



Agricultural Department.

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 in 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 were 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 droughts; 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 orders 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 affect 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 seem really 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 spinach, 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 thus 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?—*J. H., in N. Y. Tribune.*

RURAL LIFE.

In some countries, and in Spain among others, agriculture was regarded with contempt, a prejudice that only bespoke the ignorance and debasement of the minds that cherished it. In settling this question, the Spaniards had only to recur to the time "when Adam delved and Eve span," and when the sons of kings were hewers of wood, and their daughters drawers of water. To a mind, in fact, free from ambition, and in times moderately favorable, there can be few occupations more delightful than that of a farmer. He does not constantly operate upon stocks and stones; he does not pander to a vitiated taste, and deal in commodities that are positively baneful. No; he addresses himself directly to the great source of all our enjoyments, he presses art into the service of nature, and has to do with the weighty concerns of soil, season, and climate; his workshop is the fruitful earth; his machinery the sun, moon and clouds, and aided by these, he produces the elements of every comfort; irrigating the parched plain, draining the morass, enclosing the common, and reclaiming the barren waste. In a word, it is his fortune to exemplify, in some degree, the truth of Swift's position, "that he who raises two ears of corn where only one grew before," is more useful in his day and generation, than hundreds on hundreds of names which history, in her great charity, seems never tired of eulogizing, but who, where the truth dared be told, were only remarkable for the miseries they entailed on the human race.

On observing the pale-faced mechanic hurrying away to his morning labors, we almost regret with Rousseau, that great cities should have become so numerous; that mankind should be congregated in such mighty masses; and think, not without pain, of the many long hours the artisan must pass in the tainted atmosphere of a crowded manufactory. But how different are our feelings on seeing the gardener resuming the badge of his trade or the plow-boy harnessing his well-trained team! Though the toils of both may be hard, they are surrounded with every object that is rural and inviting: the grass springs and the daisy blossoms under their feet; the sun warms them by his shadows how the day waxes or wanes; the blackbird serenades them from every hedge or tree; and they enjoy, moreover, the inexpressible pleasure of beholding Nature in her fairest forms, rewarding most munificently their skill and industry. How does the citizen sigh for such scenes! and how soon, when his fortune is made, does he hurry away from the confines of a second Babel, to sink the merchant in the gentleman farmer. Few strive to rival the handicraftsman by making their own shoes, or any other needful article of dress; but all, yes, all who are able, strive to trim their own gardens, and superintend the cultivation of their own property.—*Eliza Cook's Journal.*

SOMETHING NEW ABOUT PEARS.—Mr P. T. Quinn tells the following story in his "Rural Topics" in *Scribner for July*: A few years ago, a gentleman living in the suburbs of New York, anxious to have large pear trees that would bear fruit soon, contracted with a tree agent for some Bartletts, the price of which was fixed at \$10 apiece. The trees came in due time and were set out. In two years from the time of planting, they bore a small round russet pear, that hung on the trees until late in October. About this time, the very same agent made his appearance and, being reminded of the contract to furnish Bartletts, he asked to be allowed to examine the trees and fruit, the latter still hanging on the trees. He examined both carefully, and, suddenly turning toward his victim, said, with a stern expression, "Well, sir, when I sold you those trees I supposed you were a well-read, intelligent man; but now I am of a different opinion." This very singular remark brought forth the query, "Why?" from the owner. "Why," was the response from the agent, "to think of a man of culture at this day and age, who does not know the fact that a Bartlett tree never bears Bartlett pears the first year." The gentleman admitted his ignorance, and the pedler left, master of the situation. Some weeks after, the victim made enquiry of a neighbor to know if he was aware of this strange phenomenon in horticulture. Since then, this tree agent has not made his appearance in this section of the country.

CLEARING LAND WITH DYNAMITE.—Experience at clearing lands, both in removing stumps and large boulders with dynamite in Scotland has been a success. The following account is given of a late trial, in an Edinburgh paper: "A spadeful of earth was removed from the side of a stump and a hole driven into the stump with a crow-bar. Into this hole a cartridge of dynamite was pressed by means of a wooden ramrod, then a detonating percussion cap, with a Blackford's fuse attached was squeezed into a small cartridge or primer of dynamite, and inserted into the hole in the trunk in contact with the charge. The hole was filled up with loose earth, about a foot-length of the fuse being left bare. A match was next applied to the fuse, and sufficient time was taken for the powder to reach the percussion cap to allow the operatives to retire to a safe distance. When the explosion occurred the trunk was literally blown out of the ground, some of the fragments, weighing nearly twenty pounds, being thrown to a distance of over a hundred yards. The destruction of the stump was complete. In breaking up big boulder stones, the dynamite was simply placed on top of the stone, covered with wet sand, and fired with the fuse in the ordinary way. The result was the reduction of the boulders to fragments the size of a walnut. It was effectually proved by the experiments that land can be speedily cleared of formidable obstructions to good cultivation by the use of dynamite, and the committee of the society who watches the operations expressed themselves as highly satisfied with the results.—*N. Y. Observer.*

EXERCISE FOR ANIMALS.—HENS.—An experienced farmer says that in all schemes for feeding animals in yards and stables, instead of allowing them to get their own food in woods or pastures, there is one thing lost sight of; namely, the necessity of physical exercise, in order to have the best of health. We know how it is with men and women who do not take exercise enough, and it is as true of animals. They need something to do as well as something to eat, and the wise man is he who finds his animals exercise as well as food. One of the best chicken "culturists" that we know acts always on this principle. They are usually so situated that the birds cannot have full range, but have to be kept confined in a rather small yard. They generally look pitiful when penned up in this way, but here they look as cheerful as if they were in the open air, because something is found for them to do. In the fall of the year leaves are thrown in about the yard, and the grain on which they are fed is thrown in about them, so that it takes considerable scratching about before they can find it. At other times, they are treated to a bed of sand or earth thrown in the yard, in which they scratch and amuse themselves, and sometimes through the season the man forks up the ground. These and similar thoughtful plans for finding work for the feathered flock are practised, and our friend believes with much profit to the birds.—*Exchange.*

KEEP CHICKENS SCRATCHING.—Shelter afforded by doors and posts is almost useless. We want the shade of living undergrowth, beneath which the chickens can creep and rest. Chickens, again, must be occupied. Those runs which are only a few yards square, and which daintily swept over every day to make them look tidy for visitors, are useless for chickens. Nothing can grow or keep healthy in these smooth, billiard-table-like runs. Chickens want to be occupied and must be kept busy. The runs must be dug up, and piles of the loose dirt thrown up one day or another, and the chickens will delight in levelling these. A capital way to keep chickens on the scratch is to throw their whole corn always down among loose dirt or a lump of straw. The sexes, too, must be separated in good time. Some breeds are more precocious than others, and so we can fix no reliable date for their separation; it must depend upon the breed and the breeder's experience. There is, however, another point which we think as important, namely, moving every little while the pullets of the larger breeds, where size is a desideratum, from yard to yard, for we are convinced that it retards maturity and laying at an early age and so greater size is produced.—*Journal of Horticulture.*

VENTILATION OF STABLES.—The lungs of a horse are just like those of a man, except in size; they have precisely the same office to perform, in precisely the same way, and need the same conditions to perform it effectually. Such ventilation of the houses where men live as will secure a supply of reasonably pure air, is recognized as an essential condition of human health, and the forms of disease which are caused by the want of it are as well known, as are the means of securing the requisite supply of air and the methods of avoiding dangerous impurities. Everybody who has had occasion to go into a large city stable in winter, or in summer either, for that matter, must remember the pungent, stifling odor of am-

monia, which, if his lungs were at all sensitive, "took away his breath" for a moment or two. Other foul smells from the rotting straw and filth, would also have forced themselves upon his attention if the pungency of the one first mentioned had not overpowered them. Such an atmosphere, in which most horses spend the greater part of their lives, cannot be conducive to a healthy condition of their organs of respiration, and certainly not promotive of recovery when disease has once attacked those organs.—*Mass. Spy.*

HOW TO CONQUER "SUCKERS."—A lady cultivator has at last solved this perplexing problem (at least so far as one species of "suckers" are concerned) and we give the account of her experiment as reported in the *Country Gentleman*: "It is now well known that pruning trees in winter or early in spring tends to promote vigorous growth, and that pruning in summer tends to retard it. Hence the great superiority of the practice of cutting down trees in summer if we wish to avoid the growth of suckers from the stump or roots. An intelligent lady, whose grounds we have often visited, has just been trying a few experiments. A number of common locust trees were to be removed, and a part were cut off in the winter, and the rest during the summer season. The latter have sent up a few feeble suckers; the former at least twenty times as many strong ones. She has succeeded, however, in preventing entirely the growth of suckers, both at the stump and at a distance from it, by placing a large quantity of common salt on the stump as soon as the tree is cut. It has proved completely effectual. If delayed till the suckers have started, it does no good."

HENS PLUCKING FEATHERS.—Hens want salt. Give them twice a day in four parts of wheat bran to one of corn meal, by measure, a tablespoonful of salt in every eight quarts of this mixture, scalded and cooled. The hens are after the salt contained in the minute globule of blood at the end of the quill. Hens fed in this way, or occasionally furnished salt, will never pull feathers. The salt should be dissolved in hot water before mixing with the feed. This is a certain antidote.—*Country Gentleman.*

—An old New Englander once remarked to us when we advised him to pinch back his blackberry bushes, to keep them within bounds and make them bear better, "That's so! I can remember when I lived down at Dartmouth, that we always found the most blackberries on the bushes that the old cow had browsed down." We lately saw another example in a Western paper, where a farmer had set out a hundred apple trees in autumn, and was advised to cut the roots in the winter to balance the necessary cutting of the roots in the winter. But he declined. In the winter a cow broke in and cropped the tops of twenty-five or thirty, and the winter being severe, these and a few others, were the only trees which survived. The others had more top than they could carry, and whipping about in the wind, they did not grow. We would not, however, recommend the cow-pruning for general adoption.—*Ploughman.*

—The celebrated farmer, John Johnson of Geneva, N. Y., says he has used plaster every year since he came on his farm, now fifty-four years; and it has done wonders for him on corn, clover, and grass. The first he used was on corn, soaking the corn in water, then mixing it with plaster when wet. He planted the plastered corn, and a hired man planted the corn that was not plastered. When the corn was up, that which was plastered was stronger and better colored than the other. It kept ahead throughout the season, and when ripe a blind man could have told the difference by feeling the stalks and ears.—*Chicago Tribune.*

—Millet is an excellent forage crop, and should be sown whenever there is a scarcity of other kinds. Of the German millet, a newly-introduced variety, rather astonishing stories are told by some of the papers, and in the South-west especially it seems to be much sought after. The ordinary millet and Hungarian grass are similar in their nature and cultivation. They ought to be sown on land rich or well manured and deeply plowed. About four pecks of seed is generally used to the acre, and it may be sown as soon as the ground is well warmed, or delayed until June or July.

—Wallace's *Monthly* says: "Hogs that will weigh 500 pounds are sold at less price per pound than those of 250 or 300 pounds. The market in England has long favored light weights. London is chiefly supplied with pigs of less than 200 pounds weight. And this tendency of the market to pigs, well fattened, but of small weight, is just what the farmer should encourage, for it is exactly in the line of his interest. It costs more to make the second hundred pounds of a pig than the first, and still more to make the third hundred pounds and so every pound added becomes more expensive."