

benefit from superphosphate—an acid fertilizer—than from an equivalent quantity of slag. Most of our soils are, however, deficient in carbonate of lime, and are acid or sour, so that this condition is usually favourable to the use^g of slag.

(3.) As a top-dressing for pasture, in order to be beneficial, slag requires a climate with a well-distributed rainfall, slag being only slowly dissolved by water containing carbonic acid; whereas superphosphate is entirely and quickly dissolved by pure water. A moist climate is therefore a prominent factor in the successful use of slag; if deficient in phosphates, soils in dry climates with few rainy days are better treated with superphosphate.

(4.) Sandy soils are considered to be not so responsive to slag as are clay soils, nevertheless the herbage on the coarse sandy pumice soils of the North Island is greatly benefited by slag, although superphosphate more quickly shows beneficial results.

(5.) The greatest immediate effect of slag is manifested on the leguminous (clovers, &c.) components of the pasture, the white clover (*Trifolium repens*) being especially benefited. It is therefore necessary that these plants should be present in the pasture. Experiments with slag in Scotland, Professor Patrick Wright ("Improvement of Poor Pastures," p. 10) tells us, failed owing to the absence of clovers in the pasture. When, however, clover-seed was supplied the effect of slag on these soils was quite as remarkable as on those of Cockle Park.

There are several other important points regarding the application of slag which may be briefly touched on; but in discussing the subject it must be borne in mind that the conclusions arrived at and the advice given must not be considered infallible. It should be clearly understood that these are supported by certain evidence, and are no doubt true for the conditions under which the experimental evidence was originally obtained. All of these conditions may not be known, and others may be unattainable: hence the difficulty in drawing from experiments conducted in the Northern Hemisphere conclusions which shall help us in New Zealand.

In England it has been proved more profitable to apply a heavy dose of basic slag as a single dressing than to divide it into two equal portions, and to apply these with a three-years interval (Somerville: "Influence on the Production of Mutton of Manures applied to Pasture,"* 1911, p. 57). In New Zealand, at Waerenga, Waikato, 1911, the aggregate yield of green grass per acre for the four years on a paddock which had been dressed with half a ton of slag in one appli-

* Every grazier should obtain this (price 4d.) from the British Board of Agriculture.