

In a strong clay, warmth and porosity are given; and upon a light and friable soil, where the furrow is properly pressed, tenacity and firmness are imparted by the fibrous roots. Without a previous crop of this kind, many lands are much too light to grow wheat. Upon the writer's own farm, are many fields of magnesian limestone, that will not grow a good crop of wheat in any other course than after seeds or clover. However highly a fallow or stubble may be manured, it will not produce a field of wheat equal to that grown after seeds or clover. The universal practice which holds with reference to the ploughing in of grass, its adoption as an indispensable part of the four course system, and of every other rotation, four, five, or six years, by which it is deemed most judicious to keep up the powers of the farm, render it unnecessary to say many words on the details of the system. The advantages of good workmanship in ploughing out such crop, are known to all practical men.

*Green manures grown for the special purpose* of being incorporated with the soil in their fresh state, are usually vegetables that are of quick growth, and capable of being grown upon poor soils.

The plants that have been recommended for this purpose, are Italian rye-grass, clover, buckwheat, lupine, rye, spurry, rape, mustard, tares, &c. The practical farmer who is situated so as to obtain a crop of the kind, will have little difficulty in determining which is best adapted to the circumstances of locality, seasons, climate, and soil, under which he is placed. Upon strong clays which have been open fallowed, if worked sufficiently early, a green crop of rye or tares may be occasionally obtained. This, if ploughed in, will not only furnish the succeeding wheat crop with useful food, but will improve the texture of the heavy soil.

This crop should not be sown early enough to prevent the fallow from being well made, nor to become a heavy crop; a fog crop five or six inches in length is quite sufficient. Clover which is so shy of growth, is too difficult to obtain for *fodder* purposes to allow us in old cultivated soils to attempt to grow it for green manure; when by so doing, we are likely to make our soil clover sick sooner. Mustard, rape, &c., may occasionally be grown upon light soils after an early crop of grain. To effect this, no time must be lost in preparation. Still disappointments will often occur in a climate like that of Great Britain.

When buck wheat is permitted to grow up and get into bloom before it is ploughed under, a roller is passed over it, marking such lands as it is intended to plough; and the plough is run the same way as the roller went. A short piece of very heavy chain dragging from the upper part of the coulter, in the furrow, will bend the tall stems under, and bury them effectually.

Green manures that are collected from extraneous sources, and applied in their fresh state as manures, are much more numerous than individually important. In the aggregate, however, they furnish us with an amount of fertilizing power that should not by any means be permitted to be neglected.

Separately, in some instances, they may be made available to an extent that is well entitled to the farmer's attention.

Sea-weed, farm-weeds, garden weeds hedge trimmings, turnip-tops, potatoe-haulm, are of this class. They have already been referred to in the article on Composts.

We record a single experiment made by Dr. Browne, Gorlstone, Suffolk, as an evidence of the action of sea-weed as a green manure. "In October, 1819," says he, "a violent gale of wind drove to this part of the coast, an unprecedented quantity of sea-weeds; these were eagerly scrambled for, and from my greater vicinity to the beach, I collected twenty-seven cart-loads, each as much as four horses could draw; and although other persons deposited their collections in their farm-yards to rot among their other manure, I spread mine, fresh and wet, upon little more than an acre of bean stubble, instantly ploughed it in, and dibbled wheat upon it on the 6th of October. I then salted the adjoining land with three bushels per acre, manured it with fifteen loads of farm-yard dung per acre, and dibbled it with wheat on the 15th of November. The result was, that the sea-weeded portion gave three times the produce of any equal part of the field."

*Farm-weeds* which have not developed their seed, are capable of being used as green manures with effect, where it may be more convenient to employ them in their fresh state, than to decompose them in the compost heat, as is the usual practice with modern and skilful managers.

The late Mr. Knight gives some very striking experiments with potatoe tops, fern, and nettles, as green manures. "In the beginning of June," he observes, "a small piece of ground was planted with potatoes of an early variety, and in some rows green fern, and in others nettles were employed instead of other manures, and subsequently as the early potatoes were taken up for use, their tops were buried in the rows in the same manner, and potatoes of the preceding year were placed upon them and buried in the usual way. The days being then long, the ground warm, and the decomposing green leaves and stems affording an abundant moisture, the plants acquired their full growth in an unusually short time, and afforded an abundant produce. The market gardener may probably employ the tops of his potatoes and other green vegetable substances in this way with advantage.

Another experiment of his with *fern*, he thus states:—"I received from a neighbouring farmer a field, naturally barren, and so