He began to ask himself a few questions, and set his wits to work to see how he was to make as much of 250 acres as he had of 1000. He then paid off his bailiff, who weighed 20 stone! rose with the lark in the long days, and went to bed with the lamb; he got twice as much work done for his money; he made his servants and labourers, and horses, move faster,—broke them from their snail's pace,—and found that the eye of the master quickened the pace of his servant. He saw the beginning and ending of everything; and to his servants and labourers, instead of saying, "go and do it," he said to them "let us go, my boys, and do it." Between come and go he soon found out a great difference. He grubbed up the whole of his furze and ferns, and then ploughed up the whole of his poor grass land, and converted a great deal of corn into meat for the sake of the manure, and he preserved his black water (the essence of manure); cut his hedges down which had not been plashed for 40 to 50 years; straightened his zig-zag fences; cut his water courses straight, and gained a deal of land by doing so; made dams and sluices, and irrigated all the land he could; he grubbed up many of his hedges and borders covered with bushes, in many places from 10 to 14 yards in width, some more in his small closes, some not wider than streets, and threw 3, 4, 5 and 6 closes into one. He found out that instead of growing whitethorn hedges and haws to feed foreign birds in winter, he could grow food for man instead of migratory birds.

After all this improvement, he grew more and made more of 250 acres than he did from 1000; at the same time he found out that half of England was not cultivated at that time, for want of means to cultivate it with. I let him rams and sold him long-horned bulls (said Mr. B.,) and told him the real value of labour, both in-doors and out, and what ought to be done with a certain number of men, oxen and horses, within a given time. I taught him to sow less and plough better; that there were limits and measures to all things; and that the husbandman ought to be stronger than the farm. I told him how to make hot land colder, and cold land hotter, light land stiffe., and stiff land lighter: I soon caused him to shake off his old, deep-rooted prejudices, and I grafted new ones in their places. I told him not to breed inferior cattle, sheep or horses, but the best of every kind, for the best consumed no more than the worst. My friend became a new man in his old age.—*Gardeners' Chronicle.*

Improvement in Steam Ploughing.

We learn from our English exchanges that some new features have recently been presented to the public in the machinery for steam cultivation. We clip the following account of them from the *Times* newspaper :—

"Messrs. John Fowler & Co. have brought out a six-furrow plough, and a plough turning eight furrows at once is being constructed. Now, although this piece of information may appear of slight importance, we believe that it is practically one of the greatest steps yet made in steam-power husbandry, because it involves a successful application of the system upon light lands. The vast advantage of deep and expeditious tillage upon strong soils has been proved in numberless cases, but farmers have doubted whether a costly apparatus can profitably cultivate those soils where a thin staple necessitates a shallow furrow, and where a pair of light horses can plough with ease one and a half acres per day, with few interruptions occasioned by wet weather. Norfolk is precisely the county to test the question properly, and during the past two or three months a pair of 10-horse engines (that is, one "double-engine set") from the Leeds firm has been making some extraordinary results upon the farms of Mr. Clare Sewell Read, M.P., Mr. John Hudson, of Castle Acre, and several other large occupiers. On one farm of sandy loam soil, 200 acres were ploughed 4 to 5 inches deep in 120 hours of actual work, or 143 hours inclusive of time occupied in removals, labourers' mealtimes, delays for breakage, and waiting for coal and water; this is at the rate of 16 or 17 acres per day through 12 long autumn days of 12 hours each—the rate of performance when in actual work being no less than 20 acres in a day of 12 hours. On another light-land farm the apparatus smashed up with the cultivator, at eigth inches depth, 20 acres in eight hours, or at the rate of 30 acres per day of 12 hours. On Mr. Hudson's medium and heavier soil, 30 acres were ploughed six inches deep, and 40 acres were cultivated nine inches deep, and all within the space of four and a half days in November. It has thus been demonstrated in the field that by simply widening the implement the full force of powerful engines may be employed in tilling a light as well as a heavy soil; and it is evident that the cost will be less per cwt. of draught, because the machine can be at work on light land when it would be stopped on a clay by wet weather, saving both time and wages, while the risk of breakage is also less.

"Messrs. Howard of Bedford, exhibit one of their new engines for working on the double-engine system, with a drawing explaining their method of operation. The boiler is placed crosswise upon a carriage frame, having two rope-winding drums, one at the fore-part, the other at the rear of the machine. Two engines of this construction traverse upon opposite headlands of a field, the two forward drums of both engines hauling one implement to and fro, while the two backward drums of the two engines haul a second implement to and fro. However, the implements are not pulled across the field from engine to engine, but only half way, alternately meeting in the middle of the field, and then returning each to its engine. Leaving a strip of unmoved ground at the midway meeting place is prevented by the implements not being in line, so that they pass each other for a few feet, one setting into work again at the ends of the furrows left by the other at the previous bout. Hitherto, in the double-engine system (admitted on all hands to be the most expeditious), each engine has worked only half its time, working when the plough is going one way, and resting when it is going the other; and attempts have been made to couple the two engines, so that both may simultaneously operate upon the implement both in its to and fro journey, and two 7-horse engines always working, thus do as much as two 14-horse engines alternately resting. The Bedford firm adopt the obviously more sensible plan of keeping the same power in the engines, and enabling them to work all their time by driving two implements instead of one. The amount of performance will not be quite doubled, because the ploughs, stopping half-way instead of travelling the whole length of the field, make twice the number of "turnings" in a day; but it may very probably be one-half to two-thirds more than upon the old method."

Gardening vs. Farming.

We hold that no person will attempt to cultivate a vegetable garden without deep cultivation and pulverization of the soil, and thoroughly enriching the ground by the use of manure in some form. Everybody at once concedes this to be necessary, and his practice is in accordance. Now, in what respect does a farm differ from a garden, except in the number of acres cultivated. A corn or wheat field is, or should be, but a garden on a large scale, for the cultivation of corn or wheat; yet how few farmers there are, who bestow a tithe of the labor or manure on the corn field, they acknowledge to be indispensable to the vegetable garden, to make it productive and profitable. Now, if it is necessary for the production of good vegetable crops, it must be patent to every one that there is the same existing necessity, in order to secure the production of good crops of corn and wheat. All are organized plants, and require the same treatment in regard to the enrichment of the ground in which they grow, as well as in their cultivation by manual labor. The object in view by every farmer and gardener, is to convert the elements derived from the soil and earth into substances available to sustain life, and add to our enjoyments. To do this, we must furnish such materials as can be metamorphosed into vegetables and grains, or disappointment is our lot. We have no right to expect that nature will convert pure sand and clay into cabbages, turnips, corn or wheat. Every intelligent mind knows that something more is required, in addition to sand and clay. Manure of some sort is indispensable, which is but the debris or remains of vegetables, which have once lived and died, or performed the office of food to animals.

All manures—even those derived from animals—are of vegetable origin. The minerals required by plants are usually found of sufficient quantity in most soils, and are rarely required to be furnished artificially. With these views, we hold it to be folly to expect a crop, so long as we furnish nothing but the seed out of which to make it. There should be no farmers, in the common acceptation of the term. All should be gardeners in respect to thorough manuring and cultivation, and all farms should be gardens, whether they contain one acre or fifty acres.

Dr. Parker, of Columbia, S. C., a few years since, made two hundred and twelve bushels of corn on one acre of ground, by judicious manuring and cultivation. What he did, can be done again under like conditions, and by any one; yet we will aver that his neighbours, with land as good by nature as his, did not make more than twenty bushels per acre, by the usual manure and method of cultivation, thus making it necessary for them to work ten acres to get a crop equal to his from one acre. Let us hereafter follow gardening. If we can make and work a garden of fifty acres, well; if only ten acres, do no more; if only five, be sure and have it a garden as regards the fertility of the soil and cultivation.

With these views, we say cultivate small farms, enrich your lands, diversify your crops, and labor diligently yourselves, and if you do not become wealthy, you can have at least an abundance about you to render life a blessing.—*Cor. Southern Cultivator.*

Crop of Mangold Wurtzels and Turnips.

A CORRESPONDENT of the *Country Gentleman* writes that journal as follows :—I have just finished getting up the mangolds and thought you would perhaps like to know the result. The plot furthest from the road—I think you did not see it last summer when you were here—produced the best crop, having had barnyard manure as well as bone dust applied to it. It contains 2a. 3r. 34p., and produced 3,155 bushels, at 60 pounds to the bushel. One-half acre was measured and carefully weighed; the product was 664½ bushels or at the rate of 1,328¾ bushels, or over 39 tons per acre. Variety Yellow Globe. Part was sown with the Long Red, which brought down the average. I am more convinced than ever that the Yellow Globe is the dairyman's best root. On finishing our carrots last winter and commencing to feed mangolds, our cows increased their milk very perceptibly. The lot near the road, not sown quite so early, manured with 7 bushels of bonedust per acre, containing 1a. 3r. 6p., produced 1,664 bushels. Turnips also good. One small plot of 1a. 2r. 3p., produced 1,421 bushels I have 3,087 bushels in all. The Skirving's, as usual are the best. Also tried Laing's, French Sweet and Ruta Baga. Skirving's are large, well grown, with good clear skins as nice as I ever grew. But running short of seed, I was prevailed upon to try the so-called *Ruta Baga*, which produced a small, ill shaped, green topped root with many fangs. Laing's were fair, and the French Sweet larger than usual. We made short work of harvesting them—cut off and piled tops with a sharp hoe—pulling up roots where the heaps were placed, being careful to place the heaps so that they would range in rows each way, then run over the field and again across, with a chain harrow I got from England last year. It worked splendidly, pulling all up, and shaking soil well off, without injuring the roots in the least.

FROST LIFTING FENCE POSTS—Mr. J. Griffin writes us that the action of frost in lifting posts from the ground may be prevented by casing the lower end of the posts with boards, (tile of the right size would be preferable.) This casing will be affected by repeated freezing and thawing, but the post will remain unmoved.—*Prairie Farmer.*

THE STEAM PLOUGH IN NEW ZEALAND.—The first steam cultivator has penetrated the soil of the Canterbery plains. After some difficulties the machinery and implements consigned to Mr. A. L. Powys have been delivered at the Waipara Flat. The plough, from Messrs. Howard, of Bedford, was taken and put together, so far up the country, by Mr Woods and a few farm-labourers, without even a pin being found wanting or a screw deficient.—*Mark Lane Express,*

FORKING BARNYARD MANURE OVER.—This is essential to rotting well. When corn stalks, straw, and ordure of animals are all trod down firmly during the winter and spring, the air is effectually excluded, and the material will not rot until it has been forked over, were it to remain there for a year or more. If it is loosened up, so that the air can circulate among it, the entire mass will decay in a few weeks so that it will be easy to pitch and spread it. Now, the most expeditious way of pitching manure up clean from the bottom is to do the greater portion of it with a strong horse fork. Set up three long poles as for pitching hay on a round stack, and make a hole down to the bottom of the manure first: then thrust the tines of the horse fork under the manure, and turn it up in large rolls, and tear it to pieces with hand forks. Horse forks are of great service where the manure is very long. After it has rotted, a man, or two men, can pitch much faster by hand. If barnyard manure remains in the yard all summer, it should always be forked over, to facilitate the decay of corn stalks and coarse straw. But it should be protected from rain. Some farmers pitch long manure on the waggon with horse forks. But I never could perceive that the practice would pay, because a horse fork will not hold as much as a horse is capable of elevating. It is easy for any one to try the experiment which will soon satisfy all anticipations or doubts on this subject.—*North British Agriculturist.*