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Wheat - Cost of production

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UNIVERSITY OF EXETER

Department of Economics (Agricultural Economics)



WHEAT PRODUCTION IN SOUTH-WEST ENGLAND

An Economic Study on 56 Farms in Cornwall,
Devon and Dorset, 1962

1, COURTENAY PARK
NEWTON ABBOT
DEVON

Price Three Shillings and Sixpence

UNIVERSITY OF EXETER

Department of Economics
(Agricultural Economics)

WHEAT PRODUCTION IN SOUTH WEST ENGLAND

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in Cornwall, Devon and Dorset 1962.

ACKNOWLEDGEMENTS

The University wishes to express its thanks to those farmers who supplied information on which this report is based. Without their willing co-operation, this and similar studies would not be possible. It is hoped that this presentation of the results will provide co-operating farmers and, indeed, a wider public, with useful information about a crop which, while not of major importance in the overall economy of the South West, is a most valuable crop to certain localities and many individual farmers.

The field work in connection with the study was undertaken by Miss Betty Roscoe, Miss Estelle Burnside, Miss Jane Adkins and Mr. K.G. Tyers. Mr. B.E. Hill has been responsible for the analysis and summarising of the data and writing the report.

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I. INTRODUCTION

Cereals occupy only 16.2% of the acreages of crops and grass in the South West Province,* compared with 26.8% in England and Wales. Wheat accounts for only 1.5% of the total area, the comparable figure for England and Wales is 8.8%. In both England and Wales and the South West most of the remainder of the cereal acreage is taken up by barley. In Devon and Cornwall wheat occupies less than 1% of the acreage, and is often grown more for straw than grain. Thus many small farms which do not possess dutch barns grow a small area of wheat to be cut by binder, the straw being used to thatch ricks. Also, a few farms produce wheat straw for thatching buildings, sometimes the farmhouses, sometimes old cottages. Wheat straw used for this purpose is termed "reed", the crop is cut by binder, then a special attachment is used on the thresher which, when the grain is threshed, "combs" the straw and removes the flag. In contrast, wheat is produced on a larger scale in Dorset, occupying 4.4% of the acreage of crops and grass; there it is an important cash crop, and is highly mechanised.

The acreage of wheat in Devon and Cornwall in 1962 was less than half that of 1939. National necessity and incentives brought about a fourfold increase in acreage in the war years, but there has been a gradual decline in wheat production since. The acreages of other cereals in Devon and Cornwall also decreased from a war-time peak. However, this situation was reversed in the late 'fifties. This recent increase in cereal acreages is caused by expanding barley acreages. In Dorset the picture is similar to that in Devon and Cornwall except that wheat production has throughout been more important, and in 1962 accounted for a larger area than in 1939. But in Dorset, too, wheat has been replaced to a considerable extent by barley.

The partial substitution of barley production for wheat is to be expected; before the war wheat out-yielded barley in each of the three South West counties, but in the last decade this position has been reversed, although in England and Wales as a whole wheat still out-yields barley. At the same time prices have moved in favour of barley. Thatching straw has become of relatively little importance. The method of making deficiency payments has also favoured barley production, for the payment is made on an acreage basis, the quality of the crop being ignored. Wheat must be sold and be of milling quality to qualify for subsidy; in the South West climate this is frequently impossible. Hence there is a greater degree of uncertainty associated with wheat production than with barley.

* Counties of Cornwall & Isles of Scilly, Devon and Dorset.

II. THE SAMPLE

Records for the 1962 wheat crop were obtained for a sample of 56 farms. About 42% of the sample acreage was from the relatively small farms of Devon and Cornwall. The wheat acreage of these two counties is also about 42% of the total wheat acreage of the province. The whole sample is just over 3% of the total wheat acreage of the area.

Table 1. Distribution of the Sample

	No. of Farms	Acres Costed	Acres of Wheat per Farm
Cornwall	11	83.3	7.6
Devon	34	373.0	11.0
Dorset	11	626.5	57.0
All Groups	56	1082.8	19.3

The sample farms in Cornwall are all situated in the Newquay/Padstow arable area; in Devon nearly half of the sample is from the arable area north of Exeter, the remainder being fairly scattered over the county. The Dorset sample is largely concentrated on the chalk uplands.

Table 2. Relative Importance of Spring and Winter Sown Wheat

	Spring Wheat				Winter Wheat			
	No. of Farms	Acres		% of Total Costed	No. of Farms	Acres		% of Total Costed
		Total	Per Farm			Total	Per Farm	
Cornwall	1	10.0	10.0	12.0	10	73.3	7.3	88.0
Devon	6	58.5	9.8	15.7	33	314.5	9.5	84.3
Dorset	7	228.3	32.6	36.4	7	398.2	57.0	63.6
All Groups	14	296.8	21.2	27.3	50	786.0	15.7	72.7

The growing preponderance of winter-sown rather than spring-sown wheat,

as one moves southwards, is the result of several factors. Firstly, the proportionately greater popularity of spring-sown barley in the South of the region makes the growing of winter, rather than spring wheat, more desirable to spread labour requirements both at sowing and harvesting. Secondly, the physical conditions for sowing are often poor in spring in the more southerly parts of the region. Finally, winter wheat usually out-yields spring wheat, often substantially.

Details of the method of harvesting for each county are given in Table 3. The proportion of the crop which is combined decreases as one moves from East to West. This table emphasises the fact shown in the previous

Table 3. Method of Harvesting

	Combined				Bindered & Threshed			
	No. of Farms	Acres		% of Total Costed	No. of Farms	Acres		% of Total Costed
		Total	Per Farm			Total	Per Farm	
Cornwall	2	21.0	10.5	25.2	9	62.3	6.9	74.8
Devon	19	237.0	12.5	63.5	15	136.0	9.1	36.5
Dorset	11	626.5	57.0	100.0	-	-	-	-
All Groups	32	884.5	27.7	81.7	24	198.3	8.3	18.3

tables, that wheat production in Dorset is very different from the remainder of the South West, being on a much larger scale, and more highly mechanised.

III. RETURNS, INPUTS AND MARGINS. 1962 WHEAT CROP

(1) Summary of Financial Results

The financial results of the 1962 wheat crop are summarised in Table 4. The results are shown for the counties separately and for the sample as a whole.

Table 4. Returns, Inputs and Margins by County

	Cornwall	Devon	Dorset	All Groups
	£	£	£	£
<u>Per Acre</u>				
Returns: Grain*	42.7	50.2	54.6	52.1
Straw	12.1	15.1	3.4	8.1
Total	54.8	65.3	58.0	60.2
Inputs	27.9	28.7	21.8	24.6
Margin	26.9	36.6	36.2	35.6
<u>Per Ton</u>				
Returns: Grain*	28.3	28.4	29.1	28.8
Inputs ⁺	10.5	7.7	9.8	9.1
Margin	17.8	20.7	19.3	19.7
<u>Yields</u>	cwt.	cwt.	cwt.	cwt.
Grain	29.9	35.4	37.6	36.2
Straw	29.0	31.2	23.5	26.6
<u>Average Prices</u>		£ per ton		
Grain*	28.3	28.4	29.1	28.8
Straw	8.3	9.7	2.9	6.1

* Including deficiency payments

+ Total inputs less value of straw

The variations shown in Table 4 in returns and margins between the counties reflect the different conditions under which wheat is produced in the South West. In Dorset wheat is produced on a larger scale and under

more favourable climatic conditions than in Devon and Cornwall. The yield of grain in Dorset is greater, but because combines are used, the yield and value of straw is less. Thus the total returns per acre from Cornish farms are not much less than for Dorset although grain yields are much less. The high value of straw in Devon is due to the fact that 17% of it was used as reed at an average price of nearly £30 per ton; this, and a fairly high yield of grain, gave Devon the highest returns per acre.

The level of inputs is lower when the crop is combined than when bindered. Accordingly the farms in the Dorset sample, which all used combines had the lowest inputs. In Devon a third of the crop was bindered, and since some was also used to produce reed the inputs were the highest of the three counties. Nevertheless, these high costs were offset by the higher returns from straw and the margin in Devon was still slightly greater than in Dorset. Cornwall on the other hand had high costs due to the high proportion of the crop bindered, and lower returns so that the margin in Cornwall was substantially lower than in the remainder of the South West.

(2) Analysis of Inputs

The results of a detailed analysis of the inputs are given in the tables which follow. The levels of the various inputs affect not only the total cost but also the returns; the rate of manuring and quality of seed for instance, may directly affect the yield.

(i) Labour and Power

There are very wide differences in the quantities of labour and power used in the three counties as shown by Tables 5 and 6. In Cornwall the cost of manual labour is particularly high. This is a result of the high proportion of the wheat crop which is bindered and the small size of fields. Small fields mean a relatively high proportion of time spent turning on the headlands, so that tractor costs as well as labour, are higher than in Devon and Dorset. On the other hand, machinery depreciation costs are low in Cornwall, and again this is due to the prevalence of binders, whose capital cost is much less than combines. Devon's manual labour and machinery costs are intermediate between those of Cornwall and Dorset, some wheat being binder cut but a higher proportion being combined. In Dorset, the economy of large scale production using combines has resulted in very low manual labour costs but higher machinery costs. The latter are more than offset by the low labour requirements. Hence the total costs of labour and power in Dorset are lower than in Devon and much lower than in Cornwall.

Table 5.

Analysis of Inputs

Per Acre

	Cornwall	Devon	Dorset	All Groups
	£ s.	£ s.	£ s.	£ s.
Labour and Power:				
Manual	7 16	5 6	2 16	4 0
Tractor	3 0	2 3	1 12	1 18
Machinery Depreciation	1 10	2 11	3 13	3 2
Contract	1 18	3 0	12	1 10
Total	14 4	13 0	8 13	10 10
Seeds	3 10	3 5	3 0	3 2
Manures	2 17	4 4	4 1	4 0
Rent	2 1	4 8	2 17	3 6
Overheads:				
General	1 19	1 6	14	1 0
Hedging & Draining	15	15	15	15
Miscellaneous	2 11	1 15	1 16	1 18
Total	27 17	28 13	21 16	24 11

Table 6.

Analysis of Inputs

Per Cent

	Cornwall	Devon	Dorset	All Groups
	%	%	%	%
Labour and Power:				
Manual	28.0	18.5	12.8	16.3
Tractor	10.8	7.5	7.3	7.7
Machinery Depreciation	5.4	8.9	16.7	12.6
Contract	6.8	10.5	2.8	6.1
Total	51.0	45.4	39.6	42.7
Seeds	12.6	11.3	13.8	12.6
Manures	10.2	14.7	18.6	16.3
Rent	7.4	15.4	13.1	13.5
Overheads:				
General	7.0	4.5	3.2	4.1
Hedging & Draining	2.7	2.6	3.4	3.1
Miscellaneous	9.1	6.1	8.3	7.7
Total	100.0	100.0	100.0	100.0

(ii) Seed

Details of seed used and rate of seeding are given in Table 7. Most of the seed was purchased, the price per cwt., as might be expected, falling

Table 7. Seed Details

	Homegrown			Purchased		
	% of Total Seed Used	Seed Rate cwt/acre	Cost/cwt.	% of Total Seed Used	Seed Rate cwt/acre	Cost/cwt.
	%	cwt.	£	%	cwt.	£
Cornwall	10.4	1.5	1.5	89.6	1.6	2.3
Devon	5.5	1.6	1.6	94.5	1.6	2.1
Dorset	13.9	1.7	1.5	86.1	1.5	1.9
All Groups	10.6	1.7	1.5	89.4	1.5	2.0

as larger quantities were purchased. Thus in Dorset, where the quantities of seed purchased per farm were the greatest, the average price is the lowest. At the other extreme, the small quantities purchased in Cornwall were the most expensive. Homegrown seed was valued at the estimated price for which it could have been sold, plus deficiency payments.

(iii) Manuring

Farmyard manure was applied to the wheat crop on only one farm, in Cornwall. The use of artificial fertilisers is much less in Cornwall than in Devon and Dorset as can be seen in Table 8. In Dorset, a high proportion of the acreage received both a compound fertiliser at time of sowing, and a top dressing later. Manuring is less comprehensive in Devon, and

very much less so in Cornwall.

Table 8. Proportion of Wheat Acreage to which Manures were directly applied and average expenditure per acre

	Cornwall	Devon	Dorset	All Groups
	%	%	%	%
No manures	7.2	1.0	-	0.9
Compound only	18.6	29.8	7.7	16.1
Nitrogen only	37.8	4.8	-	4.6
Phosphate only	-	0.8	-	0.3
Mixture of above	36.4	63.6	92.3	78.1
Total	100.0	100.0	100.0	100.0
Average Cost £ per Acre	2.8	4.2	4.1	4.0

(iv) Use of Selective Herbicides

Another factor which influences yield and the value of the crop is the prevalence of weeds. Obviously since weeds compete with the wheat for the available space, light and nutrients, a large number would reduce yield. Hence the great difference between the use of sprays in Dorset and Cornwall may be an important reason for the difference in yield.

Table 9. Proportion of Wheat Acreages Sprayed with Selective Herbicides

	%
Cornwall	36.3
Devon	47.1
Dorset	97.4
All groups	75.3

(v) Rent

There is a great deal of variation in the per acre rents paid over the three counties. Rents are low in Cornwall, a reflection of the rather poor, thin soils. The higher rents in Devon are largely the result of the rent in the fertile arable land in South Devon, particularly near Exeter. As can be

seen from the range, by no means all of the Devon land used for wheat production is so expensive to rent. The average rent in Dorset is less than that for Devon because of the larger size of the farms rather than any great differences in fertility.

Table 10. Rent

	£ per Acre		
	Average	Lowest	Highest
Cornwall	2.1	1.2	4.0
Devon	4.4	2.0	7.0
Dorset	2.8	1.0	4.0
All groups	3.3	1.0	7.0

(3) The Relationship between Profits and Inputs

Having discussed inputs in some detail it is desirable to discover their influences upon profitability. Profit depends upon yields, prices, and input costs. Prices may be ignored since the farmer has little control over them, although of course they are affected by the quality of the crop. However, this characteristic is widely variable according to weather conditions. Yield is influenced by a number of factors, several having been mentioned already. Thus, correct manuring and the use of selective herbicides are important. In Table 11 the farms in the sample have been

Table 11. Relationship between Profit, Yield and Costs

Margin £ per Acre	0 - 19 $\frac{3}{4}$	20 - 29 $\frac{3}{4}$	30 - 39 $\frac{3}{4}$	40 and over
No. of farms	9	9	15	14
Inputs	24.8	22.3	25.3	19.9
Yield of grain	23.2	28.5	37.4	40.6

grouped according to their profit margin per acre.

The Devon reed producers have been excluded since this form of pro-

duction is small scale and specialist, not practicable on many farms. The results suggest that there is no connection between inputs and profits, i.e., that it costs as much to grow a poor crop as a good one: the profit rises as yield rises. It seems likely that within the limits set by the weather and soil conditions etc., a number of factors increase yields and so increase profits. Of some importance are timeliness of operation with respect to sowing, manuring and cultivations, seed quality, seed rate, use of seed dressings and sprays. None of these factors have much influence on the level of costs, but may be important if a high yield is to be obtained.

(4) Gross Margins

The gross margins for the 1962 Wheat Crop are presented in Table 12.

Table 12. Gross Margins per Acre

	Cornwall	Devon	Dorset	All Groups
	£	£	£	£
<u>Variable Costs</u>				
Contract Services	1.9	3.0	0.6	1.6
Seeds	3.5	3.2	3.0	3.1
Manures	2.8	4.2	4.1	4.0
Fuel	0.2	0.2	0.3	0.2
Miscellaneous	2.4	1.6	1.5	1.6
Total	10.8	12.2	9.5	10.5
<u>Gross Output</u>				
Grain	42.7	50.2	54.6	52.1
Straw/Reed	12.1	15.1	3.4	8.1
Total	54.8	65.3	58.0	60.2
Gross Margin	44.0	53.1	48.5	49.7
<u>Yields</u>				
Grain (cwt.)	29.9	35.4	37.6	36.2
Straw/Reed (cwt.)	29.0	31.2	23.5	26.6

These figures are another approach to profitability, and are particularly

useful in planning future production. The gross margin is the contribution of an enterprise towards the farm's fixed costs and profit. It is calculated by subtracting the variable costs from the total gross output of the enterprise. Variable costs are those which are specific to the enterprise, such as seeds, manures etc., and thus vary with the acreage grown, they would be saved if the crop was not grown. The quantities of them which are used can be varied by the farmer. Fixed costs such as rent, machinery depreciation, regular labour, cannot easily be changed in the short run.

IV. COMPARISON OF WINTER AND SPRING WHEAT

Little spring wheat is grown in the South West except in Dorset. For this reason, and to ensure that the two crops are compared under similar conditions, the comparison of winter and spring wheat is restricted to Dorset. The results are given in Table 13.

Table 13. Comparison of Results, Winter and Spring Wheat
1962 Dorset

Per Acre

	Winter	Spring
No. of farms	8	7
Acreage of Wheat	398.3	228.2
<u>Returns</u>	£ s.	£ s.
Grain	59 6	46 7
Straw	3 6	3 12
Total Returns	62 12	49 19
<u>Inputs</u>		
Manual labour	2 11	3 3
Tractor	1 11	1 12
Contract	16	5
Total Labour	4 18	5 0
Fuel	5	6
Machinery Depreciation	3 12	3 15
Total Labour & Power	8 15	9 1
Other Inputs	12 15	13 4
TOTAL INPUTS	21 10	22 5
MARGIN	41 2	27 14
<u>Yield</u>	cwt.	cwt.
Grain	41.6	30.3
Straw	23.5	23.6

The returns from winter wheat are considerably greater than from spring wheat, this being due almost entirely to the higher yield of grain. On the costs side, the two crops are very similar indeed. Therefore, the profit from winter wheat is much greater than from spring wheat.

Although winter wheat is usually more profitable than spring wheat, there are many good reasons why spring wheat is also grown. It is advantageous to spread labour requirements by sowing and harvesting at different times. There is also the point that in some years less winter wheat can be sown than is desired due to unfavourable weather conditions, and some spring wheat is sown instead. Finally, the two crops occupy somewhat different places in rotations, so that their choice is governed to some extent by the other crops grown.

V. METHOD OF HARVESTING

The method of harvesting wheat depends to a considerable extent upon the size of the enterprise. Capital and depreciation costs of a combine are very much greater than those of a binder. Their much greater capacity and economy in labour costs, however, make them cheaper per acre for large acreages. A comparison of binding with combining, therefore, means also comparing small with large grain growing enterprises. In Table 14 a binder group from Cornwall is compared with the much larger scale combining in Dorset; the Devon farms which produce reed have also been compared with these two groups.

The costs of labour and power are very much less for the combine group than the binder groups. However, the substitution of machinery and capital for manual labour results in higher machinery depreciation costs. Nevertheless, this is not enough to offset the labour economy of the combines and this method of harvesting is seen to be much the cheaper. Reed production takes even more labour and power than straightforward binding and threshing because of the additional operation of combing the straw and tying it into "nitches." Consequently the per acre costs of reed producers are the highest of all groups. As mentioned earlier the value of the reed was so much higher than ordinary straw that this form of production gave the highest margin per acre. However, reed production is suited to only a few small producers, the general conclusion must be that large scale mechanised production, such as that in Dorset, is most profitable. It has the further recommendation that it is rather less arduous than binding, stoking, carting, stacking and threshing.

Table 14. Comparison of Results by Method of Harvesting

Per Acre

	Binder	Binder for Reed	Combine	All Groups
	Cornwall Small Scale	Devon	Dorset Large Scale	
No. of farms	9	13	11	56
Acres grown per farm	6.9	9.2	57.0	19.3
<u>COSTS</u>	£	£	£	£
Manual Labour	8.9	9.2	2.8	4.0
Tractor Labour	3.2	2.5	1.6	1.9
Contract	2.6	5.9	0.6	1.5
Seeds	3.6	3.7	3.0	3.1
Manures	2.9	3.9	4.1	4.0
Rent	2.1	4.6	2.8	3.3
Miscellaneous	2.8	2.0	1.8	1.9
Machinery Depreciation	0.9	1.4	3.7	3.1
Overheads	2.9	3.0	1.4	1.8
TOTAL	29.9	36.2	21.8	24.6
<u>RETURNS</u>				
Grain	41.2	47.1	54.6	52.1
Straw	12.9	29.4	3.4	8.6
TOTAL	54.1	76.5	58.0	60.2
MARGIN	24.2	40.3	36.2	35.6
<u>YIELDS</u>	cwt.	cwt.	cwt.	cwt.
Grain	28.2	32.7	37.6	36.2
Straw	27.0	33.7	23.5	26.6
<u>PRICES PER TON</u>	£	£	£	£
Grain	29.2	28.8	29.1	28.8
Straw	9.5	17.4	2.9	6.1

Average price of reed £29.72 per ton.

VI. SUMMARY

1. This report summarises the returns, inputs and margins of growing wheat in the 1962 harvest year on a sample of 56 farms in Cornwall, Devon and Dorset.
2. The weather in the autumn of 1961 and early winter of 1962 was ideal for ploughing and sowing. Sowing of spring wheat, and harvesting took place under average conditions.
3. Cereal production is relatively unimportant in Cornwall and Devon. Wheat in these two counties occupies less than 1% of the acreage of crops and grass; it is often grown as much for straw as for grain. However, in Dorset the figure is over 4%. In each of the three counties barley is of much greater importance than wheat, occupying over 10% of the acreage of crops and grass.
4. Cereal acreages in Cornwall and Devon are slightly in excess of those in 1939, in Dorset they are more than double those of 1939. However, wheat is less than half of the 1939 acreage in Cornwall and Devon and only greater by a quarter in Dorset.
5. Records were obtained from 56 farmers, of whom 11 were in Cornwall, 34 in Devon and 11 in Dorset. The area costed was $1082\frac{3}{4}$ acres, of which $83\frac{1}{4}$ acres were in Cornwall, 373 acres in Devon and $626\frac{1}{2}$ acres in Dorset.
6. In Dorset nearly one-third of the wheat acreage costed was spring sown, which is about twice the proportion of wheat which is spring sown in Cornwall and Devon.
7. In Dorset the whole sample was combined. Two thirds of the Devon sample, but only a quarter of the Cornish sample, were combined.
8. The margins, i.e., the difference between total costs and returns, were very similar in Devon and Dorset, at just over £36 per acre. The margin in Cornwall was just £27 per acre. This lower margin was primarily due to poorer yields.
9. Total costs were lowest in Dorset, being about £22 per acre compared with £28 in Devon and Cornwall. This difference is largely due to the

lower costs per acre of large scale combining compared with small scale binding.

10. The gross margin, i.e., the difference between variable costs and total returns, was highest in Devon, £53, mainly due to the high value of the straw. It was £48 in Dorset and £44 in Cornwall.
11. A comparison of results from winter and spring wheat on similar farms in Dorset showed that winter wheat was more profitable. The margins obtained were £41 per acre for winter wheat and £28 per acre for spring wheat. The levels of inputs were very similar for winter and spring wheat, the different margins being attributable to different yield, 41.6 cwt. per acre for winter wheat, 30.3 cwt. per acre for spring.
12. The analysis by method of harvesting showed the low costs of large scale producers using combines. However, these low costs did not result in lower yields, grain yields were the highest of all groups. The higher cost of binding was offset by some Devon farmers who produced reed, the high value of this straw - nearly £30 per ton, giving these farmers the highest margins of any group.

APPENDIX I.

Table 1.

Cropping Statistics

Crops and Grass, South West Province and England and Wales, 1962

	Cornwall	Devon	Dorset	South West Province	England and Wales
	acres				000's acres
Wheat	3845	10368	19876	34089	2144
Barley	78928	124488	59844	263260	3501
Oats	5455	17668	5925	29048	787
Dredge	23406	11591	417	35414	120
Total Cereals	111634	164115	86062	361811	6552
Other Crops & Fallow	48329	88855	25553	162737	2611
Total Tillage	159963	252970	111615	524548	9163
Temporary Grass	233034	308941	114190	656165	4614
Total Arable	392997	561911	225805	1180713	13777
Permanent Grass	236904	593574	224102	1054580	10635
Total Crops and Grass*	629901	1155485	449907	2235293	24412

* Excluding rough grazing.

Table 2. Crops and Grass, South West Province and
England and Wales, 1962

Per 100 Acres

	Cornwall	Devon	Dorset	South West Province	England and Wales
	%	%	%	%	%
Wheat	0.6	0.9	4.4	1.5	8.8
Barley	12.5	10.8	13.3	11.8	14.3
Oats	0.9	1.5	1.3	1.3	3.2
Dredge	3.7	1.0	0.1	1.6	0.5
Total Cereals	17.7	14.2	19.1	16.2	26.8
Other Crops & Fallow	7.7	7.7	5.7	7.3	10.7
Total Tillage	25.4	21.9	24.8	23.5	37.5
Temporary Grass	37.0	26.7	25.4	29.3	18.9
Total Arable	62.4	48.6	50.2	52.8	56.4
Permanent Grass	37.6	51.4	49.8	47.2	43.6
Total Crops and Grass*	100.0	100.0	100.0	100.0	100.0

* Excluding rough grazing

Table 3.

Trends in Acreages of Total Cereals
and Wheat 1939 - 1962

	1939	1943	1947	1951	1955	1958	1962
<u>ALL CEREALS</u>							
				acres			
Cornwall	101084	203917	145264	132249	106436	106989	111634
Devon	134920	324834	230477	192661	151073	154493	164115
Dorset	41212	102849	79781	73704	62645	75677	86062
S.W. Province	277216	631654	455522	398614	320154	337159	361811
% of England & Wales	6.8	8.3	7.1	6.3	5.4	5.5	5.5
	1939 = 100						
Cornwall	100	202	144	131	105	106	110
Devon	100	241	171	143	112	115	122
Dorset	100	250	194	179	152	184	209
S.W. Province	100	228	164	144	115	122	131
England & Wales	100	189	159	156	147	153	162
<u>WHEAT</u>							
				acres			
Cornwall	8509	34951	16901	7750	5787	5932	3845
Devon	22893	95459	47705	18267	11529	12443	10368
Dorset	15561	49996	31102	20451	14660	15439	19876
S.W. Province	46963	180406	95708	46468	31976	33814	34089
% of England & Wales	2.8	5.5	4.6	2.3	1.7	1.6	1.6
	1939 = 100						
Cornwall	100	411	199	91	68	70	45
Devon	100	417	208	80	50	54	45
Dorset	100	321	200	131	94	99	128
S.W. Province	100	384	204	99	68	72	73
England & Wales	100	195	123	122	113	126	128

Table 4. Relative Importance of Wheat Acreage 1939 - 1962

	1939	1943	1947	1951	1955	1958	1962
Per Cent of Crops and Grass							
Cornwall	1.4	5.7	2.7	1.2	0.9	0.9	0.6
Devon	2.0	8.4	4.2	1.6	1.0	1.1	0.9
Dorset	3.7	11.8	7.3	4.7	3.3	3.5	4.4
S.W. Province	2.2	8.3	4.4	2.1	1.4	1.5	1.5
England & Wales	6.8	13.5	8.5	8.4	7.7	8.6	8.8
Per Cent of Total Cereals							
Cornwall	8.4	17.1	11.6	5.9	5.4	5.5	3.4
Devon	17.0	29.4	20.7	9.5	7.6	8.1	6.3
Dorset	37.8	48.6	39.0	27.7	23.4	20.4	23.1
S.W. Province	16.9	28.6	21.0	11.7	10.0	10.0	9.4
England & Wales	41.6	43.0	32.2	32.6	31.8	34.2	32.7

APPENDIX II.

Table 1. Varieties Grown. Per Cent of Acreage

Varieties	Cornwall	Devon	Dorset	All Groups
	%	%	%	%
<u>WINTER</u>				
Capelle	81.4	42.0	44.8	46.7
Prof. Marchal	-	10.7	10.8	9.9
Flamingo	-	18.1	-	6.2
Viking	-	2.4	8.0	5.5
Elite Lepeuple	-	5.3	-	1.8
Victor	-	3.8	-	1.3
Little Joss	-	2.0	-	0.7
No. 59	6.6	-	-	0.5
TOTAL WINTER	88.0	84.3	63.6	72.6
<u>SPRING</u>				
Jufy	-	15.7	33.6	24.9
Atle	-	-	2.8	1.6
Svenno	12.0	-	-	0.9
TOTAL SPRING	12.0	15.7	36.4	27.4
ALL WHEAT	100.0	100.0	100.0	100.0

Note: Flamingo was only grown by Devon Reed producers.

APPENDIX III.

Costing Method

(i) Labour Charges

Manual:	Adult Male	5/- per hour
	Adult Female	3/6 " "
	Youths	3/6 " "
Horse		1/6 " "

(ii) Equipment Charges

Tractors:	Wheeled	4/6 " "
	Crawler	9/- " "
General Implements		15/- per acre
Binder		3/- " "
Combine Harvester:	$\frac{\text{Capital Cost less } 5\%}{11 \text{ years}} \cdot \text{acres cut}$ in year)	per acre
	Repairs	5/- " "
Baler:	$\frac{\text{Capital Cost less } 5\%}{13 \text{ years}} \cdot \text{acres baled}$ in year)	per acre
	Repairs	4/- " "
Dutch Barn		5/- " "
Driers & Installations:	$\frac{\text{Capital Cost}}{15 \text{ years}} \cdot \text{tons dried}$ in year)	per ton

(iii) Boundary upkeep/drains etc.

+ 5/- per £ manual labour
for general farm overheads

15/- per acre

(iv) Seed

Purchased

at actual cost to farmer.

Homegrown

at market value plus deficiency payment.

(v) Manures

Cost to farmer net of subsidy.

(vi) Miscellaneous Costs

Includes fuel for combine and baler engines, twine, sack hire, sprays, seed dressings, spars, thatch, etc.

Weighted averages have been used throughout this report.

APPENDIX IV.

Standard Supplement

The figures in this Appendix are based on 64 records, on 1082 $\frac{3}{4}$ acres, on 56 farms.

Table 1. Summary of Average Costs per Acre

Item of Cost	Hours			£	s.
	Men	Youths	Females		
	Regular Labour	16.0	0.2		
Casual and Gang Labour		0.1		-	
Power: Tractor		8.25		1	17
Horse		0.3		-	
Machinery Depreciation & Repair Allowance				3	2
Contract Services				1	11
Other Fuel					5
Materials: Seed				3	2
Fertiliser and Manures applied				4	0
Sundries				1	12
Rent				3	6
TOTAL DIRECT COSTS				22	16
Share of General Farm Expenses				1	15
Adjustments for Residual Manurial Values				-	
GROSS COST				24	11
Credit Value of Straw				8	12
NET COST				15	19

Table 2. Summary of Average Yields and Receipts

	Quantity Per Acre	Receipts Per Cwt.	
	cwt.	s.	d.
Grain used on farm	0.3	18	6
Grain sold	35.9	19	7
Deficiency Payment Receipts	-	9	4

Table 3. Summary of Average Quantities of
Materials and Yields per Acre

Materials			Overall Average per Acre
			cwt.
Seed			1.7
Fertilisers and Manures:	Area Dressed Only		
	Acres	Cwt. per Acre	
F.Y.M.	6	200.0	-
Lime	15 $\frac{3}{4}$	2.0	-
Artificialals:			
Straights			
Nitrogenous	928	2.1	1.8
Potassic	-	-	-
Phosphatic	147	8.0	1.1
Compounds	955 $\frac{1}{4}$	2.7	2.4
Yield of Grain: Head Corn			36.1
Tail Corn			0.1
Yield of Straw			26.6