was only 19 per cent. The details of the disposal of the pulp from the crop 1872 are also interesting. Of 1,235 tons of pulp purchased by nine farmers,— Cost of production, and return therefrom. (Lavenham factory.)

597 tons were taken by one.
326 „ „ „ by another.
116 „ „ „ by another.
95 „ „ „ by another, not a grower of beet.

In addition to these quantities sold, about 500 tons were stored at the factory, where at the same time about 100 tons of crop 1871 were still on hand, and in excellent condition. To this latter fact we can add our own testimony, having been favoured by Mr. Duncan with a sample of it after it had been eighteen months in store, when we found it perfectly sweet and good, retaining unimpaired the taste and smell of fresh beet-root. The mode of storing the pulp is very simple. On a piece of dry ground a trench is dug out about 7 ft. wide and 1 ft. deep. Into this trench the pulp is firmly trodden by the feet of the labourers, and gradually drawn to a point, precisely as is done in storing roots. The whole is then covered with earth to the depth of 12 in.; and, thus stored, the pulp keeps well for two or three years. In using it a thin crust from the outsides is rejected. In Germany and Austria tanks of brick-work are used to economize space, but not in France or Belgium. Three tons of this pulp are estimated to be equal in feeding value to one ton of good hay. Hitherto farmers give the preference to fresh-made pulp, but Mr. Duncan regards this as quite a mistake, as in his own practice he finds that pulp a year old is a better feeding material than when newly made. In 1872 he fattened fifty cattle on pulp *three* years old, and in the summer of 1873 he had sixty cattle consuming the surplus of the previous season. These cattle (twenty-seven yearlings and thirty-three two-year-olds) consumed daily 35 cwt. of pulp and 4 cwt. of cut chaff (of hay and barley straw) mixed together. The older beasts received daily in addition 7 lb. each of bean-meal, on which ration they made good progress. To meet the cartage difficulty, Mr. Duncan contracted that year (1873) with one grower to perform the haulage of 2,000 tons of beet-root a distance of five miles by a traction engine.

Several joint-stock companies have been formed for prosecuting this industry, but Mr. Duncan's is the only factory as yet in actual operation. It is known also that Mr. Lawes and Dr. Gilbert have for several years been engaged in extensive experiments on sugar-beet, and with most successful results.

The manufacture of sugar from beet-root has attained to very great dimensions on the Continent of Europe. It is known that from the crop of 1872 there has been produced 1,025,000 tons of sugar, worth £24 per ton, and 250,000 tons of molasses, worth £3 per ton; and that new factories, some of them on a gigantic scale, are now in course of erection. A most important fact connected with this rapidly-extending industry is that the erection of a sugar factory is immediately accompanied by an improvement in the agriculture, and an increase in the value of the land, of the surrounding district. In many places farmers gladly contract to supply beet-root at 18s. per ton for ten years, on condition that they receive back pulp in fair proportion to the quantity of root supplied by them. Russia produces the finest quality of beet, instances being known in which the roots yielded 10 per cent. of loaf sugar. There are good grounds for concluding that Russia will, at no very distant date, take a prominent place as a sugar-producing country.

There seems at present a reasonable prospect that the cultivation of sugar-beet will be adopted in various parts of our own country. It has already been proved that the beet grown in the south-eastern counties of England is richer in sugar than that produced in the North of France; and it seems worth while to ascertain, by careful experiment, whether in certain parts of Scotland, such as the Lothians, Fife, and the Carses, sugar-beet could not with advantage be substituted for the precarious and exhausting potato crop. The repeal of the sugar duty would give a great stimulus to this enterprise, and should be pressed for in the interest of our native agriculture.

Referring to Mr. Duncan's factory at Lavenham, the Commissioners of Inland Revenue, in their report for the year ending 31st March, 1874, say,—

The season (1873) was a very short one, owing to the deficient and irregular supply of roots, as well as to the fact of the proprietor having been threatened with proceedings for pollution of the local streams with the refuse of his works. These circumstances have, we understand, decided him to suspend the manufacture, if not wholly to abandon it, at Lavenham.

That there was merely a temporary suspension of the works, if any, will be apparent from the latest edition of the "Encyclopædia Britannica," now in course of publication, still speaking of the factory at Lavenham as an existent institution. How far the pollution of streams, and consequent threatened actions, affected the successful working of Mr. Duncan's factory, I have not the means of judging; but such a difficulty does not appear to have arisen in connection with any of the factories on the Continent or in America, and is not referred to in any of the works on beet sugar manufacture in those countries. The cause for the hitherto comparatively unsuccessful pursuit of this industry in England may probably be gathered from the following remarks of the Commissioners:—

There is good reason for believing that the Revenue regulations have had no share in the bringing about of this result by interfering with the process adopted by Mr. Duncan, or checking the productiveness of his enterprise. We are also satisfied that the non-extension of the system to other parts of the kingdom is in no degree owing to the fear of our requirements, but that the manufacture has not