neglect of timely draining leaves the flat places | soil more than was taken from it, in other words, and hollows miry in the spring and fall and baked hard through the summer drought and it is not unfrequently the case that it is left to grow up again.

The best method of clearing land is to stump it at first while the tree will act as a lever to tear out its own roots, but as this cannot always be done the sooner it is stumped and well ploughed after taking off the first crop the better it will be for the subsequent crops. If the land is stony let the farmer weigh well in his own mind where he had best make his stone heap, and where a permanent fence will not require being removed, for labor and time are cash to A FARMER.

Sunbury, August, 1844.

GREEN MANURING, OR THE APPLICATION OF VE-GETABLE MATTER IN THE GREEN STATE .-- Johnston, in his lectures on the application of Chemistry and Geology, has a very long and able article on the above subject, but as it is too long for insertion entire, we shall endeavour to give the practical results to which the writer arrives, from which the reader will be able to draw such conclusions as cannot fail to be profitable to him, provided he acts up to the advice which those results would impress upon his mind. The results are—

1. That the ploughing in of grass vegetables on the spot where they have grown, may be followed as a method of manuring and enriching all land, where other manures are less abundant. Growing plants bring up from beneath, as far as their roots extend, those substances which are useful to vegetation, and retain them in their leaves and stems. By ploughing in the whole plant, we restore to the surface what had previously sunk to a greater or less depth, and thus make it more fertile than before the green crop was sown.

2. This manuring is performed with the least loss by the use of vegetables in the green state. By allowing them to decay in the open air, there is a loss both of organic and inorganic matter; if they be converted into fermented (farm-yard) manure, there is also a large loss; and the same is the case if they are employed in feeding stock with a view of their conversion into manure. In no other form can the same crop convey to the soil an equal amount of enriching matter, as in that of green leaves and stems. Where, the first object, therefore, in the farmer's practice, is so to use his crops as to enrich his land-he will soonest effect it by ploughing them in its green state.

3. Another important result is, that the beneficial action is almost immediate. Green vegetables decompose rapidly, and thus the first crop which follows a green manuring, is benefited and increased by it. But partly for this reason also, the green manuring of grain cropped land-it aided by no other manure-must generally be repeated every second year.

4. It is said that grain crops which succeed a green manuring, are never lain, and that the produce in grain is greater in proportion to the straw, than when manured with fermented dung.

But it is deserving of separate consideration, that green manuring is especially adapted for improving and enriching soils which are poor in vegetable matter. The principles, which living plants draw a part of their sustenance from the air must be admitted, and add to their value as fertilizers. Living plants contain in their substance not only all they have drawn from the soil, but also a great part of what they have drawn from the air. Plough in these living plants, and you necessarily add to the green lay, so much the better, the more prompt and

you make it rich in organic matter. Repeat the process with a second crop, and it becomes richer still, and it would be difficult to define the limit beyond which the process could be no further carried. Is there any soil which is beyond the reach of this improving process. Those only are so on which plants refuse to grow at all, or on which they grow so languidly as to extract from the air no more than is restored to it again by the natural decay of the organic matter which the soils already contain.

But for those plants which grow naturally upon the soil, agricultural skill may substitute others. which will increase more rapidly and produce a large quantity of green leaves and stems for the purpose of being buried in the soil. Hence, the selection of particular crops for the purpose of giving manuring-those are obviously the fittest, which, in the given soil and climate, grow most rapidly, or which produce the largest quantities of vegetable matter in the shortest time, and at the smallest cost.

The plants enumerated by Professor Johnston as best adapted to the purposes of green manuring, are-1.—Spurry; 2.—Pulse; 3.—The Vetch; 4. —Buckwheat; 5.—Rape; 6.—Kye; 7.—Turnips; 8.—Borage; 9.—Red Clover; 10.—Old Grass Swards

We have for years endeavoured to impress upon such of our readers as had not the means of obtaining a sufficient quantity of animal and vegetable manures from their stock to manure their fields, how important it was that they should plough in green crops, and we are the more pleased to find that our views, so often advanced, are so ably sustained by the opinions and experience of so distinguished a man as Professor Johnston. We have heretofore recommended the Buckwheat should be sowed for the purpose of being ploughed in whenever land was poor, and its owner had not manure at hand to improve it. We recommend buckwheat because of the quickness of its growth, and the largeness of its leaf, enabling it to appropriate to itself a very considerable portion of those nutritive gases which abound in the air, and form large portions of the food of plants.

We defer to no man in our estimate of the great value-the paramount importance-of lime to every soil calculated to produce vegetables; but still we have always thought that all soils require, besides mineral substances, those of vegetable and animal matter also, to make them partake of the highest elements of fertilization. We would not be understood as supposing that one of buckwheat turned in would be equal to a full dressing of rich stable or barn yard-manure-but we do maintain that two crops turned in just as the plant comes into flower, would be equal to a very heavy dressing of any putrescent manure which could be applied. And upon the score of cheapness, we know of nonc where the party has to buy, that can compare with it; and then, when properly and evenly sowed, green manure has this advantage, from the equal distribution of the vegetable matter over the entire field, there is an equality of fertility in all its parts, a thing most desirable, as every practical farmer will readily admit.

In conclusion, let us most respectively advise all who may have exhausted lands, and who may not have the means of procuring a supply of other putrescent matters, to make arrangements to sow and plough in a crop or two of buckwheat. Should they use lime or ashes in connection with the