

HARVESTING OF LINSEED . . .

districts and the bulk of the area contracted in these districts was sown with this variety. In Southland Bison is preferred, owing to its early maturity.

At present the choice of variety is to some extent limited by the availability of seed, but every endeavour is being made to have available supplies of seed of the varieties proving most suitable to local conditions.

Rates of Seeding

During the 1946-47 season trials were laid down to get information on rates of seeding. The trial was conducted in three widely separated districts, Swannanoa, Winchmore, and Kakapui, and included the varieties Bison, Walsh, Rio, and Golden Viking, sown at rates as low as 4lb. per acre to as high as 170lb. per acre. Yields from the low rates of seeding averaged 12cwt. per acre and from the high rates of seeding 12.1cwt. per acre, there being no significant difference in yields brought about by high or low seeding rates.

In practice 30lb. to 40lb. of seed per acre (varying according to germination capacity and seed size) are sown on the lighter land; on heavy soils 55lb. to 70lb. of seed are sown per acre.

Sowing

The crop is usually drilled through 7in. coulters and care must be taken that the seed-bed is firm to ensure even depth of sowing, as the seed is fairly small and a quick strike is desirable. To achieve this drilling should be carried out on a rolled surface and it is necessary for the soil to have been well consolidated throughout the earlier cultivations. If possible the coulters of the drill should be set in line and turnip coulters or well-worn coulters tips should be used to ensure that the seed is not placed

too deeply. The depth of sowing should not be greater than lin. It is not usual to harrow after sowing, as heavy grain harrows tend to put the seed in too deeply.

Sowing should be completed in October to avoid late harvesting.

Diseases and Weeds

Rust is the most serious disease of linseed. The rusts found in cereals and ryegrass, though related to those of linseed, are different strains of the fungus and cannot be transferred.

The existence of various rust strains complicates the problem of obtaining varieties of linseed resistant to rust. In testing for rust susceptibility it has been necessary to collect samples of rust from all parts of New Zealand, as it has been noticeable that though some varieties of linseed are practically free from rust in Southland, they may be severely affected in North Canterbury. This may be due to different strains being active in different districts.

The spread of rust in a crop is favoured by damp weather and in cases of severe infection yields may be reduced by as much as 75 per cent.

It has been found that autumn-sown crops are more severely attacked by rust than spring-sown crops, and when there are autumn-sown crops in a district they provide a means of overwintering the fungus and allowing early infection of spring-sown linseed.

Browning or stem-break causes damage in some seasons, but it is not considered a serious disease of linseed.

A disease called **pasmus** has appeared in some linseed crops, affecting large areas of the crop and hastening the maturity of the affected areas. In spite of fairly bad infestation, seed yields were not appreciably lowered by this disease.

Weeds: Most of the linseed is grown on clay downs country where the

most serious weed affecting the crops in the young stages is spurry. This weed tends to choke the young seedlings and even when cultivation is properly carried out it may be serious, causing greatly reduced vigour in the crop and lowering yields.

Fat-hen may affect the crop at a later stage and can cause reduced yields. In most cases, however, it is not regarded as being as important as spurry.

Redshank is a troublesome weed in some areas, as the seed of this plant is very difficult to dress out of linseed.

Harvesting

The old method of cutting the crop with the binder, stooking, and threshing out of stook or stack is not used to any extent with the linseed crop, except in Southland and Otago, where bad weather may hold up other methods of harvesting. In the lower-rainfall areas of Waimea, North Otago, and Canterbury direct heading of the crop is largely practised, provided there is no excessive weed growth or second growth of the linseed itself.

For direct heading weather conditions must be good, as hot, dry days are necessary; any slight increase in humidity makes the crop very tough and difficult to thresh and harvesting under such conditions may cause the seed to be severely damaged.

Many growers prefer to cut the crop with the mower or to windrow it by a binder and some days later to pick it up and thresh it through a header.

The last method gives better results under difficult conditions than does direct heading.

Yields

Yields vary considerably with conditions, for it must be remembered that all the linseed crop is not grown under ideal soil and climatic conditions, and whereas yields of up to 1 ton per acre are secured from suitable land, yields of as low as 3cwt. per acre are obtained from poorly cultivated soils under unfavourable conditions. The average yield in Canterbury is about 8cwt. per acre, in North Otago 6 to 8cwt. per acre, and in Southland 10 to 12cwt. per acre.

Position Today

The linseed crop fills an important place in the cropping programme in the drier arable districts of the South Island, both as a cash crop to the farmer and also as a pilot crop preparatory to wheat or other cereals or for the establishment of pasture. Investigational work on varieties, rates of seeding, fertiliser applications, and weed control is proceeding in co-operation with farmers in an effort to solve some of the problems of growing the crop and attention is being given to diseases which affect it.

The growing of linseed is now established in the cropping districts and every effort is being made to supply the farmer with all the information which will enable him to make the growing of the crop a success financially and agriculturally.

DAIRY PRODUCE GRADED FOR EXPORT

THE following figures showing quantities of dairy produce graded for export during September and for the 2 months ended September 30, 1950, with comparative figures for the same month and 2-monthly period of 1949, have been compiled by the Dairy Division of the Department of Agriculture from figures supplied by divisional officers at the various grading ports:—

BUTTER—

Period	Creamery	Tons		Percentage Inc. or dec.	Tons	
		Whey	Total		Inc. or dec.	Total in store at end of mth.
September, 1950	13,939	285	14,224	—	16,815	
September, 1949	16,183	273	16,456	—	17,135	
Increase or decrease	-2,244	+12	-2,232	-13.563	-320	
For 2 months ended 30/9/50	23,050	395	23,445	—	—	
For 2 months ended 30/9/49	25,142	379	25,521	—	—	
Increase or decrease	-2,092	+16	-2,076	-8.134	—	

CHEESE—

Period	White	Tons		Percentage Inc. or dec.	Tons	
		Coloured	Total		Inc. or dec.	Total in store at end of mth.
September, 1950	6,568	933	7,501	—	9,620	
September, 1949	5,533	1,892	7,425	—	8,495	
Increase or decrease	+1,035	-959	+76	+1.023	+1,125	
For 2 months ended 30/9/50	8,070	1,223	9,293	—	—	
For 2 months ended 30/9/49	6,927	1,982	8,909	—	—	
Increase or decrease	+1,143	-759	+384	+4.310	—	

If these figures are converted into butterfat equivalent, there is a decrease of 6.515 per cent. in butterfat graded for the 2 months as compared with the corresponding period of the preceding season. It should be noted that the above figures refer only to butter and cheese graded for export, and that owing to diversions which may take place from time to time, they are not necessarily a true indication of production trends.