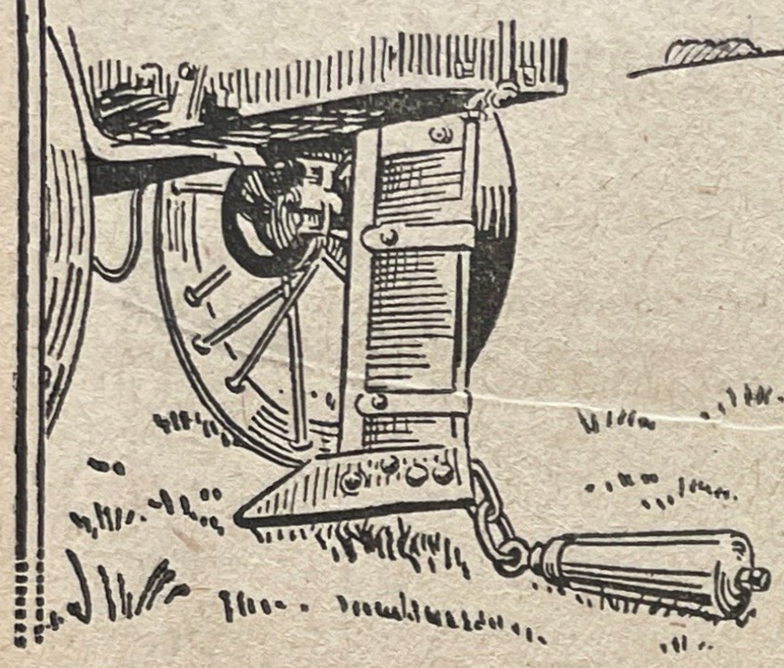
DRAINING PASTURES



WHEN Sir John Russell—distinguished director of Rothamsted Experimental Station in England—was visiting New Zealand, the writer travelled by train with him for some part of the journey between Palmerston North and Wellington. Sir John was in New Zealand for a very short time and was naturally unwilling to say much about his impressions of our farming methods. The interview, therefore, centred principally around English farming practices, and at length we reached the subject of drainage. At this time the train was passing through low-lying country, much covered with rushes, and by way of driving home his point, Sir John said that in England such country would certainly be drained—probably mole drained—because it sloped gently, and offered excellent scope. In almost every district he had visited in his hurried visit he had noticed this lack of drainage, made apparent by sour land and the growth of rushes and weedy grasses. He was offering no criticism. He admitted he did not know whether it was or was not economical to drain it, under the conditions existing here, but merely mentioned in passing that in England this land would have been drained.

There are probably many reasons why much of this land has not been drained. The cost is too heavy, leaseholders are not encouraged to spend money in this direction, the necessary implements are not available, etc. Nevertheless, properly considered, drainage is an investment that will yield (in the long run) dividends, just as will the application of fertilisers. More attention is being given to it now than for some years past, and the object of the present article is to summarise methods so that farmers may know which type of drainage will prove most suitable for their needs. Unfortunately, it is almost impossible to give accurate costs, owing to lack of information on New Zealand work. Readers who have assessed drainage costs in connection with work on their farms will be doing fellow-farmers a service if they would write us, giving details of the area and cost.

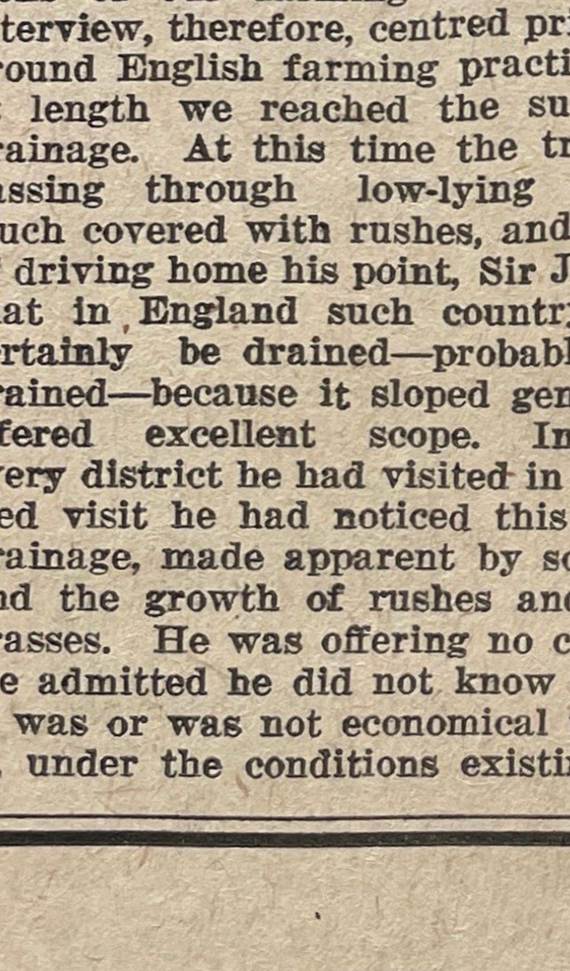
Reasons for Drainage.

BEFORE detailing the various types of drainage, it will be as well to run over the effects of drainage, and to point out that drainage is always better carried out when soils are fairly wet, rather than in the summer months. Several big drainage schemes, involving the lowering of the surface water, and the continuous pumping out of large channels, have been carried out in New Zealand, the Rangitaiki area in the Bay of Plenty being one of the latest. It sometimes happens that the cost of doing this work is excessive, and that drainage rates on the land are too heavy, but from the practical side the fact remains that hundreds of tons of butter-fat are being taken from this land, which previously was useless. The economical side of the case needs watching, and the farmer must be sure that it will pay him to drain his land, before starting on the job.

Owing to the decay of rock and organic matter, waterlogged soils are usually very alkaline in nature, and in a clogged soil there is not enough leaching. Every farmer with low-lying, wet land knows how the surface water becomes stagnant. Drainage prevents this, and allows the soil to receive plenty of oxygen from the air. Plants need oxygen just as much as we ourselves need it, and the nitrifying bacteria which live on clover roots, and which supply cheap nitrogen to the soil, need it too.

Drainage beneficially affects soils in several different ways. When water is lying too near the surface, the surface soil is full of water, and little air can get in. Then, again, when the water is removed to a lower level by drainage, roots penetrate more deeply, open-

(Continued on page 20.)



You Get ALL the Profits from your Herd with a---

LISTER

The new "LISTER" Separator gets ALL the butterfat there is in the milk. Thus you get ALL the profit your herd is capable of giving.
The new "LISTER" is produced by Britain's largest Cream Separator works and embodies the experiences of thirty years' separator manufacturing. It is a sturdily-built machine, easy to clean, silent running, with a self-oiling system, dirt-proof frame, and bell-speed indicator.

WRITE FOR FULL PARTICULARS.