sterling. One firm alone, Marshall's of Leeds, purchase Flax to the extent of £1,000,000 sterling annually.

VII. *Experimental Culture of Italian Rye Grass at New Norfolk, with Table of Results.* *By* John Meyer, *Esq.*, M.D. [*Read 8th October*, 1851.]

The Italian Rye Grass has been successfully cultivated here upon a loamy soil over a clay subsoil, well manured and dug with the spade. The seed should in the first instance be sown in liberal quantities, probably 3½ bushels to the acre; the Grass should make its appearance thick, so as to cover the ground well from the first, as it does not spread like most of the English grasses. I have found that it does not succeed well in low ground, (which is always more exposed to frosts), nor where the subsoil is gravel: warmth and moisture are necessary to secure good and frequent crops. The ground within the walls of the Asylum, which is sheltered during the winter months, with power of irrigation throughout the year, seems peculiarly adapted to its growth. The seed may be sown from April to June; May is, perhaps, the best month. Sown here on 30th April, 1849, the following dates show how often it has been cut since:—15th June, 8th September, 12th December, 1849; 4th March, 18th April, 24th June, 1850.

With regard to quantity;—at one cutting of 10 rods, the weight of Grass per acre amounted to 13 tons 7 cwt., and later in the year the same piece of ground produced at the rate of 8 tons 15 cwt. per acre. In nine months, from 8th October, 1850, to 8th July, 1851, the quantity cut from about 37 rods of ground was at the rate of 56 tons 18 cwt. per acre.

TABLE.

No. 1. A plot of 10 rods, sown 30th April, 1849. For the first five cuttings the dates only are shown, as the quantities were not weighed. Since then the whole has been weighed as cut for consumption.

Dates of Cutting.	Total weight of Grass—lbs.	Weight of Grass per rod—lbs.	Weight of Hay per rod—lbs.	Weight of Grass, per acre—ton. cwt.	Weight of Hay per acre—ton. cwt.
1849 June 15th	..	..	..	..	..
—— September 8th	..	..	..	..	..
—— December 12th	..	..	..	..	..
1850 March 4th	..	..	..	..	..
—— April 18th	..	..	..	..	..
—— From 24th June to 5th July	1872	187	46	13 7	3 5
—— From 7th to 15th September	1239	123	30	8 15	2 2

No. 2. A plot of 17 rods, sown 13th April, 1850.

Dates of Cutting.	Total weight of Grass—lbs.	Weight of Grass per rod—lbs.	Weight of Hay per rod—lbs.	Weight of Grass per acre—ton cwt.	Weight of Hay per acre—ton. cwt.
1850 From 27th July to Aug. 10	1113	65	16	4 12	1 2
—— From 27th Sept. to Oct. 7	2794	164	41	11 14	2 18

No. 3. Sown 11th June, 1850, and cut for the first time on the 8th October: as a part had to be left for seed, and a great deal was lodged, it was necessary to leave some from each plot, and cut through Nos. 1 and 2 and show the three as one plot of 37 rods; this prevented its being shown separately after the above date: it was also required daily in a green state for the cattle. The quantity during the nine months would give the following result:—

Date of Cutting.	Total weight of Grass cut from 37 rods during 9 months—lbs	Weight of Grass per acre—ton. cwt.	Weight of Hay per acre—ton. cwt.
From 8th October, 1850, to 8th July, 1851	29470	56 18	14 5
	About 3 bushels of seed.		

During the summer the grass was only irrigated in patches, owing to the deficiency of water: the season being also a very dry one was considerably against it. The soil is of a dark loam, averaging about 10 inches in depth on a gentle slope, resting partly upon a subsoil of clay, and partly on gravel. The grass thrives best and grows rapidly with a broad blade and of a fine green colour upon the subsoil of clay; over the gravel subsoil it is thin and weakly, generally of a brownish appearance, and differs materially in quantity. Nor can it over the latter be made to produce as over the former for any time, even when strong liquid and well-rotted yard manure has been applied—the benefit of these applications disappearing after the second or third cutting. No manure has been applied when the subsoil is clay (beyond the irrigation): the grass is now looking as well and growing as luxuriantly as at any time since it was sown. It requires to be sown moderately thick, as it does not spread by creeping; it however stools out well after the first cutting. Scarifying and rolling does not make it cover the ground more; nor has the seed subsequently sown to make it thicker succeeded,—the rapid growth of the old grass destroys it: this might not be the case if grazed.

Grass, when made into hay, is considered to lose three-fourths in weight: the grass cut as above, young and green, would no doubt lose more; and if calculated to lose five-sixths, it would then give 9 ton 8 cwt. of hay per acre for the nine months.