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SURVEY OF
POTATO PRODUCTION
IN COUNTY DURHAM, 1965

W. T. DAVISON M.Sc.

Report 167 G.

September 1967 5/-

University of Newcastle upon Tyne
Department of Agricultural Economics

Mr. W. T. Davison, the author of this report, died in January 1967, some six months before he was due to retire from the University. His untimely death represented a great loss to his many friends in the University and in farming in the North of England. Although he was continuously employed on the Farm Management Survey, Mr. Davison also undertook a number of special field studies and this report on Potato Production in 1965 in County Durham was his final work of this kind. Although he was especially attached to the northern counties, his heart lay in County Durham and it is particularly appropriate that his final report should relate to that county. He will be greatly missed by his colleagues and many friends.

J.A.

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ACKNOWLEDGEMENT

The University is grateful for the willing co-operation and help which was shown by the farmers who participated in this survey. By their co-operation they have helped to enlarge the understanding of modern farming techniques.

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INTRODUCTION

Although potato production is of declining importance in Co. Durham, there is still a considerable acreage. This decline has been the result of (a) simplification of farming systems, (b) uneven and high labour demand for harvesting and subsequent handling, (c) disappearance of the small growers, (d) development of more continuous barley growing, (e) uncertainty of marketing within relatively static levels of consumption.

Finally it reflects that many parts of the county are not competitive with the specialist growing areas in East Anglia.

The first part of the report gives an account of recent developments in potato production in Co. Durham and describes the general conditions affecting the 1965 crop. In the second part, a detailed account is given of the costs of production and market returns on 47 farms growing almost 1,000 acres of potatoes. As in all studies of this kind there was immense variation in the financial success of growers. Part of this variation arose because of climatic and biological factors which affected the results in that particular season, but the variation also was a reflection of the range of economic performance that is found in all aspects of farm production.

PART I

The Potato Crop in County Durham

(extracted from P.M.B. Market Reports)

Since the immediate post-war period when the total potato acreage in Great Britain was well in excess of one million acres, the crop has declined to the extent that, in 1966, the acreage was less than half that of 1946. In association with this decline there has been a substantial reduction in both the total number of growers and the number of small growers (i.e. those growing a small acreage of potatoes regardless of farm size). This, of course, is in line with experience in other farm enterprises where specialisation has shown marked economic advantages.

In this same context, namely specialisation, it is inevitable that specialist growing areas, like parts of East Anglia have brought the pressure of competition to bear on areas with less favourable circumstances. Consequently the proportion of the total national potato acreage grown in Co. Durham has decreased by 30% since 1946.

Evidence of these trends is given in Tables 1 and 2.

Nevertheless the potato acreage in Co. Durham was still substantial in 1965 when 10,070 acres of potatoes constituted almost 5% of the total acreage under arable cropping. The breakdown of this acreage in Table 3 indicates the dominance of main crop potatoes, which is to be expected in a north-eastern county associated with a relatively late growing season. In

TABLE 1

Potato Acreages in Great Britain and Co. Durham

Year	Gt. Britain '000 acres	Co. Durham	
		acres	%
1939	704	12,334	1.71
1946	1,230	26,576	2.16
1950	1,056	22,295	2.11
1955	756	14,635	1.94
1960	742	12,914	1.74
1961	628	10,552	1.68
1962	660	10,311	1.56
1963	687	10,048	1.46
1964	706	10,506	1.49
1965	680	10,070	1.48
1966	612	8,596	1.40

Source: Agricultural Statistics

TABLE 2

Distribution of (A) holdings, (B) first earlies, (C) main crop acreage by total potato acreage size groups for England and Wales

Total Potato acreage size group (acres)	1960			1965		
	% total No. of holdings	% total 1st early acreage	% total main crop acreage	% total No. of holdings	% total 1st early acreage	% total main crop acreage
1/4 — 4 3/4	71.9	12.6	15.0	66.1	10.2	10.4
5 — 9 3/4	12.1	12.4	14.3	13.0	11.1	11.2
10 — 19 3/4	8.7	16.7	20.5	10.4	15.3	18.5
20 — 29 3/4	3.2	12.9	13.0	4.4	11.5	13.4
30 — 39 3/4	1.6	8.2	8.8	2.3	11.0	9.9
40 — 49 3/4	0.9	7.6	6.3	1.2	8.1	6.4
50 — 69 3/4	0.8	9.1	7.9	1.2	9.7	9.1
70 — 99 3/4	0.5	9.8	7.2	0.8	10.5	8.3
100 and over	0.3	10.7	7.0	0.6	12.6	12.8
	100.0	100.0	100.0	100.0	100.0	100.0
Total A	99,302			70,985		
Total B	99,576			83,742		
Total C	490,609			454,154		

Source: Agricultural Statistics

recent, as in pre-war, years first earlies have represented 5% or less of the total potato acreage in the County, compared with a level of 10% in the immediate post-war period.

Among registered producers, for whom a detailed analysis is available, Arran Pilot has in most years accounted for 60% or more of the acreage of first earlies. Home Guard is the only other variety to occupy a significant acreage.

Among second earlies, Craigs Royal and Red Craigs Royal together accounted for 85% and 52% of the total second early crop in 1965 and 1966 respectively. In 1960 Majestic replaced Arran Peak as the premier main crop variety and remained so in 1965 and 1966.

Analyses of acreages and main crop varieties in Co. Durham are given in Tables 3 and 4.

With the fall in total potato acreage, total production has declined substantially since the immediate post-war years. The decline has, however, been moderated by a steady improvement in yields, and it is this feature, particularly in recent years, that has enabled a relatively stable level of production to be achieved. In fact, in some years (and 1965 is a prime example) the marked increase in yield has more than compensated for any decline in acreage.

Although precisely comparable data is not available for Co. Durham, the results of crop check weighing, carried out by the P.M.B. in Durham and Northumberland, confirm the trend to increased yields.

TABLE 3*

Potato Acreages in County Durham

Year	1955	1960	1965	1966
All Producers				
1st earlies acres	1261	819	466	302
2nd earlies and maincrop "	12744	12095	9604	8294
total "	14035	12914	10070	8596
P.M.B. Registered Producers				
1st earlies acres	1230	550	310	180
2nd earlies "	640	190	100	60
main crop "	11280	11700	9410	7960
total "	13150	12440	9820	8200

Source: Agricultural Statistics P.M.B.

* The disparities evident in this table arise from the fact that producers growing less than one acre are not required to register with the Potato Marketing Board.

TABLE 4

Varieties of Main Crop Potatoes in Co. Durham

Variety	% of total main crop acreage	
	1965	1966
Majestic	37	39
Arran Peak	23	20
Consul	8	13
Dr. McIntosh	11	5
Redskin	7	4
Record	6	6
Pentland Crown	1	6
Dell	—	2
King Edward	2	1
Arran Banner	1	—
Other Varieties	4	4
	100	100

Source: P.M.B.

TABLE 5

Acreage, Yield per acre and Production in Great Britain

Year	Acreage '000 acres	Yield per acre tons	Production '000 tons
1946-47	1230	7.0	8614
1950-51	1056	7.7	8164
1955-56	757	7.3	5521
1960-61	742	8.7	6455
1961-62	628	9.0	5638
1962-63	660	9.1	6012
1963-64	687	8.6	5929
1964-65	706	9.1	6411
1965-66	680	10.2	6954

Source: Agricultural Statistics

TABLE 6

**Potato Crop Check Weighing Results
for Durham and Northumberland**

Year	Total yield per acre tons
1955	8.00
1960	9.65
1965	11.50
1966	10.95

Source: P.M.B.

The Growers' Market, 1965/66 Season

Following a year of relatively low returns the potato acreage both nationally and in Co. Durham showed a substantial reduction in 1965-66. Nevertheless the season suited the crop particularly well so that nationally a record yield was achieved and total production exceeded that of the 1964 crop. This situation was effectively reflected in the disappointing course of prices during the 1965-66 season.

Despite the reduction in acreage and the improved market conditions at the start of the season, the situation soon deteriorated for early potatoes and prices were down to £11-£12 per ton for Red Craigs Royal by the beginning of August. In Co. Durham the first recorded transactions, in early August, were Arran Pilot and Home Guard at £11-£13 per ton, falling by the end of the month to £9-£10.

On the 24th August the P.M.B. announced, under its support buying arrangements, that it was prepared to receive offers of ware potatoes from 1st September to 31st October. This announcement, helped to some extent

by work on the late corn harvest, had a marked steadying effect and by early September Majestic were fetching £12-£13 per ton. In late October and during November demand was somewhat hesitant, but many growers were storing potatoes and it was evident that a considerable surplus was still in prospect. Consequently the Board undertook a second buying programme from 1st December to 15th January and market demand remained firm until the third week of January when pressure again mounted.

Despite the Board's confidence that the surplus had been fully taken up under the two buying programmes, the market was still depressed. To remove any doubts a final buying programme was undertaken from 1st to 11th March after which prices followed a steady upward trend, reaching around £20 per ton for Majestics by the end of the season in May.

As a result of P.M.B. intervention during the season the average market price per ton, for the 1965 crop in the United Kingdom, was £14.45 which approximates closely to the guarantee price of £14 5s. per ton.

The following Table shows producer prices for the season :

TABLE 7

**Average Monthly Producers' Prices for
Ware Potatoes. Great Britain**

1965 Crop									
Price/ton £				Price/ton £					
August	11.1	January	..	..	..	14.2
September	11.9	February	..	..	..	14.5
October	12.5	March	..	..	..	16.4
November	12.0	April	..	..	..	19.8
December	13.3	May	..	..	..	22.2

Source: P.M.B.

PART II

Potato Production in County Durham, 1965

The Sample

The farms included in this survey are all situated in Co. Durham. In all, 47 farms provided data relating to 954 acres of potatoes.

On approximately half of the farms surveyed cash cropping was of primary importance, although most of them had one or more associated fatstock enterprises. Three farms were devoted entirely to cash cropping, and fourteen derived the major portion of their income from milk. The average potato crop for the sample was 20 acres ranging from 3 to 97 acres. Table 8 shows the distribution of the farms by type of farm and acreage of potatoes.

Of the 954 acres of potatoes in the sample 54% was preceded by barley, 22% by wheat, 23% by grass and the remaining 1% by roots or kale.

TABLE 8

Distribution of (A) Sample and (B) Potato Crop Acreage by type of holding and size of potato crop acreage

Potato Acreage size group (acres)		Type of farm						
		Cropping	Cropping and Feeding	Cropping and Pigs	Feeding and Cropping	Milk and Cropping	Mixed	Total
less than 5	A	1			1		1	3
	B	3½			3		3	9½
5—10	A		3	1		3	1	8
	B		21½	9		20½	8	59
10—20	A		7		1	7	2	17
	B		106		10	96	29	241
20—30	A	1	1	1	3	2		8
	B	24	20	22½	70	55		191½
30—40	A		2	1	2	2		7
	B		62	34	62	65		223
40—50	A	1	2					3
	B	46	87					133
greater than 50	A		1					1
	B		97					97
Total	A	3	16	3	7	14	4	47
	B	73½	393½	65½	145	236½	40	954

Planting

Difficult weather conditions in the Spring of 1965 extended the period of planting from early April until the end of May. However, the bulk of the crop was sown during the first three weeks of May. Mechanical planters were used on all farms but one, on which 15 acres were planted by hand.

Seed

Of the total tonnage of seed planted, 57% was purchased and 43% home-grown. Four farms relied entirely upon homegrown seed and ten farms upon purchased seed. On the remaining farms the proportion of purchased seed ranged from 4% to 93%.

TABLE 9

Cost of Seed and Seed Rate

	Average	Range
Seed rate per acre (cwt.)	19.9	14.5 to 25.8
Cost of seed per acre (£)	19.9	9.5 to 47.7
Cost of seed per ton (£)	20.0	12.4 to 39.4
Price of purchased seed per ton (£)	23.6	16.0 to 48.0
Cost of homegrown seed per ton (£)	15.3	10.6 to 20.0

TABLE 10

Seed Varieties

Varieties	Total acres	%	No. of farms using the variety
Arran Peak	174.25	18.3	21
Consul	116.75	12.2	10
Pilot	12.00	1.3	1
Banner	9.00	0.9	3
Pentland Crown	64.00	6.7	11
Dell	16.50	1.7	4
Beauty	3.00	0.3	1
Envoy	1.00	0.1	1
Ulster Torch	34.00	3.6	5
Prince	15.00	1.6	2
Ranger	5.00	0.5	1
Majestic	158.75	16.6	16
Redskin	127.50	13.4	3
Record	108.00	11.3	3
Dr. McIntosh	60.00	6.3	12
Other Varieties	49.25	5.2	10
	954.00	100.0	—

The main varieties in the sample were Arran Peak, Majestic, Redskin and Arran Consul. In this respect the sample differed from Co. Durham as a whole, as can be seen by comparing Tables 4 and 10.

Manuring

Forty farms applied dressings of farmyard manure ranging from 4 to 20 tons per acre. Dressings of chemical fertiliser were applied on all farms, the rate ranging from 6 to 14 cwt. per acre. The survey was inconclusive in measuring the effect of manuring policies owing to a variety of factors which could not be assessed in this context e.g. potential yield of different varieties, weather conditions, impact of disease, soil type.

TABLE 11

Farmyard Manure and Fertiliser per acre

	F.Y.M. per acre		Fertiliser per acre	
	ton	£	cwt.	£
Applied in 1965	11.6	11.7	9.7	10.0
Residual values	—	3.9	—	2.4
Net usage	—	<u>7.8</u>	—	<u>7.6</u>

Lifting and Storage

Fair to moderate weather at lifting time resulted in few farms experiencing a difficult harvest. The majority of farms used spinners and hand picked the potatoes, only five farms operated harvesters. Generally, the method of harvesting was traditional for this part of the country, i.e. bags or other containers to trailers to store. However, there were some variations, including the use of elevators and pallets.

Sales off the field occurred on five farms, but in each case only part of the crop was disposed of in this way. Storage in buildings was clearly favoured since it eliminated the weather as an accountable factor during subsequent handling of the crop. On only two farms was storage entirely by clamp.

RESULTS

The results of the survey are presented in Tables 12 to 15.

Table 12 shows the average margins, gross and net, per acre and illustrates the relative importance of the various costs. Variable costs amounted to 57% of total costs, with seed and manures together totalling 37%. The total labour bill was 31% of total costs, regular labour being 17%, casual labour 14%. Table 13 gives a breakdown of labour and tractor costs per acre between the major operations.

An examination of Table 14, which compares the ten most profitable crops with the ten least profitable, gives an indication of reasons for these differences. The most profitable group had higher costs per acre despite the fact that they were larger in scale and might, therefore, have been expected to have some economics. There is no virtue, of course, in high costs, but equally there is nothing to be gained by stinting in seed, fertilizer or cultivations. The whole of the difference in performance is attributable to the differences in revenues. Firstly, there was a difference in the prices received of about 20%, but even more striking was the difference in yields, where the most profitable ten had virtually double the yield of the least profitable. This difference in yields was not, to any significant extent, due to the geographical location of the farms.

Finally, Table 15 arrays the data for all 47 farms in descending order of profitability. A cursory glance at this will show the wide range of costs which existed and which is typical of all investigations of this kind.

TABLE 12

Gross Margin and Net Margin per acre

	Average per acre for whole sample		Range per acre	
	£	ton	£	£
Output				
Sales—Ware	119.3	7.9		
—Seed	2.6	0.1		
—Chats, etc.	0.4	0.1		
Fed to livestock	2.1	0.6		
Consumed	1.0	0.1		
Retained—Ware	0.2	—		
—Seed	10.4	0.6		
Total Output	136.0	9.4	3.8	to 240.1
Variable Costs	£	% total costs		
Seed	19.9	21	9.5	to 47.7
Manures (net usage)	15.4	16	2.5	23.9
Casual and Contract	12.9	14	0.0	24.0
Sundry	5.8	6	3.0	17.5
Total Variable Costs	54.0	57	38.6	75.9
Gross Margin	82.0	—	-49.8	to 164.2
Fixed Costs				
Regular Labour	15.9	17	6.0	to 38.0
Tractor	5.4	6	2.8	10.6
Depreciation and Repairs	8.2	9	4.5	16.2
Rent	4.7	5	2.7	7.0
Overheads	5.9	6	2.2	14.3
Total Fixed Costs	40.1	43	20.0	81.8
Total Costs	94.1	100	70.8	157.6
Net Margin	41.9	—	-69.7	to 96.3

TABLE 13

Analysis of Labour and Tractor Costs per acre
(Average 47 farms)

	Man	Tractor	Casual and Contract	Total	
	£	£	£	£	%
Pre-Planting	2.7	2.0	0.2	4.9	14
Planting	1.4	0.4	—	1.8	5
After Cultivations	1.1	0.6	0.5	2.2	6
Lifting	4.2	2.3	10.8	17.3	51
Sorting, Bagging & Delivery	6.5	0.1	1.4	8.0	24
Total	15.9	5.4	12.9	34.2	100
%	46	16	38	100	—

TABLE 14

**Average Results per acre for 10 farms with highest and 10 farms
with lowest net margin per acre**

	10 farms with highest margin per acre	10 farms with lowest margin per acre
Average size of potato crop in acres	29.2	13.1
Labour and Tractors*	£	£
Pre Planting	3.8	5.5
Planting	1.4	1.8
After Cultivations	1.9	2.1
Lifting	18.2	15.8
Sorting, Bagging & Delivery	10.5	5.8
	35.8	31.0
Seeds	23.1	18.2
Manures† (net usage)	16.3	15.4
Rent	4.7	4.1
Depreciation and Repairs	6.3	6.0
Overheads	5.8	5.1
Miscellaneous	7.3	7.8
Total Net Cost	99.3	87.6
Yields	11.7 tons	6.0 tons
Prices	15.3 £ per ton	12.7 £ per ton
Total Returns	179.1	76.2
Net Margin	79.8	-11.4

* includes contract

† after allowing for residual values

TABLE 15

Individual Potato Crop Costs per Acre

Code No.	*Pre-planting	*Planting and After Cults	*Lifting, Storing, Sorting, Bagging and Delivery	Farm Yard Manure	Artificial Fertiliser	Seed	Overheads, Dep's, Rep's, Rent and Misc.	Total Gross Costs	Total Net Costs (exc. Fert. residuals)	Yield	Price per ton	Total Income	Margin
	£	£	£	£	£	£	£	£	£	tons	£	£	£
34	5.1	4.0	19.6	6.0	10.2	47.7	22.6	115.2	110.9	10.1	20.5	207.2	96.3
33	1.6	3.6	22.8	16.0	8.3	15.0	21.3	88.6	81.6	10.5	16.9	177.5	95.9
27	2.1	2.9	23.6	—	10.5	22.8	21.6	83.5	80.9	12.6	13.0	164.8	83.9
54	13.0	8.9	41.3	20.0	12.0	21.4	50.7	167.3	157.6	12.4	19.4	240.1	82.5
48	3.8	2.0	34.3	20.0	7.2	23.6	22.5	113.4	105.2	12.5	15.0	187.2	82.0
32	3.9	9.5	36.8	10.0	7.7	22.2	30.1	120.2	114.8	11.6	16.9	196.6	81.8
33A	1.5	2.8	23.0	—	8.3	56.4	19.5	111.5	109.9	11.1	17.0	188.4	78.5
30	2.6	5.9	24.9	14.0	13.1	18.3	21.8	100.6	92.6	12.6	13.1	164.9	72.3
37	3.5	1.5	25.6	6.8	12.2	14.5	27.6	91.7	86.1	10.7	14.2	152.3	66.2
17	3.9	3.1	24.3	19.1	8.8	15.9	22.6	97.7	89.3	10.2	15.2	155.4	66.1
39	4.2	5.1	30.8	15.0	8.4	19.1	21.3	103.9	97.4	13.2	12.1	160.4	63.0
36	5.7	2.1	22.8	5.7	12.5	12.4	28.3	89.5	84.2	10.3	14.1	145.7	61.5
6	2.7	2.7	30.8	—	11.8	21.0	28.2	97.2	94.3	8.7	16.9	147.6	53.3
7	3.2	2.5	16.8	12.1	10.7	19.7	19.7	84.7	77.1	8.7	14.8	129.1	52.0
28	8.1	2.5	22.0	15.0	9.6	14.4	20.7	92.3	84.1	9.1	14.5	131.7	47.6
13	5.2	5.5	23.3	9.1	9.3	16.5	22.3	91.2	85.8	12.2	10.9	132.6	46.8
57	2.5	6.0	22.5	20.0	8.8	21.8	35.3	116.9	108.4	13.1	11.8	154.7	46.3
22	5.1	7.1	23.2	18.2	9.5	16.1	23.3	102.5	93.3	9.7	14.1	136.8	43.5
24	5.4	4.7	17.2	20.0	10.7	21.0	21.1	100.1	90.6	9.4	13.5	127.3	36.7
9	5.8	4.7	25.4	20.0	9.5	24.7	26.2	116.3	107.8	11.3	12.7	143.8	36.0
16	6.5	3.7	16.9	7.8	12.2	17.4	20.6	85.1	79.3	7.0	16.4	115.0	35.7
53	6.3	7.6	44.8	10.4	7.2	27.2	34.1	137.6	135.8	8.1	20.9	169.7	33.9
26	10.3	5.6	29.9	12.0	10.7	12.4	32.6	113.5	107.0	8.8	15.9	140.4	33.4
8	5.3	2.4	28.8	8.4	9.2	17.0	24.8	95.9	91.0	9.0	13.7	123.6	32.6

Code No.	*Pre-planting	*Planting and After Cults	*Lifting, Storing, Sorting, Bagging and Delivery	Farm Yard Manure	Artificial Fertiliser	Seed	Overheads, Dep's, Rep's, Rent and Misc.	Total Gross Costs	Total Net Costs (exc. Fert. residuals)	Yield	Price per ton	Total Income	Margin
	£	£	£	£	£	£	£	£	£	tons	£	£	£
23	1.8	4.6	20.4	—	10.5	21.1	22.4	80.8	78.3	6.6	16.6	109.8	31.5
41	4.0	4.3	20.2	15.0	10.5	17.0	21.4	92.4	85.2	9.0	12.8	115.6	30.4
14	6.6	1.8	20.6	20.0	11.0	15.5	20.8	96.3	86.0	7.2	16.0	115.9	29.9
4	7.1	4.2	37.9	14.0	11.0	21.0	31.9	127.1	119.4	10.4	14.2	148.2	28.8
29	3.9	3.7	23.1	9.4	8.7	20.4	19.9	89.1	84.0	8.9	12.7	112.7	28.7
43	3.5	8.1	19.7	20.0	10.4	18.4	19.5	99.6	90.5	6.9	16.4	113.2	22.7
51	5.2	6.6	19.0	6.0	11.0	16.0	24.9	88.7	84.2	10.8	9.9	106.8	22.6
17A	3.3	3.5	28.3	—	8.8	16.0	22.7	82.6	83.0	10.1	10.2	103.5	20.5
56	12.7	5.5	24.9	—	12.2	20.1	34.3	9.7	107.0	8.9	14.3	127.2	20.2
10	5.7	4.5	32.0	15.0	11.5	20.0	30.5	119.2	111.5	11.6	11.3	131.6	20.1
3	5.1	5.0	35.3	15.5	7.9	9.5	29.9	108.2	101.8	7.7	15.5	119.3	17.5
40	4.5	6.6	20.6	20.0	9.3	17.3	20.3	98.6	89.6	8.1	12.7	103.0	13.4
18	2.5	4.6	17.7	—	12.3	23.1	24.7	84.9	81.8	7.8	12.1	93.1	11.3
49	6.0	5.2	27.9	12.0	9.1	16.9	25.4	102.5	97.0	8.4	11.9	99.6	2.6
15	9.5	3.5	21.0	10.0	13.5	21.6	19.4	98.5	91.8	5.9	15.1	89.2	-2.6
2	6.7	3.6	22.6	20.0	8.7	16.0	24.0	101.6	93.1	7.7	11.6	89.7	-3.4
5	4.3	2.8	23.2	15.1	6.6	18.3	17.7	88.0	81.8	4.0	19.3	77.2	-4.6
44	2.5	4.9	25.2	—	13.3	22.6	24.3	92.8	89.5	5.7	14.5	82.7	-6.8
1	11.5	3.4	19.8	15.0	8.3	20.3	29.2	107.5	100.7	8.7	10.6	92.1	-8.6
31	3.8	2.6	24.7	7.9	9.8	16.8	19.8	85.4	80.2	4.7	15.2	71.3	-8.9
19	5.1	4.4	23.8	20.0	11.5	18.2	26.9	109.9	100.6	8.4	10.9	91.2	-9.4
58	2.7	5.1	18.3	4.0	9.8	15.5	18.9	74.3	70.8	4.6	13.3	61.1	-9.7
20	7.5	3.8	19.0	20.0	11.6	12.9	27.8	102.6	93.4	6.0	9.5	56.7	-36.7
35	6.5	2.1	1.0	20.0	8.4	26.6	13.4	78.0	73.5	0.2	19.0	3.8	-69.7

APPENDIX

Costing Method

Seed

Purchased seed was charged at cost and homegrown seed at market value.

Fertilisers

Fertilisers were charged at cost, and farmyard manure at £1 per ton. Allowances were made for residual values.

Regular Labour

The minimum wage rates including allowances for insurance and overtime were charged for both employees and family labour.

Casual and Contract

Charged at the rates paid.

Tractor Labour

Charged at 4/- per hour.

Depreciation and Repairs

Depreciation on special potato equipment was charged at 12½%. To cover other equipment 5/- per tractor hour was included.

Overheads

A charge of 7/6d. per £ manual labour was made.

Rent

The charge for rented farms was the actual rate paid per acre, and for owner occupied farms a rate per acre based upon the rent paid for similar farms in the district.

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The above are obtainable from The Department of Agricultural Economics,
University of Newcastle upon Tyne, Newcastle upon Tyne, 1.