

thority, speaks as follows of the value of the above manure :

#### BASIC SLAG FOR TURNIPS.

I have some experiments with basic slag upon swedes after trifolium which cannot yet be weighed up as the roots are still growing. Having used basic cinder pretty freely this year upon rape, turnips, and swedes, I have found it as good as superphosphate for these crops. The plant came up strongly to the hoe and grew apace up to the time of folding. I applied 4 cwt. per acre of the cinder. The curious feature is that the cinder should act in summer upon a summer crop. I have found it so before, as was shown as far back as 1885. The basic cinder was then as potent as superphosphate in producing turnip crops simultaneously in Durham and Hampshire. The number of cases in which basic cinder has shown itself equal to superphosphate as a turnip manure are too numerous to be discarded. It might be thought that a summer application of a raw and "insoluble" phosphate could not influence the growth of turnips, but such is not the case. The turnip root fibres find a way to negotiate the phosphoric acid of the cinder apparently as easily as they do that of the superphosphate. Hence there seems to be no valid reason why basic cinder should not be applied in summer as well as winter—and in winter as well as summer. Now is a good time to apply it to grass land, especially grass land of a clayey character, and abounding in vegetable matter. Apart from the question above discussed, there is that of the advisability of applying basic cinder to pastures in summer. It is not so much whether the cinder will take effect upon the grass by promoting its growth. It is a question of grazing, for it would not be well to sprinkle a quantity of an impalpable dust like basic cinder over growing grass. It might choke the pores of the leaves and prevent free transpiration. But, more serious still, it might injure cattle grazing upon the herbage. Both considerations point to the advisability of applying basic

cinder to grass land in winter, i.e., from the present time up to about the end of February. Arguing from analogy, there seems to be no objection to the application of basic cinder to crops in summer, as cruciferæ at least seem well able to avail themselves of its presence. On the whole, however, and after taking into consideration the comfort and well-being of the live stock, it would appear better to make all applications of basic cinder to grass land in December, January, and February.

JOHN WRIGHTSON.

"Ploughing; deep or shallow."—At a meeting, held somewhat in Ontario; but in what specific locality the correspondent of the "Farming News" does not say; Professor Roberts, of Cornell University, delivered an address on "Improved Methods of Agriculture," in which he used these words: "The trouble is, we do not plough deep enough." To this perfectly true assertion, the correspondent adds: The reference to ploughing deep caused a very large smile among the disciples of the apostle of shallow cultivation. And, then, he adds: "In England, I am told, they are getting the best results from their steam ploughs by not ploughing with them. They use these to loosen the subsoil to a depth of 20 inches or more, but they do not bring this subsoil to the top."

Prof. Roberts said "he did not advocate bringing up the subsoil from the bottom. In the United-States, however, too many farmers plowed to a depth of 4 inches, where it would be better to plough to a depth of 8 to 10 inches. It is not wise to turn the milk-pan up-side down, though I would rather have 8 or 10 inches of good soil on the surface than 4 inches."

Well, people will not see! Nobody in this senses proposes to jump in a moment from a furrow 4 inches deep to one 10 inches deep; no one, dreams, unless he is incapable of reasoning, of bringing up 6 inches of raw clay from the subsoil and sowing a crop of grain on it in its unprepared state. The English system of deep-ploughing is carried out in this simple