

# Growing Linseed

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THE growing of considerable acreages of linseed, mainly in the arable areas of the South Island, has been an important feature in the cropping programme of New Zealand for many years. The area of linseed grown has fluctuated considerably in the past. Over 10,000 acres were grown in the 1922-23 season, under 1000 acres in several years between 1936 and 1943, and the acreage is now in the vicinity of 20,000.

THIS variation was brought about by an unstable market which was governed mainly by the overseas price and demand for linseed and linseed oil, which had the effect of making the growing of linseed attractive to the farmer only in years when world prices for the product were high.

At one time a linseed oil extraction plant operated at Auckland, but because of lack of assured supplies of linseed for processing, the project was abandoned. However, during the Second World War seed from the linen flax industry began to accumulate and in 1943 a factory for expressing oil from this seed and treating by-products was established in Dunedin. As this factory has definite annual requirements of seed in excess of that available from the linen flax industry, the linseed crop is now contracted for on a fixed basis, with certain premiums payable to the grower for varying qualities of seed. This price is stable and the crop can now be regarded as financially as secure as any other of the spring-sown crops such as spring wheat, oats, barley, or linen flax.

As the seed contains on an average approximately 36 per cent. of oil, each ton of seed produces 75 to 80 gallons of oil. The types of oil produced in New Zealand from locally grown and imported linseed are raw, acid-refined, alkali-refined, boiled oil, double-boiled oil, pale boiled oil, stand oil, and blown oil.

The effect of the recommencement of linseed oil extraction and the consequent demand for supplies of raw material can be seen in the table below.

LINSEED ACREAGE GROWN IN VARIOUS DISTRICTS

	Canterbury	Otago	Southland	Other districts	N.Z. total
1947-48	16,087	1,266	1,178	197 (Marlborough)	18,728
1946-47	10,741	625	926	—	12,292
1945-46	8,927	926	505	3 (Wellington)	10,361
1944-45	3,640	336	348	2 (Marlborough)	4,326
1943-44	702	123	404	1 (Marlborough) 33 (Nelson)	1,263
1942-43	81	78	195	—	354
1941-42	387	185	269	18 (Wellington)	859
1940-41	1,194	90	—	—	1,284



Threshing linseed from the windrow.

## Extent of the Crop

As better cropping conditions prevail in Canterbury and the linseed crop fits in very well with a fully arable programme, the greatest acreage of linseed is grown in that province.

Of the Otago acreage about 500 acres are grown annually in North Otago and 200 to 300 acres in South Otago. In Southland the main linseed areas are eastern and western Southland, each area growing about 500 acres annually. In the 1947-48 season 54 per cent. of the total linseed acreage in the Canterbury Land District (16,087 acres) was grown in North Canterbury, 34 per cent. in Mid-Canterbury, and 12 per cent. in South Canterbury.

## Soil Types

As linseed is primarily a spring-sown crop, the growing of it fits in very well in those areas where it is not always possible to get land ready for wheat or other cereal crops in autumn and winter because of wet conditions or because lea land requires longer cultivation. For these reasons

it is an excellent pilot crop on the browntop lands of the foothills. Where the crop is used for this purpose it leaves the soil in excellent mechanical condition for the growing of a cereal crop after the linseed. In North Canterbury about 500 acres per year are grown by contractors on a share basis on this type of land and to the farmer it is a means of getting his land cultivated with a minimum amount of work on his part, as the contractor attends to the cultivation and harvesting. In other areas in Canterbury the linseed crop is not confined to the foothills, but is grown mainly on clay downs, with some areas on the better-type stony soils. The heavy, rich soils are not suitable for linseed growing, as growth is usually excessive under these conditions, ripening tends to be uneven, and the crop presents many harvesting difficulties. On the poorer stony plains soils growth conditions are not good, yields are low, and the crop is uncertain.

In Otago and Southland the crop is grown under a variety of conditions: On land suitable for wheat in North Otago, on the clay loams of South Otago, and on the better-drained clay loams and gravel subsoils in Southland.

## Cultivation

In most districts linseed is grown on land which is cultivated out of old run-out grass and this calls for some preliminary preparation such as grubbing or hustling the lea paddock or skim ploughing before the main