

CEREALS FOR GREENFEED . . .

be delayed for some weeks, because "leaf makes leaf" and the only way in which pasture plants can grow strongly is by carrying some leaf. Where greenfeed is available in the spring it is possible to carry stock without making heavy inroads into the first of the spring grass growth. Another advantage of the greenfeed paddock is that it can be used in wet periods when the permanent pasture would be damaged by poaching of the paddocks.

The main periods during which cereal greenfeeds are required are in summer, as a supplement to grass growth in dry periods; in autumn, for fattening lambs where rape has failed or where there is insufficient of it, and for flushing ewes; in winter, as a supplement to turnips or when the root crop is unsatisfactory; and in spring, for lambing feed. The types of cereals which can be used cover a fairly wide range, each type having its particular value under certain conditions.

Oats

The figures for 1946-47 show that of the 175,939 acres of oats sown in New Zealand 49,786 acres were used for greenfeed only. Much of the balance would be shut up for a crop only after a certain amount of grazing had been obtained. Of the 49,786 acres grown for greenfeed about 8000 acres were grown in the North Island and about 40,000 acres in the South Island (28,336 acres in Canterbury).

In the South Island the growing of oats for greenfeed is confined mainly to sheep farming areas which have severe winters and dry summers. The time of feeding off and the purpose for which feed is required are the factors which influence time of sowing, cultivation, and the place of greenfeed oats in the crop rotation.

Oats for greenfeed are usually sown after grain crops of wheat or oats, though they are sometimes sown on ground out of lea in an endeavour to eradicate twitch or browntop, when they are regarded mainly as catch crops.

Cultivation

Cultivation is not usually extensive when oats are sown after stubble, though it is certain that considerable benefit would result from a short fallow between deep ploughing and subsequent surface cultivation. Cultivation must, of necessity, be more thorough when oats are sown on ground ploughed out of lea. In deciding what cultivation should be carried out it should be remembered that the main objective is the provision of a firm seed-bed with a fine and moist tilth underneath but having some rough material on the surface. It is usually best to drill the seed, and broadcasting should be done only on occasions of urgency or where drills are not available.

Varieties

The varieties of oats commonly used are Algerian, Duns, and varieties of the Gartons type. Algerian is the most useful for greenfeed, as it is fairly frost resistant, tillers well, stands close and continuous grazing up to the beginning

of September, recovers well after grazing, and is the most drought resistant. Algerian is also rust resistant. As germination in the field is likely to be poor if immature seed is sown, it is advisable to use 1-year-old seed.

Duns possesses characteristics similar to Algerian, is more palatable, but is slower growing and does not produce the same bulk of feed. It is popular in districts where the climate is fairly severe, as it is extremely frost resistant. However, because of its very prostrate habit, it suffers from the disadvantage that it becomes very dirty if grazed when the ground is at all wet.

Gartons Abundance and Gartons Onward are more upright growers, with broad, coarse leaves, producing a good bulk of feed, but they will not stand close and continuous grazing and are susceptible to rust. A frost-resistant variety, Black Scotch is often used for high-country sowing.

There are some new oats which have been introduced recently or which are in the process of being tested against established varieties. Among them is Winter Grey, which has rapidly become popular in some districts. It is a semi-erect type—more so than Algerian—with fine leaves.

Sowing

Oats are sown at the rate of 2 to 2½ bushels per acre in autumn or 3 bushels per acre in winter and spring, the seed being either drilled in 7in. rows or broadcast and lightly harrowed in. Broadcasting is common in the North Island.

When oats and grass are sown together the seeding rate of oats is reduced by ½ to 1 bushel per acre. Seeding is increased on heavier types of soil. Algerian and Duns when sown in February-April are ready for grazing 2 to 3 months after sowing and may be grazed up to September, when growth tends to become woody and of low feeding value. In parts of Otago and Southland oats are mainly spring sown and so provide very little grazing.

It is a sound practice to apply 1½cwt. of superphosphate per acre and in many parts of the North Island 2 to 3cwt. per acre is often used. Oats are not likely to benefit from applications of special potash or nitrogenous fertilisers except under special circumstances.

Utilisation

Greenfeed oats are utilised mainly as sheep feed in late autumn, winter, and spring, though cows are also grazed on oats in some of the dairying districts; on the average the carrying capacity from May to September is in the vicinity of 7 sheep per acre. Though frequent attempts are made to milk cows and fatten sheep on greenfeed oats alone, the practice is not recommended nor is it profitable, as the feed is deficient in certain essential minerals necessary for milk and fat-lamb production. When used as a change, or supplemented by a good run-off on grass with roots and good clover hay, greenfeed oats are a valuable feed. It is advisable to feed the crop off in breaks, and it should be noted that once ewes have a run-off on greenfeed they are loath to return to turnips.



[J. P. Malcolm photo.]
Two varieties of feed barleys, which are all 6-rowed. Cape (left) is commonly grown and Wong (right) is a hybrid which was produced in China. It recovers well after repeated grazing.

Where oats or any similar cereal follows grass, attack by grass-grub may occur and it can prove serious.

Barley

Of the total area of 62,845 acres sown in barley 9071 acres were sown for greenfeed only in 1946-47. It is possible that a small portion of the remaining area was lightly grazed before it was closed up for grain, but the practice is not common, as barley for malting purposes is usually spring sown. Almost 50 per cent. of the barley specifically sown for greenfeed is grown in the sheep farming districts of Hawkes Bay and Wellington, the remaining 50 per cent. being grown principally in Marlborough, Canterbury, Otago, and Southland. Barley is useful for two main purposes: First, for the provision of winter and early-spring feed similar to that supplied by oats; secondly, for the rapid production in dry areas during summer and early autumn of a greenfeed catch crop. Compared with oats barley has the advantage of rapid initial growth and good recovery after grazing, but is a lower yielder, is less frost resistant, and goes off more quickly.

Barley can be used as a catch crop to fill the gap between the harvesting of a cereal crop in the autumn and the preparation of a field for roots or rape, and it is sometimes sown after the failure of rape and grass, or roots, to provide a quick bite of feed.

When barley is sown in March-April for winter and spring feed cultivation is similar to that required for oats which follow stubble or a catch crop of oats used to eradicate twitch. Where barley is required for early-autumn greenfeed, where it is sown after failure of rape or roots, or where it is sown on stubble ground immediately after clearing has been done fields are