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# The Growth of Cheaper Winter Food for Livestock

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## Introduction

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## INTRODUCTION

THE problem of finding winter food for live stock is of increasing importance to farmers. Modern changes in British agriculture all tend to raise the position of live stock in the economy of the farm and to emphasize the need for effective management during the winter. There is the possibility of doing fairly well during the winter months, but on the other hand it is painfully easy to lose whatever may have been made in summer.

The problem is probably most important for the dairyman producing fresh milk for market. The highest prices are paid in winter, but the costs are also highest and the need for economy is very great.

For the meat producer the problem is rather different. The old method of winter production of beef was to feed cattle on roots, hay or straw, cake and corn, and this certainly gave meat of high quality. The costs are now too high and the method has been much altered, roots particularly being much less used. No satisfactory new method has yet been devised, and indeed it is not clear that the giving up of roots was the best change to make. In Denmark, as is shown later, farmers kept to roots, and even extended their use.

The provision of winter food is also of considerable interest to the grassland farmer producing meat on grass—*i.e.* during summer months only. This method, while cheap and usually profitable, has the disadvantage of making little provision for winter, so that new animals have to be bought from the hill farmers or from Ireland each spring, and any animals not finished in summer may have to be sold in autumn to other farmers possessing sufficient winter food. Hitherto the arable farmers alone have been in this position, and so there developed the transfer of live stock in autumn from the grass to the arable farms, a change advantageous to both groups of farmers so long as there was some sort of balance between the grass and arable land of the country. Where, however, there is much more grass than arable there tend to be many buyers of store cattle in spring and many sellers of unfinished animals in autumn; in consequence the grassland farmers may be driven into the awkward position of paying dearly for their stores in spring and of selling cheaply any animals left over in autumn. This difficulty could be largely overcome by the provision of cheap winter food.

The sheep farmer is equally interested. Given a sufficiently cheap supply of winter food he can hope to produce early lamb commanding a very attractive price per pound, otherwise he must wait till the grass is sufficiently advanced, and by this time others are on the market and prices have fallen.

These considerations always hold, and they give a permanent interest to the problem of producing cheap winter food. During



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the present winter, however, the problem is likely to be specially urgent, for the past summer (June to September) at Rothamsted has been the driest since the records began in February 1853, and it has been particularly unfavourable for the growth of winter food in the southern part of England.

The following papers show how the problem is being tackled by practical men in various parts of this country, and also in Denmark and in New Zealand. Some are depending on grass. This is less difficult now than it was, for under modern management and manuring the grass can be made to start earlier into growth in the spring, and to continue growing later in the autumn, so that the grazing season can be extended by several weeks. Dr Annett describes the method used in New Zealand; here the problem is reduced to its simplest because the cattle can be left out all winter, and they are given no concentrated foods there. Some grass is cut for hay, and some is made into stock silage, but neither cake nor corn is purchased. The milk supply is low in winter, but as the farmer is aiming only at butter production he arranges, like the English cheese-maker, for his cows to calve in time for the best growth of the grass. Usually this simple method does not answer in Great Britain, and the utmost that can be done is to extend the grazing season as described by Mr Brunton, so reducing the need for winter food.

It would of course be possible to get through the winter on hay alone, but this plan is not always economical.

Three other methods are therefore used: these are discussed in detail in the following papers:

(1) Fodder crops of good feeding value are grown.

Lucerne has proved of great value and deserves to be more used by farmers, especially now that inoculation is a practicable process. Marrow-stem kale, sugar-beet tops and fodder mixtures (*e.g.* oats, beans and tares) are cheap and good, while one ingenious and successful farmer uses the stalks of brussels sprouts with considerable success. Agricultural science is not yet at the end of its resources in this matter of fodder crops.

(2) Roots, either swedes or turnips, are grown.

This is the old method: it is going out in Great Britain, particularly in the Eastern and South-Eastern counties of England, where the area shrinks from year to year: it fell from 154,400 in 1920 to 104,500 in 1928,<sup>1</sup> and the fall continues. One might think that roots are doomed, but the experience of Danish farmers proves that they are not. In Denmark, as Mr Faber shows, the area under roots increases, and with it the numbers of live stock per hundred acres, the fertility of the land, and the total output of food from the farm. Several reasons have contributed to this result. The

<sup>1</sup> The counties are those enumerated under the headings "Eastern" and "South-Eastern" counties in the Ministry of Agriculture statistics.



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climate of Denmark is more suited to roots than that of the Eastern and South-Eastern counties of England. The Danes have concentrated their attention on the improvement of feeding value per acre rather than appearance or weight; they have made stringent regulations about seed being true to name, and they have improved their method of cultivation.

It is not easy to compare wages in Denmark with those in England because of differences in mode of payment, but there does not appear to be a sufficient difference in daily rates to explain the difference in attitude towards the root-crop. The trouble is that at present the English farmer, owing to climatic factors, often obtains only about twelve to fifteen tons of roots per acre, and until this can be increased roots must remain unprofitable. In the North the yields are higher, and roots remain a permanent factor in winter feeding.

(3) More use can be made of home-grown cereals; instead of selling them at low prices they can be ground for use on the farm. Before buying any concentrated feeding-stuff farmers should inquire about the prices that will be paid for their corn, and if this is not satisfactory then the purchases should be reduced accordingly.

No single one of those methods is likely to answer all round, and every farmer must solve for himself the question of the most likely for his conditions. Experiments are being made on mixture and other suitable crops and the best way of working these into the rotation. What is wanted is not more coarse fodder but more digestible material—protein, carbohydrate and fat—and the question is how to get this most economically and conveniently.

At this Conference there was no discussion of rations, but it was pointed out by Mr Stewart that the Scandinavian rations are more economical than ours, giving about one gallon per cow more milk than ours do: also that we appear to be giving too much protein, judging by American results.

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