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LAMB FATTENING ON PASTURES AND CROPS IN THE GISBORNE DISTRICT

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IS an increase of 50,000 tons of meat possible in 7 years? This means in terms of fat lambs, 3,950,000 at an average dressed weight of 34lbs. each or an increase of approximately 8.5lbs. weight on all lambs killed in New Zealand at present. This would appear to be a very formidable task yet it is considered possible when all factors are taken into consideration.

Poverty Bay as a sheep breeding district is chiefly concerned with the raising of breeding ewes or store sheep to be later sold outside the district. Therefore fat lamb farming is not a major part of the district's activities. It is estimated that 350,000 fat lambs are killed annually in Poverty Bay. No reliable figures can be found to indicate the number of lambs fattened on the mother or purchased as stores for fattening in the autumn on crops or pastures. The following are the district average dressed weight of lambs:—

	District average dressed weight of lambs compared with Manutuke lambs.			
	District.		Manutuke.	
	Spring.	Autumn.	Spring.	Autumn.
1947-48	31.89	30.83	34.20	38.70
1948-49	32.65	32.65	36.80	39.0

The average weights shown for the district should be read with an open mind as it is realised that a considerable number of lambs killed are from hill-country farms where the main source of breeding ewes are reared.

While it is realised that to compare the weights of lambs fattened at Manutuke with the district average killing weights may not show the true position of the lambs reared on the flats, it does at least give an indication of the possibility of raising the latter weight to something approaching the Dominion average of 33.68lbs. in 1948 and 35.38lbs. in 1949 to date.

To enable a better picture to be obtained of the weights of the lambs killed from the Gisborne flats, figures from some 72 farms have been collected. As the spring lambs from the station are killed in December and the store lambs purchased in January are killed in April, the data collected are for comparative times.

The average dressed weights of 25,284 lambs killed in December, 1948, from 72 farms was 32.81lbs. The average dressed weight of 6,808 lambs killed in April, 1949, from 44 farms was 32.28lbs. These figures indicate that the average district dressed weight could be used for comparative purposes. From a glance comparing the district average weight with the Station lambs it would appear that the latter weights are not a true indication of the fertility of the soil or the crops grown but rather of the type of pasture and general management.

Manutuke Research Station is situated on the rich flats of Gisborne and on a soil type typical of most of the flat land in the district. Therefore it would seem that the results of pasture work at the Station could be applied to any farm situated on these flats or for that matter any comparable flats in the North Island. The pastures on the flats

in the main are of the ryegrass, white clover type and should be of a high carrying capacity. It is estimated that about 60 per cent. only are in that order. The Station was established in November, 1944, primarily to investigate Facial Eczema. This work involved the laying down of several types of pastures with the intention of finding out whether any of these pasture species would prevent the occurrence of Facial Eczema in lambs grazing them during an epidemic season. It soon became apparent that should any of these special pastures prevent Facial Eczema developing in the lambs the capabilities of such pasture be assessed so that in recommending them to farmers it was known that the pasture was as good, if not better than the one he already used. Three methods of recording this type of data could be used.

- (1) Carrying capacity in grazing days.
- (2) Rate of growth of lambs.
- (3) Rate of growth of pastures.

We have recorded details using the first two methods.

THE PASTURES.

Areas of one acre of the following mixtures have been under observation:—

Long rotation mixture consisting of short rotation ryegrass, cocksfoot, timothy, white clover, Montgomery and broad red clover. Sown April, 1945.

Short rotation ryegrass and white clover (latest selection). Sown April, 1947.

Montgomery and broad red clovers. Sown April, 1946.

Cocksfoot and white clover. Sown April, 1946.

Short rotation ryegrass and white clover. Sown April, 1946.

Phalaris tuberosa and white clover. Sown April, 1948.

Perennial ryegrass, short rotation ryegrass, white clover and red clover. Sown April, 1948.

Long rotation ryegrass and white clover. Sown April, 1947.

Perennial ryegrass and white clover (uncertified). Sown April, 1946.

Perennial ryegrass and white clover (certified). Sown April, 1946.

Long rotation mixture consisting of: Short rotation ryegrass, cocksfoot, timothy, white clover, Montgomery, broad red clovers. Sown April, 1946.

General management of the pastures:

The management of the pastures is, of course, to obtain the maximum production from each particular type of sward. While Levy and Sears have recommended times of spelling to allow each particular component of the sward to grow to obtain maximum production, the management of these pastures at the Station is to graze leniently at a time when growth is required by some particular species. For instance, red clovers are leniently grazed in December and January to give a good grazing in February and March. These fields are set-stocked in July and August at the rate of 7 in-lamb ewes per acre. These ewes and lambs are carried through until the lambs are killed in December. The stocking of each field then depends on the weather conditions, amount of feed available and the particular pasture itself. Some fields for instance may graze 5 ewes and lambs, others 3 ewes and lambs and another 2 beasts or 1 beast depending entirely on circumstances. In mid-January store lambs are purchased and set-stocked at the rate of 8 (this last season) to the acre, these lambs to stay on the fields until the danger of Facial Eczema has passed. This should be about the middle of April. The fields then become available for the grazing of the ewes until lambing commences in the following spring.

The number of grazing days are given for the two seasons 1947-48 and 1948-49.

Period 1st April, 1947, to 31st March, 1948:

Type of Pasture.	Grazing Days:		
	Ewes.	Lambs.	Cattle.
Long rotation mixture	1,390	1,824	188
Short rotation ryegrass and white clover	1,170	1,748	75
Montgomery and broad red clovers	1,615	1,489	45
Cocksfoot and white clover	1,981	1,570	105
Short rotation ryegrass and white clover	1,948	1,585	77
Long rotation ryegrass and white clover	1,113	1,714	106
Perennial ryegrass and white clover	2,315	1,441	79
Long rotation mixture	2,027	1,484	73

Period 1st April, 1948, to 31st March, 1949:

Type of Pasture.	Grazing Days.		
	Ewes.	Lambs.	Cattle.
Long rotation mixture	1,294	2,331	29
Short rotation and white clover	1,154	2,685	—
Montgomery and broad red clovers	1,419	1,993	—
Cocksfoot and white clover	1,149	2,434	23
Short rotation ryegrass and white clover	1,232	2,492	44
Phalaris tuberosa and white clover	686	1,560	114
Short rotation ryegrass, perennial ryegrass) Cut for hay January, 1949. 80 bales of good meadow hay was harvested.		
White clover, Montgomery & broad red clover			
Long rotation ryegrass and white clover	1,482	2,092	58
Perennial ryegrass and white clover	1,078	2,356	45
Long rotation mixture	1,334	2,445	47

Weight of Lambs:

The dressed weights of lambs killed are shown for both spring lambs fattened on the ewe and store lambs purchased in January and killed in April.

Spring Lambs, 1946:

Type of Pasture.	Average Liveweight (15.2.46 in lbs.)	Average gain per day	Average Dressed Weight.
Long Rotation Mixture	79	0.53	35.83
Italian Ryegrass and White Clover	80	0.51	35.67
Montgomery and Broad Red Clover	78	0.53	36.17
Cocksfoot and White Clover	78	0.53	33.67
Short Rotation and White Clover	78	0.53	33.67
Perennial Ryegrass and White Clover	81	0.52	35.33
Long Rotation Mixture	79	0.50	33.33
Average			34.90

A stocking rate of 6 two-tooths per acre was carried on all these pastures and an average live-weight gain of over 0.50lbs. per day was obtained. The lambs grazing the short rotation ryegrass and long rotation mixture did not kill out quite as well as the balance, mainly because the white clover was not established strongly in these two swards. An average of 208.0lbs. per acre of meat was taken from all these fields.

Spring Lambs, 1947.

Type of Pasture.	Average Liveweight (8.12.47 in lbs.)	Average gain per day	Average Dressed Weight.
Long Rotation Mixture	84	0.54	38.8
Short Rotation Ryegrass & White Clover	72	0.47	36.3
Montgomery and Broad Red Clover	77	0.48	37.6
Cocksfoot and White Clover	80	0.53	37.0
Short Rotation Ryegrass & White Clover	80.5	0.54	39.4
Long Rotation Ryegrass & White Clover	72	0.45	35.0
Perennial Ryegrass and White Clover (uncertified)	74	0.44	34.4
Perennial Ryegrass and White Clover (certified)	72	0.47	33.2
Long Rotation Mixture	73	0.50	37.2
Average			36.5

In the spring of 1947 the white clover was well established in these fields and early in December, despite a dry season was growing vigorously. This is reflected in the increase in the weights of the lambs. In the perennial ryegrass, white clover fields, the ryegrass suppressed the white clover and consequently the weights of these lambs are lower than average. The stocking rate of 6 four-tooth ewes per acre was maintained and the lambs again made a daily live-weight gain of about 0.50lbs. An average of 219lbs. per acre of meat was produced from these fields.

Spring Lambs, 1948.

Type of Pasture.	Average Liveweight (10.12.48 in lbs.)	Average gain per day	Average Dressed Weight.
Long Rotation Mixture	82	0.57	39.5
Short Rotation Ryegrass & White Clover	84	0.57	42.5
Montgomery and Broad Red Clover	82	0.56	40.0
Cocksfoot and White Clover	89	0.63	45.1
Short Rotation Ryegrass & White Clover	87	0.60	43.5
Phalaris tuberosa and White Clover	79	0.55	38.5
Long Rotation Ryegrass & White Clover	85	0.59	42.9
Perennial Ryegrass and White Clover (uncertified)	78	0.51	38.5
Perennial Ryegrass and White Clover (certified)	81	0.55	39.0
Long rotation mixture	86	0.60	44.5
Average			41.4

In 1948 because of a very favourable season, the lambs on all fields killed out exceptionally well, all making a live-weight gain of over 0.50lbs. per day. Again the white clover was suppressed by the perennial ryegrass, but not to the same extent as in the previous season. A stocking rate of 7 six-tooth ewes per acre was possible, an increase of one ewe per acre over the two previous seasons. An average of 290lbs. per acre of meat was obtained from these fields, an increase of 81lbs. over the 1946 season.

In 1947 all the spring lambs from the Station averaged 34.21lbs., but the lambs from the pastures which have been examined more carefully averaged 36.5lbs. — 2.3lbs. heavier. In 1948 the spring lambs from these pastures averaged 41.4lbs., that is 4.6lbs. heavier than the average for the Station. This would appear to indicate that our own permanent pastures are not producing to capacity.

Autumn Lambs.

Good average store lambs are purchased at the local saleyards in January, set-stocked on these fields throughout the autumn months and killed in April.

Autumn Lambs, 1947.

Type of Pasture.	Average Liveweight	Average gain per day	Average Dressed Weight.
Long Rotation Mixture	77	0.28	35.0
Montgomery and Broad Red Clover	75	0.25	35.2
Cocksfoot and White Clover	74	0.24	34.0
Short Rotation Ryegrass & White Clover	72	0.21	32.6
Perennial Ryegrass and White Clover	77	0.28	33.5
Long Rotation Mixture	73	0.23	32.6
Average			33.8

In 1947 the average live-weight of the 6 lambs at the commencement of the trial was 55lbs. The average daily gain varied from 0.21lbs. to 0.28lbs. As November and December were exceptionally dry and the pastures had been sown the previous autumn, the white clover was not established sufficiently well to withstand a prolonged drought. The average dressed weights consequently were only fair from 32.6lbs. to 35.3lbs. These weights averaging 33.8lbs. would nevertheless be above the district average.

Autumn Lambs, 1948.

Type of Pasture.	Average Liveweight (4.5.48 in lbs.)	Average gain per day	Average Dressed Weight.
Long Rotation Mixture	91	0.25	42.0
Short Rotation Ryegrass & White Clover	85	0.19	40.8
Montgomery and Broad Red Clover	101	0.36	45.3
Cocksfoot and White Clover	94	0.29	43.8
Short Rotation Ryegrass & White Clover	93	0.29	44.5
Long Rotation Ryegrass & White Clover	82	0.16	36.5
Perennial Ryegrass and White Clover (certified)	90	0.25	43.5
Long Rotation Mixture	93	0.27	44.0
Average			42.5

In 1948 the average live-weight of the 6 lambs was 68lbs. at the commencement of the trial. The average daily gain varied from 0.16lbs. to 0.36lbs. These lambs killed out exceptionally well despite the dry conditions experienced during January and February. The outstanding feature was the extraordinary cover of white clover it was possible to maintain, which did not allow the sward to dry out. This cover was up to 3 inches in height throughout the dry period. The long rotation ryegrass and white clover sward which was sown in the previous autumn was not particularly strong in white clover and this is reflected in the killing weights. The average killing weight of 42.5lbs. over all the fields is 11.7lbs. above the district average.

Autumn Lambs, 1949.

Type of Pasture.	Average Liveweight (26.4.49 in lbs.)	Average gain per day	Average Dressed Weight.
Long Rotation Mixture	82	0.21	35.0
Short Rotation Ryegrass & White Clover	100	0.40	44.5
Montgomery and Broad Red Clover	75	0.16	33.9
Cocksfoot and White Clover	87	0.26	36.1
Short Rotation Ryegrass & White Clover	87	0.26	36.3
Phalaris tuberosa and White Clover	90	0.30	40.2
Short Rotation Ryegrass and Perennial Ryegrass	—	—	—
White and Red Clovers	91	0.31	44.0
Perennial Ryegrass (certified)	85	0.25	36.0
Long Rotation Mixture	88	0.28	36.5
Average			38.8

This last summer and autumn, 1949, have been unusual. December rainfall was low and the clover growth was poor with the pastures drying out. Good rains fell during the first fortnight of January, giving renewed growth. On the 18th January, 8 lambs per acre, averaging 61lbs. live-weight, were set-stocked on each field. (Previously only 6 lambs per acre was the stocking rate). Because of the growth a further 8 lambs averaging 70lbs. live-weight were added on 25th January. 16 lambs per acre continued to graze these fields until the 31st March when all the groups added on the 25th January were removed. It was found necessary, however, to remove one group from the cocksfoot and white clover on the 2nd March and from the Montgomery and broad red clover fields on the 24th March. The average live-weight of these 72 lambs on the 31st March was 88lbs., an average live-weight gain of 18lbs. for the period of 65 days, or 0.27lbs. per day.

The average daily gain for the group of 8 lambs added on the 18th January varied from 0.16lbs. per day for the red clovers, to 0.40lbs. per day for the short rotation ryegrass and white clover. The average dressed weight for all groups was 38.8lbs. which is 6.2lbs. higher than the district average for lambs killed in April.

Crops.

The Facial Eczema work involved the growing of crops because lambs purchased in January should not be grazed on pasture until required on the special Facial Eczema investigational area. As it was desired to graze some 300 lambs from the middle of January until the end of April on crops, it was necessary that a crop producing a high quality yet a bulk of feed per acre be grown. The following crops were tried: Japanese millet, rape, lupins (sweet), chou moellier, thousand headed kale and turnips.

The method used for measuring the various crops was (1) the number of lamb fattening days, (2) the growth rate of lambs. The following table gives the average number of lamb fattening days per acre and the average live-weight gain per day for a good to average crop.

	Lamb fattening days.	Average Live-weight gain in lbs per day.
Japanese Millet	1,400	0.25
Rape	1,100	0.50
Sweet Lupins	750	0.54
Chou moellier	1,000	0.40
Turnips	2,200	0.45
Thousand Headed Kale	2,100	0.45

From the above results it is obvious that the crops to grow should be turnips and thousand headed kale. Consequently areas of these two crops are grown at the Station not only for holding the experimental lambs before use on an investigational area, but for topping off lambs as they are discarded from an experiment.

The average dressed weight of lambs killed from turnips and thousand headed kale are given.

	Turnips.	Kale.
1948	37.2	36.7
1949	37.8	36.6

The average weight of lambs killed from four farms using crops for topping off lambs this autumn was 36.62lbs. for 879 lambs.

MANAGEMENT OF CROPS.

Thousand Headed Kale: In the utilisation or grazing of this crop, it cannot be too strongly emphasised that the lambs must be confined to the area, that is no run-off to be allowed. It has also been found from experience that greater control of both the crop and stock can be obtained by grazing the thousand headed kale in breaks as compared with extensive grazing of an area.

Turnips: In the grazing of turnips a light grazing of the tops can be obtained from an October sown area, early in February if the lambs are removed when they are noticed grazing the bulbs, a second growth of tops comes very rapidly and the crop can be completely utilised at the second and final grazing.

SUMMARY.

It does seem clear that the man fattening lambs on the Gisborne flats can add considerably to the amount of meat exported from this country. It has been shown that it is possible on these special pastures carrying 6 or 7 ewes per acre in the spring to fatten lambs to weights 5 to 6lbs. heavier than the district average. It is also possible from the same pastures with careful management to encourage species specially included in the mixture and these will fatten or top off store lambs to weights 6 to 7lbs. heavier than the average lamb killed in the district.

From experience at Manutuke there is no doubt that the clovers are responsible for the heavier weights. It would seem, therefore, that it is our responsibility to ensure that only the best of pasture mixtures are sown and that the farmer is advised how to handle these pastures to obtain maximum production.

With regard to crops, turnips and thousand headed kale. These would appear to have a two-fold purpose in the Gisborne district:

Firstly: It has been shown that lambs grazing these crops will kill 5 to 6lbs. heavier than is usual in the district and the average daily gain is higher than on pasture. It would seem, therefore, that it would be quite profitable to grow crops for topping off weaned lambs in January and February.

Secondly: Turnips and thousand headed kale are an ideal crop to grow as an insurance against Facial Eczema. These crops provide a tremendous bulk of high quality feed which could be used at that critical time for lambs which are not quite killable and must be kept off the dangerous pastures.

Discussion on Mr. Simpson's Paper

Mr. HUNT: At what date were the kales sown and how long would they take to grow during the season?

Mr. SIMPSON: We sow our kale in October and it is generally ready for grazing about the 25th or about the end of January. We put our first lambs on then and it is grazed throughout the season from January to April and then closed up early in May, in our district.

Mr. MITCHELL, senr.: The procedure described by the speaker is definitely discouraged by the Meat Board.

Mr. FORDE: With regard to the question of the heavier lamb. The Meat Board at the present time is showing a totally unrealistic attitude towards this increase in meat production. The light weight lamb has a history. It was brought in primarily after the Ottawa Agreement. We were up against a quota on our lamb and we knew that the small lamb was popular in England. We wanted that market in order that we would not have unshipped meat in this country and the whole price schedule was framed in order to induce that light weight lamb to come forward. The situation is totally different to-day, when people can only get 10d worth of meat a week in England. We are still under the shadow of quotas and the policy that was framed during that period. I know the province I am familiar with, Southland, can produce a heavy weight lamb. I am glad to say the Gisborne district, or some of the farmers there, are practising Southland's well-known technique of the past 50 years, of growing supplementary crops and getting these bigger weight lambs. I am glad to say that we do get our money back with lambs and those heavier lambs are helping to feed the people of Britain at the present time.

Dr. McMEEKAN: I would like to ask some questions in respect to Mr. Simpson's data. Undoubtedly the weights presented for the performance of these special pastures are quite impressive, in fact spectacular, but I am a little bit worried about the inference, Mr. Chairman, as to a full commercial scale job. Am I right in assuming that the data refers to one acre areas of these special pastures and if so, would Mr. Simpson describe how the stocking is organised? When do the ewes come on, what measure of selection is employed in stocking those one acres—if that is the area concerned—and is the method employed to select ewes of the same lambing date? Is it correct to assume that the difference of 2½lbs. per lamb between the rest of the properties' milk lambs and those lambs, is due to poor postures, or pasture types? Might not that difference be at least in part associated with the "spread" in lambs in a larger flock?

Mr. SIMPSON: Yes, the paddocks are acre paddocks and the ewes will be going out on to these pastures early next month. At present we still have a few lambs grazing them. They will simply be run off, six or seven ewes to each paddock. But when the lambing starts and we want to set stock the fields with the lambs we do not consider the ewe at all. The average weight of each group of lambs in all the paddocks is the same. We weigh all the lambs. If we want 72 lambs for these particular paddocks we take out all the very heavy and very light ones from a mob of 80 or 90 and use the intermediate ones. We have a group of lambs averaging 30 or 25lbs. weight in each paddock, so all the groups start off at the same average live-weight. The same happens in the autumn with the bought-in store lambs as well.

Dr. McMEEKAN: Any twins?

Mr. SIMPSON: No, single lambs each time. With regard to the permanent pastures that were there, I think I pointed out that the weight of lambs last spring were up on previous spring weights. We had an area of eight acres of new pasture this year to run the balance of station lambs on—about 180 lambs—and they did considerably better than the lambs that were on the permanent pasture. As soon as we get the lambs grazing these special pastures, off the place in December as fats we bring the others in. The permanent pastures they were grazing were there when we took the property over.

Dr. FILMER: This is a small experiment which I believe has to be done in a number of districts as it obviously follows on from work that has been done at Palmerston North by the Grasslands people in developing pastures. The results, I think, have been quite fairly presented and I think it can be said that under the conditions that those pastures were handled, the farmer on comparable land in the Gisborne district can now get seven fat lambs per acre away by about Christmas time at comparable weights. He can get from 8 to 16 lambs per acre away in the autumn at comparable weights. There are one or two things that I think have to be pointed out, however. Some of these results surprised us in the way in which they happened. The outstanding results have been obtained with the H.I. ryegrass and white clover but they were not obtained primarily from the H.I. ryegrass. They were obtained primarily from clover, and Mr. Simpson indicated that they were obtained possibly because the H.I. did not suppress the clover growth in the way the ryegrass does under Poverty Bay conditions. I do not know whether that will apply in other districts or not. In the South Island we hear stories that in wet summers when clover becomes prominent, lambs do very badly and we know in certain parts of Australia when subtterranean clover becomes predominant severe loss occurs. I feel this experiment has to be done in a number of districts using the pastoral mixtures recommended by the Grasslands people. I do think these results can be applied on a large scale in the Poverty Bay district.

Mr. FORDE: It is rather an important point that Dr. Filmer raised. We are faced with the problem of staggers this year in an exaggerated form in Hawke's Bay, and we have fairly considerable economic losses in lambs, wethers, bullocks and the whole galaxy of farm animals. In my particular case, I have had this present farm for nine years and have improved the pastures very considerably. I have had three worthwhile outbreaks of staggers now, each one worse than the previous. There seems to be a connection between the incidence of staggers and the percentage of p.p. pastures. In fact, our local veterinarian is frightened that the incidence of toxic poisoning is increasing with the increasing percentage of good types of rye-white pastures. I would like to ask Manutuke if they have had any experience this season with grass-staggers.

Mr. SIMPSON: Actually we had a little grass-staggers this year and it was all on the perennial ryegrass pastures, particularly those with very little white clover; on the short rotation and red clovers, and cocksfoot and white clover, where the white clover was dominant, we had no staggers at all.

Mr. FORDE: We were led to believe that the H.I. and short rotational pastures were free of it, but Mr. Laing, our local veterinarian, can contradict that. He told me he had come across it in Hawke's Bay.

Mr. SIMPSON: I think that the only reason we did not get the staggers on H.I. pastures was because the green feed available was in the form of clovers. We noticed staggers on our irrigation area this year. Before we actually flushed it, four or five lambs out of the ten were badly affected with grass-staggers. When we gave it four or five inches of rain and the grass gradually began to move away, the staggers disappeared.

Mr. FORDE: Could anybody here carry out some research into grass-staggers? Two or three of my friends with high production land, had colossal economic loss this year. Hundreds of lambs could not be taken to the works. There was a high incidence of loss through collapsing into dams and drains through giddiness and disturbance.

Mr. BARTON: There are two points I would like to query. One is Mr. Simpson's method of assessing the value of these special type pastures and crops in terms of carcass weight? Those exceptionally heavy carcass weights ranging up to 48lb. are of the type which are not really required in the English market. It may be better if this measure of production from those pastures was in terms of carrying capacity, and number of animals fattened, rather than in terms of weight. To mention something about Mr. Forde's contention that the Meat Board is encouraging low average weight carcasses because of the Ottawa Agreement. I doubt very much whether that is quite correct, in that in the past 25 years during the time in which the New Zealand Meat Producers' Board has been in operation the average carcass weight for lambs has not altered very much. The average for the first five years, for instance, 1923-27, was 34.6lb.; the next five years it was 33.9lb.; the next five years 33.5lb.; the next five years 33.8lb.; and the last five years it was 34.1lb. So I am rather forced to the conclusion that it is very difficult for farmers in New Zealand to alter their average carcass weight unless they adopt Mr. Simpson's policy which may be wrong with regard to carcass suitability in the old country.

Mr. SIMPSON: Actually when we went to Gisborne we were told we could not produce lambs over 35lb. weight in the district—the district average killing weight suggests that. I do not think myself there are many farms in the Gisborne district carrying seven ewes per acre. It shows anyway that we can still get those heavyweights and at the same time produce seven lambs per acre, giving say 280lbs. of meat. This year I intend to run eight ewes to the acre and see if we can still get the same weight of lambs. We are going to use Dorset horns.