

sively under deserved punishment inflicted by a righteous Providence, we should not be unmindful of the physical causes with which it seems to be connected, nor of the remedy.

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CULTIVATION OF PEAR AND OTHER FRUIT TREES.

There is a very general complaint of failure in the cultivation of fruit trees in Canada. The stone fruits especially refuse their accustomed yield. Diseases seem to increase, and the remedies are either not yet found out, or they are not applied. We believe that a great part of the difficulty is owing to careless cultivation. Many people forget that trees require food, and will die without it, just as certainly as the living animal. They require food, too, that they can digest, or assimilate, and different species require different kinds of food. A writer in the *Country Gentleman* presents some valuable hints on this subject, which, if attended too, would, no doubt, lessen the complaints now so common about fruit trees dying, and refusing to bear.

"In the manuring of orchards we have learnt much, and solved many problems during the last few years, but we still have a great deal to learn in this respect. For what we do know, we are greatly indebted to chemistry, for expounding, by means of the crucible, the various elements contained in matter. Chemistry is the great telegraph of modern times, now set in operation through that wide and comparatively unexplored territory, scientific cultivation. It has brought and made as clear as noon-day the hidden mysteries of the science of the orchard, and like the philosopher's stone or the magic wand in fairy tale, turned all to gold, and has taught us the lesson that only through the most diligent study can we hope to achieve triumphs in the fruit garden. But our motto must still be *Excelsior*, until our country "shall blossom as the rose," and appear as Grenada did of old to the army of Ferdinand and Isabella, and orchards and gardens cover all our hill-sides. If we make as rapid strides in progress as we have the last few years past, we, perhaps, in time, may obtain the celebrity the French have attained in the cultivation of their orchards, for they much excel the English in this particular. But I am wandering from my subject, and so must return to it. Elliot, in his 'American Fruit Grower's Guide,' thus writes of soils and manures for the pear tree:—

"The pear roots thrive best in a soil where the subsoil is at once dry and moist; that is, where it is open and porous sufficient to admit of free drainage, and yet where the roots extending deeply and freely in it, reach moisture in seasons of extreme drought. Cold clay is a bad sub-soil, and when it exists in the ground of a prospective orchard, it should be deeply and thoroughly sub-soiled, and well drained. The pear on quince roots succeeds best in rich, deep, moist, loamy ground, even enduring considerable water better than dry sand."

"The following is the analysis of the ash of the pear, as made by Dr. Emmons:—

	Sap Wood.	Bark.
Potash,.....	22.25	6.20
Soda,.....	1.84
Chlorine,.....	0.31	1.70
Sulphuric acid,.....	0.50	1.80
Phosphate of lime,.....	27.22	6.50
Phosphate of peroxide of iron,.....	0.31
Carbonic acid,.....	27.69	37.29
Lime,.....	12.64	30.36
Magnesia,.....	3.00	9.40
Silex,.....	0.30	0.40
Coal,.....	0.17	0.65
Organic matter,.....	4.02	4.20

100.25 98.30

He goes on to say:—"From this it will be seen what is most wanted in the soil to produce healthy foliage and wood in the pear. As a general thing, soils usually are or