

have known large blocks of nursery trees destroyed in this way, for want of surface drainage. Not a few planters lose their trees from this cause, as well as from lack of natural or artificial root protection. Frequently they are wholly at a loss as to the reason, and charge the trouble to poor trees or defective soil.

While the apple tree will do well in as great a variety of soils as any other tree, it is hopeless to try to grow a thrifty orchard upon land having an impervious sub-soil, or hard-pan near the surface. Though such land might, at great expense for drainage and ridging, be made to sustain a growth of fruit trees, it ought never to be taken if any other can be had. Neither should an orchard be set over a ledge of rock where the soil is not at least three feet deep in the shallowest spots. I have seen orchards do apparently well on such localities until just as they were coming to full bearing, then in a dry season, be cut off almost to a tree. A strong clay soil requires thorough under drainage, and subsequent deep tillage, before being planted to an orchard. The ground should be strongly back-furrowed, and the trees set upon the ridges. The land ought to be in perfect tilth, not cloddy or lumpy, when the trees are planted.

The most perfect soil for an orchard is a naturally rich loam, gravelly or stony, rather than sandy, but with a pervious sub-soil. The dark, shaley, calcareous slate loams on Lake Champlain, and the west shore of Memphremagog, are ideal apple lands.

Though hill-side land is often selected for an orchard, and many good ones are so situated, yet so important is tillage to a young orchard, and so difficult is it to till a hill-side without exposing it to injurious washing, that a more level spot is desirable. A north-western slope is perhaps the best, but it is not indispensable, since good orchards are found with other exposures.

Protection from prevailing winds, especially the fall and winter winds, is very desirable; and for this purpose the lee of a hill or of a forest may be chosen. When these are not