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Potatoes - Cost of production

THE WEST OF SCOTLAND AGRICULTURAL COLLEGE

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# POTATO COSTINGS

1966 CROP

J. F. MACPHERSON

178 Bothwell Street,  
Glasgow, C.2

Economics Department Report No. 117  
1967



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*With the Compliments of the  
College Economist and Staff*

West of Scotland Agricultural College,  
178 Bothwell Street,  
GLASGOW, C.2.

## CONTENTS

	<u>Page</u>
INTRODUCTION .....	1
SUMMARY OF RESULTS .....	2
 <u>THE SAMPLE</u>	
ACREAGES .....	3
VARIETIES AND YIELDS .....	3
 <u>THE CROP</u>	
PLACE IN ROTATION .....	5
FARMYARD MANURE .....	5
FERTILISERS .....	5
SEED .....	6
CHEMICAL WEED AND PEST CONTROL .....	6
BLIGHT PRECAUTION .....	6
HAULM DESTRUCTION .....	6
DIGGING AND LIFTING .....	7
STORING .....	7
 LABOUR AND POWER .....	
COSTS AND PROFITABILITY .....	8
COSTING METHOD AND CHARGES .....	9
 <u>APPENDIX</u>	
TABLE I Seed production costs per acre .....	12
TABLE IA Seed production costs by stages .....	13
TABLE II Ware production costs per acre .....	14
TABLE IIA Ware production costs by stages .....	15
TABLE III Average output and costs per acre .....	16
TABLE IV Distribution of cost per acre .....	17
TABLE V Distribution of cost per ton .....	17
TABLE VI Distribution of returns (gross outout) per acre .....	18
TABLE VII Distribution of returns per ton .....	18
TABLE VIII Distribution of profitability (surplus per acre) .....	19
TABLE IX Distribution of profitability (surplus per ton) .....	19
 <u>STANDARD APPENDIX</u>	
TABLE I Summary of average costs .....	20
TABLE II Summary of average yields and returns .....	21
TABLE III Summary of average labour and power .....	22
TABLE IV Summary of average quantities of materials used etc. .....	23

THE WEST OF SCOTLAND AGRICULTURAL COLLEGE

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178 Bothwell Street,  
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INTRODUCTION

Following the costing of the 1965 crop, this report summarises the results from the 1966 crop. It covers 23 costings kept on 20 farms in this College province. Ten of the farms were in Dumfriesshire, nine in Renfrewshire and one in west Perthshire. The acreage costed amounted to  $318\frac{3}{4}$  acres.

The costings have been divided into two groups - one of 12 crops grown principally for seed and the other of 11 ware crops. The second group contained two farms where the crop was lifted by contract and sold straight off the field and a third farm where part of the crop was disposed of in a similar way.

As growers already know, the 1966 crop was a profitable one. It is true that one or two farms in this sample due to unsatisfactory seed planted and resultant poor yields showed very much lower profits than they might otherwise have reasonably expected, but nevertheless none of the crops costed made a loss - unlike the year before when almost half the sample showed a loss.

After a run of poor market prices for the 1963, 1964 and 1965 potato crops, the acreage planted in Scotland for the 1966 crop was 122,000 acres - the lowest since before the war.

Selling began with rather better prices and these improved as the season progressed, although the demand for seed slackened a little before rising again. Towards the end of the season all varieties of ware including white ware made very good prices.

In general, weather conditions seemed quite reasonable for the potato crops in this sample, and certainly in one or two cases the crop was more easily worked than in the previous year, and this was reflected in lower power and labour costs for the farms concerned.

This report is part of the study of the cost of growing potatoes being carried out by the Economics Departments of the three Scottish Agricultural Colleges.

Grateful acknowledgement is made of the help received from the growers who co-operated by keeping cost records.

SUMMARY OF RESULTS

It should be noted that yield per acre includes ware, seed and also chats and brock. Similarly the gross output per acre and the average prices per ton include the chats and brock which were valued at around £2 - £3 as feed for stock.

The average total cost for growing, lifting and dressing the crop was £132 per acre for the 12 seed crops and £123 per acre for the 11 ware crops. This total cost comprises all variable costs - seed, fertiliser, miscellaneous and sundry expenses, and contract and casual work, and all other costs - rent, depreciation on specialised equipment etc., farm labour and power (including work of farmer and family), and overheads (share of general farm expenses).

Averages per Acre

	<u>12 Seed</u>	<u>11 Ware</u>
	£	£
Gross Output	9.7 tons 235.6	9.7 tons 168.2
<u>Less Variable Costs</u>	<u>71.0</u>	<u>65.9</u>
Gross Margin	164.6	102.3
<u>Less Other Costs</u>	<u>60.9</u>	<u>57.1</u>
Surplus	<u>103.7</u>	<u>45.2</u>

Averages per Ton

	<u>12 Seed</u>	<u>11 Ware</u>
	£	£
Price	24.2	17.3
Cost	<u>13.6</u>	<u>12.7</u>
Surplus	<u>10.6</u>	<u>4.6</u>

The results are given in detail in the tables at the end of the report, including the gross margin presentation in Table III. There is also a Standard Appendix of tables prepared in an agreed form so that the various University and College costings can be more easily compared.

THE SAMPLE

ACREAGES

The potato acreages costed on the 20 farms in the sample fell within the group shown in the following table:-

<u>Potato Acreage</u>	<u>Number of Farms</u>
Under 5	1
5 - 10	7
10 - 20	8
20 - 30	1
40 - 50	<u>3</u>
	<u>20</u>

In all 23 costings were used for this report, since on some farms more than one variety was grown and separate records were kept. The table below shows the distribution by acreage of the 23 crops.

<u>Crop Acreage Costed</u>	<u>12 Seed</u>	<u>11 Ware</u>
Under 5	2	1
5 - 10	3	3
10 - 20	5	6
20 - 30	1	-
30 - 50	<u>1</u>	<u>1</u>
	<u>12</u>	<u>11</u>

VARIETIES AND YIELDS

The 23 costings covering in all  $318\frac{3}{4}$  acres are placed in the categories in the following table according to crop type and potato variety.

	<u>Seed</u>	<u>Ware</u>	<u>Total</u>	
Number of costs	12	11	23	
<u>VARIETY</u>	<u>Seed Acreage</u>	<u>Ware Acreage</u>	<u>Total Acreage</u>	<u>Average yield per acre (tons)</u>
Redskin	1	$153\frac{3}{4}$	$154\frac{3}{4}$	9.8
Majestic	$75\frac{3}{4}$	-	$75\frac{3}{4}$	9.3
Red Craigs Royal	$42\frac{1}{4}$	-	$42\frac{1}{4}$	9.5
Pentland Dell	$18\frac{1}{2}$	-	$18\frac{1}{2}$	10.9
Record	$8\frac{1}{4}$	-	$8\frac{1}{4}$	13.1
Golden Wonder	-	$6\frac{1}{2}$	$6\frac{1}{2}$	8.1
Arran Pilot	6	-	6	6.9
Kerr's Pink	$2\frac{1}{2}$	$1\frac{1}{4}$	$3\frac{3}{4}$	9.7
Arran Banner	$2\frac{1}{4}$	-	$2\frac{1}{4}$	9.7
Pentland Crown	$\frac{3}{4}$	-	$\frac{3}{4}$	13.3
Total acreage	<u><math>157\frac{1}{4}</math></u>	<u><math>161\frac{1}{2}</math></u>	<u><math>318\frac{3}{4}</math></u>	
Average yield per acre (tons)	9.7	9.7	9.7	



The average yields per acre for the two groups were made up as follows:-

	<u>12 Seed</u> <u>tons</u>	<u>11 Ware</u> <u>tons</u>
Ware	2.8	8.5
Seed	6.5	0.4
Chats and brock	0.4	0.8
	<u>9.7</u>	<u>9.7</u>

There was a very wide range in yield. Some of the heaviest individual yields, all over 12 tons per acre were among the varieties, Record (one small field of this variety cropped just over 15 tons per acre), Redskin, Pentland Dell and Pentland Crown, Red Craigs Royal and Majestic. The lowest yield was just under four tons per acre for a very small field of Golden Wonder which nevertheless due to high selling prices still managed to cover costs. It also happened that some Arran Pilot, Pentland Dell, Redskin, Majestic and Red Craigs Royal yielded less than eight tons per acre.

Altogether 40 fields or sections of fields went to make up the 23 costings. The distribution of yield per acre from these 40 plantings is shown in the table below.

<u>Average Yield per Acre</u> <u>tons</u>	<u>Number</u>
Over 15	1
14 - 15	2
13 - 14	2
12 - 13	3
11 - 12	7
10 - 11	8
9 - 10	3
8 - 9	7
7 - 8	2
6 - 7	3
5 - 6	1
4 - 5	-
Under 5	<u>1</u>
	<u>40</u>

THE CROP

PLACE IN ROTATION

The usual practice is for the potato crop to follow a grain crop or be taken out of lea. The summary below shows what happened.

Following:-	<u>Seed</u>	<u>Ware</u>
Grain	7	6
Grass	4	5
Roots	1	-

Actually on three of the farms a small acreage of the potatoes grown followed roots and on one of these three a small field of grass was ploughed for potatoes, but mainly grain was their previous crop.

FARMYARD MANURE

Of the 12 seed crops, five were dunged and two were partly dunged. The estimated rate of dunging on the acres actually covered was 17 tons per acre. The remaining five crops received no dung at all.

Four of the 11 ware crops were dunged and one was partly dunged. The remaining six were not dunged at all. The estimated rate on the areas actually covered was 10½ tons per acre.

FERTILISERS

In all cases compound potato fertilisers were applied. One very small acreage which had been in grass also received a dressing of basic slag and on another farm a light application of muriate of potash was also given to part of the potato acreage.

Over the whole sample the average weight of all types of fertiliser applied per acre was as follows:-

	<u>12 Seed</u>	<u>11 Ware</u>
Cwt. per acre	10.0	9.4

When measured in units per acre this worked out at the following rates:-

	<u>12 Seed</u>			<u>11 Ware</u>		
	N	P	K	N	P	K
Units per acre	105	117	166	130	130	181

## SEED

Apart from one seed crop where the seed was boxed and another where it was stored in pallets there was no boxing of the seed.

The average rates of planting are shown below:-

<u>Type</u>	<u>Cwt. per acre</u>	<u>% Purchased Seed</u>
12 Seed	27.8	37
11 Ware	20.2	79

Two of the ware crops were planted by hand. The remaining nine ware crops and all the twelve seed crops were planted by machine. For part of two of the seed crops and for three of the ware crops and part of a fourth ware crop this was done with an automatic planter.

## CHEMICAL WEED AND PEST CONTROL

On one of the seed crops and part of another there was spraying for chemical control of weeds. Two ware crops and part of two others were similarly treated. Generally some summer cultivations were also carried out but on one farm the spraying was all that was done. All these sprays would be classed as the pre-emergent type, and the average cost of the spray was almost £3 per acre.

On part of the acreage of one of the ware crops an infestation of slugs was sprayed with a mixture of copper sulphate and muriate of potash before the potatoes were planted.

## BLIGHT PRECAUTION

Of the 12 seed crops six and part of a seventh were sprayed as a precaution against blight and an eighth was dusted. Four of these sprayings and the dusting were done by a contractor.

Of the 11 ware crops four and part of a fifth were sprayed. In one of these cases spraying was by contract.

## HAULM DESTRUCTION

All the seed crops and five of the ware crops were sprayed to burn down the shaws. This was by contract spraying for five of the seed crops and for one of the ware crops, otherwise the farm sprayer was used.

DIGGING AND LIFTING

A harvester was used on three of the seed growing farms although part of the acreage of two of these was dug by spinner digger. Three crops (all on one farm) were lifted by a two-row elevator and one by a one-row elevator digger. The remaining seed crops were all dug by spinner digger.

The ware crops were all dug by spinner digger. In two cases the crop was lifted by a merchant contractor and part of a third crop was also dealt with in the same way.

STORING

Apart from the two ware crops and part of a third ware crop lifted by contract and sold straight from the field for the green ware trade, the crop was generally taken and stored in sheds. Quite often any seed that was to be kept for planting during the next season would be clamped in potato pits.

LABOUR AND POWER

At potato harvest time, apart from one small crop lifted by family labour, all the costings showed that outside labour (casuals employed directly by the grower or squads supplied by a merchant who contracted to lift the crop) had to be brought in. In this report contract labour has been included under the category of casual and gang labour. This is to distinguish such contract labour from contract services which refer to hire of machinery with operators e.g. spraying, supplying digger and tractor etc.

The following table gives a summary of the labour and power costs. The figures are averages per acre.

	<u>12 Seed</u>		<u>11 Ware</u>	
	<u>Hours</u>	<u>£</u>	<u>Hours</u>	<u>£</u>
* Regular labour	53.58	17.782	42.93	14.062
Casual and gang	75.73	18.585	104.69	24.465
Power: tractor	26.91	6.054	29.62	6.664
dresser etc.		0.104		0.053
Contract services		<u>3.803</u>		<u>1.932</u>
		<u>46.328</u>		<u>47.176</u>

\* This includes any work of farmer and wife.



Table III in the Standard Appendix gives a further analysis of the labour and power requirements.

The lifting costs (excluding any allocation of share of general farm expenses) averaged £25 per acre for the 12 seed crops and £29 per acre for the 11 ware crops. The higher figure for the ware is due largely to the inclusion of the two crops and part of a crop sold off the field and lifted by contract with dressing of the potatoes in the field as soon as they were lifted. The contractor in these cases also supplied transport, tractor and digger as well as the squad of pickers.

The contract charges for this type of arrangement depended on the time taken but when expressed per acre varied from £23 per acre where the yield was rather light to £33 per acre. For one of the seed crops a squad was obtained at a flat rate of £16:10/- per acre but the farmer had to supply all meals and transport etc.

Part of another seed crop was completely lifted by a contractor who supplied all tractors, diggers etc. on a time basis. The charge here worked out at £37 per acre.

Some other contract charges were as follows:-

Dusting against blight	35/- per acre
Spraying against blight	28/- to 37/6d per acre
Haulm destruction	66/- to rather over £5 per acre

These charges will of course vary per acre according to the acreage covered and the type of treatment, e.g. in burning down shaws the spray may be applied at less than the full rate.

#### COSTS AND PROFITABILITY

Costs varied widely. For the 12 seed crops they ranged from £116 to £180 per acre. In this last case there happened to be high labour and power costs and expensive foundation seed was planted. The average cost for the 12 seed crops was £132 per acre.

The costs for the 11 ware crops ranged from £102 to £157 per acre with an average cost of £123 per acre.

The main items of cost are labour and power, and very often seed which can be expensive. Overheads or share of general farm expenses can also be quite heavy. The basis of calculation of these overheads is on the

amount of labour costs, the number of tractor hours and the acreage. This increases the effect which labour and power have on the over-all cost. The method of calculating these overheads is given in the section on method and charges.

Gross output depending on the yield and price per ton also showed wide variations. For the 12 seed crops it ranged from £166 to £392 per acre with an average of £236 per acre. For the 11 ware crops it ranged from £113 to £253 per acre with an average of £168 per acre.

Some of the seed crops had high costs per acre but these were more than recompensed by high yields and good prices. A heavier crop will, of course, mean higher lifting and dressing costs, but nevertheless it was noticeable that high profits were quite often associated with high costs. Similarly several low cost crops had lower yields and would have made losses had it not been that prices for the 1966 crop were generally very good.

The remaining surplus after all costs had been set against gross output ranged from £23 to £213 per acre for the 12 seed crops with an average of £104 per acre. For the 11 ware crops the range in surplus was from £7 to £117 per acre with an average of £45 per acre. None of the crops in either group had a deficit.

The distribution tables in the appendix give further details of costs, gross output and profitability.

#### COSTING METHOD AND CHARGES

##### Seed

Purchased seed has been charged at cost. Home-grown seed has been charged at market value.

##### Fertilisers

Fertilisers have been charged at net cost (i.e. subsidy has been deducted). No credit has been given for manurial residues. Similarly no charge has been made for dung itself although all carting and spreading costs are included.

##### Casual Labour and Contract Work.

Charged at the rates paid.

### Regular Labour

Regular labour has been charged at the rates operating on the individual farms including insurance, graduated pension payments, and allowances for perquisites and holidays etc. Manual work of the farmer has been charged at the farm rate. Where there was no regular labour an estimated rate of 6/5d per hour was charged for the farmer's manual work.

### Tractor

Tractor work has been charged at an estimated 4/6d per hour. This charge covers fuel, depreciation and repairs.

### Depreciation and Repairs

For implements, equipment and buildings used specially for the potato crop a charge has been made as follows:-

Implements	20% of purchase price
Electrical equipment	15% of purchase price
Potato storage sheds or conversions	5% of purchase price

### Rent

Rent has been charged at the rate paid by the tenant. For owner-occupiers it has been charged at a figure agreed with the farmer - generally in line with the increased rent that a sitting tenant would pay for a similar type of farm in the area.

### Overheads (Share of General Farm Expenses)

These overhead expenses are difficult to estimate, since neither the complete financial accounts for the farms nor information as to the sharing of the overheads between the different enterprises on the farm are available. The overhead figures which have been used are based on a general average obtained from a sample of financial accounts of Scottish farms, and this is applied to the crop costings in proportion to the labour costs, to the number of tractor and horse hours (tractor-equivalent hours), and to the acreage used for the crop. The result of this is to give an overhead charge based on a national (Scottish) average instead of on the figures for each individual farm.

Overheads have been charged at the following rates:-

	<u>Dairy Farms</u>	<u>Other Farms</u>
Per acre	11s. 6d	10s. 3d
Per £ labour	7s. 6d	8s. 0d
Per tractor hour	12s. 0d	6s. 3d

Thus the total charge for a man with a tractor working for an hour (assuming 6/5d for the man) will be as follows:-

		<u>Dairy Farms</u>		<u>Other Farms</u>
Man		6s. 5d		6s. 5d
Overhead	$\frac{7/6}{20/-} \times \frac{6/5}{1}$	2s. 5d	$\frac{8/-}{20/-} \times \frac{6/5}{1}$	2s. 7d
Tractor		4s. 6d		4s. 6d
Overhead		<u>12s. 0d</u>		<u>6s. 3d</u>
Total		<u>25s. 4d</u>		<u>19s. 9d</u>

These three overhead charges per acre, per £ labour and per tractor hour, cover the share of general farm expenses which it is estimated should be borne by the potato crop:-

1. The share of the farm bill for wages, fuel, light and power, and for tractor depreciation and repairs which cannot be allocated to any particular crop or department.
2. A share of car running expenses and depreciation.
3. A share of miscellaneous farm expenses.
4. A share of repairs to buildings, fences and drains.
5. Shares of implement repairs, rates, insurance and depreciation on tenant's fixtures and normal farm implements.



TABLE I

PRODUCTION COSTS PER ACRE

AVERAGES FROM 12 SEED CROPS

(Money figures are in £'s decimal)

	£	£
4.85 tons dung (no charge)	-	-
17.56 cwt. home-grown seed	14.998	
10.28 cwt. purchased seed	<u>15.416</u>	30.414
10.00 cwt. fertilisers		10.493
Box replacement	0.435	
Chemicals for weed control	0.468	
Sprays, dusts, fungicides etc.	0.246	
P.M.B. levy and excess acreage payments	3.035	
Inspection fee	0.751	
Sprays for haulm destruction	1.237	
Basket replacement	0.086	
Straw for storage etc.	0.447	
Miscellaneous	0.907	
Power for dresser etc.	<u>0.104</u>	7.716
1.66 hours (est.) contract services (incl. materials)	3.803	
27.25 hours gang labour (contract)	7.412	
48.48 hours casual labour (incl. meals etc.)	<u>11.173</u>	<u>22.388</u>
 SUB TOTAL (VARIABLE COSTS)		 <u><u>71.011</u></u>
 Rent		 5.974
Depreciation on specialised equipment etc.		7.040
12.17 hours farmer and wife	3.908	
41.41 hours regular farm labour	<u>13.874</u>	17.732
26.91 hours farm tractor		6.054
Overheads: per acre	0.523	
per £ labour	14.339	
per tractor hour	<u>9.146</u>	<u>24.008</u>
 SUB TOTAL (OTHER COSTS)		 <u><u>60.858</u></u>
 TOTAL COST		 <u><u>131.869</u></u>

TABLE IA

PRODUCTION COSTS PER ACRE BY STAGES

AVERAGES FROM 12 SEED CROPS

(Money figures are in £'s decimal)

	<u>ITEMISED COSTS</u>	<u>STAGE TOTALS</u>	<u>CUMULATIVE TOTALS</u>	
	£	£	£	
<u>FARMYARD MANURE AND APPLICATION</u>				
4.85 tons dung (no charge)	-			
1.14 hours labour	0.366			
1.24 hours tractor	0.278			
0.20 hours (est.) contract services	<u>0.147</u>	0.791	0.791	DUNG NOW SPREAD
<u>SEED, FERTILISERS AND FIELD WORK</u>				
17.56 cwt. home-grown seed	14.998			
10.28 cwt. purchased seed	15.416			
10.00 cwt. fertilisers	10.493			
9.69 hours labour	3.082			
7.17 hours tractor	1.613			
0.51 hours (est.) contract services	0.336			
Sundries	<u>0.435</u>	46.373	47.164	CROP NOW PLANTED
<u>SUMMER CULTIVATIONS ETC.</u>				
5.60 hours labour	1.947			
3.64 hours tractor	0.820			
0.24 hours (est.) contract services	2.684			
Sundries	<u>2.702</u>	8.153	55.317	CROP READY TO HARVEST
<u>HARVESTING, LIFTING AND STORING</u>				
79.74 hours labour	20.825			
14.77 hours tractor	3.323			
0.71 hours (est.) contract services	0.636			
Sundries	<u>0.533</u>	25.317	80.634	CROP SECURED
<u>DRESSING AND SORTING ETC.</u>				
33.14 hours labour	10.147			
0.09 hours tractor	0.020			
- hours (est.) contract services	-			
Sundries	0.907			
Fuel and power for sorting machine	<u>0.104</u>	11.178	91.812	CROP DRESSED FOR SALE
<u>RENT</u>		5.974		
<u>P.M.B. LEVY AND EXCESS ACREAGE PAYMENTS</u>		3.035		
<u>DEPRECIATION ON SPECIALISED EQUIPMENT ETC.</u>		7.040		
<u>OVERHEADS</u>				
Dung work only: per £ labour	0.147			
per tractor hour	<u>0.387</u>	0.534		
All other work: per acre	0.523			
per £ labour	14.192			
per tractor hour	<u>8.759</u>	23.474		
<u>TOTAL COST</u>		<u>131.869</u>	<u>131.869</u>	TOTAL COST

TABLE II

PRODUCTION COSTS PER ACRE

AVERAGES FROM 11 WARE CROPS

(Money figures are in £'s decimal)

	£	£
5.28 tons dung (no charge)	-	-
4.22 cwt. home-grown seed	3.807	
16.02 cwt. purchased seed	<u>19.193</u>	23.000
9.36 cwt. fertilisers		10.642
Box replacement	-	
Chemicals for weed control	0.541	
Sprays, dusts, fungicides etc.	0.746	
P.M.B. levy and excess acreage payments	3.071	
Inspection fee	0.079	
Sprays for haulm destruction	0.837	
Basket replacement	0.263	
Straw for storage etc.	0.155	
Miscellaneous	0.090	
Power for dresser etc.	<u>0.053</u>	5.835
1.03 hours (est.) contract services (incl. materials)	1.932	
33.44 hours gang labour (contract)	9.384	
71.25 hours casual labour (incl. meals etc.)	<u>15.081</u>	<u>26.397</u>
SUB TOTAL (VARIABLE COSTS)		<u>65.874</u>
Rent		4.698
Depreciation on specialised equipment etc.		2.389
12.25 hours farmer and wife	3.915	
30.68 hours regular farm labour	<u>10.147</u>	14.062
29.62 hours farm tractor		6.664
Overheads: per acre	0.549	
per £ labour	14.906	
per tractor hour	<u>13.819</u>	<u>29.274</u>
SUB TOTAL (OTHER COSTS)		<u>57.087</u>
TOTAL COST		<u>122.961</u>

TABLE IIA

PRODUCTION COSTS PER ACRE BY STAGES

AVERAGES FROM 11 WARE CROPS  
(Money figures are in £'s decimal)

	<u>ITEMISED</u> <u>COSTS</u> £	<u>STAGE</u> <u>TOTALS</u> £	<u>CUMULATIVE</u> <u>TOTALS</u> £	
<u>FARMYARD MANURE AND APPLICATION</u>				
5.28 tons dung (no charge)	-			
1.03 hours labour	0.346			
1.32 hours tractor	0.298			
0.13 hours (est.) contract services	<u>0.260</u>	0.904	0.904	DUNG NOW SPREAD
<u>SEED, FERTILISERS AND FIELD WORK</u>				
4.22 cwt. home-grown seed	3.807			
16.02 cwt. purchased seed	19.193			
9.36 cwt. fertilisers	10.642			
14.09 hours labour	4.371			
10.94 hours tractor	2.460			
neg. hours (est.) contract services	0.006			
Sundries	-	40.479	41.383	CROP NOW PLANTED
<u>SUMMER CULTIVATIONS ETC.</u>				
5.34 hours labour	1.774			
4.55 hours tractor	1.025			
0.02 hours (est.) contract services	0.415			
Sundries	<u>2.203</u>	5.417	46.800	CROP READY TO HARVEST
<u>HARVESTING, LIFTING AND STORING</u>				
99.56 hours labour	25.071			
12.65 hours tractor	2.846			
0.88 hours (est.) contract services	1.251			
Sundries	<u>0.418</u>	29.586	76.386	CROP SECURED
<u>DRESSING AND SORTING ETC.</u>				
27.60 hours labour	6.965			
0.16 hours tractor	0.035			
- hours (est.) contract services	-			
Sundries	0.090			
Fuel and power for sorting machine	<u>0.053</u>	7.143	83.529	CROP DRESSED FOR SALE
<u>RENT</u>				
		4.698		
<u>P.M.B. LEVY AND EXCESS ACREAGE PAYMENTS</u>				
		3.071		
<u>DEPRECIATION ON SPECIALISED EQUIPMENT ETC.</u>				
		2.389		
<u>OVERHEADS</u>				
Dung work only: per £ labour	0.131			
per tractor hour	<u>0.752</u>	0.883		
All other work: per acre	0.549			
per £ labour	14.775			
per tractor hour	<u>13.067</u>	<u>28.391</u>		
<u>TOTAL COST</u>		<u>122.961</u>	<u>122.961</u>	TOTAL COST



TABLE III

AVERAGE OUTPUT AND COSTS PER ACRE

<u>OUTPUT</u>	<u>12 Seed</u>		<u>11 Ware</u>	
	<u>Tons</u>	<u>£</u>	<u>Tons</u>	<u>£</u>
Ware	2.8	59.5	8.5	156.5
Seed	6.5	174.9	0.4	9.9
Chats and brock	<u>0.4</u>	<u>1.2</u>	<u>0.8</u>	<u>1.8</u>
Total	<u>9.7</u>	<u>235.6</u>	<u>9.7</u>	<u>168.2</u>
<u>VARIABLE COSTS</u>	<u>Cwt.</u>		<u>Cwt.</u>	
Seed	27.8	30.4	20.2	23.0
Fertiliser	10.0	10.5	9.4	10.7
Miscellaneous		7.7		5.8
Contract and casual work		<u>22.4</u>		<u>26.4</u>
Total		<u>71.0</u>		<u>65.9</u>
<u>GROSS MARGIN</u>		<u>164.6</u>		<u>102.3</u>
<u>OTHER COSTS</u>				
Rent		6.0		4.7
Depreciation on specialised equipment etc.		7.0		2.4
Farm labour and power		23.8		20.7
Overheads (share of general farm expenses)		<u>24.1</u>		<u>29.3</u>
Total		<u>60.9</u>		<u>57.1</u>
<u>SURPLUS</u>		<u>103.7</u>		<u>45.2</u>

TABLE IV

DISTRIBUTION OF COST PER ACRE

<u>Cost per acre (£'s)</u>	<u>Seed</u>	<u>Ware</u>
100 - 125	1	6
125 - 150	8	4
150 - 175	2	1
175 - 200	1	-
	<u>12</u>	<u>11</u>

TABLE V

DISTRIBUTION OF COST PER TON

<u>Cost per ton (£'s)</u>	<u>Seed</u>	<u>Ware</u>
10 - 12	5	5
12 - 14	2	2
14 - 16	3	2
16 - 18	2	1
18 - 20	-	-
20 - 30	-	1
	<u>12</u>	<u>11</u>

TABLE VI

DISTRIBUTION OF RETURNS (GROSS OUTPUT) PER ACRE

<u>Returns per acre (£'s)</u>	<u>Seed</u>	<u>Ware</u>
100 - 150	-	5
150 - 200	3	4
200 - 250	4	1
250 - 300	2	1
300 - 350	1	-
350 - 400	2	-
	<u>12</u>	<u>11</u>

TABLE VII

DISTRIBUTION OF RETURNS PER TON

<u>Returns per ton (£'s)</u>	<u>Seed</u>	<u>Ware</u>
14 - 16	-	3
16 - 18	-	1
18 - 20	2	5
20 - 25	7	1
25 - 30	1	1
Over 30	2	-
	<u>12</u>	<u>11</u>

TABLE VIII

DISTRIBUTION OF PROFITABILITY (SURPLUS PER ACRE)

<u>Surplus per acre (£'s)</u>	<u>Seed</u>	<u>Ware</u>
Under 25	1	3
25 - 50	2	4
50 - 75	-	3
75 - 100	3	-
100 - 125	2	1
125 - 150	1	-
150 - 200	1	-
Over 200	2	-
	<u>12</u>	<u>11</u>

TABLE IX

DISTRIBUTION OF PROFITABILITY (SURPLUS PER TON)

<u>Surplus per ton (£'s)</u>	<u>Seed</u>	<u>Ware</u>
Under 2	-	3
2 - 4	1	1
4 - 6	1	4
6 - 8	2	2
8 - 10	3	1
10 - 12	2	-
12 - 14	-	-
14 - 16	1	-
16 - 18	1	-
18 - 20	1	-
	<u>12</u>	<u>11</u>



STANDARD APPENDIX

The figures in the tables in this appendix are from 12 seed potato costings on 157 $\frac{1}{4}$  acres and 11 ware potato costings on 161 $\frac{1}{2}$  acres. Money figures are in £'s decimal.

TABLE I

Summary of Average Costs per Acre

Items of Cost	<u>12 Seed</u>		<u>11 Ware</u>	
	<u>Hours</u>	<u>£</u>	<u>Hours</u>	<u>£</u>
Regular labour	53.58	17.782	42.93	14.062
Casual and gang	75.73	18.585	104.69	24.465
Power: Tractor	26.91	6.054	29.62	6.664
Contract services	1.66	3.803	1.03	1.932
Machinery depreciation and repair allowance		7.040		2.389
Other fuel (or power)		0.104		0.053
Materials: seed	27.84 cwt.	30.414	20.24 cwt.	23.000
fertilisers and manures applied	10.00 cwt.	10.493	9.36 cwt.	10.642
sundries		4.577		2.711
Rent		5.974		4.698
P.M.B. levy and excess acreage payment		3.035		3.071
Share of general farm expenses		<u>24.008</u>		<u>29.274</u>
Cost		<u>131.869</u>		<u>122.961</u>

STANDARD APPENDIX

TABLE II

Summary of Average Yields and Returns

	<u>Average Yield per Acre</u>			
	<u>12 Seed</u>		<u>11 Ware</u>	
	(tons)		(tons)	
Ware	2.8		8.5	
Seed	6.5		0.4	
Chats and brock	<u>0.4</u>		<u>0.8</u>	
Total	<u>9.7</u>		<u>9.7</u>	

  

	<u>Average Returns or Estimated Value</u>			
	<u>12 Seed</u>		<u>11 Ware</u>	
	<u>Per Acre</u>	<u>Per Ton</u>	<u>Per Acre</u>	<u>Per Ton</u>
	£	£	£	£
Ware	59.519	21.394	156.539	18.438
Seed	174.831	26.613	9.790	21.778
Chats and brock	<u>1.218</u>	<u>3.283</u>	<u>1.843</u>	<u>2.425</u>
Total	235.568	24.230	168.172	17.337
Net Cost	<u>131.869</u>	<u>13.564</u>	<u>122.961</u>	<u>12.676</u>
Margin	<u>103.699</u>	<u>10.660</u>	<u>45.211</u>	<u>4.661</u>

STANDARD APPENDIX

TABLE III

Summary of Average Labour and Power used per Acre

Averages for 12 Seed Potato Costings

Hours per Acre

<u>Operation</u>	<u>Farm Staff</u>	<u>Casual &amp; Gang</u>	<u>Contract Services</u>	<u>Farm Tractor</u>
Up to harvest	14.96	1.47	0.95	12.05
Lifting and storing	17.24	62.50	0.71	14.77
Dressing	<u>21.38</u>	<u>11.76</u>	<u>-</u>	<u>0.09</u>
Total	<u>53.58</u>	<u>75.73</u>	<u>1.66</u>	<u>26.91</u>

Averages for 11 Ware Potato Costings

Hours per Acre

<u>Operation</u>	<u>Farm Staff</u>	<u>Casual &amp; Gang</u>	<u>Contract Services</u>	<u>Farm Tractor</u>
Up to harvest	17.56	2.90	0.15	16.81
Lifting and storing	13.89	85.67	0.88	12.65
Dressing	<u>11.48</u>	<u>16.12</u>	<u>-</u>	<u>0.16</u>
Total	<u>42.93</u>	<u>104.69</u>	<u>1.03</u>	<u>29.62</u>

STANDARD APPENDIX

TABLE IV

Summary of Average Quantities of Materials etc. used per Acre

Material		12 Seed	
Seed: purchased home-grown			Overall Average per Acre
			10.28 cwt. 17.56 cwt.
			Area dressed only
	Acres	Average per Acre	
Farmyard manure	72½	10.55 tons	4.85 tons
Straights	-	-	-
Compounds	157½	10.00 cwt.	10.00 cwt.
Material		11 Ware	
Seed: purchased home-grown			Overall Average per Acre
			16.02 cwt. 4.22 cwt.
			Area dressed only
	Acres	Average per Acre	
Farmyard manure	49½	17.21 tons	5.28 tons
Straights - basic slag	2	10.00 cwt.	0.06 cwt.
- muriate of potash	10	1.00 cwt.	0.12 cwt.
Compounds	161½	9.18 cwt.	9.18 cwt.