

low. It will be found profitable after planting an orchard at thirty-three feet each way to set a tree in the centre of each square formed by four trees. These will yield enough fruit to pay for themselves many times before they will become too crowded, and when that time arrives they can be removed.

3. BEST SIX VARIETIES OF WINTER APPLES FOR A DISTANT MARKET.—The first on the list, all things considered, is the *Golden Russet*, next is the *Baldwin*, then the *Sawyer Pomme Grise* and *Roxbury Russet*. Perhaps some of our readers who have had experience in shipping apples can supply the other two.

4. BEST SIX VARIETIES OF PEARS FOR FALL MARKETING.—First of all is the *Bartlett*, which is probably the most profitable of them all; then the *Durrie Bosc*, *Beurre Clairgeau*, *Beurre d'Anjou*, *Duchesse d'Angoulême*, if they do well in your locality, and *Louise Bonne de Jersey*.

5. BEST FOUR VARIETIES OF WINTER PEARS FOR PACKING AND SHIPPING.—We suggest the *Lawrence* and *Winter Nelis* for trial, but have very little confidence in the pecuniary advantages to be derived from growing and marketing winter pears.

6. BEST MATERIAL FOR A FARM HEDGE.—This is yet an open question. Many are now giving the *Osage Orange* a trial. We believe it will prove a failure. Others are trying the *English Hawthorn*. In some parts of Ontario this has done well. Some are making a trial of the *Berberis*. This plant has many good qualities for a hedge. It is very hardy, it is not eaten by mice nor by cattle, it grows thicker with age, and flourishes on every soil.]

How to Grow a Thoroughly Successful Lettuce.

The first thing to consider in preparing to sow a crop of this much esteemed esculent is the manure, it should be good, and there should be plenty of it. The best is well decomposed frame manure; or any such as well rotted as that is at the end of nine or twelve months or so. The winter crop—that sown in August or September—does not require so much manure as the summer crops; a very rich condition of the soil for sowings made at those times leads to much damping and loss of plants during the winter. In wet districts and ill-drained soil, there is always more or less destruction of crop from too much damp, so that anything tending to that evil must be avoided as far as possible, and every means that may be employed to prevent it adopted. The best way to prevent damping is to plant the winter crops in frames, or hand-glasses; but as these are not always available, other ways should be considered and adopted according to convenience. The driest situation should be chosen for them to water in a border at the base of a wall with a south or south-west aspect being preferable to any other. But if shelter of this description is not obtainable, the best plan is to throw the ground into ridges and to plant the lettuce on the higher parts, while the lower or wetter parts may be occupied with cabbage for the earliest crop. If the ridges are three feet wide let the centre or highest part be raised six inches above the lowest part, the declivity thus obtained will be sufficient to throw the rain off the side towards the base and so keep the young plants comfortably dry about the roots. They can be protected when planted in this way easily by throwing a little litter over them when the weather is frosty or by arching a few boughs over the ridges when there is a likelihood of a heavy fall of snow. Planted thickly, say a few inches apart, in this manner a large number may be wintered in little space, the superfluous ones may be thinned out and planted elsewhere. But the difficulty in wintering lettuce safely is as nothing compared with the difficulty in producing a crop fit to eat during the hot summer months. Sowings in June and July should be made in a shady spot, where the fierce mid-day sun may not light directly. If the weather is dry at the time of sowing and afterwards, germination will be facilitated if the ground is lightly strewn over with dry litter and then watered. Deep digging and plenty of manure are the best preparatives for the crop, and plenty of stirring with the hoe afterwards conduces to its healthy, steady development. The plants should be tied up some time before they approach a size fit for use, in order to keep the inner leaves succulent and tender.—*N. B. Agriculturist*.

The Lawn and Home Grounds.

Those of our readers who have a lawn shaded with trees about their house—and those who have not should have—ought not to neglect raking away the leaves and other trash that may have accumulated during the winter. Those who have neglected to keep the grass cut short in the fall, will find their spring raking an onerous job. Besides the greater difficulty in getting together the leaves and other trash that are sure to accumulate, there is the added objection that the greenness of the grass will not show until it has acquired sufficient height to overtop the dead foliage remaining.

When the lawn is of considerable extent, it will pay to buy a one-horse lawn mower, for with this, the lawn can easily be gone over early in the morning while yet the dew is on. If small, the hand machine will answer as well. When the lawn is of large extent, those portions remote from the house may be mown with an ordinary mowing machine if set to cut close. This cutting should be done at not longer intervals than two weeks. In raking up the accumulated trash of winter, it is best performed when the leaves, &c., are somewhat damp; at all events it should be done when the weather is mild.

It used to be considered necessary, in order to have a good lawn, that the surface should be kept sheared close to the earth, but, under this system, it is impossible to keep a permanent turf unless there are facilities for artificial waterings. From one to two inches is close enough to mow, and this can be easily accomplished with any of the ordinary mowing machines where the surface is large enough and open enough to allow its work. This may easily be accomplished on a lawn of an acre in extent, if not too much occupied with shrubbery and trees.

One of the great mistakes made in ornamenting both suburban and farm houses, is the planting of an excessive number of trees, which, as they acquire age, not only shut out the view entirely, but also often render the place absolutely unhealthy. Trees on the lawn should be used only for ornament and necessary shade. Shrubbery may be planted at the turns of the roadways and walks, to increase and heighten the effect, but, in doing all this, a full view of the house and other salient points of the country beyond should not be obstructed. To secure these requisites of light and shade, there should be ample space between the trees and clumps for air and sunlight. If this be attended to, each tree or clump will have ample space for development, and thus not only create a grateful shade, but enhance the beauty of the surroundings. Therefore, if you have planted too thickly, see to it that the thinning be done in such season as to secure ample foliage, and, at the same time, a fair view beyond. If it takes some study, it will be amply repaid.—*Western Rural*.

Knots on Cherry and Plum Trees.

It often happens that trees, for years healthy, will become covered with unsightly knots, which in many cases injure and often wholly destroy the tree. It was at one time supposed that this was the work of an insect, many believing that the curculio, which so fatally attacks the plum and other stone fruits, was the insect which caused the appearances. The young insect has indeed been found in them, but this came about by the curculio laying its eggs in the soft knot when young, just as it deposits it in the fruit. It is now known that the protuberances are caused by fungoid action; how the fungus works is not known. Some believe that the seeds—spores they are scientifically called—are taken into the roots with the moisture from the soil, and that, drawn into the plant system, they vegetate and develop. Others believe the spores are taken in through the bark, and grow in that way. It would be worth a good deal to know this positively, as if the latter were true, one might prevent the disease by lime and sulphur washes over the stems, as this wash is usually fatal to fungi, without injuring the bark of an ordinary tree.

Not being sure that the disease is caused in that way, no one takes the trouble to try it as a preventive on any large scale. We have seen trees in farm gardens, among the Germans of Southern and Central Pennsylvania whitewashed every year, which seemed very healthy and free from the knot, but of course one cannot say that it was on this account that disease was prevented. It is certain that no bad results came from the practice.

We believe that after a tree becomes attacked with the knot the best practice is to cut them off and burn them as fast as they appear, and while still young. We have seen trees—old trees—so thoroughly disfigured by knots that the owner thought nothing could be done but cut them down for firewood—thoroughly renovated by a severe pruning—cutting

the tree all in heavily to the main branches. The young growth which followed was clean and free from knots for years afterwards; and no one would know how near the tree came being sent to the wood pile.—*Maryland Farmer*.

A Bit of Rock-Work.

There is many a shady nook and corner in the vicinity of country homes which might be beautified with very little expense—northern exposures, where the sun seldom shines, and which are left bleak and bare because grass and flowers refuse to grow. Any time through the winter harness the old horse and start for the woods to hunt up suitable material for what our English friends term “a pleasing bit of rock-work.” An unusually rough stone, all over angles and uncouth projections, is a prize; let such form a load to begin with. Next collect a supply of the unctuous leaf-mold which has lain buried beneath its covering for many years, until it has become as dark and as firm as the most fastidious plant can require. These things, with the addition of some good sharp sand from the creek's margin, supply the ground-work for the structure. In arranging the stones upon the heap of soil do not attempt any mathematical precision; endeavor to imitate some shelving mass of rock, such as may be found in nature; the wilder and more irregular in outline the more effective and appropriate it will prove. With the advent of spring, repair to the woods again, and wherever little curling fronds of the ferns are just peeping above the leaves, with the aid of a strong trowel, carefully pry out a good ball of earth, roots and all, and transfer them to their artificial home. There are also many other pretty and modest native plants which will thrive luxuriantly amid just such surroundings; watch for these during summer and mark them, so that when the dormant season arrives they may be removed with safety. An occasional trailing vine, clambering over and festooning the surrounding shrubs, will add a dainty grace to the hitherto unattractive corner. The appropriateness of rockeries has been frequently called into question, but this, we presume, is in allusion to the practice of placing them upon the open, well-kept lawn—a custom which would seem to be in direct opposition to all the acknowledged rules of taste, but in such out-of-the-way nooks as we have suggested, nothing could be more appropriate or attractive.—*N. Y. Tribune*.

Budding Lemon Trees.

Lemon trees may be whip or splice grafted at any time before the active circulation of the sap. If budded it should be when the wood of the buds is sufficiently hard for working. This will depend upon the manner in which the tree has been wintered.

Lemon trees will of course bear fruit without being grafted or budded, but the operation of grafting or budding will hasten the fruiting just as it does that of any other fruit. The age at which the trees will fruit without budding is a more difficult question to answer. It might be ten or even fifteen years, or fruit might be produced in five or six years. As you cannot expect to want a lemon or orange tree in the North except for ornament, we should advise you to buy a tree already budded of some one of the commercial greenhouse men, although you can undoubtedly get grafts or buds of them if you prefer to work the trees yourself.

AGE OF TREES.—Mr. Nailor requests me to inform him whether I had ever counted the rings in the growth of timbers, in order to test whether each ring represents only a year's growth. I most cordially comply with this request, and will say that I have, and am satisfied of its correctness. But in order to be more fully assured (as I am about to make a record of my faith), I went to my grove this afternoon, where I had ordered some trees cut, and first counted a chestnut stump cut in 1872, and found by counting the heart stem (a mere pipe stem) as one year, the rings counted 31, and by adding the bark would make 32, which would correspond with the age of the tree. I then counted two trees cut to-day, which numbered 33, adding the bark, makes 34; these also correspond with the age of the trees. I therefore conclude that with this variety of timber, the rule holds good, and presume it holds equally good with most or all other varieties. There is no tradition about the time of planting these trees, for I know the year that I bought the property (1838), and I know the seed was planted in (1840) the following spring.—*T. B. CONNEXY, Kent Co., Del., in the N. Y. Tribune*.