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DAIRY FARM MECHANISATION SCHEME.COSTS OF OPERATIONS.*

(P.C. Druce).

The costs of operations during the second half of 1944 at the pools co-operating in this survey serve to stress the importance of keeping the units constantly at work, so that fixed expenditure will be spread over as many working hours as possible.

The drought experienced over most of the State during the period under review affected machinery pool operations more severely on the North than on the South Coast and the results of this are seen at the Hastings District Pool where the drought was responsible for a big reduction in the hours worked: Not only were fewer orders forthcoming but some work had to be refused because the land was too hard to cultivate.

Consequently, working time was reduced from 698 hours in the previous six months, when conditions were fairly normal, to 589 hours, and this heavy reduction was largely responsible for an increase in costs of over 3/- per hour.

Both at Nowra and Bega the season was reasonably good; at least, it did not have an adverse effect on the orders received and it was not necessary to refuse orders on the grounds that the land was too difficult to work. These pools worked somewhat longer hours than in the previous six months, their costs remaining much the same as before.

The effect on costs of the longer hours worked at these two pools was offset, at least to some extent, by the fact that in the light of experience gained since figures for the previous six months were analysed, it was thought desirable to make some alterations in the method of allowing for the depreciation of the plant and tyres.

The rates allowed for depreciation were increased so that tractors will now be depreciated in three years if working and travelling time amounts to 48 hours per week. In addition, a flat rate loading of 5% per annum on the capital cost of the plant has been added. It is likely that if this allowance for depreciation errs, it errs on the heavy side.

Tyres have been treated quite separately from the rest of the plant, and were allowed for on the basis of 2000 hours of use. Whether this estimate of their working life is correct only experience will show.

* See "Recent Investigations into Farm Machinery Costs" in the January, 1945, issue of this Review. Unfortunately, figures for the Bowthorne Co-operative Butter Factory Ltd. are not yet available, but it is hoped that these will be published next month.

Repairs also present a difficulty in that it is impossible to know whether, as the plant becomes older, they will increase, and if so, to what extent.

These three factors: depreciation of the plant, and repairs, limit to a certain extent the value of the figures given below. They comprise about 25% of the total costs. It is unlikely that the costs given are too low.

The hourly operating costs in the first half of 1944 and the second half of 1944 are given below:

<u>Nowra:</u>	1st half	2nd half
	1944	1944
I. H. C. W6 Tractor and 3 furrow disc plough	16/5	16/-
I. H. C. W6 Tractor and tandem disc harrow	16/3½	15/6½
<u>Hastings:</u>		
Massey Harris 203 Tractor and 5 furrow disc plough	15/3	18/8
Massey Harris 203 Tractor and tandem disc harrow	15/1½	18/9½
<u>Bega:</u> (In the case of Bega, the figures given are for the periods April to July, 1944, and August, 1944, to January, 1945.)		
Howard DH22 Rotary Hoe	14/3½d	14/1½d

The charges now made by these pools are as follows:-

Nowra	- 17/6d per hour
Hastings	- 17/6d per hour
Bega	- 13/- per hour.

The times taken to work one acre and the cost per acre, in the two periods, were as under:-

	Time taken to work one acre.		Cost per acre.	
	1st half (hrs.)	2nd half (hrs.)	1st half £ s.d.	2nd half £ s.d.
<u>Nowra:</u>				
I.H.C. W6 Tractor and 3 furrow disc plough	1.22	1.25	1. 0.0	1. 0.0
I.H.C. W6 Tractor and tandem disc harrow	.41	.44	6.8	6.10
<u>Hastings:</u>				
Massey Harris 203 Tractor and 5 furrow disc plough	.20	1.09	18.8	1. 0.4
Massey Harris 203 Tractor and tandem disc harrow	.61	.53	9.3	9.1½
<u>Bega:</u>				
Howard DH22 Rotary Hoe	1.99	2.20	1. 8.7	1.11.1

As before, wages, kerosene and depreciation, in that order, were the most important items in costs. Together they comprised from 65%-70% of the total costs.

The only other individual item which accounted for more than 5% of the total cost was the allowance for tyres which was in the vicinity of 6%.

The fact that wages are not, in the case of most pools, a variable cost but remained fixed irrespective of the amount of work done is of great importance in view of the fact that in every case examined they account for over 30% of the total hourly costs. This serves to stress the importance of obtaining the greatest possible number of actual working hours as distinct from time taken in travelling, repairs or lost in other ways, if the Scheme is to be run economically and if it is to compete successfully with private contractors.

Since the above was written details of the Bowthorne Co-operative Butter Factory Ltd.'s pool operations have been made available. Operations were severely restricted by the drought with the result that costs increased to levels that were from 3/8d to 4/11d per hour higher than the charges made by the pool. Hourly costs in the first and second six months of 1944 were as follows:-

	<u>Jan.-June</u>	<u>July-Dec.</u>	<u>Increase.</u>
W4 Tractor and 3 furrow disc plough	13/10	17/2	3/4
W4 Tractor and tandem disc harrow	-	17/3½	-
Howard DH 22 Rotary Hoe	13/10	18/2	4/4
Farmall H Tractor and 3 furrow disc plough	13/8½	18/5	4/8½
Farmall H Tractor and tandem disc harrow	13/7	18/4	4/9

Charges made by the pool were 13/6 per hour for ploughing and tandem discing and 15/- per hour for rotary hoeing. The acreage costs in the two periods were as follows:-

	<u>Jan.-June</u>	<u>July-Dec.</u>
W4 Tractor and 3 furrow disc plough	£1. 7. 0	£1.12. 1
W4 Tractor and tandem disc harrow	-	10.11
Howard DH 22 Rotary Hoe	1.11. 6	1.16. 6
Farmall H Tractor and 3 furrow disc plough	1. 4. 5	1.11. 4
Farmall H Tractor and tandem disc harrow	14. 1	11. 7