



TRACTOR INTER-ROW CULTIVATION

Methods and Equipment Used at Patumahoe

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TRACTOR inter-row cultivation in New Zealand is a comparatively new venture which received considerable impetus during the war, when the shortage of manpower caused mechanical cultivation to be used to the utmost in the production of the large quantities of vegetables necessary for the Armed Forces. This article, based on observations at Patumahoe, one of the largest projects in the Services' Vegetable Production Scheme, in three years' operation during the war, discusses the advantages and disadvantages of tractor inter-row cultivation compared with hand cultivation, and describes the cultivation equipment and methods used.

CULTIVATION of the soil has always been recognised as an important part of successful cropping and from the days of animal- or human-drawn crude ploughs and cruder chopping and hoeing implements to the modern mechanical cultivation equipment the management of the soil has been given close attention. Cultivation

is necessary to aerate the soil, conserve soil moisture, control the growth of weeds, and prepare a seed-bed. Inter-row cultivation has always been looked on as an integral part of the successful growing of crops, but unfortunately either through lack of labour or lack of efficient tools this phase of cultivation is often neglected.

It is only on the larger areas that tractor cultivation has a place in market gardening. A market garden large enough to be ploughed and disced by tractor is generally big enough to allow tractor inter-row cultivation. With the cultivation equipment available today it is very easy to make the one tractor do all the work necessary for the crop. The tractor which will bring the land up to the seeding point and in some cases sow the seed requires only the addition of cultivation equipment to carry out the full range of work.

If tractor cultivation is used in market gardens, the rows have to be spaced more widely apart than the normal 12 to 14in., and consequently a smaller quantity per acre will be produced. Normally most small crops such as carrots and onions are grown in rows 12in. apart. At this spacing all inter-row cultivation has to be done by hand, using small hand-operated power tractor wheel hoes and hand