

shoots appeared they were pinched out, the leading shoot only being allowed to grow. On the 16th February the leaders were stopped, with the exception of those plants required for seed. An average of fifteen leaves were left to develop on each plant.

First-grade seed is obtained from the uppermost flowers, so that all lateral branches of the inflorescence were removed early.

Stopping the leaders forces suckering, and these growths must not be left to develop, otherwise the quality of the leaf is diminished.

Much care is needed when working amongst the plants, for during ripening the leaves become brittle and easily break across the midrib.

At ripening the plant presents an entirely different appearance. The top leaves attain a size equal to the lower ones; secondary suckers commence to shoot out below the bottom leaves at the soil-level; the colour changes from a deep green to a yellow spotted appearance, and all leaves become much wrinkled.

It is expected that the crop at Ruakura will be ready for harvesting about the 15th March.

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## RUAKURA MANURIAL EXPERIMENTS.

PRIMROSE MCCONNELL.

IN connection with the permanent manurial experiments (this year being tested with a swede crop), the plots manured with a mixture of guano and sulphur take the lead, while highly nitrogenous manures, such as blood and bones, stand at present at the bottom of the list. On a previous occasion I ventured the opinion that the damage caused by blights and parasites was to some extent due to the exhaustion of the soil, in which condition it could not produce a plant sufficiently robust to resist an attack of the above nature. This opinion would seem to be emphasized by the fact that, although the cabbage-fly has done some slight damage to the manured plots of swedes, the unmanured plot is so much damaged as to be in some places past recovery. In the mangel-paddock the cross-dressing of sulphur and lime now stands up very clearly, the colour of the foliage being of a deeper green than other portions of the paddock. On the other hand, where sulphur was applied alone, at the rate of 5 cwt. per acre, the crop is at present not as good as that grown with no manure at all. Nitrolin applied as a top-dressing had no visible effect on the oat crop, but, strange to say, has had a marked effect on the colour of the soil, the portion dressed being of a much darker colour than other portions of the paddock. All pastures are at present so brown that no comparison can be made of top-dressings.