

co, flax, &c.,) whose culture can only be continued by the help of commercial fertilizers."

The author continues:—"at my instance, this plan of early transplanting has been adopted at the Age Reform School of Mettray, and the first trial resulted in doubling the usual crop, although no manure was applied. My brother saw at Grenoble a field of beets cultivated in the same manner. The roots had an average weight of thirty pounds (14 kilogrammes) so that calculating there were only 8,000 plants to the acre, the yield would be no less than 124 tons. This was in September. There were still to form four new rings on each root, so that the final yield must have exceeded mine, and this was on the large scale.

In a warm climate, then, by heavy manuring, irrigation, early transplanting, and good tillage, such results may be procured. Where the vegetative period is shorter, where there is less warmth and less water, and where a frequently beclouded sky hinders the solar radiation, the produce will not, of course, turn out so high.

The point of production I have reached, however extraordinary it may appear, is not the limit. On the banks of the canal of St. Gilles, in the region so celebrated for its prodigious wine crops, a beet has been grown weighing 132 lbs. (60 kilos.) How many such are required to weigh 500 tons? Can we not study out, and then work out the condition for such a phenomenon?

We are having here, on this question, such a discussion as has come over to us from England, where many persistently discredit the wonderful stories about the yield of Italian Ray Grass. The timothy-growers cannot account for the crop of 50 tons per acre (Scotch); but when I see all the care in cultivation, the showers of liquid manure, the perfect drainage, and the use of steam-power, I am not difficult to be convinced of the truth of these assertions. The Englishmen have brought their plant from the extreme of Italy; have put under contribution the energetic vitality of the South, and have united it to the industrious activity of the North."

The plan of transplanting root crops from hot-beds, originated with Mons. Koechlin, and was practiced by him in Alsatia. He is said to have obtained on ground "perfectly prepared," beets averaging 17 kilos, =37½ lbs., and a total yield of 156 tons per acre! Raising the young plants in a hot-bed is no impracticable thing. It is easy to raise an artificially heated bed, and the seeds can be sown so thick that 40 square feet will furnish plants for an acre.

The English farmers, as I saw in Gloucestershire, are in the habit of transplanting cabbage, in order to occupy ground from which summer crops had been taken.

The average root crop of England is about 25 tons (turnips, carrots,) to 30 tons per acre (beets). We have now authenticated instances of four, five, and even six times these products. Who can doubt that it is cheaper to gather large crops from a small, well tilled surface, than medium crops from a larger area?

SALT FOR SHEEP.—The first thing the shepherd in Spain does when his flocks return from the south, the summer downs, or pastures, is to give them as much salt as they will eat. Every owner allows to each thousand sheep 2,500 lbs. of salt, which they consume in about five months. They eat none in their journeys, nor are they allowed any in winter, as it is thought to produce abortion when given to ewes forward with young. This has been the custom, and it is thought to be the true reason why the Kings of Spain could never raise the price of salt to the height it has maintained in France; for it would tempt the shepherds to stint their sheep, which, it is believed, would weaken their constitutions and deteriorate their wool. The shepherd places fifty or sixty flat stones at the distance of about five paces apart, strews salt upon each, leads the sheep slowly among them, and every one is allowed to eat it at pleasure. But when they are feeding on limestone lands, they eat no salt; and if they meet with a spot of mixed formation, they are said to partake of it in proportion as the soil is mingled with clay.—*Wool-Grower.*

Market gardeners have two methods of trenching their lands; when both soil and subsoil are good to a great depth, they turn the surface under, and fetch up a fresh spit from below; but when the subsoil is poor, or strong clay, they fast and trench it, as they term it, throwing the surface spit forward and always keeping it uppermost, digging the subsoil with the foot in the trench, without bringing it to the surface.