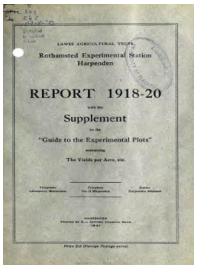
Report 1918-20 With the Supplement to the Guide to the Experimental Plots Containing the Yields per Acre Etc.



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Efficiency of Labour

Rothamsted Research

Rothamsted Research (1921) *Efficiency of Labour ;* Report 1918-20 With The Supplement To The Guide To The Experimental Plots Containing The Yields Per Acre Etc., pp 12 - 13 **- DOI: https://doi.org/10.23637/ERADOC-1-109**

Harvest of	1914	Mangolds 18½ tons, potatoes (varieties 7-10 tons)
,,	1915	Wheat (25 bush.), barley (40 bush.)
,,	1916	Wheat (26 bush.), oats (38 bush.)
,,	1917	Wheat (23 bush.)
,,	1918	Clover (weedy—1½ tons)
,,	1919	Oats (weedy), stubble cleaned (62 bush.)
,,	1920	Wheat (clean—32 bush.)
,,	1921	Wheat (still clean)

III. COST OF WORKING.

Our experience up to the present is that the cost of working with the tractor is less than with horses. For the Titan the figures for the cost of ploughing an acre of land have been :—

	1919		1920	
	By Tractor.	By Horses.	By Tractor.	By Horses.
Labour	7/7	10/2	8/9	12/6
Maintenance*	—	22/6	—	28/3
Oil, Paraffin and Petrol	7/8	—	10/7	—
Depreciation and Repairs	6/3	—	6/6	—
	21/6	32/8	25/10	40/9
Time taken	4 hours	1½ days		

* Including Labour Items.

IV. INCREASE IN EFFICIENCY OF LABOUR.

In our district the standard rate of wages per week has been :—

	Horseman.	Labourer.	Hours per week.
1914	18/–	16/–	57
1915	21/–	19/–	57
1916 (until May 19)	23/–	21/–	57
1917 (until March 23)	24/–	22/–	57
(until Nov. 30)	27/–	25/–	57
1918 (until May 17)	31/–	28/–	57
(until Sep. 6)	33/–	30/–	57
1919 (until May 19)	42/–	32/–	48 winter 54 summer
(until Oct. 6)	48/6	38/6	48 winter 54 summer
1920 (until April 19)	48/6	38/6	48 winter 50 summer
(until Aug. 28)	52/6	42/6	48 winter 50 summer
(after Aug. 28)	56/6	46/6	48 winter 50 summer

but the efficiency of the work done with the same implements has not increased.

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It would be difficult, even if it were possible, to reduce the rate of wages, but there is abundant room for an increase in efficiency. The American estimates* are :—

* K. L. Butterfield, "The Farmer and the New Day." New York, 1919, p. 9.

EFFICIENCY OF AGRICULTURAL WORKERS.

United States	100
United Kingdom ...	43
Germany	41
France	31
Italy	15

The figures may not be absolutely accurate, but it is undeniable that the British worker falls far behind the American in output. No British worker would admit that there need be so great a difference as the figures show, even if any need exist at all. The best hope for the future of the rural community is an increase in efficiency of the worker sufficient to allow for a fall in cost of production without a fall in wages.

The tractor greatly increases the output of the worker. Its effect is shown by the figures for the following times of cultivation of an acre of land measured or estimated on our farm :—

	By Tractor.		By Horses.	No. of Horses.
First Ploughing . .	Titan	4 hours	$1\frac{1}{2}$ days	—
Cross Ploughing . .	Austin	2 ,,	$7\frac{1}{2}$ hours	2
Cultivation . .	Austin	$\frac{3}{4}$,,	$1\frac{1}{3}$,,	3
,, . .	Titan	1 ,,	$1\frac{1}{3}$,,	3
Rolling 10 acres . .	Austin	$3\frac{1}{2}$,,	$8\frac{1}{2}$,,	2
,, ,, . .	Titan	5 ,,	$8\frac{1}{2}$,,	2

THE POSSIBILITY OF EASING THE WORK OF CULTIVATION.

The tractor is purely mechanical in its operation and consumes fuel in exact proportion to the work done by the engine. It is imperative, therefore, that useless work should be avoided as far as possible. Farmers have long known in a general way that certain manures facilitate the working of the land, and we have this year begun measurements which we hope to develop, showing the saving thus effected in energy, *i.e.*, in fuel, oil and wear and tear.

One of the most effective agents in ameliorating heavy soil is chalk. Since 1912 in several fields we have had large plots of chalked and unchalked land, each several acres in extent, and have kept records of the yields obtained. These show improvement in clover and barley, but not in potatoes, wheat, mangolds, etc. Over a six course rotation there is less financial return than might have been expected, though, of course, it is satisfactory so far as it goes.

The ploughman always declared, however, that he could work more easily on the chalked than on the unchalked land. No measure of this difference could be obtained with horse implements,

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