

The Place of Chou Moellier in Mid-Canterbury Farming

THOUGH chou moellier has not filled a very large place in general farm economy in Mid-Canterbury, it plays a very important part on farms where it is being used. It has its role as a substitute for rape or turnips where those crops cannot be depended on to establish, as a change of feed, or as an extra feed mixed in those crops. The cultivation and utilisation of chou moellier in Mid-Canterbury are the subject of this article by R. Inch, Fields Instructor, Department of Agriculture, Ashburton, who predicts that increasing use will be made of the crop.

CHOU MOELLIER is a crop that deserves a larger place in the farming rotation in New Zealand. It can be sown from early spring to early summer and can be fed off over an even longer period. It provides a balanced ration of leaf and stem and can be used either for lamb fattening from January onward or for cattle or older sheep in autumn and winter. A number of farmers in Mid-Canterbury sow small areas to feed their house cows, and others milking for town supply grow a few acres for supplementary winter feed, but a far greater amount is sown either alone or with other crops for sheep feed. Methods and times of sowing vary from farm to farm and from district to district, and the time of feeding off probably varies to the same extent, depending on the season and the supply of other feed available.

Development of Varieties

Until recent years lines of chou moellier in New Zealand varied greatly. Some plants were short and leafy, some were tall and stemmy, and others showed many differences between these extremes. The late R. A. Calder worked for a number of years at the Agronomy Division, Department of Scientific and Industrial Research, selecting and breeding plants, and two distinct types were evolved, one with a medium length of stem and a considerable amount of leaf, the other with a long, thick stem and less leaf. After trials had been carried out seed of these varieties was sown under contract and the seed marketed as Certified Medium Stemmed and Certified Giant. It was felt that the Medium Stemmed would be more useful for sheep feed where a crop was to be fed off as it stood, the Giant type being more suitable for cattle, especially where it had to be carted out to another site for feeding. Each type has a place, and the farmer can now buy seed of the variety more suited to his needs.

Place in Farm Economy

Up to 1939 the area sown with chou moellier in Mid-Canterbury was not very large, but farmers were beginning



Sheep grazing chou moellier after a fall of snow.

to take more notice of its value. Because of the uncertainty of imports, when war was declared the Department of Agriculture took steps to produce seed in this country. The first area sown for Government Approved seed was harvested in 1942 and, possibly because of the publicity given to this effort, acreages sown for feed increased immediately.

During the winter of 1943 Mid-Canterbury experienced a severe snowstorm and more than a foot of snow lay over most of the district for about 10 days. Farmers fortunate enough to have a crop of chou moellier standing above the snow were able to feed their stock with little difficulty and their losses, if any, were very small. Many of their less fortunate neighbours experienced a great deal of trouble in feeding stock, and losses then and during lambing were fairly severe. Undoubtedly the value of chou moellier in such a year was one of the factors responsible for the greatly increased acreage in the following spring. Though that increase has not been maintained, the average quantity of seed sown in the district each year is now estimated at 3000 to 4000lb.

Chou moellier grows very well with a plentiful rainfall and on good soil, but it will also grow on light land and under fairly dry conditions. Indeed, the bulk of the crop is grown on the lighter land and in the drier areas. Its ability to withstand more adverse conditions than either rape or turnips makes it a safer crop on such areas.

Place in Rotation

Winter feed is very important and every endeavour should be made to grow it successfully. One of the factors limiting the number of stock carried on a farm is the amount of feed that can be provided to carry them successfully through the winter. During this time pasture growth is almost dormant, and only by the provision of extra feed in the form of hay, roots, or greenfeed can stock be fed adequately. A good crop of turnips or swedes undoubtedly gives the greatest amount of feeding, but in some districts, because of lack of moisture or the prevalence of club root, they are not reliable, and there chou moellier can take their place.

Chou moellier may be sown after all types of crops, but perhaps the best place in the rotation is after pasture. Land ploughed out of old pasture is

usually in good heart and may be depended on to grow a good crop. After the chou moellier has been fed off, the land may be cultivated for a spring-sown crop or pasture, or be put through a summer fallow to clean up twitch, thistles, or other perennial weeds and sown down in pasture in autumn. In the wetter browntop districts where club root tends to be prevalent, but where the disease is not bad enough to prevent a turnip crop being grown, it is often advisable to grow two cleaning crops before sowing the land down. In this case turnips may be sown on the lea ground and followed the next year with chou moellier. The smothering effect of the two crops coupled with the grazing of the stock tends to check and weaken the growth of weeds. Any that are left can then be eradicated by a summer fallow.

Cultivation of the Seed-bed

The ultimate aim of cultivation is to prepare a seed-bed free from weeds and in good tilth—a condition that can seldom be achieved solely by mechanical means. Man may plough, disc, grub, and harrow, but in the long run the action of the weather on the soil is the deciding factor.

The land should be ploughed as early as possible to take advantage of weathering by rain, frost, and wind. On the free, lighter soils very early ploughing may not be necessary, but it should still be done in time to allow for the grubbing out of perennial weeds. When this has been done the field should be harrowed several times at fortnightly intervals to consolidate the ground and obtain a strike of annual weed seeds that may be in the topsoil.

On the stiffer clay soils, especially where browntop is prevalent, the land can be ploughed in early winter and left exposed to the action of the heavy frosts. In spring when conditions are suitable several strokes with the discs followed by the usual harrowing should give a good tilth on the surface without disturbing the turf below. If undisturbed, a considerable amount of this turf will rot while the crop is growing and being fed off, and any live plants remaining can be killed more readily the following year. In districts where spurry is prevalent the aim of top working should be to leave the surface as rubbly as possible.