

THE CROPS IN THE U. STATES.

We are indebted to the courtesy of Mr. Grinnell, chief clerk of the Agricultural department at Washington, D. C., for an abstract of the returns to the department of the amount and condition of the crops in twenty-two States reported from in May 1863, from which we give the following very condensed summary.

The number 10 represents an average of the crops, both as to their *amount* compared with the crops of 1861, and their *appearance* in May, 1863. A number above or below 10, represents as many tenths as it is above or below it. Thus 8 is two-tenths below an average, and 14 is four-tenths above it.

The table from which this statement is extracted, is prepared by first taking an average from the returns of each county, and from these an average of each State.

	Average amount of land sown com- pared with 1862.	Appearance of crop at this date.
Winter Wheat,	11	9½
Spring Wheat,	10	10
Rye,	10½	10
Corn,	11¼	9½
Oats,	1¼	9½
Potatoes,	11	10
Sorghum,	15½	10½
Cotton,	37	10½

Agricultural Intelligence.

THE ACTION OF SUPERPHOSPHATE OF LIME.

[As this very valuable fertilizer is now made in Canada, and therefore available for use, we insert the following able and interesting paper from the last number of the *British Farmers' Magazine*. Mr. Cox is manufacturing the Superphosphate at Montreal; and his Agents in Toronto are James Fleming & Co., Agricultural Hall. EDS.]

It is only by slow degrees that we acquire valuable information relating to the use of manures. The subject involves, in fact, all those difficulties which gather around the chemistry when he is trying to unravel the mysteries of organic chemistry. The unwillingness of former generations to leave long-beaten paths, their dislike to try newly-suggested fertilizers, naturally enough long discouraged such efforts to increase our stock of knowledge. The way in which the introduction of artificial manures was opposed appears, indeed, to modern agriculturists to border on the ludicrous. The Sheffield cutlers were long obliged to pay for the removal of their waste bone-dust from around their lathes and workshops. And when the Lincolnshire

farmers began cautiously to use crushed bones with their turnip-seed, they were of course, at first ridiculed; and then it was very gravely asserted by that class who seem born for opposition, that bones introduced the advent of a black grub or caterpillar; and then, changing their ground, the anti-bonemen contended that it was white clover that the bones introduced. When the next move was made, after Liebig had suggested the use of superphosphate of lime, the opposition men as usual, came out in great force; the very idea of adding sulphuric acid to the land excited their anger and their ridicule. The use of guano also was denounced very vigorously as "a mere stimulant," just as the use of sewage is now by the men who are ever constitutionally the opponents of every new fertilizer, and who complacently consider everything worthless which they do not happen to comprehend.

Then, again, it is only by very tardy advances that the most valuable improvements in the application of excellent manures are adopted. It is now more than fifteen years since the late Philip Pusey suggested the use of decomposed or fermented bones as a drill manure for roots (*Jour. Roy. Ag. Soc.*, vol. viii., p. 417). He showed by various experiments of his own, and those of other considerable farmers, that crushed bones, when previously allowed to ferment, mixed with peat ashes, earth, or sand, were reduced to a state adapted for application by the drill. He next proved by varied trials that the effect of this dressing was as great as that of an equal money value of superphosphate of lime. This mixture was commonly composed of two measures of bones and one of sand, allowed to ferment in a considerable heap. The result of his first trial was, per acre, as follows: 17 bushels crushed bones, costing £2 6s., produced 13 tons 5 cwt.; 4½ bushels superphosphate, costing £1 2s 9d., produced 14 tons 5 cwt.; 8½ bushels fermented bones and sand, costing £1 0s 9d., produced 13 tons 5 cwt. Three bushels of the mixture were valued higher than the two bushels of bones, because the heap sunk during the process of fermentation one foot in four showing from the shrinking of the bones, that there was more than two bushel of bones in three of the mixture. Two years afterwards Pusey recurred to the question (*ibid* vol. ix., p. 590). It was at the close of the year 1858 that he reported the results of his further investigations, and spoke of the precautions necessary to be taken to ensure a good result.

In that year he mixed bones with peat ashes, coal ashes, sand, mould, and sawdust. The fermentation is equal where the size of the heap is the same; but a small heap, unless carefully enclosed and covered, will not decompose so thoroughly as a large one—perhaps not even then. Whatever the substance employed, it should be in a free pulverized state—should be moistened, and the bones thoroughly drenched. Finely-ground bones decay more than coarsely.