

near together. In apple orchards thirty feet from tree to tree, in all directions, is a safe rule. Standard pears require about twenty-five feet. Peach-trees are preferable at one year old from the bud and should be set say fifteen feet apart. Standard cherries are generally set about the same distance advised for peaches and may be transplanted at one year old from the bud, and should not be over two years. Plum trees are usually planted about fifteen feet apart; trees two years old from the graft are recommended for orchard standards. Quinces require about twelve feet space and ought to be at least two years old from the layer or bud.

All trees ought to be transplanted as soon as possible after having been lifted from the nursery. All broken and mutilated roots should be removed with a sharp knife, and enough of the previous season's growth of branches cut back to preserve a proper balance between the stem and the roots of the tree.

The ground having been previously prepared by ploughing and placing in good tilth, holes may be dug wide and deep enough to admit the roots carefully spread out in natural position. The tree must not be set deeper than it originally stood. Fine earth should be filled in about the roots and trodden down with the feet, more earth filled in, more firming down of earth, and so on until the excavation is filled. When the ground inclines to be dry, it is an excellent plan to dip the roots in thin mud and use water for settling down the earth. If the trees are in exposed positions secure them by a stake or two. Mulching is very generally approved of for newly set trees; it keeps the ground moist and warm and prevents the growth of weeds.

#### HOW TO LAY OUT AN ORCHARD.

It often happens that one must lay out and plant an orchard without assistants. Mr. G. F. Mumma, an Ohio horticulturist, has a device of his own, which greatly simplifies the task. Even with help, the old way of first staking off the ground is laborious, and takes a great deal of sighting to get the stakes in range. Moreover, when the hole is dug, the setting is to be done by ranging again. Mr. Mumma's plan is to take twine like that used by nurserymen in packing trees, and stretch it across the place where the end trees in the rows are to stand. Mark the twine at the place for the corner tree, by sticking in a pin, bending it to keep it from falling out. Next, measure on the line the distance the trees are to be apart, putting a pin in each place where the end should be. Before removing the line, put a small stake or stick in the ground, at the spot indicated by each pin. Now stretch the line the way the rows are to run, commencing at the corner, and endeavouring to make the rows as near at right angles as possible with the line of end trees. When the line is stretched, count the number of pins to the other end of the orchard, but put in no stakes at the pins except at the last one. Go back to the other corner, and measure that side likewise. Now stretch the line across the other end of the rows, and by means of the pins get the proper distances apart. If these agree with the first end stakes, put in stakes here as at starting. The ground is now ready for work. Stretch the line along the first row, and wherever there is a pin put in a stake; throw the line back, and dig the holes; when all in the row are dug, bring back the line and plant each tree at a pin. Continue in this manner until the orchard is planted; when done, your trees will range as straight one way as another. The person should be careful not to get the line wet, or it will not measure correctly.

#### GRASS OR CULTIVATION FOR ORCHARDS.

If fruit trees after they have attained a size sufficiently large for bearing fruit can be made to do as well in grass as when cultivated, it is obvious that it will be much less expense to seed to grass and save the cost of cultivation. But that would not be all the advantage obtained. It is well known that cultivation is likely to injure many of the large roots of the trees. This is the greatest objection to cultivating among large trees. It is desirable that the roots should penetrate the soil near the surface in all directions, since the surface soil is the richest; but if cultivation is practised the roots which approach the surface are continually torn and injured and kept from approaching the surface. If the soil is cultivated among large trees, the cultivation should be very shallow, so as to injure the roots as little as possible. By frequent top-dressing with fertilizers it is believed that the trees will do equally as well in grass as when cultivated. Pasturing sheep or pigs in the orchard is a good method of disposing of what grass grows, and enriching the soil. The pigs and sheep will also eat that fruit which falls prematurely, and they destroy the larvæ of the codling moth contained in it. If, however, the grass is allowed to grow, it is best to cut it two or three times during the summer, and let it remain on the ground to mulch and enrich the soil. In regard to whether to cultivate an orchard or not, it may be said that if trees are young, they should be cultivated to promote their growth; but if the trees are large, they need not be cultivated, but may be seeded to grass and top-dressed.—*Correspondence Practical Farmer.*

#### GARDEN GLEANINGS.

Mr. W. F. Brown—the well-known "Waldo" of *The Ohio Farmer*—gathered from his garden this summer a sheaf of notes of exceptional interest and value:

"For the first time in all my experience as a gardener my early peas were injured by frost, but it was not on account of excessive cold, but because the preceding week had been so very hot. I had often had peas up when the mercury would fall to 8° or 10° above zero and the ground freeze solid without injuring them, but the first week in April this year the mercury reached 80° in the shade for several successive days, and when on the 11th it fell to 20° the change was too great.

"I believe that the best way to manage an asparagus bed is to make plank edges and raise the bed a few inches each year till it is a foot higher than the level of the garden. The best yielding bed I ever saw was managed in this way. It is surprising through what a mass of manure and earth asparagus will force its way. Three years ago I accidentally made my hot-bed so that one end of it lapped over the asparagus. I put on eighteen inches of manure and about six of earth, but the asparagus come through it all and made the largest stalks I ever grew.

"We have had trouble to get old plants to grow, and have been short of rhubarb for the past three or four years, and last spring, remembering that twenty years ago I had been successful in growing from seed, I determined to try it again. On the 23rd of May I sowed a row 200 feet long, and I have now fine, thrifty plants, plenty large enough to furnish stems for pies, and I think we shall have no lack of this delicious vegetable—or fruit, I hardly know how to classify it—for years to come. It is a much cheaper and easier way to get a start with it than buying old roots.

"I have never found a variety of beans so prolific as the small Lima. We have a plat of them in the garden, from which we have been using

through the summer, and have saved a gallon to the square rod of dry beans from them, which is at the rate of twenty bushels to the acre, and they are now loaded with mature beans, but not dry. I have no doubt that from fifty to eighty bushels per acre could be grown of them. We do not plant the large Lima, for we find these fully equal to them in flavour, doubly prolific, three weeks earlier, and much easier to shell. We grow also the Dreer's improved Lima, and find it much better than the old sort.

"I believe I have learned the easiest way to grow a family supply of celery. We, this year, filled our old hot-bed frame, three feet by twelve, with celery plants, setting them about eight inches apart each way, making sixty plants in the frame. It has grown splendidly, and as fast as it grows we fill in with earth, so that it is bleaching nicely. I believe that it would have done as well if planted closer, say one hundred plants in the frame. The advantage is that it occupies but little space, is not much trouble to cultivate, and requires much less water to moisten it than if planted in the usual way, with the rows six or eight feet apart, besides a much smaller quantity of earth for banking it up for bleaching, and of course less labour to do it. If one has not a hot-bed frame, he can set boards up at the edges of a bed in the garden, and manage it in the same way. Boards a foot wide should be used, and very cheap refuse lumber will answer for the purpose.

"We made a failure with Hubbard squashes this year on account of the insects being so much worse than usual, but still recommend planting them late, among the early potato vines, as the surest way to secure a crop.

"Each year that I try it convinces me more fully of the benefit of fall ploughing in the garden, and we expect this year to plough and manure several acres. We plough first, and then spread the manure, and take pains to open the furrows so as to drain off all the water, and then when spring comes we work fine without re-ploughing, and get a seed bed about as near perfection as is possible."

#### GOOD FRUIT AND A GOOD NAME.

One thing above all others some fruit-growers dislike to do is to thin out nice specimens from peach, pear or plum tree, to insure growth. We were conversing recently with a prominent and successful horticulturist, and in passing through his peach orchard he remarked that he had just thinned out the peaches one-half and that he should probably go over the ground again. His rule is to leave no two peaches nearer than six inches from each other on the same twig or limb. It does seem wasteful to pluck off specimens of the fruit that have already attained good size, but this is the only way by which the best fruit can be grown.

This leads us to consider the question of reputation among fruit-sellers. This gentleman was one who has dealt largely in fruit, shipping several thousand barrels of apples within the last few years to Europe, and he claimed in the long run it will be better to market only large first-class fruit and thereby gain a reputation. A man's mark goes a good ways in selling fruit. Let marketmen find out that a man ships only the best quality, unless in barrels marked otherwise, and his goods will always be in demand, but, on the other hand, if it be known that he is not particular in his shipments, that he fills the middle of the package with third-rate fruit and the outside with first-class, his goods will go abegging. In such a mixed package or barrel the poor fruit always brings the better down to its level, the better can never pull the poorer up.—*Springfield Republican.*