

INTENSIVE GRASSLAND PRODUCTION ON A DAIRY FARM.

By: Mr. W.S. Long, Levin.

First of all I would like to emphasise two points:-
Firstly, I have never before attempted any kind of speaking to an audience and may not make myself heard well, so if anyone cannot hear please call out "speak out." Secondly, I would emphasise that the farm is in no way an experimental farm or a hobby. It is essentially a business proposition. Our fads and ideas are what we have found, or imagined to be the easiest and cheapest methods of getting the highest all-year-round production with the least possible work and expense, and therefore the highest net profit.

The farm is approximately 100 acres, practically all level; it is a light free soil with a well-drained, sandy, clay subsoil.

We have also a farm at Waitarere but the farms are run completely independently. The dry stock from both farms have been partly run on a leased section of 110 acres of coastal, sandy country.

We bought this home farm in August, 1939. It was badly run down, having been cropped in potatoes and by Chinese gardeners for several years and not sown down. We ploughed and sowed down most of it in the first two years, using a Rye-White mixture with Montgomery Red, and Cocksfoot, in some paddocks. We have now dropped the Cocksfoot as unsuitable for winter saving as it burns with the frost and in any case is not high-producing enough.

The White Clover was No. 1 or Pedigree White, and this has been the basis of the building up of the pasture.

A TOWN MILK SUPPLY FARM:

To give a picture of what we are trying to do, and why, I should first make it clear that the farm is essentially an all-year-round town milk producing unit on an all-year daily guarantee. The emphasis of course is on the winter milk supply and everything, even its temporary deterioration of pastures, must give way to getting the milk. All livestock farming needs some levelling out of feed production by hay, silage or cropping, but with ordinary Butterfat Factory supply the high feed requirements of the milking season corresponds to a considerable extent to the natural feed growth, leaving a moderate balance to be made up. For the all-year milking we have to keep as near as possible to level feeding right through the calendar.

SAVING AND RATIONING OF AUTUMN GRASS GROWTH:

We are trying to do this with Autumn saved grass and silage. We have made some hay in the past but are now going over to all silage. We find that well fed milking cows will not clean up the best hay we can make, nor will they milk so well on it as on silage. This is giving us some pasture problems that I will mention later, and takes careful planning and judgment but the results have been very encouraging.

DEVELOPMENT OF PRESENT METHODS:

The first two seasons on the farm we supplied the Factory, ordinary seasonal milking, and grazed the paddocks in the ordinary way, saving some silage and hay and shutting paddocks in late Autumn for Spring feed, milking approximately 1380 cows in the second season for a supply of 21,000 lbs. of butterfat. The third season we started on town milk supply and for winter milking started to bring the herd back to Autumn calving; and plan for more winter feed.

We put in chow moellier, saved more silage and started to

save grass earlier, The next season we grew *chou moellier* again, cut more silage, and worked back still earlier with the saved grass. We were beginning to realise then the greater possibilities of storing Autumn grass in the paddocks. We were by then doing 90 to 100 gallons a day through the winter.

This winter, about the critical period of the War, when Manpower was shortest, I was in hospital and off work for about two months. The work was done by one man helped by my daughter, a girl of 17. Feeding the silage and rationing the grass by electric fence to fifty odd cows, was heavy enough but workable, but feeding the *chou moellier* was the last straw that nearly broke my man's back. We had already found that the cows produced better and 'cleaned up' the feedings better on silage than *chou moellier*, so we were glad to drop the *chou moellier* altogether and concentrate on more silage and more Autumn grass. For the last four years this has given better results each year as we got the herd back to the required calving times and developed the method:- better results in production, labour-saving and stock health, and these add up to better results financially.

MILK AND BUTTERFAT PRODUCTION:

For convenience, I will give production figures for the season July, 1945, to June, 1946, as we have had 25 acres of adjoining land rented last year. Our contract was for 150 gallons a day but actual sales were 160 to 175 gallons. During late Summer and early Autumn, while the Autumn calvers were drying off, we had to bring in 20 to 40 gallons a day from the other farm, but for the Winter period, April 15th to August 15th, we averaged over 160 gallons a day.

Estimating the test of the milk at 4.4%, our total production was approximately 28,500 lbs. of butterfat for the year. (Our herd test figures showed just over 309000 lbs. of butterfat,

PASTURE MANAGEMENT 1945-46.

RELIANCE ON SILAGE:

In this season we cut 58 acres silage, 47 acres from beginning November to mid-December, and 11 acres early February, also 9 acres of hay. We also had a stack of 9 acres silage carried over from the previous year.

SAVING AUTUMN GRASS GROWTH:

We started saving grass in late January and had upwards of 50 acres of grass up to 9 inches long by mid-May with other paddocks that had been fed off during the Autumn coming along again.

We build up this feed by dropping any paddocks that can be spared from the feeding rotation and when long enough, feed them in breaks with the electric fence and spell the rest of the farm. As each paddock is cleaned up by dry stock or topping, it is shut again while we go on to the next longest in turn. Thanks to the strong growth of the clovers, especially following silage cutting, we can usually start wire feeding in late February or early March. We also start some silage feeding in March or early April. This saves more grass to balance with the silage in the winter and also it is very much easier to spread the silage feeding into the dry Autumn weather. We can then afford to miss the **silage** and feed all grass on some of the extra bad winter days,

SYSTEMATIC FEEDING OF HERD:

We feed the cows right through the year up to what they will reasonably clean up - we expect a little waste even of 1st. grade silage. Any 2nd. class silage from top or windy side of

stacks is given to the dry stock. The winter ration for approximately 55 cows is $\frac{1}{3}$ to $\frac{1}{2}$ acre of grass according to length, with 1 to $1\frac{1}{4}$ tons silage in the morning and about $\frac{1}{4}$ to $\frac{1}{3}$ acre grass with about $\frac{3}{4}$ ton silage at night. Our hay has been used almost entirely for drying off cows.

This feeding off in breaks by Electric fence for about six months each year, probably sounds like a mighty lot of work but the shifting for each break in a paddock takes two men under 10 minutes. The routine work is done by two men and even in winter we are usually finished feeding out for the day by 11 or 11.30 a.m.

An important aspect of this is that winter milk for 4 months is paid for at approximately 3/10 per lb. butterfat or 23 times factory price, while a big winter supply enables a big volume of summer milk also at town milk prices.

TOPDRESSING:

To bring away late Autumn-Winter growth, and help the levelling out process, we do all our topdressing from early March to April. Fortunately I had topdressed well the first two years while sowing down, and had a rationing quote of about 2 cwt. per acre. I consider this not enough for milking on our country and hope to come up to $3\frac{1}{2}$ to $4\frac{1}{2}$ cwt. The yard sweepings are also carted out by a tanker truck and the liquid manure doss about 20 acres but with super as well. We have done a little liming but not nearly up to my good intentions and not enough for the good of the clover under our methods.

STATE OF PASTURES:

In the earlier years with ordinary grazing, the rye in the pastures did not hold too well and the white clover was taking charge. I helped restore the balance in the worst paddocks by oversowing with Rye. The last two seasons, however, have given us a different problem. The shading caused by the continuous shutting up for silage, or feeding off, is tending to weaken the clover and let in Yorkshire, Fog and Browntop in some paddocks - they lose their bloom and there is no real life in them once the clover goes back. Above all, we must keep the establishment of a strong growing white clover. As I said at the beginning, I am convinced that the basis of the building up of the farm and the basis of our production, is the No. 1 or Pedigree White. The only failure we have had in sowing down was once when our No. 1 White came up mostly as trefoil.

We are now trying to find the best method of bringing back these pastures, and we are very hopeful that oversowing with HI and Perennial Rye and Pedigree White will do it. We are using a Sunshine grass renovator, and where we have worked the old pasture hard enough, the strike has been very good and the promising results of the short rotation rye make us hopeful of increasing winter production very considerably yet.

PASTURE ROTATION.

Feeding:

No. 3.	22nd February to 4th March.
No. 4.	11th March to 20th March.
No. 5.	21st March to 30th March.
No. 6.	4th April to 15th April.
No. 7.	16th April to 26th April.
No. 10.	26th April to 5th May.
No. 2.	6th May to 12th May (day and night).
No. 1.	13th May to 21st May (day and night).
No. 9 .	23rd to 31st May.
No. 8 ,	1st to 20th June.
No. 3.	21st June to 8th July.
No. 4.	9th July to 22nd July.
No. 5.	23rd to 30th July.
No. 10.	30th July to 4th August.
No. 6.	5th to 16th August.
No. 7.	17th to 28th August.

Rotation from 29th August.
