

Barley, being a surface feeder, naturally prefers a light soil of a sandy and calcareous nature. Although it does best after a root crop, it can be grown anywhere in the rotation, and should receive the same cultivation as that given to the oat crop. As maltsters desire a fairly large uniform quantity of grain with even germinating-capacity, it is desirable that the growers in each district should endeavour to crop the same variety. In Marlborough varieties of malting barley of the Chevalier type are most commonly sown in October on the heavier lands—those of the Wairau Plain. The Gisborne variety is usually autumn-sown in the drier country of the Awatere Valley. In the Hawea and other inland districts of Otago where barley-growing plays an important part in the farm operations it may be sown right up till the end of October. A variety named New Binder has given excellent results and is well worthy of extended trial.

POTATOES.

From the beginning of October onward the second early and main crop of potatoes may be planted, care being taken that the ground is sufficiently worked to be free from weeds. From 10 cwt. to 15 cwt. of seed should be sown in 28 in. rows to allow of intercultivation with horse-drawn implements. Good moulding-up tends to prevent the ravages of potato-blight and to ensure heavier crops. A manurial mixture consisting of 3 cwt. super, $\frac{1}{2}$ cwt. sulphate of potash, and $\frac{1}{4}$ cwt. sulphate of ammonia generally gives good results.

Only the best of seed should be used. Many selections of the chief varieties of main croppers go under various names. Among the good standard varieties are Up-to-date, El Dorado, Arran Chief, King Edward, Maori Chief, Gamekeeper, and Northern Star. The last three varieties are more or less immune from blight.

In favourable situations and circumstances a few acres of potatoes make a very valuable cash crop on a small dairy farm, and help materially to increase the net returns. For domestic use it is a good plan to plant a few drills of potatoes in the mangold-field, as the two crops are sown and mature about the same time.

PULSE CROPS.

Peas should be sown during October. In Canterbury there were indications during last season that the regulation seeding of one sack to the acre was too heavy. Cases of lighter seedings which resulted in good yields have been brought to notice. In Marlborough, Dwarf, Medium Straw, Partridge, Prussian Blue, and other varieties should be sown not later than the second week of the month. About 3 bushels per acre of the Dwarf and Medium Straw varieties, and $2\frac{1}{2}$ bushels of Partridge and Prussian Blue (smaller peas), are sown. Owing to collar-rot, pea land in Marlborough should generally be limed; superphosphate should not be used alone.

LINSEED.

Land should be prepared for this crop where grown, and it may be sown towards the end of October at the rate of 30 lb. to 35 lb. per acre.

LUCERNE.

Most lucerne stands will now be shut up for a crop. Where necessary the stand may still be top-dressed with superphosphate at the rate of 2 cwt. per acre. In Marlborough, owing to fine weather conditions, it is sometimes possible to get a cut of lucerne hay in October. This, however, is not possible in most districts. Ensilage may be made, or the lucerne cut and fed out in a neighbouring paddock. In this way much of the nutrient matter is returned to the ground in the droppings from the stock.

Under Canterbury conditions, where late frosts are a frequent occurrence, sowings of lucerne should not be made before the end of October, except in cases where the soil is extremely light and the crop is likely to be damaged by the hot drying winds sometimes experienced in early summer. The sowing season may be extended until the beginning of March. It should be remembered, however, that October seeding is advisable only where the land is thoroughly clean and where there is no risk of weeds getting away with the young crop. Spring sowing certainly has the advantage of enabling the young plants to escape grass-grub attack.

—*Fields Division.*