

Though the female should not be neglected, it is the male that makes the greatest improvement, and a good male, with a poor female, will make better stock than a good female with a poor male.

There is also, among many, a prejudice against crossing the Leicester and South Down sheep, because say they, they so soon become worthless—and the Report of the County of Wellington published in the *Agriculturist* of June tends to increase this.

Now this cross is known to make a most valuable sheep for general purposes, but if not attended to, they will undoubtedly run out sooner than either of the original breeds kept pure—and this is the case with all crosses.

The proper method when a farmer wishes to keep this kind of sheep is to breed alternately from rams of the original breeds.

I remain, Sir,

Yours, &c.,

C.

January, 1853.

BONE MANURE.

(Read before a recent meeting of the Frontenac Agricultural Society, at Kingston.)

GENTLEMEN,—

I am sorry to say that although I have used my best endeavor to collect information on the subject of Bone dust, I have not been so successful as I could have wished, owing in the first place to its being as yet little used by the agriculturists in this country with whom I have corresponded on the subject; and, secondly, to the fact of its being applied so extensively in England to the culture of turnips, that I could find little mention of it in "Steven's Book of the Farm," except in connection with turnip husbandry. I shall, therefore, only quote such paragraphs from him as relate to the preparing of bone-dust for manure, it being my opinion, though I speak it with diffidence, that this country generally, and our portion of it particularly, is not suited to the cultivation of turnips on a large scale. On this point I may be mistaken, and it would be a matter of great gratification to me, should what I have now said induce some of our farmers who have tried that kind of culture, and have found the crop a profitable one for any consecutive number of years, sufficient to prove it was so from the effect of proper cultivation, and not of mere local advantages, or the result of a chance favorable season, to come forward and give such practical information through our agricultural papers, as may lead to the general culture of that very useful root.

I shall now proceed to consider how bone-dust can be used beneficially to the soil, and profit-

ably to the farmer in this country, otherwise than in the culture of turnips; and for this purpose I shall quote a passage from an excellent article in the *Canadian Agriculturist*, the whole of which, being written by Professors Croft and Buckland, I need hardly add, merits your most attentive perusal.

"Bone manure is peculiarly adapted to exhausted arable land, and upon poor unproductive pastures, its application has been attended with the most striking results. The soil in such cases having been exhausted of its phosphates by repeated cropping, or as in the case of pasture land by the gradual deprivation of these materials by the milk, cheese, and bones of animals, that have been sold off through a long series of years without any adequate return in the form of manure; a liberal dressing of bone dust speedily restores the equilibrium, by returning to the weakened soil, the very ingredients of which it had been deprived."

You will here observe that particular mention is made of bone-dust as a manure for exhausted pasture, and as such I think it can be more profitably used by us than plaster, in support of which I find mention made of it in a little book called "Walks and talks of an American Farmer in England," written by F. A. Olmstead, who seems well acquainted with practical agriculture, he there says that it is extensively used in Cheshire on pasture land, and that the effect of it is so lasting as to be very perceptible eight and nine years after it has been applied. Stevens also says that when used in large quantities, its effects may be seen twenty years after, its superiority to plaster which requires sowing every year, is therefore self-evident.

I shall conclude by reading the passages from Stevens before referred to, calling your particular attention to paragraph 3,236, where a method of preparing the bones without grinding is mentioned which can easily be carried into effect by any farmer.

"Bone dust has now established itself as a valuable manure, and with the exception of farm yard dung, there is no substance upon which more implicit reliance may be placed as a fertilizer of the soil, not even excepting guano.

"One of its most valuable qualities is its durability, and in this respect it is superior to farm dung and guano; even in its reduced state when applied in large quantities, as 1½ tons to the acre, as used by the Cheshire farmers, its effects are visible 20 years after; this results from the slow decomposition of its inorganic matter in the soil.

"It has been ascertained by analysis that 1 ton of bone-dust equals 30 tons of dung; but as only 16 bushels of bone-dust are applied to the acre, which, at 47 lbs. per bushel, weigh 7 cwt., this quantity is equal to 10½ tons of dung.

"Mix vitriol with twice its bulk of water, put into a large tub double the weight of bone-dust, and pour the mixture of vitriol gradually over it, and in time the bone-dust will be entirely dissolved. The mass may be dried with ashes,