

Crop and Pasture Production

Seasonal Notes by the Extension Division

PREPARATORY work for next season's crops should follow closely on this season's harvest and, as early as weather conditions allow, attention should be given to seed-bed preparation for autumn grass and autumn- and winter-sown cereals.

* * *

WHEAT AND OATS

THE best method of preparing a grass paddock for wheat is to skim plough it during the summer or early autumn. The furrow slices should then be rolled and left for the turf to rot. Once the turf has disintegrated the land should be disced and then deep ploughed. Subsequent cultivation should aim at a seed-bed which is fine underneath but cloddy on top. When wheat follows rape only one ploughing is necessary and a stroke of the harrows after ploughing is usually sufficient to prepare a suitable seed-bed. Drilling of oats after wheat is common on heavy land, and as soon as the wheat is harvested the land should be ploughed, grubbed, and harrowed, and the oats drilled in April or May.

* * *

PASTURE SEED-BED

AN important factor in the establishment of autumn-sown pastures is consolidation. Both over-consolidation and under-consolidation may result in the money spent on seed and fertiliser being wasted through poor establishment. Over-consolidation of the surface of clay soils by excessive rolling frequently leads to cracking and drying out with consequent death of seedlings. Time is the most important factor in consolidating heavy soils; hence the advantage of a summer fallow. Under-consolidation is very common on light, free-working soils. With a loose seed-bed the initial germination of grasses is often satisfactory, but the clovers do not germinate until late in the season, with the result that the grasses are starved for nitrogen and die. Rolling on the furrow should always be the first step in working down light land.

TIME OF SOWING

Early sowing of autumn-sown pastures is desirable for two reasons. First, it gives the grasses and clovers a better chance to establish before the cold weather starts. Second, it enables the pasture to establish and produce winter feed much better than will a late sowing. Early sowing is of particular importance where Italian or short-rotation ryegrass is included in the mixtures.

* * *

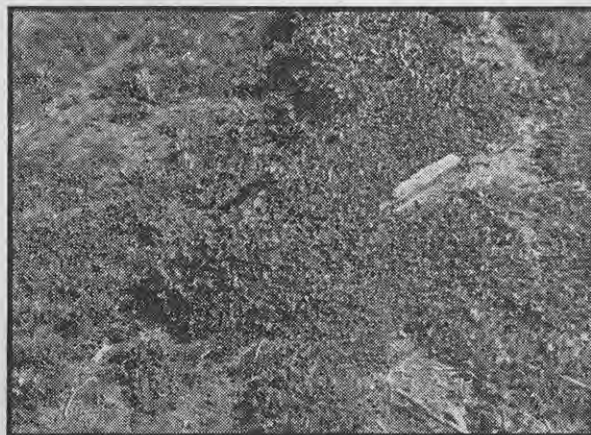
IRRIGATED PASTURES

ON the Canterbury irrigation schemes, on a light, stony silt loam, the best irrigation frequency appears to be every 3 weeks. Grass responds to irrigation at all stages of growth and pasture establishment can be assured by irrigating the land before sowing and making the maximum use of irrigation water during the first year. Recent experimental work has shown that the light Canterbury soils under irrigation will carry up to 9 ewes and their lambs per acre. Though this concentration of ewes may not be the best method of exploiting the grass, it illustrates the potential production of the land. Surplus feed above the requirements of the normal level of 5 ewes per acre can be used for hay, for seed, or for fattening store lambs and cattle.

AUTUMN-MAINTAINED PASTURE

With autumn irrigation fields in Canterbury can be closed early in March with an assurance that sufficient growth can be produced for early-spring use by ewes and lambs. The aim should be to close at least 5 acres per 100 ewes, for ewes will winter well on hay and autumn-saved grass.

* * *



Young pasture on scrub land. Note vigorous clover establishment on tractor wheel marks.

WHEAT-STRAW STUBBLE

WITH the advent of the header harvester a problem has been created in the disposal of wheat stubbles. There are several alternative methods, but the best to adopt depends on the crop rotation. If the crop has been oversown with a pasture mixture in spring, it is advisable to head the crop as high as possible and then cut and bale the straw. However, if the crop is very light, it may be possible to head it low and leave the stubble to be picked at and trampled by stock without harming the pasture.

BURNING

Should the crop be followed by an autumn-sown crop such as wheat, greenfeed, or oats and lupins for winter feed, it is advisable to burn the stubble. If the following crop is wheat, burning will reduce the risk of hessian fly and fungous diseases which normally increase in a second crop. Burning will destroy some weed seeds and accelerate the germination of others, and a kill by cultivation can be carried out. Nitrogen starvation, which may occur in a dry season, when straw is ploughed under, will be avoided by burning. This starvation is caused by the soil nitro-organisms using the available soil nitrogen while converting the ploughed in straw to humus. Some organic matter is lost when stubble is burnt, but the loss is very slight.

PLOUGHING UNDER

If the crop is to be followed by a spring-sown crop such as oats, barley, peas, rape, or turnips, the straw need not be burnt. By late autumn or winter, when the cultivation work on the paddock begins, the straw will be fairly well broken down by weather and stock. Also, weed and stubble clover growth may be quite considerable, and this, when ploughed in with the straw, will help in the decay.

GREENFEED CEREALS

CEREAL greenfeeds are commonly grown after a grain crop. Seed-bed preparation should begin immediately the preceding crop is harvested. Burn off the straw and disc immediately after burning. Sowing should take place immediately the soil is moist enough for seed germination. Cereal varieties suitable for greenfeed production are Algerian and Dun oats, Cape, Wong, and Black Skinless barley, and N.I.A.B. rye-corn. On light and medium cropping land the inclusion of lupins (1 bushel of lupins and 1 bushel of cereal) is a good way of building up soil fertility and at the same time improving the quality of the feed.