

pings on fields where the cattle have been fed supplementary fodder during the winter is common, but could be carried out more frequently on many farms with great advantage. Too many fields, when closed for silage or hay, are decidedly blotchy in appearance from the strong growth around unspread droppings.

The oversowing of indifferent pastures with perennial ryegrass and white clover has improved many of these pastures and obviated the necessity of ploughing and regrassing. The field is grazed hard in March, disced or harrowed to produce a cover for the seed, and oversown with 10lb. of perennial ryegrass and 1 or 2lb. of white clover with the fertiliser. This method of pasture improvement could be much more widely practised.

The saving of winter grass is not a strong feature of the grass-land management in the county. Too many farmers allow their stock access to the whole farm during the winter, and in the late winter and early spring there is not a fresh bite for the newly-calved cows.

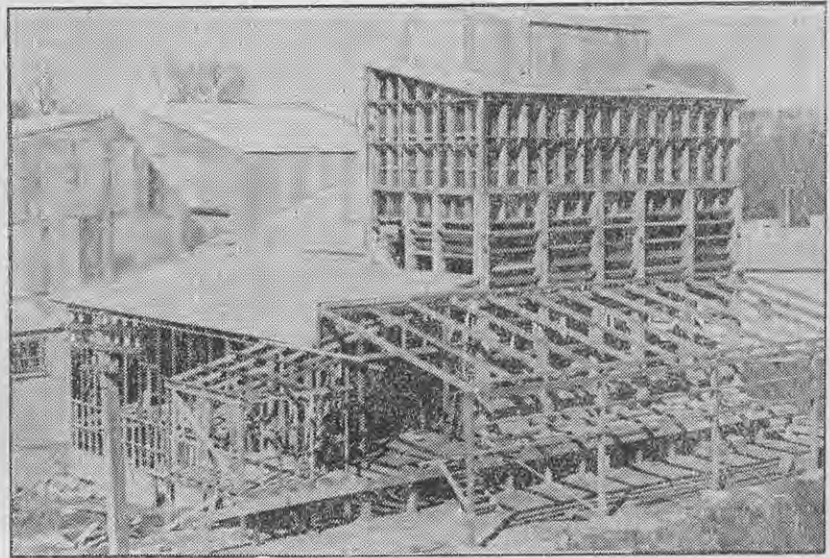
To obtain winter grass it is necessary to shut up the field during April so that the ryegrass will be growing well before the winter sets in. If the winter is mild and the pasture is making good growth, a light grazing when the pasture has attained a height of about 9in. will not materially affect its late winter-early spring production.

The greatest problem facing the farmer is dealing with the luxurious growth in the spring and early summer. On dairy farms which are well subdivided this problem is easily dealt with; as the growth reaches a stage where it cannot be controlled by the cows, fields are withdrawn from the grazing rotation and closed for silage or hay. On the larger farms where subdivision is not so intense additional stock are bought in during the spring and summer to be fattened.

### Silage and Hay

Surplus pasturage is conserved as hay on most farms, and about 10,000 acres are harvested annually. However, much of the hay saved is of poor quality, chiefly because the quality of the pasture cut is poor, or because too large an area is cut at one time and bleached by the sun or spoilt by rain before the material is stacked. Failure to cover the stack adequately is also responsible for much wastage of hay. Of recent years baling direct from the windrow with a pick-up baler has become popular. This method of collecting the hay has much to commend it, but it depends on good weather.

**Silage making has not retained its popularity of some 10 years ago, and this method of conserving sur-**



Limeworks under construction in Otorohanga County.

plus pasturage should be more widely practised than at present. Pastures which have been cut early usually make sufficient recovery to give good grazing during the summer, whereas hayed pastures often fail to produce much growth until the autumn rains fall.

Not only do the pastures have a better opportunity to recover, but ensiling can be undertaken when the weather prevents haymaking. Permanent pasture sowings of the previous autumn, especially those containing Italian or H1 ryegrass, can be cut for silage while the growth is still luscious without harming the pasture if a good establishment of clover has been secured. The farmer would find it beneficial to feed a ration of silage to his dairy cows and ewes for a month before calving or lambing rather than to depend entirely on hay, much of which is of doubtful quality.

### Cropping

Most pastures on the ploughable country have been laid down after a root crop, and that method is still followed. Cropping is confined chiefly to swedes and chou moellier for winter feeding, and only small areas of soft turnips are grown for summer feeding to dairy cows. Soft turnips are sown in October-November for January-February feeding to the dairy herd, the land then being sown to permanent grass in the autumn. The main crops of swedes and chou moellier for winter feeding are sown in November-December and the land then sown to grass in the spring if it is not required for soft turnips.

Very little maize or other cereals is grown for supplementary feed, nor is there much cropping to provide special fodder for fattening lambs. Because the weather is unsuitable, rape is seldom ready for feeding off when the lambs are weaned in mid-January. The reliance that is placed principally on grass for butterfat production and lamb fattening is a weakness in the farming methods general in the county.

The area devoted to lucerne is very small considering the suitability of most of the soils and the ease with which this valuable crop can be grown. The lucerne stands are usually productive for 3 or 4 years, after which they deteriorate rapidly through the invasion of grasses because of insufficient or total lack of surface cultivation during hot weather. Lucerne will stand drastic harrowing with penetrating types of harrows which will rip out clumps of grasses such as Yorkshire fog and ryegrass. A cover crop of oats drilled in during the late autumn will provide a ground cover to exclude grasses and weeds; in the spring the combined herbage of lucerne and oats can be made into excellent silage.

If more attention had been devoted to the cultivation of established lucerne stands from their inception, many which have more or less run out in 7 years or so would still be highly productive.

### Cattle

The dairy herds are predominantly Jersey or Jersey cross, but there are also some herds of Ayrshires, Shorthorns, and Friesians. All breeds do well in the district, Shorthorns and