FOR FARMERS AND GARDENERS.

INSECTS, as usual, are commencing their ravages on vegetation. We have noticed a species of flea on the young leaves of the turnips, which are thoroughly perforated with holes by this flea, and, where the plants have not come up very thickly, they are soon entirely consumed.

This leads us to the conclusion—and one which has been most disastrously attested in years that are past—that we live in a country peculiarly liable to attacks from the various insects that infest and destroy vegetation.

Now, it will be asked, what shall be done in the matter? Can no means be devised to arrest or at least render less disastrous the attacks of the legion of destructive insects and worms that prey upon our vegetation?

As we were told by a gentleman of experience in these matters, to the above inquiry we would say *fat them*—give them all they can eat—sow not your seed sparingly—"in the morning sow thy seed and in the evening withhold not thine hand." We mean to say, sow sufficient seed to allow the insects to eat what they want and still leave to you a good crop. You must make calculation to feed them, or lose much of your early crop.

Now choose you which is preferable—to suffer from a partial, or perhaps total loss of your early tomatoes, cabbages, turnips, &c., involving the extra labor of replanting—or, to put into the ground, at the first planting, an extra amount of seed to provide food for the insects? We say, without hesitation, that the latter is by far the best plan, every way.

Let us look at the matter a moment.

If your seed is good and is carefully planted in good time, it will most of it come up, which, allowing that the usual quantity of seed has been planted or sown to a given area of soil, if properly cultivated and free from the ravages of insects, would yield remuneratively. But, let the insects come and feed on that field or garden and the fair prospect is soon blighted. Now, in this case, the labor of planting is lost; and, if by the additional labor of replanting, this loss could be fully restored, it would be but trifling. This, however, is not the case; for, when you have expended the necessary labor in re-planting, the maturing of your crop is thrown back some three or four week; thus that from which you had hoped to reap early fruits becomes late and unless very carefully planted and attended, is not so apt, after all, to yield as full returns.

Now, then, which course is best? We say, again, most plainly, the one that, while it secures the crop from the first judicious planting, also places the most effectual barrier against the desolating insects, by putting in the ground sufficient seed to afford them support without in the least diminishing your crop.

For instance—in planting beet seed—four pounds of which is usually allowed to the acre; instead of four pounds, plant eight or ten. But, says some one, that is quite an additional expense. Well, if your crops will not warrant this, try two pounds to the acre, which, if it should be consumed by the swarms of animalculæ, that must also live, if even at the expense of your whole crop—you will not of course complain, because the *cost of the seed is but trifling!*—you can get more!

A gentleman, asking one of our gardeners how much beet seed was necessary to the acre, was told, "From four to eight pounds."

"But," said he, with amazement, "I never heard of so much being required. Would not two or three pounds be enough?"

"O yes," replied the gardener, "if you think so; but you must expect a crop in accordance."

This man had forgotten—if he had ever thought or known—that we live in a country, subject, perhaps, more than any other that we know of, to the merciless ravages of destroying insects.

THE CUT WORM is doing considerable damage in the destruction of early plants. We have been told, several times, by various persons, that, soon after their plants, such as cabbage, tomato, cucumber and melons, get out of the ground, they wither and die—the true cause of this being frequently unknown; but, as may be proved by observation, this is generally the work of the cut worm, whose operations, we learn, have been thus far quite destructive in some localities.

Those who have time and patience to watch somewhat closely the progress of their early vegetation, will discover that this worm enters the ground near the roots of the plants and, during the night, gnaws off the plant at or near the surface. By an examination, every evening, of the ground immediately around the plants, these depredations may be materially checked. We have heard of this worm being destroyed, in places where they were "literally swarming," by turning in young pigs upon them, on which the pigs thrived exceedingly, while at the same time they were too young to do any injury to the vegetation. The young pigs were enabled by their powers of scent, to detect the worms, although buried in the earth.

This latter resort may not be altogether practicable here, especially where each man's lot is not securely inclosed by itself, but no reasonable care should be omitted to prevent the ravages of the cut-worm — one of the most destructive agents to the early vegetation, that we have among us.

Garden Greens.—Almost every one loves garden greens, and physiologists say that, in their season, they are very good. All persons can have them who have a small patch of ground, yet few have early greens.

A friend informs us that, by a little care and management, he always has plenty for his own use and some to give to his neighbors. His method is to sow a patch of turnip seed in the fall—say the latter end of August or beginning of September—which forming small turnips, stand through the winter and, in the spring, afford early turnip tops for greens. He also sows a little spinage in the fall, to stand during the winter; this succeeds his turnip tops.

In the spring when he plants his peas he sows a little spinage seed broadcast over the ground. By this arrangement he has plenty of nice greens until June, when early peas are in season. For 50 cents worth of seed, any person can have all that will be required for a family of this esculent greens, growing on a small patch of ground, without in the least interfering with his main crop.

We were informed, while on a visit to Mr. E. Sayers' garden, a few days since, that he has adopted a plan somewhat similar to the above—and with similar results.

Those who love greens and have not taken the precaution necessary to secure them in their own gardens, can probably obtain them during the season of Mr. Sayers.

Potatoes.—We presume most of the farmers have already planted their potatoes; some may not yet have done so; but whether or not, we will give publicity to a statement in the *Country Gentleman*, relative to planting the eyes of the potatoes. It will at least be in season for another year. Here it is:

"We selected the largest and best potatoes from the cellar, took out the eyes, and used the rest of the potatoes for the table, about as profitably as if the eye had not been taken out. They were then planted three in a hill, or place, about one foot apart, and in rows some two feet apart; and then cultivated often enough to keep the weeds down, and to keep the ground stirred and mellow."

The point of a narrow knife will be best for rimming out the eyes.

The result of the above experiment was a "fine yield of large potatoes from every hill, with no small ones." Besides, there were no diseased or unsound ones, although, as the writer states, "in the adjoining ground, where we planted whole potatoes, there were many unsound ones."

The planting of seed-ends is not very highly recommended by this experiment, as it would seem that, where there are many eyes in a hill, too many tubers are produced, so that the young potatoes are crowded in the hill; consequently many of them must be small, while others become diseased.

Sweet Potatoes again.—An article in the *Plow, the Loom, and the Anvil*, states that sweet potatoes of better quality than usual have been raised from the bloom, or rather from the small seeds that are found in the pod made from the bloom. These seeds are about the size of sage seed and of the same color.

The sweet potato vine blooms in August, the pod forming about a month thereafter. As soon as ripe the pods should be gathered. At the usual planting time the seed should be sown, as you would sow cabbage, and transplanted in a similar manner, when the soil is wet, taking up a little soil with the roots.

This method of raising the sweet potato is preferred, by those who have tried it, to any other.

What is there now to prevent the introduction of the sweet potato into the Valleys of the Mountains? Who has interest enough in the matter to make an effort to obtain even a small quantity of the seed from the pods? They might, with trifling cost, be brought here by mail. Now is the time to write, and have them forwarded as soon after ripening, as possible.

Russian Rhubarb was shown us in the garden of Mr. E. Sayers, the stalks of which were quite large and heavy—not so large, however, as the Victoria, from the garden of Mr. W. C. Staines—but the flavor was excellent. Mr. Sayers says it is the finest flavored variety in the world.

[For the Deseret News.

A Treatise on the Present State of Horticulture in Utah.

BY E. SAYERS, HORTICULTURIST.

NO. 3.

PRACTICE OF GROWING SEEDS.

In my last article, No. 3, I omitted one principle which should always be borne in mind, in growing seeds from roots, namely, that great care should be taken in the fall—which is the best time for making choice of roots for seed—in the cutting of the leaves from the root, that the crown or top of the root is left entire. When this part is cut off too low, the heart, which will produce when the root is planted, a strong leading shoot or stem is cut off; the consequence is that a number of small shoots will be produced around the crown of the seed root, which will never produce seed so good in quality as those produced from a strong leading shoot.

Location for Growing Seed.

In planting roots for seed, it should be a general rule to select a piece of ground that has a full exposure to sun and air and is not overshaded by trees. Indeed seed should never, if it can be possibly avoided, be grown where trees or any crop rob the ground of a portion of nutriment; it being necessary that plants should always have a full share of sun, air and the nutriment in the ground necessary to bring seed to a proper maturity.

The Best Ground for Seed-growing

Is that which is under good, clean culture and well broken to a good depth, so that the roots can penetrate deep into the soil and not need irrigating too often. When ground is too rich and too frequently watered, the roots of beets, carrots, parsneps, etc., are kept in a continual growth and the consequence is that the seed does not ripen even; some portion will be too ripe and fall to the ground, while a part will be green and unripe. Seed is often gathered in this state and the result is that about half is premature or worthless.

Planting Roots.

In planting out roots, the ground should be prepared early in the spring by digging or plowing it deep. The roots may be planted in rows from 3 to 4 feet apart, so as to allow the plants to have a full share of sun and air. When roots for seed are planted too close together, the growth will be weak and slender and seed produced from such stock will not be so well matured as that grown from more healthy, strong plants.

Culture of Roots, etc., for Seed.

The culture is simply to keep the ground about the roots, etc., in a good condition—frequently hoeing tends to keep down weeds, etc.—and irrigating in a moderate manner. Most plants require a good share of water while in bloom and when the seed is in a growing state, but when beginning to be ripe, water then should be suspended in order that the seed may ripen even.

Irrigation of Plants for Seed.

When water is too copiously applied in this state, a part of the plant is kept growing, having some seed green, a part in flower, while another portion is fully ripe. When this is the case, seed is often gathered and the produce will be a mixed stock of good and bad, as before named.

Let the Seed Ripen Even.

The great object in consideration should always be to have seed ripen even and, when gathered, if it happens that any is unripe, it should be taken away and not suffered to mix with the good; for the worst of all evils to the cultivator is to have seed good, bad, ripe, green and the like mixed together; no one need expect any very good results from such stock.

Grow Seed only from the Strongest Plants.

Whilst growing, the cultivator should often look over the crop and see that there is no weakly or mixed variety allowed to remain. It will often happen that part of the roots of beets, carrots, etc., rot after being put into the ground. Such will produce weakly plants and the seed will be poor and meager, ripening prematurely. Such should always be taken from the ground and not allow inferior seed to ripen and mix with the good when gathered.

Weakly Peas, Beans, etc.

Peas, beans and indeed every variety of seed should often be gone over, while growing, and examined and, if any weakly or mixed variety appear among the growth, it should be taken out. Every attention should be paid during the growing season to produce a good, pure, healthy stock.

Gathering the Seed.

In gathering seed, care should be taken to reject any that is green or not well ripened. Such should be thrown away from the stock.

Clean the Seed.

Care should also be taken that seed is well cleaned and put away in good order for the ensuing season. This is so trifling a matter that little need be said, only always bear in mind that everything relating to cleaning seed should be well done.

[To be continued.]

Sayers says he will have cucumbers by the 4th of July, which will be early indeed for the present cold and backward season. Gardeners, can any of you promise us a dish of cucumbers before that time?

To cure Warts in cattle, says the New England *Farmer*, dissolve potash to a paste, cause the warts with it for half an hour, then wash covered it off with vinegar. A sure cure! "for man or beast."

The Growth of Trees.

We extract the following from the New England *Farmer*, which contains suggestions worthy of attention:

Trees grow faster or slower, according to the wetness and warmth of the season and richness of soil in which they are planted. By looking at the stems and branches of trees it may be seen at once how much more trees grow in one year than in another. In examining a white pine limb I found the growth was as follows: In 1851, the growth was small; in 1852, much shorter; 1853, very long; 1855, middling; 1856, short; 1857, long; 1858, long. An oak limb measured, gave a length of four inches for 1856; eight inches for 1857; seven inches for 1858.

The stumps of trees show the same thing. The grains are wider or narrower, as the season has been favorable or unfavorable. The leaves of trees are larger or smaller, as the season is wet or dry. In corn, wheat, and rye, the influence of the season is attentively noticed, but in trees we seldom stop to measure the extent of their growth or the increase of their size. We feel no richer, nor poorer, for any influence the season may have on them. And yet a genial season promotes their growth as much as it does grass or grain. In a genial season, the fruit of trees is not only magnified, but multiplied, by the rapid growth of the branches. In general, a good grass year is a good tree year, though not always a good fruit year. The orchards and the woods are hard drinkers, and enlarge their dimensions accordingly.

The growth of trees is retarded or increased by the same causes which retard or increase the growth of grasses and grains. If apple, pear, or cherry trees are left to grow without manure or culture, they do not grow faster than Indian corn treated in the same way. Weeds, grasses, and bushes take away the moisture and nutritious particles of the soil, just as they do from corn and rye. In a word, their growth is blasted.

Nothing is more common than for one tree or plant to blast another by abstracting its moisture and nourishment, and by obstructing its light. Notice the little trees growing in the vicinity and shade of larger ones. We all know how quickly weeds and grasses blast Indian corn by absorbing the moisture and manure of the surrounding soil. If we wish, therefore, to raise an orchard in the shortest possible time, we have only to treat it precisely as we do a cornfield. The trees must have a nursery-treatment until they attain to a middling size. The trees should every year be manured with rich compost, and kept well plowed and hoed. They will then have nothing to impede their growth, and will rapidly attain to a large size.

An orchard treated like an Indian cornfield, where fifty bushels to the acre are expected, would be none too well to experience the full benefit of the agricultural art, as it may be known at the present time. Under such a treatment they will attain to a greater size in seven years than in twenty, when they are left to themselves, in an ordinary soil, to contend with weeds, grasses, and bushes of all descriptions. Mind it where you will, those apple trees which grow near houses and barns, where the soil is the richest of any part of the farm, always grow rapidly, yield fruit abundantly, and of the largest size. Never be afraid of making the soil too rich; the richest new land has never been found too much so for fruit trees.

Any land which is good for Indian corn, rye and wheat, is good for an orchard of apple trees. But avoid low, wet, clayey land, or land adapted to marsh grasses. It is neither congenial to the tree nor the fruit.

People are so much accustomed to seeing orchards grow in a slow way, without manure or cultivation, that they are discouraged from planting them. Their patience is taxed too severely. In general they see the trees growing, or rather existing, twenty or twenty five years, before they attain even to a middling size, whereas thrifty nursery trees, three years of age, set in a genial soil, may easily be made to yield fruit in good quantity in four years more. Many trees, in a genial soil, grow as rapidly as Indian corn. They will show as great a length of stem, in the same time. If you wish to raise a large tree in a short space of time, you must give it as much food and drink as it wants, in the same way that you raise a large calf or a large turkey. Drink, especially, is everything to a tree, and nothing else should absorb it."

Notwithstanding the apparent correctness of the theory above inculcated—not to allow any manner of other vegetation grow in an orchard—we believe, by proper careful tilling and abundant manuring, the orchard ground may be cultivated with profit, not only to the direct pecuniary advantage of the owner, but also with more or less benefit to the trees—that is, until they obtain sufficient growth to nearly or quite shade the ground. Potatoes, as we have before said, are probably best suited for orchard grounds, as they will bear well, even tho' partially obscured from the sun's scorching rays, and have a mellowing effect upon the soil; or, if preferred, a few rows of strawberries might be planted between the rows of trees, taking care, always, to have the ground well manured.

But, as soon as the trees begin to bear, we should at once appropriate the whole soil of the orchard to the trees, annually enriching and plowing as above recommended.

"On experience in warming with hot air" is the title of an essay lately read before the Liverpool Agricultural Society.

Strawberries were ripe at Napa, California, April 20.