

Ward, Marlborough, soil (G686).—This is an example of a fertile soil resting on Amuri limestone debris at the foot of limestone hills near Ward. The available mineral plant-food is high, but the total phosphoric acid is low, so low, indeed, that in a soil with less lime it would be deemed deficient. The remarkable fact that highly productive soils with much lime may contain very little total phosphoric acid, even lower than the above sample, has been pointed out by Hilgard in his classic work on American soils.

British East Africa soils (C1026 and E1398)—the latter from the Kedong Valley Escarpment—were analysed at the request of the Fields Division for a gentleman in East Africa who had rendered service to the Department. The analyses show great deficiency of available and total phosphoric acid, coupled with extremely high total and available potash, and are comparable with no soils in New Zealand.

WHEAT - RUST.

A NEW ZEALAND OBSERVATION.

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THE occurrence of wheat-rust (*Puccinia graminis*) in New Zealand is by no means uncommon; in fact, its presence may be detected more or less every season. The severity with which it attacks and the extent of country that it seriously affects is, however, often so limited that farmers either regard its effects as trivial or even fail to note its presence at all. Under conditions favourable to its development wheat-rust occasionally assumes the form of an epidemic in which a large acreage in wheat-growing areas may be seriously affected. Such was the case during the past season in the vicinity of Greenfield, Bruce County, South Otago. There the yields over a wide area were reduced from 30 down to about 10 bushels per acre, while several hundred acres of crop had to be merely gathered up and burnt, the grain being so shrivelled as to be unmarketable.

CAUSE OF THE DISEASE.

An investigation of a large portion of the affected area, made at the instance of the Greenfield Farmers' Union, showed that while a certain amount of damage may have been caused by