins are too sluggish and indifferent for a good sitter. She breaks her eggs and when her chicks hatch is liable to kill them by the careless, clumsy manner in which she governs her movements.

For very early chickens, an Asiatic mother is to be preferred before all others, as her body is larger and warmer (I never found artificial heat conducive to health and strength) than the smaller bird, and this bodily warmth is highly necessary at all seasons of the year. She possesses an ample coat of feathers, which retains the warmth, and is calculated to accommodate and keep a large brood comfortable. The mother that broods them makes all the difference with the chicken, not only at hatching time, but ever after. Where early sitters are required, allow the Brahma a separate apartment from the non-sitter, and there will be found little difficulty when the eggs are to be set. Where the non-sitters are allowed to associate with them they soon break up any tendency to brooding, especially in cold weather. The smaller breeds generally have the ascendancy and rule the roost, if not the nest. The Brahmas are quiet low-minded fowls, and a roost two inches from the ground suits their taste just as well as one ten feet high. The sitting hen should, when it can be done, always have her nest on the ground, that she may walk on and off, and not be compelled to use her wings in going to and from the nest. A regular sitter, that means business, seldom leaves the nest oftener than once in two or three days.

Early Hatched Pullets

Of last year, are almost all laying now, and during this month many of the young fowls of the Asiatics will lay out their first litters and become broody. It is frequently the case that just when you have plenty of eggs, and wish to sit them, the last year's pullets are the only fowls which are broody. Among the larger breeds the fluff is already pretty well developed, and, to all appearance, the birds are perfectly capable of covering a clutch of eggs in good shape and giving them a fair chance for hatching. But it will not, for all its fair appearance, be a good plan to use these youngsters as sitters. The fluff, which appears well developed, lacks the closeness and consequent warmth which another year will bring, and the pullets are not large enough to cover more than eight or nine eggs properly, and, besides, they are apt to be inconstant, lacking the steadiness of old hens. Therefore, if possible, you should choose the latter for incubating purposes. —[Poultry World.]

It is convenient to have two hens hatching at the same time, since if accidents happen the two broods may be united; again, on the hatching day it frequently occurs that, to prevent the newly-born chicks being crushed by eggs that are behind time, it is desirable to give all that are hatched to one hen, while the other takes charge of the eggs alone. Not only does this give security to the chicks, who run some hazard of being crushed if they are kept for any prolonged time under the mother, but the unhatched eggs also stand a far better chance; for, when a hen finds chickens under her she sits higher from the eggs, and less warmth is afforded them at the time they require most.