

If it is possible, grazing of established lucerne during winter and early spring in particular should be avoided. Grazing causes consolidation, which favours the invasion of the lucerne by rye-grass and *Poa annua*, two of its worst invaders. Grazing also keeps the growth short, which favours white clover, at times a detrimental competitor with lucerne for vital requirements. Young stands of lucerne especially should now be easily treated. Harrowing of established weedy lucerne may be advisable at this season, but generally it is inadvisable unless the conditions allow one to lessen substantially the numbers of the invading weeds without unduly injuring the lucerne itself. Many seem inclined to cultivate lucerne as a matter of course and without due thought, and thus often do as much harm as good, or more so. It is well to remember always that the best way for lucerne to combat weeds is by virtue of its vigour obtained by good fertility, good drainage, and good utilization methods. The most profitable lucerne area is invariably that which combats weeds by its own aggressive vigour rather than by adventitious aids, such as surface-cultivation. A point of practical importance at this season is that lucerne which is heavily invaded by grass should not be top-dressed in the early spring. It is normally better to delay the top-dressing until the first cut has been removed. To top-dress in the early spring would lead to relatively greater stimulation of the grass than of the lucerne, and this would intensify the smothering effect of the grass, which is just what should be avoided.

In the liming of land under cultivation the ploughing-under of the lime should always be avoided. This is because normally lime is washed down through a soil more readily than is desirable, and it means that usually lime should be applied at about the time of sowing the seed, or later rather than earlier.

Italian rye-grass or Western Wolths, which often can be sown successfully at the end of August, may be looked upon as a special forage crop capable of providing hay or ensilage if necessary. Artichokes may be sown in mid-August or September. They thrive on land naturally suited to potatoes, but they will also produce well on somewhat poor light soils, providing they are freely manured. From 8 to 10 cwt. of seed per acre is required. The seed should be sown in rows about 3 ft. apart, with a space of about 2 ft. between the tubers in the rows. Generally a complete fertilizer may advantageously be used with artichokes. A mixture consisting of 2 cwt. super, 1 cwt. 30-per-cent. potash salts, and 1 cwt. blood-and-bone or sulphate of ammonia may be relied upon to give good results. The ground for artichokes requires to be well worked before the sowing of the crop.

### The Cereal Crops.

The attention of every wheatgrower may well be given to the report on the 1929-30 season wheat-manurial experiments published elsewhere in this issue of the *Journal*.

The ploughing of land intended for cereals should now receive attention ahead of almost all other tillage work. Experience has led to the greater part of the spring wheat crop being sown in August and early September. In some districts good crops may be obtained from later sowings, but as a rule good yields are not so generally obtained. The sowing of oats should ordinarily follow the wheat as opportunity offers. It often proves advantageous to sow Black Skinless barley in August. A heavier amount of seed requires to be used with spring-sown cereals than would be used with the corresponding crops sown in the autumn. For instance, in the main South Island wheatgrowing districts, while  $1\frac{1}{2}$  to  $1\frac{3}{4}$  bushels of Tuscan seed is accepted as suitable for autumn sowing,