

## FARMER'S WORK.

BY CHARLES SWAIN.

Take the spade of Perseverance ;  
Dig the field of Progress wide :  
Every bar to true instruction  
Carry out and cast aside ;

Every stubborn weed of Error,  
Every seed that hurts the soil—  
Tares, whose very growth is terror,  
Dig them out, whate'er the toil !

Give the stream of Education  
Broader channel, bolder force ;  
Hurl the stones of Persecution  
Out where'er they block its course :

Seek for strength in Self-exertion ;  
Work, and still have faith to wait ;  
Close the crooked gate to fortune ;  
Make the road to honor straight.

Men are agents for the future ;  
As they work so ages win  
Either Harvest of advancement,  
Or the product of their sin.

Follow out true Cultivation,  
Widen Education's plan,  
From the majesty of Nature  
Teach the majesty of MAN.

## DEFINITION OF SOILS.

In common phraseology, soils are characterized by various, and, in many instances, very vague terms, such as heavy, light, stiff, open, tenacious, porous, wet, dry, warm, cold, etc. These always convey certain important characteristics, but are differently understood by different persons. Soils are properly classified according to the presence, in greater or less proportion, of certain bases, such as clay, lime, sand, and vegetable matter, these being important constituents.

A pure clay is a soil in which very little sandy, silicious matter is found. Accurately it consists of a chemical combination of about sixty parts of silica and forty of alumina, with a trace of oxyd of iron.

A strong clay contains about twenty parts in one hundred of sand, capable of separation.

A clay loam contains a large proportion of sand easily separated.

A loam contains one half or more sand, readily separable.

A sandy loam contains eight or nine tenths sand.

A sandy soil contains one tenth or less of clay.

The above are the varieties of soil as regards the base clay.

In reference to the second important constituent, lime, we have a marl, containing from five to twenty-five per cent. of lime.

A calcareous soil, in which lime is the predominant constituent. Marls are always characterized as sandy, or loamy or clay marls, according to the portion of sand.

In respect to decayed vegetable matter there are soils which owe their character to this. Such are our swamp soils or muck, in which masses of ferns and the roots of dead grasses predominate, forming a black, fibrous mass. Vegetable or leaf-mold, formed by the decay of leaves found in our wood-lands, is one of the most valuable items to the gardener. Muck, however, can not be used with safety in compost with other soils, until it has been meliorated by exposure to the sun and air, the admixture of some alkali. Potash, soda, lime, or magnesia are the most efficacious alkalies used, and are found in several forms, such as wood-ashes, common salt, etc. The term peat is frequently used in speaking of soils resulting from decayed vegetable matter ; the term muck has a very different signification with our English fellow-laborers, though the popular phrase with us.

**BIRDS.**—Birds are among the best friends of the gardener, and should by no means be destroyed, although some of them may eat a few raspberries or cherries. They easily search the small branches and ends of twigs, where insects are sure to be, and which can not well be reached by brush or other appliance.

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