

VARIOUS FACTS IN TILLAGE.

DEPTH OF SOWING WHEAT.—Wheat may be sowed too shallow as well as too deep. The depth must vary with the nature of the soil. A thinner covering is required in a close heavy soil, than in one light gravelly or sandy. The following experiments were made by Petri, the results of which would vary with the moisture or dryness of the soil. They are given as a specimen of trials of this kind, which if often repeated by farmers, would afford them much valuable information.

Seed sown to a depth of	Appeared above ground in	Number of plants that came up.
1-2 inch	11 days	7-8ths.
1 "	15 "	all.
2 "	18 "	7-8ths.
3 "	20 "	6-8ths.
4 "	21 "	1-2.
5 "	22 "	3-8ths.
6 "	23 "	1-8th.

GOOD ROTATION.—A successful farmer, who has enriched his farm, while he has enriched himself from it, pursues the following course: First, he takes especial pains with MANURE, wastes none, saves all, mixes well in the yard, (not by forking over, but) by a proper distribution of straw, stable cleanings, &c. Next, he makes corn his leading crop, as affording both grain and fodder, and as being all returned to the soil, in feeding all to animals, except what is sold in beef, pork, &c. The *first year*, the corn has all the manure in spring, at about 25 loads per acre. The *second year*, oats, barley, or spring wheat follows. In the autumn, sow winter wheat, which constitutes the *third year's* crop. This is seeded down to clover, which (being plastered) constitutes the *fourth and fifth year's* crop in meadow or pasture.

THE WHEAT CROP IMPROVING.—John Johnston of Geneva, N. Y., is one of the best farmers in the country. He first of all UNDERDRAINS; he then feeds his land well (with manure) and this enables his land to feed his large herds of animals: there manure feeds the land again; and both feed him and fill his pockets. He said, at the close of the year 1856, after all the unusual disasters which had happened to the wheat crop for some years previously, "*My own wheat crops for the last eight years, have averaged more than they ever did in the same length of time for thirty-five years.*" The reason he gives, he has sown *no wheat on undrained land*—added to the good farming described above.

GRASS LANDS.—No farmer should be satisfied with less than two tons of hay per acre from his meadows, and his pastures should be as good. There are several means of improving grass lands. If the land is wet, springy, or holds water in the subsoil, it should be drained. This may be easily determined by digging a hole two feet deep in spring of the year, and if underdraining is needed, water will stand in it. We have known meadows greatly improved by draining. Next in order, are manuring and deep ploughing for previous crops. Last, but not least, is heavy seeding. We have succeeded in doubling the product of grass, by quadrupling the seed—and this paid well. We have known five tons of hay per acre, by sowing a bushel of seed per acre.

LONG AND SHORT MANURE.—One great objection to using fresh or unfermented manure, is the difficulty of working its long fibres into the soil, and *mixing it finely with the earth*, a most essential operation. All these difficulties are surmounted, by cutting all the straw used for bedding. It need not be cut very short. If all the corn-stalks fed to cattle, were first cut finely with a machine driven by horse power, the animals would eat much more, and there would be none of that peculiarity unmanageable manure occasioned by large corn-stalks. A friend of ours cuts all his stalks with a four horse power—an hour's cutting lasting a long time—and finds great profit in it every way.

VALUE OF STRAW IN MANURES.—It is found by careful chemical examination, that different kinds of straw possess quite different values, to work up into manure. This relative value is very nearly determined by the quantity of nitrogen they contain. Barley straw is the poorest of all; cat and rye straws are about one-third better; wheat is nearly double in value to barley; buckwheat is rather better than wheat; meadow hay and corn stalks are far ahead of any of the-e, being five times as rich in nitrogen as barley straw; and red clover hay and pea-straw are each about eight times as rich as barley. Whether these substances are mixed directly with manure, or eaten first by animals, they produce their relative effects.