

FIELD EXPERIENCES RELATIVE TO CERTIFIED
RYEGRASS IN CANTERBURY.

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In bringing this paper before you to-day I will endeavour to give you some farmers' experiences in the growing and grazing of Certified Ryegrass of Hawkes Bay origin. As you all know there has been a great deal of controversy with regard to the merits and otherwise of Certified Ryegrass, and by relating to you a few of these that have come before my notice I will endeavour to correct a great deal of misapprehension.

On the introduction of Certified Ryegrass a great deal of antagonism was immediately generated in the minds of some farmers, mainly on account of this strain having been found in Hawkes Bay Province, or that they had some pastures of their own which they thought were of a true perennial strain, and they saw an opportunity of trading the product from same at high prices.

When this Ryegrass was first introduced into Canterbury the price was rather prohibitive for the ordinary farmer, and so he purchased only a small quantity and sowed this in a strip alongside the pseudo type of ryegrass. As true perennial ryegrass is not so palatable as Italian or the pseudo type, it followed that, when grazed, the sheep neglected the strip at the first feeding, and so it was neglected all the way through, and immediately condemned as being unpalatable. This in itself was entirely wrong and one gets the same results when sowing two varieties of oats in the same paddock, the sheep absolutely neglecting one variety of oats.

It was not until by the introduction of the contract system of growing this Ryegrass, in which seed was supplied free until the crop was harvested, that large areas were sown, and the true worth of this strain was recognised. Unfortunately again in endeavouring to keep this strain free from contamination of other grasses, the seed was sown on areas that had had a good many crops taken off them, and so had been depleted greatly in fertility, also they were sown without clover, and so had no means of benefiting by the introduction of the nitrogen which clover gives. So taking all these matters into consideration it was not to be wondered at that the palatableness of this strain was questioned.

One important factor in the growing of Certified Ryegrass and which is not very often considered, is that with its high carrying capacity the fertility of the soils is built up much more rapidly than in a poor pasture, and when ploughed up for subsequent crops, instead of ploughing in bare earth, a heavy turf is turned in, which is of great benefit in building up the humus in the soil.

As my time is limited I can only give you a few of the more important experiences of farmers who have

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grown this ryegrass. The first is one of a farm in the Ealing district at Ashburton comprising 2000 acres of light land. This farmer's usual sowing was Cocksfoot, Ryegrass, and Clovers. Since the introduction of Certified Ryegrass he has eliminated the Cocksfoot and sows Certified White Clover with the Certified Ryegrass. His main object on this farm was grazing. His only crops were rape, turnips, and grass, and the latter he considered the most important and so prepared his land as for a crop by the following method. After feeding off the turnips the land was ploughed in October and worked periodically until the middle of January; he then broadcasted $1\frac{1}{2}$ cwt. of Super before sowing the seed. If a quick strike is obtained it is fed off in March and kept fed off short until the third or fourth week in April. He considers by this means the plants are tramped by the sheep and stool out well. When spelled in April the pasture will keep green and grow through the winter. To illustrate this he sowed down an area of 25 acres early in January 1934, with Certified Ryegrass and Certified White Clover. He fed off with 800 lambs from early March to the fourth week in March, then fed off with about 800 ewes until the 10th. April. The pasture was then shut up until the 23rd. August. 1400 ewes were then grazed eight hours per day, being turned off at night on to an old grass paddock until September 7th. This was then shut up for seed.

This farmer was at one time a great grower of Italian, but since adopting the above method of sowing down he considers that he gets just as much early feeding and has a permanent pasture after the first year's intense grazing. He has increased his carrying capacity on this farm since introducing this method by 400 ewes and 500 dry sheep, and there is yet a good number of acres to sow with Certified Ryegrass.

In a very fertile district a farmer sowed an area of 15 acres with Certified Ryegrass and White Clover and on receiving a complaint I inspected the crop and found the plants, although a good strike, were very spindly and yellow. This farmer was naturally perturbed and condemned the Certified Ryegrass immediately, but on enquiry I found that he had cropped this paddock with white crops continuously for ten years. This accounted for the poor appearance of the Ryegrass. I advised topdressing with Ammoniated Super. This was carried out and a marked improvement took place. The following year this area was grazed only by cows and was not shut up for seed, and later was allowed to grow rather long and the cows would not eat it. I advised again to topdress this autumn with $1\frac{1}{2}$ cwt. Ammoniated Super, and since that it has developed into a wonderful pasture. The cows have grazed continuously until three weeks ago and have done remarkably well. This man was very antagonistic towards Certified Ryegrass, but is now a convert.

Another instance was also in a fertile dairying district. The farmer was a very good grass farmer and topdressed regularly with Super in the

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autumn and Ammoniated Super in the spring, and obtained wonderful results from an eleven acre area of Certified Ryegrass and Clover. He sowed an equal area alongside with Canterbury Ryegrass and Clover, at the same time treated both paddocks alike. His herd of cattle was 20 head, and grazed those paddocks **alternately**, and found that when turned into the Certified Ryegrass he was considerably up with his milk, and this was reversed when turned back into the Canterbury Ryegrass pasture. The Certified Ryegrass paddock has been cut for seed five years in succession, and is still a wonderful pasture, while the Canterbury Ryegrass has had to be ploughed up.

On a farm of 800 acres comprising stiff clay to light soil, approximately half of each, a start was made with sowing 38 acres of Certified Ryegrass in 1931, and has increased each year until at the present time the area sown is 300 acres, 200 acres is under the plough for rape and turnips, the balance -(300 acres)- being in ordinary Canterbury Ryegrass. This farmer has not only increased his carrying capacity by nearly a sheep per acre, but has also saved over 3000 bushels of seed off this area in one year. He also fattened 400 wethers on Certified Ryegrass alone. On one paddock of 50 acres he carried 500 ewe hoggets from August to November, it being then shut up for seed. This farmer has found that since grazing on Certified Ryegrass he has got a far bigger percentage of lambs fat off their mothers.

One of the first indications of the carrying capacity of Certified Ryegrass was in a farm of shallow clay soil, the value of which is approximately £20. per acre. This was sown in two paddocks, one of 15 acres and the other 17 acres, in 1930. They were saved for seed the first year, and after harvest 240 ewes were purchased and grazed alternately on each paddock, which is 8 ewes per acre, without any other feed except rye straw from harvested seed, until they lambed and were sold in October. It was then shut up for seed again,

There are quite a number of farms on which half of the paddocks have been sown with Certified seed alongside of the Perennial of Canterbury origin, and on observation over a number of years the sheep have been found to have had no particular preference to either.

Two cases in particular being worthy of note are :-

The first was an area in the Omihi district in North Canterbury. This man had sown half the paddock in Certified Ryegrass and the balance in Perennial Ryegrass, the strain of which had been in the family for some thirty years, and as there had never been any Italian sown on the farm it had retained its true Perennial characteristics. On visiting this farm recently the farmer advised

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me of this and suggested an *inspection* of the pasture, and much to his surprise the whole of the flock were grazing on the certified area.

The other case was in mid-Canterbury. This man had a strain of Perennial Ryegrass which on testing was given as being eligible for certification. He sowed, some three years ago, 40 acres half in Certified Ryegrass of Hawkes Bay origin, and the other half with his own strain of seed. The certified area was quite green before the other had made any appearance at all, and owing to the fact that the Certified side of the paddock was somewhat longer, the sheep, on grazing, showed a slight preference to the Canterbury strain, but in the following two seasons they have shown no preference whatsoever. The Certified area has withstood the past dry summer far better than the Canterbury area, this having died out badly in patches, the other remaining quite a good pasture.

One of the most recent grazing observations was on an area of 60 acres of Certified Ryegrass which was sown in 1933. This was being grazed by 400 ewes brought down- from high Country, as they were inclined to scour the owner decided to change them on to a 3-year old Canterbury pasture. The sheep did not take kindly to the change and lined up along the fence for three days, and so he was compelled to let them back into the Certified Ryegrass again.

The fallacy of sheep having preference to Canterbury Perennial Ryegrass was shown on an area of 30 acres of four year old Certified Ryegrass recently. This was grazed by a large mob of sheep. These sheep also had access to a Canterbury Ryegrass area, and on a number of occasions there was not one sheep to be seen on the Canterbury Ryegrass area.

In conclusion, taking observations over an area of several thousands of acres of Certified Ryegrass, and covering the last six years, it seems that any lack of palatability is due to one of the following causes :-

Lack of fertility in the soil, which may be corrected by topdressing with suitable manures and stocking heavily.

Lack of commonsense husbandry in the proper grazing of this type of Ryegrass.

Sowing without suitable mixture of clovers.

Continuous cutting for seed production.

It seems to be that owing to the fact such a large number of farmers have had such wonderful success and increased their carrying capacity so enormously, that where others have experienced difficulty the reason must be due to one or more of the foregoing causes.