

### What is Known about Beans.

A co-responent of the *Agriculturalist* says that, for some years past, taking one year with another, beans have proved the most profitable crop on his farm; that they occupy the land only eight or ten weeks, and are harvested in time to sow winter wheat. No special skill or peculiar treatment is necessary in raising them, but some care and experience are required to harvest them. The real point is to have the land clean, mellow and in good heart. The old saying, "too poor to raise beans," has led many astray. They have planted beans on land such as was not considered rich enough or dry enough to raise corn or small grain crops. And the result, in nine cases out of ten, is just what any one might expect—abundance of weeds, a light yield, and an inferior or mildewed sample of beans, fit only to feed sheep.

A crop of beans of thirty bushels to an acre that has to grow and mature in so short a time, must have a liberal supply of available food, and the soil must be in the best condition. A fair crop of beans is sometimes raised on soil so hard that it would seem that the roots could not penetrate it; but a maximum yield cannot be expected unless all the conditions are favorable. The most common mistake is in trying to raise beans and weeds on the same land at the same time. The writer has seen part of a field cultivated and hoed, and another part of equally good land, left uncultivated and the latter produced less than one-third of the former. The extra cost of pulling the beans out of the weeds was more than it would have cost to cultivate and hoe them. The beans on the weedy land did not mature properly, and could not be sold at any price. The most profitable crop he ever raised was on a two-year-old clover sod, ploughed in June, turning under clover equal perhaps to more than half a ton of hay an acre. The beans were drilled in immediately after the ground was ploughed and harrowed. There was a rain shortly afterwards, and the beans came up and grew rapidly. They were cultivated four or five times, but needed scarcely any hoeing. The yield was over twenty bushels an acre; and the beans brought \$3 25 a bushel. The land, after the beans were off, was ploughed and sown down to winter wheat, and produced a good crop.

A friend having read the above, says that his own experience fully accords with every statement, and adds that in the season of 1863 he raised twenty-three bushels of the "blue nod" variety on three-quarters of an acre of light and rather sandy soil, and sold twenty-two bushels for \$66. He believes that he never raised any crop that paid as well. The land should be prepared for the crop by spreading finely composted manure before ploughing the first time. The soil should be cross-ploughed just before the seed is put in, and as little harrowing done as possible, so that the ground may be as light as circumstances will permit. The drills should be three feet apart, so that the vines may cover the whole ground when fully grown, thereby depriving the weeds of the benefit of light and heat. The time of drilling should be from May 20 to the first week in June. If manure or compost is used in the drills too much dirt will adhere to the roots when pulled and will only come off when the beans are threshed. Any process which facilitates the cleaning of beans should be adopted. In a favorable season beans will mature in this climate in ten weeks; but ordinarily our correspondent thinks twelve or thirteen weeks are required. In this country winter rye should be sown instead of wheat, and as soon as may be after the beans are removed. If it is possible the beans should be dried on the ground and beaten out as they are brought from the field, as they will come out more easily than afterwards. No crop leaves the ground in a better condition for winter wheat or winter rye; and as rye straw sells readily for \$18 or \$20 per ton, he commends the attention of farmers to this very important subject.

### Transplanting Large Maples.

A few days since, while passing along one of the unfrequented roads in a wild region of country a few miles from my home, I found a handsome row of sugar maples which some former owners of the place had planted on the roadside. These trees were from four to eight inches in diameter at the base, and straight as an arrow, with finely formed heads. As I wanted fifteen just such trees for a particular purpose, I ventured to ask the present owner of the dilapidated looking place his price for the trees. Judging from the surroundings of the dwelling and out-buildings, I did not think the proprietor had sufficient good taste to fully appreciate such beautiful ornaments, and in this I was not mistaken; for when I asked if he would sell, he answered, "Yes, if

a man gives me my price." He named it, and I closed the bargain at once.

To-day, April 22, I have been transplanting these trees; and although so very large, I have no fear of losing them, for they had but few large roots, the greater part being small fibres, which are of far more importance than coarse, large ones. In digging I struck a circle seven feet in diameter, and all roots passing beyond this boundary were cut off and all within carefully preserved. The trees had to be loaded upon waggons and hauled about five miles to the place where they were planted; but during this operation the roots were kept covered with sacks and sprinkled occasionally, to prevent drying. In planting, fine, rich soil was carefully worked in about the roots and packed firmly, and over the surface of the soil I shall now place a mulch of coarse stable manure. This will not only aid in keeping the soil moist, but the juices of the manure will be carried down to the roots by the rain. I consider that mulching with manure is a far better plan than putting it into the ground, where it is likely to come in direct contact with the roots. Of course a portion of the branches of every tree was removed, but only in proportion to the quantity of roots destroyed. The ends of every root cut off or broken with the spade, was carefully cut again either with a sharp saw or pruning-knife. New rootlets will issue far more speedily from the end of a root, the cells of which have been smoothly severed than from one crushed or broken off.—*Rural New Yorker*.

### Transplanting in Windy Weather.

I have always found it a difficult matter to make workmen understand the importance of protecting the roots of plants that were being transplanted in windy weather. Small delicate plants are soon destroyed if exposed to the hot sun and drying winds. Large trees will also be greatly injured if exposed only for an hour, and many a fine healthy specimen has been destroyed by exposure, while a hole was being dug for its reception. I have seen trees scattered about over a field in the morning, and there left exposed to drying winds until planted, the same or the following day. If the trees died or failed to make a good growth, the nurseryman, soil, or season was blamed, but never a word said about carelessness at the time of transplanting. One morning, last spring, I passed a gentleman's place where one of our would-be-great landscape gardeners was superintending, the planting of a choice lot of evergreen and other trees, which had just arrived from a well-known nursery. Not a hole had been dug, or other preparations for planting made, but trees were scattered over the place, each specimen thrown down near where it was to be planted, not a root covered or even sprinkled with water, although the wind was blowing almost a hurricane at the time. Late in the evening I passed that way again; the larger portion of the trees were still lying in the same position, only a very few having been planted. I learned, a few months after, that the trees had died, and the purchaser refused to pay for them, and I believe the case is still in the courts. This is but one instance in hundreds that have come under my rather limited experience in noticing what my neighbors are doing; consequently, I do not always feel like taking sides against the nurserymen, even if they do sometimes make mistakes (purposely or otherwise) in filling orders for trees. Too much care cannot be given to the protection of the roots of trees while being transplanted. They should always be kept covered with some damp material, such as hay, straw, moss, or old cloth, and not be uncovered till the moment arrives to place them in the soil. It is to carelessness in such matters that most people are indebted for the greater part of their failures in tree planting.—*Cor. Rural New Yorker*.

### Low Headed Trees.

The *Horticulturalist* says: The tide of favorable opinion for heading fruit trees low for orchard culture, is now experiencing a revulsion. Orchardists who cultivate their orchards, and are in the habit of ploughing or stirring the soil periodically, say low headed trees will not answer. It is impossible to approach near enough with the horse and implement, and hence the high standard methods of training will hardly be given up. Low training will answer for garden culture, and for orchards where there is a good deal of hand labor. Apple and peach trees must be trained high, but pears, we believe, are best if grown on the pyramidal system, and this must be low to attain success.

### Nitrate of Soda.

Mr. J. B. Lawes, says: The only two substances really required in artificial manures are:—

1st. Nitrogen, and 2nd. Phosphate of lime.

Nitrogen is useful in three forms:

1st. As nitric acid. 2nd. As ammonia. 3rd. As organic decomposable matter, yielding ammonia, or nitric acid.

Nitrogen is more valuable in the form of nitric acid than it is as ammonia, and ammonia is more valuable than decaying substances yielding it. The best possible manure for all graminaceous crops, wheat, barley, maize, oats, sugar cane, rice, pasture, grass, is a mixture of super-phosphate of lime, and nitrate of soda; 300 lbs of super-phosphate of lime and 275 lbs. of nitrate of soda applied every year to one acre of ordinary English land, has for twenty consecutive years given & produce annually of 6 quarters of barley, 14 tons of farm-yard dung applied annually over the same period has given the same produce of barley. Super-phosphate of lime is a special chemical manufacture which can be made cheaper on a large than on a small scale, and therefore farmers ought to purchase it cheaper than they can make it, but it is better to make up their own compound manures, purchasing their nitrate of soda or salts of ammonia. It is not advisable to sow artificial manure with beans, peas, tares or other leguminous plants. Corn and root crops will take all the artificial manure which the farmer can afford to pay for. Super-phosphate of lime should always be placed under the soil, either by drilling or harrowing in when the seed is sown. Nitrate of soda may be sown in the same way, or it may be sown broadcast when the crop is up. The increase in the growth of the cereal crop is much more dependent upon the nitrogen supplied than on the phosphoric acid. Potash is generally found in sufficient quantities in soils and the artificial supply is not required.—*Et.*

### European Larch.

There is hardly a purpose for which timber is used, for which larch cannot be profitably employed. Its importance in ship building cannot be over-estimated; it is tough, durable and light. A shot hole through larch closes, and will not splinter, while its incombustibility peculiarly recommends it for ships of war. It can be used in house building from the sills to the ridge pole, while for flooring it has no equal, especially for barns and ridges or any place where there is much wear and tear. It is used for ploughs, harrows, waggons and carts, in the construction of almost all agricultural implements and machinery, for railroad ties and fence posts, the old historic hedge rows giving place to posts and wire fence. It has such a fine grain, and is so exempt from cracking, that painters use it for their palettes and to paint pictures on; for this purpose it was used by the ancients; several of Raphael's paintings are on larch wood. Its beautiful color, and capability of high polish adapt it well for cabinet work.

Besides the value contained in its timber, its bark is used for tanning. It is from the larch that Venice turpentine is produced.

That mixed planting in certain circumstances will be adopted there is no doubt, but that one particular tree for general timber purposes will be selected for planting is just as certain. The larch is that tree in Europe, whether it or the American larch, (tamarack,) or some other tree, is to be the timber tree of America, it is high time it should be decided.—*WILLIAM HILL, Western Rural*.

### FERTILIZERS FOR POTATOES—PLOUGHING OUT.—

W. J. Pettee inquires as to the best fertilizer for potatoes to be applied in the hill—whether bone, phosphate of lime, or fish guano. In the last twelve years I have tried a great many experiments in reference to the best fertilizer for potatoes, and have seen many more tried. I have found invariably that the best yields were got by applying coarse manure as a top-dressing on the hill after planting. Take a good clover sod; have it well drained (this is indispensable in such a wet season as the last); plant in hills about three feet apart; give a good top-dressing of coarse manure of two good forkfuls to each hill. Tend well and do not hill; get a growth of top that will cover the land at the time the tops fall to the ground, and a glorious yield is insured. I have known this amount of top-dressing more than double the crop. Mr. Pettee also inquires as to the feasibility of discontinuing the plough in digging. It is the opinion of potato raisers here, that a plough is more better than benefit. E. A. K. Cayuga Co.