

and prizes, at ten, fifteen or twenty shillings per week, for oil-cake, &c., &c.

I have published many similar returns to the above, and know from experience that the quickest generally prove the most profitable. But in the present instance, I desired to shew, that foreigners possess cattle equally prone to fatten with our own;—that meat can be raised from linseed compounds at one third less than the cost for cake; and that through the growth of linseed, with summer and winter feeding in boxes, nearly all the expenditure throughout the country for artificial manure, and for cattle food, might be avoided.

It can scarcely be necessary to remind the British farmer of his position with respect to foreign competition; and of his sure destruction unless he strikes into new and improved paths. Lethargy, prejudice, and antiquated notions, must give way to a vigorous exercise of common sense. The requisites for rearing, feeding, and fattening cattle must be grown at home,—manure be economised,—and employment be afforded to the weaker portion of the population, which can all be mainly secured through the cultivation of flax, use of the seed, and summer, as well as winter feeding in boxes.

As a further proof of the great utility of the system, I will just state, that I sold lately a fat yearling heifer for £12, and sent two others equally so to the North Walsham exhibition, worth more than the average of three-year-old store stock.

If incentives were wanting to the adoption of my plan, the fact that 22,473,233 qrs. of grain, 510,337 head of cattle, and 1,268,040 cwts. of provisions were imported from the 1st of January, 1846, to November 5th, 1848, ought to stimulate us at least to attempt to stem the approaching tide.—*John Warner, Trimmingham, Norfolk, December 16th, 1848.*

TO THE EDITOR OF THE MARK LANE EXPRESS.

SIR,—Will you be kind enough to state your opinion, in your next publication, upon the following questions, viz. :—

Is lime-stone, when ground into a powder, as good manure as lime-stone calcined?

Would ground lime-stone, laid upon land without any mixture whatever, be at all *beneficial*?

Do you consider ground lime-stone a manure at all?

By noticing the above, you will oblige yours,
A TILLER OF LAND.

Lancaster, Dec. 20, 1848.

REPLY.

Before lime or lime-stone (carbonate of lime) can act with the greatest effect on the soil, it is necessary that it attain a state of minute divi-

sion. The chief use of burning lime-stone into lime is to effect this division by the gradual *slaking* of the lime in the air. After the lime has been exposed some time to atmospheric action it resumes its original state of carbonate of lime; but this carbonate is now capable of acting much more efficiently on the soil than powdered lime-stone, because no mechanical action can ever reduce lime-stone to such minute particles as the chemical action of slaking.

The hard crystalline lime-stones of the north and west of England would not be so efficient as the softer chalk of the south-east of England. Some of the latter, in fact, when acted upon by a sharp frost, become reduced to a powder, almost equal in fineness to that from lime.

Lime not only has a considerable action on the soil, but being one of the constituents of plants, is itself, to a certain extent, a manure. It must not be forgotten that few lime-stones are absolutely pure, and that different specimens contain variable amounts of other valuable ingredients, upon whose presence or absence, in fact, the value of different lime-stones in a great measure depends.

Powdered lime-stone would undoubtedly do good on land requiring lime; but it would have to be administered in much larger doses than lime, to produce the same effect.

With reference to the economic application of lime, another thing is worthy of remark. From 52 to 56 tons of lime-stone burn to 28 of lime. If the sources of the chalk or lime lie at various distances, it will often be merely a question of the expense of cartage, for the 28 tons of lime will, when put on the land, speedily reabsorb carbonic acid and moisture, and attain the original weight.

Fifty tons of pure dry lime-stone contain 28 of lime and 22 of carbonic acid, or, reduced to original elements, 50 tons of lime-stone contain 20 tons of the metal calcium, 24 tons of oxygen, and 6 tons of charcoal or carbon.

I am, Sir, yours truly,

J. C. NESBIT.

Scientific and Agricultural School, Kennington,
Jan. 17, 1849.

PORTABLE RAILWAY.—Dr. Spurgin favoured the Council with the inspection of a model for a rotary railway, on the principle of the simple roller, for use on farms, docks, warehouses, and other places where heavy weights were to be conveyed short distances without the aid of horse-power; as manure from yards, corn from stack-yards, timber from woods, turnips or mangel wurzel from flat heavy land. He considered that this mode of conveyance would prove, in these and similar cases, fully efficient in its action; particularly as it would combine great simplicity with ready adaptability for the purposes required, at a cost not exceeding £10.