

SOME ASPECTS OF SHEEP FARMING IN CANTERBURY.

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The problems confronting the sheep farmer on arable farms in Canterbury may be divided into two classes:-

1. Those relating to the vast areas of pure sheep country typical of the Bight stoney plains and arable downlands.
2. Those relating to the heavier cropping land.

As little, or if any, of the light plains land is put under irrigation, sheep farming presents a fairly easy problem there. It is a simple type of farming, in providing suitable permanent pastures, a sufficient supply of winter feed, such as turnips, and an area of early feed, such as Western Wolths or green feed to tide the ewes over between the turnips and grass.

Moreover, as the carrying capacity runs from one ewe to the acre, to one ewe to one and a half acres, there is little difficulty in keeping the pastures clean and healthy, even with the low annual rainfall..

The heavier cropping land is a different proposition in that the carrying capacity is raised to from three to five ewes per acre, and in some cases even more.

This heavy stocking under erratic climatic conditions, such as caused by the hot north west winds and low summer rain fall combined with the long winter, makes profitable sheep farming on this type of land a problem requiring much planning and consideration.

It may be asked, "Why go in for sheep farming on this heavy soil, why not stick to cropping or dairying?" The answer-in regard to cropping is simply that the area of this land is too great for the population. In 1933, when even a slight increase in acreage was sown in wheat, the result was a surplus over the domestic requirements which had to be exported at a price much below the cost of production.

Owing to climatic conditions and higher production costs Canterbury cannot compete in the world's grain markets. Dairying is in the same position. Climatic conditions again make the cost of production too high, and as the only market for dairying products and by products is Great Britain, the present outlook is anything but bright.

Britain is determined to stand by her own farmers, 65% of whom have holdings under 50 acres, and 89% holdings of under 150 acres. With this large number of small holdings of a size undoubtedly adapted for cows, pigs, and poultry, it looks like better business for the Canterbury farmers to concentrate more on fat lamb production with ewe mutton and wool as by products, especially as this would make up to some extent for the market for oats and chaff which has been lost by the use of mechanical power.

Although many of the practices in providing suitable sheep feed are applicable to both light and heavy land, it is the purpose of this paper to deal with sheep farming on the heavier Canterbury country, and the farm of "Craigburn" will be used for illustrative purposes.

On this farm a certain amount of mixed cropping is carried on, but the main object is the breeding of stud sheep, which comprises a flock of 450 Romney ewes, and 300 Southdown ewes.

"Craigburn" consists of 240 acres of heavy cropping land and 140 acres of lighter river land with stony ridges running through. The 140 acre block is laid down in Hawkes Bay ryegrass and white clover, these pastures are topdressed with 15 cwt. of lime and $2\frac{1}{2}$ cwt. of super an acre.

The 240 acres of heavy land is worked in a seven course rotation, the rotation being:-

First year	Wheat
Second "	Peas $\frac{1}{2}$, oats $\frac{1}{2}$
Third "	Winter green feed, summer fallow.
Fourth "	Western Wolths and Red Clover.
Fifth "	Western Wolths and Red Clover
Sixth "	Swedes and Mangolds.
Seventh "	Potatoes and Rape.

After the peas and oats are harvested the ground is immediately sown in Algerian oats for winter green feed with $1\frac{1}{2}$ cwt. of super and $\frac{1}{2}$ cwt. sulphate of ammonia.

This is ploughed again in October and the paddock summer fallowed. It is then sown down in February in Western Wolths and Red Clover. This provides late winter and early spring feed for the ram hoggets.

If summer feed is plentiful it is shut up in October and cut for hay, and the aftermath used for finishing off the rams in February and March. To get the best results from Western Wolths the land must be summer fallowed. The practice used to be to sow the Western Wolths immediately the peas were harvested, but unless the harvest was early and the weather suitable, the risk was too great as the Western Wolths did not come in early enough and the Red Clover strike was usually poor. This unsatisfactory clover strike consequently resulted in an unprofitable aftermath and second year's grazing. In the event of an early harvest the wheat stubble is turned over and sown in Algerian oats with $1\frac{1}{2}$ cwt. super and $\frac{1}{2}$ cwt. sulphate of ammonia. The root crop which comprises swedes and mangolds, is carted off and fed to the ewes on the permanent grass paddocks, the ewes receiving at the rate of eight to ten pounds of roots per ewe for the Romney ewes, and six to eight pounds for the Southdown ewes, the quantities being increased from the lower to the higher rate as the paddock feed decreases and the pregnancy period advances. Wire netting racks are erected in the paddocks and these are kept filled with hay.

In a dry year when no hay is saved, boxes are put out and 1 lb. of oat sheaf chaff is fed per ewe. It is necessary to have enough boxes so that all the ewes have room to feed at the same time. The self feeding boxes for this purpose cannot be too strongly condemned because a few of the stronger and older ewes will take possession and keep off the younger and weaker ones.

The method here advocated is undoubtedly the most successful way of winter feeding ewes on heavy land, and it has been found that the ewes do better than when folded on the roots.

Since the ewes have been fed in this way, no cases of anti-pasture-paralysis in the ewes, or pulpy kidney in the lambs has appeared. But when the ewes were folded on the roots, both these diseases were common in the flock.

Swedes are fed till about a fortnight before lambing, when the ewes are put on to mangolds. The previous practice was to put the ewes at this time on to green feed but it was found that they did not milk so well as they did on mangolds fed out on the permanent pastures.

Some years ago the ewes were put on a paddock of Cape barley, but when lambing commenced they did not have enough milk for the lambs, so they were taken off and put on a three years old Hawkes Bay paddock, which immediately increased lactation. The crops provided by the seven course rotation, with the exception of the wheat and potatoes and a portion of the peas, are used entirely for sheep feed.

A portion of the oat crop is used for chaff for the ewes when no hay is saved, and the balance of the grain fed to the young sheep during winter, and also to flush the ewes before being put out with the rams. Half a pound of oats per ewe per day for three weeks is fed at this time. A portion of the peas is fed to the young sheep. This system of sheep farming on heavy land seems to work very well, but a serious problem is to provide grazing in January and February. Topdressing the permanent pastures brings the grass in about three weeks earlier, but these topdressed pastures, although they provide tremendous quantities of feed in the late spring and early summer, months, go off quicker and do not come away again till the autumn rains, start growth.

To overcome this difficulty it is being contemplated to replace a portion of the Hawkes Bay pasture with a mixture of Akaroa cocksfoot and Montgomefy red clover, the intention being to shut up the cocksfoot and clover during November and December so as to provide feed in January and February.

Expression of opinion on this point would be welcome from the conference.

There is undoubtedly a disadvantage in Hawkes Bay ryegrass especially when topdressed, in that it takes absolute possession and smothers out all other grasses and clovers with the exception of Crested Dogstail, and although it has a dormant period in late summer, it certainly responds to the autumn rains and comes away quickly at that time. However, its strong point is that it is Permanent and improves with age.

Points worthy of note are :-

1. That for the winter feeding of the ewe flock it is much more profitable to cart the roots out to the ewes. About half the acreage is required and as the crop costs about £8-10/- per acre to grow, the saving in growing the smaller acreage more than pays for the cost of carting out. By this method the ewes are kept in better health, and this consequently has a tremendous beneficial effect on the lambs.

2. The advantage gained by summer fallowing previous to sowing down the temporary pasture of Western Wolths and red clover.

3. The increase of green feed from application of $\frac{1}{2}$ cwt. sulphate of ammonia mixed with the super.

4. The difficulty in providing a balanced amount of grazing from September to March as the topdressed Hawkes Bay rye provides too much in spring and early summer and not enough in late summer and early autumn.

5. That a grass paddock or mangolds are better feed for bringing ewes to their milk than green feed.

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