

above the level of the ground. The peach moth, finding its way to the soft bark below the surface of the earth barred by the mulch, deposits its eggs in the manure, where they either fall a prey to birds, or the grubs are unable to penetrate the hard bark, and suffer the consequence of misplaced confidence in barking up the wrong tree. The peach tree is subject to many disorders, but it need not "have worms."

PRUNING.

During the first years the trees should be trained to assume the form of a wine glass with open head. He then cuts back two opposite sides of the trees, removing all the bearing wood, and is enabled to plow close to the trees in the direction of the cutting. The orchard is thus plowed for two years, turning the furrows towards the trees. After two years the uncut sides of the trees are trimmed as before, and the plowing follows, turning the furrows towards the trees at right angles with the two previous years. This system of cutting back and plowing is alternated every two years.

The trees ordinarily present the appearance of being planted on mounds, whereas really on a level with surface soil. By following this system of mulching with manure, and the use of ashes around the trees, the feeding roots do not extend beyond a few feet from the tree; the system of plowing also brings the top soil to the tree, and roots which extend into the poor soil beyond have always been observed to turn back to the manured circle around the trees. This is on the principle of manuring in the hill, instead of enriching the whole ground, which is virtually impracticable in this State.

KEEPING BACK THE BUDS.

In the fall, remove the earth with a spade from around the trees, but do not expose the roots, and cut a drain from the basis thus formed around each tree into the dead furrow beyond. This basin is filled up in the spring and the mulch applied, which tends to further retard the flow of sap as the season advances.

The bud on the peach tree is an excrescence, put forth to anticipate the season, and is not necessary, and does not exist in the longer season of its native country, Persia. But there the germ is projected beyond the bark, and enclosed in its wrappings of vegetable tissue, in order the more speedily to respond to the advance of the season.

The less the projection and the thicker tissue envelopes, the less the danger from late frosts and climate irregularities. It can hardly be said that when the temperature is below zero any bud is safe; but, even then, the possibility of maintaining a higher temperature of the germ, under the protection of the bud, depends on its size and thickness, and this is upon the vigor of the tree in its efforts to mature, even during winter months. In proportion as a tree is vigorous, it, like an animal, has a higher temperature than the air in winter; but when weak from insufficient nutrition it has less ability to resist cold—and not only the germ in the bud, but the whole fruit spur is frequently destroyed.

A small deficiency in the element of nutrition will turn the scale, precisely as the death of a dozen old persons in a hospital is determined by a few degrees reduction of temperature in the night, while fifty in the same ward survive, being more vigorous.

It has been demonstrated by a successful fruiting of an orchard during the past seven years, without a single failure, that the foregoing system offers every inducement of certainty of crop to those who choose to adopt it.

This system is based more upon the peculiar physiology of the peach in our climate than on any specific to insure the fruit, and depends for its success upon the application of proper nutritious elements and the judicious use of the knife, mulch and plow.—*Rural New Yorker*.

Shade Trees.

We regard the following, from the *New York Sun*, as both sensible and timely. We wish to say, however, that while there is no doubt as to the importance of planting shade trees, it is very important, also, not to overlook the necessity of a well-defined plan or system—one which will not caricature nature, and cause regret to the intelligent observer:—

"Farmers hold various and widely different

opinions in regard to the value of shade trees upon the farm. Much, however, depends upon a man's early life, associations and education, all of which have their influence in forming a taste and love for the beautiful in nature and otherwise. Some men can neither see nor admire anything except from a utilitarian point of view, and this, perhaps, in its most circumscribed aspect—a tree to them being worth only what it will fetch for timber or firewood. These utilitarian notions are far too common in all new countries covered with heavy timber, and the habit which is first formed through necessity becomes so fixed and universal that barrenness of landscape frequently follows, where an opposite result might have been secured without cost to the original owners of the land. The first generation of farmers destroyed that which the next two or three restore only in part, and at great expense of time and money. But as these are by-gone follies in the older States, we have only to take care of what is left of the old landmarks, and put out new trees whenever they are likely to be valuable or useful; and in doing so the subject of shade trees upon the farm should be considered as carefully as their value as timber, or for the fruit which they may produce.

The contrast between two regions of country, the one with trees judiciously distributed, and the other without them, is sufficient in itself to make any man favor the former. The generally attractive appearance of a country is certainly one of its strong points, and mankind cling to things of beauty quite as tenaciously as to those of strict usefulness and intrinsic value. Nomadic races seldom inhabit hilly, mountainous or wooded countries, for these tend directly to a fixedness of purpose, and a love of one spot which we term home. A rock, hill or tree is an object which clings to the memory of both civilized and uncivilized man. This idea may seem somewhat sentimental, but it cannot be denied that it is very potent in its influence upon nations as well as communities.

TREES ABOUT FARM BUILDINGS.

A goodly number of shade trees about the farm buildings add much to the general appearance of the place, as also to the comfort of man and beast during the hot days of summer. But many make the mistake of planting too many large growing trees near their dwellings, which in time exclude both light and air, and cause the building standing constantly in the shade to become unhealthy. In cold climates, deciduous trees should always be preferred to evergreens, when planted in positions likely to shade the house, because it is only in hot weather that shade is desirable, and in winter all the light and solar heat to be obtained are required for both comfort and health. As a rule, we would say, keep all trees of larger growth at least one hundred feet from a dwelling-house, using the intervening space as a lawn, in which may be planted small-growing trees and shrubs. Evergreen trees should be employed exclusively for ornamentation, or as windbreaks, but never for shade.

TREES IN PASTURES.

It has been frequently urged that trees in pastures encourages laziness in animals, for when such comfortable retreats from the hot sun in summer are at hand, they are likely to tarry too long at these resting-places. While it is true that animal instinct may not be any surer preventative against indiscretions in the dumb brute than in man, still, we believe that in all ruminants digestion proceeds more regularly when the animal is comfortably at rest, than when subjected to opposite conditions. Animals appear to be disposed to seek the cool shade of a tree when the heat is oppressive, and it is cruel, to say the least, to deprive them of this comfort. We have always noticed that animals having a comfortable resting-place during the hottest part of the day would feed later at night as well as commence earlier in the morning; consequently, we fail to see wherein shade trees in a pasture are detrimental to good health or the fattening of animals, as is sometimes asserted. There are certainly two sides to this question, but the more humane practice would be to provide shade, to say nothing of appearances.

TREES ON THE ROADSIDE.

Continuous rows of stately trees along the roadside add much to the appearance of a farm or country. But it is urged that shaded roads remain wet and muddy much longer after heavy rains than those fully exposed to the sun. This is doubtless true, but as an offset we may claim that they are less liable to become dusty, and between the two evils there is not much choice. Deciduous

trees only should be planted along roadsides in cold climates, because they afford shade during the season when most needed, if at all. Roadside trees may also interfere with the growth of crops in the fields adjoining, by shading, as well as by the absorption of moisture by their roots; but as we can scarcely secure anything of value without some loss, perhaps the pleasure derived from passing over a shady road during the hot weather in summer, as well as the beautiful appearance of such highways, more than compensate for the slight losses which they entail.

Gardening and Farming.

Do they not mean one and the same thing—namely, abundant crops produced by ample manuring and by very deep and frequent cultivation? I can detect no difference; the object is to gain the most perfect and profitable development of the plant, whether in flowering or seeding, and this brings me to the consideration of deep cultivation. What should we say to our gardener who allowed his flower pot, without a hole at the bottom of it, to be half-filled with dense, undisturbed stuff clay, and then put into the upper half a few inches deep of friable, manured and cultivated earth? When the rain from the clouds or his watering-pot had saturated and passed through the friable surface-soil, where would it then be found? Why, certainly, in or on the dense, undrained, unmoved subsoil, its only mode of escape being upwards, as vapor through the surface soil, carrying with it to the open air, as latent heat, the warmth that should invigorate and perfect the growing plant—the great British agricultural undrained flower-pot and its contents are thus clearly and indisputably described. There is no idealism or guess-work about the matter; the naked facts stand out in bold and unmistakable relief. The 15,000,000 or more of acres of undrained agricultural flower-pots (for all farmers' crops bloom or flower) exist as a great national mistake and disgrace; and equally blameable is the miserable five-inch agricultural pie-crust—for every one may learn by digging, and every farmer ought to know, that the roots of cereal and other farm crops, and especially autumn-sown wheat, descend deeply, and much beyond the plowed soil, in search of moisture and food, and it is because this subsoil is neither aerated and manured that the wheats "go off" in May. This is also often caused by too thick sowing, and the confused competition of roots. Does not thin sowing and plant room form an essential principle in the gardener's practice? If he desires a full, modern, perfect fruit, how carefully he thins out his fruit in its early stage to prevent undue competition and diminutive results. So does the farmer with his turnips—but why not with his corn, for wheat plants require space? The twenty rods of laborer's cottage garden, deeply cultivated and highly manured by one pig, or 800 pounds of meat made per acre, is an example that may be safely followed on the largest farming scale, provided, of course, the necessary capital can be found. Our country is still not half farmed. It is the maximum crop that diminishes, *pro rata*, the fixed charges of the farm, including manual labor, and, of course, thus increase the farmer's profit. "Where there is a will there's a way," so that when landlord and tenant believe that their capital will pay a larger return upon a diminished area, agriculture will present a more agreeable and more fruitful appearance.—J. J. Mechi, in the *Farmer*.

Manitoba as an Agricultural Country

According to the *New York Independent*, Manitoba, which has hitherto been esteemed chiefly on account of its fur business, has fine agricultural capabilities. It is said to be one of the finest wheat growing countries in the world, being a black, alluvial mold, rich in organic deposits, and resting from a depth of from two to four feet on a tenacious clay soil. Some of the fields on the Red River produced forty successive crops of wheat without fallow or manure. The yield has reached as high as fifty or sixty bushels, even under the farming of the native. Last year oats averaged sixty bushels to the acre, weighing over forty pounds to the bushel. One farmer raised 350 bushels of potatoes from seven bushels of seed, and the root crops generally were good. Among the vegetable products successfully cultivated are mentioned turnips, parsnips, carrots, cabbages, melons, beets, pumpkins, squashes, celery, lettuce, spinach, cauliflower and cucumbers.