

Left,-A linen flax crop pulled and stooked.

Below.—A linen flax crop in stack and awaiting processing into fibre.



there any consistent differences between superphosphate and reverted superphosphate in this respect. It has not been possible to evaluate the effect that other fertilisers, such as potash manures. may have on quality. Preliminary work on these lines will be undertaken in the coming season.

## (5) Previous Crop

- (a) Height of Straw.—The best crops are obtained after grass. The survey has shown that crops following wheat, oats, or barley are generally not as tall as those after grass, while crops after turnips, swedes, rape, or chou moellier are generally inferior to those after wheat. These differences are particularly marked in some districts, but are evident in all.
- (b) Quality of Straw.—There may be a tendency for crops after grass or cereals to be of superior straw quality to those after brassicas. Although the difference is not as marked as the effect of previous crop on height of straw, it strongly supports the recommendation to sow linen flax crops after grass, or, failing that, after cereals.

## (6) Date of Sowing

(a) Height of Straw.—In the particular season with which we are concerned, late sowing has in nearly every case given poorer crops. Particularly in those districts where the crops as a whole have been short. November sowings have resulted in markedly shorter stands. In nearly every district early sowings (September or early October) have given superior crops. Generally speaking, late September or early October has been the best sowing time for Canterbury and Marlborough, and early to mid-October for South Otago and Southland.

It is fully realised that this result may not be repeated in another season, and examination of daily rainfall figures indicates that soil moisture may have been a major factor operating to cause the foregoing results. As a general rule, however, one would expect early sown crops to benefit from greater soil moisture reserves built up from winter rains.

(b) Quality of Straw.—There appears to be no consistent difference in the quality of straw of crops sown at various times.

# (7) Variety

- (a) Height of Straw.—Unfortunately, seed supplies do not allow a choice of varieties for the coming season, but it is interesting to note that Concurrent (which was sown in most of the flax-growing areas last season) gave in South Canterbury consistently taller crops than did the variety J.W.S. Other varieties which have given promising results in special trials are Stormont Cirrus, Liral Prince, and Liral Crown, all of which have been superior to Concurrent in fibre length and yield. Giza Purple has been somewhat similar to Concurrent.
- (b) Quality of Straw.—Stormont Cirrus and Liral Prince have been superior to Liral Crown in fibre quality (based on examination of the processed fibre), and all three are better than Concurrent and Giza Purple. On straw quality as based on field inspection, J.W.S. is very similar to Concurrent.

Seed stocks of the promising varieties are being built up at the Agronomy Division, Lincoln, and an experimental programme with these lines is arranged for the coming season. The Young Farmers' Clubs organisation will co-operate in this work, and will also give assistance in other investigations into the growing of linen flax.

# SUMMARY OF RECOMMENDA-

- (1) Climate.—Good spring and early summer rainfall, as well as reasonably low humidity during harvest are essential.
- (2) Soil.—Medium loam; light soils are generally unsuitable.
- (3) Sowing.—Drill in 7 in. coulters. Do not sow deeper than ½ to 1 inch.
- (4) Rate of Seeding.—85 to 90 lb. per
- (5) Manuring.—Sow 2 cwt. per acre of superphosphate or reverted superphosphate.
- (6) Place in Rotation.—Sow after grass, or, failing that, after cereals.
- (7) Date of Sowing.—Late September or early October in Canterbury and Marlborough, and early to mid-October in South Otago and Southland.
- (8) Variety.—For next season's crops, seed supplies are available of one or two varieties only. In variety trials, however, Stormont Cirrus and Liral Prince have shown considerable promise, and seed stocks of these are being multiplied for future distribution.

#### Conclusion

There are few farmers who do not realise the importance of linen fibre

