Potatoes
Cost of
production O.S.

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COSTS OF GROWING POTATOES IN THE NORTH WEST PROVINCE

1948 Crop

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Introduction

The costs of early and maincrop varieties which are given separately in this bulletin were obtained from 23 farms in North Cheshire and North West Lancashire. In these districts milk production is the main enterprise but on farms with suitable soils and in years when early potatoes are a good trade the income from cash crops is not far short of that from milk. This is particularly true of North Cheshire where substantial changes in the level of profits between one year and another are nearly always due to the success or otherwise of the early potato crop. The 23 farms supplied 12 cost records for "earlies" and 18 for "maincrop."

The third group of costs was obtained from farms in South West Lancashire where potato growing is a highly specialised business. A feature of this area is the complete absence of livestock on many farms and the consequent purchase of farmyard manure to maintain the land in a high state of fertility. The varieties costed in this group were all maincrops.

Particulars of the size and cropping of the farms from which each group of costs was obtained are given in Table I and Table II.

TABLE I

Size Distribution

	Earlies	Maincrops	S.W.Lancs.
Under 50 Acres	-	2	2
50 - 100 Acres	5	7	6
100- 200 Acres	6	6	5
Over 200 Acres	1	3	-

TABLE II

Cropping

	Earlies	Maincrops	S.W.Lancs.
Number of Costs	12	18	16
Average Size (Acres)	129½	122½	99½
Wheat, Barley, Rye	13.53	11.62	16.95
Oats, Mixed Corn	22.06	19.09	25.39
Potatoes	10.89	8.37	19.25
Roots	3.12	2.33	2.89
Other Crops	.77	1.00	3.71
Total Tillage	50.37	42.41	68.19
Temporary Grass	24.61	22.91	20.27
Permanent Grass	25.02	34.63	11.54
	100.00	100.00	100.00

Costs

A total of 365¼ acres was costed and the average cost per acre of potatoes in the clamp or in bags was £56.18.3. This is an increase of £8 per acre over the cost for a similar sample of farms in 1947. Expenditure on fertilizers has risen substantially and there have been smaller increases in the costs of manual labour and seed. The yields of maincrop varieties were higher than in 1947 but earlier lifting reduced the yield of "earlies" and the overall average yield.

The costs in Table III have been taken up to the point at which the potatoes were ready for sale. This, for "earlies" and about half the acreage of "maincrops" was straight off the field at harvest time and for the remainder after dressing from the clamp. The harvesting cost covers both operations, that is, lifting and bagging, or lifting and clamping. Unclamping is the cost of dressing, bagging and clearing up.

TABLE III

Costs Per Acre

	Earlies			Maincrop			S.W.Lancs.		
	12 Costs			18 Costs			16 Costs		
	87¾ Acres			108 Acres			169½ Acres		
	£	s	d	£	s	d	£	s	d
Ploughing & Cultivating	2	13	10	3	1	11	2	15	1
Manuring	3	17	4	3	19	1	2	12	4
Planting, Sorting &c.	3	1	3	1	17	8	2	1	9
After Cultivations	3	5	6	3	8	6	3	14	1
Spraying		-			-				1
Harvesting	13	17	11	12	17	8	8	15	2
Unclamping		-		1	7	9	1	19	9
Total Operations	26	15	10	26	12	7	21	18	3
Manures: F.Y.M.	9	5	4	8	8	2	20	11	2
Other	7	7	5	6	18	7	6	11	9
	16	12	9	15	6	9	27	2	11
Less Net Man. Res.	6	6	10	5	9	10	12	0	4
Net Cost of Manures	10	5	11	9	16	11	15	2	7
Seed	13	10	9	14	2	8	12	6	6
Straw		-			7	7		6	6
Boxes		14	6		5	9		5	0
Spraying Materials		-			-				6
Rent	2	6	8	2	4	10	2	3	9
Overheads	5	7	4	5	5	3	5	0	4
Total	59	1	0	58	15	7	57	3	5
Yield Per Acre	5 tons			8t. 7c.			9t. 1c.		
Cost Per Ton	£11	16	2	£7	0	9	£6	6	4

The average costs of unclamping for the farms where this operation was undertaken were:-

Maincrop Group £2 13 4 per Acre or 6/7d. per Ton

S.W.L. Group £3 3 8 per Acre or 7/7d. per Ton

Differences between the costs per acre of "earlies" and maincrop are only slight and the exceptional features of Table III appear in the South West Lancashire group. In this group there is a saving of nearly £5 per acre in the cost of operations which is offset by an increase of nearly the same amount to the cost of manures.

The heavy charge for manures follows from the practice of buying a large part of the farmyard manure used in the South West Lancashire district and is a question of price. The rates of application are no heavier than in the other groups but the price paid per ton is from two to three times as great as the value given to manure made on the farm. As some compensation for the high price paid the purchased manure is usually delivered on to the field and there is a saving in carting costs. This contributes to the low operational cost but the main economy under this head is affected at harvest time. It is in this operation that good labour organisation and the use of specialised equipment can effect the greatest saving and the specialist growers appear to have made the most of their opportunity. Even when the cost of "unclamping" is added there is a saving of about £4 per acre to their credit. In Table IV where the operational costs are divided into manual, horse and tractor labour the saving is seen to be in the cost of the regular workers.

TABLE IV

Cost of Labour Per Acre

	Earlies			Maincrops			S.W.Lancs.		
	£	s	d	£	s	d	£	s	d
Regular Workers	15	1	7	16	4	0	11	1	11
Horse	1	6	4	2	3	10	1	3	2
Tractor	4	12	11	3	8	9	4	12	10
Contract		-				11		-	
Piece Work	2	17	5		-			-	
Casual	2	17	7	4	15	1	5	0	4
Total	26	15	10	26	12	7	21	18	3

Tables V and VI show the distribution of total costs per acre and the range in yields per acre and costs per ton.

TABLE V

Range in Cost Per Acre

	Number of Costs between:-						
	£ under 45	45-50	50-55	55-60	60-65	65-70	70-75
Earlies	-	1	1	5	1	3	1
Maincrops	-	-	2	7	1	4	1
S.W.Lancs.	2	2	3	1	2	1	2

TABLE VI

Range in Yield and Cost Per Ton

Yield Per Acre Tons	No. of Farms	Number of Costs Between:- £2-4	4-6	6-8	8-10	10-12	12-14	14-16
2 - 4	2	-	-	-	-	-	-	2
4 - 6	10	-	-	-	3	2	2	3
6 - 8	10	-	1	3	4	2	-	-
8 - 10	12	-	3	9	-	-	-	-
10 - 12	5	-	3	2	-	-	-	-
12 - 14	-	-	-	-	-	-	-	-
Over 14	1	1	-	-	-	-	-	-

Returns and Profits

As it was not possible to obtain full particulars of the potato sales from all the farms costed the information in the following table is confined to those farms for which full returns were available. The average costs per acre and average yields therefore, are not the same as in Table III since they refer to a smaller sample of farms. The returns per acre do not include the acreage payment.

TABLE VII

Returns & Profits Per Acre & Per Ton

	Earlies 11 Costs			Maincrops 11 Costs			S.W.Lancs. 10 Costs		
	£	s	d	£	s	d	£	s	d
Cost Per Acre	57	7	3	58	4	8	56	1	9
Return Per Acre	74	0	8	64	7	8	72	15	0
Profit Per Acre	16	13	5	6	3	0	16	13	3
Cost Per Ton	12	1	6	6	19	6	6	1	1
Returns Per Ton	15	11	9	7	14	3	7	17	0
Profit Per Ton	3	10	3		14	9	1	15	11
Average Yield Per Acre(Tons)	4.75			8.34			9.25		

On average "earlies" were no more profitable than maincrops grown in South West Lancashire but they have the very decided advantage for the dairy farmer that they leave the ground free early enough for a catch crop to be grown. In the South West Lancashire group the profit is the result of high yields and low costs per ton but in the "earlies" group the return per ton is the important factor. Since this depends on the crop being far enough forward to catch the high price at the beginning of the season the success of the early grower is less a question of costs and yields and more one of the weather and the situation of his farm. In the next table where individual results are given a greater variation in profits is shown by farms in the "earlies" group than in either of the other two.

TABLE VIII

Group	Return/Acre £	s	d	Cost/Acre £	s	d	Profit/Acre £	s	d	Yield/Acre
S.W.L.	120	0	0	47	19	5	72	0	7	15 tons
Earlies	122	4	5	65	16	9	56	7	8	4t. 18c.
Earlies	95	2	4	55	13	4	39	9	0	4 tons
Earlies	101	1	11	65	0	7	36	1	4	4t. 8c.
S.W.L.	82	0	0	49	10	1	32	9	11	10t. 5c.
Maincrops	95	19	10	65	6	7	30	13	3	11t. 7c.
Maincrops	91	7	4	67	9	0	23	18	4	11t. 5c.
Earlies	79	8	3	55	19	1	23	9	2	8t. 7c.
S.W.L.	75	18	0	52	15	8	23	2	4	9 tons
Earlies	85	0	0	62	19	2	22	0	10	9t. 8c.
S.W.L.	72	0	0	53	1	4	18	18	8	9t.10c.
Maincrops	89	6	11	73	5	1	16	1	10	10t.10c.
S.W.L.	68	14	4	54	10	3	14	4	1	9 tons
S.W.L.	58	0	0	44	11	9	13	8	3	8t. 5c.
S.W.L.	76	0	0	63	2	3	12	17	9	9t.10c.
S.W.L.	79	16	4	67	2	0	12	14	4	9t.17c.
Maincrops	54	4	11	45	3	1	9	1	10	6t.17c.
Maincrops	67	8	9	58	8	10	8	19	11	9 tons
Maincrops	60	17	5	55	12	2	5	5	3	7t.18c.
Maincrops	66	11	2	61	9	10	5	1	4	9t. 1c.
Earlies	50	14	6	46	10	5	4	4	1	3t. 2c.
S.W.L.	49	5	0	48	3	7	1	1	5	6 tons
Earlies	60	10	0	59	13	6		16	6	4 tons
Earlies	55	0	0	54	10	5		9	7	5t.10c.
Maincrops	54	10	0	55	10	8	-1	0	8	7 tons
Maincrops	54	18	4	59	3	6	-4	5	2	7 tons
Maincrops	50	15	0	55	7	4	-4	12	4	7 tons
S.W.L.	52	6	1	58	8	11	-6	2	10	6t.19c.
Earlies	42	0	0	50	2	0	-8	2	0	3t.10c.
Maincrops	52	10	0	61	14	5	-9	4	5	8t. 8c.
Earlies	46	9	10	56	19	1	-10	9	3	5t.15c.
Earlies	55	18	8	66	13	9	-10	15	1	6 tons

Notes on Costing Methods

Labour: records of the time spent on each operation by men, horses and tractors were supplied by the farmers and the cost calculated by charging manual labour at prevailing rates, horses at a standard rate of 1/- per hour, and tractors at a standard rate of 3/- per hour. Contract work was taken at actual cost and included, in addition to the hire of equipment, the cost of any labour supplied.

F.Y.M: the charge for manure produced on the holding was 14/6d. per ton exclusive of the cost of carting and spreading.

Seed: purchased seed was charged at cost price, including carriage, and home grown seed at £9 per ton.

Straw: straw used for clamping was charged at £3. 10. 0 per ton.

Manurial Residues and Cultivations: no allowances were made for grass and clover roots ploughed in, or for beneficial cultivations. In Table III Net Manurial Residues is the difference in value between the Manurial Residues in the ground before and after the growing of the potato crop. The cost of manures applied has to be adjusted by this figure to give the amount chargeable to the potato crop.

Overhead Expenses: an amount equal to 10% of the cost of labour, seed, manures and rent was charged under this head to cover a proportion of the general upkeep charges on the farm, depreciation on implements and time lost through illness, holidays with pay and so on.

Yields: the yields quoted in the bulletin are weights of marketable ware.