

country; we must have the means of rendering the heads, horns, hoofs, and skeletons of our winter starved cattle, which disfigure the fair face of nature round many a rich farmer's steading available for the purpose of manure, and thus make the evil cure itself. Probably some may think I place too high a value on the turnip crop, but I am impressed with the conviction that this country will never be really great in agriculture until every farmer produces an abundant supply of turnips, or an equivalent in other roots! and this state of things will only be profitably accomplished by calling to our assistance the aids which science offers to us in artificial manures. I think, Mr. Chairman, that if our Agricultural Societies would offer liberal premiums for the best course of experiments with guano and bones applied to root crops, and furnish intending competitors with a certain quantity of each under certain rules, it would be the means of eliciting a large amount of practical information, as well as a test of their adaptedness to our climate, and on the principle that *seeing is believing* would, I have no doubt, remove much prejudice against a principle which ignorance only has the hardihood to deny. I thank you, gentlemen, for the patience with which you have listened to my remarks, those which will follow I trust will furnish complete evidence that the motto of our Club is "progressive improvement." (Cheers.)

Mr. JOHN MASSON said—I had an opportunity of getting a large quantity of bones which had accumulated about the kennel where Mr. Boulton's hounds were kept, on my farm; these I carried seven miles to Mr. Allan's mill, where they were ground, then I placed them in a heap and mixed with them a quantity of animal refuse and wood ashes, covering the pile carefully with black muck, three or four inches thick, and left them for ten days, in which time the bones were reduced to a fine powder; the pile carefully turned and mixed and immediately applied in drill, followed by the turnip drill. Before or since I have never seen any such crops of turnips in this country, and from this I was induced to repeat the turnip crop the next year, which proved little inferior to the first, a proof that one crop was not sufficient to exhaust the manure. I have been in the habit of using ground bones since 1826, when I first applied them on four acres, part of a twelve acre field, all in turnips, eight acres sown manured with well rotted barn-yard manure; the season, as most of us know, was one of extreme drouth, and I had as many turnips off the four acres as off the eight. It was a serious loss to me when the hounds were sold, bones about the premises got very scarce, and I had no opportunity of getting supplied from any other source.—(Mr. Wade) "I think Mr. Masson was the only one who found the hounds profitable." (Laughter.)—(Mr. Masson) I did so, and would willingly have paid additional rent to have them kept on. He could, so far as his experience went, strongly recommend the use of bones for the turnip crop in preference to any other manure, and was quite prepared to state also, that it was the cheapest.

Mr. JOHN WADE said he considered that arti-

ficial manures were of as great importance to us if not more so, than in Britain, from the circumstance of our working season in the fields being so short, seldom commencing before the middle of April, whereas in Britain the seedling is always finished, so far as the cereals are concerned, in March, leaving them a full month more than us to prepare their land for green crops, summer fallows, or other operations of that nature, than we have; consequently, we have to perform in the space of six weeks the same operations that they have three months to work upon. And it is on this account that hard manures become of such importance to us, particularly on green crops; when suppose on a farm of say 200 acres, if you grow twenty acres of green crops and break up twenty acres for summer fallow (a fair proportion in a five course shift), this must be all performed in from 3 to 4 weeks: and the usual amount of force commonly employed upon farms of this size is not more than 2 efficient teams, and probably 3 to 4 men. It is found that, supposing we have sufficient manure in our yards to put on our green crops, we have not time at that season to draw it out without neglecting other operations of imperative necessity. Consequently, if guano, bone dust, or any other hard manure of that description, could be procured, the time of putting in our turnip or other root crops would be shortened nearly two-thirds, as it will take two teams nearly a week to draw manure enough for eight or ten acres of ground for roots; and this serious amount of time, at that particular period, would be saved in that way, and be available in any other required. He had tried guano on two occasions with very satisfactory results, and considered 1 cwt. equal to 15 loads barn yard manure. He had not yet tried bone dust, and could not speak from experience of its results. He had used plaster for seventeen years with great success, and considered that it had doubled, and sometimes trebled his crops of grass; the effects in our neighbourhood have been almost like magic; and he could say with certainty that he has realised not less than 300 or 400 dollars a year from the simple application of from 25 to 30 barrels of Plaster, the quantity he commonly used. He had used it on peas, but considered the direct application to the crop rather dangerous in moist or wet summers, producing too much straw; and as he had so long applied it on his farm he found he could get enough of peas from the effect left in the land the second year. Mr. Wade concluded by recommending the Township Society to make use of their funds in importing guano and bone dust, by the quantity, and giving it to the members of the Society at cost and charges. (Cheers.)

Mr. GEO. BLACK said that he had not much experience with artificial manures in Canada, but had experienced the good effects of bone manure in the old country. Mr. Blacker, in Ireland, made some experiments with manures on turnips, which may not be amiss to mention here; they were, 1st with pounded bones, 2nd, burned bones; 3rd, peat ashes; 4th, pure cow droppings; 5th, hot lime; an equal part of each being weighed. The result was—No. 1 gave 87 lbs., No. 2, 108