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OLD SERIES]

Nec aranearum sane textus ideo melior, quia ex se fila gignunt, nec noster vilior quia ex alienis libamus ut apes.

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From the Albany Cultivator. HOEING OR CULTIVATING CROPS.

The chief or primary object in hoeing crops is to increase the quantity and improve the quality of the produce. To this end, various means are adopted. A point of the first consequence, is the eradication of weeds and all plants excepting those which it is wished to cultivate. The necessity of destroying weeds, arises from several causes. Their growth interferes with and injures the crop in various ways. They exhaust the soil, more or less, of the elements which constitute the food of cultivated plants; they especially abstract the moisture of the soil, making a constant drain upon it in this respect, from the first moment of their existence.

It is of great importance that weeds should be killed while they are young. If killed at this stage, the injury they occasion is comparatively trifling, and the expense incurred in the operation is but little, compared with what would be required to effect the object when they are more fully grown. The brush of a hoe or the scratch of a light harrow, will effectually kill a weed at the time it appears above ground, whereas the growth of a few weeks would give it such a hold on the soil that it would withstand considerable force, and to eradicate it would require ten times the labor which would have effected the object in the first instance. Besides, if weeds are allowed to reach a large size, their roots become more or less mingled and entwined with the roots of the cultivated plants, so that in pulling up the weeds the crop is liable to be injured.

Some people seem not to be aware of the serious injury which the introduction of pernicious plants is to the soil. Some of the rich 'corn lands' of the western states, have already suffered a great deterioration from this cause. The negligent and slovenly manner in which the corn is too frequently 'tended,' has filled the soil with every pest which will grow on it. The foul growth is in many cases suffered to increase every year, till there seems to be between the weeds and corn a great strife for the mastery, and though the corn, on some of the most fertile fields, grows 12 to 15 feet high, it scarcely exceeds the weeds in height or strength, and judging from the liberal border around the fields, of which the weeds seem to have gained full possession, and from their frequent appearance among the crop, the prospect seems fair for the day being ultimately carried by them.

Stirring the ground, to a certain extent, is beneficial to crops, aside from the effect of keeping down the weeds. By keeping the soil loose, the roots of plants more readily extend themselves, the soil is rendered more permeable to the sun, by which a more congenial temperature is gained for plants; it facilitates the absorption of dews, which bring down ammonia and fertilizing elements from the atmosphere; and it exposes the soil more to the action of the air, by which the decomposition and combination of the various elements of vegetable food is affected. The action of the oxygen of the atmosphere is thought to be particularly beneficial on clays, and slaty and granitic soils. The combination of the oxygen with the iron, and its action on the other mineral elements, produces a disintegration of the stony materials, and leaves the soil more friable. The admission of the oxygen into the soil, may likewise be useful by its entering into combination with the carbon of the soil, and thus forming carbonic acid, the food of plants.

On some soils, especially those of a tenacious nature, a hard crust frequently forms, by which heat and air are much excluded. Some simple implement, as a harrow or cultivator, should be used with frequency to prevent the crust from forming. As the growth of plants increases, their roots are more widely ex-

tended, and it is not proper to use tools which will mutilate and destroy the roots.

It is important that plants should be duly exposed to the influence of light and air. It is only under the influence of light that they are able to digest their food. They take in carbonic acid and water, but by the aid of light, they decompose the carbonic acid, giving off the oxygen, and retaining the carbon to form their tissues. This influence of light is quite surprising. If a plant is placed in a dark room, and a ray of light is admitted on one side, the ends of the branches are soon directed towards the light, and the plant seems to struggle to reach that part of the room where the light is strongest and its influence most direct. If a small tree be planted under or near a large one, or on the side of a forest, it soon begins to lean to the side nearest to the light, and will continue to grow in this direction, putting out but few or no branches on the side most affected by the shade of other trees.

SHEEP HUSBANDRY.

Many farmers in this section are convinced by actual experience, that there is no crop which we raise at so little expense, and is of so much value to feed sheep, as carrots. Sheep fed on them will attain a better size, and are more healthy than when fed on grain. Aside from hay, we feed nothing to store sheep in winter so well adapted to their wants, as this vegetable. Half carrots, with grain, is better than all grain for sheep or horses, to fat them. Several thousand bushels were raised in this country last season, for the purpose of feeding sheep, and I presume the quantity will be doubled the coming year.

With us, we make it more profitable to raise sheep than cattle; even when we sell our wool as low as 25 cents per pound, the average profits on sheep exceed those on cattle. In fact, I was about to say that the income from the sales of the increase of our sheep about equalled that of cattle, aside from the wool. The common flocks of this district yield annually three pounds of store sheep is over one dollar per head, fat sheep over one dollar and a half. The sales of our wool occur every year, our cattle once in two or three years. For instance, we keep our calves till they are three years old, then sell them in the fall. From our sales we lay out one-fourth or one-third of the money to re-stock.

The wealthiest man in this state, once remarked, as we were discussing the relative merits of raising sheep or cattle, 'that some of our graziers did not see the difference, between an annual income and income once in two or three years.'

Another farmer who lived in this town with the exception of three or four years in about fifty, sold his wool invariably for 25 cents per pound. In the meantime his flock averaged about 550, and stock of cattle over 60. His 2 year old cattle sold at from \$10 to \$12; 3 years old, from \$17 to \$20. I have frequently heard him say that his clean and easy money was made on his wool—that the cattle cost all that he got for them, the growth and increase of the sheep nearly paid for their keep.

If we bring into the account the improvement of our farms, to stocking either sheep or cattle, we must place the credit on the side of sheep.

The pure descendants of the Spanish Merinos are undoubtedly the most profitable sheep that we have. They yield a more abundant return of wool in comparison to what they consume, than any other breed. They are more robust and hardy. They withstand our northern winters, fed at hay stacks, without any covering above them except the broad heavens, and will range on shorter feed in larger flocks, and keep in good condition, when other breeds would pine away.

CORN FOR FODDER.

Let no farmer neglect at the proper season to sow a plentiful supply. Sev-

eral years experience enables the writer to say, that at least double amount of the best fodder may be obtained from an acre, over any other known mode, and very often triple the amount. If most meadows which now produce scarcely a ton per acre, were plowed and planted in this way, they would scarcely fail to yield four tons of the best and finest cattle feed, and many would yield five or six tons.

The management of the crop, however must be of the proper kind, or complete success cannot result. Never sow broadcast—for this requires four or five bushels of seed per acre, to succeed well, is less productive, and does not leave the ground clean. Invariably sow in drills, as follows:—Furrow the land, after it is plowed and harrowed, three feet apart, with a single-horse plow, scatter the seed thickly along these furrows from a hand-basket, so that there may be at least forty or fifty grains to the foot. Cover the seed by a two-horse harrow, run lengthwise or crosswise with the furrows, and the crop is in. The only after-culture consists in running the cultivator once or twice between the rows—all weeds will be shaded and destroyed by the crop—and the ground will be left early in autumn when the fodder is cut, as clean as a travelled road.

The seed may be sown any time during the early part of the present month—two bushels will be required per acre—and it may be harvested early in autumn, in time for a crop of wheat. The stalks should be stocked as dry as possible—in small stacks—and well salted—or injury by heating and mouldiness will follow.

PRESERVING GREEN CURRANTS FRESH.

M. S. Wilson, of Lenox, Mass., preserves green currants in dry glass bottles, corked and sealed tight, placing them in a cool cellar. Green gooseberries may be preserved in the same way. He adds, 'In this manner green currants have been preserved in my cellar for years. I have green currant pies on my table at all seasons of the year.'

GARDENING OPERATIONS.

It is well to be in readiness for the commencement of gardening operations at the earliest period which the state of the weather and the condition of the soil will admit. Some articles can hardly be put in the ground too soon after the frost has left it. This is the case with peas, lettuces, radishes, early cabbages, parsneps, spinach, parsley &c. It is rare that these plants are killed by frosts that occur after the season has so far advanced that the ground has once become fairly settled.

For peas the earliest varieties, such as Early Washington, the prince Albert, and the Cedo-nulli, should be chosen, and they should be planted on the warmest and most sheltered soils. Parsneps and spinach, also may be sown in the open air as soon as the ground can be worked.

It is a great advantage to give some plants a start in a hot-bed; particularly lettuces, cabbage, cucumbers, tomatoes, and egg plants. By forcing in this way, several weeks may be gained over plants grown in the open air. The chief advantage of raising plants by this mode of artificial heat, is to have them in an advanced state by the time it will do to transfer them to the open grounds, but cucumbers and early radishes may remain in the beds till they are so far matured as to be fit for use.

In this latitude it is not deemed advisable to start hot-beds until March, but farther south, they may be put in operation in February. It is of but little use to force plants which are designed to be afterwards transferred to the open air, until the spring has commenced, and there is a probability that the weather would not be so severe after they are set out as to seriously check their growth. It is an injury to keep them in the hot-beds after they have reached the proper size for setting out, as the effect is to 'draw them up,' as it is called, giving them long slender stems, which prevents their growth. Hot-beds should be sunk in the ground to the depth of 18 inches or 2 feet.

They require a large supply of moisture, and if made wholly on the surface, they dry up so rapidly that they must be watered a great deal. If, however, it becomes necessary to make the bed on wet ground no excavation need be made, as the coldness of such a situation might prevent the manure from fermenting, if deeply placed in the earth. In vol. ix p. 55, of the Cultivator, will be found some very good directions in regard to the construction of hot-beds.

The weather may be so cold as to render it necessary to use straw or mats to keep the air in the beds of requisite temperature. But they are liable to become at times too hot, hence they should be often examined, and the proper temperature secured by sliding the glasses; always admitting as much of the external air as the plants will bear. Water should be given frequently.

A deep mellow soil is all-important for gardens, and the use of the subsoil plow may be adopted to good advantage, in situations where teams can be made to do the work. In general, however, garden-work must be done by the spade. For most garden purposes, rotted manure is preferable. Composts which were formed the year previous and have been well worked several times, till they have become thoroughly fine, are best for most purposes. A good compost is made of two parts stable or barn manure, two of peat or 'muck,' one of tough grass sods, and one of leached ashes, mixed as equally as possible in a heap. If put up in the summer, the mass will soon undergo a fermentation, and by being worked over and re-piled, it will be in excellent condition for use the next spring and will show its good qualities in all kinds of vegetation.

Asparagus bed should be forked over as soon as the ground has settled, and a good dressing of compost worked in. Salt is also recommended as a dressing for asparagus, and we are of the opinion that it is beneficial. It probably operates favourably in two ways. Asparagus is said to be a marine plant, growing naturally in soils impregnated with salt water, hence it is concluded that salt forms an important part of its food. It will unquestionably bear a larger quantity of salt than plants generally, and by applying a liberal dressing of the substance to asparagus-beds, the weeds and noxious plants are killed, leaving the asparagus full possession of the soil.

EXPERIMENT IN THE CULTURE OF INDIAN CORN.

Mr. JULIUS HUBBARD, of Stockholm; St. Lawrence Co., informs us that by the use of a compost mentioned in the Cultivator for 1845, page 89, he raised last year as much corn from 2 acres as he has usually done from 5, but he does not state the precise amount. The compost alluded to, is described in a communication from Mr. CHARLES COLFELT, of Pennsylvania. We herewith republish the mode preparing it.

Twenty five bushels leached and unleached ashes, ten bushels plaster, sixteen bushels lime, and about fifty bushels fine sheep manure, mix the whole together on the barn floor, and dissolve the lime with beef and pork brine. After thorough mixing, the compost heap had the appearance of the grey plaster. I put one handful in a hill of corn, till I found I should not have enough to go over the whole field, when the quantity was reduced to a handful to two or even three hills.

The operation of this compost we have no doubt would be good; but it is questionable whether all the substances of which it is formed, combine in such a manner as to produce the best results. For instance, lime and sheep manure are incorporated together. According to chemistry, this is 'against all rule.' The effect of the lime would be to dissipate the nitrogen of the manure, which is its most valuable principle. The nitrogen exists in the manure in the form of carbonate of ammonia. The lime, having an affinity for carbon, unites with the carbon of the manure and sets free the ammonia, which is thus lost. Hence it is an established rule that lime should not be