

# Harvesting an Outstanding Subterranean Clover Crop

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**S**UBTERRANEAN clover has been recognised as a valuable seed crop for almost a decade and profitable yields have been secured in Marlborough fairly consistently. However, success in harvesting depends more on the weather than is the case with most other cash crops. A yield of 180 to 200lb. is generally recognised as a good payable return, but under efficient management and with favourable weather subterranean clover can yield far more. The area grown by Mr. M. Walsh, of Fairhall, Marlborough, gives an excellent illustration of the capabilities of the crop.

**T**HE land is of medium-light soil type with a sandy subsoil containing small gravel throughout. This freely-drained soil is easily worked except during summer. The land becomes very hard and dry during January and February, giving the required conditions for the harvesting of a subterranean clover seed crop.

The crop was sown under barley at the rate of 10lb. an acre, with 2cwt. of reverted superphosphate. Both barley and subterranean clover were sown in autumn, the clover being broadcast immediately after the barley had been drilled. This operation was followed by a final harrowing and rolling.

The clover was well established when the first frosts were experienced, though no excessive growth had been made at that time. No stock were allowed on the area in the first year, the crop being allowed to continue growth through the winter without any check, the objective being the securing of a barley crop, but the growth of the subterranean clover gradually smothered the barley, making harvesting impracticable. In the spring the clover was therefore allowed to mature, and the harvesting of this crop was begun on March 21, 1947.

## Harvesting Method

The harvesting of subterranean clover seed has never been straightforward and this crop did not prove any exception. Part of the crop was cut with a mower and threshed with a header picking up the material from the swath. It was later found that the crop could be direct headed with considerable success, and the remainder was handled thus. Special lifters attached to the cutting bar gave better clearance of the material from the ground; these lifters are an essential part of the machine. The threshing drum was of the rub-bar type, which proved quite efficient, giving only a trace of broken seeds. The



[Snapshot House photo.]

Portion of the crop after threshing had been started.

threshed material was put through the machine a second time, and it was estimated that in all 80 to 85 per cent. of the seed was secured, giving a final yield of 750lb. of machine-dressed seed to the acre.

The field was left with a good covering of seed which could not be picked up for threshing. The area was then disced twice, harrowed, and rolled, which worked the crop refuse into the surface of the soil and produced a desirable seed-bed. Just before the final working 1 ton of lime and 1cwt. of superphosphate per acre were applied. The surface was left rolled.

## Second Year's Crop

After the first rains in autumn an excellent strike of subterranean clover resulted without any more seed being sown. That gave an early start, permitting winter grazing, which was continued until early August. After the area had been closed the growth was both even and vigorous, having no competition from weed or crop species.

The next season the crop was again headed direct and has proved most satisfactory. The sample of seed is far superior to the majority produced, for the only impurities are a few split seeds and a trace of dirt. The efficiency of threshing was greater than the year before, and it was estimated that only 10 per cent. of the burrs were left on the ground. The greatest loss of seed occurred through the failure of some of the burrs to release their seed when threshed, but that loss was not excessive, and as the header was required for other work, this material will not be threshed again.

The yield in the 1947-48 season was 1260lb. of machine-dressed seed per acre (7 180lb. sacks), which makes a total yield of 2160lb. per acre for the two harvests.

Mr. Walsh does not intend to take seed from this area this year, as he considers it likely that after two years of harvesting weed infestation may hinder the efficient handling of the seed crop. The paddock is in excellent heart to produce a cash crop, after which it would not be unreasonable to expect that the subterranean clover will establish itself again. Handling the clover crop in this way builds up fertility and adds humus to the soil, yet no monetary return is lost, for a cash crop is produced at the same time.

Unfortunately this method of harvesting subterranean clover seed cannot be applied generally, but on a considerable area in Marlborough the crop could be direct headed if seed areas were managed accordingly. The most desirable requirement is the greatest possible bulk of subterranean clover which is not contaminated by other species. Heavy growth produces a maze of vines which tend to hold the burrs above the ground and so make it possible for the crop to be lifted on to the conveyer canvas of the header without loss of seed. Surface stones limit the use of this method, for extensive damage can be done to a machine if only one small stone finds its way to the threshing drum.

This crop record gives some idea of what is possible when favourable weather can be combined with efficient management.