

Garden, Orchard and Forest.

Mulching.

This subject, which is gaining additional prominence every year, owes much of its unpopularity to the abuse of its application. I have in my mind's eye an instance that illustrates the damage done the system, simply by employing workmen who were not conversant with the principles involved. What could ever induce a rational being to cover the surface of an orchard two feet deep with straw is more than the majority of fruit growers could possibly guess, and yet such was the fact. Of course it injured the trees, soured the soil, and made a capital home for all manner of injurious insects, besides whole villages of mice. The advantages to be derived from the use of mulching material may be summed up somewhat as follows:—First, the desire to keep the soil moderately moist and cool. Secondly, to prevent the surface from baking hard through the combined influences of the rays of the sun and the high winds. Thirdly, as a preventive from weeds. For newly planted trees all of these are necessities; the mulch preserves the surface moist and cool, and this is precisely the condition under which young fibres are formed. It keeps the soil open and porous, another sine qua non for the formation and growth of young roots. That it smothers out the numerous weeds that would invariably start was the surface not protected, is a self-evident fact.

For three or four seasons past we, in the Middle States, have suffered terribly from the severity of the drouths, and had it not been for the beneficial effects of mulching, in many instances the losses would have been frightful. Paradoxical as it may appear, water applied as we will does not answer the purpose altogether. We need something more; shade is absolutely essential, together with an equable temperature. Nature sets us an example in this respect in the fall of snow. It is not so much the moisture contained in the covering that falls so lightly and covers up our plants so evenly; not at all. It is the adequate protection afforded the roots, that no matter how severe the succeeding weather may be, these are preserved cool and unchangeable so long as the snow shall last. I know not of a more beautiful illustration in horticulture than this lesson that nature vouchsafes to teach us.

The material that should compose our mulch differs with the plants to be protected, as well as with the season when it is applied. We may rest satisfied, however, that all green or unfermented substances are deleterious in their nature, and not unfrequently do more harm than good. We occasionally hear of instances, however, where such have been used with good effect, as, for example, the use of turnip-tops for mulching strawberry beds; still, the principle is bad and should be discouraged. Heat and moisture engender decomposition in green vegetable tissue, and the heat consequent upon rapid decomposition is very injurious to plant life, when placed in immediate juxtaposition therewith. It calls into active life innumerable forms of fungoid structure, many of which are the forerunners of disease, and all are deleterious in the effect upon the health of the higher order of vegetation. It forms a proper hot-bed for the propagation and dissemination of millions of insects, the greater portion of which damage the roots and bark of our trees and plants. And, lastly, it imparts a sour and saddened character to the soil beneath, which must effect the well being of the plant.

What are the best materials to be used is not so easily answered, although there are some things like spent tan-bark that really seems adapted to almost all manner of plants. The healthiest pear trees I ever saw were kept constantly mulched with a good thick coat of this, and each autumn a slight sprinkling of well rotted manure was scattered over the surface. Tan-bark is applicable to most kinds of growing plants, from the largest orchard trees to the strawberry beds in the garden. Straw, not too long, and pliable, cannot well be excelled. It is clean and affords a pleasant shade, devoid of any deleterious effects. Hay I do not like, unless very coarse, and green grass kills more than it cures. Manure should never be used in a fresh state, although such is occasionally resorted to around large trees.

Plants in pots, that is, the ordinary varieties usually grown for this purpose, including roses, are greatly benefited by a slight mulch of old hot-bed manure. And conifers, too, show the effect of this fertilizing covering by an increased color and a more vigorous growth. Bright straw is, after all, the best covering for winter vegetables, such as spin-

ach, lettuce, cabbage, &c. Leaves are excellent for most things, but not around young evergreens. I have seen whole beds of these entirely destroyed by the compact mat which leaves form by spring, and this, preventing a free circulation of air, kills the plants in many instances. The subject may be summed up in a few words. After planting most forms of vegetable growth are benefited by mulching; during dry seasons everything enjoys it to a moderate extent. The number of trees and plants that have been saved by the process is beyond our calculation, then why not apply the remedy more extensively?—JOSIAH HOOPES, IN N. Y. TRIBUNE.

Sunflowers as Disinfectants.

Mr. T. Serle Jerrold, in a letter to *Public Opinion*, writes as follows regarding the cultivation of sunflowers as a preventative of disease:—

The subject received some attention about three years ago, when a conversation between General Sherman and the correspondent of a London paper, respecting the pestilential marshes around Rome, was published. The General said: "We utilize such places, and make them healthy; we just sow them with sunflower seed—common sunflowers—and that does." My own experience points to the same conclusion. Taking up the cultivation of the sunflower a few years ago, my attention was forcibly drawn to the subject of its extensive cultivation having a markedly beneficial effect on the surrounding atmosphere, by the fact that one season the village near which I resided was visited by a severe epidemic of scarlet fever and typhus; many children died, one in a cottage where the whole family was prostrate at one time, not a hundred yards from my own house. All my family escaped without a touch of sickness. I had at that time about sixty very large sunflower plants in my garden surrounding the house, many of them being twelve feet high. My personal experience of the efficiency of the cultivation of the sunflower as a preventative of miasmatic fever has been fully borne out by other and worthier authorities, of whom General Sherman is one.

A landowner on the banks of the Scheldt sowed the sunflower extensively on his property near the river, with such effect that there has not been a single case of miasmatic fever among his tenants for years, although the disease continues to prevail in the neighborhood. The *servants* of France, Italy and Germany believe the cultivation of the sunflower to be effectual in removing the sources of disease.

It may not be generally known that the sunflower absorbs during its growth a vast quantity of impure gases, it feeds largely by its leaves, absorbs nitrogen more rapidly than any other plant, and will evaporate as much as a quart of water daily. I am convinced that the cultivation of this much-neglected plant on a larger scale would not only be beneficial, but remunerative. The fibre can be used for making paper; the ripe seed is most useful as food for poultry, especially during the moulting season; from it a fine oil—second only to olive—is extracted; the leaves are much relished by rabbits, and the thick stems may be used as fuel.

Apples at the North.

During a recent discussion in the New York Farmer's Club, the opinion was expressed that the farther north apples can be raised, the better and more beautiful they are. The Fameuse, or snow apple, was instanced as an illustration of this. It was conceded that the best specimens of this choice variety are grown in and about Montreal. The same is probably true of the Pomme Grise and St. Lawrence, both excellent apples. It was further stated that the Fameuse and other varieties of noted hardiness are not nearly so good when grown in Pennsylvania, New Jersey and Virginia. Such testimony should encourage our farmers in the northern sections of Ontario to plant orchards of suitable sorts. Discouragement has often resulted from not properly studying adaptations of climate and soil. Such tender apples as the Rhode Island Greening and Newton Pippin will not answer expectations in high latitudes. It is a good plan in buying trees to leave the selection to the nurseryman, if he be competent and trustworthy, advising him of the locality, soil, exposure, &c., that he may choose the sorts accordingly.

The *Gardener's Monthly* gives briefly the following rules for selecting the different fruits:—"A light, dryish soil for the peach; a strong, loamy soil for the pear; nearly the same for the plum; a heavy loam for the apple—if on limestone all the better, and for the cherry a soil similar to that of the peach."

Seeds of Fruit Trees.

If the present month be ordinarily fair, it is not too late yet for any one inclined to put into practice the method of sowing seeds given below to do so. If the seeds be sown immediately when gathered, they will at least be safe in the soil for the spring growth.

As early as practicable in the fall I have my ground plowed as deep as it can be done, and then harrowed as fine as possible. I lay out the ground in rows fifteen inches apart, making the rows six inches wide and almost two inches deep. I then drop the seeds evenly over four inches of the space, dropping so that they will be almost an inch apart. I gather as many coal ashes as I will need, and use a mason's screen to pass the fine ashes through. When the men have finished dropping the apple seeds, I take the fine coal ashes and then cover the ashes with about half an inch of soil. Besides the ashes acting as a fertilizer and preventing the woolly aphid from doing harm, they keep the ground in condition, so as not to be affected by frost in the spring, and thereby lifting the soil. I have never found any trouble in this direction or from the aphid by covering with ashes. I plant all my seeds in the fall—plum, apple, cherry, peach, maple, ash, &c. I do not use coal ashes on any other than apple or cherry seeds. An application of sifted coal ashes in the spring, after the plants are well up and have made several sets of leaves, will materially benefit apple seedlings. Passing over the rows with the back of a rake will knock off any ashes that may have lodged on the plants. I find fifteen inches a good width for a space between the rows, and also find that I gain in ground, and have less space for weeds to grow. I also find the use of a digging fork better than the plow for working the seedlings, as less harm is done to them, and the work is more effectual. The advantages of fall planting will be obvious to all. Nature does her planting then, and the freezing is done in order and regularity. As soon as the spring opens they begin to grow. There is no hurry to get the seeds in when pressed with spring work; no detention because of late season and freezing, as by the old process. Nature takes charge of them in the ground, and the result is perfectly satisfactory. You can begin to cultivate the ground and keep down the weeds with but little trouble. I remember the remark made to me by a prominent Rochester nurseryman on a visit to this place. I gave him my mode in detail, and had the satisfaction of having him tell me that I would have the loss of time, seeds and labor as my reward. My reward did not come as predicted, but, instead, I was offered \$100 for the lot just as they were coming up. I preferred carrying the experiment through, and was well rewarded for it. I cover plum and cherry fully two and a half inches; peach three inches. No trouble to get through if your soil is light. I have given you the working in detail. I would only add that my faith in coal ashes increases with the use of them. I have seen orange and lemon seeds that had been thrown on the ash pit in the fall, sprout in the spring, and grow to fine plants, with no other soil than that afforded by the ashes.—*Cor. N. Y. Tribune.*

Storing Fruit.

An expensive structure is not required, for the fruit may be kept exceedingly well in a dark room in which it will not be exposed to sudden changes of temperature. A cellar is a capital place, provided it is perfectly dry and dark; but, as usually constructed, cellars are too damp and incapable of being properly ventilated. If a place is built expressly for fruit, it should, in dry soils, be partly below the general level, with the soils banked up against the walls. On wet soils it may be built upon the level, and a bank of soil made against the walls. The roof must be double, or covered with a good thickness of thatch, which will materially assist in maintaining an equable temperature. The fruit should be kept in perfect darkness; but, to facilitate the examination of the stores, windows provided with shutters should be fixed at intervals in the roof, or elsewhere, according to the style of the house. The fruit room should be in a shady position, for a very considerable number of soft fruits ripening in summer are materially improved by being placed in a cool room for a few days, and in some cases the season of a particular fruit may be prolonged considerably by a portion of the crop being gathered and then placed in a cool, dry place, or a dry cellar. With regard to the internal fittings, it will suffice to say that shallow shelves or drawers of open lattice work are preferable for laying the fruit upon.—*Gardener's Magazine.*

Keep

The ques way to kee have found or devoted The apples inches deep or picked o specimens.

It is ver cool as pra before the f this purpos house facir there till commences of the fui This fruit thirty long ment by an bottom to ventilation be open d regulation The nearer ter the fr warm outs the warm ciently to perature.

The app any decay removed, over the animation spring vi

Among radiness keep are keepers a headed up this select while the as all re in a few

A lit remove the before d several ti but sound

As wa more dif may be e soum-est shallow on the b tom keep shelf ab rents, such fru Greening kept fine July.

The th l. Placi turni ti caying s the tem freezing, windows

Subj

A vet that, rel on soils tributab before d to try th he did w by this, plur, an prisingly

If you must be while it are wau deep, ju stand a transpla they rea with an careful growth, pushes prise in where t for this