

mid-January and continuing until April, retarded growth in all varieties, and, in view of the weather generally throughout the period of the trial, the final yields of all varieties proved very satisfactory.

**Order of Maturity**

Plots of the variety Aucklander Short Top (both South Island and local) were the first to reach maturity, but were closely followed by Majestic and American Wonder. The varieties Inverness Favourite and especially Iron Duke were definitely later, and were still showing strong, green growth of haulm during the first week of March, when the haulms of Aucklander Short Top were completely down and those of the remaining two varieties dying off.

**Yields**

All trial plots were lifted and the produce of each weighed on April 5, 1939. The following table gives a summary of the yield figures for the trial, each figure being representative of the average of four weighings (one from each of the four plots of the one variety):—

Variety.	Yield in Tons per Acre.		
	Table	Seed	Total Marketable Produce
(1) American Wonder	7.7	1.6	9.3
(2) Aucklander Short Top (South Island)	8.6	2.2	10.8
(3) Majestic .. ..	10.7	2.5	13.2
(4) Inverness Favourite .. ..	11.1	3.7	14.8
(5) Iron Duke .. ..	10.3	1.9	12.2
(6) Aucklander Short Top (Local) ..	8.3	1.5	9.8

In comparing the varieties on the results obtained in this trial it will be noted that both Inverness Favourite (14.8 tons) and Majestic (13.2 tons) gave significantly higher yields per acre of saleable tubers ("table" and "seed") than the average of 10.3 tons per acre from the standard Aucklander Short Top variety. Iron Duke yielded well, but because of its slowness in reaching maturity and because of the fact that difficulty is often experienced in maintaining the standard of this variety over a period of years, any recommendation as to its suitability to the district can be made only with reservation.

The variety American Wonder, which had shown much promise in the 1937-38 season's trial, proved the

lightest yielder in the trial under discussion, although its average yield was not significantly below that of the standard variety.

Judged on the appearance of the line of "table" tubers produced, the varieties American Wonder and Majestic were both better than Aucklander Short Top, the tubers being more evenly sized and shaped and of cleaner appearance. The remaining two varieties compared quite favourably in this respect with the standard variety, although more variation in size and shape of the tubers was noticeable in Inverness Favourite.



Typical Aucklander Short Top tubers, illustrating the thin nature of the skin and its liability to damage.

**RESULTS OF TRIAL B.**

In this trial five early and ten main crop varieties were included, 50 tubers of each variety being planted in a single row. All varieties established satisfactorily, but the rapid growth of the newly-imported Doon Early was outstanding. The rows of Cliff's Kidney and Epicure were perhaps the least even in this trial.

The observations made during the period of the trial are summarised in the following table, the early and main crop varieties, respectively, being arranged in approximate order of merit as determined from this trial.

**RESULTS OF DEMONSTRATION TRIAL.**

Variety	Relative Merits	Yield		Maturity	General appearance of tubers
		Table	Total marketable produce		
<b>Earlies—</b>					
Doon Early ..	Very good	Very good	Very good	First early	Evenly shaped, good size
Robin Adair ..	Good	Very good	Very good	Second early	Excessive proportion of small tubers
Epicure .. ..		Good	Good	Second early	Evenly shaped, good size
Jersey Bennes ..	Fair	Good	Good	Second early	Many misshapen tubers
Cliff's Kidney ..	Poor	Poor	Good	Second early	Tubers very small
<b>Main Crops—</b>					
Majestic .. ..	Very good	Very good	Very good	Early main crop	Evenly shaped, good size
Dakota .. ..		Very good	Very good	Main crop	Evenly shaped, good size
American Wonder	Good	Good	Good	Early main crop	Evenly shaped, good size
Inverness Favourite		Good	Very good	Main crop	Evenly shaped, good size
Arran Banner ..		Good	Good	Early main crop	Evenly shaped, good size
Aucklander Short Top .. ..		Good	Good	Early main crop	Evenly shaped, good size
Arran Chief .. ..	Fair	Fair	Good	Main crop	Evenly shaped, good size
Gamekeeper .. ..		Good	Very good	Late main crop	Moderate size, many small
(Northern Star)		Good	Very good	Late main crop	Moderate size, many small
Maori Chief .. ..	Poor	Good	Very good	Late main crop	Moderate size, many small
Iron Duke .. ..		Fair	Fair	Late main crop	Many misshapen tubers