

FOR FARMERS AND GARDENERS.

It is a Mistaken Notion—says the *Am. Agriculturist*, to suppose that digging up the grass a foot or eighteen inches deep around an old apple tree, does it any material good. That amount of loose soil about the stem of a newly planted young tree, would be of much service. It would enable the air and moisture to penetrate to the roots, and it would prevent the soil from being exhausted of the food which the young roots needed. But where are the roots of a fullgrown apple tree? At least, ten or fifteen feet away from the trunk. The great arteries, to be sure, are nearer, but the smaller roots, the fibrous network of spongioles with their thousand hungry mouths are off, a full rod or more; and they laugh (if, indeed, they do not weep) at the man who thinks he is helping them while grubbing away around the old trunk! As well might one think that he is feeding his horse, by simple rubbing his back with an ear of corn!

Again, it is another mistake, says the same journal, to suppose that cotton wadding tied around the trunks and limbs of plum and cherry trees, prevents the ascent of the curculio. "But my paper said it would," exclaims an indignant subscriber. Indeed! but we are sorry to say that mistakes will sometimes get into the newspapers, as surely as the "Grand Turk" will get into the plum trees, and there's no sovereign remedy yet discovered for either affliction. "But tell us how the curculio finds his way into the trees?" Not by crawling only, else the cotton would stop his travels, but he has a good pair of wings and knows how to use them, and so he flies to the forbidden fruit without let or hindrance from the great southern staple.

Perhaps the most effectual method of applying restoratives to old trees would be by the use of liquid manures—first loosening the soil so that it will rapidly drink in the liquid, which, if not too copiously supplied, and suitably directed, will gradually penetrate to the furthest fibre of the root and at once impart new vitality.

What shall be Done with the weeds? We answer, give them to your pigs, if you have any. If not, feed them to your cow. If you have no cow, no pig—nothing belonging to you that will eat weeds, perhaps you may have a good, kind, obliging and not-over-selfish neighbor, who has both and who, perhaps, would willingly afford you a little milk in exchange for your weeds.

Well, now! you "never heard of such a thing before!" And what if you did not? Probably there are many other things that you have never heard of. It is altogether likely that, in the world and in philosophy there are a great many things that "neither you nor I ever dreamed of."

Why should the acres of vegetation commonly termed weeds—many of them being very full of nutritious juices, be thrown out on the ground to dry up and be blown off, when they can be used as feed for animals? Whatever is nourished on your soil, which possesses value in any way, should not be recklessly wasted—whether it be the golden harvest grain, the thinnings of corn, sugar cane, beets, etc., or the "perverse weeds" that, unasked and uncared for, grow in such luxuriance, even when other crops entirely fail.

What think you? The Red Root, a weed most common and most inveterate here, is carefully cultivated by the Indian tribes of Southern Utah, who, from time immemorial, almost, have cultivated the soil. A stalk of Red Root, in their estimation, is as valuable as a stalk of corn—and not without reason—for each stalk, when ripe, yields a large quantity of seed which is said to be as nutritious as rye or wheat.

This weed, if not at present valuable to us for its seed, is valuable for feeding as green fodder to stock. Like some of our wheat, it is a volunteer plant—perhaps it is a perennial and will grow from year to year without seed. At all events, we would venture to pull up every stalk, if possible, and not let a single one mature its seed—not fearing in the least that the species would become extinct—and we would feed them out, instead of wasting them.

Ruta Bagas have been successfully transplanted. The plan is approved by Mr. Wm. J. Pettie, of Salisbury, Conn., who says that he is pleased with it as saving the first weeding and also the thinning; that he gathered, from one transplanted acre, nine hundred bushels. A quarter acre yielded three hundred and twenty five bushels, or at the ratio of one thousand three hundred bushels to the acre. On small patches of ground, or city lots, doubtless the ruta baga might be profitably transplanted.

Hops.—An article on the culture, gathering and use of this excellent tonic, by Mr. E. Sayers, will appear in our next.

A Practical Cheese Maker gives the following hints on several important points in the manufacture of summer cheese, which we doubt not will be found acceptable and worthy the attention of our valley farmers and all who engage in making cheese. Though we have seen some excellent cheese in Utah, we have also seen some that was very poor—mainly attributable, we are quite confident, to want of experience and information relative to the methods most approved. With good milk, clean vessels and proper treatment, we are not aware of anything to prevent the manufacture of as good cheese in Utah as the Cheshire and other far-famed English brands. The writer says:

I do not save the curd in the rennets, and to avoid having too much in them, I put the calf away from the cow about twelve hours before killing; there will then be but little curd; what there is, take out carefully and throw away. Do not wash the inside of the rennets, but salt well and stretch on a crocheted stick; then hang them up to dry where it will not be too hot for them. It is generally believed that rennets a year old make milder cheese than those of less age.

To prepare the rennet, take ten gallons of water about milk warm, put in ten rennets, add a little salt to keep them sweet, soak about two days, rub them well a number of times while soaking to get out the strength, then take them out, salt and dry again for future use. Strain the liquor into a tub or jar, put in a little more salt than will dissolve; take a small bag and put in four ounces of cloves, four ounces of cinnamon, a handful of sage, and four or five lemons, cut in two with a knife, tie up and drop into the liquor. Stir before dipping out each time, and keep in a cool place. Put enough rennet into the milk to have it ready to cut up in thirty or forty minutes, the milk to be from 85 to 88 degrees heat when set.

It makes but little difference what kind of a cutter is used, provided it has a smooth and rather sharp edge—wire cutters have been generally used about here. A four-bladed knife, just coming into use, is said to work well—with any kind we have to stir the curd with the hand while scalding, to prevent it from settling and adhering.

For heating milk or whey I use a dairy stove and tin heater. After the whey is sufficiently heated, dip it on to the curd gradually—be from fifteen to twenty minutes raising the heat from 100 to 105 degrees. No particular length of time can be given for scalding. When hard enough it will squeak between your teeth when chewed.

Before salting, drain well. When I intend to take the cheese to market from three to six weeks old, I put a tea-cup, or six and a half ounces of salt to twenty pounds of cheese—when to be kept through the summer, the same quantity of salt to seventeen pounds. Keep the curd fine in the sink. Press about twenty-four hours, turning twice during the time. As to the amount of weight for pressing, it makes but little difference—if the cheese is worked fine and cooked enough, there will be no trouble in getting out the whey.

To make spring cheese, when the weather is cold, the milk should be about 90 degrees when set; but scald from 95 to 98 degrees. If it is wished to cure quick for market, salt light—say a cupful to twenty or twenty two pounds.

Insects Again.—Mr. Sayers has this week furnished us, in his practical treatise, with a few thoughts on insects hurtful and beneficial to vegetation. Mr. Harris entertains the time honored idea that the bee may not be classed among the insects injurious to vegetation. This view is thought erroneous by later writers, who argue that the pollen, which is necessary to the maturing of all fruit, is destroyed by the bee.

However, it will be an important achievement in the science of agriculture, if our farmers and all who to any extent cultivate the soil, could acquire the faculty of critically discerning between those birds and insects which are positively injurious and those known to be not only harmless but even an auxiliary to the success of the soil cultivator.

The present article may be termed an introduction to the subject, as it will be treated more in detail in future numbers.

Make manure at all seasons. The Calendar of Operations in the *Am. Agriculturist* says, "Keep the cattle and hog yards well covered with muck. Scrape up cattle droppings each morning and throw them under cover." Good economy.

The Sex of eggs—says M. Gernin—after three year's study—may be determined by examining the ends—all eggs containing germs of males having wrinkles in their smaller ends, while female eggs are equally smooth at both extremities.

The Grape Vines of Ohio, the present season, promise an abundant crop. A letter from Cincinnati states that the vines in that vicinity have blossomed the fullest this year they have been known to do since they were planted.

The Potato in this vicinity, bears marks of being blasted—the vines turning red and having, as appears from examination, very few, if any, sets.

Frost, early in June, did great damage to the grain and fruit in several of the Eastern, Middle and Western States—as also in Canada.

Grafting cultivated fruits on wild stocks is said to be labor in vain, in Iowa.

[From the N. Y. Tribune.]

THE FARMER. BY MARIE S. LADD.

He breathes the air of his scented fields,
With lilies and daisies rife,
And says that his heart is young and glad,
And blest is his quiet life
In the sweet content of a little home,
And the smiles of a happy wife.

The voice of the birds that pipe all day
And the robin's song at morn,
As it skips about on the new-mown hay,
Or scents at the tasseled corn,
Is sweetest music—and so to him
Are the notes of the dinner horn.

He likes the scent of the apple buds
That nod o'er the creeping grass,
And the clover heads that wave their caps
O'er the path he is wont to pass
To watch the cattle graze on the hill—
And he seldom sighs, alas!

The orchard's load and the yellow grain,
When the harvest days come on,
Look rich and ripe, and as fair a sight
As ever he looked upon;
And the mellow sky and the glancing sun
Their brightest tints put on.

With hat in hand, when the eve comes in,
He hears the open door,
And, lifting his hair from his broad, high brow,
He crosses the sanded floor,
And hears the hum of the spinning wheel,
And his wife tell her profits o'er.

And the Winter night, though long, is bright,
For, seated around the fire,
His daughters sing some homey lay,
And knit as the blaze mounts higher;
And his sons read low, or tell their plans
And hopes to their listening sire.

He gives to the poor with willing hand,
And prays for the nation's weal;
He casts his vote for the righteous cause,
And his scorn he can't conceal
For the man who is cringing to other men,
Or dishonest in his deal.

And he quietly sinks to rest at last—
For his name is little known,
Yet revered by those who miss his voice
When they sit by their hearth alone;
His grave is made by the village church,
"And the spot is marked by a stone."

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A Treatise on the Present State of Horticulture in Utah.

BY E. SAYERS, HORTICULTURIST.

No. 6.

INSECTS INJURIOUS TO VEGETATION.

There are few subjects less understood, that should engage the attention of the Horticulturist and Agriculturist, than insects, which are in many instances not only making great inroads, but in some cases destroying whole crops.

In treating the subject I shall now merely give a synopsis relative to insects that are daily under our notice—my design being, if this treatise is continued, to write more fully on the subject of insects under the different classes of vegetables which insects attack during the season of their growth and coming to maturity.

In treating on insects I avail myself of an extract from the introduction of an excellent treatise on Insects of New England, which are injurious to Vegetation—By Thaddeus William Harris, M.D., which should be in the hands of every cultivator, and I hope my personal acquaintance with him and his liberal disposition to throw light on everything relative to Horticulture, will be a sufficient apology for making such an intrusion on his writings. He says:

The benefits which we derive from insects, though neither few in number nor inconsiderable in amount, are, if we except those of the silkworm, the bee, and the cochineal, not very obvious, and are almost entirely beyond our influence. On the contrary, the injuries that we suffer from them are becoming yearly more apparent, and are more or less within our control. A familiar acquaintance with insects, enemies and friends, in all their forms and disguises, will afford us much help in the discovery and proper application of the remedies for the depredations of the former and will tend to remove the repugnance wherewith the latter are commonly regarded.

Destructive insects have their appointed task, and are limited in the performance of them; they are exposed to many accidents through the influence of the elements, and they fall a prey to numerous animals, many of which are also of the insect race, which, while they fulfill their own part in the economy of nature, contribute to prevent the undue increase of the noxious tribes.

Too often, by an unwise interference with the plan of Providence, we defeat the very measures contrived for our protection. We not only suffer from our own carelessness, but through ignorance fall into many mistakes.

Moreover, cultivation has destroyed the balance originally existing between the different tribes of insects; nor can this be restored until we make ourselves thoroughly acquainted with their natural history. Information on this subject is to be obtained by observation alone; it can be communicated and rendered useful to others only by means of correct descriptions of the insects themselves, accompanied by full accounts of their habits in every stage of their existence.

The attention should not be confined to the history of individual species or kinds however hurtful or beneficial they may be; it should be extended to groups composed of different species, whereby some general ideas of this branch of science may be obtained, and the facts derived from scattered sources may be systematically arranged, so as to aid us in our future researches. For a general knowledge of the natural groups, or families of insects, not only leads to higher and more philosophical views of

the whole class, but will often be practically useful when we come, for the first time, to the study of any single species.

CRICKETS AND GRASSHOPPERS.

In this part of the treatise I shall confine the subject to insects which are the most prominent and are detrimental to vegetation in the Territory—of which the cricket and grasshopper are the most numerous and injurious. They are, however, only transient visitors and are familiar to the people.

MEANS OF DESTROYING THEM.

When they come there seems to be no effectual means of extermination, although by diligence, several crops have been partially saved from their ravages by continually driving them from their place into creeks, water courses, etc.

BURNING THEM ALIVE.

During the time of the "grasshopper war," as it was termed, I destroyed a great quantity and partially saved some of my crops by laying small parcels of straw for the grasshoppers to nestle in of a night and, when they were fairly crept in to roost, setting fire to the pile and burning them alive. If this practice had been generally adopted at their first appearance, most of the crops in the city might have been saved—the greater part being hatched in the streets and vacant places around the lots, and, when young, these insects collect in great numbers at night under small parcels of weeds or straw, etc., where they might have been destroyed by watching their places of retreat, covering them with straw and setting fire to the pile.

THE FLEA MOST DESTRUCTIVE.

The most destructive insect that annually wastes a great portion of our garden crops, as cabbage, turnips, beet, carrots, etc., is a species of flea, similar in its habits and destructiveness to the turnip flea of England.

HOW DETECTED.

This little insect may be seen on young cabbage, turnips, beets, etc., as they make their appearance in the spring and, if the seed is thinly sown and the insects are numerous, it often happens that the entire crop is cut off, particularly when the young plants make their appearance a few at a time.

DESTROYING THE FLEA.

There are many remedies recommended for destroying the flea beetle—as, dusting over the plants when wet with lime; watering with a alkaline solution, by dissolving one pound of hard soap in twelve gallons of soap suds; after washing, the mixture may be applied twice a day with a water pot. Kollar very highly recommends watering or wetting the leaves of the plants with an infusion or tea of wormwood, which prevents the beetle from touching them. My experience leads to a more liberal plan, which is, to feed them, by sowing a bountiful quantity of seed, so that, after feeding the insects, a sufficient number of plants may be left for a crop.

THE CATERPILLAR.

We have many varieties of this insect, detrimental to vegetation, particularly the potato worm, so called, which is yearly becoming more destructive, and the only method that can be adopted is to look over the vines when they make their appearance and destroy them. Professor Thaddeus W. Harris gives an excellent description of this pest to vegetation in his treatise, page 226. He says:

Every farmer's boy knows the potato-worm, as it is commonly called; a large green caterpillar, with a kind of thorn upon the tail, and oblique whitish stripes on the sides of the body. This insect, which devours the leaves of the potato, often to the great injury of the plant, grows to the thickness of the fore-finger, and the length of three inches or more. It attains its full size from the middle of August to the first of September, then crawls down the stem of the plant and buries itself in the ground. Here, in a few days, it throws off its caterpillar-skin, and becomes a chrysalis, of a bright brown color, with a long and slender tongue-case, bent over from the head, so as to touch the breast only at the end, and somewhat resembling the handle of a pitcher. It remains in the ground through the winter, below the reach of frost, and in the following summer the chrysalis-skin bursts open, a large moth crawls out of it, comes to the surface of the ground, and mounting upon some neighboring plant, waits till the approach of evening invites it to expand its untired wings and fly in search of food. This large insect has generally been confounded with the Carolina Sphinx (Sphinx Carolina of Linnaeus), which it closely resembles. It measures across the wings about five inches, is of a gray color, variegated with blackish lines and bands; and on each side of the body there are five round, orange-colored spots encircled with black. Hence it is called by English Entomologists Sphinx quinquemaculatus, the five spotted Sphinx. Its tongue can be unrolled to the length of five or six inches, but, when not in use, is coiled like a watch-spring, and is almost entirely concealed between two large and thick feelers, under the head.

THE CUT-WORM.

Or more properly the underground caterpillars, are also very detrimental and fully described by Professor Harris in his treatise, page 321, 322 and 323, as follows:

Numerous complaints have been made of the ravages of cut-worms among corn, wheat, grass, and other vegetables, in various parts of the country. After a tiresome search through many of our agricultural publications, I have become convinced that these insects and their history are not yet known to some or the very persons who are said to have suffered from their depredations. Various cut-worms, or more properly subterranean caterpillars, wire-worms or Iuli, and grub-worms, or the young of May beetles, are often confounded together or mistaken for each other; sometimes their names are interchanged, and sometimes the same name is given to each and all of these different animals. Hence the remedies that are successful in some instances are entirely useless in others. The name of cut-worm seems originally to have been