

ble accessions can be made to the compost heap or yard, than that obtained from the forest. In the cultivation of young fruit trees, this species of dressing is now greatly valued. From one to two years are required to prepare them for this purpose according to the particular use to which they are to be applied. Any kind of forest leaves will be found valuable for this purpose. All that is necessary is to afford them time to decompose. The foliage of the alder, bass, poplar, willow and other similar trees, is more readily decomposed than that of the elm or oak; but they possess less consistence, and consequently tend less to the increase of the compost heap.

The fact is now generally well understood by practical agriculturists, that the aliment of vegetables, technically denominated *Humus*, is best produced from that class of substances from which plants derive their food. The process adopted for elaborating this important material is attained in a variety of ways; but the most direct method is by the application of substances of an animal or vegetable character in a state of active putrescence or decay. We of course, are speaking now of organic manures, and in the list of materials shall embrace *leaves*. These, in addition to their organic constituents, possess also matters of an inorganic character no less essential to plants in a growing state, than the former. To illustrate this point somewhat more fully we present an analysis of leaves of the "Early Harvest Apple." The leaves were collected September 30, the tree bearing fruit:

Silica	5.775
Earthy phosphates	
Phosphate of peroxide of lime	4.875
Phosphate of lime.....	1.416
Phosphate of magnesia....	trace.
Silica.....	5.125
Phosphoric acid.....	5.359—76.775
Lime	36.398
Magnesia.....	0.075
Potash	13.179
Soda	11.616
Chloride of sodium.....	0.060
Sulphuric acid.....	0.137
Carbonic acid.....	15.200
Organic matter.....	2.850
	101.065

PROPORTIONS.

Water.....	54.341
Dry	45.659
Ash	4.194
Calculated dry.....	9.163

—N. E. Farmer.

Temperature of the Earth Under Sod and Under Cultivated Surface.

The writer was recently a listener to an animated discussion between two excellent gardeners. One insisted that the earth was drier and warmer

under sod than under loose earth. The other argued on the contrary. Each was sure the other was wrong, and each appealed to us. "There is a Thermometer, we replied, "why don't you not go and try for yourselves?"

How strange it is that men will argue for years on the most simple questions, when but five minutes of actual experiment would often decide the matter at once and forever! How true it is that a large amount of misunderstanding often leading to the most disastrous issues, not only to individuals, but to whole communities, arises from imagination being mistaken for fact and hasty assumption misplacing cool perception. In our schools most of what we are taught might come under the head of "what to remember; but how much better would it not be if the system was "how to observe and consider?" We cannot help making these reflections, as, in our department of education—horticulture,—we find this injudicious course of education opposing our progress at every step. But to the temperature experiment.

It was mid-day on the 26th of August, at the thermometer, in the shade, under a tree, five feet from the ground, was 92 degs.

The first spot selected was in a very hot place on a lawn, where the grass was kept mown pretty close by a scythe. A spit was dug up a spade six inches deep, the thermometer inserted, and the sod placed on immediately. After a few minutes, the thermometer was four to mark 88 degs. Ten feet from this spot, the same full sunny exposure, was a flower-bed kept clean by the hoe and rake. The thermometer was here inserted as before, and found to be 96 degs.

A more exposed place was then chosen, on a hill, where a boundary once divided a pasture from a cultivated piece of ground, used as a nursery, on which three year-old apple trees were growing. Four feet from the fence, in the sod, the thermometer was again tried as before, and the result was 80 degs. The same distance in the cultivated lot, tried in the same way, gave 88 degs.

It was evident from these two experiments, tried in the coolest and in the warmest spot that could be found, that the relative difference in the temperature was uniform, and the result is, that on a hot summer's day, the earth, eight inches under surface in sod, was eight degrees cooler than under a clean, loose surface.

It seems to us that this fact, if found to be universally as it was in this particular instance, ought to have an important bearing on the discussion of many important horticultural questions—such as whether orchards as a rule, better in grass or not, for instance—but it is not our object here to enter into such questions. We wish now merely to call attention to the want of more observations and less opinion and to show the result of such an experiment, in a single instance.—*Gardeners' Monthly*.