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CORRIGENDA

Reduction of Nitrate in Water Supplies: An Economic Study of Water Treatment Compared with the Effects of Lower Fertiliser Usage

Annex IV, Page 4, Paragraph 2.6

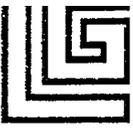
Insert: at end of paragraph:

"(the cash flows), except in Table 5 and Appendix II of the main report where the overall economic position of agriculture in each catchment area is examined."

Annex IV, Page 4, Paragraph 2.9

Insert: at end of paragraph:

"(cash flow), except again in Table 5 and Appendix II of the main report."



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DEPARTMENT OF THE ENVIRONMENT

REDUCTION OF NITRATE IN WATER SUPPLIES:
AN ECONOMIC STUDY OF WATER TREATMENT COMPARED
WITH THE EFFECTS OF LOWER FERTILISER USAGE

ANNEX IV

FINANCIAL, UNITED KINGDOM ECONOMIC AND
EUROPEAN COMMUNITY ECONOMIC ANALYSES

LAURENCE GOULD CONSULTANTS LIMITED
OCTOBER 1985

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Definitions and Abbreviations

- Fixed Costs - Those costs which are unallocated when determining farm enterprise Gross Margins i.e. regular labour, power costs, other overheads and rent, finance charges etc.
- Gross Margins - Enterprise output (including the value of production retained on the farm) less its variable costs. The latter are both specific to the enterprise and vary in proportion to the size of the enterprise. For arable crops these normally include fertilisers, seeds, sprays, sundry direct items, haulage, casual labour and specific contract charges.
- Livestock Unit - Cow Equivalent.
- Ml/day - Mega litres per day.
- NPV - Net Present Value, the difference between the Present Value of benefits and the Present Value of costs.
- Present Value - The discounted value of a stream of benefits or costs received or spent over a period of time.
- Terminal Value - The residual value of a capital asset at the end of the project's life.

Conversion Factor

1 Hectare (ha) = 2.471 acres

1. INTRODUCTION

1.1 Three main analyses have been undertaken to appraise the effects on agriculture from restricting nitrogen fertiliser use with the engineering costs saved as a result of the fertiliser restrictions imposed. The three analyses are as follows:

- Financial Analysis - to demonstrate the effects from the point of view of agents in the market place (i.e. farmers, Water Authorities etc.).
- United Kingdom Economic Analysis - using prices provided by the Ministry of Agriculture, Fisheries and Food (MAFF) to indicate the effect from the point of view of the United Kingdom.
- World Prices - to demonstrate the impact of implementing fertiliser restriction in the borehole catchment areas from the point of view of the European Community (EC).

1.2 Two alternatives have been assumed for each study area, one assumes a group of boreholes discharging at least 25 M litres per day, the other a single borehole producing about 5 M litres per day. The actual discharges assumed are as follows:

	<u>Lincolnshire</u>	<u>Cambridgeshire</u>
Group	24.4 Ml ^{1/}	34.4 Ml
Single Borehole	4.5 Ml	5.3 Ml

1.3 Each borehole, or group of boreholes has its own specific catchment area. The size of each catchment area may be calculated but would require a great deal more information than is currently available. Therefore, three scenarios have been examined under each analysis.

^{1/} Ml = Megalitres

These, together with the estimated land area involved, are shown in Table 1.1 opposite. Option (b) assumes that the precise catchment area of the borehole(s) can be identified. Option (c) allows for the likelihood that the catchment areas cannot be precisely identified or that a larger protection area is required to cope with drought years when the borehole(s) will draw from a larger catchment area.

- 1.4 In both study areas the agricultural disbenefits have been derived from the catchment area required to afford protection to the entire water resources. The Present Values (PV) for the other protection options have been calculated by proportioning the PV down on the basis of the relevant areas involved.

2. METHOD

- 2.1 The method used in the financial, UK and EC analyses are basically the same, the main difference being the variation in the value of agricultural Gross Margins, fixed costs and engineering costs.

Agricultural Cash Flows

- 2.2 The total annual catchment area Gross Margin for the no restriction and each of the restricted fertiliser cases was derived by multiplying the projected annual crop areas and numbers of livestock units for each case by their respective Gross Margins per annum.
- 2.3 Regular farm labour costs were derived by using 1984 as the base year and noting the annual change in tractor hours required (see Annex I) to grow the crops and grass in the two catchment areas. A unit cost per hour was applied to the base cost to reflect the increased or reduced labour requirement.
- 2.4 Machinery repair and fuel costs were also based on the standard tractor hours required to grow the crops and unit costs per hour applied.
- 2.5 Maintenance and miscellaneous costs were based on Nottingham and Cambridgeshire University costs per hectare and applied to the total agricultural return area in each catchment.

- 2.6 Restriction of nitrogen fertiliser usage would result in a decrease in farm profitability (see Annex I) and this is likely to lead to a reduction in both land values and rents. The potential long term fall in rental charges is difficult to determine and is outside the scope of this study. Consequently, it has been assumed that the cost per hectare for the no restriction case and each of the restriction options within each catchment area will be the same. The incremental cost is therefore zero when comparing the various restriction cases with the no restriction scenario and rent has been omitted from the cash flows.
- 2.7 Irrigation operating and maintenance (O&M) costs have been based on the total area irrigated per annum and grain drying costs have been based on the total annual production of cereals, oilseed rape, harvest peas and beans.
- 2.8 Annual irrigation capital costs are based on the additional area irrigated compared with the previous year while grain drying and storage capital costs have been derived from the incremental tonnage of cereals, oilseed rape, harvest peas and beans produced per annum.
- 2.9 No additional farm equipment, other than that described above, will be required as a result of the changes in cropping projected under the no restriction and restriction cases. Consequently, only existing machinery will need to be replaced under the farmers' normal replacement policy. This will be the same for all cases and as a result the incremental cost will be zero. These costs have therefore been omitted from the agricultural cash flow.
- 2.10 The annual regular labour, machinery repairs and fuel, maintenance and miscellaneous costs, together with irrigation and grain drying/storage capital and O & M costs have been deducted from the annual total Gross Margins for the catchment area in order to arrive at the annual agricultural cash flow.

Table 2.1 - Present Value of Rent, Interest and Normal Machinery Replacement Costs

	Lincolnshire Catchment Area 1/	Cambridgeshire Catchment Area 2/
	£'000	£'000
Rent	33640	36135
Interest Charges	11060	15890
Normal Machinery Replacement Costs	28275	25498

1/ 20600 ha

2/ 20700 ha

- NOTE:
1. Rental charge for the whole of the catchment areas irrespective of whether the land is owned or rented.
 2. These costs have been omitted from the agricultural cash flows as the incremental cost in each of the three main analyses and for each restriction option is zero.

- 2.11 The agricultural cash flows, which exclude rent, normal machinery replacement costs and interest charges, have been discounted at 5 per cent (which is the current Treasury Discount Rate) over a 30 year project life (i.e. 1985 to 2014). For completeness, the PV of rent, interest and normal machinery replacement costs for all the main analyses and all restriction options is given in Table 2.1 opposite.
- 2.12 The no restriction case represents the 'future without project' scenario and this has therefore been used as the basis to compare the 'future with project' cases represented by each of the restricted fertiliser options. The PV of the latter have been deducted from the PV of the no restriction case in order to arrive at the agricultural disbenefits for the alternative restriction options.

Engineering Costs

- 2.13 A similar procedure has been adopted for engineering costs. The annual capital and O&M costs were discounted at 5 per cent. The economic life of civil works and mechanical and electrical equipment has been taken to be 60 and 20 years respectively. Terminal values have been calculated assuming straight line depreciation.
- 2.14 The engineering cost PV for the alternative restriction options were deducted from the PV of the no restriction case to arrive at the PV of the engineering costs saved.
- 2.15 The PV of the agricultural disbenefits for each option were then compared with the relevant PV of engineering costs saved in order to determine whether restricting fertiliser use provided an overall benefit or disbenefit.

3. FINANCIAL ANALYSIS

- 3.1 The financial analysis has been undertaken using 1985 prices which are assumed to remain constant in real terms.

Agriculture

- 3.2 The cropping and stocking projections for the no restriction case and each of the restriction options are presented in Annex I, together with the financial Gross Margins for crops and livestock.
- 3.3 The unit costs for labour, machinery repairs and fuel, maintenance and miscellaneous costs and irrigation and grain drying/storage costs are also discussed in Annex I and are briefly summarised below:

	<u>£</u>
Regular Labour (per hour)	3.58
Machinery - repairs (per standard tractor hour)	2.89
- fuel (per standard tractor hour)	2.36
Miscellaneous &) - Lincolnshire (per hectare)	53.50
Maintenance Costs) - Cambridgeshire (per hectare)	51.60
Irrigation - Capital costs (per hectare)	1770.00
- O&M costs (per hectare)	50.60
Grain Drying/Storage - Capital costs (per tonne)	50.00
- O&M costs (per tonne)	3.00

- 3.4 Regular labour costs per annum were derived by assuming a base cost in 1984 of three regular men per farm in Lincolnshire and two regular men per farm in Cambridgeshire at a standard cost per man of £7980 (see Annex I). The annual variation in labour costs were calculated on the basis of the annual change in tractor hours from the base year using a unit labour cost of £3.58 per hour.

Table 3.1 - Financial Analysis - Summary of Present Values of Agricultural Cash Flows - 24.4/34.4 MI per Day Abstraction - £'000

% Restriction from Current Nitrogen Application Rates	Lincolnshire - 24.4 MI per Day Abstraction			Cambridgeshire - 34.4 MI per Day Abstraction		
	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) Only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)
0	92331	28596	57191	101678	44060	88121
10	90258	27954	55907	99503	43118	86236
20	88219	27322	54644	97280	42155	84309
30	85204	26388	52777	93727	40615	81230
40	81466	25231	50461	89412	38745	77490
50	76648	23739	47477	83651	36249	72498

Table 3.2 - Financial Analysis - Summary of Present Values of Agricultural Cash Flows - 4.5/5.3 MI per Day Abstraction - £'000

% Restriction from Current Nitrogen Application Rates	Lincolnshire - 4.5 MI per Day Abstraction			Cambridgeshire - 5.3 MI per Day Abstraction		
	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) Only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)
0	92331	5737	11429	101678	6386	12820
10	90258	5608	11173	99503	6249	12546
20	88219	5482	10920	97280	6109	12266
30	85204	5294	10547	93727	5886	11818
40	81466	5062	10084	89412	5615	11274
50	76648	4763	9488	83651	5253	10547

- 3.5 Other costs were derived on the basis discussed in Chapter 2, using the above unit rates.
- 3.6 The financial agricultural cash flows for the area required to protect the entire water resource in Lincolnshire and Cambridgeshire are presented in Appendix I and II pages 32 and 38 respectively, and the Present Values are summarised in Tables 3.1 and 3.2 opposite. The PV of the other two restriction options have been obtained by proportioning the PV of the total catchment area cash flow on an area basis. For instance, the PV of the option where a 10 per cent restriction is applied to the specific catchment of the boreholes in Lincolnshire producing 24.4 Ml per day has been obtained as follows:

$$90258 \times (6380/20600) = 27954$$

The relevant areas are set out in Table 1.1, Chapter 1.

- 3.7 The PV of the agricultural disbenefits for each restriction option is presented in Tables 3.3 and 3.4 overleaf.

Engineering

- 3.8 The engineering cost streams and Present Values are presented in Annex 4 and a summary is given in Table 3.5 overleaf, together with the PV of the engineering costs saved under each restriction case (see Table 3.6). It will be noted that blending can only be undertaken in Lincolnshire for the 24.4 Ml per day abstraction case. Reverse osmosis has not been costed as the technical feasibility of this engineering alternative is doubtful.
- 3.9 Ion exchange is the cheapest engineering alternative in all cases except the 24.4 Ml per day abstraction rate in Lincolnshire. Although the capital costs to establish an ion exchange plant are cheaper, the annual O&M costs are higher than for biological denitrification. Consequently, biological denitrification represents the least cost option in this instance.

Table 3.3 - Financial Analysis - Summary of the Incremental Present Values of Agricultural Benefits - 24.4/34.4 MI per Day Abstraction - £'000

% Restriction from Current Nitrogen Application Rates	Lincolnshire - 24.4 MI per Day Abstraction				Cambridgeshire - 34.4 MI per Day Abstraction		
	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) Only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)	
	10	(2073)	(642)	(1284)	(2175)	(942)	(1885)
20	(4112)	(1274)	(2547)	(4398)	(1905)	(3812)	
30	(7127)	(2208)	(4914)	(7951)	(3445)	(6891)	
40	(10865)	(3365)	(6730)	(12266)	(5315)	(10631)	
50	(15683)	(4857)	(9714)	(18027)	(7811)	(15623)	

Table 3.4 - Financial Analysis - Summary of the Incremental Present Values of Agricultural Benefits - 4.5/5.3 MI per Day Abstraction - £'000

% Restriction from Current Nitrogen Application Rates	Lincolnshire - 4.5 MI per Day Abstraction			Cambridgeshire - 5.3 MI per Day Abstraction		
	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) Only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)
	10	(2073)	(129)	(256)	(2175)	(137)
20	(4112)	(255)	(509)	(4398)	(277)	(554)
30	(7127)	(443)	(882)	(7951)	(500)	(1002)
40	(10865)	(675)	(1345)	(12266)	(771)	(1546)
50	(15683)	(974)	(1941)	(18027)	(1133)	(2273)

Note: Brackets Denote Negative Figures

Table 3.5 - Summary of the Financial Present Values of Engineering Costs - 24.4/34.4 MI per Day and 4.5/5.3 MI per Day Abstraction - £'000

% Restriction from Current Nitrogen Application Rates	Lincolnshire						Cambridgeshire					
	24.4 MI per Day Abstraction			4.5 MI per Day Abstraction			34.4 MI per Day Abstraction			5.3 MI per Day Abstraction		
	Ion Exchange	Biological Denitrification	Blending	Ion Exchange	Biological Denitrification		Ion Exchange	Biological Denitrification		Ion Exchange	Biological Denitrification	
0	4234	3099	9256	636	865		751	819		217	310	
10	3799	2888	9026	504	769		693	771		203	300	
20	3353	2671	8757	314	486		599	683		178	269	
30	2962	2446	8449	199	350		538	636		158	234	
40	2438	2190	7766	88	170		455	553		144	227	
50	1957	1938	7325	26	73		367	464		124	199	

Table 3.6 - Summary of the Financial Present Values of Engineering Costs Saved Through the Restriction of Nitrogen Fertiliser Usage - £'000

% Restriction from Current Nitrogen Application Rates	Lincolnshire						Cambridgeshire					
	24.4 MI per Day Abstraction			4.5 MI per Day Abstraction			34.4 MI per Day Abstraction			5.3 MI per Day Abstraction		
	Ion Exchange	Biological Denitrification	Blending	Ion Exchange	Biological Denitrification		Ion Exchange	Biological Denitrification		Ion Exchange	Biological Denitrification	
10	435	211	230	132	96		58	48		14	10	
20	881	428	499	322	379		152	136		39	41	
30	1272	653	807	437	515		213	183		59	76	
40	1796	909	1490	548	695		296	266		73	83	
50	2277	1161	1931	610	792		384	355		93	111	

Note - There is no blending option in Lincolnshire on the 4.5 MI per Day Abstraction

Table 3.7 - Results of the Financial Analysis - 24.4 M per Day Abstraction -
Protection of the Entire Water Resource in the Catchment Area - Lincolnshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(2073)	(4112)	(7127)	(10865)	(15683)
Present Value Biological Denitrification Costs Saved	211	428	653	909	1161
Net Present Value	(1862)	(3684)	(6474)	(9956)	(14522)

Table 3.8 - Results of the Financial Analysis - 4.5 M per Day Abstraction -
Protection of the Entire Water Resource in the Catchment Area - Lincolnshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(2073)	(4112)	(7127)	(10865)	(15683)
Present Value of Ion Exchange Costs Saved	132	322	437	548	610
Net Present Value	(1941)	(3790)	(6690)	(10317)	(15073)

Table 3.9 - Results of the Financial Analysis - 34.4 M per Day Abstraction -
Protection of the Entire Water Resource in the Catchment Area - Cambridgeshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(2175)	(4398)	(7951)	(12266)	(18027)
Present Value of Ion Exchange Costs Saved	58	152	213	296	384
Net Present Value	(2117)	(4246)	(7738)	(11970)	(17643)

Table 3.10 - Results of the Financial Analysis - 5.3 M per Day Abstraction -
Protection of the Entire Water Resource in the Catchment Area - Cambridgeshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(2175)	(4398)	(7951)	(12266)	(18027)
Present Value of Ion Exchange Costs Saved	14	39	59	73	93
Net Present Value	(2161)	(4359)	(7892)	(12193)	(17934)

NOTE: Brackets denote negative figures

- 3.10 Although the full results will be presented in this Annex, the main analysis, comparing agricultural disbenefits with savings in engineering costs, will be confined to the least cost engineering options.

Results

- 3.11 The results of the financial analyses are presented in Tables 3.7 to 3.18 opposite and overleaf.
- 3.12 The PV of the savings in engineering costs are much lower in Cambridgeshire than in Lincolnshire. The main reason for this is that as nitrate levels in Cambridgeshire are not expected to be a problem for some time, construction and operation of the treatment plant is unlikely to be required for at least another decade, whereas in Lincolnshire the plant is required immediately. In addition, the engineering costs are significantly cheaper in Cambridgeshire than in Lincolnshire.
- 3.13 The financial analyses shows that for all three protection options, namely, protection of the entire water resource, protection of the specific borehole catchment area and twice this area, restriction of nitrogen fertiliser results in overall financial disbenefits for all cases except two:
- Lincolnshire, protection of the specific 4.5 Ml per day borehole catchment area - nitrogen fertiliser use restricted to 10% and 20% of current levels.

In the above case, restriction of fertiliser usage to 30 per cent or upwards results in agricultural disbenefits exceeding engineering costs saved.

Table 3.11 - Results of the Financial Analysis - 24.4 Ml per Day Abstraction -
Protection of the Borehole Catchment Area Only - Lincolnshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(642)	(1274)	(2208)	(3365)	(4857)
Present Value Biological Denitrification Costs Saved	211	428	653	909	1161
Net Present Value	(431)	(846)	(1555)	(2456)	(3696)

Table 3.12 - Results of the Financial Analysis - 4.5 Ml per Day Abstraction -
Protection of the Borehole Catchment Area Only - Lincolnshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(129)	(255)	(443)	(675)	(974)
Present Value of Ion Exchange Costs Saved	132	322	437	548	610
Net Present Value	3	67	(6)	(127)	(364)

Table 3.13 - Results of the Financial Analysis - 34.4 Ml per Day Abstraction -
Protection of the Borehole Catchment Area Only - Cambridgeshire £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(942)	(1905)	(3445)	(5315)	(7811)
Present Value of Ion Exchange Costs Saved	58	152	213	296	384
Net Present Value	(884)	(1753)	(3232)	(5019)	(7427)

Table 3.14 - Results of the Financial Analysis - 5.3 Ml per Day Abstraction -
Protection of the Borehole Catchment Area Only - Cambridgeshire £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(137)	(277)	(500)	(771)	(1133)
Present Value of Ion Exchange Costs Saved	14	39	59	73	93
Net Present Value	(123)	(238)	(441)	(698)	(1040)

NOTE: Brackets denote negative figures

Table 3.15 - Results of the Financial Analysis - 24.4 Ml per Day Abstraction -
Protection of an Area Twice the Specific Borehole Catchment Area - Lincolnshire £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(1284)	(2547)	(4414)	(6730)	(9714)
Present Value Biological Denitrification Costs Saved	211	428	653	909	1161
Net Present Value	(1073)	(2119)	(3761)	(5821)	(8553)

Table 3.16 - Results of the Financial Analysis - 4.5 Ml per Day Abstraction -
Protection of an Area Twice the Specific Borehole Catchment Area - Lincolnshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(256)	(509)	(882)	(1345)	(1941)
Present Value of Ion Exchange Costs Saved	132	322	437	548	610
Net Present Value	(124)	(187)	(445)	(797)	(1331)

Table 3.17 - Results of the Financial Analysis - 34.4 Ml per Day Abstraction -
Protection of an Area Twice the Specific Borehole Catchment Area - Cambridgeshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(1885)	(3812)	(6891)	(10631)	(15623)
Present Value of Ion Exchange Costs Saved	58	152	213	296	384
Net Present Value	(1827)	(3660)	(6678)	(10335)	(15239)

Table 3.18 - Results of the Financial Analysis - 5.3 Ml per Day Abstraction -
Protection of an Area Twice the Specific Borehole Catchment Area - Cambridgeshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(274)	(554)	(1002)	(1546)	(2273)
Present Value of Ion Exchange Costs Saved	14	39	59	73	93
Net Present Value	(260)	(515)	(943)	(1473)	(2180)

NOTE: Brackets denote negative figures

3.14 The analysis also shows that for all protection options the greater the fertiliser restriction, the larger the agricultural disbenefits. These disbenefits exceed the engineering costs saved to a larger and larger extent, such that maximum disbenefits are achieved at the highest level of nitrogen restriction.

Table 4.1 - UK Economic Analysis - Summary of Present Values of Agricultural Cash Flows - 2.4/34.4 Ml per Day Abstraction - £'000

Restriction from Current Nitrogen Application Rates	Lincolnshire - 24.4 Ml per Day Abstraction			Cambridgeshire - 34.4 Ml per Day Abstraction		
	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) Only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)
0	63813	19763	39527	65730	28483	56966
10	62412	19330	38659	64291	27859	55719
20	61035	18903	37806	62805	27216	54431
30	59136	18315	36630	60237	26103	52205
40	57320	17753	35505	57407	24876	49753
50	54544	16893	33786	55080	23868	47736

Table 4.2 - UK Economic Analysis - Summary of Present Values of Agricultural Cash Flows - 4.5/5.3 Ml per Day Abstraction - £'000

Restriction from Current Nitrogen Application Rates	Lincolnshire - 4.5 Ml per Day Abstraction			Cambridgeshire - 5.3 Ml per Day Abstraction		
	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) Only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)
0	63813	3965	7899	65730	4128	8288
10	62412	3878	7726	64291	4038	8106
20	61035	3792	7555	62805	3944	7919
30	59136	3674	7320	60237	3783	7595
40	57320	3562	7095	57407	3605	7238
50	54544	3389	6752	55080	3459	6945

4. UNITED KINGDOM ECONOMIC ANALYSIS

Agricultural Cash Flows

- 4.1 This analysis has been undertaken using figures that have been provided by MAFF on a confidential basis. It represents the effect of restricting fertiliser for the point of view of the United Kingdom.
- 4.2 The base data used to create the agricultural cash flows is the same as that described in the financial analysis, apart from the following:
- the Gross Output of the cereal and oilseed rape Gross Margins has been reduced by 20 per cent;
 - the Gross Output of autumn and spring calving single sucklers and beef heifer replacements has been reduced by 20 per cent;
 - and the Gross Output of sheep has been reduced by 20 per cent.
- 4.3 The United Kingdom economic agricultural cash flows for the Lincolnshire and Cambridgeshire catchment areas (assuming the entire water resource is protected) are presented in Appendices III and IV, pages 44 and 50 respectively, and the results are summarised in Tables 4.1 to 4.4 opposite and overleaf.

Engineering

- 4.4 No change has been made to the financial engineering costs. These therefore remain as shown in Annex IV and as summarised in the previous chapter.

Table 4.3 - UK Economic Analysis - Summary of Incremental Present Value of Agricultural Benefits - 24.4/34.4 MI per Day Abstraction - £'000

Restriction from Current Nitrogen Application Rates	Lincolnshire - 24.4 MI per Day Abstraction			Cambridgeshire - 34.4 MI per Day Abstraction		
	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) Only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)
10	(1401)	(433)	(868)	(1439)	(624)	(1247)
20	(2778)	(860)	(1721)	(2925)	(1267)	(2535)
30	(4677)	(1448)	(2897)	(5493)	(2380)	(4761)
40	(6493)	(2010)	(4022)	(8323)	(3607)	(7213)
50	(9269)	(2870)	(5741)	(10650)	(4615)	(9230)

Table 4.4 - UK Economic Analysis - Summary of Incremental Present Value of Agricultural Benefits - 4.5/5.3 MI per Day Abstraction - £'000

Restriction from Current Nitrogen Application Rates	Lincolnshire - 4.5 MI per Day Abstraction			Cambridgeshire - 5.3 MI per Day Abstraction		
	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) Only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)
10	(1401)	(87)	(173)	(1439)	(90)	(182)
20	(2778)	(173)	(344)	(2925)	(184)	(369)
30	(4677)	(291)	(579)	(5493)	(345)	(693)
40	(6493)	(403)	(804)	(8323)	(523)	(1050)
50	(9269)	(576)	(1147)	(10650)	(669)	(1343)

Note: Brackets denote negative figures

Table 4.5 - Results of the UK Economic Analysis - 24.4 MI per Day Abstraction -
Protection of the Entire Water Resource in the Catchment Area - Lincolnshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(1401)	(2778)	(4677)	(6493)	(9269)
Present Value Biological Denitrification Costs Saved	211	428	653	909	1161
Net Present Value	(1190)	(2350)	(4024)	(5584)	(8108)

Table 4.6 - Results of the UK Economic Analysis - 4.5 MI per Day Abstraction -
Protection of the Entire Water Resource in the Catchment Area - Lincolnshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(1401)	(2778)	(4677)	(6493)	(9269)
Present Value of Ion Exchange Costs Saved	132	322	437	548	610
Net Present Value	(1269)	(2456)	(4240)	(5945)	(8659)

Table 4.7 - Results of the UK Economic Analysis - 34.4 MI per Day Abstraction -
Protection of the Entire Water Resource in the Catchment Area - Cambridgeshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(1439)	(2925)	(5493)	(8323)	(10650)
Present Value of Ion Exchange Costs Saved	58	152	213	296	384
Net Present Value	(1381)	(2773)	(5280)	(8027)	(10266)

Table 4.8 - Results of the UK Economic Analysis - 5.3 MI per Day Abstraction -
Protection of the Entire Water Resource in the Catchment Area - Cambridgeshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(1439)	(2925)	(5493)	(8323)	(10650)
Present Value of Ion Exchange Costs Saved	14	39	59	73	93
Net Present Value	(1425)	(2886)	(5434)	(8250)	(10557)

NOTE: Brackets denote negative figures

Results of the United Kingdom Economic Analysis

- 4.5 The results of the UK economic analysis, are presented in Tables 4.5 to 4.16 opposite and overleaf.
- 4.6 The analysis shows that, with one exception, the agricultural disbenefits outweigh the savings in engineering costs resulting from a restriction in nitrogen fertiliser usage. Again, the greater the restriction on nitrogen usage, the larger the overall disbenefits achieved.
- 4.7 The exception is the same case as shown in the financial analysis, namely Lincolnshire, protection of the specific 4.5 Ml per day borehole catchment area, all restriction cases. However, to achieve these potential benefits will require an accurate identification of the specific borehole catchment area.

Table 4.9 - Results of the UK Economic Analysis - 24.4 Ml per Day Abstraction -
Protection of the Boreholes Catchment Area Only - Lincolnshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(433)	(860)	(1448)	(2010)	(2870)
Present Value Biological Denitrification Costs Saved	211	428	653	909	1161
Net Present Value	(222)	(432)	(795)	(1101)	(1709)

Table 4.10 - Results of the UK Economic Analysis - 4.5 Ml per Day Abstraction -
Protection of the Borehole Catchment Area Only - Lincolnshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(87)	(173)	(291)	(403)	(576)
Present Value of Ion Exchange Costs Saved	132	322	437	548	610
Net Present Value	45	149	146	145	34

Table 4.11 - Results of the UK Economic Analysis - 34.4 Ml per Day Abstraction -
Protection of the Boreholes Catchment Area Only - Cambridgeshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(624)	(1267)	(2380)	(3607)	(4615)
Present Value of Ion Exchange Costs Saved	58	152	213	296	384
Net Present Value	(566)	(1115)	(2167)	(3311)	(4231)

Table 4.12 - Results of the UK Economic Analysis - 5.3 Ml per Day Abstraction -
Protection of the Boreholes Catchment Area Only - Cambridgeshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(90)	(184)	(345)	(523)	(669)
Present Value of Ion Exchange Costs Saved	14	39	59	73	93
Net Present Value	(76)	(145)	(286)	(450)	(576)

NOTE: Brackets denote negative figures

Table 4.13 - Results of the UK Economic Analysis - 24.4 Ml per Day Abstraction - Protection of an Area Twice the Specific Borehole Catchment Area - Lincolnshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(868)	(1721)	(2897)	(4022)	(5741)
Present Value Biological Denitrification Costs Saved	211	428	653	909	1161
Net Present Value	(657)	(1293)	(2244)	(3113)	(4580)

Table 4.14 - Results of the UK Economic Analysis - 4.5 Ml per Day Abstraction - Protection of an Area Twice the Specific Borehole Catchment Area - Lincolnshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(173)	(344)	(579)	(804)	(1147)
Present Value of Ion Exchange Costs Saved	132	322	437	548	610
Net Present Value	(41)	(22)	(142)	(256)	(537)

Table 4.15 - Results of the UK Economic Analysis - 34.4 Ml per Day Abstraction - Protection of an Area Twice the Specific Borehole Catchment Area - Cambridgeshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(1247)	(2535)	(4761)	(7213)	(9230)
Present Value of Ion Exchange Costs Saved	58	152	213	296	384
Net Present Value	(1189)	(2383)	(4548)	(6917)	(8846)

Table 4.16 - Results of the UK Economic Analysis - 5.3 Ml per Day Abstraction - Protection of an Area Twice the Specific Borehole Catchment Area - Cambridgeshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(182)	(369)	(693)	(1050)	(1343)
Present Value of Ion Exchange Costs Saved	14	39	59	73	93
Net Present Value	(168)	(330)	(634)	(977)	(1250)

NOTE: Brackets denote negative figures

5. EUROPEAN COMMUNITY ECONOMIC ANALYSIS

Introduction

- 5.1 The method used in the world price analysis, which shows the effect of restricting nitrogen fertiliser usage from the European Community point of view, is the same as that described in Chapter 2.

Derivation of World Prices

- 5.2 The weighted index of manufacturing unit value (muv), published by international sources was applied to the price series for the commodities concerned to convert current to constant dollar values. An average constant 1984 dollar price for the length of the price series was calculated. It should be noted that the use of the muv leads to a fall in the 1980 prices for commodities expressed in 1984 constant dollars.
- 5.3 1985 constant dollar prices were derived by applying an internationally accepted index to the 1984 constant dollar prices. An index from the same source was used to calculate 1990 prices in 1985 constant dollars.
- 5.4 Internationally accepted projections were applied to the following commodities and expressed in 1985 constant dollar prices:

Feed and Milling Wheat
Potatoes
Sugar
Oilseeds
Fertilisers
Beef

No change in real prices are anticipated for sugar, potatoes butter, dried milk or wool. Barley prices have been linked to feed wheat on the basis of its Metabolizable Energy (ME), but in the case of malting barley the financial premium expressed as a percentage has been applied to the world price. Future lamb prices have been linked to beef.

- 5.5 The market for dried peas for human consumption is satisfied, therefore any expansion will result in the crop being utilised for protein and energy in animal compound feeds. Consequently, the future price of harvest peas has been linked to an average of future wheat and soya bean prices. Beans have been similarly treated after linking the price to dried peas.
- 5.6 Oilseed rape competes in the oils and fats market. Future price projections have therefore been linked to a Weighted Index of Commodity Prices - Fats and Oils.
- 5.7 1990 fuel prices have been derived from current prices and adjusted by a Weighted Index of Commodity Prices - Petroleum.

Future Real Exchange Rates

- 5.8 As well as taking a view on the behaviour of the world agricultural commodity prices in constant dollar terms it is necessary to take a view on the real dollar/pound exchange rates over a similar time span. Given the volatility of the exchange rate over recent years, published predictions of the exchange rate (like agricultural commodity forecasts) rarely go beyond 1990 and even unpublished opinions usually stop at 2000. Therefore, between 1990 and 2014 it seem reasonable to assume, for investment appraisal purposes, a constant real exchange rate even though the actual exchange rate will vary widely around this.
- 5.9 After detailed consultation with a number of published and unpublished sources, the opinion was formed that it would be sensible to use three exchange rates in order to highlight the sensitivity of the final result to the real long term exchange rate. Defensible 1990 real exchange rates are as follows:

- \$1.50 : £1
- \$1.80 : £1
- \$1.20 : £1

- 5.10 The International Monetary Fund (IMF) indicates that the real exchange rate from 1990 to 2000 will be about \$1.50:£1. However, for the longer time scale to 2014 it may be appropriate to take regard of the more fundamental determinants of long term average real exchange rates such as Purchasing Power Parity (PPP). OECD have recently suggested a PPP rate of \$1.80:£1.
- 5.11 The real long term exchange rate of \$1.20:£1 has been used to illustrate the effect of a lower than expected sterling value, although this may be less likely to occur than the other two exchange rate scenarios assumed.
- 5.12 For the purpose of analysis it has been taken that these long term rates are reached in 1990 by a linear exchange rate adjustment per annum from a typical 1985 exchange rate of \$1.30:£1.
- 5.13 The respective exchange rates were applied to the 1985 and 1990 real dollar price projections for the agricultural commodities in order to arrive at a constant sterling 1985 world price.

Sources of Information - Commodities - Net Exports

- 5.14 Feed wheat prices were obtained from Food and Agriculture Organisation (FAO) information and milling wheat prices from international sources. A 10 per cent quality adjustment was assumed for milling wheat.
- 5.15 Potato prices were based on FAO information from Danish sources.
- 5.16 Raw sugar prices were again based on FAO data, FOB Caribbean ports.

- 5.17 Butter prices were obtained from the Commodity Week ex-store New Zealand. An allowance was made for transport, port handling charges and freight and insurance to derive the FOB UK price. Butter and skimmed milk prices were used to derive the world price of milk. One tonne of butter and 2.1 tonnes of skimmed milk powder are obtained from 22,567 litres of milk. After allowing for processing costs the world farm gate price of milk is calculated to be as follows:

	<u>p/litre</u>
1985 \$1.30 : £1	11
1990 \$1.50 : £1	9
1990 \$1.80 : £1	7
1990 \$1.20 : £1	12

- 5.18 Wool prices were derived from shorn wool (greasy) ex-store USA. An allowance was made for transport and port handling charges to determine the FOB UK price.

- 5.19 Nitrogen phosphate and potash costs have been based on international commodity projections for urea, triple superphosphate and muriate of potash. The kg of plant nutrient per tonne have been taken as follows:

	<u>Kg Plant Nutrient per Tonne</u>
Urea	460 kg N
TSP	460 kg P
MOP	600 kg K

Sources of Information - Commodities - Net Imports

- 5.20 Financial prices have been used for vining peas. Harvest (dried) pea prices have been obtained from FAO data, CIF UK, and oilseed rape prices CIF North West Europe.

- 5.21 Beef prices have been obtained from international sources, FOB frozen, boneless. The farm gate price has been adjusted to allow for the killing out percentage of boneless meat. Lamb prices have been based on CIF Smithfield data supplied by FAO.

Shadow Wage Rates

- 5.22 Following submission of the draft interim report and subsequent discussions with DOE economists, it was agreed that Treasury guidance should be adhered to. Consequently, market wage rates have been used throughout the EC analysis. Outline calculations have indicated that the use of shadow wage rates would have little impact upon the final outcome.

Fuel

- 5.23 The world price of fuel was obtained from data relating to CIF North West Europe prices. Farmers pay less tax than commercial users. The multipliers have therefore been calculated as:

	1985	1990	1990	1990
	\$1.30:£1	\$1.50:£1	\$1.80:£1	\$1.20:£1
Farmer	0.80	0.67	0.56	0.84
Commercial User	0.38	0.32	0.26	0.40

Details are given in Appendix V.

Conversion to Farm Gate Prices

- 5.24 The CIF UK international prices have to be converted into farm gate prices by adjusting for quality, transport port handling and where relevant, processing costs. The precise format depends on whether the EC is a net exporter or net importer of the commodity. Information on net imports or exports to or from the EC were obtained from Nimex and the Home Grown Cereals Authority.

- 5.25 Up to date information on freight rates was obtained from Commodity Week. Port and handling charges were provided by the Port of Bristol Authority. Although the ports assumed to handle cereals and proteins for the project areas are Hull and Felixstowe, no difference in port and handling charges are expected. The port assumed for livestock and livestock products is London.
- 5.26 Haulage rates were obtained from a detailed study undertaken in 1983/4 and adjusted by 10% to allow for inflation.

World Price Gross Margins

- 5.27 The world price Gross Margins have been compiled from the world price farm gate values and are presented in the following Appendices:
- | | | |
|-----------------------------------|-----------------|----------|
| \$1.30:£1 1985 and \$1.50:£1 1990 | - Appendix VI | page 65 |
| \$1.80:£1 1990 | - Appendix VII | page 97 |
| \$1.20:£1 1990 | - Appendix VIII | page 113 |
- 5.28 Seed prices have been calculated by multiplying the financial cost by the ratio of the world price and financial price. Casual labour, sundry direct items, sprays, veterinary and medicine charges have been assumed to have the same value as the financial cost. Livestock replacement charges have been based on the world beef or lamb price but adjustments have been made to allow for premiums associated with young breeding stock.

- 5.29 Contract charges have been based on the cost per tractor hour, including labour. Haulage charges have been based on the world price of fuel. Road tax and interest have been excluded. The multipliers used were therefore as follows:

	<u>Contract</u>	<u>Haulage</u>
\$1.30 : £1 1985	0.97	0.60
\$1.50 : £1 1990	0.95	0.57
\$1.80 : £1 1990	0.93	0.55
\$1.20 : £1 1990	0.97	0.60

Other Agricultural Operating Maintenance and Capital Costs

- 5.30 The fuel element of irrigation Operating and Maintenance (O&M) costs has been revalued at world prices. The multipliers used were as follows:

	<u>Irrigation O & M</u>
\$1.30 : £1 1985	0.90
\$1.50 : £1 1990	0.84
\$1.80 : £1 1990	0.79
\$1.20 : £1 1990	0.92

- 5.31 The fuel element in grain drying costs was similarly adjusted. The multipliers used were as follows:

	<u>Grain Drying</u>
\$1.30 : £1 1985	0.87
\$1.50 : £1 1990	0.78
\$1.80 : £1 1990	0.71
\$1.20 : £1 1990	0.89

- 5.32 The capital costs of installing additional irrigation and grain drying/storage facilities were assumed to be the same as their financial value.

Engineering Costs

- 5.33 It has been assumed that the capital components of the engineering works are manufactured and constructed within the UK or EC. Consequently, apart from the fuel element, changes in the real U.S.dollar:£ Sterling exchange rate is assumed to have no effect on costs.
- 5.34 The fuel component within the capital cost of civil works and installing mechanical and electrical equipment is negligible. Consequently, these have been assumed to be the same as the financial values.
- 5.35 Similarly, the cost of maintenance, electricity, salt resin and chemicals is assumed to be the same as their financial values.
- 5.36 Ion exchange and biological denitrification plants need to dispose of the regenerant and sludge. It has been assumed in the engineering costings that own transport would be purchased for the ion exchange plant required to deal with 25 or 34 Ml per day abstractions. The world price of transport vehicles is assumed to be the same as their financial cost as no tax is levied. The multipliers used to derive the transport O & M costs with own vehicles were as follows:

	<u>Own Vehicle O & M Costs</u>
\$1.30 : £1 1985	0.47
\$1.50 : £1 1990	0.45
\$1.80 : £1 1990	0.43
\$1.20 : £1 1990	0.48

Table 5.1 - EC Economic Analysis - 1985 \$1.30:£1 - 1990 \$1.50:£1 - Summary of Present Values of Agricultural Cash Flows - 24.4/34.4 MI per Day Abstraction - £'000

% Restriction from Current Nitrogen Application Rates	Lincolnshire - 24.4 MI per Day Abstraction			Cambridgeshire - 34.4 MI per Day Abstraction		
	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) Only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)
0	60194	18643	37295	72438	31390	62780
10	58316	18061	36122	70418	30514	61029
20	56642	17543	35035	68606	29729	59459
30	54878	16996	33992	65937	28573	57145
40	54133	16765	33531	62854	27237	54473
50	52328	16206	32413	62754	27193	54387

Table 5.2 - EC Economic Analysis - 1985 \$1.30:£1 - 1990 \$1.50:£1 - Summary of Present Values of Agricultural Cash Flows - 4.5/5.3 MI per Day Abstraction - £'000

% Restriction from Current Nitrogen Application Rates	Lincolnshire - 4.5 MI per Day Abstraction			Cambridgeshire - 5.3 MI per Day Abstraction		
	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) Only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)
0	60194	3740	7451	72438	4549	9133
10	58316	3624	7219	70418	4422	8879
20	56642	3520	7012	68606	4309	8650
30	54878	3410	6793	65937	4141	8314
40	54133	3364	6701	62854	3947	7925
50	52328	3251	6477	62754	3941	7912

- 5.37 The smaller ion exchange and biological denitrification plants will use contractors to dispose of the regenerant and sludge. The multipliers used were indicated in paragraph 5.29. The reason for the difference in the two sets of multipliers is that in the latter case an economic depreciation charge is retained in the costings to allow the contractor to replace his vehicles. The replacement of owned vehicles is allowed for in the relevant engineering costings.

Agricultural Cash Flows

- 5.38 The world price agricultural cash flows are presented in the following Appendices:

1985 \$1.30:£1	1990 \$1.50:£1	- Appendix IX, page 129
1985 \$1.30:£1	1990 \$1.80:£1	- Appendix X, page 141
1985 \$1.30:£1	1990 \$1.20:£1	- Appendix XI, page 153

- 5.39 Presentation of the results of the EC economic analyses will be confined in the text to the base case of 1985 \$1.30:£1 - 1990 \$1.50:£1. The results of the other two long term real exchange rates assumed are presented in Appendices XII and XIII, pages 165 and 171 respectively.
- 5.40 Assuming a real exchange rate of \$1.50 and \$1.80 to £1 in 1990 significantly reduces the PV of the agricultural cash flows compared with the financial analysis (see Tables 5.1 and 5.2 opposite). However, the effect on the incremental agricultural disbenefits is less marked except at the higher levels of restriction of nitrogen usage (see Tables 5.3 and 5.4 overleaf). This is due to the anticipated general decline in the real dollar price of agricultural commodities.

Table 5.3 - EC Economic Analysis - 1985 \$1.30:£1 - 1990 \$1.50:£1 - Summary of the Incremental Present Values of Agricultural Benefits - 24.4/34.4 MI per Day Abstraction - £'000

% Restriction from Current Nitrogen Application Rates	Lincolnshire - 24.4 MI per Day Abstraction			Cambridgeshire - 34.4 MI per Day Abstraction		
	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) Only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)
10	(1878)	(582)	(1163)	(2020)	(876)	(1751)
20	(3552)	(1100)	(2200)	(3832)	(1661)	(3321)
30	(5316)	(1647)	(3293)	(6501)	(2817)	(5635)
40	(6061)	(1878)	(3754)	(9584)	(4153)	(8307)
50	(7866)	(2437)	(4872)	(9684)	(4197)	(8393)

Table 5.4 - EC Economic Analysis - 1985 \$1.30:£1 - 1990 \$1.50:£1 - Summary of the Incremental Present Values of Agricultural Benefits - 4.5/5.3 MI per Day Abstraction - £'000

% Restriction from Current Nitrogen Application Rates	Lincolnshire - 4.5 MI per Day Abstraction			Cambridgeshire - 5.3 MI per Day Abstraction		
	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) Only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)
10	(1878)	(116)	(232)	(2020)	(127)	(254)
20	(3552)	(220)	(430)	(3832)	(240)	(483)
30	(5316)	(330)	(658)	(6501)	(408)	(819)
40	(6061)	(376)	(750)	(9584)	(602)	(1208)
50	(7866)	(489)	(974)	(9684)	(608)	(1221)

Note: Brackets denote negative figures.

Table 5.5 - EC Economic Analysis - 1985 \$1.30:£1 - 1990 \$1.50:£1 - Summary of Present Values of Engineering Costs - 24.4/34.4 MI per Day Abstraction and 4.5/5.3 MI per Day Abstraction - £'000

% Restriction from Current Nitrogen Application Rates	Lincolnshire				Cambridgeshire				
	24.4 MI per Day Abstraction		4.5 MI per Day Abstraction		34.4 MI per Day Abstraction		5.3 MI per Day Abstraction		
	Ion Exchange	Biological Denitrification	Blending 1/	Ion Exchange	Biological Denitrification	Ion Exchange	Biological Denitrification	Ion Exchange	Biological Denitrification
0	3769	3060	9216	542	863	694	814	183	309
10	3390	2853	8986	436	768	642	767	173	300
20	2998	2640	8718	269	685	553	680	151	269
30	2661	2419	8409	174	349	498	632	134	234
40	2195	2168	7726	77	170	421	550	123	227
50	1764	1921	7285	25	73	339	461	107	198

Table 5.6 - EC Economic Analysis - 1985 \$1.30:£1 - 1990 \$1.50:£1 - Summary of Present Values of Engineering Costs Saved Through the Restriction of Nitrogen Fertiliser Usage - £'000

% Restriction from Current Nitrogen Application Rates	Lincolnshire				Cambridgeshire				
	24.4 MI per Day Abstraction		4.5 MI per Day Abstraction		34.4 MI per Day Abstraction		5.3 MI per Day Abstraction		
	Ion Exchange	Biological Denitrification	Blending 1/	Ion Exchange	Biological Denitrification	Ion Exchange	Biological Denitrification	Ion Exchange	Biological Denitrification
10	379	207	230	106	95	52	47	10	9
20	771	420	498	273	378	141	134	32	40
30	1108	641	807	368	514	196	182	49	75
40	1574	892	1490	465	693	273	264	60	82
50	2005	1139	1931	517	790	355	353	76	111

Note - There is no blending option in Lincolnshire on the 4.5 MI per Day Abstraction

1/ Costs are the same as financial analysis as no transport/disposal of waste material is required

- 5.41 As expected, if a \$1.20:£1 real exchange rate is assumed in 1990 onwards, the PV of the agricultural cash flows is higher than that shown in the financial analysis. Again, the incremental agricultural disbenefits are generally less than those indicated in the financial analysis, particularly in the higher nitrogen restriction cases.

Engineering

- 5.43 Applying the assumed dollar sterling exchange rates to the fuel element of the engineering costs has relatively little impact upon the PV of the alternative engineering solutions or on the incremental engineering costs saved. As a result, the least cost alternatives do not differ from those in the financial or United Kingdom analyses. Details of the world price analysis, assumed an exchange rate of \$1.50:£1 in 1990, are given in Tables 5.5 and 5.6 opposite.

Results of the Analysis

- 5.44 The results of the base world price analysis, assuming protection of the entire water resource in the catchment area, protection of the specific borehole(s) catchment area and an area twice this size are given in Tables 5.7 to 5.18 overleaf.
- 5.45 Although the incremental agricultural disbenefits are substantially reduced, the reduction is not sufficient to alter the result; namely, that except for the option of protecting the specific catchment area of the 4.5 Ml borehole in Lincolnshire, the agricultural disbenefits in the other options outweigh the savings in engineering costs.

Table 5.7 - Results of the EC Economic Analysis - 1985 \$1.30:£1 - 1990 \$1.50:£1 - 24.4 MI per Day Abstraction - Protection of the Entire Water Resource in the Catchment Area - Lincolnshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(1878)	(3552)	(5316)	(6061)	(7866)
Present Value Biological Denitrification Costs Saved	207	420	641	892	1139
Net Present Value	(1671)	(3132)	(4675)	(5169)	(6727)

Table 5.8 - Results of the EC Economic Analysis - 1985 \$1.30:£1 - 1990 \$1.50:£1 - 4.5 MI per Day Abstraction - Protection of the Entire Water Resource in the Catchment Area - Lincolnshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(1878)	(3552)	(5316)	(6061)	(7866)
Present Value of Ion Exchange Costs Saved	106	273	368	465	517
Net Present Value	(1772)	(3279)	(4948)	(5596)	(7349)

Table 5.9 - Results of the EC Economic Analysis - 1985 \$1.30:£1 - 1990 \$1.50:£1 - 34.4 MI per Day Abstraction - Protection of the Entire Water Resource in the Catchment Area - Cambridgeshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(2020)	(3832)	(6501)	(9584)	(9684)
Present Value of Ion Exchange Costs Saved	52	141	196	273	355
Net Present Value	(1968)	(3691)	(6305)	(9311)	(9329)

Table 5.10 - Results of the EC Economic Analysis - 1985 \$1.30:£1 - 1990 \$1.50:£1 - 5.3 MI per Day Abstraction - Protection of the Entire Water Resource in the Catchment Area - Cambridgeshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(2020)	(3832)	(6501)	(9584)	(9684)
Present Value of Ion Exchange Costs Saved	10	32	49	60	76
Net Present Value	(2010)	(3800)	(6452)	(9524)	(9608)

NOTE: Brackets denote negative figures

Table 5.11 - Results of the EC Economic Analysis - 1985 \$1.30:£1 - 1990 \$1.50:£1 - 24.4 MI per Day Abstraction - Protection of the Borehole Catchment Area Only - Lincolnshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(582)	(1100)	(1647)	(1878)	(2437)
Present Value Biological Denitrification Costs Saved	207	420	641	892	1139
Net Present Value	(375)	(680)	(1006)	(986)	(1298)

Table 5.12 - Results of the EC Economic Analysis - 1985 \$1.30:£1 - 1990 \$1.50:£1 - 4.5 MI per Day Abstraction - Protection of the Borehole Catchment Area Only - Lincolnshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(116)	(220)	(330)	(376)	(489)
Present Value of Ion Exchange Costs Saved	106	273	368	465	517
Net Present Value	(10)	53	38	89	28

Table 5.13 - Results of the EC Economic Analysis - 1985 \$1.30:£1 - 1990 \$1.50:£1 - 34.4 MI per Day Abstraction - Protection of the Borehole Catchment Area Only - Cambridgeshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(876)	(1661)	(2817)	(4153)	(4197)
Present Value of Ion Exchange Costs Saved	52	141	196	273	355
Net Present Value	(824)	(1520)	(2621)	(3880)	(3842)

Table 5.14 - Results of the EC Economic Analysis - 1985 \$1.30:£1 - 1990 \$1.50:£1 - 5.3 MI per Day Abstraction - Protection of the Borehole Catchment Area Only - Cambridgeshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(127)	(240)	(408)	(602)	(608)
Present Value of Ion Exchange Costs Saved	10	32	49	60	76
Net Present Value	(117)	(208)	(359)	(542)	(532)

Table 5.15 - Results of the EC Economic Analysis - 1985 \$1.30:£1 - 1990 \$1.50:£1 - 24.4 MI per Day Abstraction - Protection of an Area Twice the Specific Borehole Catchment Area - Lincolnshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(1163)	(2200)	(3293)	(3754)	(4872)
Present Value Biological Denitrification Costs Saved	207	420	641	892	1139
Net Present Value	(956)	(1780)	(2652)	(2862)	(3733)

Table 5.16 - Results of the EC Economic Analysis - 1985 \$1.30:£1 - 1990 \$1.50:£1 - 4.5 MI per Day Abstraction - Protection of an Area Twice the Specific Borehole Catchment Area - Lincolnshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(232)	(439)	(658)	(750)	(974)
Present Value of Ion Exchange Costs Saved	106	273	368	465	517
Net Present Value	(126)	(166)	(290)	(285)	(457)

Table 5.17 - Results of the EC Economic Analysis - 1985 \$1.30:£1 - 1990 \$1.50:£1 - 34.4 MI per Day Abstraction - Protection of an Area Twice the Specific Borehole Catchment Area - Cambridgeshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(1751)	(3321)	(5635)	(8307)	(8393)
Present Value of Ion Exchange Costs Saved	52	141	196	273	355
Net Present Value	(1699)	(3180)	(5439)	(8034)	(8038)

Table 5.18 - Results of the EC Economic Analysis - 1985 \$1.30:£1 - 1990 \$1.50:£1 - 5.3 MI per Day Abstraction - Protection of an Area Twice the Specific Borehole Catchment Area - Cambridgeshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(254)	(483)	(819)	(1208)	(1221)
Present Value of Ion Exchange Costs Saved	10	32	49	60	76
Net Present Value	(244)	(451)	(770)	(1148)	(1145)

NOTE: Brackets denote negative figures

- 5.46 Again, the overall disbenefits are higher in Cambridgeshire than in Lincolnshire due to the fact that agricultural disbenefits would occur immediately a protection policy was implemented, yet the requirement for treatment works would not occur for at least a decade.
- 5.47 If ion exchange or blending were the only engineering alternatives in the 24.4 Ml per day abstraction case in Lincolnshire, the higher PV of engineering costs saved would be insufficient to affect the outcome, even if the catchment area of the boreholes could be accurately identified and protected.
- 5.48 The conclusions that can be drawn from the analyses which assume a real exchange rate of \$1.20:£1 and \$1.80:£1 in 1990 are the same as indicated above, except that in the latter the overall disbenefits are less than in the base case.

6. SOIL NITROGEN DEPLETION

- 6.1 The reduction in crop yields were based on yield response curves derived from experimental data. These experiments were conducted on soils which have a residue of soil nitrogen from the application of normal fertiliser levels in previous years.
- 6.2 The introduction of a policy to restrict indefinitely nitrogen fertiliser usage will result in the depletion of soil nitrogen with the result that the decline in yields will probably be greater than that assumed in the main analyses.
- 6.3 To date, very little experimental work has been undertaken into the long term effects of soil nitrogen depletion on crop response to nitrogen fertiliser. Discussions with Mr. J.R. Archer, Regional Soil Scientist, MAFF, have indicated that the following approach would be acceptable as a sensitivity analysis.
- 6.4 If nitrogen fertiliser is restricted it is likely that the soil nitrogen reserves would be largely depleted after three years. It has therefore been assumed that if nitrogen application rates are restricted by 10 per cent of current usage, after three years yield depression is likely to be equivalent to that assumed for the 20 per cent restriction case. Consequently, in 1988 onwards the 20 per cent restriction agricultural cash flow has been substituted into the original 10% restriction cash flow.
- 6.5 Similar assumptions have been made for the remaining restriction cases. In the 50 per cent restriction case, the agricultural cash flow for a hypothetical 60 per cent restriction case has been estimated by observing trends in the other restriction cases.

Table 6.1 - Present Value of Agricultural Cash Flows Assuming that a Greater Yield Depression Occurs Through Soil Nitrogen Depletion - £'000

% Nitrogen Restriction from Current Usage	Lincolnshire			Cambridgeshire		
	Financial Analysis	UK Economic Analysis	EC Economic Analysis 1990 \$1.50:£1	Financial Analysis	UK Economic Analysis	EC Economic Analysis 1990 \$1.50:£1
0	92331	63813	60194	101678	65730	72438
10	88704	61404	57121	97780	63179	68861
20	85841	59611	55407	94440	60796	66427
30	82173	57821	54684	90176	57939	63455
40	77592	55194	52983	84746	55817	63409
50	69411	49376	49364	74300	50745	61759

Table 6.2 - Present Value of Incremental Agricultural Benefits Assuming that a Greater Yield Depression Occurs Through Soil Nitrogen Depletion - £'000

% Nitrogen Restriction from Current Usage	Lincolnshire			Cambridgeshire		
	Financial Analysis	UK Economic Analysis	EC Economic Analysis 1990 \$1.50:£1	Financial Analysis	UK Economic Analysis	EC Economic Analysis 1990 \$1.50:£1
10	(3627)	(2409)	(3073)	(3898)	(2551)	(3577)
20	(6490)	(4202)	(4787)	(7238)	(4934)	(6011)
30	(10158)	(5992)	(5510)	(11502)	(7791)	(8983)
40	(14739)	(8619)	(7211)	(16932)	(9913)	(9029)
50	(22920)	(14437)	(10830)	(27378)	(14985)	(10679)

6.6 The results of this outline analysis are given in Tables 6.1 and 6.2 opposite for the three main base analyses. The results indicate that soil nitrogen depletion is likely to result in a 40 to 50 per cent increase and a 30 to 35 per cent increase in the incremental financial/UK and world price agricultural disbenefits respectively, for each nitrogen restriction case. The largest impact on the PV of agricultural disbenefits is likely to be at the lower nitrogen restriction cases.

APPENDIX I

LINCOLNSHIRE CATCHMENT AREA
FINANCIAL AGRICULTURAL CASH FLOWS

**Projected Financial Agricultural Gross Margins, Recurrent and Additional Capital Costs - Lincolnshire
No Restriction Case**

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	2000	2001	2002	2003	2004	2005*
Livestock Gross Margins																					
Bairy Cows	200	199	199	199	197	177	177	177	177	177	177	177	177	177	177	199	199	199	199	199	199
Bairy Youngstock	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Autumn Calving Sucklers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Spring Calving Sucklers	21	21	21	21	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Beet Heifer Replacements	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
3/2.5 Year Beef	113	113	112	112	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111
18 Month Beef	45	45	45	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Stores	77	77	77	77	77	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76
Sheep	172	164	155	147	139	130	121	112	103	94	85	76	67	58	49	40	31	22	13	4	0
Less Purchased Bull Feed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Livestock	465	456	446	437	427	418	408	398	388	378	368	358	348	338	328	318	308	298	288	278	268
Arable Crop Gross Margins																					
Wheat-feed	2557	2144	2131	2019	2005	2093	2071	2073	2073	2073	2073	2073	2073	2073	2073	2093	2093	2093	2093	2093	2093
Wheat-milling	908	939	970	1001	1031	1062	1062	1062	1062	1062	1062	1062	1062	1062	1062	1062	1062	1062	1062	1062	1062
Barley - Winter	1042	942	842	742	642	542	542	542	542	542	542	542	542	542	542	542	542	542	542	542	542
Barley - Spr-Ing	819	811	804	796	788	780	780	780	780	780	780	780	780	780	780	780	780	780	780	780	780
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rye	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peas - non irrigated main crop	410	305	360	334	309	284	284	284	284	284	284	284	284	284	284	284	284	284	284	284	284
- Irrigated main crop	508	537	565	594	622	651	651	651	651	651	651	651	651	651	651	651	651	651	651	651	651
Sugar Beet	1800	1700	1760	1740	1721	1701	1701	1701	1701	1701	1701	1701	1701	1701	1701	1701	1701	1701	1701	1701	1701
Beans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Agricultural Crops :																					
Peas, comprising:	623	622	621	620	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619
- vintng peas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- ha vest/raming	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
- turnips/swedes	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34
- Broad Beans	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
- french beans	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
- Other vegetables	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Oilseed Rape	701	745	786	827	868	909	949	989	1029	1069	1109	1149	1189	1229	1269	1309	1349	1389	1429	1469	1509
Other Crops, not Sluck-feed	10	12	14	16	18	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Sub Total Crops	9440	9495	9550	9606	9661	9716	9771	9826	9881	9936	9991	10046	10101	10156	10211	10266	10321	10376	10431	10486	10541
Recurrent Fixed Costs																					
Repairs - Labour	1860	1865	1870	1875	1880	1885	1890	1895	1900	1905	1910	1915	1920	1925	1930	1935	1940	1945	1950	1955	1960
Machinery - Repairs	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764
Fuel	608	607	606	605	604	603	602	601	600	599	598	597	596	595	594	593	592	591	590	589	588
Maintenance & Miscellaneous	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027
Additional Irrigation O & M Costs	3	4	4	5	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Additional Grain Drying Costs	0	4	9	14	19	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Sub Total Recurrent Costs	4230	4230	4231	4231	4231	4232	4232	4232	4232	4232	4232	4232	4232	4232	4232						
Additional Capital Costs																					
Irrigation Equipment	101	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Grain Drying/Storage Equipment	0	86	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87
Sub Total Capital Costs	101	111	112	110	112	113	113	113	113	113	113	113	113	113	113						
ANNUAL CASH FLOW	5254	5790	5814	5807	5925	5967	6012	6057	6102	6147	6192	6237	6282	6327	6372	6417	6462	6507	6552	6597	6642
NET FRESHWATER VALUE	92331																				

Note : Rent has been excluded as the cost is the same in all cases

**Projected Financial Agricultural Gross Margins, Recurrent and Additional Capital Costs - Lincolnshire
10% Restriction Case**

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005*
Livestock Gross Margins																				
Dairy Ewes	201	201	201	201	201	201	201	201	201	201	201	201	201	201	201	201	201	201	201	201
Dairy Youngstock	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
Autumn Calving Sucklers	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Spring Calving Sucklers	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
Beef Heifer Replacements	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
372.5 Year Beef	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117
18 Month Beef	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46
18 Month Beef	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78
Stores	126	126	126	126	126	126	126	126	126	126	126	126	126	126	126	126	126	126	126	126
Sheep	144	144	144	144	144	144	144	144	144	144	144	144	144	144	144	144	144	144	144	144
Less Purchased Bull Feed	-44	-43	-43	-42	-41	-41	-41	-41	-41	-41	-41	-41	-41	-41	-41	-41	-41	-41	-41	-41
Sub Total Livestock	635	627	619	612	605	597														
Multiple-Crop Gross Margins																				
Wheat - Feed	2102	2794	3084	3102	3279	3377	3377	3377	3377	3377	3377	3377	3377	3377	3377	3377	3377	3377	3377	3377
Wheat - Milling	719	744	538	576	574	574	574	574	574	574	574	574	574	574	574	574	574	574	574	574
Barley - Winter	1031	925	810	742	665	479	477	477	477	477	477	477	477	477	477	477	477	477	477	477
Barley - Spring	812	805	798	791	704	717	717	717	717	717	717	717	717	717	717	717	717	717	717	717
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rye	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polsters - Non irrigated main crop	407	383	358	313	307	284	284	284	284	284	284	284	284	284	284	284	284	284	284	284
-Irrigated main crop	503	531	559	588	616	644	644	644	644	644	644	644	644	644	644	644	644	644	644	644
Sugar Beet	1797	1779	1740	1742	1723	1705	1705	1705	1705	1705	1705	1705	1705	1705	1705	1705	1705	1705	1705	1705
Beans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Horticultural Crops :																				
Peas, comprising -	623	622	621	620	620	617	619	619	619	619	619	619	619	619	619	619	619	619	619	619
- vining peas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- harvest/ramming	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
- turnip/swedes	31	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
- Broad beans	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
- French beans	14	12	51	70	87	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107
- Other vegetables																				
Utilised Rape	695	735	775	816	856	896														
Other Crops, not Stock-feed	10	12	14	16	18	18	20													
Sub Total Crops	9356	9404	9408	9408	9356	9384														
Recurrent Fixed Costs																				
Regular Labour	1025	1067	1055	1062	1060	1057	1057	1057	1057	1057	1057	1057	1057	1057	1057	1057	1057	1057	1057	1057
Machinery - Repairs	745	743	741	739	736	736	736	736	736	736	736	736	736	736	736	736	736	736	736	736
-fuel	608	607	605	604	602	601	601	601	601	601	601	601	601	601	601	601	601	601	601	601
Maintenance & Miscellaneous	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027
Additional Irrigation & M Costs	3	4	4	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Additional Grain Drying Costs	5	0	5	9	14	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
Sub Total Recurrent Costs	4747	4747	4747	4746																
Additional Capital Costs																				
Irrigation Equipment	101	25	25	23	25	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grain Drying/Storage Equipment	0	0	77	80	81	81	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Capital Costs	101	25	101	103	105	106	0													
ANNUAL CASH FLOW	5641	5760	5711	5251	5787	5827	5915													
NET PRESENT VALUE																				

99259

Note: Net has been excluded as the cost is the same in all cases

Projected Financial Agricultural Gross Margins, Recurrent and Additional Capital Costs - Lincolnshire
20% Restriction Case

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005*
Livestock Gross Margins																					
Dairy Cows	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
Dairy Youngstock	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Autumn Calving Sucklers	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72
Spring Calving Sucklers	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Beef Heifer Replacements	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121
3/7.5 Year Beef	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47
18 Month Beef	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79
Stewes	180	172	163	155	147	138	130	122	114	106	98	90	82	74	66	58	50	42	34	26	18
Sheep	-80	-77	-78	-77	-76	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75
Less Purchased Bulk Feed																					
Sub Total Livestock	611	604	596	589	582	575	575	575	575	575	575	575	575	575	575	575	575	575	575	575	575
Arable Crop Gross Margins																					
Wheat-Feed	2835	3104	3207	3309	3411	3514	3514	3514	3514	3514	3514	3514	3514	3514	3514	3514	3514	3514	3514	3514	3514
Wheat-Milling	532	367	379	391	403	415	415	415	415	415	415	415	415	415	415	415	415	415	415	415	415
Barley - Winter	1010	904	797	690	583	476	369	262	155	48	-59	-166	-273	-380	-487	-594	-701	-808	-915	-1022	-1129
Barley - Spring	803	797	791	784	778	772	766	760	754	748	742	736	730	724	718	712	706	700	694	688	682
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rye	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Potatoes - Non Irrigated main crop	413	387	364	340	316	292	272	272	272	272	272	272	272	272	272	272	272	272	272	272	272
- Irrigated main crop	492	519	547	575	602	629	656	683	710	737	764	791	818	845	872	899	926	953	980	1007	1034
Sugar Beet	1792	1775	1759	1742	1725	1708	1691	1674	1657	1640	1623	1606	1589	1572	1555	1538	1521	1504	1487	1470	1453
Beans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Horticultural Crops :																					
Peas, comprising:																					
winning peas	623	622	621	620	620	620	620	620	620	620	620	620	620	620	620	620	620	620	620	620	620
harvest/crumbing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
turnip/swedes	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Broad beans	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
French beans	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Other vegetables	13	31	50	68	86	104	122	140	158	176	194	212	230	248	266	284	302	320	338	356	374
Oilseed Rape	681	720	760	799	839	878	918	957	997	1036	1076	1115	1155	1194	1234	1273	1313	1352	1392	1431	1471
Other Crops, not Stock-feed	10	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Sub Total Crops	9247	9283	9330	9376	9423	9470	9517	9564	9611	9658	9705	9752	9800	9847	9894	9941	9988	10035	10082	10129	10176
Recurrent Fixed Costs																					
Regular Labour	1071	1089	1067	1084	1062	1080	1060	1080	1060	1080	1060	1080	1060	1080	1060	1080	1060	1080	1060	1080	1060
Machinery - Repairs	747	745	743	741	740	739	738	738	738	738	738	738	738	738	738	738	738	738	738	738	738
-fuel	610	608	607	605	604	603	603	603	603	603	603	603	603	603	603	603	603	603	603	603	603
Maintenance & Miscellaneous	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027
Additional Irrigation O & M Costs	5	4	4	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Additional Grain Drying Costs	9	5	0	5	9	11	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Sub Total Recurrent Costs	4218	4248	4240	4240	4248	4248	4248	4248	4248	4248	4248	4248	4248	4248	4248	4248	4248	4248	4248	4248	4248
Additional Capital Costs																					
Irrigation Equipment	101	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
Grain Drying/Storage Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Capital Costs	101	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
AMHUR ECUH (10M)	5509	5614	5653	5620	5655	5694	5741	5797	5854	5911	5968	6025	6082	6139	6196	6253	6310	6367	6424	6481	6538
NET PRESENT VALUE	80219																				

*CI PRESENT VALUE
 Note: Rent has been excluded as the cost is the same in all cases

Projected Financial Agricultural Gross Margins, Recurrent and Additional Capital Costs - Lincolnshire
30% Restriction Case £'000

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	
Livestock Gross Margins																							
Dairy Cows	204	204	204	204	204	204	204	204	204	204	204	204	204	204	204	204	204	204	204	204	204	204	204
Autumn Calving Sucklers	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Spring Calving Sucklers	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
Beef Heifer Replacements	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
372.5 Year Beef	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125
10 Month Beef	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49
Stores	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
Sheep	184	175	167	150	141	141	141	141	141	141	141	141	141	141	141	141	141	141	141	141	141	141	141
Less Purchased Hk Feed	-128	-126	-125	-123	-121	-120	-120	-120	-120	-120	-120	-120	-120	-120	-120	-120	-120	-120	-120	-120	-120	-120	-120
5th Total Livestock	576	589	563	556	549	547	547	547	547	547	547	547	547	547	547	547	547	547	547	547	547	547	547
Arable Crop Gross Margins																							
Wheat Feed	3279	3161	3523	3645	3767	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800
Wheat - Milling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barley - Winter	906	810	755	639	524	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
Barley - Spring	790	785	780	775	769	764	764	764	764	764	764	764	764	764	764	764	764	764	764	764	764	764	764
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rye	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Potatoes - Non-irrigated main crop	414	350	366	343	319	295	275	275	275	275	275	275	275	275	275	275	275	275	275	275	275	275	275
Potatoes - Irrigated main crop	479	505	532	559	586	613	613	613	613	613	613	613	613	613	613	613	613	613	613	613	613	613	613
Sugar Beet	1785	1710	1756	1741	1727	1712	1712	1712	1712	1712	1712	1712	1712	1712	1712	1712	1712	1712	1712	1712	1712	1712	1712
Beans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non-Agricultural Crops :																							
Peas, on-growing -	623	622	621	620	619	617	617	617	617	617	617	617	617	617	617	617	617	617	617	617	617	617	617
Young peas	0	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98
Harvest/cleaning	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Harvest/sweeds	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
Broad beans	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
French beans	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Other vegetables	11	30	48	45	81	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101
Oilseed Rape	654	594	632	670	700	746	746	746	746	746	746	746	746	746	746	746	746	746	746	746	746	746	746
Other Crops, not Sinter-feed	9	11	13	15	16	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Sub Total Crops	9073	9119	9165	9211	9257	9304	9304	9304	9304	9304	9304	9304	9304	9304	9304	9304	9304	9304	9304	9304	9304	9304	9304
Recurrent Fixed Costs																							
Regular Labour	1873	1873	1871	1869	1867	1865	1865	1865	1865	1865	1865	1865	1865	1865	1865	1865	1865	1865	1865	1865	1865	1865	1865
Machinery - Repairs	748	748	746	745	743	742	742	742	742	742	742	742	742	742	742	742	742	742	742	742	742	742	742
Fuel	611	611	610	608	607	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606
Maintenance & Miscellaneous Costs	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027
Additional Irrigation D & M Costs	3	4	4	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Additional Grain Drying Costs	-15	-12	-7	-3	2	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Sub Total Recurrent Costs	4247	4251	4251	4251	4251	4251	4251	4251	4251	4251	4251	4251	4251	4251	4251	4251	4251	4251	4251	4251	4251	4251	4251
Additional Capital Costs																							
Irrigation Equipment	101	75	25	23	25	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grain Drying/Storage Equipment	0	0	0	0	29	76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Capital Costs	101	75	25	23	54	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AMRIN (ASIN FLUX)	5101	5411	5462	5493	5502	5494	5505	5505	5505	5505	5505	5505	5505	5505	5505	5505	5505	5505	5505	5505	5505	5505	5505
NET PRESENT VALUE																							

Note: Rent has been excluded as the cost is the same in all cases

Projected Financial Agricultural Gross Margins, Recurrent and Additional Capital Costs - Lincolnshire
40% Restriction Case £'000

	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	2000	2001	2002	2003	2004	2005*
Livestock Gross Margins																					
Dairy Cows	705	205	205	205	205	205	205	205	205	205	205	205	205	205	205	205	205	205	205	205	205
Dairy Youngstock	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28
Autumn Calving Sucklers	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Spring Calving Sucklers	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
Beef Heifer Replacements	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
3/2.5 Year Beef	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128
18 Month Beef	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Stores	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81
Sheep	188	179	170	162	151	144	144	144	144	144	144	144	144	144	144	144	144	144	144	144	144
Less Purchased Bulk Feed	-171	-169	-167	-164	-162	-160	-160	-160	-160	-160	-160	-160	-160	-160	-160	-160	-160	-160	-160	-160	-160
Sub Total Livestock	546	540	533	527	521	514	514	514	514	514	514	514	514	514	514	514	514	514	514	514	514
Arable Crop Gross Margins																					
Wheat-Feed	3179	3317	3456*	3595	3734	3873	4013	4153	4293	4433	4573	4713	4853	4993	5133	5273	5413	5553	5693	5833	5973
Wheat-Milling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barley - Winter	949	807	684	551	419	286	206	206	206	206	206	206	206	206	206	206	206	206	206	206	206
Barley - Spring	767	763	760	756	752	748	744	740	736	732	728	724	720	716	712	708	704	700	696	692	688
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rye	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Potatoes - Non-irrigated main crop	414	391	367	344	321	298	278	278	278	278	278	278	278	278	278	278	278	278	278	278	278
- Irrigated main crop	467	493	519	546	572	598	624	650	676	702	728	754	780	806	832	858	884	910	936	962	988
Sugar Beet	1767	1755	1744	1732	1721	1710	1700	1690	1680	1670	1660	1650	1640	1630	1620	1610	1600	1590	1580	1570	1560
Beans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Horticultural Crops																					
Peas, comprising -	623	622	621	620	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619
vining peas	0	147	273	341	349	387	387	387	387	387	387	387	387	387	387	387	387	387	387	387	387
harvest/canning	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
lunaris/seedes	30	30	30	30	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29
Broad beans	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
French beans	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Other vegetables	17	27	43	62	79	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95
Other Crops, not Stock-feed	619	526	433	433	433	433	433	433	433	433	433	433	433	433	433	433	433	433	433	433	433
Sub Total Crops	8044	8901	8954	9004	9054	9104	9154	9204	9254	9304	9354	9404	9454	9504	9554	9604	9654	9704	9754	9804	9854
Recurrent Fixed Costs																					
Regular Labour	1875	1876	1876	1876	1876	1876	1876	1876	1876	1876	1876	1876	1876	1876	1876	1876	1876	1876	1876	1876	1876
Machinery - Repairs	719	750	751	750	749	748	748	748	748	748	748	748	748	748	748	748	748	748	748	748	748
- Fuel	812	813	813	812	812	811	811	811	811	811	811	811	811	811	811	811	811	811	811	811	811
Maintenance & Miscellaneous Costs	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027
Additional Irrigation & H Costs	3	4	4	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Additional Capital Costs																					
Irrigation Equipment	101	25	25	23	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Grain Drying/Storage Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Capital Costs	101	25	25	23	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
ANNUAL CASH FLOW	5945	5163	5203	5245	5286	5329	5370	5411	5452	5493	5534	5575	5616	5657	5698	5739	5780	5821	5862	5903	5944
NET PRESENT VALUE																					

Note: Present has been included as the cost is the same in all cases

Projected Financial Agricultural Gross Margins, Recurrent and Additional Capital Costs - Lincolnshire
50% Restriction Case £'000

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005*
Livestock Gross Margins																					
Dairy Cows	207	207	207	207	207	207	207	207	207	207	207	207	207	207	207	207	207	207	207	207	207
Dairy Youngstock	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28
Non-dairy Cows	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Spring Calving Sucklers	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
Spring Calving Sucklers	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Beef Heifer Replacements	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132
18 Month Heifer	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51
Stores	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
Sheep	191	183	174	165	156	147	137	127	117	107	97	87	77	67	57	47	37	27	17	7	0
Less Purchased Bulk Feed	-216	-213	-210	-207	-205	-202	-200	-197	-194	-191	-188	-185	-182	-179	-176	-173	-170	-167	-164	-161	-158
Sub Total Livestock	514	509	502	497	491	485	480	475	470	465	460	455	450	445	440	435	430	425	420	415	410
Arable Crop Gross Margins																					
Wheat-Feed	3025	3108	3352	3515	3679	3843	3994	4144	4294	4444	4594	4744	4894	5044	5194	5344	5494	5644	5794	5944	6094
Wheat-Milling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barley - Winter	895	718	581	424	267	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107
Barley - Spring	731	770	778	776	774	773	771	773	771	773	771	773	771	773	771	773	771	773	771	773	771
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rye	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Arable - Non-irrigated main crop	414	392	369	347	324	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302
Total Arable - Irrigated main crop	454	489	506	514	557	582	582	582	582	582	582	582	582	582	582	582	582	582	582	582	582
Sugar Beet	1715	1720	1721	1714	1707	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Beans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Crops	623	622	621	620	619	618	617	616	615	614	613	612	611	610	609	608	607	606	605	604	603
Peas, comprising:																					
winter peas	0	280	535	573	612	650	650	650	650	650	650	650	650	650	650	650	650	650	650	650	650
harvest/cumming	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
turnips/swedes	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
Broad beans	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
French beans	11	27	42	57	73	88	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Other vegetables																					
Oilseed Rape	574	573	572	571	570	569	568	567	566	565	564	563	562	561	560	559	558	557	556	555	554
Other Crops, not Stock-feed	0	10	11	13	14	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
Sub Total Crops	8506	8590	8674	8759	8844	8929	9014	9100	9185	9270	9355	9440	9525	9610	9695	9780	9865	9950	10035	10120	10205
Recurrent Fixed Costs																					
Regular Labour	1977	1800	1804	1883	1883	1883	1883	1883	1883	1883	1883	1883	1883	1883	1883	1883	1883	1883	1883	1883	1883
Machinery - Repairs	751	754	757	756	756	756	756	756	756	756	756	756	756	756	756	756	756	756	756	756	756
Fuel	613	616	618	618	617	617	617	617	617	617	617	617	617	617	617	617	617	617	617	617	617
Maintenance & Miscellaneous Costs	1077	1077	1077	1077	1077	1077	1077	1077	1077	1077	1077	1077	1077	1077	1077	1077	1077	1077	1077	1077	1077
Additional Irrigation O & M Costs	3	4	4	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Additional Grain Drying Costs	-31	-25	-19	-15	-11	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6
Sub Total Recurrent Costs	4246	4255	4272	4274	4278	4282	4287	4292	4297	4302	4307	4312	4317	4322	4327	4332	4337	4342	4347	4352	4357
Additional Capital Costs																					
Irrigation Equipment	101	25	25	23	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Grain Drying/Storage Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Capital Costs	101	25	25	23	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Annual Cash Flow	4680	4819	4880	4978	4971	5017	5042	5047	5047	5047	5047	5047	5047	5047	5047	5047	5047	5047	5047	5047	5047
NET FINISHED VALUE																					

* Interferent has been excluded as the cost is the same in all cases

APPENDIX II

CAMBRIDGESHIRE CATCHMENT AREA
FINANCIAL AGRICULTURAL CASH FLOWS

Projected Financial Agricultural Gross Margins, Recurrent and Additional Capital Costs - Cambridgeshire
No Restriction Case - £'000

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005A	
Livestock Gross Margins																						
Dairy Cows	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94
Dairy Youngstock	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Autumn Calving Sucklers	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Spring Calving Sucklers	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Beet Heifer Replacements	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3/2.5 Year Beef	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
18 Month Beef	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Stores	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sheep	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46
Less Purchased Bulk Feed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Livestock	277	277	277	277	277	277	277	277	277	277	277	277	277	277	277	277	277	277	277	277	277	277
Arable Crop Gross Margins																						
Wheat Feed	3305	3302	3300	3417	3455	3492	3492	3492	3492	3492	3492	3492	3492	3492	3492	3492	3492	3492	3492	3492	3492	3492
Wheat Milling	1731	1731	1710	1790	1809	1829	1829	1829	1829	1829	1829	1829	1829	1829	1829	1829	1829	1829	1829	1829	1829	1829
Barley - Winter	2074	1967	1860	1752	1645	1538	1538	1538	1538	1538	1538	1538	1538	1538	1538	1538	1538	1538	1538	1538	1538	1538
Barley - Spring	305	289	273	257	241	225	225	225	225	225	225	225	225	225	225	225	225	225	225	225	225	225
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Potatoes - Non irrigated main crop	48	45	43	40	37	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34
- Irrigated main crop	58	61	64	66	69	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72
Sugar Beet	744	736	728	719	711	703	703	703	703	703	703	703	703	703	703	703	703	703	703	703	703	703
Beans	272	260	248	236	224	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212
 horticultural Crops:																						
Peas, comprising -	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
winning peas	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
harvest/canning peas	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
French beans	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70
lettuce	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196
Orchard and small fruit	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134
Greenhouse crops	19	23	27	31	35	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Other vegetables	628	744	859	974	1089	1204	1204	1204	1204	1204	1204	1204	1204	1204	1204	1204	1204	1204	1204	1204	1204	1204
Other Crops, not Stock feed	23	28	33	38	42	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47
Sub Total Crops	9727	9764	9802	9839	9877	9915	9915	9915	9915	9915	9915	9915	9915	9915	9915	9915	9915	9915	9915	9915	9915	9915
Recurrent Fixed Costs																						
Regular Labour	1330	1330	1329	1328	1327	1327	1327	1327	1327	1327	1327	1327	1327	1327	1327	1327	1327	1327	1327	1327	1327	1327
Machinery - Repairs	628	628	627	626	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625
Fuel	513	512	512	511	511	511	511	511	511	511	511	511	511	511	511	511	511	511	511	511	511	511
Maintenance & Miscellaneous	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037
Additional Irrigation O & R Costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Additional Grain Drying Costs	0	5	10	15	20	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Sub Total Recurrent Costs	3500	3512	3515	3518	3522	3525	3525	3525	3525	3525	3525	3525	3525	3525	3525	3525	3525	3525	3525	3525	3525	3525
Additional Capital Costs																						
Irrigation Equipment	0	4	2	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grain Drying/Storage Equipment	0	85	83	82	81	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Capital Costs	0	86	85	85	85	84	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANNUAL CASH FLOW	6495	6413	6479	6513	6540	6503	6667	6667	6667	6667	6667	6667	6667	6667	6667	6667	6667	6667	6667	6667	6667	6667
NET PRESENT VALUE																						101678

Notes: Rent has been excluded as the cost is the same in all cases

Projected Financial Agricultural Gross Margins, Recurrent and Additional Capital Costs - Cambridgeshire
10% Restriction Case - £'000

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Livestock Gross Margins																				
Dairy Cows	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94
Dairy Youngstock	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Autumn Calving Sucklers	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Spring Calving Sucklers	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Beef Heifer Replacements	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1/2.5 Year Beef	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101
10 Month Beef	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Stores	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sheep	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46
Less Purchased Bulk Feed	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11
Sub Total Livestock	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270
Arable Crop Gross Margins																				
Wheat Feed	3663	3951	3976	4040	4128	4128	4128	4128	4128	4128	4128	4128	4128	4128	4128	4128	4128	4128	4128	4128
Wheat-Milling	1278	1050	1062	1074	1097	1097	1097	1097	1097	1097	1097	1097	1097	1097	1097	1097	1097	1097	1097	1097
Barley - Winter	2051	1944	1830	1731	1624	1518	1518	1518	1518	1518	1518	1518	1518	1518	1518	1518	1518	1518	1518	1518
Barley - Spring	301	286	270	255	239	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Potatoes- Non irrigated main crop	48	46	43	40	37	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
- Irrigated main crop	57	60	63	66	68	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71
Sugar Beet	742	735	727	719	712	704	704	704	704	704	704	704	704	704	704	704	704	704	704	704
Beans	272	260	240	236	224	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212
Other Horticultural Crops:																				
Peas,comprising-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
vining peas	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
harvest/canning peas	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
french beans	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69
Lettuce	193	193	193	193	193	193	193	193	193	193	193	193	193	193	193	193	193	193	193	193
Orchard and small fruit	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131
Greenhouse crops	10	22	26	30	34	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39
Other vegetables																				
Other Crops, not Short-feed	619	733	846	960	1073	1187	1187	1187	1187	1187	1187	1187	1187	1187	1187	1187	1187	1187	1187	1187
Sub Total Crops	9603	9624	9680	9697	9733	9769	9769	9769	9769	9769	9769	9769	9769	9769	9769	9769	9769	9769	9769	9769
Recurrent Fixed Costs																				
Regular Labour	1331	1330	1329	1329	1328	1327	1327	1327	1327	1327	1327	1327	1327	1327	1327	1327	1327	1327	1327	1327
Machinery Repairs	628	628	627	626	626	626	626	626	626	626	626	626	626	626	626	626	626	626	626	626
Fuel	513	513	512	512	511	511	511	511	511	511	511	511	511	511	511	511	511	511	511	511
Maintenance & Miscellaneous	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037
Additional Irrigation D & H Costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Additional Grain Drying Costs	5	0	5	10	15	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
Sub Total Recurrent Costs	3504	3507	3511	3514	3517	3521	3521	3521	3521	3521	3521	3521	3521	3521	3521	3521	3521	3521	3521	3521
Additional Capital Costs																				
Irrigation Equipment	0	4	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Grain Drying/Storage Equipment	0	2	81	80	80	79	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Capital Costs	0	6	83	83	83	82	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANNUAL CASH FLOW	6369	6381	6337	6369	6402	6436	6510	6510	6510	6510	6510	6510	6510	6510	6510	6510	6510	6510	6510	6510
NET PRESENT VALUE																				

997003

Note: front has been excluded as the cost is the same in all cases

Projected Financial Agricultural Gross Margins, Recurrent and Additional Capital Costs - Cambridgeshire
20% Restriction Case - £'000

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005*	
Livestock Gross Margins																						
Dairy Cows	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95
Dairy Youngstock	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Autumn Calving Sucklers	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Spring Calving Sucklers	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Beef Heifer Replacements	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
372.5 Year Beef	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103
18 Month Heif	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Stewes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sheep	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47
Less Purchased Bulk Feed	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24
Sub Total Livestock	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261
Arable Crop Gross Margins																						
Wheat-Feed	3057	4144	4191	4237	4283	4330	4376	4422	4468	4514	4560	4606	4652	4698	4744	4790	4836	4882	4928	4974	5020	
Wheat-Milling	1025	777	786	795	803	812	821	829	837	846	854	862	870	878	886	894	902	910	918	926	934	942
Barley - Minter	2022	1916	1810	1704	1599	1493	1387	1281	1175	1069	963	857	751	645	539	433	327	221	115	9	-7	-15
Barley - Spring	297	282	267	252	237	222	207	192	177	162	147	132	117	102	87	72	57	42	27	12	-3	-11
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Potatoes- Non irrigated main crop	49	46	43	40	30	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
Irrigated main crop	56	58	61	64	67	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69
Sugar Beet	740	733	726	719	712	705	705	705	705	705	705	705	705	705	705	705	705	705	705	705	705	705
Beans	272	260	248	236	224	212	202	192	182	172	162	152	142	132	122	112	102	92	82	72	62	52
Intercultural Crops:																						
Peas, comprising-																						
vining peas	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
harvest/canning peas	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
french beans	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67
lettuce	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
orchard and small fruit	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127
greenhouse crops	18	22	26	29	33	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37
Other vegetables																						
Sub Total Crops	9463	9402	9347	9292	9237	9182	9127	9072	9017	8962	8907	8852	8797	8742	8687	8632	8577	8522	8467	8412	8357	8302
Other Crops, not Stock-feed	607	718	829	940	1051	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162
Sub Total Recurrent Costs	1331	1330	1329	1329	1329	1329	1329	1329	1329	1329	1329	1329	1329	1329	1329	1329	1329	1329	1329	1329	1329	1329
Recurrent Fixed Costs	628	628	627	627	627	626	626	626	626	626	626	626	626	626	626	626	626	626	626	626	626	626
Regular Labour	513	513	512	512	512	511	511	511	511	511	511	511	511	511	511	511	511	511	511	511	511	511
Machinery - Repairs	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037
Fuel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Maintenance & Miscellaneous	-10	-5	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4
Additional Irrigation D & H Costs																						
Additional Grain Drying Costs																						
Sub Total Recurrent Costs	3499	3503	3506	3509	3513	3516	3516	3516	3516	3516	3516	3516	3516	3516	3516	3516	3516	3516	3516	3516	3516	3516
Additional Capital Costs																						
Irrigation Equipment	0	4	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Grain Drying/Storage Equipment	0	0	0	69	77	76	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Sub Total Capital Costs	0	4	2	72	81	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Annual Cash Flow	6225	6237	6271	6212	6254	6287	6347	6407	6467	6527	6587	6647	6707	6767	6827	6887	6947	7007	7067	7127	7187	7247
NET PRESENT VALUE																						

Note: Net Present Value has been excluded as the cost is the same in all cases

Projected Financial Agricultural Gross Margins, Recurrent and Additional Capital Costs - Cambridgeshire
30% Restriction Case - £'000

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Livestock Gross Margins																				
Bairy Cows	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95
Bairy Youngstock	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Autumn Calving Sucklers	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Spring Calving Sucklers	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Beef Heifer Replacements	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
372.5 Year Beef	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
18 Month Beef	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Stores	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sheep	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47
Less Purchased Bulk Feed	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36
Sub Total Livestock	251	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250
Arable Crop Gross Margins																				
Wheat-Feed	4737	4791	4855	4870	4922	5006	5006	5006	5006	5006	5006	5006	5006	5006	5006	5006	5006	5006	5006	5006
Wheat-Milling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barley - Winter	1983	1879	1774	1670	1565	1461	1461	1461	1461	1461	1461	1461	1461	1461	1461	1461	1461	1461	1461	1461
Barley - Spring	297	277	262	248	233	217	217	217	217	217	217	217	217	217	217	217	217	217	217	217
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Potatoes- Non irrigated main crop	49	46	43	41	39	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
- Irrigated main crop	34	37	39	42	45	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47
Sugar Beet	736	730	724	718	712	706	706	706	706	706	706	706	706	706	706	706	706	706	706	706
Beans	277	260	248	236	224	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212
Horticultural Crops																				
Peas,comprising	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
vining peas	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
harvest/canning peas	13	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
french beans	65	65	65	65	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64
lettuce	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183
orchard and small fruit	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122
greenhouse crops	17	21	25	29	32	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
Other vegetables	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oilseed Rape	583	690	797	903	1010	1117	1117	1117	1117	1117	1117	1117	1117	1117	1117	1117	1117	1117	1117	1117
Other Crops, not Stock-feed	21	26	30	34	38	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43
Sub Total Crops	9232	9284	9295	9326	9357	9389	9389	9389	9389	9389	9389	9389	9389	9389	9389	9389	9389	9389	9389	9389
Recurrent Fixed Costs																				
Regular Labour	1331	1311	1310	1329	1329	1328	1328	1328	1328	1328	1328	1328	1328	1328	1328	1328	1328	1328	1328	1328
Machinery - Repairs	629	628	628	627	627	627	627	627	627	627	627	627	627	627	627	627	627	627	627	627
- Fuel	513	513	513	512	512	512	512	512	512	512	512	512	512	512	512	512	512	512	512	512
Maintenance & Miscellaneous	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037
Additional Irrigation B & R Costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Additional Grain Drying Costs	-16	-12	-7	-3	2	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Sub Total Recurrent Costs	3493	3497	3506	3503	3506	3510	3510	3510	3510	3510	3510	3510	3510	3510	3510	3510	3510	3510	3510	3510
Additional Capital Costs																				
Irrigation Equipment	0	4	2	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grain Drying/Storage Equipment	0	0	0	0	30	104	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Capital Costs	0	4	2	4	34	107	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANNUAL CASH FLOW	5990	6014	6014	6089	6067	6021	6129	6129	6129	6129	6129	6129	6129	6129	6129	6129	6129	6129	6129	6129
NET FRESH VALUE																				
93/27																				

Note: Rent has been excluded as the cost is the same in all cases

Projected Financial Agricultural Gross Margins, Recurrent and Additional Capital Costs - Cambridgeshire
40% Restriction Case - £'000

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004*		
Livestock Gross Margins																						
Batty Cows	96	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	96	
Bairy Youngstock	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	
Autumn Calving Sucklers	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
Spring Calving Sucklers	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
Beef Heifer Replacements	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
3/2.5 Year Beef	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	
18 Month Beef	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	
Stores	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sheep	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	
Less Purchased Bulk Feed	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	
Sub Total Livestock	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	
Arable Crop Total Gross Margins																						
Wheat	4572	4651	4710	4769	4828	4887	4946	4987	4987	4987	4987	4987	4987	4987	4987	4987	4987	4987	4987	4987	4987	
Wheat-Thrilling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Barley - Winter	1918	1810	1702	1594	1486	1377	1269	1161	1053	945	837	729	621	513	405	297	189	81	-27	-135	1377	
Barley - Spring	202	269	255	241	227	214	200	187	174	161	148	135	122	109	96	83	70	57	44	31	214	
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Potatoes - Non irrigated main crop	49	46	44	41	39	36	34	32	30	28	26	24	22	20	18	16	14	12	10	8	36	
- Irrigated main crop	53	55	58	60	63	65	67	69	71	73	75	77	79	81	83	85	87	89	91	93	76	
Sugar Beet	778	774	719	714	710	705	700	695	690	685	680	675	670	665	660	655	650	645	640	635	65	
Beans	272	260	240	236	224	212	200	188	176	164	152	140	128	116	104	92	80	68	56	44	705	
Horticultural Crops:																						
Peas, comprising -	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
vining peas	105	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	
harvest/canning peas	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	
French beans	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	
Lettuce	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	
Orchard and small fruit	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	
Greenhouse crops	16	20	25	27	31	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	
Other vegetables																						
Blended Rape	552	570	672	773	874	975	975	975	975	975	975	975	975	975	975	975	975	975	975	975	975	
Other Crops, not Stock-feed	20	24	28	32	36	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	
Sub total Crops	8954	8983	9012	9041	9070	9100	9100	9100	9100	9100	9100	9100	9100	9100	9100	9100	9100	9100	9100	9100	9100	
Recurrent Fixed Costs																						
Regular Labour	1331	1332	1332	1332	1331	1331	1331	1331	1331	1331	1331	1331	1331	1331	1331	1331	1331	1331	1331	1331	1331	
Machinery - Repairs	629	630	629	629	629	629	628	628	628	628	628	628	628	628	628	628	628	628	628	628	628	
- Fuel	513	514	514	514	513	513	513	513	513	513	513	513	513	513	513	513	513	513	513	513	513	
Maintenance & Miscellaneous	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	
Additional Irrigation O & R Costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Additional Grain Drying Costs	-25	-20	-16	-12	-7	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	
Sub total Recurrent Costs	3405	3493	3495	3499	3503	3506	3506	3506	3506	3506	3506	3506	3506	3506	3506	3506	3506	3506	3506	3506	3506	
Additional Capital Costs																						
Irrigation Equipment	0	4	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
Grain Drying/Storage Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sub total Capital Costs	0	4	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
ANNUAL CASH FLOW	5715	5733	5761	5785	5810	5816	5819	5819	5819	5819	5819	5819	5819	5819	5819	5819	5819	5819	5819	5819	5819	
NET PRESENT VALUE																						89412

Notes: Kent has been excluded as the cost is the same in all cases

Projected Financial Agricultural Gross Margins, Recurrent and Additional Capital Costs - Cambridgeshire
50% Restriction Case - £'000

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	
Livestock Gross Margins																					
Dairy Cows	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96
Dairy Youngstock	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
Autumn Calving Sucklers	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Spring Calving Sucklers	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Beef Heifer Replacements	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3/2.5 Year Beef	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109
18 Month Beef	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Stores	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sheep	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49
Less Purchased Bulk Feed	-58	-58	-58	-58	-58	-58	-58	-58	-58	-58	-58	-58	-58	-58	-58	-58	-58	-58	-58	-58	-58
Sub Total Livestock	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240
Arable Crop Total Gross Margins																					
Wheat - Feed	4371	4476	4502	4687	4722	4897	4897	4897	4897	4897	4897	4897	4897	4897	4897	4897	4897	4897	4897	4897	4897
Wheat - Milling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barley - Winter	1021	1676	1531	1386	1241	1076	1076	1076	1076	1076	1076	1076	1076	1076	1076	1076	1076	1076	1076	1076	1076
Barley - Spring	269	255	243	230	218	205	205	205	205	205	205	205	205	205	205	205	205	205	205	205	205
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Potatoes - Non irrigated main crop	49	46	44	41	39	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37
Potatoes - irrigated main crop	51	54	58	59	61	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63
Sugar Beet	715	712	709	706	704	701	701	701	701	701	701	701	701	701	701	701	701	701	701	701	701
Beans	277	260	248	236	224	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212
Oilseed Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Crops, not Stock feed	165	209	473	575	676	770	770	770	770	770	770	770	770	770	770	770	770	770	770	770	770
Sub Total Crops	8549	8587	8635	8677	8718	8759	8759	8759	8759	8759	8759	8759	8759	8759	8759	8759	8759	8759	8759	8759	8759
Recurrent Fixed Costs																					
Regular Labour	1331	1335	1338	1339	1341	1343	1343	1343	1343	1343	1343	1343	1343	1343	1343	1343	1343	1343	1343	1343	1343
Machinery - Repairs	629	632	634	635	637	638	638	638	638	638	638	638	638	638	638	638	638	638	638	638	638
Fuel	514	516	518	519	520	521	521	521	521	521	521	521	521	521	521	521	521	521	521	521	521
Maintenance & Miscellaneous	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037
Additional Irrigation D & H Costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Additional Grain Drying Costs	-37	-32	-28	-24	-16	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11
Sub Total Recurrent Costs	3473	3487	3500	3509	3519	3527	3527	3527	3527	3527	3527	3527	3527	3527	3527	3527	3527	3527	3527	3527	3527
Additional Capital Costs																					
Irrigation Equipment	0	4	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Grain Drying/Storage Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Capital Costs	0	4	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
ANNUAL CASH FLOW	5306	5337	5373	5403	5435	5467	5471	5471	5471	5471	5471	5471	5471	5471	5471	5471	5471	5471	5471	5471	5471
NET FRESHET VALUE																					

Note: Rent has been excluded as the cost is the same in all cases

APPENDIX III

LINCOLNSHIRE CATCHMENT AREA
UNITED KINGDOM ECONOMIC AGRICULTURAL CASH FLOWS

Projected UK Economic Agricultural Gross Margins, Recurrent and Additional Capital Costs - Lincolnshire
10% Restriction Case

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	
Livestock Gross Margins																					
Dairy Cows	201	201	201	201	201	201	201	201	201	201	201	201	201	201	201	201	201	201	201	201	201
Bovine Youngstock	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
Autumn Calving Sucklers	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Spring Calving Sucklers	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Beef Heifer Replacements	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
3/2.5 Year Beef	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117
18 Month Beef	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46
Stores	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78
Sheep	114	109	103	98	93	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87
Less Purchased Rulk Feed	-44	-43	-43	-42	-42	-41	-41	-41	-41	-41	-41	-41	-41	-41	-41	-41	-41	-41	-41	-41	-41
Sub Total Livestock	560	555	550	546	541	536	536	536	536	536	536	536	536	536	536	536	536	536	536	536	536
Arable Crop Gross Margins																					
Wheat-Feed	1935	2001	2209	2279	2349	2419	2419	2419	2419	2419	2419	2419	2419	2419	2419	2419	2419	2419	2419	2419	2419
Wheat-Killing	519	536	482	415	429	442	442	442	442	442	442	442	442	442	442	442	442	442	442	442	442
Barley - Winter	731	656	580	505	429	354	354	354	354	354	354	354	354	354	354	354	354	354	354	354	354
Barley - Spring	585	580	575	570	565	560	560	560	560	560	560	560	560	560	560	560	560	560	560	560	560
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rye	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Potatoes -Non irrigated main crop	407	383	358	333	309	284	284	284	284	284	284	284	284	284	284	284	284	284	284	284	284
-Irrigated main crop	503	531	559	588	616	644	644	644	644	644	644	644	644	644	644	644	644	644	644	644	644
Sugar Beet	1797	1779	1760	1742	1723	1705	1705	1705	1705	1705	1705	1705	1705	1705	1705	1705	1705	1705	1705	1705	1705
Beans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Horticultural Crops :																					
Peas,comprising-	623	622	621	620	620	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619
Vining Peas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Harvest/Canming	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Turnips/Swedes	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
Broad beans	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
French beans	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Other vegetables	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Oilseed Rape	488	516	544	573	601	629	629	629	629	629	629	629	629	629	629	629	629	629	629	629	629
Other Crops, not Stock-feed	10	12	14	16	18	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Sub Total Crops	7655	7691	7717	7754	7790	7826	7826	7826	7826	7826	7826	7826	7826	7826	7826	7826	7826	7826	7826	7826	7826
Recurrent Fixed Costs																					
Regular Labour	1849	1867	1865	1862	1860	1857	1857	1857	1857	1857	1857	1857	1857	1857	1857	1857	1857	1857	1857	1857	1857
Machinery -Repairs	745	743	741	739	738	736	736	736	736	736	736	736	736	736	736	736	736	736	736	736	736
Maintenance & Miscellaneous	609	607	605	604	602	601	601	601	601	601	601	601	601	601	601	601	601	601	601	601	601
Additional Irrigation O & M Costs	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027
Additional Grain Drying Costs	3	4	4	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Sub Total Recurrent Costs	4247	4247	4247	4246	4246	4246	4246	4246	4246	4246	4246	4246	4246	4246	4246	4246	4246	4246	4246	4246	4246
Additional Capital Costs																					
Irrigation Equipment	101	25	25	23	25	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grain Drying/Storage Equipment	0	0	77	80	80	81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub total Capital Costs	101	25	101	103	105	106	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANNUAL CASH FLOW	3867	3974	3919	3930	3979	4010	4116	4116	4116	4116	4116	4116	4116	4116	4116	4116	4116	4116	4116	4116	4116
NET PRESENT VALUE																					

Note:Foot has been excluded as the cost is the same in all cases

Projected UK Economic Agricultural Gross Margins, Recurrent and Additional Capital Costs - Lincolnshire
20% Restriction Case

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	
Livestock Gross Margins																					
Bairy Cows	202	202	202	202	202	262	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202
Bairy Youngstock	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Autumn Calving Sucklers	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Spring Calving Sucklers	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Beef Heifer Replacements	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121
3/2.5 Year Beef	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47
18 Month Beef	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79
Stores	121	116	116	165	97	92	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93
Sheep	-80	-79	-78	-77	-76	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75
Less Purchased Bulk Feed																					
Sub Total Livestock	546	535	531	526	522	517	517	517	517	517	517	517	517	517	517	517	517	517	517	517	517
Arable Crop Gross Margins																					
Wheat-Feed	2035	2229	2302	2375	2449	2522	2522	2522	2522	2522	2522	2522	2522	2522	2522	2522	2522	2522	2522	2522	2522
Wheat-Milling	385	265	274	283	292	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300
Barley - Winter	718	642	566	490	414	338	338	338	338	338	338	338	338	338	338	338	338	338	338	338	338
Barley - Spring	580	576	571	567	562	558	558	558	558	558	558	558	558	558	558	558	558	558	558	558	558
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rye	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Potatoes - Non irrigated main crop	413	387	364	340	316	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292
- Irrigated main crop	492	519	547	575	602	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630
Sugar Beet	1792	1775	1759	1742	1725	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709
Beans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Horticultural Crops :																					
Peas, comprising -	623	622	621	620	620	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619
vining peas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
harvest/canning	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Turnip/Swedes	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
Broad beans	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
French beans	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Other vegetables	13	31	50	68	86	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
Oilseed Rape	479	507	535	563	591	618	618	618	618	618	618	618	618	618	618	618	618	618	618	618	618
Other Crops, not Stock-feed	10	11	13	15	17	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
Sub Total Crops	7583	7610	7645	7681	7717	7752	7752	7752	7752	7752	7752	7752	7752	7752	7752	7752	7752	7752	7752	7752	7752
Recurrent Fixed Costs																					
Regular Labour	1871	1869	1867	1864	1862	1860	1860	1860	1860	1860	1860	1860	1860	1860	1860	1860	1860	1860	1860	1860	1860
Machinery - Repairs	747	745	743	741	740	738	738	738	738	738	738	738	738	738	738	738	738	738	738	738	738
- Fuel	610	608	607	605	604	603	603	603	603	603	603	603	603	603	603	603	603	603	603	603	603
Maintenance & Miscellaneous	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027
Additional Irrigation O & M Costs	3	4	4	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Additional Grain Drying Costs	-9	-5	0	5	9	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Sub Total Recurrent Costs	4248	4248	4248	4248	4248	4248	4248	4248	4248	4248	4248	4248	4248	4248	4248	4248	4248	4248	4248	4248	4248
Additional Capital Costs																					
Irrigation Equipment	101	25	25	23	25	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grain Drying/Storage Equipment	0	0	0	76	78	79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Capital Costs	101	25	25	99	103	103	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANNUAL CASH FLOW	3774	3873	3983	3861	3888	3918	4022	4022	4022	4022	4022	4022	4022	4022	4022	4022	4022	4022	4022	4022	4022
NET PRESENT VALUE																					

Note: Rent has been excluded as the cost is the same in all cases

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**Projected UK Economic Agricultural Gross Margins, Recurrent and Additional Capital Costs - Lincolnshire
30% Restriction Case**

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	
Livestock Gross Margins																					
Dairy Cows	204	204	204	204	204	204	204	204	204	204	204	204	204	204	204	204	204	204	204	204	204
Dairy Youngstock	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
Autumn Calving Sucklers	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Spring Calving Sucklers	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Beef Heifer Replacements	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
172.5 Year Beef	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125
18 Month Beef	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49
Stores	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
Sheep	121	116	116	105	89	83	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93
Less Purchased Bulk Feed	-128	-126	-123	-123	-121	-120	-120	-120	-120	-120	-120	-120	-120	-120	-120	-120	-120	-120	-120	-120	-120
Sub Total Livestock	501	497	493	489	485	482															
Arable Crop Gross Margins																					
Wheat-Feed	2358	2446	2534	2621	2709	2797	2797	2797	2797	2797	2797	2797	2797	2797	2797	2797	2797	2797	2797	2797	2797
Wheat-Milling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barley - Winter	702	620	538	455	373	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291
Barley - Spring	572	568	565	561	557	553	553	553	553	553	553	553	553	553	553	553	553	553	553	553	553
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rye	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Potatoes - Hum-irrigated main crop	414	390	366	343	319	295	295	295	295	295	295	295	295	295	295	295	295	295	295	295	295
- Irrigated main crop	479	505	532	559	586	613	613	613	613	613	613	613	613	613	613	613	613	613	613	613	613
Sugar Beet	1785	1770	1756	1741	1727	1712	1712	1712	1712	1712	1712	1712	1712	1712	1712	1712	1712	1712	1712	1712	1712
Beans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Horticultural Crops :																					
Peas,comprising- vining peas	623	622	621	620	620	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619
harvest/canning	0	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98
Turnip/swedes	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
Broad beans	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
French beans	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Other vegetables	13	36	48	65	83	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101
Oilseed Rape	461	418	445	472	499	525	525	525	525	525	525	525	525	525	525	525	525	525	525	525	525
Other Crops, not Stock-feed	9	11	13	15	16	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Sub Total Crops	7457	7522	7557	7593	7628	7664															
Recurrent Fixed Costs																					
Regular Labour	1873	1875	1871	1869	1867	1865	1865	1865	1865	1865	1865	1865	1865	1865	1865	1865	1865	1865	1865	1865	1865
Machinery - Repairs	748	748	746	745	743	742	742	742	742	742	742	742	742	742	742	742	742	742	742	742	742
Machinery - Fuel	611	611	610	608	607	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606
Maintenance & Miscellaneous Costs	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027
Additional Irrigation & In Costs	3	4	4	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Additional Grain Drying Costs	-15	-12	-7	-3	2	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Sub Total Recurrent Costs	4247	4251																			
Additional Capital Costs																					
Irrigation Equipment	101	25	25	23	25	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grain Drying/Storage Equipment	0	0	0	0	29	76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Capital Costs	101	25	25	23	54	100	0														
ANNUAL CASH FLOW	3610	3744	3775	3808	3809	3793	3894														
NET PRESENT VALUE																					

Note: rent has been excluded as the cost is the same in all cases

Projected UK Economic Agricultural Gross Margins, Recurrent and Additional Capital Costs - Lincolnshire
50% Restriction Case

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	
Livestock Gross Margins																					
Dairy Cows	207	267	207	207	267	207	207	207	297	207	207	207	207	207	207	207	207	207	207	207	
Dairy Youngstock	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Autumn Calving Sucklers	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	
Spring Calving Sucklers	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
Deer Heifer Replacements	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	
18 Month Beef	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	
Stores	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	
Sheep	129	123	117	111	105	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	
Less Purchased Bulk Feed	-216	-213	-210	-207	-205	-202	-202	-202	-202	-202	-202	-202	-202	-202	-202	-202	-202	-202	-202	-202	
Sub Total Livestock	439	436	433	430	427	424	424	424	424	424	424	424	424	424	424	424	424	424	424	424	
Arable Crop Gross Margins																					
Wheat-Feed	2173	2291	2408	2526	2644	2761	2761	2761	2761	2761	2761	2761	2761	2761	2761	2761	2761	2761	2761	2761	
Wheat-Milling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Barley - Winter	637	525	413	302	190	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	
Barley - Spring	530	528	527	526	523	523	523	523	523	523	523	523	523	523	523	523	523	523	523	523	
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pye	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Potatoes - Non-irrigated main crop	414	392	369	347	324	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	
- Irrigated main crop	454	460	506	531	557	582	582	582	582	582	582	582	582	582	582	582	582	582	582	582	
Sugar Beet	1735	1728	1721	1714	1707	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	
Beans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Horticultural Crops :																					
Peas,comprising-	623	622	621	620	612	610	610	610	610	610	610	610	610	610	610	610	610	610	610	610	
vining peas	0	260	535	573	612	650	650	650	650	650	650	650	650	650	650	650	650	650	650	650	
harvest/crumbing	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
Turnips/Sweets	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	
Broad beans	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
French beans	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
Other vegetables	11	27	42	57	73	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	
Oilseed Rape	402	261	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	
Other Crops, not Stock-feed	B	10	11	13	14	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	
Sub Total Crops	7023	7167	7311	7365	7420	7475	7475	7475	7475	7475	7475	7475	7475	7475	7475	7475	7475	7475	7475	7475	
Recurrent Fixed Costs																					
Regular Labour	1877	1880	1884	1883	1883	1882	1882	1882	1882	1882	1882	1882	1882	1882	1882	1882	1882	1882	1882	1882	
Machinery - Repairs	751	754	757	757	756	756	756	756	756	756	756	756	756	756	756	756	756	756	756	756	
Machinery - Fuel	611	616	619	619	617	617	617	617	617	617	617	617	617	617	617	617	617	617	617	617	
Maintenance & Miscellaneous Costs	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	
Additional Irrigation O & R Costs	3	4	4	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
Additional Grain Drying Costs	-31	-25	-19	-15	-11	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	
Sub Total Recurrent Costs	4240	4255	4272	4274	4278	4282	4282	4282	4282	4282	4282	4282	4282	4282	4282	4282	4282	4282	4282	4282	
Additional Capital Costs																					
Irrigation Equipment	101	25	25	23	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	
Grain Drying/Storage Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sub Total Capital Costs	101	25	25	23	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	
ANNUAL CASH FLOW	3122	3323	3447	3498	3544	3592	3617	3617	3617	3617	3617	3617	3617	3617	3617	3617	3617	3617	3617	3617	
NET PRESENT VALUE																					54544

Note: Rent has been excluded as the cost is the same in all cases

APPENDIX IV

CAMBRIDGESHIRE CATCHMENT AREA

UNITED KINGDOM ECONOMIC AGRICULTURAL CASH FLOWS

Projected UK Economic Agricultural Gross Margins, Recurrent and Additional Capital Costs - Cambridgeshire
10% Restriction Case

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	
Livestock Gross Margins																					
Dairy Cows	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94
Dairy Youngstock	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Autumn Calving Sucklers	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Spring Calving Sucklers	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Beef Heifer Replacements	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3/2.5 Year Beef	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101
18 Month Beef	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Stores	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sheep	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29
Less Purchased Bulk Feed	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11
Sub Total Livestock	248																				
Arable Crop Gross Margins																					
Wheat-Feed	2480	2856	2688	2920	2952	2984	2984	2984	2984	2984	2984	2984	2984	2984	2984	2984	2984	2984	2984	2984	2984
Wheat-Milling	944	764	772	781	789	798	798	798	798	798	798	798	798	798	798	798	798	798	798	798	798
Barley - Winter	1472	1395	1319	1242	1165	1089	1089	1089	1089	1089	1089	1089	1089	1089	1089	1089	1089	1089	1089	1089	1089
Barley - Spring	215	204	193	182	170	159	159	159	159	159	159	159	159	159	159	159	159	159	159	159	159
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Potatoes - Non irrigated main crop	48	46	43	40	37	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
- Irrigated main crop	37	60	63	66	68	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71
Sugar Beet	742	735	727	719	712	704	704	704	704	704	704	704	704	704	704	704	704	704	704	704	704
Beans	272	260	248	236	224	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212
Horticultural Crops:																					
Peas, comprising -	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
vining peas	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
harvest/canning peas	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
French beans	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69
Lettuce	193	193	193	193	193	193	193	193	193	193	193	193	193	193	193	193	193	193	193	193	193
Orchard and small fruit	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131
Greenhouse crops	18	22	26	30	34	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39
Other vegetables	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oilseed Rape	439	520	600	681	761	842	842	842	842	842	842	842	842	842	842	842	842	842	842	842	842
Other Crops, not Stock-feed	73	27	32	37	41	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46
Sub Total Crops	7389	7399	7421	7443	7466	7488															
Recurrent Fixed Costs																					
Regular Labour	1311	1330	1329	1329	1328	1327	1327	1327	1327	1327	1327	1327	1327	1327	1327	1327	1327	1327	1327	1327	1327
Machinery - Repairs	628	628	627	626	626	626	626	626	626	626	626	626	626	626	626	626	626	626	626	626	626
Machinery - Fuel	513	513	512	512	511	511	511	511	511	511	511	511	511	511	511	511	511	511	511	511	511
Maintenance & Miscellaneous	1837	1837	1837	1837	1837	1837	1837	1837	1837	1837	1837	1837	1837	1837	1837	1837	1837	1837	1837	1837	1837
Additional Irrigation & Lit Costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Additional Grain Drying Costs	-5	0	5	10	15	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
Sub Total Recurrent Costs	3504	3507	3511	3514	3517	3521															
Additional Capital Costs																					
Irrigation Equipment	0	4	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Grain Drying/Storage Equipment	0	2	81	80	80	79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Capital Costs	0	6	83	83	83	82	0														
ANNUAL CASH FLOW	4133	4134	4076	4094	4114	4134	4216														
NET PRESENT VALUE																					64291

Note: Net present value has been excluded as the cost is the same in all cases

**Projected UK Economic Agricultural Gross Margins, Recurrent and Additional Capital Costs - Cambridgeshire
20% Restriction Case**

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Livestock Gross Margins																				
Dairy Cows	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95
Dairy Youngstock	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Autumn Calving Sucklers	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Spring Calving Sucklers	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Beef Heifer Replacements	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7/2.5 Year Beef	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103
18 Month Beef	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Stores	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sheep	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Less Purchased Bulk Feed	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24
Sub Total Livestock	240																			
Arable Crop Gross Margins																				
Wheat-Fed	2794	3002	3036	3069	3103	3136	3136	3136	3136	3136	3136	3136	3136	3136	3136	3136	3136	3136	3136	3136
Wheat-Milling	747	566	573	579	585	592	592	592	592	592	592	592	592	592	592	592	592	592	592	592
Barley - Winter	1453	1377	1391	1225	1149	1073	1073	1073	1073	1073	1073	1073	1073	1073	1073	1073	1073	1073	1073	1073
Barley - Spring	212	201	191	180	169	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Potatoes- Non irrigated main crop	49	46	43	40	39	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
- Irrigated main crop	56	59	61	64	67	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69
Sugar Beet	740	733	726	719	712	705	705	705	705	705	705	705	705	705	705	705	705	705	705	705
Beans	272	268	248	236	224	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212
Horticultural Crops-																				
Peas,comprising-																				
vining peas	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
harvest/canning peas	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
French beans	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67
Lettuce	199	199	199	199	199	199	199	199	199	199	199	199	199	199	199	199	199	199	199	199
Orchard and small fruit	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127
Greenhouse crops																				
Other vegetables	18	22	28	29	33	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37
Oilseed Rape	431	510	589	668	747	826	826	826	826	826	826	826	826	826	826	826	826	826	826	826
Other Crops, not Stock-feed	22	27	31	35	40	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Sub Total Crops	7293	7363	7324	7346	7368	7389														
Recurrent Fixed Costs																				
Regular Labour	1331	1330	1330	1329	1329	1328	1328	1328	1328	1328	1328	1328	1328	1328	1320	1328	1328	1328	1328	1328
Machinery - Repairs	620	628	627	627	626	626	626	626	626	626	626	626	626	626	626	626	626	626	626	626
Machinery - Fuel	513	513	512	512	511	511	511	511	511	511	511	511	511	511	511	511	511	511	511	511
Maintenance & Miscellaneous	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037
Additional Irrigation O & M Costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Additional Grain Drying Costs	-10	-5	-1	4	9	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
Sub Total Recurrent Costs	3499	3503	3506	3509	3513	3516														
Additional Capital Costs																				
Irrigation Equipment	0	4	2	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grain Drying/Storage Equipment	0	0	0	69	77	76	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Capital Costs	0	4	2	72	81	80	0													
ANNUAL CASH FLOW	4034	4036	4056	4005	4014	4033	4113													
NET PRESENT VALUE																				

Note: Rent has been excluded as the cost is the same in all years

**Projected UK Economic Agricultural Gross Margins, Recurrent and Additional Capital Costs - Cambridgeshire
30% Restriction Case**

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	
Livestock Gross Margins																					
Dairy Cows	95	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Dairy Youngstock	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Autumn Calving Sucklers	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Spring Calving Sucklers	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Beef Heifer Replacements	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
3/2.5 Year Beef	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
18 Month Beef	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sheep	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Stores	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Less Purchased Bulk Feed	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36
Sub Total Livestock	229	229	229	229	229	229	229	229	229	229	229	229	229	229	229	229	229	229	229	229	229
Arable Crop Gross Margins																					
Wheat-Feed	3437	3476	3515	3554	3593	3632	3632	3632	3632	3632	3632	3632	3632	3632	3632	3632	3632	3632	3632	3632	3632
Wheat-hilling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barley - Winter	1427	1332	1277	1202	1127	1051	1051	1051	1051	1051	1051	1051	1051	1051	1051	1051	1051	1051	1051	1051	1051
Barley - Spring	209	198	188	177	167	156	156	156	156	156	156	156	156	156	156	156	156	156	156	156	156
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Potatoes - Non irrigated main crop	49	46	43	41	38	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
Potatoes - Irrigated main crop	54	57	59	62	65	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67
Sugar Beet	736	730	724	718	712	706	706	706	706	706	706	706	706	706	706	706	706	706	706	706	706
Beans	272	260	248	236	224	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212
Horticultural Crops:																					
Peas, comprising -	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
vining peas	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
harvest/canning peas	13	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
French beans	65	65	65	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64
Lettuce	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183
Orchard and small fruit	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122
Greenhouse crops	17	21	25	28	32	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
Other vegetables	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oilseed Rape	415	491	567	643	719	795	795	795	795	795	795	795	795	795	795	795	795	795	795	795	795
Other Crops, not Stock-feed	21	26	30	34	38	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43
Sub Total Crops	7125	7144	7163	7182	7201	7221	7221	7221	7221	7221	7221	7221	7221	7221	7221	7221	7221	7221	7221	7221	7221
Recurrent Fixed Costs																					
Regular Labour	1331	1331	1330	1329	1329	1328	1328	1328	1328	1328	1328	1328	1328	1328	1328	1328	1328	1328	1328	1328	1328
Machinery - Repairs	629	628	628	627	627	627	627	627	627	627	627	627	627	627	627	627	627	627	627	627	627
- Fuel	513	513	513	512	512	512	512	512	512	512	512	512	512	512	512	512	512	512	512	512	512
Maintenance & Miscellaneous	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037
Additional Irrigation O & M Costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Additional Grain Drying Costs	-16	-12	-7	-3	2	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Sub Total Recurrent Costs	3493	3497	3500	3503	3506	3510	3510	3510	3510	3510	3510	3510	3510	3510	3510	3510	3510	3510	3510	3510	3510
Additional Capital Costs																					
Irrigation Equipment	0	4	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Grain Drying/Storage Equipment	0	0	0	0	30	104	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Capital Costs	0	4	2	4	34	107	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANNUAL CASH FLOW	3861	3873	3891	3905	3890	3832	3940	3940	3940	3940	3940	3940	3940	3940	3940	3940	3940	3940	3940	3940	3940
NET PRESENT VALUE																					
680237																					

Note: Rent has been excluded as the cost is the same in all cases

**Projected UK Economic Agricultural Gross Margins, Recurrent and Additional Capital Costs - Cambridgeshire
40% Restriction Case**

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	
Livestock Gross Margins																					
Dairy cows	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	
Dairy youngstock	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	
Autumn Calving Sucklers	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Spring Calving Sucklers	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
Beef Heifer Replacements	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
372.5 Year Heifer	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	
18 Month Beef	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	
Stures	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sheep	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	
Less Purchased Bulk Feed	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	
Sub Total Livestock	225	225	225	225	225	225	225	225	225	225	225	225	225	225	225	225	225	225	225	225	
Arable Crop Total Gross Margins	3333	3376	3419	3462	3505	3548	3548	3548	3548	3548	3548	3548	3548	3548	3548	3548	3548	3548	3548	3548	
Wheat-feed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Wheat-milling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Barley - Winter	1300	1303	1275	1147	1069	991	991	991	991	991	991	991	991	991	991	991	991	991	991	991	
Barley - Spring	282	192	182	172	163	153	153	153	153	153	153	153	153	153	153	153	153	153	153	153	
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Potatoes- Non irrigated main crop	49	46	44	41	39	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	
- Irrigated main crop	53	55	58	60	63	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	
Sugar Beet	728	724	719	714	710	705	705	705	705	705	705	705	705	705	705	705	705	705	705	705	
Beans	272	260	248	236	224	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212	
Horticultural Crops:																					
Peas,comprising	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
winning peas	105	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	
harvest/canning peas	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	
French beans	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	
Lettuce	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	
Orchard and small fruit	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	
Greenhouse crops	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	
Other vegetables	16	20	23	27	31	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	
Oilseed Rape	392	405	477	519	621	692	692	692	692	692	692	692	692	692	692	692	692	692	692	692	
Other Crops, not Stock-feed	20	24	28	32	36	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	
Sub Total Crops	6917	6959	6977	6955	7013	7031	7031	7031	7031	7031	7031	7031	7031	7031	7031	7031	7031	7031	7031	7031	
Recurrent Fixed Costs	1331	1332	1332	1332	1331	1331	1331	1331	1331	1331	1331	1331	1331	1331	1331	1331	1331	1331	1331	1331	
Regular Labour	679	679	679	629	629	628	628	628	628	628	628	628	628	628	628	628	628	628	628	628	
Machinery - Repairs	513	514	514	514	513	513	513	513	513	513	513	513	513	513	513	513	513	513	513	513	
Machinery - Fuel	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	
Maintenance & Miscellaneous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Additional Irrigation O & R Costs	-25	-20	-16	-12	-7	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	
Additional Grain Drying Costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sub Total Recurrent Costs	3485	3493	3496	3499	3503	3506	3506	3506	3506	3506	3506	3506	3506	3506	3506	3506	3506	3506	3506	3506	
Additional Capital Costs																					
Irrigation Equipment	0	4	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
Grain Drying/Storage Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sub Total Capital Costs	0	4	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
ANNUAL CASH FLOW	3657	3680	3704	3717	3731	3746	3749	3749	3749	3749	3749	3749	3749	3749	3749	3749	3749	3749	3749	3749	
NET PRESENT VALUE																					57407

Note: Rent has been excluded as the cost is the same in all cases

APPENDIX V

EUROPEAN COMMUNITY ECONOMIC ANALYSIS
WORLD PRICES AND FARM GATE PRICES

AGRICULTURAL COMMODITY PRICES-NITRATES STUDY

CURRENT PRICES \$/TONNE

YEAR	INDEX	FEED WHEAT (1)	MILLING WHEAT (2)	WINTER BARLEY (3)	SPRING BARLEY (3)	POTATOES RAW (4)	SUGAR RAW (5)	VINING PEAS (6)	HARVEST PEAS (DRY) (7)	RAPE (8)	UREA (9)	TSP (10)	POTASH (11)
1980	115.20	164.00	183.00	160.49	160.49	136.00	633.00	667.70	479.00	311.00	222.00	180.00	116.00
1981	109.50	177.00	186.00	173.21	173.21	117.00	372.00	657.88	436.00	300.00	216.00	161.00	112.00
1982	107.40	161.00	166.00	157.55	157.55	86.00	184.00	501.55	439.00	286.00	159.00	138.00	82.00
1983	102.90	158.00	169.00	154.62	154.62	99.00	186.00	562.17	369.00	330.00	135.00	135.00	75.00
1984	100.00	153.00	171.00	149.73	149.73	183.00	115.00	498.46	395.00	342.00	171.00	132.00	84.00

SOURCES

- (1) FAO Hard Winter No. 2 Fob Gulf Ports.
- (2) International Source, No.1 Western Red Spring CWRS, in store Thunder Bay
- (3) Based on energy value in relation to feed wheat
- (4) FAO Denmark Producer Bintje
- (5) FAO ISA FOB and Stowed Bulk Caribbean Ports
- (6) PVGA Grade A October prices ex store freezing
- (7) FAO CIF UK Alaska Green
- (8) FAO CIF N.W. Europe Canadian 40X
- (9) International Commodity Projections FOB Europe bagged
- (10) International Commodity Projections Triple Super Phosphate FOB Gulf Ports
- (11) International Commodity Projections Potash FOB Vancouver

*includes 56% value added during processing

CONSTANT PRICES \$/TONNE

YEAR	INDEX	FEED WHEAT	MILLING WHEAT	WINTER BARLEY	SPRING BARLEY	POTATOES RAW	SUGAR RAW	VINING PEAS	HARVEST PEAS (DRY)	RAPE	UREA	TSP	POTASH
1980	115.20	142.36	167.53	139.31	139.31	110.06	549.48	579.67	415.80	269.97	192.71	156.25	100.69
1981	109.50	161.64	179.00	158.18	158.18	106.85	339.73	600.80	398.17	273.97	197.26	147.03	102.28
1982	107.40	149.91	169.07	146.70	146.70	80.07	171.32	466.99	408.75	266.29	148.04	128.49	76.35
1983	102.90	153.55	164.24	150.26	150.26	96.21	180.76	546.33	358.60	370.70	131.20	131.20	72.89
1984	100.00	153.00	171.00	149.73	149.73	163.00	115.00	498.46	395.00	342.00	171.00	132.00	84.00

Average

1980-1984		152.09	170.17	148.84	148.84	112.84	271.26	538.45	395.27	294.59	168.04	138.99	87.24
Estimate 1985(1)		139.92	156.55	136.93	136.93	112.84	307.26	404.61	355.74	244.11	177.59	151.35	89.27
Estimate 1990(2)		132.97	148.77	130.13	130.13	112.84	307.26	460.30	337.95	214.10	238.70	175.03	101.45

(1) Multiplication factor based on real price differential 1984-1985

(2) Based on internationally projected real price differential 1985-1990

CURRENT PRICES IN US \$ PER TONNE

YEAR	INDEX	BEEF (1)	LAMB (2)	WOOL (3)	BUTTER (4)
1980	115.20	2760.00	2606.00	1951.00	
1981	109.50	2480.00	2698.00	2006.00	2776.28
1982	107.40	2390.00	2350.00	1499.00	2776.28
1983	102.90	2440.00	1913.00	1356.00	2923.44
1984	100.00	2250.00	1890.00	1744.00	2615.60

- (1) International sources US FOB frozen boneless
(2) FAO CIF Smithfield Market, London wholesale New Zealand Prime Lamb 13-16 kg
(3) FAO Shorn wool in store USA
(4) Commodity Week Danish 82% Lactic acid, salted ex-store
(5) FAO Whole milk powder Netherlands average price ex factory

CONSTANT PRICES US \$ PER TONNE

YEAR	INDEX	BEEF	LAMB	WOOL	BUTTER
1980	115.20	2395.83	2262.15	1693.58	
1981	109.50	2264.84	2463.93	1831.96	2535.42
1982	107.40	2225.33	2188.08	1395.72	2584.99
1983	102.90	2371.23	1859.09	1317.78	2841.05
1984	100.00	2250.00	1890.00	1744.00	2615.60

Average					
1980-1984		2301.45	2132.65	1596.61	2115.41
Estimate 1985 (1)		2678.41	2481.96	1596.61	2115.41
Estimate 1990 (2)		2440.33	2261.34	1596.61	2115.41

- (1) Multiplication factor based on real price differential 1984-1985
(2) Based on internationally projected real price differential 1985-1990

1985 \$1.30:£1 - 1990 \$1.20:£1

NET EXPORTS FROM EEC-1985

	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	FEED WHEAT	MILLING WHEAT	BARLEY	POTATOES	SUGAR	BUTTER	DRIED MILK	WOOL	UREA	TSP	MOP
	-----POUNDS PER TONNE-----										
Average Price -FOB (1)	107.63	127.43	105.33	86.80	236.36	1641.24	1583.81	1242.16		116.42	68.67
Quality Adjustment %	na	10.00	na	na	na	na	na	na		na	na
Sub-total	107.63	114.68	105.33	86.80	236.36	1641.24	1583.81	1242.16		116.42	68.67
Freight/Insurance	5.00	5.00	5.00	na	5.00	22.00	na	10.00		-13.95	-13.13
FOB UK	112.63	119.68	110.33	86.80	241.36	1663.24	1583.81	1252.16	136.61	102.47	55.54
Port/Unloading Charges	-4.70	-4.70	-4.70	-12.70	-12.35	-11.53	-7.26	-12.70	-4.80	-4.80	-4.80
Domestic Transport	-9.91	-9.91	-9.91	-12.10	-9.91	-27.72	-9.91	-20.00	9.91	9.91	9.91
Processing Cost					-70.00		-135.00				
Faragate Price	98.02	105.07	95.72	62.00	149.10	1623.99	1431.64	1219.46	141.72	107.58	60.65

- (1) In cases where the price was quoted in store an allowance has been made for loading/port charges
(2) FAO Hard Winter No. 2 Fob Gulf Ports.
(3) International Source, No.1 Western Red Spring CWRS, in store Thunder Bay
(4) FAO No.1 Feed in store Thunder Bay
(5) FAO Denmark Producer Bintje
(6) FAO ISA FOB and Stowed Bulk Caribbean Ports+
(7) Commodity Week New Zealand Manufacturing ex store New Zealand Note:Transport costs added to fertilisers as plants
(8) FAO Whole milk powder Netherlands average price mainly located near ports
(9) Commodity Week Australian/New Zealand CIF UK
(10) International Commodity Projections FOB Europe Bagged
(11) International Commodity Projections Triple Super Phosphate(TSP) FOB Gulf ports
(12) International Commodity Projections Muriate of Potash(MOP) FOB Vancouver

NET EXPORTS FROM EEC-1990

	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	FEED WHEAT	MILLING WHEAT	BARLEY	POTATOES	SUGAR	BUTTER	DRIED MILK	WOOL	UREA	TSP	MOP
	-----POUNDS PER TONNE-----										
Average Price -FOB (1)	110.81	130.98	108.44	94.03	256.05	1776.84	1714.63	1344.51		145.86	84.54
Quality Adjustment %	na	10.00	na	na	na	na	na	na		na	na
Sub-total	110.81	117.88	108.44	94.03	256.05	1776.84	1714.63	1344.51		145.86	84.54
Freight/Insurance	5.00	5.00	5.00	na	5.00	22.00	na	10.00		-13.95	-13.13
CIF UK	115.81	122.88	113.44	94.03	261.05	1798.84	1714.63	1354.51	198.91	131.91	71.41
Port/Unloading Charges	-4.70	-4.70	-4.70	-12.70	-12.35	-11.53	-7.26	-12.70	-4.80	-4.80	-4.80
Domestic Transport	-9.91	-9.91	-9.91	-12.10	-9.91	-27.72	-9.91	-20.00	9.91	9.91	9.91
Processing Cost					-70.00		-135.00				
Faragate Price	101.20	108.27	98.83	69.23	168.79	1759.59	1562.46	1321.81	204.02	137.02	76.52

1985 \$1.30:£1 - 1990 \$1.20:£1

NET IMPORTS TO EEC-1985

	(1)	(2)	(3)	(4)
	HARVEST PEAS	OILSEED RAPE	BEEF	LAMB
	-----POUNDS PER TONNE-----			
Average Price -FOB (1)			2060.31	
Quality Adjustment %			na	
Sub-total			2060.31	
Freight/Insurance			219.78	
CIF UK	243.54	203.16	2280.09	1909.20
Port/Unloading Charges			21.23	
Net domestic Transport	7.50	7.50	19.07	19.07
Processing Cost	na	na	-35.00	-40.00
Farmgate Price	251.04	210.66	2285.39	1888.27

- (1) FAO CIF UK Alaska Green, 11% downward adjustment for quality
 (2) FAO CIF N.W.Europe Canadian 40%
 (3) International sources US FOB frozen boneless
 (4) FAO CIF Smithfield market, London wholesale New Zealand prime lamb

NET IMPORTS TO EEC-1990

	(1)	(2)	(3)	(4)
	HARVEST PEAS	OILSEED RAPE	BEEF	LAMB
	-----POUNDS PER TONNE-----			
Average Price -FOB (1)			2033.61	
Quality Adjustment %			na	
Sub-total			2033.61	
Freight/Insurance			219.78	
CIF UK	250.65	195.08	2253.39	1884.45
Port/Unloading Charges			21.23	
Net domestic Transport	7.50	7.50	19.07	19.07
Processing Cost	na	na	-35.00	-40.00
Farmgate Price	258.15	202.58	2258.69	1863.52

- (1) FAO CIF UK Alaska Green, 11% downward adjustment for quality
 (2) FAO CIF N.W.Europe Canadian 40%
 (3) International sources US FOB frozen boneless
 (4) FAO CIF Smithfield market, London wholesale New Zealand prime lamb

1985 \$1.30:£1 - 1990 \$1.50:£1

NET EXPORTS FROM EEC-1985

	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	FEED	MILLING	BARLEY	POTATOES	SUGAR	BUTTER	DRYED	WOOL	UREA	TSP	MOP
	WHEAT	WHEAT					MILK				
	POUNDS PER TONNE										
Average Price -FOB (1)	107.63	127.43	105.33	86.80	236.36	1641.24	1583.81	1242.16	116.42	68.67	
Quality Adjustment x	na	10.00	na	na	na	na	na	na	na	na	na
Sub-total	107.63	114.60	105.33	86.80	236.36	1641.24	1503.81	1242.16	116.42	68.67	
Freight/Insurance	5.00	5.00	5.00	na	5.00	22.00	na	10.00	-13.95	-13.13	
FOB UK	112.63	119.68	110.33	86.80	241.36	1663.24	1583.81	1252.16	136.61	102.47	58.54
Port/Unloading Charges	-4.70	-4.70	-4.70	-12.70	-12.35	-11.53	-7.26	-12.70	-4.80	-4.80	-4.80
Domestic Transport	-9.91	-9.91	-9.91	-12.10	-9.91	-27.72	-9.91	-20.00	9.91	9.91	9.91
Processing Cost				-70.00		-135.00					
Faragate Price	98.02	105.07	95.72	62.00	149.10	1623.99	1431.64	1219.46	141.72	107.58	60.65

(1) In cases where the price was quoted in store an allowance has been made for loading/port charges

(2) FAO Hard Winter No. 2 Fob Gulf Ports.

(3) International Source, No.1 Western Red Spring CMS, in store Thunder Bay

(4) FAO No.1 Feed in store Thunder Bay

(5) FAO Denmark Producer Binitje

(6) FAO ISA FOB and Stowed Bulk Caribbean Ports

(7) Commodity Week New Zealand Manufacturing ex store New Zealand

(8) FAO Whole milk powder Netherlands average price

(9) Commodity Week Australian/New Zealand CIF UK

(10) International Commodity Projections FOB Europe Bagged

(11) International Commodity Projections Triple Super Phosphate(TSP) FOB Gulf ports

(12) International Commodity Projections Muriate of Potash(MOP) FOB Vancouver

Notes:Transport costs added to fertilisers as plants mainly located near ports

NET EXPORTS FROM EEC-1990

	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	FEED	MILLING	BARLEY	POTATOES	SUGAR	BUTTER	DRYED	WOOL	UREA	TSP	MOP
	WHEAT	WHEAT					MILK				
	POUNDS PER TONNE										
Average Price -FOB (1)	88.65	106.18	86.75	75.23	204.84	1424.27	1374.50	1070.41	116.69	67.63	
Quality Adjustment x	na	10.00	na	na	na	na	na	na	na	na	na
Sub-total	88.65	95.56	86.75	75.23	204.84	1424.27	1374.50	1070.41	116.69	67.63	
Freight/Insurance	5.00	5.00	5.00	na	5.00	22.00	na	10.00	-13.95	-13.13	
CIF UK	93.65	100.56	91.75	75.23	209.84	1446.27	1374.50	1088.41	159.13	102.74	54.50
Port/Unloading Charges	-4.70	-4.70	-4.70	-12.70	-12.35	-11.53	-7.26	-12.70	-4.80	-4.80	-4.80
Domestic Transport	-9.91	-9.91	-9.91	-12.10	-9.91	-27.72	-9.91	-20.00	9.91	9.91	9.91
Processing Cost				-70.00		-135.00					
Faragate Price	79.04	85.95	77.14	50.43	117.58	1407.02	1222.33	1055.71	164.24	107.85	59.61

1985 \$1.30:£1 - 1990 \$1.50:£1

NET IMPORTS TO EEC-1985

	(1)	(2)	(3)	(4)
	HARVEST	OILSEED	BEEF	LAMB
	PEAS	RAPE		
	-----POUNDS PER TONNE-----			
Average Price -FOB (1)			2060.31	
Quality Adjustment %			na	
Sub-total			2060.31	
Freight/Insurance			219.78	
CIF UK	243.54	203.16	2280.09	1909.20
Port/Unloading Charges			21.23	
Net domestic Transport	7.50	7.50	19.07	19.07
Processing Cost	na	na	-35.00	-40.00
Farmgate Price	251.04	210.66	2285.39	1888.27

- (1) FAO CIF UK Alaska Green, 11% downward adjustment for quality
(2) FAO CIF N.W. Europe Canadian 40%
(3) International sources US FOB frozen boneless
(4) FAO CIF Smithfield market, London wholesale New Zealand prime lamb

NET IMPORTS TO EEC-1990

	(1)	(2)	(3)	(4)
	HARVEST	OILSEED	BEEF	LAMB
	PEAS	RAPE		
	-----POUNDS PER TONNE-----			
Average Price -FOB (1)			1626.88	
Quality Adjustment %			na	
Sub-total			1626.88	
Freight/Insurance			219.78	
CIF UK	200.52	156.07	1846.66	1507.56
Port/Unloading Charges			21.23	
Net domestic Transport	7.50	7.50	19.07	19.07
Processing Cost	na	na	-35.00	-40.00
Farmgate Price	208.02	163.57	1851.96	1486.63

- (1) FAO CIF UK Alaska Green, 11% downward adjustment for quality
(2) FAO CIF N.W. Europe Canadian 40%
(3) International sources US FOB frozen boneless
(4) FAO CIF Smithfield market, London wholesale New Zealand prime lamb

1985 \$1.30:£1 - 1990 \$1.80:£1

NET EXPORTS FROM EEC-1985

	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	FEED WHEAT	MILLING WHEAT	BARLEY	POTATOES	SUGAR	BUTTER	DRIED MILK	WOOL	UREA	TSP	MOP
	-----POUNDS PER TONNE-----										
Average Price -FOB (1)	167.63	127.43	105.33	86.80	236.36	1641.24	1583.81	1242.16		116.42	68.67
Quality Adjustment %	na	10.00	na	na	na	na	na	na		na	na
Sub-total	107.63	114.68	105.33	86.80	236.36	1641.24	1583.81	1242.16		116.42	68.67
Freight/Insurance	5.00	5.00	5.00	na	5.00	22.00	na	10.00		-13.95	-13.13
FOB UK	112.63	119.68	110.33	86.80	241.36	1663.24	1583.81	1252.16	136.61	102.47	55.54
Port/Unloading Charges	-4.70	-4.70	-4.70	-12.70	-12.35	-11.53	-7.26	-12.70	-4.80	-4.80	-4.80
Domestic Transport	-9.91	-9.91	-9.91	-12.10	-9.91	-27.72	-9.91	-20.00	9.91	9.91	9.91
Processing Cost					-70.00		-135.00				
Faragate Price	98.02	105.07	95.72	62.00	149.10	1623.99	1431.64	1219.46	141.72	107.58	60.65

- (1) In cases where the price was quoted in store an allowance has been made for loading/port charges
- (2) FAD Hard Winter No. 2 Fob Gulf Ports.
- (3) International Source, No.1 Western Red Spring CWRS, in store Thunder Bay
- (4) FAD No.1 Feed in store Thunder Bay
- (5) FAD Denmark Producer Bintje
- (6) FAD ISA FOB and Stowed Bulk Caribbean Ports*
- (7) Commodity Week New Zealand Manufacturing ex store New Zealand
- (8) FAD Whole milk powder Netherlands average price
- (9) Commodity Week Australian/New Zealand CIF UK
- (10) International Commodity Projections FOB Europe Bagged
- (11) International Commodity Projections Triple Super Phosphate(TSP) FOB Gulf ports
- (12) International Commodity Projections Muriate of Potash(MOP) FOB Vancouver
- Note:Transport costs added to fertilisers as plants
mainly located near ports

NET EXPORTS FROM EEC-1990

	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	FEED WHEAT	MILLING WHEAT	BARLEY	POTATOES	SUGAR	BUTTER	DRIED MILK	WOOL	UREA	TSP	MOP
	-----POUNDS PER TONNE-----										
Average Price -FOB (1)	73.87	89.65	72.29	62.69	170.70	1189.23	1147.75	901.00		97.24	56.36
Quality Adjustment %	na	10.00	na	na	na	na	na	na		na	na
Sub-total	73.87	80.69	72.29	62.69	170.70	1189.23	1147.75	901.00		97.24	56.36
Freight/Insurance	5.00	5.00	5.00	na	5.00	22.00	na	10.00		-13.95	-13.13
CIF UK	78.87	85.69	77.29	62.69	175.70	1211.23	1147.75	911.00	132.61	83.29	43.23
Port/Unloading Charges	-4.70	-4.70	-4.70	-12.70	-12.35	-11.53	-7.26	-12.70	-4.80	-4.80	-4.80
Domestic Transport	-9.91	-9.91	-9.91	-12.10	-9.91	-27.72	-9.91	-20.00	9.91	9.91	9.91
Processing Cost					-70.00		-135.00				
Faragate Price	64.26	71.08	62.68	37.89	83.44	1171.98	995.58	878.30	137.72	88.40	48.34

1985 \$1.30:£1 - 1990 \$1.80:£1

NET IMPORTS TO EEC-1985

	(1)	(2)	(3)	(4)
	HARVEST PEAS	OILSEED RAPE	BEEF	LAMB
	-----POUNDS PER TONNE-----			
Average Price -FOB (1)			2060.31	
Quality Adjustænt %			na	
Sub-total			2060.31	
Freight/Insurance			219.78	
CIF UK	243.54	203.16	2280.09	1909.20
Port/Unloading Charges			21.23	
Net domestic Transport	7.50	7.50	19.07	19.07
Processing Cost	na	na	-35.00	-40.00
Farmgate Price	251.04	210.66	2285.39	1888.27

- (1) FAO CIF UK Alaska Green,11% downward adjustænt for quality
(2) FAO CIF N.W.Europe Canadian 40%
(3) International sources US FOB frozen boneless
(4) FAO CIF Smithfield market,London wholesale New Zealand prime laab

NET IMPORTS TO EEC-1990

	(1)	(2)	(3)	(4)
	HARVEST PEAS	OILSEED RAPE	BEEF	LAMB
	-----POUNDS PER TONNE-----			
Average Price -FOB (1)			1355.74	
Quality Adjustænt %			na	
Sub-total			1355.74	
Freight/Insurance			219.78	
CIF UK	167.10	130.06	1575.52	1256.30
Port/Unloading Charges			21.23	
Net domestic Transport	7.50	7.50	19.07	19.07
Processing Cost	na	na	-35.00	-40.00
Farmgate Price	174.60	137.56	1580.82	1235.37

- (1) FAO CIF UK Alaska Green,11% downward adjustænt for quality
(2) FAO CIF N.W.Europe Canadian 40%
(3) International sources US FOB frozen boneless
(4) FAO CIF Smithfield market,London wholesale New Zealand prime laab

EC PRICE OF FUEL

		1985	1990	1990	1990
		(\$1.3:£1)	(\$1.5:£1)	(\$1.8:£1)	(\$1.2:£1)
cif NW Europe 22.5.85	US\$/tonne	218.00	210.44	210.44	210.44
	UK Pounds /tonne	167.69	140.29	116.91	175.37
1 tonne=1165 litres	UK Pence /litre	14.39	12.04	10.04	15.05
Price to farmer of diesel is 18 pence per litre					
	Economic Multiplier =	0.80	0.67	0.56	0.84
Price to contractor of diesel is 38 pence per litre					
	Economic Multiplier =	0.38	0.32	0.26	0.40

APPENDIX VI

LINCOLNSHIRE AND CAMBRIDGESHIRE CATCHMENT AREAS

EUROPEAN COMMUNITY ECONOMIC GROSS MARGINS

CROPS AND LIVESTOCK

1985 \$1.30:£1 - 1990 \$1.50:£1

EC Economic Gross Margins - Lincolnshire - (\$1.3:£1) - 1985 No Restriction Case

OUTPUT	Winter wheat	Winter wheat	Winter barley	Spring barley	Irrigated	Non-irrigated	Sugar beet	Peas	Harvest peas	Oil seed rape
	Feed	Milling	barley	barley	potatoes	potatoes	UK pounds/ha	UK pounds/ha	UK pounds/ha	UK pounds/ha
Yield per hectare-tonnes	6.60	4.60	6.10	5.60	49.00	33.50	38.50	5.30	3.30	2.85
UK Pounds per tonne-Ex farm	98.02	105.07	97.12	97.12	77.00	62.00	23.86	216.00	251.04	210.66
Gross output-UK pounds	646.93	693.46	592.43	543.87	3528.00	2077.00	918.61	1144.80	828.43	609.38
VARIABLE COSTS										
Total Fertiliser Costs comprising-	74.05	74.05	69.40	67.62	180.88	167.86	71.15	13.20	13.20	94.33
Nitrogen Fertiliser	54.25	54.25	49.60	46.50	81.22	68.20	43.40	0.00	0.00	77.50
Phosphate fertiliser	13.80	13.80	13.80	14.72	69.46	69.46	17.25	9.20	9.20	11.73
Potassium fertiliser	6.00	6.00	6.00	6.40	39.20	39.20	10.50	4.00	4.00	5.10
Seed	29.83	31.92	29.45	29.45	420.00	388.80	52.00	92.50	132.50	20.74
Sprays	74.10	74.10	64.30	34.60	150.00	131.00	118.00	48.00	59.00	62.80
Sundry direct	5.00	5.00	5.00	4.00	229.50	164.30	3.00	9.00	6.00	9.00
Casual labour	0.00	0.00	0.00	0.00	156.80	107.20	0.00	0.00	0.00	0.00
Haulage	0.00	0.00	0.00	0.00	0.00	0.00	76.23	50.88	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	244.40	0.00	29.10
Total Variable Costs	182.98	185.07	168.15	135.67	1137.18	959.16	329.38	457.98	210.70	215.47
Gross Margin Per Hectare	463.95	508.39	424.28	408.20	2390.82	1117.84	598.23	686.82	617.73	384.91

EC Economic Gross Margins - Lincolnshire - (\$1.3:£1) - 1985 10% Restriction Case

	Winter Wheat		Winter wheat Milling		Winter barley		Spring barley		Irrigated potatoes		Non-irrigated potatoes		Sugar beet		Peas		Harvest peas		Dill seed rape		
	Feed								UK pounds/ha												
OUTPUT																					
Yield per hectare-tonnes	6.49	6.49	6.49	6.00	5.51	5.51	5.51	5.51	48.51	33.17	38.25	5.30	3.30	2.79							
UK Pounds per tonne-Ex farm	98.02	105.07	97.12	97.12	97.12	97.12	97.12	97.12	72.00	62.00	23.86	216.00	251.04	210.66							
Gross output-UK pounds	636.58	682.37	582.95	582.95	535.17	535.17	535.17	535.17	3492.72	2056.23	912.64	1144.80	828.43	587.17							
VARIABLE COSTS																					
Total Fertiliser Costs comprising-	68.63	68.63	64.44	64.44	62.97	62.97	62.97	62.97	172.76	161.04	66.81	13.20	13.20	86.58							
Nitrogen Fertiliser	48.83	48.83	44.64	44.64	41.85	41.85	41.85	41.85	73.10	61.38	39.06	0.00	0.00	69.75							
Phosphate fertiliser	13.80	13.80	13.80	13.80	14.72	14.72	14.72	14.72	69.46	69.46	17.25	9.20	9.20	11.73							
Potassium fertiliser	6.00	6.00	6.00	6.00	6.40	6.40	6.40	6.40	30.20	30.20	10.50	4.00	4.00	5.10							
Seed	29.83	31.92	29.45	29.45	29.45	29.45	29.45	29.45	420.00	388.80	52.00	92.50	132.50	20.24							
Sprays	74.10	74.10	64.30	64.30	34.60	34.60	34.60	34.60	150.00	131.00	118.00	48.00	59.00	62.80							
Sundry direct	5.00	5.00	5.00	5.00	4.00	4.00	4.00	4.00	229.50	164.30	3.00	9.00	6.00	9.00							
Casual labour	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	155.23	106.13	0.00	0.00	0.00	0.00							
Haulage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.73	50.88	0.00	0.00							
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	244.40	0.00	29.10							
Total Variable Costs	177.56	179.65	163.19	163.19	131.02	131.02	131.02	131.02	1127.49	951.27	315.54	457.98	210.70	207.72							
Gross Margin Per Hectare	459.03	502.72	419.76	419.76	404.15	404.15	404.15	404.15	2365.23	1104.96	597.09	686.82	617.73	379.45							

EC Economic Gross Margins - Lincolnshire - (\$1.3:£1) - 1985 20% Restriction Case

	Winter Wheat Feed	Winter wheat Hilling	Winter barley	Spring barley	Irrigated potatoes	Non-irrigated potatoes	Sugar beet	Peas	Harvest peas	Oil seed rape
	-----UK pounds/ha-----									
OUTPUT										
Yield per hectare-tonnes	6.38	6.38	5.89	5.41	47.68	32.60	37.97	5.30	3.30	2.71
UK Pounds per tonne-Ex fara	98.02	105.07	97.12	97.12	72.00	62.00	23.86	216.00	251.04	210.66
Gross output-UK pounds	624.94	669.88	572.29	525.38	3432.74	2020.92	905.93	1144.80	828.43	571.56
VARIABLE COSTS										
Total Fertiliser Costs comprising-	63.20	63.20	59.48	58.32	164.64	154.22	62.47	13.20	13.20	76.83
Nitrogen Fertiliser	43.40	43.40	39.68	37.20	64.98	54.56	34.72	0.00	0.00	62.00
Phosphate fertiliser	13.80	13.80	13.80	14.72	69.46	69.46	17.25	9.20	9.20	11.73
Potassium fertiliser	6.00	6.00	6.00	6.40	30.20	30.20	10.50	4.00	4.00	5.10
Seed	29.83	31.92	29.45	29.45	420.00	388.80	52.00	92.50	132.50	20.24
Sprays	74.10	74.10	64.30	34.60	150.00	131.00	118.00	48.00	59.00	62.88
Sundry direct	5.00	5.00	5.00	4.00	229.50	164.30	3.00	9.00	6.00	9.00
Casual labour	0.00	0.00	0.00	0.00	152.57	104.31	0.00	0.00	0.00	0.00
Heilage	0.00	0.00	0.00	0.00	0.00	0.00	75.18	50.88	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	244.40	0.00	29.10
Total Variable Costs	172.13	174.22	158.23	126.37	1116.70	942.63	310.65	457.98	210.70	199.97
Gross Margin Per Hectare	452.81	495.66	414.06	399.01	2316.04	1078.30	595.29	686.82	617.73	371.59

EC Economic Gross Margins - Lincolnshire - (\$1.3:£1) - 1985 30% Restriction Case

	Winter wheat Feed	Winter wheat Milling	Winter wheat	Spring barley	Irrigated potatoes	Non-irrigated potatoes	Sugar beet	Peas	Harvest peas	Oil seed rape
					UK pounds/ha					
OUTPUT										
Yield per hectare-tonnes	6.24	6.24	5.76	5.29	46.70	31.93	37.66	5.30	3.30	2.60
UK Pounds per tonne-Ex farm	98.02	105.07	97.12	97.12	72.00	62.00	23.86	216.00	251.04	210.56
Gross output-UK pounds	611.35	655.32	559.85	513.96	3362.10	1979.38	898.49	1144.80	828.43	548.75
VARIABLE COSTS										
Total Fertiliser Costs comprising-										
Nitrogen Fertiliser	57.78	57.78	54.52	53.67	156.51	147.40	58.13	13.20	13.20	71.08
Phosphate fertiliser	37.97	37.97	34.72	32.55	56.85	47.74	36.38	0.00	0.00	54.25
Potassium fertiliser	13.80	13.80	13.80	14.72	69.46	69.46	17.25	9.20	9.20	11.73
Seed	6.00	6.00	6.00	4.40	30.20	30.20	10.50	4.00	4.00	5.10
Sprays	29.83	31.92	29.45	29.45	420.00	388.80	52.00	92.50	132.50	20.24
Sundry direct	74.10	74.10	64.30	34.60	150.00	131.00	118.00	48.00	59.00	62.80
Casual labour	5.00	5.00	5.00	4.00	229.50	164.30	3.00	9.00	6.00	9.00
Haulage	0.00	0.00	0.00	0.00	149.43	102.16	0.00	0.00	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	74.56	50.88	0.00	0.00
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	244.40	0.00	29.10
Total Variable Costs	166.71	168.80	153.27	121.72	1105.44	933.66	305.69	457.98	210.70	192.22
Gross Margin Per Hectare	444.65	486.53	406.58	392.24	2256.74	1045.72	592.80	686.82	617.73	356.53

EC Economic Gross Margins - Lincolnshire - (\$1.3:£1) - 1985 40% Restriction Case

	Winter wheat Feed	Winter wheat Milling	Winter wheat barley	Spring barley	Irrigated potatoes	Non-irrigated potatoes	Sugar beet	Peas	Harvest peas	Oil seed rape
	-----UK pounds/ha-----									
OUTPUT										
Yield per hectare-tonnes	6.04	6.04	5.58	5.12	45.82	31.32	37.17	5.30	3.30	2.47
UK Pounds per tonne-Ex farm	98.02	105.07	97.12	97.12	72.00	62.00	23.86	216.00	251.04	210.66
Gross output-UK pounds	591.94	634.52	542.08	497.64	3298.68	1942.00	886.83	1144.80	828.43	521.13
VARIABLE COSTS										
Total Fertiliser Costs comprising-	52.35	52.35	49.56	49.02	148.39	140.58	53.79	13.20	13.20	63.33
Nitrogen Fertiliser	32.55	32.55	29.76	27.90	48.73	40.92	26.04	0.00	0.00	46.50
Phosphate fertiliser	13.80	13.80	13.80	14.72	69.46	69.46	17.25	9.20	9.20	11.73
Potassium fertiliser	6.00	6.00	6.00	6.40	30.20	30.20	10.50	4.00	4.00	5.10
Seed	29.83	31.92	29.45	29.45	420.00	388.80	52.00	92.50	132.50	20.74
Sprays	74.10	74.10	64.30	34.60	150.00	131.00	118.00	48.00	59.00	62.80
Sundry direct	5.00	5.00	5.00	4.00	229.50	164.30	3.00	9.00	6.00	9.00
Casual labour	0.00	0.00	0.00	0.00	146.61	100.23	0.00	0.00	0.00	0.00
Haulage	0.00	0.00	0.00	0.00	0.00	0.00	73.59	50.88	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	244.40	0.00	29.10
Total Variable Costs	161.28	163.37	148.31	117.07	1094.50	924.91	300.38	457.98	210.70	184.47
Gross Margin Per Hectare	430.66	471.15	393.77	380.57	2204.18	1017.08	506.44	686.82	617.73	336.66

EC Economic Gross Margins - Lincolnshire (\$1.3:£1) - 1985 50% Restriction Case

	Winter wheat Feed	Winter wheat Hilling	Winter barley	Spring barley	Irrigated potatoes	Non-irrigated potatoes	Sugar beet	Peas	Harvest peas	Oil seed rape
	-----UK pounds/ha-----									
OUTPUT										
Yield per hectare-tonnes	5.77	5.77	5.33	4.89	44.88	30.69	36.46	5.30	3.30	2.31
UK Pounds per tonne-Ex farm	98.02	105.07	97.12	97.12	72.00	62.00	23.86	216.00	251.04	210.66
Gross output-UK pounds	565.42	606.09	517.79	475.34	3231.65	1902.53	869.92	1144.80	828.43	487.51
VARIABLE COSTS										
Total Fertiliser Costs comprising-	46.93	46.93	44.60	44.37	140.27	133.76	49.45	13.20	13.20	55.58
Nitrogen fertiliser	27.13	27.13	24.80	23.25	40.61	34.10	21.70	0.00	0.00	38.75
Phosphate fertiliser	13.80	13.80	13.80	14.72	69.46	69.46	17.25	9.20	9.20	11.73
Potassium fertiliser	6.00	6.00	6.00	6.40	30.20	30.20	10.50	4.00	4.00	5.10
Seed	29.83	31.92	29.45	29.45	420.00	388.80	52.00	92.50	132.50	20.24
Sprays	74.10	74.10	64.30	34.60	150.00	131.00	118.00	40.00	59.00	62.80
Sundry direct	5.00	5.00	5.00	4.00	229.50	164.30	3.00	9.00	6.00	9.00
Casual labour	0.00	0.00	0.00	0.00	143.63	98.20	0.00	0.00	0.00	0.00
Haulage	0.00	0.00	0.00	0.00	0.00	0.00	72.19	50.88	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	244.40	0.00	29.10
Total Variable Costs	155.86	157.95	143.35	112.42	1083.40	916.06	294.44	457.98	210.70	176.72
Gross Margin Per Hectare	409.56	448.14	374.44	362.92	2148.25	986.48	575.28	686.82	617.73	310.79

No Restriction EC Economic Gross Margins - Lincolnshire - 1985 - \$1.3 : \$1 - £ Per Head

	Dairy Cows	Dairy Youngstock	Autumn Calving Single Sucklers	Spring Calving Single Sucklers	Fattening Autumn Born SS Calves	Fattening Spring Born SS Calves	3/24 Year Beef	Beef Heifer Replacements	Stores 0-1Yr. (Value Added)	Sheep
OUTPUT										
Sales/1.0. Value	660.0	496.3	287.4	198.2	451.1	396.1	469.3	486.4	243.7	47.6
Calf	44.7									
Replacement Charge	(50.1)	(47.0)	(28.4)	(28.4)	(299.3)	(206.4)	(65.8)	(242.8)	(65.8)	(9.6)
Wool										3.9
GROSS OUTPUT	654.6	449.3	259.0	169.8	151.8	189.7	403.5	243.6	177.9	41.9
VARIABLE COSTS										
Concentrates	284.1	95.6	51.4	20.6	61.9	23.8	95.6	53.6	56.8	7.1
VeL. & Med.	18.0	12.0	10.0	10.0	5.0	7.0	12.0	8.0	6.0	2.6
SBI	29.0	20.0	9.0	9.0	8.0	9.0	12.0	10.0	8.0	1.9
Sub-Total	331.1	127.6	70.4	39.6	74.9	39.8	119.6	71.6	70.8	11.6
Gross Margin before Forage	323.5	321.7	188.6	130.2	76.9	149.9	283.9	172.0	107.1	30.3
Forage Costs	46.5	83.7	55.8	46.5	27.9	37.2	83.7	51.2	18.6	7.9
Gross Margin per Head	277.0	238.0	132.8	83.7	49.0	112.7	200.2	120.8	88.5	22.4
Gross Margin per LU	277.0	132.2	110.7	83.7	81.7	140.9	111.2	109.8	221.3	131.8
LU per Head	1.0	1.8	1.2	1.0	0.6	0.8	1.8	1.1	0.4	0.17

Summary of EC Economic Livestock Gross Margins - Lincolnshire - 1985 - £1.3 : £1 - £ Per Livestock Unit

% Nitrogen Restriction	Dairy Cows	Dairy Youngstock	Autumn Calving Single Sucklers	Spring Calving Single Sucklers	Fat Lambing Autumn Born 55 Calves	Fat Lambing Spring Born 55 Calves	3/24 Year Beef	Beef Heifer Replacements	Stores	Sheep
0%	277.0	132.2	110.7	83.7	81.7	140.9	111.2	109.8	221.3	131.8
10%	279.8	135.0	113.5	86.5	84.5	143.7	114.0	112.6	224.1	134.6
20%	282.7	137.9	116.4	89.4	87.4	146.6	116.9	115.4	227.0	137.5
30%	285.5	140.7	119.2	92.2	90.2	149.4	119.7	118.3	229.8	140.3
40%	288.3	143.5	122.0	95.0	93.0	152.2	122.5	121.1	232.6	143.1
50%	291.2	146.4	124.9	97.9	95.9	155.1	125.4	124.0	235.5	146.0

EC Economic Gross Margins - Lincolnshire - (\$1.5:£1) - 1990 No Restriction Case

	Winter wheat Feed	Winter wheat Hilling	Winter wheat Spring barley	Irrigated potatoes	Non-irrigated potatoes	Sugar beet	Peas	Harvest peas	Oil seed rape
	UK pounds/ha								
Yield per hectare-tonnes	7.26	7.26	6.71	51.45	35.18	40.43	5.57	3.63	3.14
UK Pounds per tonne-Ex farm	79.04	85.95	78.27	60.43	50.43	18.81	205.71	208.02	163.57
Gross output-UK pounds	573.83	624.00	525.19	3109.12	1773.88	760.39	1144.70	755.11	512.79
VARIABLE COSTS									
Total Fertiliser Costs comprising-	83.40	83.40	78.00	197.00	181.88	78.90	10.80	13.60	107.34
Nitrogen Fertiliser	63.00	63.00	57.60	94.32	79.20	50.40	0.00	0.00	90.00
Phosphate fertiliser	14.40	14.40	14.40	72.48	72.48	18.00	9.60	9.60	12.24
Potassium fertiliser	6.00	6.00	6.00	30.20	30.20	10.50	4.00	4.00	5.10
Seed	23.94	26.22	23.75	420.00	388.80	52.00	92.50	110.00	15.84
Sprays	74.10	74.10	64.30	150.00	131.00	118.00	40.00	59.00	62.80
Sundry direct	5.00	5.00	5.00	229.50	164.30	3.00	9.00	6.00	9.00
Casual labour	0.00	0.00	0.00	164.64	112.56	0.00	0.00	0.00	0.00
Haulage	0.00	0.00	0.00	0.00	0.00	76.00	50.75	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	239.40	0.00	28.50
Total Variable Costs	186.44	188.72	171.05	1161.14	978.54	327.90	453.25	188.60	223.48
Gross Margin Per Hectare	387.39	435.28	354.14	1947.98	795.34	432.50	691.52	566.51	289.31

EC Economic Gross Margins - Lincolnshire (\$1.5:£1) - 1990 10% Restriction Case

	Winter wheat Feed	Winter wheat Hilling	Winter wheat barley	Spring barley	Irrigated potatoes UK pounds/ha	Non-irrigated potatoes	Sugar beet	Peas	Harvest peas	Oil seed rape
OUTPUT										
Yield per hectare-tonnes	7.14	7.14	6.60	6.06	50.94	34.82	40.16	5.57	3.63	3.07
UK Pounds per tonne-Ex farm	79.04	85.95	78.27	78.27	60.43	50.43	18.81	205.71	208.02	163.57
Gross output-UK pounds	564.65	614.01	516.79	474.43	3078.03	1756.14	755.45	1144.70	755.11	501.51
VARIABLE COSTS										
Total Fertiliser Costs comprising-										
Nitrogen Fertiliser	77.10	77.10	72.24	70.36	187.57	173.76	73.86	10.80	13.60	98.34
Phosphate fertiliser	56.70	56.70	51.84	48.60	84.89	71.28	45.36	0.00	0.00	81.00
Potassium fertiliser	14.40	14.40	14.40	15.36	72.48	72.48	18.00	9.60	9.60	12.24
Seed	6.00	6.00	6.00	6.40	30.70	30.70	10.50	4.00	4.00	5.10
Sprays	23.94	26.72	23.75	23.75	420.00	388.80	52.00	92.50	110.00	15.84
Sundry direct	74.10	74.10	64.30	34.60	150.00	131.00	118.00	48.00	59.00	62.80
Casual labour	5.00	5.00	5.00	4.00	229.50	164.30	3.00	9.00	6.00	9.00
Haulage	0.00	0.00	0.00	0.00	162.99	111.43	0.00	0.00	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	75.51	50.75	0.00	0.00
Total Variable Costs	180.14	182.42	165.29	132.71	1150.06	969.49	322.37	453.25	188.60	214.48
Gross Margin Per Hectare	304.51	431.59	351.50	341.72	1927.97	786.64	433.09	691.52	566.51	287.03

EC Economic Gross Margins - Lincolnshire - (\$1.5:£1) - 1990 20% Restriction Case

OUTPUT	Winter wheat	Winter wheat	Winter barley	Spring barley	Irrigated	Non-irrigated	Sugar beet	Peas	Harvest peas	Oil seed rape
	Feed	Milling	barley	barley	potatoes	potatoes				
	-----UK pounds/ha-----									
Yield per hectare-tonnes	7.01	7.01	6.48	5.95	50.06	34.23	39.87	5.57	3.63	2.98
UK Pounds per tonne-Ex farm	79.04	85.95	78.27	78.27	60.43	50.43	18.81	205.71	208.02	163.57
Gross output-UK pounds	554.32	602.78	507.34	465.75	3025.18	1725.98	749.90	1144.70	755.11	488.18
VARIABLE COSTS										
Total fertiliser Costs comprising-	70.80	70.80	66.48	64.96	178.14	166.04	68.82	10.00	13.60	89.34
Nitrogen Fertiliser	50.40	50.40	46.08	41.20	75.46	63.36	40.32	0.00	0.00	72.00
Phosphate fertiliser	14.40	14.40	14.40	15.36	72.48	72.48	18.00	9.60	9.60	12.24
Potassium fertiliser	6.00	6.00	6.00	6.40	30.20	30.20	10.50	4.00	4.00	5.10
Seed	23.94	26.22	23.75	23.75	420.00	388.80	52.00	92.50	110.00	15.84
Sprays	74.10	74.10	64.30	34.60	150.00	131.00	118.00	48.00	59.00	62.80
Sundry direct	5.00	5.00	5.00	4.00	229.50	164.30	3.00	9.00	6.00	9.00
Casual labour	0.00	0.00	0.00	0.00	160.19	109.52	0.00	0.00	0.00	0.00
Haulage	0.00	0.00	0.00	0.00	0.00	0.00	74.95	50.75	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	239.40	0.00	28.50
Total Variable Costs	173.84	176.12	159.53	127.31	1137.83	959.66	316.77	453.25	188.60	205.48
Gross Margin Per Hectare	380.48	426.66	347.81	338.44	1887.35	766.32	433.13	691.52	566.51	282.70

EC Economic Gross Margins - Lincolnshire - (\$1.5:£1) - 1990 30% Restriction Case

	Winter wheat Feed	Winter wheat Hilling	Winter barley	Spring barley	Irrigated potatoes	Non-irrigated potatoes	Sugar beet	Peas	Harvest peas	Oil seed rape
	-----UK pounds/ha-----									
OUTPUT										
Yield per hectare-tonnes	6.86	6.86	6.34	5.82	49.03	33.52	39.54	5.57	3.63	2.87
UK Pounds per tonne-Ex farm	79.04	85.95	78.27	78.27	60.43	50.43	18.81	205.71	208.02	163.57
Gross output-UK pounds	542.27	589.68	496.31	455.63	2962.99	1690.50	743.74	1144.70	755.11	468.69
VARIABLE COSTS										
Total Fertiliser Costs comprising-	64.50	64.50	60.72	59.56	168.70	158.12	63.78	10.80	13.60	80.34
Nitrogen Fertiliser	44.10	44.10	40.32	37.80	66.02	55.44	35.28	0.00	0.00	63.00
Phosphate fertiliser	14.40	14.40	14.40	15.36	72.48	72.48	18.00	9.60	9.60	12.24
Potassium fertiliser	6.00	6.00	6.00	6.40	30.20	30.20	10.50	4.96	4.00	5.10
Seed	23.94	26.22	23.75	23.75	420.00	388.80	52.00	92.50	110.00	15.84
Sprays	74.10	74.10	64.30	34.60	150.00	131.00	118.00	48.00	59.00	62.80
Sundry direct	5.00	5.00	5.00	4.00	229.50	164.30	3.00	9.00	6.00	9.00
Casual labour	0.00	0.00	0.00	0.00	156.90	107.27	0.00	0.00	0.00	0.00
Haulage	0.00	0.00	0.00	0.00	0.00	0.00	74.33	50.75	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	239.40	0.00	28.50
Total Variable Costs	167.54	169.82	153.77	121.91	1125.11	949.49	311.11	453.25	188.60	196.48
Gross Margin Per Hectare	374.73	419.86	342.54	333.72	1837.89	741.01	432.63	691.52	566.51	272.21

EC Economic Gross Margins - Lincolnshire - (\$1.5:£1) - 1990 40% Restriction Case

	Winter Wheat Feed	Winter wheat Milling	Winter barley	Spring barley	Irrigated potatoes -UK pounds/ha-	Non-irrigated potatoes	Sugar beet	Peas	Harvest peas	Oil seed rape
OUTPUT										
Yield per hectare-tonnes	6.64	6.64	6.14	5.64	48.11	32.89	39.03	5.57	3.63	2.72
UK Pounds per tonne-Ex farm	79.04	85.95	78.27	78.27	60.43	50.43	18.81	205.71	208.02	163.57
Gross output-UK pounds	525.05	570.96	480.55	441.16	2907.03	1658.57	734.08	1144.78	755.11	445.10
VARIABLE COSTS										
Total Fertiliser Costs comprising-	58.20	58.20	54.96	54.16	159.27	150.20	58.74	10.80	13.60	71.34
Nitrogen Fertiliser	37.80	37.80	34.56	32.40	56.59	47.52	30.24	0.00	0.00	54.00
Phosphate fertiliser	14.40	14.40	14.40	15.36	72.48	72.48	18.00	9.60	9.60	12.74
Potassium fertiliser	6.00	6.00	6.00	6.40	30.20	30.20	10.50	4.00	4.00	5.10
Seed	23.94	26.22	23.75	23.75	420.00	388.80	52.00	92.50	110.00	15.84
Sprays	74.10	74.10	64.30	34.60	150.00	131.00	118.00	48.00	59.00	62.80
Sundry direct	5.00	5.00	5.00	4.00	229.50	164.30	3.00	9.00	6.00	9.00
Casual labour	0.00	0.00	0.00	0.00	153.94	105.24	0.00	0.00	0.00	0.00
Haulage	0.00	0.00	0.00	0.00	0.00	0.00	73.37	50.75	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	239.40	0.00	28.50
Total Variable Costs	161.24	163.52	148.01	116.51	1112.71	939.54	305.11	453.25	188.60	187.48
Gross Margin Per Hectare	363.81	407.44	332.54	324.65	1794.32	719.03	428.98	691.52	566.51	257.62

EC Economic Gross Margins - Lincolnshire - (\$1.5:£1) - 1990 50% Restriction Case

	Winter wheat Feed	Winter wheat Milling	Winter wheat barley	Spring barley	Irrigated potatoes	Non-irrigated potatoes	Sugar beet	Peas	Harvest peas	Oil seed rape
OUTPUT	-UK pounds/ha-									
Yield per hectare-tonnes	6.35	6.35	5.86	5.38	47.13	32.22	38.28	5.57	3.63	2.55
UK Pounds per tonne-Ex farm	79.04	85.95	78.27	78.27	60.43	50.43	18.81	205.71	208.02	163.57
Gross output-UK pounds	501.53	545.37	457.02	421.39	2847.96	1624.87	720.09	1144.70	755.11	416.39
VARIABLE COSTS										
Total Fertiliser Costs comprising-	51.90	51.90	49.20	48.76	149.84	142.28	53.70	10.00	13.60	62.34
Nitrogen Fertiliser	31.50	31.50	28.80	27.00	47.16	39.60	25.20	0.00	0.00	45.00
Phosphate fertiliser	14.40	14.40	14.40	15.36	72.48	72.48	18.00	7.60	9.60	12.24
Potassium fertiliser	6.00	6.00	6.00	6.40	30.20	30.20	10.50	4.00	4.00	5.10
Seed	23.94	26.22	23.75	23.75	420.00	388.80	52.00	92.50	110.00	15.84
Sprays	74.10	74.10	64.30	34.60	150.00	131.00	118.00	48.00	59.00	62.80
Sundry direct	5.00	5.00	5.00	4.00	229.50	164.30	3.00	9.00	6.00	9.00
Casual labour	0.00	0.00	0.00	0.00	150.81	103.10	0.00	0.00	0.00	0.00
Haulage	0.00	0.00	0.00	0.00	0.00	0.00	71.97	50.75	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	239.40	0.00	28.50
Total Variable Costs	154.94	157.22	142.25	111.11	1100.15	929.48	298.67	453.25	188.60	178.48
Gross Margin Per Hectare	346.59	388.15	316.77	310.28	1747.81	695.38	421.42	691.52	566.51	237.91

No Restriction EC Economic Gross Margins - Lincolnshire - 1990 - \$1.5 : £1 - £ Per Head

	Dairy Cows	Dairy Youngstock	Autumn Calving Single Sucklers	Spring Calving Single Sucklers	Fattening Autumn Born SS Calves	Fattening Spring Born SS Calves	3/23 Year Beef	Beef Heifer Replacements	Stores 0-1Yr. (Value Added)	Sheep
OUTPUT										
Sales/F.O. Value	540.0	406.6	235.4	162.3	369.5	324.5	384.4	398.4	199.6	37.5
Calfr	36.6	(38.5)	(23.3)	(23.3)	(245.2)	(169.1)	(53.9)	(206.8)	(53.9)	(7.7)
Replacement Charge	(41.0)									3.4
Wool										33.2
GROSS OUTPUT	535.6	368.1	212.1	139.0	124.3	155.4	330.5	191.6	145.7	
VARIABLE COSTS										
Concentrates	227.6	77.8	41.2	16.5	49.6	19.1	77.8	42.9	46.7	5.7
Vel. & Med.	18.0	12.0	10.0	10.0	5.0	7.0	12.0	8.0	6.0	2.6
SDI	29.0	20.0	9.0	9.0	8.0	9.0	12.0	10.0	8.0	1.9
Sub-Total	274.6	109.8	60.2	35.5	62.6	35.1	101.8	60.9	60.7	10.2
Gross Margin before Forage	261.0	258.3	151.9	103.5	61.7	120.3	228.7	130.7	85.0	23.0
Forage Costs	53.3	95.9	64.0	53.3	32.0	42.6	95.9	58.6	21.3	9.1
Gross Margin per Head	207.7	162.4	87.9	50.2	29.7	77.7	132.8	72.1	63.7	13.9
Gross Margin per TU	207.7	90.2	73.3	50.2	49.5	97.1	73.8	65.6	159.3	81.7
TU per Head	1.0	1.8	1.2	1.0	0.6	0.8	1.8	1.1	0.4	0.17

Summary of EC Economic Livestock Gross Margins - Lincolnshire - 1990 - \$1.5 : £1 - £ Per Livestock Unit

% Nitrogen Restriction	Dairy Cows	Dairy Youngstock	Autumn Calving Single Sucklers	Spring Calving Single Sucklers	Fattening Autumn Born 55 Calves	Fattening Spring Born 55 Calves	3/2 Year Beef	Beef Heifer Replacements	Stores	Sheep
0%	207.7	90.2	73.3	50.2	49.5	97.1	73.8	65.6	159.3	81.7
10%	212.5	95.0	78.1	55.0	54.3	101.9	78.6	70.3	164.0	86.5
20%	215.8	98.3	81.4	58.3	57.6	105.2	81.9	73.6	167.3	89.8
30%	219.1	101.6	84.7	61.6	60.9	108.5	85.2	76.9	170.6	93.1
40%	222.4	104.9	88.0	64.9	64.2	111.8	88.5	80.2	173.9	96.4
50%	225.7	108.2	91.3	68.2	67.5	115.1	91.8	83.5	177.2	99.7

EC Economic Gross Margins - Cambridgeshire - (\$1.3:£1) - 1985 No Restriction Case

OUTPUT	Winter wheat Feed	Winter wheat Milling	Winter wheat Spring barley	Irrigated potatoes	Non-irrigated potatoes	Sugar beet	Peas	Harvest peas Dil seed rape	Beans
	-UK pounds/ha-								
Yield per hectare-tonnes	7.00	7.00	5.95	4.25	40.00	32.92	5.30	3.69	3.20
UK Pounds per tonne-Ex farm	98.02	105.07	102.69	109.66	72.00	23.86	216.00	251.04	236.50
Gross output-UK pounds	686.14	735.49	611.01	466.06	2880.00	1052.94	1144.80	925.00	756.82
VARIABLE COSTS									
Total Fertiliser Costs comprising-									
Nitrogen Fertiliser	74.05	74.05	63.20	55.22	170.96	170.96	13.20	13.20	13.20
Phosphate fertiliser	54.25	54.25	43.40	34.10	71.30	71.30	0.00	0.00	0.00
Potassium fertiliser	13.80	13.80	13.80	14.72	69.46	69.46	9.20	9.20	9.20
Seed	6.00	6.00	6.00	6.40	30.20	30.20	4.00	4.00	4.00
Sprays	29.83	31.92	31.16	33.25	420.00	388.80	92.50	132.50	68.00
Sundry direct	74.10	74.10	64.30	34.60	150.00	118.00	48.00	59.00	39.00
Casual labour	5.00	5.00	5.00	4.00	304.50	239.30	9.00	6.00	5.00
Haulage	0.00	0.00	0.00	0.00	128.00	105.34	0.00	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	87.38	50.88	0.00	0.00
Total Variable Costs	182.98	185.07	163.66	127.07	1173.46	1035.40	458.02	210.70	125.20
Gross Margin Per Hectare	503.16	550.42	447.35	338.99	1706.54	1005.64	686.78	714.30	631.62

EC Economic Gross Margins - Cambridgeshire - (\$1.3:£1) - 1985 10% Restriction Case

OUTPUT	Winter Wheat	Winter wheat	Winter barley	Spring barley	Irrigated	Non-irrigated	Sugar beet	Peas	Harvest peas	Oil seed rape	Beans
	Feed	Hilling			potatoes	potatoes					
	-----UK pounds/ha-----										
Yield per hectare-tonnes	6.07	6.07	5.85	4.10	39.60	32.59	43.04	5.30	3.67	2.93	3.20
UK Pounds per tonne-Ex farm	98.02	105.07	102.69	109.66	72.00	62.00	23.86	216.00	251.04	210.66	236.50
Gross output-UK pounds	675.16	723.72	601.23	450.60	2851.20	2020.63	1046.10	1144.80	925.00	618.08	756.82
VARIABLE COSTS											
Total fertiliser Costs comprising-	68.63	68.63	58.86	51.01	163.83	163.83	66.81	13.20	13.20	86.58	13.20
Nitrogen Fertiliser	48.83	48.83	39.06	30.69	64.17	64.17	39.06	0.00	0.00	69.75	0.00
Phosphate fertiliser	13.80	13.80	13.80	14.72	69.46	69.46	17.25	9.20	9.20	11.73	9.20
Potassium fertiliser	6.00	6.00	6.00	6.40	30.20	30.20	10.50	4.00	4.00	5.10	4.00
Seed	29.83	31.92	31.16	33.75	420.00	388.80	52.00	92.50	137.50	2.72	68.00
Sprays	74.10	74.10	64.30	34.40	150.00	131.00	118.00	48.00	59.00	62.80	39.00
Sundry direct	5.00	5.00	5.00	4.00	304.50	239.30	3.00	9.00	6.00	9.00	5.00
Casual labour	0.00	0.00	0.00	0.00	126.72	104.29	0.00	0.00	0.00	0.00	0.00
Haulage	0.00	0.00	0.00	0.00	0.00	0.00	86.81	50.88	0.00	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	244.44	0.00	29.10	0.00
Total Variable Costs	177.56	179.65	159.32	123.66	1165.05	1027.22	326.62	458.02	210.70	190.20	125.20
Gross Margin Per Hectare	497.61	544.08	441.91	334.94	1686.15	993.41	719.48	686.78	714.30	427.88	631.62

EC Economic Gross Margins - Cambridgeshire - (\$1.3:£1) - 1985 20% Restriction Case

	Winter wheat Feed	Winter wheat Milling	Winter barley	Spring barley	Irrigated potatoes	Non-irrigated potatoes	Sugar beet	Peas	Harvest peas	Dil seed rape	Beans
OUTPUT	-UK pounds/ha-										
Yield per hectare-tonnes	6.76	6.76	5.75	4.11	38.92	32.03	43.52	5.30	3.69	2.86	3.20
-UK Pounds per tonne-£x fara	98.02	105.07	107.69	109.66	72.00	62.00	23.86	216.00	251.04	210.66	236.50
Gross output-UK pounds	662.81	710.48	590.23	450.21	2802.24	1905.93	1038.41	1144.80	925.00	601.64	756.82
VARIABLE COSTS											
Total Fertiliser Costs comprising-	63.20	63.20	54.52	48.40	156.70	156.70	62.47	13.20	13.20	78.83	13.20
Nitrogen Fertiliser	43.40	43.40	34.72	27.28	57.04	57.04	34.72	0.00	0.00	62.00	0.00
Phosphate fertiliser	13.80	13.80	13.80	14.72	69.46	69.46	17.25	9.20	9.20	11.73	9.20
Potassium fertiliser	6.00	6.00	6.00	6.40	30.20	30.20	10.50	4.00	4.00	5.10	4.00
Seed	29.83	31.92	31.16	33.25	420.00	388.80	52.00	92.50	132.50	2.72	68.00
Sprays	74.10	74.10	64.30	34.60	150.00	131.00	118.00	48.00	59.00	62.80	39.00
Sundry direct	5.00	5.00	5.00	4.00	304.50	239.30	3.00	9.00	6.00	9.00	5.00
Casual labour	0.00	0.00	0.00	0.00	124.54	102.50	0.00	0.00	0.00	0.00	0.00
Haulage	0.00	0.00	0.00	0.00	0.00	0.00	86.17	50.88	0.00	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	244.44	0.00	29.10	0.00
Total Variable Costs	172.13	174.22	154.98	129.25	1155.74	1018.30	321.64	458.02	210.70	182.45	125.20
Gross Margin Per Hectare	490.68	536.26	435.25	329.96	1646.50	967.63	716.77	686.78	714.30	419.19	631.62

EC Economic Gross Margins - Cambridgeshire - (\$1.3:£1) - 1985 30% Restriction Case

	Winter wheat Feed	Winter wheat Milling	Winter wheat Spring barley	Irrigated potatoes	Non-irrigated potatoes	Sugar beet	Peas	Harvest peas 011 seed rape	Beans	
OUTPUT	-----UK pounds/ha-----									
Yield per hectare-Tonnes	6.62	6.62	5.62	4.02	30.12	31.37	43.16	3.69	2.74	3.20
UK Pounds per tonne-Ex fara	98.02	105.07	102.69	109.66	72.00	62.00	23.86	251.04	210.66	236.50
Gross output-UK pounds	648.40	695.04	577.40	440.42	2744.64	1945.11	1144.80	925.08	577.63	756.82
VARIBLE COSTS										
Total Fertiliser Costs comprising-										
Nitrogen fertiliser	37.97	37.97	30.38	23.87	49.91	49.91	30.38	0.00	54.25	0.00
Phosphate fertiliser	13.80	13.80	13.80	14.72	69.46	69.46	17.25	9.20	11.73	9.20
Potassium fertiliser	6.00	6.00	6.00	6.40	30.20	30.20	10.50	4.60	5.10	4.00
Seed	29.83	31.92	31.16	33.25	420.00	388.00	52.00	132.50	2.72	68.00
Sprays	74.10	74.10	64.30	34.60	150.00	131.00	118.00	59.00	62.80	39.00
Sundry direct	5.00	5.00	5.00	4.00	304.50	239.30	3.00	6.00	9.00	5.00
Casual labour	0.00	0.00	0.00	0.00	121.90	100.39	0.00	0.00	0.00	0.00
Haulage	0.00	0.00	0.00	0.00	0.00	0.00	85.46	0.00	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	244.44	0.00	29.10	0.00
Total Variable Costs	166.71	168.80	150.64	116.84	1146.05	1009.06	316.59	210.70	174.70	125.20
Gross Margin Per Hectare	481.70	526.24	426.76	323.58	1598.59	936.05	713.29	714.38	402.93	631.62

EC Economic Gross Margins - Cambridgeshire (\$1.3:£1) - 1985 50% Restriction Case

	Winter wheat Feed	Winter wheat Milling	Winter wheat barley	Spring barley	Irrigated potatoes	Non-irrigated potatoes	Sugar beet	Peas	Harvest peas	Oil seed rape	Beans
	-----UK pounds/ha-----										
OUTPUT											
Yield per hectare-tonnes	6.12	6.12	5.20	3.71	36.64	30.15	41.79	5.30	3.69	2.44	3.20
UK Pounds per tonne-Ex fara	98.02	105.07	102.69	109.66	72.00	62.00	23.86	216.00	251.04	210.66	236.50
Gross output-UK pounds	599.69	642.82	534.02	407.33	2638.08	1869.59	997.14	1144.80	925.00	513.17	756.82
VARIABLE COSTS											
Total Fertiliser Costs comprising-	46.93	46.93	41.50	38.17	135.31	135.31	49.45	13.20	13.20	55.58	13.20
Nitrogen Fertiliser	27.13	27.13	21.70	17.05	35.65	35.65	21.70	0.00	0.00	38.75	0.00
Phosphate fertiliser	13.80	13.80	13.80	14.72	69.46	69.46	17.25	9.20	9.20	11.73	9.20
Potassium fertiliser	6.00	6.00	6.00	6.40	30.20	30.20	10.50	4.00	4.00	5.10	4.00
Seed	29.83	31.92	31.16	33.25	420.00	388.80	52.00	92.50	132.50	2.72	68.00
Sprays	74.10	74.10	64.30	34.60	150.00	131.00	118.00	48.00	59.00	62.80	39.00
Sundry direct	5.00	5.00	5.00	4.00	304.50	239.30	3.00	9.00	6.00	9.00	5.00
Casual labour	0.00	0.00	0.00	0.00	117.25	96.50	0.00	0.00	0.00	0.00	0.00
Haulage	0.00	0.00	0.00	0.00	0.00	0.00	82.75	50.88	0.00	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	244.44	0.00	29.10	0.00
Total Variable Costs	155.86	157.95	141.96	110.02	1127.06	990.91	305.20	458.02	210.70	159.20	125.20
Gross Margin Per Hectare	443.83	484.87	392.06	297.31	1511.02	878.69	691.94	686.78	714.30	353.97	631.62

No Restriction EC Economic Gross Margins - Cambridgeshire - 1985 - \$1.3 : £1 - £ Per Head

	Dairy Cows	Dairy Youngstock	Autumn Calving Single Sucklers	Spring Calving Single Sucklers	Fattening Autumn Born SS Calves	Fattening Spring Born SS Calves	3/24 Year Beef	Beef Heifer Replacements	Stores 0-1yr. (Value Added)	Sheep
OUTPUT										
Sales/I.O. Value	654.6									
Calf										
Replacement Charge										
Wool										
GROSS OUTPUT	654.6									
VARIABLE COSTS										
Concentrates	316.6									
Vel. & Med.	18.0	12.0	10.0	10.0	5.0	7.0	12.0	8.0	N/A	2.6
SDI	29.0	20.0	9.0	9.0	8.0	9.0	12.0	10.0		1.9
Sub-Total	363.6									
Gross Margin before Forage	291.0	321.7	188.6	130.2	76.9	149.9	283.9	172.0		30.3
Forage Costs	51.6	92.9	61.9	51.6	31.0	41.3	92.9	56.8		8.8
Gross Margin per Head	239.4	228.8	126.7	78.6	45.9	108.6	191.0	115.2		21.5
Gross Margin per LU	239.4	127.1	105.6	78.6	76.5	135.8	106.1	104.7		126.5
LU per Head	1.0	1.8	1.2	1.0	0.6	0.8	1.8	1.1		0.17

Summary of EC Economic Livestock Gross Margins - Cambridgeshire - 1985 - \$1.3 : £1 - £ Per Livestock Unit

% Nitrogen Restriction	Dairy Cows	Dairy Youngstock	Autumn Calving Single Sucklers	Spring Calving Single Sucklers	Fattening Autumn Born 55 Calves	Fattening Spring Born 55 Calves	3/2 Year Beef	Beef Heifer Replacements	Stores	Sheep
0%	239.4	127.1	105.6	78.6	76.5	135.8	106.1	104.7	N/A	126.5
10%	241.1	128.8	107.3	80.3	78.2	137.5	107.8	106.4		128.2
20%	242.8	130.5	109.0	82.0	79.9	139.2	109.5	108.1		129.9
30%	244.4	132.1	110.6	83.6	81.5	140.8	111.1	109.7		131.5
40%	246.1	133.8	112.3	85.3	83.2	142.5	112.8	111.4		133.2
50%	247.8	135.5	114.0	87.0	84.9	144.2	114.5	113.1		134.9

EC Economic Gross Margins - Cambridgeshire - (\$1.5:£1) - 1990 No Restriction Case

	Winter wheat Feed	Winter wheat Milling	Winter wheat Spring barley	Irrigated potatoes	Non-irrigated potatoes	Sugar beet	Peas	Harvest peas	Oil seed rape	Beans
OUTPUT	-----UK pounds/ha-----									
Yield per hectare-tonnes	7.70	7.70	4.68	42.00	34.57	46.34	5.57	3.69	3.30	3.52
UK Pounds per tonne-Ex fara	79.04	85.95	88.37	60.43	50.43	18.81	216.00	208.02	163.57	195.98
Gross output-UK pounds	608.61	661.82	413.13	2538.06	1743.16	871.59	1202.04	766.55	539.78	689.83
VARIABLE COSTS										
Total Fertiliser Costs comprising-	83.40	83.40	61.36	185.48	185.48	78.90	13.60	13.60	107.34	13.60
Nitrogen fertiliser	63.00	63.00	39.60	82.80	82.80	50.40	0.00	0.00	90.00	0.00
Phosphate fertiliser	14.40	14.40	15.36	72.48	72.48	18.00	9.60	9.60	12.24	9.60
Potassium fertiliser	6.00	6.00	6.40	30.20	30.20	10.50	4.00	4.00	5.10	4.00
Seed	23.94	26.22	25.08	420.00	388.80	52.00	92.50	110.00	15.84	64.00
Sprays	74.10	74.10	34.60	150.00	131.00	118.00	48.00	59.00	62.80	39.00
Sundry direct	5.00	5.00	4.00	304.50	239.30	3.00	9.00	6.00	9.00	5.00
Casual labour	0.00	0.00	0.00	134.40	110.61	0.00	0.00	0.00	0.00	0.00
Haulage	0.00	0.00	0.00	0.00	0.00	87.11	50.75	0.00	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	239.40	0.00	28.50	0.00
Total Variable Costs	186.44	188.72	126.75	1194.38	1055.19	339.01	453.25	188.60	273.48	171.60
Gross Margin Per Hectare	422.17	473.10	286.38	1343.68	687.97	532.58	748.79	577.95	316.30	568.23

EC Economic Gross Margins - Cambridgeshire - (\$1.5:£1) - 1990 10% Restriction Case

OUTPUT	Winter wheat	Winter wheat	Winter barley	Spring barley	Irrigated	Non-irrigated	Sugar beet	Peas	Harvest peas	Oil seed rape	Beans
	Feed	Milling	potatoes	potatoes	potatoes	potatoes					
	UK pounds/ha										
Yield per hectare-tonnes	7.58	7.58	6.44	4.60	41.58	34.22	46.04	5.57	3.69	3.23	3.52
UK Pounds per tonne-Ex farm	79.04	85.95	82.76	88.37	60.43	50.43	18.81	216.00	208.92	163.57	195.98
Gross output-UK pounds	598.87	651.23	533.00	406.52	2512.68	1725.73	865.92	1202.04	766.55	527.91	689.83
VARIABLE COSTS											
Total Fertiliser Costs comprising-	77.10	77.10	65.76	57.40	177.20	177.20	73.86	13.60	13.60	98.34	13.60
Nitrogen Fertiliser	56.70	56.70	45.36	35.64	74.52	74.52	45.36	0.00	0.00	81.00	0.00
Phosphate fertiliser	14.40	14.40	14.40	15.36	72.48	72.48	18.00	9.60	9.60	12.24	9.60
Potassium fertiliser	6.00	6.00	6.00	6.40	30.20	30.20	10.50	4.00	4.00	5.10	4.00
Seed	23.94	26.22	25.08	26.79	420.00	388.80	52.00	92.50	110.00	15.84	64.00
Sprays	74.10	74.10	64.30	34.60	150.00	131.00	118.00	48.00	59.00	62.80	39.00
Sundry direct	5.00	5.00	5.00	4.00	304.50	239.30	3.00	9.00	6.00	9.00	5.00
Casual Labour	0.00	0.00	0.00	0.00	133.06	109.51	0.00	0.00	0.00	0.00	0.00
Haulage	0.00	0.00	0.00	0.00	0.00	0.00	86.55	50.75	0.00	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	239.40	0.00	28.50	0.00
Total Variable Costs	180.14	182.42	160.14	122.79	1184.76	1045.81	333.41	453.25	188.60	214.48	121.60
Gross Margin Per Hectare	418.73	468.81	372.86	283.73	1327.92	679.93	532.52	748.79	577.95	313.43	568.23

EC Economic Gross Margins - Cambridgeshire - (\$1.5:£1) - 1990 20% Restriction Case

OUTPUT	Winter wheat	Winter wheat	Winter wheat	Spring barley	Irrigated	Non-irrigated	Sugar beet	Peas	Harvest peas	Oil seed rape	Beans
	Feed	Milling	barley	potatoes	potatoes	potatoes					
	-----UK pounds/ha-----										
Yield per hectare-tonnes	7.44	7.44	6.32	4.52	40.87	33.63	45.70	5.57	3.69	3.14	3.52
UK Pounds per tonne-Ex farm	79.04	85.95	82.76	88.37	60.43	50.43	18.81	216.00	208.02	163.57	195.98
Gross output-UK pounds	587.92	639.31	523.25	399.08	2469.53	1696.10	859.56	1202.04	766.55	513.87	689.83
VARIABLE COSTS											
Total Fertiliser Costs comprising-	70.80	70.80	60.72	53.44	168.92	168.92	68.82	13.60	13.60	89.34	13.60
Nitrogen Fertiliser	50.40	50.40	40.32	31.68	66.24	66.24	40.32	0.00	0.00	72.00	0.00
Phosphate fertiliser	14.40	14.40	14.40	15.36	72.48	72.48	18.00	9.60	9.60	12.24	9.60
Potassium fertiliser	6.00	6.00	6.00	6.40	30.20	30.20	10.50	4.00	4.00	5.10	4.00
Seed	23.94	26.22	25.08	26.79	420.00	388.80	52.00	92.50	110.00	15.84	64.00
Sprays	74.10	74.10	64.30	34.60	150.00	131.00	118.00	48.00	59.00	62.80	39.00
Sundry direct	5.00	5.00	5.00	4.00	304.50	239.30	3.00	9.00	6.00	9.00	5.00
Casual labour	0.00	0.00	0.00	0.00	130.77	107.62	0.00	0.00	0.00	0.00	0.00
Haulage	0.00	0.00	0.00	0.00	0.00	0.00	85.91	50.75	0.00	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	239.40	0.00	28.50	0.00
Total Variable Costs	173.84	176.12	155.10	110.83	1174.19	1035.64	327.73	453.25	188.60	205.48	121.60
Gross Margin Per Hectare	414.08	463.19	368.15	280.25	1295.34	660.45	531.83	748.79	577.95	308.39	568.23

EC Economic Gross Margins - Cambridgeshire - (\$1.5:£1) - 1990 30% Restriction Case

	Winter wheat Feed	Winter wheat Milling	Winter wheat Spring barley	Irrigated potatoes	Non-irrigated potatoes	Sugar beet	Peas	Harvest peas Oil seed rape	Beans
	---UK pounds/ha---								
OUTPUT									
Yield per hectare-tonnes	7.28	7.28	6.19	4.42	40.03	32.94	5.57	3.69	3.52
UK Pounds per tonne-Ex farm	79.04	85.95	82.76	88.37	60.43	50.43	216.00	208.02	163.57
Gross output-UK pounds	575.13	625.42	511.87	390.41	2410.77	1661.23	1202.04	766.55	493.36
	64.50	64.50	55.68	49.48	160.64	160.64	13.60	13.60	13.60
VARIABLE COSTS									
Total Fertiliser Costs comprising-									
Nitrogen Fertiliser	44.10	44.10	35.28	27.72	57.96	57.96	0.00	0.00	0.00
Phosphate fertiliser	14.40	14.40	14.40	15.36	72.48	72.48	9.60	9.60	9.60
Potassium fertiliser	6.00	6.00	6.00	6.40	30.20	30.20	4.00	4.00	4.00
Seed	23.94	26.22	25.08	26.79	420.00	308.80	92.50	110.00	64.00
Sprays	74.10	74.10	64.30	34.60	150.00	131.00	48.00	59.00	39.00
Sundry direct	5.00	5.00	5.00	4.00	304.50	239.30	9.00	6.00	5.00
Casual labour	0.00	0.00	0.00	0.00	128.08	105.41	0.00	0.00	0.00
Haulage	0.00	0.00	0.00	0.00	0.00	0.00	50.75	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	239.40	0.00	0.00
Total Variable Costs	167.54	169.82	150.66	114.87	1163.22	1025.15	453.25	188.60	121.60
Gross Margin Per Hectare	407.59	455.60	361.81	275.54	1255.55	636.08	748.79	577.95	568.23

EC Economic Gross Margins - Cambridgeshire (\$1.5:£1) - 1990 40% Restriction Case

	Winter Wheat Feed	Winter wheat Milling	Winter wheat barley	Spring barley	Irrigated potatoes	Non-irrigated potatoes	Sugar beet	Peas	Harvest peas	Oil seed rape	Beans	
	UK pounds/ha											
OUTPUT												
Yield per hectare-tonnes	7.05	7.05	5.99	4.28	39.27	32.32	44.73	5.57	3.49	2.86	3.52	
UK Pounds per tonne-Ex fara	79.04	85.95	82.76	88.37	60.43	50.43	18.81	216.00	208.02	163.57	195.98	
Gross output-UK pounds	556.88	605.56	495.62	378.01	2373.09	1629.86	841.43	1202.04	766.55	468.53	689.83	
VARIABLE COSTS												
Total Fertiliser Costs comprising-												
Nitrogen Fertiliser	58.20	58.20	50.64	45.52	152.36	152.36	58.74	13.60	13.60	71.34	13.60	
Phosphate fertiliser	37.80	37.80	30.24	23.76	49.68	49.68	30.24	0.00	0.00	54.00	0.00	
Potassium fertiliser	14.40	14.40	14.40	15.36	72.48	72.48	18.00	9.60	9.60	12.24	9.60	
Seed	6.00	6.00	6.00	6.40	30.20	30.20	10.50	4.00	4.00	5.10	4.00	
Sprays	23.94	26.22	25.08	26.79	420.00	308.80	52.00	92.50	110.00	15.84	64.00	
Sundry direct	74.10	74.10	64.30	34.60	150.00	131.00	118.00	48.00	59.00	62.80	39.00	
Casual labour	5.00	5.00	5.00	4.00	304.50	239.30	3.00	9.00	6.00	9.00	5.00	
Haulage	0.00	0.00	0.00	0.00	125.66	103.42	0.00	0.00	0.00	0.00	0.00	
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	84.10	50.75	0.00	0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	239.40	0.00	28.50	0.00	
Total Variable Costs	161.24	163.52	145.02	110.91	1152.52	1014.88	315.84	453.25	188.60	187.48	121.60	
Gross Margin Per Hectare	395.64	442.04	350.60	267.10	1220.56	614.98	525.59	748.79	577.95	281.05	568.23	

EC Economic Gross Margins - Cambridgeshire - (\$1.5:£1) - 1990 50% Restriction Case

	Winter wheat Feed	Winter wheat Milling	Winter barley	Spring barley	Irrigated potatoes	Non-irrigated potatoes	Sugar beet	Peas	Harvest peas	Oil seed rape	Beans
OUTPUT	-----UK pounds/ha-----										
Yield per hectare-tonnes	6.73	6.73	5.72	4.09	30.47	31.66	43.88	5.57	3.69	2.68	3.52
UK Pounds per tonne-Ex farm	79.04	85.95	82.76	86.37	69.43	50.43	18.81	216.00	208.02	163.57	195.98
Gross output-UK pounds	531.92	578.43	473.41	361.08	2324.86	1596.74	825.40	1202.04	766.55	438.30	689.83
VARIABLE COSTS											
Total Fertiliser Costs comprising-											
Nitrogen Fertiliser	51.90	51.90	45.60	41.56	144.08	144.08	53.70	13.60	13.60	62.34	13.60
Phosphate fertiliser	31.50	31.50	25.20	19.80	41.40	41.40	25.20	0.00	0.00	45.00	0.00
Potassium fertiliser	14.40	14.40	14.40	15.36	72.40	72.48	18.00	9.60	9.60	12.24	9.60
Seed	6.00	6.00	6.00	6.40	30.20	30.20	10.50	4.00	4.00	5.10	4.00
Sprays	23.94	26.22	25.08	26.79	420.00	308.80	52.00	92.50	110.00	15.84	64.00
Sundry direct	74.10	74.10	64.30	34.60	150.00	131.00	118.00	48.00	59.00	62.80	39.00
Casual labour	5.00	5.00	5.00	4.00	304.50	239.30	3.00	9.00	4.00	9.00	5.00
Haulage	0.00	0.00	0.00	0.00	123.11	101.32	0.00	0.00	0.00	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	82.50	50.75	0.00	0.00	0.00
Total Variable Costs	154.94	157.22	139.98	104.95	1141.69	1004.50	309.20	453.25	188.60	178.48	121.60
Gross Margin Per Hectare	376.98	421.21	333.43	254.13	1183.17	592.24	516.20	748.79	577.95	259.82	568.23

No Restriction EC Economic Gross Margins - Cambridgeshire - 1990 - \$1.5 : £1 - £ Per Head

	Dairy Cows	Dairy Youngstock	Autumn Calving Single Sucklers	Spring Calving Single Sucklers	Fattening Autumn Born SS Calves	Fattening Spring Born SS Calves	3/2 Year Beef	Beef Heifer Replacements	Stores 0-1 Yr. (Value Added)	Sheep
OUTPUT										
Sales/1.0. Value										
Calf										
Replacement Charge										
Wool										
GROSS OUTPUT	535.6									
VARIBLE COSTS										
Concentrates	253.7									
Vet. & Med.	18.0	12.0	10.0	10.0	5.0	7.0	12.0	8.0	6.0	2.6
SUI	29.0	20.0	9.0	9.0	8.0	9.0	12.0	10.0	8.0	1.9
Sub-Total	300.7									
Gross Margin before Forage	234.9	258.3	151.9	103.5	61.7	120.3	228.7	130.7	N/A	23.0
Forage Costs	54.6	98.3	65.5	54.6	32.8	43.7	98.3	60.1		9.3
Gross Margin per Head	180.3	160.0	86.4	48.9	28.9	76.6	130.4	70.6		13.7
Gross Margin per LU	180.3	88.9	72.0	48.9	48.2	95.8	72.4	64.2		80.6
LU per Head	1.0	1.8	1.2	1.0	0.6	0.8	1.8	1.1	0.4	0.17

Summary of EC Economic Livestock Gross Margins - Cambridgeshire - 1990 - \$1.5 : \$1 - \$ Per Livestock Unit

% Nitrogen Restriction	Dairy Cows	Dairy Youngstock	Autumn Calving Single Sucklers	Spring Calving Single Sucklers	Fattening Autumn Born SS Calves	Fattening Spring Born SS Calves	3/21 Year Beef	Beef Heifer Replacements	Stores	Sheep
0%	180.3	88.9	72.0	48.9	48.2	95.8	72.4	64.2	N/A	80.6
10%	182.3	90.9	74.0	50.9	50.2	97.8	74.4	66.2		82.6
20%	184.2	92.8	75.9	52.8	52.1	99.7	76.3	68.1		84.5
30%	186.2	94.8	77.9	54.8	54.1	101.7	78.3	70.1		86.5
40%	188.1	96.7	79.8	56.7	56.0	103.6	80.2	72.0		88.4
50%	190.1	98.7	81.8	58.7	58.0	105.6	82.2	74.0		90.4

APPENDIX VII

LINCOLNSHIRE AND CAMBRIDGESHIRE CATCHMENT AREAS

EUROPEAN COMMUNITY ECONOMIC GROSS MARGINS

CROPS AND LIVESTOCK

1990 \$1.80:£1

EC Economic Gross Margins - Lincolnshire - (\$1.8:£1) - 1990 No Restriction Case

OUTPUT	Winter wheat	Winter wheat	Winter barley	Spring barley	Irrigated		Non-irrigated	Sugar beet	Peas	Harvest peas	Oil seed rape
	Feed	Milling			potatoes	potatoes/ha	potatoes				
Yield per hectare-tonnes	7.26	7.26	6.71	6.16	51.45	51.45	35.18	40.43	5.57	3.63	3.14
UK Pounds per tonne-Ex farm	64.26	71.08	63.59	63.59	47.89	47.89	37.89	13.35	205.71	174.60	137.56
Gross output-UK pounds	466.53	516.04	426.69	391.71	2463.94	2463.94	1332.78	539.67	1144.78	633.80	431.25
VARIABLE COSTS											
Total Fertiliser Costs comprising-	68.70	68.70	64.20	62.28	160.14	160.14	147.54	64.65	10.80	10.80	88.77
Nitrogen Fertiliser	52.50	52.50	48.00	45.00	78.60	78.60	66.00	42.00	0.00	0.00	75.00
Phosphate fertiliser	11.40	11.40	11.40	12.16	57.38	57.38	57.38	14.25	7.60	7.60	9.69
Potassium fertiliser	4.80	4.80	4.80	5.12	24.16	24.16	24.16	8.40	3.20	3.20	4.08
Seed	19.57	21.66	19.38	19.38	420.00	420.00	388.80	52.00	92.50	92.50	13.28
Sprays	74.10	74.10	64.30	34.60	150.00	150.00	131.00	118.00	40.00	59.00	62.80
Sundry direct	5.00	5.00	5.00	4.00	229.50	229.50	164.30	3.00	9.00	6.00	9.00
Casual labour	0.00	0.00	0.00	0.00	164.64	164.64	112.56	0.00	0.00	0.00	0.00
Haulage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	73.57	40.97	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	234.36	0.00	27.90
Total Variable Costs	167.37	169.46	152.88	120.26	1124.28	1124.28	944.20	311.22	443.63	168.30	201.75
Gross Margin Per Hectare	299.16	346.58	273.81	271.45	1339.66	1339.66	388.58	228.45	701.14	465.50	229.50

EC Economic Gross Margins - Lincolnshire - (\$1.8:£1) - 1990 10% Restriction Case

	Winter wheat		Winter wheat		Spring barley		Non-irrigated		Sugar beet		Peas		Harvest peas		Oil seed rape	
	Feed	Milling	Winter wheat	Winter wheat	Spring barley	Irrigated	Non-irrigated	potatoes	Sugar beet	Peas	Harvest peas	Oil seed rape				
	-----UK pounds/ha-----															
OUTPUT																
Yield per hectare-tonnes	7.14	7.14	6.60	6.06	6.06	50.94	34.82	40.16	5.57	3.63	3.07					
UK Pounds per tonne-ex far	64.26	71.08	63.59	63.59	63.59	47.89	37.89	13.35	205.71	174.60	137.56					
Gross output-UK pounds	459.06	507.78	419.86	385.45	385.45	2439.30	1319.45	536.17	1144.78	633.80	421.76					
VARIABLE COSTS																
Total Fertiliser Costs comprising-	63.45	63.45	59.40	57.78	57.78	152.28	140.94	60.45	10.80	10.80	81.27					
Nitrogen Fertiliser	47.25	47.25	43.20	40.50	40.50	70.74	59.40	37.80	0.00	0.00	67.50					
Phosphate fertiliser	11.40	11.40	11.40	12.16	12.16	57.38	57.38	14.25	7.60	7.60	9.89					
Potassium fertiliser	4.80	4.80	4.80	5.12	5.12	24.16	24.16	8.40	3.20	3.20	4.08					
Seed	19.57	21.66	19.38	19.38	19.38	420.00	388.80	52.00	92.50	92.50	13.28					
Sprays	74.10	74.10	64.30	34.60	34.60	150.00	131.00	118.00	48.00	59.00	62.80					
Sundry direct	5.00	5.00	5.00	4.00	4.00	229.50	164.30	3.00	7.00	6.00	9.00					
Casual labour	0.00	0.00	0.00	0.00	0.00	162.99	111.43	0.00	0.00	0.00	0.00					
Harage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	73.10	48.97	0.00	0.00					
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	234.36	0.00	27.90					
Total Variable Costs	162.12	164.21	148.08	115.76	115.76	1114.77	936.47	306.55	443.63	168.30	194.25					
Gross Margin Per Hectare	296.94	343.57	271.78	269.69	269.69	1324.53	382.98	229.62	701.14	465.50	227.51					

EC Economic Gross Margins - Lincolnshire - (\$1.8:£1) - 1990 20% Restriction Case

OUTPUT	Winter wheat	Winter wheat	Winter barley	Spring barley	Irrigated	Non-irrigated	Sugar beet	Peas	Harvest peas	Oil seed rape
	Feed	Milling	barley	barley	potatoes	potatoes				
	UK pounds/ha									
Yield per hectare-tonnes	7.01	7.01	6.48	5.95	50.06	34.23	39.87	5.57	3.63	2.98
UK Pounds per tonne-Ex far*	64.26	71.08	63.59	63.59	47.89	37.89	13.35	205.71	174.60	137.56
Gross output-UK pounds	450.67	498.50	412.18	378.40	2397.41	1296.80	532.23	1144.70	633.80	410.55
VARIABLE COSTS										
Total Fertiliser Costs comprising-	58.20	58.20	54.60	53.28	144.42	134.34	56.25	10.80	10.80	73.77
Nitrogen Fertiliser	42.00	42.00	38.40	36.00	62.88	52.80	33.60	0.00	0.00	60.00
Phosphate fertiliser	11.40	11.40	11.40	12.16	57.38	57.38	14.25	7.60	7.60	9.69
Potassium fertiliser	4.80	4.80	4.80	5.12	24.16	24.16	8.40	3.20	3.20	4.08
Seed	19.57	21.66	19.38	19.38	420.00	388.80	52.00	92.50	92.50	13.28
Sprays	74.10	74.10	64.30	34.60	150.00	131.00	118.00	48.00	59.00	62.80
Sundry direct	5.00	5.00	5.00	4.00	229.50	164.30	3.00	9.00	6.00	9.00
Casual labour	0.00	0.00	0.00	0.00	160.19	109.52	0.00	0.00	0.00	0.00
Haulage	0.00	0.00	0.00	0.00	0.00	0.00	72.56	48.97	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	234.36	0.00	27.90
Total Variable Costs	156.87	158.96	143.28	111.26	1104.11	927.96	301.81	443.63	168.30	186.75
Gross Margin Per Hectare	293.80	339.54	268.90	267.14	1293.30	368.83	230.42	701.14	465.50	223.80

EC Economic Gross Margins - Lincolnshire - (\$1.8:£1) - 1990 30% Restriction Case

OUTPUT	Winter wheat	Winter wheat	Winter barley	Spring barley	Irrigated	Non-irrigated	Sugar beet	Peas	Harvest peas	Oil seed rape
	Feed	Milling			potatoes	potatoes				
	-UK pounds/ha-									
Yield per hectare-tonnes	6.86	6.86	6.34	5.82	49.03	33.52	39.54	5.57	3.63	2.87
UK Pounds per tonne-Ex farm	64.26	71.08	63.59	63.59	47.89	37.89	13.35	205.71	174.60	137.56
Gross output-UK pounds	440.87	487.66	403.22	370.17	2340.14	1270.14	527.85	1144.78	633.80	394.16
VARIABLE COSTS										
Total Fertiliser Costs comprising-	52.95	52.95	49.80	48.78	136.56	127.74	52.05	10.80	10.80	66.27
Nitrogen Fertiliser	36.75	36.75	33.60	31.50	55.02	46.20	29.40	0.00	0.00	52.50
Phosphate fertiliser	11.40	11.40	11.40	12.16	57.38	57.38	14.25	7.60	7.60	9.69
Potassium fertiliser	4.80	4.80	4.80	5.12	24.16	24.16	8.40	3.20	3.20	4.98
Seed	19.57	21.66	19.38	19.38	420.00	388.80	52.00	92.50	92.50	13.28
Sprays	74.10	74.10	64.30	34.60	150.00	131.00	118.00	48.00	59.00	62.80
Sundry direct	5.00	5.00	5.00	4.00	229.50	164.30	3.00	9.00	6.00	9.00
Casual labour	0.00	0.00	0.00	0.00	156.90	107.27	0.00	0.00	0.00	0.00
Haulage	0.00	0.00	0.00	0.00	0.00	0.00	71.96	48.97	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	234.36	0.00	27.90
Total Variable Costs	151.62	153.71	138.48	106.76	1092.96	919.11	297.01	443.63	168.30	179.25
Gross Margin Per Hectare	289.25	333.95	264.74	263.41	1255.17	351.03	230.84	701.14	465.50	214.91

EC Economic Gross Margins - Lincolnshire - (\$1.8:£1) - 1990 40% Restriction Case

	Winter wheat Feed	Winter wheat Hilling	Winter wheat barley	Spring barley	Irrigated potatoes	Non-irrigated potatoes	Sugar beet	Peas	Harvest peas	Oil seed rape
OUTPUT	UK pounds/ha									
Yield per hectare-tonnes	6.64	6.64	6.14	5.64	48.11	32.89	39.03	5.57	3.63	2.72
UK Pounds per tonne-Ex farm	64.26	71.08	63.59	63.59	47.89	37.89	13.35	205.71	174.60	137.56
Gross output-UK pounds	426.87	472.18	390.42	358.42	2303.78	1246.15	521.00	1144.78	633.80	374.33
VARIABLE COSTS										
Total Fertiliser Costs comprising-	47.70	47.70	45.00	44.28	128.70	121.14	47.85	10.00	10.80	58.77
Nitrogen Fertiliser	31.50	31.50	28.80	27.00	47.16	39.60	25.20	0.00	0.00	45.00
Phosphate fertiliser	11.40	11.40	11.40	12.16	57.38	57.38	14.25	7.60	7.60	9.69
Potassium fertiliser	4.80	4.80	4.80	5.12	24.16	24.16	9.40	3.20	3.20	4.08
Seed	19.57	21.66	19.38	19.38	420.00	388.80	52.00	92.50	92.50	13.28
Sprays	74.10	74.10	64.30	34.60	150.00	131.00	118.00	48.00	59.00	62.80
Sundry direct	5.00	5.00	5.00	4.00	229.50	164.30	3.00	9.00	6.00	9.00
Casual labour	0.00	0.00	0.00	0.00	153.94	105.24	0.00	0.00	0.00	0.00
Haulage	0.00	0.00	0.00	0.00	0.00	0.00	71.03	48.97	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	234.36	0.00	27.90
Total Variable Costs	146.37	148.46	133.68	102.26	1082.14	910.48	291.88	443.63	168.30	171.75
Gross Margin Per Hectare	280.50	323.72	256.74	256.16	1221.65	335.67	229.12	701.14	465.50	202.58

EC Economic Gross Margins - Lincolnshire - (\$1.8:£1) - 1990 50% Restriction Case

	Winter wheat Feed	Winter wheat Milling	Winter wheat barley	Spring barley	Irrigated potatoes -UK pounds/ha-	Non-irrigated potatoes	Sugar beet	Peas	Harvest peas	Oil seed rape
OUTPUT										
Yield per hectare-tonnes	6.35	6.35	5.86	5.38	47.13	32.22	38.28	5.57	3.63	2.55
UK Pounds per tonne-Ex farm	64.26	71.08	63.59	63.59	47.89	37.89	13.35	205.71	174.60	137.56
Gross output-UK pounds	407.75	451.02	372.73	342.36	2256.97	1220.83	511.07	1144.78	633.80	350.18
VARIABLE COSTS										
Total Fertiliser Costs comprising-	42.45	42.45	40.70	39.78	120.84	114.54	43.65	10.80	10.80	51.27
Nitrogen Fertiliser	26.25	26.25	24.00	22.50	39.30	33.00	21.00	0.00	0.00	37.50
Phosphate fertiliser	11.40	11.40	11.40	12.16	57.38	57.38	14.25	7.60	7.60	9.69
Potassium fertiliser	4.80	4.80	4.80	5.12	24.16	24.16	8.40	3.20	3.20	4.08
Seed	19.57	21.66	19.38	19.38	420.00	388.80	52.00	92.50	92.50	13.28
Sprays	74.10	74.10	64.30	34.60	150.00	131.00	118.00	48.00	59.00	62.80
Sundry direct	5.00	5.00	5.00	4.00	229.50	164.30	3.00	9.00	6.00	9.00
Casual labour	0.00	0.00	0.00	0.00	150.81	103.10	0.00	0.00	0.00	0.00
Haulage	0.00	0.00	0.00	0.00	0.00	0.00	69.67	48.97	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	234.36	0.00	27.90
Total Variable Costs	141.12	143.21	128.88	97.76	1071.15	901.74	286.32	443.63	168.30	164.25
Gross Margin Per Hectare	266.63	307.81	244.05	244.60	1185.82	319.08	224.75	701.14	465.50	185.93

No Restriction EC Economic Gross Margins - Lincolnshire - 1990 - \$1.8 : \$1 - £ Per Head

	Dairy Cows	Dairy Youngstock	Autumn Calving Single Sucklers	Spring Calving Single Sucklers	Fattening Autumn Born SS Calves	Fattening Spring Born SS Calves	3/2 Year Beef	Beef Heifer Replacements	Stores 0-1Yr. (Value Added)	Sheep
OUTPUT										
Sales/T.O. Value	420.0	343.2	198.7	137.0	311.9	273.9	324.5	336.3	168.5	31.1
Calf	30.9									
Replacement Charge	(34.6)	(32.5)	(19.7)	(19.7)	(207.0)	(142.8)	(45.5)	(174.6)	(45.5)	(6.6)
Wool										2.8
GROSS OUTPUT	416.3	310.7	179.0	117.3	104.9	131.1	279.0	161.7	123.0	27.3
VARIABLE COSTS										
Concentrates	190.7	64.8	34.5	13.8	41.6	16.0	64.8	36.0	38.7	4.8
Vel. & Med.	18.0	12.0	10.0	10.0	5.0	7.0	12.0	8.0	6.0	2.6
SOI	29.0	20.0	9.0	9.0	8.0	9.0	12.0	10.0	8.0	1.9
Sub-Total	237.7	96.8	53.5	32.8	54.6	32.0	88.8	54.0	52.7	9.3
Gross Margin before Forage	178.6	213.9	125.5	84.5	50.3	99.1	190.2	107.7	70.3	18.0
Forage Costs	45.9	82.6	55.1	45.9	27.5	36.7	82.6	50.5	18.4	7.8
Gross Margin per Head	132.7	131.3	70.4	38.6	22.8	62.4	107.6	57.2	51.9	10.2
Gross Margin per LU	132.7	72.9	58.7	39.6	38.0	78.0	59.8	52.0	129.8	60.0
LU per Head	1.0	1.8	1.2	1.0	0.6	0.8	1.8	1.1	0.4	0.17

Summary of EC Economic Livestock Gross Margins - Lincolnshire - 1990 - \$1.8 : £1 - £ Per Livestock Unit

% Nitrogen Restriction	Dairy Cows	Dairy Youngstock	Autumn Calving Single Sucklers	Spring Calving Single Sucklers	Fattening Autumn Born 55 Calves	Fattening Spring Born 55 Calves	3/2½ Year Beef	Beef Heifer Replacements	Stores	Sheep
0%	132.7	72.9	58.7	38.6	38.0	78.0	59.8	52.0	129.8	60.0
10%	136.8	77.1	62.8	42.7	42.0	82.1	63.9	56.1	134.0	64.1
20%	139.6	79.9	65.6	45.5	44.8	84.9	66.7	58.9	136.8	66.9
30%	142.3	82.6	68.3	48.2	47.5	87.6	69.4	61.6	139.5	69.6
40%	145.1	85.4	71.1	51.0	50.3	90.4	72.2	64.4	142.3	72.4
50%	147.8	88.1	73.8	53.7	53.0	93.1	74.9	67.1	145.0	75.1

EC Economic Gross Margins - Cambridgeshire - (\$1.8:£1) - 1990 No Restriction Case

	-----UK pounds/ha-----											
	Winter wheat Feed	Winter wheat Hilling	Winter wheat Milling	Winter wheat	Spring barley	Irrigated potatoes	Non-irrigated potatoes	Sugar beet	Peas	Harvest peas	Oil seed rape	Beans
OUTPUT												
Yield per hectare-tonnes	7.70	7.70	7.70	6.55	4.68	42.00	34.57	46.34	5.57	3.69	3.30	3.52
UK Pounds per tonne-Ex faro	64.26	71.08	71.08	67.24	71.81	47.89	37.89	13.35	216.00	174.60	137.56	164.49
Gross output-UK pounds	494.80	547.32	547.32	440.09	335.71	2011.38	1309.71	618.59	1202.04	643.40	453.95	579.01
VARIABLE COSTS												
Total fertiliser Costs comprising-	68.70	68.70	68.70	58.20	50.28	150.54	150.54	64.65	10.80	10.80	88.77	10.80
Nitrogen fertiliser	52.50	52.50	52.50	42.00	33.00	67.00	67.00	42.00	0.00	0.00	75.00	0.00
Phosphate fertiliser	11.40	11.40	11.40	11.40	12.16	57.38	57.38	14.25	7.60	7.60	9.69	7.60
Potassium fertiliser	4.80	4.80	4.80	4.80	5.12	24.16	24.16	8.40	3.20	3.20	4.08	3.20
Seed	19.57	21.66	21.66	20.52	21.85	429.00	388.80	52.00	92.50	92.50	13.28	52.00
Sprays	74.10	74.10	74.10	64.30	34.60	150.00	131.00	118.00	48.00	59.00	62.80	39.00
Sundry direct	5.00	5.00	5.00	5.00	4.00	304.50	239.30	3.00	9.00	6.00	9.00	5.00
Casual labour	0.00	0.00	0.00	0.00	0.00	134.40	110.61	0.00	0.00	0.00	0.00	0.00
Haulage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	84.33	48.97	0.00	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	234.36	0.00	27.90	0.00
Total Variable Costs	167.37	169.46	169.46	148.02	110.73	1159.44	1020.25	321.98	443.63	168.30	201.75	106.80
Gross Margin Per Hectare	327.43	377.86	377.86	292.07	224.98	851.94	289.45	296.61	758.41	475.10	252.20	472.21

EC Economic Gross Margins - Cambridgeshire - (\$1.8:£1) - 1990 10% Restriction Case

	Winter Wheat Feed	Winter wheat Milling	Winter wheat	Winter barley	Spring barley	Irrigated potatoes	Non-irrigated potatoes	Sugar beet	Peas	Harvest peas	Oil seed rape	Beans
						UK pounds/ha						
OUTPUT												
Yield per hectare-tonnes	7.58	7.58	6.44	4.60	41.58	34.22	46.04	5.57	3.69	3.23	3.52	3.52
UK Pounds per tonne-Ex fare	64.26	71.08	67.24	71.81	47.89	37.89	13.35	216.00	174.60	137.56	164.49	164.49
Gross output-UK pounds	486.89	538.56	433.04	330.31	1991.27	1276.61	614.57	1202.04	643.40	443.96	579.01	579.01
VARIABLE COSTS												
Total Fertiliser Costs comprising-	63.45	63.45	54.00	46.98	143.64	143.64	60.45	10.80	10.80	81.27	10.80	10.80
Nitrogen Fertiliser	47.25	47.25	37.80	29.70	62.10	62.10	37.80	0.00	0.00	67.50	0.00	0.00
Phosphate fertiliser	11.40	11.40	11.40	12.16	57.38	57.38	14.25	7.60	7.60	9.69	7.60	7.60
Potassium fertiliser	4.80	4.80	4.80	5.12	24.16	24.16	8.40	3.20	3.20	4.08	3.20	3.20
Seed	19.57	21.66	20.52	21.85	420.00	388.80	52.00	92.50	92.50	13.28	52.00	52.00
Sprays	74.10	74.10	64.30	34.60	150.00	131.00	118.00	48.00	59.00	62.80	39.00	39.00
Sundry direct	5.00	5.00	5.00	4.00	304.50	239.30	3.00	9.00	6.00	9.00	5.00	5.00
Casual labour	0.00	0.00	0.00	0.00	133.06	109.51	0.00	0.00	0.00	0.00	0.00	0.00
Haulage	0.00	0.00	0.00	0.00	0.00	0.00	83.78	48.97	0.00	0.00	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	234.36	0.00	27.90	0.00	0.00
Total Variable Costs	162.12	164.21	143.82	107.43	1151.20	1012.25	317.23	443.63	168.30	194.25	106.80	106.80
Gross Margin Per Hectare	324.77	374.35	289.22	222.91	840.07	284.36	297.34	758.41	475.10	249.71	472.21	472.21

EC Economic Gross Margins - Cambridgeshire - (\$1.8:£1) - 1990 30% Restriction Case

	Winter wheat Feed	Winter wheat Milling	Winter wheat Spring barley	Irrigated potatoes	Non-irrigated potatoes	Sugar beet	Peas	Harvest peas	Oil seed rape	Beans
OUTPUT	UK pounds/ha									
Yield per hectare-tonnes	7.28	7.28	6.19	4.42	40.03	32.94	5.57	3.69	3.02	3.52
UK Pounds per tonne-Ex farm	64.26	71.08	67.24	71.01	47.89	37.89	216.00	174.60	137.56	164.49
Gross output-UK pounds	467.59	517.21	415.88	317.25	1916.85	1248.15	1202.04	643.40	414.91	579.01
VARIABLE COSTS										
Total Fertiliser Costs comprising-										
Nitrogen Fertiliser	52.95	36.75	29.40	23.10	48.30	48.30	0.00	0.00	66.27	10.00
Phosphate fertiliser	11.40	11.40	11.40	12.16	57.38	57.38	7.60	7.60	52.50	0.00
Potassium fertiliser	4.80	4.80	4.80	5.12	24.16	24.16	3.20	3.20	9.69	7.60
Seed	19.57	21.66	20.52	21.85	420.00	388.80	92.50	92.50	4.08	3.20
Sprays	74.10	74.10	64.30	34.60	150.00	131.00	48.00	59.00	13.28	52.00
Sundry direct	5.00	5.00	5.00	4.00	304.50	239.30	9.00	6.00	9.00	39.00
Casual labour	0.00	0.00	0.00	0.00	128.08	105.41	0.00	0.00	0.00	5.00
Haulage	0.00	0.00	0.00	0.00	0.00	0.00	48.97	0.00	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	234.36	0.00	27.90	0.00
Total Variable Costs	151.62	153.71	135.42	100.01	1132.42	994.35	443.63	168.30	179.25	106.80
Gross Margin Per Hectare	315.97	363.50	280.46	216.42	784.42	253.80	758.41	475.10	235.66	472.21

EC Economic Gross Margins - Cambridgeshire - (\$1.8:£1) - 1990 40% Restriction Case

OUTPUT	Winter Wheat	Winter wheat	Winter barley	Spring barley	Irrigated	Non-irrigated	Sugar beet	Peas	Harvest peas	Oil seed rape	Beans
	Feed	Milling			potatoes	potatoes					
	UK pounds/ha										
Yield per hectare-tonnes	7.05	7.05	5.99	4.28	39.27	32.32	44.73	5.57	3.69	2.86	3.52
UK Pounds per tonne-Ex farm	64.26	71.08	67.24	71.81	47.89	37.89	13.35	216.00	174.60	137.56	164.49
Gross output-UK pounds	452.74	500.79	402.68	307.18	1880.64	1224.57	597.19	1202.04	643.40	394.03	579.01
VARIABLE COSTS											
Total Fertiliser Costs comprising-	47.70	47.70	41.40	37.08	127.94	122.94	47.85	10.00	10.80	58.77	10.80
Nitrogen Fertiliser	31.50	31.50	25.20	19.80	41.40	41.40	25.20	0.00	0.00	45.00	0.00
Phosphate fertiliser	11.40	11.40	11.40	12.16	57.38	57.38	14.25	7.60	7.60	9.69	7.60
Potassium fertiliser	4.80	4.80	4.80	5.12	24.16	24.16	8.40	3.20	3.20	4.08	3.20
Seed	19.57	21.66	20.52	21.85	420.00	388.80	52.00	92.50	92.50	13.28	52.00
Sprays	74.10	74.10	64.30	34.60	150.00	131.00	118.00	48.00	59.00	62.80	39.00
Sundry direct	5.00	5.00	5.00	4.00	304.50	239.30	3.00	9.00	6.00	9.00	5.00
Casual Labour	0.00	0.00	0.00	0.00	125.66	103.42	0.00	0.00	0.00	0.00	0.00
Haulage	0.00	0.00	0.00	0.00	0.00	0.00	81.41	48.97	0.00	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	234.36	0.00	27.90	0.00
Total Variable Costs	146.37	148.46	131.22	97.53	1123.10	985.46	302.26	443.63	168.39	171.75	106.80
Gross Margin Per Hectare	306.37	352.33	271.46	209.65	757.54	239.11	294.92	758.41	475.10	222.28	472.21

EC Economic Gross Margins - Cambridgeshire - (\$1.8:£1) - 1990 50% Restriction Case

OUTPUT	Winter wheat	Winter wheat	Winter barley	Spring barley	Irrigated	Non-irrigated	Sugar beet	Peas	Harvest peas	Dill seed rape	Beans
	Feed	Milling	potatoes	potatoes	UK pounds/ha	potatoes					
Yield per hectare-tonnes	6.73	6.73	5.72	4.09	39.47	31.66	43.88	5.57	3.69	2.68	3.52
UK Pounds per tonne-Ex farm	64.26	71.08	67.24	71.81	47.89	37.89	13.35	216.00	174.60	137.56	164.49
Gross output-UK pounds	432.46	478.35	384.63	293.41	1842.42	1199.69	585.81	1202.04	643.40	368.61	579.01
VARIABLE COSTS											
Total fertiliser Costs comprising-	42.45	42.45	37.20	33.78	116.04	116.04	43.65	10.80	10.80	51.27	10.80
Nitrogen fertiliser	26.25	26.25	21.00	16.50	34.50	34.50	21.00	0.00	0.00	37.50	0.00
Phosphate fertiliser	11.40	11.40	11.40	12.16	57.38	57.38	14.25	7.60	7.60	9.69	7.60
Potassium fertiliser	4.80	4.80	4.80	5.12	24.16	24.16	8.40	3.20	3.20	4.08	3.20
Seed	19.57	21.66	20.52	21.85	420.00	388.80	52.00	92.50	92.50	13.28	52.00
Sprays	74.10	74.10	64.30	34.60	150.00	131.00	118.00	48.00	59.00	62.80	39.00
Sundry direct	5.00	5.00	5.00	4.00	304.50	239.30	3.00	9.00	6.00	9.00	5.00
Casual labour	0.00	0.00	0.00	0.00	123.11	101.32	0.00	0.00	0.00	0.00	0.00
Haulage	0.00	0.00	0.00	0.00	0.00	0.00	79.86	48.97	0.00	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	234.36	0.00	27.90	0.00
Total Variable Costs	141.12	143.21	127.02	94.73	1113.65	976.46	296.51	443.63	168.30	164.25	106.80
Gross Margin Per Hectare	291.34	335.14	257.61	199.18	728.77	223.23	289.29	758.41	475.10	204.36	472.21

No Restriction EC Economic Gross Margins - Cambridgeshire - 1990 - \$1.8 : £1 - £ Per Head

	Dairy Cows	Dairy Youngstock	Autumn Calving Single Sucklers	Spring Calving Single Sucklers	Fattening Autumn Born SS Calves	Fattening Spring Born SS Calves	3/2 Year Beef	Beef Heifer Replacements	Stores 0-1Yr. (Value Added)	Sheep
OUTPUT										
Sales/T.O. Value										
Calf										
Replacement Charge										
Wool										
GROSS OUTPUT	416.3									
VARIABLE COSTS										
Concentrates	212.5									
Vel. & Med.	18.0	12.0	10.0	10.0	5.0	7.0	12.0	8.0	6.0	2.6
SDI	29.0	20.0	9.0	9.0	8.0	9.0	12.0	10.0	8.0	1.9
Sub-Total	259.5									
Gross Margin before Forage	156.8	213.9	125.5	84.5	50.3	99.1	190.2	107.7		18.0
Forage Costs	48.4	97.1	58.1	48.4	29.0	38.7	87.1	53.2		8.2
Gross Margin per Head	108.4	126.8	67.4	36.1	21.3	60.4	103.1	54.5		9.8
Gross Margin per LU	108.4	70.4	56.2	36.1	35.5	75.5	57.3	49.6		57.7
LU per Head	1.0	1.8	1.2	1.0	0.6	0.8	1.8	1.1	0.4	0.17

Summary of EC Economic Livestock Gross Margins - Cambridgeshire - 1990 - \$1.8 : £1 - \$ Per Livestock Unit

% Nitrogen Restriction	Dairy Cows	Dairy Youngstock	Autumn Calving Single Sucklers	Spring Calving Single Sucklers	Fattening Autumn Born SS Calves	Fattening Spring Born SS Calves	3/2 Year Beef	Beef Heifer Replacements	Stores	Sheep
0%	108.4	70.4	56.2	36.1	35.5	75.5	57.3	49.6		57.7
10%	110.0	72.0	57.8	37.7	37.12	77.1	58.9	51.2		59.3
20%	111.6	73.6	59.4	39.3	38.7	78.7	60.5	52.8		60.9
30%	113.3	75.3	61.1	41.0	40.4	80.4	62.2	54.5		62.6
40%	114.9	76.9	62.7	42.6	42.0	82.0	63.8	56.1		64.2
50%	116.5	78.5	64.3	44.2	43.6	83.6	65.4	57.7		65.8

APPENDIX VIII

LINCOLNSHIRE AND CAMBRIDGESHIRE CATCHMENT AREAS

EUROPEAN COMMUNITY ECONOMIC GROSS MARGINS

CROPS AND LIVESTOCK

1990 \$1.20:£1

EC Economic Gross Margins - Lincolnshire - (\$1.2:£1) - 1990 No Restriction Case

OUTPUT	Winter wheat	Winter wheat	Winter barley	Spring barley	Irrigated	Non-irrigated	Sugar beet	Peas	Harvest peas	Oil seed rape
	Feed	Milling	barley	barley	potatoes	potatoes	haect	haect	haect	haect
	UK pounds/ha									
Yield per hectare-tonnes	7.26	7.26	6.71	6.16	51.45	35.18	40.43	5.57	3.63	3.14
UK Pounds per tonne-Ex fara	101.20	108.27	109.27	109.27	79.23	69.23	27.01	295.71	258.15	202.58
Gross output-UK pounds	734.71	786.04	672.81	617.66	4076.38	2435.17	1091.88	1144.78	937.08	635.09
VARIABLE COSTS										
Total Fertiliser Costs comprising-	102.80	102.80	96.20	93.32	245.14	226.66	97.75	17.20	17.20	131.93
Nitrogen Fertiliser	77.00	77.00	70.40	66.00	115.28	96.80	61.60	9.00	9.00	110.00
Phosphate fertiliser	18.00	18.00	18.00	19.20	90.60	90.60	22.50	12.00	12.00	15.30
Potassium fertiliser	7.80	7.80	7.80	8.32	39.26	39.26	13.65	5.20	5.20	6.63
Seed	30.78	32.87	30.40	30.40	420.00	388.80	52.00	92.50	135.00	19.44
Sprays	74.10	74.10	64.30	34.60	150.00	131.00	118.00	48.00	59.00	62.80
Sundry direct	5.00	5.00	5.00	4.00	229.50	164.30	3.00	9.00	6.00	9.00
Casual Labour	0.00	0.00	0.00	0.00	164.64	112.56	0.00	0.00	0.00	0.00
Haulage	0.00	0.00	0.00	0.00	0.00	0.00	80.04	53.42	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	244.44	0.00	29.10
Total Variable Costs	212.68	214.77	195.90	162.52	1209.28	1023.32	350.79	464.56	217.20	252.27
Gross Margin Per Hectare	522.03	571.27	476.91	455.14	2867.10	1411.85	741.09	680.21	719.88	382.82

EC Economic Gross Margins - Lincolnshire - (\$1.2:£1) - 1990 10% Restriction Case

	Winter wheat Feed	Winter wheat Milling	Winter wheat barley	Spring barley	Irrigated potatoes UK pounds/ha	Non-irrigated potatoes	Sugar beet	Peas	Harvest peas	Oil seed rape
Yield per hectare-tonnes	7.14	7.14	6.60	6.06	50.94	34.82	40.16	5.57	3.63	3.07
UK Pounds per tonne-Ex farm	101.20	108.27	100.27	100.27	77.23	69.23	27.01	205.71	258.15	202.58
Gross output-UK pounds	722.96	773.46	662.05	607.78	4035.62	2410.81	1084.78	1144.78	937.08	621.12
VARIABLE COSTS										
Total Fertiliser Costs comprising-	95.10	95.10	89.16	86.92	233.61	216.98	91.59	17.20	17.20	120.93
Nitrogen Fertiliser	69.30	69.30	63.36	59.40	103.75	87.12	55.44	0.00	0.00	99.00
Phosphate fertiliser	18.00	18.00	18.00	19.20	90.60	90.60	22.50	12.00	12.00	15.30
Potassium fertiliser	7.80	7.80	7.80	8.32	39.26	39.26	13.65	5.20	5.20	6.63
Seed	30.78	32.87	30.40	30.40	420.00	388.80	52.00	92.50	135.00	19.44
Sprays	74.10	74.10	64.30	34.60	150.00	131.00	118.00	48.00	59.00	62.80
Sundry direct	5.00	5.00	5.00	4.00	229.50	164.30	3.00	9.00	6.00	9.00
Casual labour	0.00	0.00	0.00	0.00	162.99	111.43	0.00	0.00	0.00	0.00
Haulage	0.00	0.00	0.00	0.00	9.00	0.00	79.52	53.42	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	244.44	0.00	29.10
Total Variable Costs	204.98	207.07	188.66	155.92	1196.11	1012.51	344.11	464.56	217.20	241.27
Gross Margin Per Hectare	517.98	566.39	473.19	451.86	2839.51	1398.30	740.67	680.21	719.88	379.85

EC Economic Gross Margins - Lincolnshire - (\$1.2:£1) - 1990 20% Restriction Case

OUTPUT	Winter wheat	Winter wheat	Winter barley	Spring barley	Irrigated	Non-irrigated	Sugar beet	Peas	Harvest peas	Oil seed rape
	Feed	Milling	barley	barley	potatoes	potatoes				
					UK pounds/ha	UK pounds/ha				
Yield per hectare-tonnes	7.01	7.01	6.48	5.95	50.06	34.23	39.87	5.57	3.63	2.98
UK Pounds per tonne-Ex farm	101.20	108.27	100.27	100.27	79.23	69.23	27.01	205.71	258.15	202.58
Gross output-UK pounds	709.73	759.31	649.94	596.66	3966.32	2369.42	1076.81	1144.78	937.08	604.60
-----UK pounds/ha-----										
VARIABLE COSTS										
Total Fertiliser Costs comprising-	87.40	87.40	87.12	80.32	222.08	207.30	85.43	17.20	17.20	109.93
Nitrogen Fertiliser	61.60	61.60	56.32	52.80	92.22	77.44	49.28	0.00	0.00	88.00
Phosphate fertiliser	18.00	18.00	18.00	19.20	90.60	90.60	22.50	12.00	12.00	15.30
Potassium fertiliser	7.80	7.80	7.80	8.32	39.26	39.26	13.65	5.20	5.20	6.63
Seed	30.78	32.87	30.40	30.40	420.00	388.80	52.00	92.50	135.00	19.44
Sprays	74.10	74.10	64.30	34.40	150.00	131.00	118.00	48.00	59.00	62.80
Sundry direct	5.00	5.00	5.00	4.00	229.50	164.30	3.00	9.00	6.00	9.00
Casual labour	0.00	0.00	0.00	0.00	160.19	109.52	0.00	0.00	0.00	0.00
Haulage	0.00	0.00	0.00	0.00	0.00	0.00	78.94	53.42	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	244.44	0.00	29.10
Total Variable Costs	197.28	199.37	181.82	149.32	1181.78	1000.92	337.37	464.56	217.20	230.27
Gross Margin Per Hectare	512.45	559.94	468.12	447.34	2784.54	1368.49	739.44	680.21	719.88	374.33

EC Economic Gross Margins - Lincolnshire - (\$1.2:£1) - 1990 30% Restriction Case

	Winter wheat Feed	Winter wheat Milling	Winter barley	Spring barley	Irrigated potatoes	Non-irrigated potatoes	Sugar beet	Peas	Harvest peas	Oil seed rape
	-----UK pounds/ha-----									
OUTPUT										
Yield per hectare-tonnes	6.86	6.86	6.34	5.82	49.03	33.52	39.54	5.57	3.63	2.87
UK Pounds per tonne-£x fara	101.20	108.27	100.27	100.27	79.23	69.23	27.01	203.71	258.15	202.58
Gross output-UK pounds	694.30	742.81	635.81	583.69	3884.79	2320.71	1067.97	1144.78	937.08	580.47
VARIABLE COSTS										
Total Fertiliser Costs comprising-	79.70	79.70	75.00	73.72	210.56	197.62	79.27	17.20	17.20	98.93
Nitrogen Fertiliser	53.90	53.90	49.28	46.20	80.70	67.76	43.12	0.00	0.00	77.00
Phosphate fertiliser	18.00	18.00	18.00	19.20	90.60	90.60	22.50	12.00	12.00	15.30
Potassium fertiliser	7.80	7.80	7.80	8.32	39.26	39.26	13.65	5.20	5.20	6.63
Seed	30.78	32.87	30.40	30.40	420.00	388.80	52.00	92.50	135.00	19.44
Sprays	74.10	74.10	64.30	34.60	150.00	131.00	118.00	48.00	59.00	62.80
Sundry direct	5.00	5.00	5.00	4.00	227.50	164.30	3.00	9.00	6.00	9.00
Casual labour	0.00	0.00	0.00	0.00	156.90	107.27	0.00	0.00	0.00	0.00
Haulage	0.00	0.00	0.00	0.00	0.00	0.00	78.29	53.42	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	244.44	0.00	29.10
Total Variable Costs	189.58	191.67	174.78	142.72	1166.96	988.99	330.56	464.56	217.20	219.27
Gross Margin Per Hectare	504.72	551.14	461.03	440.97	2717.84	1331.72	737.41	680.21	719.88	361.20

EC Economic Gross Margins - Lincolnshire - (\$1.2:£1) - 1990 40% Restriction Case

	Winter wheat	Winter wheat	Winter barley	Spring barley	Irrigated	Non-irrigated	Sugar beet	Peas	Harvest peas	Oil seed rape
	Feed	Milling	barley	barley	potatoes	potatoes	haect	haect	haect	haect
	UK pounds/ha									
Yield per hectare-tonnes	6.64	6.64	6.14	5.64	40.11	32.89	39.03	5.57	3.63	2.72
UK Pounds per tonne-£x fara	101.20	108.27	100.27	100.27	79.23	69.23	27.01	205.71	258.15	202.58
Gross output-UK pounds	672.26	719.23	615.62	565.16	3811.42	2276.88	1054.10	1144.78	937.08	551.26
VARIABLE COSTS										
Total Fertiliser Costs comprising-	72.00	72.00	68.04	67.12	199.03	187.94	73.11	17.20	17.20	87.93
Nitrogen Fertiliser	46.20	46.20	42.24	39.60	67.17	58.08	36.96	0.00	0.00	66.00
Phosphate fertiliser	18.00	18.00	18.00	19.20	90.60	90.60	22.50	12.00	12.00	15.30
Potassium fertiliser	7.80	7.80	7.80	8.32	39.26	39.26	13.65	5.20	5.20	6.63
Seed	30.78	32.87	30.40	30.40	420.00	388.80	52.00	92.50	135.00	19.44
Sprays	74.10	74.10	64.30	34.60	150.00	131.00	118.00	48.00	59.00	62.80
Sundry direct	5.00	5.00	5.00	4.00	229.50	164.30	3.00	9.00	6.00	9.00
Casual labour	0.00	0.00	0.00	0.00	153.94	105.24	0.00	0.00	0.00	0.00
Haulage	0.00	0.00	0.00	0.00	0.00	0.00	77.27	53.42	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	244.44	0.00	29.10
Total Variable Costs	181.88	183.97	167.74	136.12	1152.47	977.28	323.38	464.56	217.20	208.27
Gross Margin Per Hectare	490.38	535.26	447.88	429.04	2658.95	1299.60	730.72	680.21	719.88	342.99

No Restriction EC Economic Gross Margins - Lincolnshire - 1990 - \$1.2 : £1 - £ Per Head

	Dairy Cows	Dairy Youngstock	Autumn Calving Single Sucklers	Spring Calving Single Sucklers	Fattening Autumn Born SS Calves	Fattening Spring Born SS Calves	3/24 Year Beef	Beef Heifer Replacements	Stores 0-1Yr. (Value Added)	Sheep
<u>OUTPUT</u>										
Sales/T.O. Value	720.0	491.0	284.3	196.1	446.3	391.9	464.3	481.2	241.1	47.0
Calif Replacement Charge	44.2	(46.5)	(28.1)	(28.1)	(296.1)	(204.2)	(65.1)	(250.1)	(65.1)	(9.5)
Wool										4.2
GROSS OUTPUT	714.7	444.5	256.2	168.0	150.2	187.7	399.2	231.1	176.0	41.7
<u>VARIABLE COSTS</u>										
Concentrates	288.8	98.9	52.3	20.9	62.9	24.2	90.9	54.5	59.4	7.3
Vet. & Med.	18.0	12.0	10.0	10.0	5.0	7.0	12.0	8.0	6.0	2.6
SDF	29.0	20.0	9.0	9.0	8.0	9.0	12.0	10.0	8.0	1.9
Sub-Total	335.8	130.9	71.3	39.9	75.9	40.2	122.9	72.5	73.4	11.8
Gross Margin before Forage	378.9	313.6	184.9	128.1	74.3	147.5	276.3	158.6	102.6	29.9
Forage Costs	63.2	113.8	75.8	63.2	37.9	50.6	113.8	69.5	25.3	10.7
Gross Margin per Head	315.7	199.8	109.1	64.9	36.4	96.9	162.5	89.1	77.3	19.2
Gross Margin per LU	315.7	111.0	90.9	64.9	60.7	121.1	90.3	81.0	193.3	112.9
LU per Head	1.0	1.8	1.2	1.0	0.6	0.8	1.8	1.1	0.4	0.17

Summary of EC Economic Livestock Gross Margins - Lincolnshire - 1990 - \$1.2 : \$1 - \$ Per Livestock Unit

% Nitrogen Restriction	Dairy Cows	Dairy Youngstock	Autumn Calving Single Sucklers	Spring Calving Single Sucklers	Fattening Autumn Born SS Calves	Fattening Spring Born SS Calves	3/21 Year Beef	Beef Heifer Replacements	Stores	Sheep
0%	315.7	111.0	90.9	64.9	60.7	121.1	90.3	81.0	193.3	112.9
10%	321.8	117.1	97.0	71.0	66.7	127.3	96.4	87.6	199.5	118.8
20%	325.9	121.2	101.1	75.1	70.8	131.4	100.5	91.7	203.6	122.9
30%	330.0	125.3	105.2	79.2	74.9	135.5	104.6	95.8	207.7	127.0
40%	334.1	129.4	109.3	83.3	79.0	139.6	108.7	99.9	211.8	131.1
50%	338.2	133.5	113.4	87.4	83.1	143.7	112.8	104.0	215.8	135.2

EC Economic Gross Margins - Cambridgeshire - (\$1.2:£1) - 1990 No Restriction Case

	UK pounds/ha										
	Winter wheat Feed	Winter wheat Milling	Winter wheat	Spring barley	Irrigated potatoes	Non-irrigated potatoes	Sugar beet	Peas	Harvest peas	Oil seed rape	Beans
Yield per hectare-tonnes	7.70	7.70	6.55	4.68	42.00	34.57	46.34	5.57	3.69	3.30	3.52
UK Pounds per Tonne-Ex farm	101.20	108.27	106.03	113.22	79.23	69.23	27.01	216.00	258.15	202.58	243.20
Gross output-UK pounds	779.24	833.68	693.97	529.30	3327.66	2393.00	1251.55	1202.04	951.28	668.51	856.07
VARIABLE COSTS											
Total Fertiliser Costs comprising-	102.80	102.80	87.40	75.92	231.06	231.06	97.75	17.20	17.20	131.93	17.20
Nitrogen Fertiliser	77.00	77.00	61.60	48.40	101.20	101.20	61.60	0.00	0.00	110.00	0.00
Phosphate fertiliser	18.00	18.00	18.00	19.20	90.60	90.60	22.50	12.00	12.00	15.30	12.00
Potassium fertiliser	7.80	7.80	7.80	8.32	39.26	39.26	13.65	5.20	5.20	6.63	5.20
Seed	30.78	32.87	32.30	34.39	420.00	388.80	52.00	92.50	135.00	19.44	78.00
Sprays	74.10	74.10	64.30	34.60	150.00	131.00	118.00	48.00	59.00	62.80	39.00
Sundry direct	5.00	5.00	5.00	4.00	304.50	239.30	3.00	9.00	6.00	9.00	5.00
Casual labour	0.00	0.00	0.00	0.00	134.40	110.61	0.00	0.00	0.00	0.00	0.00
Haulage	0.00	0.00	0.00	0.00	0.00	0.00	91.75	53.42	0.00	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	244.44	0.00	29.10	0.00
Total Variable Costs	212.68	214.77	189.00	148.91	1239.76	1100.77	362.50	464.56	217.20	252.27	139.20
Gross Margin Per Hectare	566.56	618.91	504.97	380.39	2087.70	1292.23	889.05	737.48	734.08	416.24	716.87

EC Economic Gross Margins - Cambridgeshire - (\$1.2:£1) - 1990 10% Restriction Case

	Winter wheat Feed	Winter wheat Hilling	Winter wheat	Winter barley	Spring barley	Irrigated potatoes	Non-irrigated potatoes	Sugar beet	Peas	Harvest peas 011	seed rape	Beans
	-----UK pounds/ha-----											
OUTPUT												
Yield per hectare-tonnes	7.58	7.58	6.44	4.60	4.60	41.58	34.22	46.04	5.57	3.69	3.23	3.52
UK Pounds per tonne-Ex fara	101.20	108.27	106.03	113.22	113.22	79.23	69.23	27.61	216.00	258.15	202.58	243.20
Gross output-UK pounds	766.77	820.34	682.86	520.83	520.83	3294.38	2369.07	1243.41	1202.04	951.28	653.81	856.07
VARIABLE COSTS												
Total Fertiliser Costs comprising-	95.10	95.10	81.24	71.08	71.08	220.94	220.94	91.59	17.20	17.20	120.93	17.20
Nitrogen Fertiliser	69.30	69.30	55.44	43.56	43.56	91.08	91.08	55.44	0.00	0.00	99.00	0.00
Phosphate fertiliser	18.00	18.00	18.00	19.20	19.20	90.60	90.60	22.50	12.00	12.00	15.30	12.00
Potassium fertiliser	7.80	7.80	7.80	8.32	8.32	39.26	39.26	13.65	5.20	5.20	6.63	5.20
Seed	30.78	32.87	32.30	34.39	34.39	420.00	308.80	52.00	92.50	135.00	19.44	78.00
Sprays	74.10	74.10	64.30	34.60	34.60	150.00	131.00	118.00	48.00	59.00	62.80	39.00
Sundry direct	5.00	5.00	5.00	4.00	4.00	304.50	239.30	3.00	9.00	6.00	9.00	5.00
Casual labour	0.00	0.00	0.00	0.00	0.00	133.06	109.51	0.00	0.00	0.00	0.00	0.00
Haulage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	91.15	53.42	0.00	0.00	0.00
Harvesting charge	-0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	244.44	0.00	29.10	0.00
Total Variable Costs	204.98	207.07	182.84	144.07	144.07	1228.50	1089.55	355.74	464.56	217.20	241.27	139.20
Gross Margin Per Hectare	561.79	613.27	500.02	376.76	376.76	2065.89	1279.53	887.67	737.48	734.08	412.54	716.87

EC Economic Gross Margins - Cambridgeshire - (\$1.2:£1) - 1990 20% Restriction Case

OUTPUT	Winter wheat	Winter wheat	Winter wheat	Spring barley	Irrigated	Non-irrigated	Sugar beet	Peas	Harvest peas	Oil seed rape	Beans
	Feed	Milling	barley	barley	potatoes	potatoes	UK pounds/ha	UK pounds/ha	UK pounds/ha	UK pounds/ha	UK pounds/ha
Yield per hectare-tonnes	7.44	7.44	6.32	4.52	40.87	33.63	45.70	5.57	3.69	3.14	3.52
UK Pounds per tonne-Ex fara	101.20	108.27	106.03	113.22	79.23	69.23	27.01	216.00	258.15	202.58	243.20
Gross output-UK pounds	752.75	805.33	670.37	511.31	3237.81	2328.39	1234.28	1202.04	951.28	636.43	856.07
VARIABLE COSTS											
Total Fertiliser Costs comprising-	87.40	87.40	75.00	66.74	210.82	210.82	85.43	17.20	17.20	109.93	17.20
Nitrogen Fertiliser	61.60	61.60	49.28	30.72	80.96	80.96	49.28	0.00	0.00	88.00	0.00
Phosphate fertiliser	18.00	18.00	18.00	19.20	90.60	90.60	22.50	12.00	12.00	15.30	12.00
Potassium fertiliser	7.80	7.80	7.80	8.32	39.26	39.26	13.65	5.20	5.20	6.63	5.20
Seed	30.78	32.87	32.30	34.39	420.00	388.80	52.00	92.50	135.00	19.44	78.00
Sprays	74.10	74.10	64.30	34.60	150.00	131.00	118.00	48.00	59.00	62.80	39.00
Sundry direct	5.00	5.00	5.00	4.00	304.50	239.30	3.00	9.00	6.00	9.00	5.00
Casual labour	0.00	0.00	0.00	0.00	130.77	107.62	0.00	0.00	0.00	0.00	0.00
Haulage	0.00	0.00	0.00	0.00	0.00	0.00	90.48	53.42	0.00	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	244.44	0.00	29.10	0.00
Total Variable Costs	197.28	199.37	176.68	139.23	1216.09	1077.54	348.91	464.56	217.20	230.27	139.20
Gross Margin Per Hectare	555.47	605.96	493.69	372.08	2021.72	1250.85	885.37	737.48	734.08	406.16	716.87

EC Economic Gross Margins - Cambridgeshire - (\$1.2:£1) - 1990 30% Restriction Case

OUTPUT	Winter wheat		Winter wheat Milling		Spring barley		Irrigated potatoes		Non-irrigated potatoes		Sugar beet		Peas		Oil seed rape		Beans	
	Feed	Milling	Winter wheat	Spring barley	Irrigated potatoes	Non-irrigated potatoes	Sugar beet	Peas	Oil seed rape	Beans	Oil seed rape	Beans						
	UK pounds/ha																	
Yield per hectare-tonnes	7.28	7.28	6.19	4.42	40.03	32.94	45.32	5.57	3.69	3.02	3.52							
UK Pounds per tonne-Ex fare	101.20	108.27	106.03	113.22	79.23	69.23	27.01	216.00	258.15	292.58	243.20							
Gross output-UK pounds	736.38	787.83	655.80	500.19	3171.26	2280.53	1224.14	1202.04	951.28	611.02	856.07							
VARIABLE COSTS																		
Total Fertiliser Costs comprising-	79.70	79.70	68.92	61.40	200.70	200.70	79.27	17.20	17.20	98.93	17.20							
Nitrogen fertiliser	53.90	53.90	43.12	33.88	70.84	70.84	43.12	0.00	0.00	77.00	0.00							
Phosphate fertiliser	18.00	18.00	18.00	19.20	90.60	90.60	22.50	12.00	12.00	15.30	12.00							
Potassium fertiliser	7.80	7.80	7.80	8.32	39.26	39.26	13.65	5.20	5.20	6.63	5.20							
Seed	30.78	32.87	32.30	34.39	420.00	388.80	52.00	92.50	135.00	19.44	78.00							
Sprays	74.10	74.10	64.30	34.60	159.00	131.00	118.00	48.00	59.00	62.80	39.00							
Sundry direct	5.00	5.00	5.00	4.00	304.50	239.30	3.00	7.00	6.00	9.00	5.00							
Casual labour	0.00	0.00	0.00	0.00	128.08	105.41	0.00	0.00	0.00	0.00	0.00							
Haulage	0.00	0.00	0.00	0.00	0.00	0.00	89.74	53.42	0.00	0.00	0.00							
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	244.44	0.00	29.10	0.00							
Total Variable Costs	189.58	191.67	170.52	134.39	1203.28	1065.21	342.01	464.56	217.20	219.27	139.20							
Gross Margin Per Hectare	546.80	596.16	485.28	365.80	1967.98	1215.32	882.13	737.48	734.08	391.75	716.87							

EC Economic Gross Margins - Cambridgeshire - (\$1.2:£1) - 1990 40% Restriction Case

OUTPUT	Winter wheat	Winter wheat	Winter barley	Spring barley	Irrigated	Non-irrigated	Sugar beet	Peas	Harvest peas	Oil seed rape	Beans
	Feed	Milling	potatoes	potatoes	potatoes/ha	potatoes					
Yield per hectare-tonnes	7.05	7.05	5.99	4.78	39.27	32.32	44.73	5.57	3.69	2.86	3.52
UK Pounds per tonne-Ex farm	104.20	108.27	106.03	113.22	79.23	69.23	27.01	216.00	258.15	202.58	243.20
Gross output-UK pounds	713.00	762.82	634.98	484.31	3111.36	2237.46	1208.25	1202.04	951.28	580.27	856.07
-----UK pounds/ha-----											
VARIABLE COSTS											
Total Fertiliser Costs comprising-	72.00	72.00	62.76	56.56	190.58	190.58	73.11	17.20	17.20	87.93	17.20
Nitrogen Fertiliser	46.20	46.20	36.96	29.04	60.72	60.72	36.96	0.00	0.00	66.00	0.00
Phosphate fertiliser	18.00	18.00	18.00	19.20	90.60	90.60	22.50	12.00	12.00	15.30	12.00
Potassium fertiliser	7.80	7.80	7.80	8.12	39.26	39.26	13.65	5.20	5.20	6.63	5.20
Seed	30.78	32.87	32.30	34.39	420.00	388.80	52.00	92.50	135.00	19.44	78.00
Sprays	74.10	74.10	64.30	34.60	150.00	131.00	118.00	48.00	59.00	62.80	39.00
Sundry direct	5.00	5.00	5.00	4.00	304.50	239.30	3.00	9.00	6.00	9.00	5.00
Casual labour	0.00	0.00	0.00	0.00	125.66	103.42	0.00	0.00	0.00	0.00	0.00
Haulage	0.00	0.00	0.00	0.00	0.00	0.00	88.57	53.42	0.00	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	244.44	0.00	29.10	0.00
Total Variable Costs	181.88	183.97	164.36	129.55	1190.74	1053.10	334.68	464.56	217.20	208.27	139.20
Gross Margin Per Hectare	531.12	578.85	470.62	354.76	1920.62	1184.36	873.56	737.48	734.08	372.00	716.87

EC Economic Gross Margins - Cambridgeshire - (\$1.2:£1) - 1990 50% Restriction Case

OUTPUT	Winter wheat	Winter wheat	Winter wheat	Spring barley	Irrigated	Non-irrigated	Sugar beet	Peas	Harvest peas	Oil seed rape	Beans
	Feed	Milling	barley	barley	potatoes	potatoes					
	-----UK pounds/ha-----										
Yield per hectare-tonnes	6.73	6.73	5.72	4.09	38.47	31.66	43.88	5.57	3.69	2.68	3.52
UK Pounds per tonne-Ex tara	101.20	108.27	106.03	113.22	79.23	69.23	27.01	216.00	258.15	202.58	743.20
Gross output-UK pounds	681.06	728.64	605.53	462.61	3048.14	2191.99	1185.22	1202.04	951.28	542.83	856.07
VARIABLE COSTS											
Total Fertiliser Costs comprising-	64.30	64.30	56.60	51.72	180.46	180.46	66.95	17.20	17.20	76.93	17.20
Nitrogen Fertiliser	38.50	38.50	30.80	24.20	50.60	50.60	30.80	0.00	0.00	55.00	0.00
Phosphate fertiliser	18.00	18.00	18.00	19.20	90.60	90.60	22.50	12.00	12.00	15.30	12.00
Potassium fertiliser	7.80	7.80	7.80	8.32	39.26	39.26	13.65	5.20	5.20	6.63	5.20
Seed	30.78	32.87	32.30	34.39	420.00	388.80	52.00	92.50	135.00	19.44	78.00
Sprays	74.10	74.10	64.30	34.60	150.00	131.00	118.00	48.00	59.00	62.80	39.00
Sundry direct	5.00	5.00	5.00	4.00	304.50	239.30	3.00	9.00	6.00	9.00	5.00
Casual labour	0.00	0.00	0.00	0.00	123.11	101.32	0.00	0.00	0.00	0.00	0.00
Haulage	0.00	0.00	0.00	0.00	0.00	0.00	86.88	53.42	0.00	0.00	0.00
Harvesting charge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	244.44	0.00	29.10	0.00
Total Variable Costs	174.18	176.27	158.20	124.71	1178.07	1040.88	326.83	464.56	217.20	197.27	139.20
Gross Margin Per Hectare	506.88	552.37	448.33	337.90	1870.07	1151.11	858.38	737.48	734.08	345.56	716.87

No Restriction EC Economic Gross Margins - Cambridgeshire - 1990 - \$1.2 : £1 - £ Per Head

	Dairy Cows	Dairy Youngstock	Autumn Calving Single Sucklers	Spring Calving Single Sucklers	Fattening Autumn Born SS Calves	Fattening Spring Born SS Calves	3/2½ Year Beef	Beef Heifer Replacements	Stores 0-1Yr. (Value Added)	Sheep
OUTPUT										
Sales/T.O. Value										
Calf										
Replacement Charge										
Wool										
GROSS OUTPUT	714.7									
VARIABLE COSTS										
Concentrates	321.8									
Vet. & Med.	18.0	12.0	10.0	10.0	5.0	7.0	12.0	8.0	6.0	2.6
SDI	29.0	20.0	9.0	9.0	8.0	9.0	12.0	10.0	8.0	1.9
Sub-Total	368.8									
Gross Margin before Forage	345.9	313.6	184.9	128.1	74.3	147.5	276.3	158.6	N/A	29.9
Forage Costs	62.5	112.5	75.0	62.5	37.5	50.0	112.5	68.8		10.6
Gross Margin per Head	283.4	201.1	109.9	65.6	36.8	97.5	163.8	89.8		19.3
Gross Margin per LU	283.4	111.7	91.6	65.6	61.3	121.9	91.0	81.6		113.5
LU per Head	1.0	1.8	1.2	1.0	0.6	0.8	1.8	1.1	0.4	0.17

Summary of EC Economic Livestock Gross Margins - Cambridgeshire - 1990 - \$1.2 : \$1 - \$ Per Livestock Unit

% Nitrogen Restriction	Dairy Cows	Dairy Youngstock	Autumn Calving Single Sucklers	Spring Calving Single Sucklers	Fattening Autumn Born SS Calves	Fattening Spring Born SS Calves	3/24 Year Beef	Beef Heifer Replacements	Storks	Sheep
0%	283.4	111.7	91.6	65.6	61.3	121.9	91.0	81.6		113.5
10%	285.8	114.1	94.0	68.0	63.7	124.3	93.4	84.0		115.9
20%	288.1	116.4	96.3	70.3	66.0	126.6	95.7	86.3		118.2
30%	290.5	118.8	98.7	72.7	68.4	129.0	98.1	88.7		120.6
40%	292.8	121.1	101.0	75.0	70.7	131.3	100.4	91.0		122.9
50%	295.2	123.5	103.4	77.4	73.1	133.7	102.8	93.4		125.3

APPENDIX IX

LINCOLNSHIRE AND CAMBRIDGESHIRE CATCHMENT AREAS
EUROPEAN COMMUNITY ECONOMIC AGRICULTURAL CASH FLOWS
1985 \$1.30:£1 - 1990 \$1.50:£1

Projected EC Economic Agricultural Gross Margins, Recurrent and Additional Capital Costs -
Lincolnshire - No Restriction Case - \$1.3-\$1.5 : £

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Livestock Gross Margins																				
Dairy Cows	113	107	101	96	90	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85
Dairy Youngstock	24	22	21	19	18	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
Autumn Calving Sucklers	6	6	5	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Spring Calving Sucklers	16	15	14	12	11	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Feed Heifer Replacements	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
1/2.5 Year Beef	116	108	100	92	85	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77
18 Month Beef	43	40	37	35	32	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29
Stores	67	63	57	55	52	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48
Sheep	141	124	108	94	80	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67
Less Purchased Bulk Feed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Livestock	529	469	420	412	374	318	310													
Arable Crop Gross Margins																				
Wheat - Feed	2334	2334	2329	2310	2192	2281	2281	2281	2281	2281	2281	2281	2281	2281	2281	2281	2281	2281	2281	2281
Wheat - Milling	851	856	859	859	857	854	854	854	854	854	854	854	854	854	854	854	854	854	854	854
Barley - Winter	1015	888	766	651	545	441	441	441	441	441	441	441	441	441	441	441	441	441	441	441
Barley - Spring	805	772	740	708	677	646	646	646	646	646	646	646	646	646	646	646	646	646	646	646
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eye	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Potatoes - Non Irrigated main crop	512	454	398	347	299	254	254	254	254	254	254	254	254	254	254	254	254	254	254	254
Irrigated main crop	572	502	500	506	509	509	509	509	509	509	509	509	509	509	509	509	509	509	509	509
Sugar Beet	1307	1298	1210	1124	1019	955	955	955	955	955	955	955	955	955	955	955	955	955	955	955
Peas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Horicultural Crops :																				
Peas, comprising -																				
vining peas	672	673	674	675	675	676	676	676	676	676	676	676	676	676	676	676	676	676	676	676
bar vex/canning	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
lentils/sowles	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Broad beans	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34
French beans	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Other vegetables	14	33	52	72	91	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110
Oilseed Rape	519	542	542	519	512	523	523	523	523	523	523	523	523	523	523	523	523	523	523	523
Other Crops, not Stock-feed	10	12	14	16	18	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Sub Total Crops	8758	8489	8219	7940	7677	7406														
Recurrent Fixed Costs																				
Regular Labour	1000	1006	1004	1002	1000	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007
Machinery - Repairs	744	743	741	719	717	716	716	716	716	716	716	716	716	716	716	716	716	716	716	716
Fuel	405	407	404	415	415	402	402	402	402	402	402	402	402	402	402	402	402	402	402	402
Maintenance & Miscellaneous	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027
Additional Irrigation & H Costs	3	1	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Additional Grain Drying Costs	0	3	7	12	15	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
Sub Total Recurrent Costs	4178	4110	4098	4070	4020	4047														
Additional Capital Costs																				
Irrigation Equipment	101	25	25	23	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Grain Drying/Storage Equipment	0	85	87	87	87	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
Sub Total Capital Costs	101	111	112	110	112	113														
ADHORN CASH FLOW	5058	4758	4459	4172	3880	3504	3097													
NET FUTURE VALUE																				

Projected EC Economic Agricultural Gross Margins, Recurrent and Additional Capital Costs -
Lincolnshire - 10% Restriction Case - 1.3-1.5 : 1

	1905	1906	1907	1908	1909	1970	1991	1992	1993	1974	1975	1976	1978	1979	1980	2001	2002	2003	2004*
Livestock Gross Margins																			
Dairy Cows	114	108	103	97	92	86	86	86	86	86	86	86	86	86	86	86	86	86	86
Dairy Youngstock	24	23	21	20	19	17	17	17	17	17	17	17	17	17	17	17	17	17	17
Autumn Calving Sucklers	6	6	5	5	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Spring Calving Sucklers	17	16	14	13	12	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Reef Heifer Replacements	5	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
3/2.5 Year Beef	119	111	104	97	89	82	82	82	82	82	82	82	82	82	82	82	82	82	82
10 Month Heifer	44	41	38	36	35	31	31	31	31	31	31	31	31	31	31	31	31	31	31
Stores	67	64	60	57	55	49	49	49	49	49	49	49	49	49	49	49	49	49	49
Sheep	144	127	112	97	84	71	71	71	71	71	71	71	71	71	71	71	71	71	71
Less Purchased Bulk Feed	-44	-45	-43	-42	-42	-41	-41	-41	-41	-41	-41	-41	-41	-41	-41	-41	-41	-41	-41
Sub Total Livestock	495	457	420	383	348	313													
Arable Crop Gross Margins																			
Wheat Feed	2463	2465	2629	2618	2692	2579	2579	2579	2579	2579	2579	2579	2579	2579	2579	2579	2579	2579	2579
Wheat Milling	674	678	493	491	484	494	494	494	494	494	494	494	494	494	494	494	494	494	494
Barley - Winter	1003	871	714	625	512	406	406	406	406	406	406	406	406	406	406	406	406	406	406
Barley - Spring	797	765	734	704	674	644	644	644	644	644	644	644	644	644	644	644	644	644	644
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rye	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Potatoes (non irrigated main crop)	509	451	397	346	290	234	234	234	234	234	234	234	234	234	234	234	234	234	234
- Irrigated main crop	566	576	584	589	593	593	593	593	593	593	593	593	593	593	593	593	593	593	593
Sugar Beet	1385	1277	1211	1126	1045	961	961	961	961	961	961	961	961	961	961	961	961	961	961
Beans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Arable Crops	672	673	674	675	675	676													
Non-Agricultural Costs :																			
Peas, comprising:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- vining peas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- harvest/trimming	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
- turnip/swedes	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
- broad beans	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
- french beans	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
- other vegetables	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Non-Agricultural Costs	33																		
Disseminated Costs	531	535	535	533	527	519	519	519	519	519	519	519	519	519	519	519	519	519	519
Other Groups, not Stock-Feed	10	12	14	16	18	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Sub Total Recurrent Costs	8660	8398	8110	7840	7568	7297													
Additional Capital Costs																			
Regular Labour	1849	1867	1865	1862	1860	1857	1857	1857	1857	1857	1857	1857	1857	1857	1857	1857	1857	1857	1857
Machinery - Repairs	745	743	741	739	738	736	736	736	736	736	736	736	736	736	736	736	736	736	736
Fuel	487	467	454	435	416	403	403	403	403	403	403	403	403	403	403	403	403	403	403
Maintenance & Miscellaneous	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027
Additional Irrigation B & H Costs	3	3	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Additional Grain Drying Costs	4	0	4	8	11	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Sub Total Additional Capital Costs	4176	4107	4094	4075	4056	4043													
Total Recurrent and Additional Capital Costs	12836	12505	12204	11915	11624	11340													
Irrigation Equipment	101	25	25	23	25	25	0	0	0	0	0	0	0	0	0	0	0	0	0
Grain Drying/Storage Equipment	0	0	77	80	80	81	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Capital Costs	101	25	102	103	105	106	0												
GRAND TOTAL	4976	4723	4334	4015	3755	3462	3567												
100% PRESENT VALUE																			

Projected EC Economic Agricultural Gross Margins, Recurrent and Additional Capital Costs -
Lincolnshire - 20% Restriction Case - \$1.3-\$1.5 : £

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	
Livestock Gross Margins																					
Dairy Cows	115	110	104	99	93	88	83	80	80	80	80	80	80	80	80	80	80	80	80	80	80
Bairy Youngstock	25	23	22	20	19	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
Adult Calfing Sucklers	6	6	6	5	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Spring Calving Sucklers	17	16	15	14	13	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Beef Heifer Replacements	5	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
3/2.5 Year Beef	122	115	107	100	93	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85
3/2.5 Year Beef	45	42	40	37	34	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
Stores	60	60	60	58	56	54	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
18 Month Beef	147	134	115	100	87	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74
Sheep	-80	-79	-78	-77	-76	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75
Less Purchased Bulk Feed																					
Sub Total Livestock	469	432	395	359	324	290	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270
Arable Crop Gross Margins																					
Wheat - Feed	2582	2737	2734	2725	2710	2689	2689	2689	2689	2689	2689	2689	2689	2689	2689	2689	2689	2689	2689	2689	2689
Wheat - Milling	499	334	335	336	336	335	335	335	335	335	335	335	335	335	335	335	335	335	335	335	335
Barley - Winter	902	850	725	606	494	308	308	308	308	308	308	308	308	308	308	308	308	308	308	308	308
Barley - Spring	787	757	727	698	630	641	641	641	641	641	641	641	641	641	641	641	641	641	641	641	641
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rye	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fodders - Non irrigated main crop	517	459	405	353	306	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261
Fodders - Irrigated main crop	554	564	572	577	580	581	581	581	581	581	581	581	581	581	581	581	581	581	581	581	581
Sugar Beet	1181	1295	1211	1128	1046	966	966	966	966	966	966	966	966	966	966	966	966	966	966	966	966
Beans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Miscellaneous Crops :																					
Peas, (comprising:	672	673	674	675	675	676	676	676	676	676	676	676	676	676	676	676	676	676	676	676	676
winter peas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
harvest/canning	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
turnip/swedes	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
Broad beans	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
French beans	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Other vegetables	13	31	50	68	86	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
Oilseed Rape	570	524	525	523	519	511	511	511	511	511	511	511	511	511	511	511	511	511	511	511	511
Other Crops, not Stock-feed	19	11	13	15	17	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
Sub Total Crops	8558	8278	8013	7747	7480	7214	7214	7214	7214	7214	7214	7214	7214	7214	7214	7214	7214	7214	7214	7214	7214
Recurrent Fixed Costs																					
Regular Labour	1871	1859	1867	1884	1882	1880	1860	1860	1860	1860	1860	1860	1860	1860	1860	1860	1860	1860	1860	1860	1860
Machinery - Repairs	747	745	743	741	740	730	730	730	730	730	730	730	730	730	730	730	730	730	730	730	730
Fuel	488	468	455	436	417	404	404	404	404	404	404	404	404	404	404	404	404	404	404	404	404
Miscellaneous	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027
Additional Irrigation & L.N Costs	3	3	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Additional Grain Drying Costs	-8	-4	0	4	7	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Sub Total Recurrent Costs	4127	4108	4095	4076	4058	4045	4045	4045	4045	4045	4045	4045	4045	4045	4045	4045	4045	4045	4045	4045	4045
Additional Capital Costs																					
Irrigation Equipment	101	25	25	23	25	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grain Drying/Storage Equipment	0	0	0	76	78	79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Capital Costs	101	25	25	99	103	103	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL	4800	4577	4287	3931	3644	3356	3469	3469	3469	3469	3469	3469	3469	3469	3469	3469	3469	3469	3469	3469	3469
NET PRESENT VALUE																					

Projected EC Economic Agricultural Gross Margins, Recurrent and Additional Capital Costs -
Lincolnshire - 30% Restriction Case - \$1.3-\$1.5 : £

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Livestock Gross Margins																				
Dairy Cows	116	111	105	100	95	89	87	87	87	89	89	89	89	89	89	89	89	89	89	89
Dairy Youngstock	25	24	22	21	19	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Autumn Calving Sucklers	7	6	6	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Spring Calving Sucklers	10	17	16	14	13	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Reef Heifer Replacements	5	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
3/2.5 Year Beef	125	118	110	103	96	89	87	87	89	89	89	89	89	89	89	89	89	89	89	89
18 Month Beef	46	43	41	38	35	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
Stores	69	66	62	58	55	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51
Sheep	150	133	118	103	89	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77
Less Purchased Bulk Feed	-128	-126	-125	-123	-121	-120	-120	-120	-120	-120	-120	-120	-120	-120	-120	-120	-120	-120	-120	-120
Sub Total Livestock	432	395	359	324	290	257														
Arable Crop Gross Margins																				
Wheat Feed	2983	2996	3003	3003	2995	2981	2981	2981	2981	2981	2981	2981	2981	2981	2981	2981	2981	2981	2981	2981
Wheat-Hilling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barley - Winter	957	810	686	582	444	334	334	334	334	334	334	334	334	334	334	334	334	334	334	334
Barley - Spring	773	745	717	650	463	316	316	316	316	316	316	316	316	316	316	316	316	316	316	316
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rye	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Potatoes - Non-irrigated main crop	521	463	400	357	309	265	265	265	265	265	265	265	265	265	265	265	265	265	265	265
- Irrigated main crop	540	550	557	582	565	565	565	565	565	565	565	565	565	565	565	565	565	565	565	565
Sugar Beet	1175	1292	1210	1129	1049	970	970	970	970	970	970	970	970	970	970	970	970	970	970	970
Beans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Arable Crops	672	673	674	625	625	626														
Other Crops	0																			
Sub Total Crops	1104	1068	1033	949	916	883														
Other Crops, not Stock-feed	9	11	13	15	16	18														
Oilseed Rape	499	432	437	438	438	435														
Sub Total Recurrent Costs	8102	8170	7919	7660	7401	7141														
Recurrent Fixed Costs	1073	1073	1071	1068	1067	1065														
Regular Labour	748	748	746	745	743	742	742	742	742	742	742	742	742	742	742	742	742	742	742	742
Machinery - Repairs	489	470	457	438	419	406	406	406	406	406	406	406	406	406	406	406	406	406	406	406
Fuel	1077	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027
Maintenance & Miscellaneous Costs	3	3	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Additional Irrigation, O & M Costs	-11	-10	-6	-2	1	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Additional Grain Drying Costs																				
Sub Total Recurrent Costs	4127	4111	4099	4080	4062	4049														
Additional Capital Costs																				
Irrigation Equipment	101	25	25	23	25	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grain Drying/Storage Equipment	0	0	0	0	0	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Capital Costs	101	25	25	23	25	25	0													
ARRITHM CASH FLOW	4507	4437	4154	3801	3575	3240	3349													
NET PRESENT VALUE																				

Projected EC Economic Agricultural Gross Margins, Recurrent and Additional Capital Costs -
Lincolnshire - 40% Restriction case - \$1.3-\$1.5 : £1

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004*	
Livestock Gross Margins																					
Dairy Cows	117	112	107	101	96	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91
Dairy Youngstock	26	24	23	21	20	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
Outlain Calving Sucklers	7	6	6	6	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Spring Calving Sucklers	48	17	16	15	14	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
Bred Heifer Replacements	5	5	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
3/2.5 Year Beef	128	121	113	106	97	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92
18 Month Beef	47	44	42	39	36	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34
Stores	20	66	63	59	56	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52
Sheep	153	136	121	106	92	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79
Less Purchased Bulk Feed	-171	-169	-167	-164	-162	-160	-160	-160	-160	-160	-160	-160	-160	-160	-160	-160	-160	-160	-160	-160	-160
Sub Total Livestock	399	363	320	293	260	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220
Arable Crop Gross Margins																					
Wheat - Feed	2009	2972	2946	2965	2972	2973	2973	2973	2973	2973	2973	2973	2973	2973	2973	2973	2973	2973	2973	2973	2973
Mixed Milling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barley - Winter	929	758	627	485	355	218	218	218	218	218	218	218	218	218	218	218	218	218	218	218	218
Barley - Spring	750	725	699	674	649	624	624	624	624	624	624	624	624	624	624	624	624	624	624	624	624
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rye	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Potatoes - Non-irrigated main crop	523	465	411	360	312	268	268	268	268	268	268	268	268	268	268	268	268	268	268	268	268
- Irrigated main crop	527	537	544	549	552	552	552	552	552	552	552	552	552	552	552	552	552	552	552	552	552
Sugar Beet	1360	1201	1202	1124	1047	970	970	970	970	970	970	970	970	970	970	970	970	970	970	970	970
Beans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non-Agricultural Groups :																					
Peas, soyabean, vining peas	672	673	674	675	675	676	676	676	676	676	676	676	676	676	676	676	676	676	676	676	676
harvest/canning	9	190	347	389	429	468	468	468	468	468	468	468	468	468	468	468	468	468	468	468	468
linsey/sides	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Broad beans	30	30	30	30	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29
French beans	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Other vegetables	12	29	45	62	79	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95
Oilseed Rape	472	302	299	204	200	253	253	253	253	253	253	253	253	253	253	253	253	253	253	253	253
Other Crops, not Stock-feed	9	10	12	14	16	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
Sub Total Crops	8172	8009	7819	7616	7393	7171	7171	7171	7171	7171	7171	7171	7171	7171	7171	7171	7171	7171	7171	7171	7171
Recurrent Fixed Costs																					
Regular Labour	1875	1876	1876	1875	1874	1873	1873	1873	1873	1873	1873	1873	1873	1873	1873	1873	1873	1873	1873	1873	1873
Machinery - Repairs	749	750	751	750	749	748	748	748	748	748	748	748	748	748	748	748	748	748	748	748	748
- Fuel	490	472	468	411	422	409	409	409	409	409	409	409	409	409	409	409	409	409	409	409	409
Maintenance & Miscellaneous Costs	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027
Additional Irrigation O & M Costs	3	3	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Additional Intra Drying Costs	-19	-14	-10	-6	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Sub Total Recurrent Costs	4124	4114	4108	4097	4095	4085	4085	4085	4085	4085	4085	4085	4085	4085	4085	4085	4085	4085	4085	4085	4085
Additional Capital Costs																					
Irrigation Equipment	101	25	25	23	25	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grain Drying/Storage Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Capital Costs	101	25	25	23	25	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RRR000 - CASH FLOW	4246	4233	4034	3795	3553	3270	3155	3155	3155	3155	3155	3155	3155	3155	3155	3155	3155	3155	3155	3155	3155
NET PRESENT VALUE																					

Projected EC Economic Agricultural Gross Margins, Recurrent and Additional Capital Costs -
Lincolnshire - 50% Restriction Case - \$1.3-\$1.5 : £1

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004*	
Livestock Gross Margins																					
Dairy Cows	119	113	109	103	97	92	92	72	19	19	19	19	19	19	19	19	19	19	19	19	19
Dairy Youngstock	26	25	23	22	21	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
Autumn Calving Sucklers	7	6	6	6	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Spring Calving Sucklers	19	18	17	16	14	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
Beef Heifer Replacements	5	5	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
372.5 Year Beef	131	124	117	110	103	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96
18 Month Beef	48	45	43	40	38	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
Stores	71	67	64	60	57	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53
Sheep	156	139	124	109	95	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82
Less Purchased Bull Feed	-216	-213	-210	-207	-205	-202	-202	-202	-202	-202	-202	-202	-202	-202	-202	-202	-202	-202	-202	-202	-202
Sub Total Livestock	365	329	295	261	229	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197
Arable Crop Gross Margins																					
Wheat Feed	2747	2607	2837	2899	2931	2954	2954	2954	2954	2954	2954	2954	2954	2954	2954	2954	2954	2954	2954	2954	2954
Wheat Milling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barley - Winter	868	694	529	373	227	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
Barley - Spring	715	693	671	648	626	604	604	604	604	604	604	604	604	604	604	604	604	604	604	604	604
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rye	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Potatoes - Non-irrigated main crop	525	468	414	363	316	271	271	271	271	271	271	271	271	271	271	271	271	271	271	271	271
Irrigated main crop	514	523	530	535	537	538	538	538	538	538	538	538	538	538	538	538	538	538	538	538	538
Sugar Beet	1334	1260	1186	1112	1039	965	965	965	965	965	965	965	965	965	965	965	965	965	965	965	965
Beans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Horticultural Crops :																					
Peas, comprising -	672	673	674	675	675	676	676	676	676	676	676	676	676	676	676	676	676	676	676	676	676
vining peas	0	347	683	719	753	786	786	786	786	786	786	786	786	786	786	786	786	786	786	786	786
harvest/canning	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Tunip/swedes	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
Broad beans	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
French beans	11	27	42	57	73	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
Other vegetables																					
On/seed Rape	435	270	118	112	106	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Other Crops, not Stock-feed	8	10	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Sub Total Crops	7866	7806	7750	7541	7333	7124	7124	7124	7124	7124	7124	7124	7124	7124	7124	7124	7124	7124	7124	7124	7124
Recurrent Fixed Costs																					
Regular Labour	1077	1080	1084	1087	1083	1082	1082	1082	1082	1082	1082	1082	1082	1082	1082	1082	1082	1082	1082	1082	1082
Machinery - Repairs	751	754	757	757	756	756	756	756	756	756	756	756	756	756	756	756	756	756	756	756	756
- Fuel	491	474	464	445	426	413	413	413	413	413	413	413	413	413	413	413	413	413	413	413	413
Maintenance & Miscellaneous Costs	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027
Additional Irrigation O & M Costs	3	3	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Additional Grain Drying Costs	-27	-27	-16	-12	-8	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
Sub Total Recurrent Costs	4121	4117	4120	4104	4080	4070	4070	4070	4070	4070	4070	4070	4070	4070	4070	4070	4070	4070	4070	4070	4070
Additional Capital Costs																					
Irrigation Equipment	101	25	25	23	25	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grain Drying/Storage Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Capital Costs	101	25	25	23	25	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANNUAL CASH FLOW	6040	3993	3300	3676	3488	3218	3243	3243	3243	3243	3243	3243	3243	3243	3243	3243	3243	3243	3243	3243	3243
NET PRESENT VALUE																					

Projected EC Economic Agricultural Gross Margins, Recurrent and Additional Capital Costs -
Cambridgeshire - No Restriction Case - \$1.3-\$1.5 : £

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004		
Livestock Gross Margins																						
Bairy Cows	50	48	45	43	40	39	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	
Bairy Youngstock	18	13	12	11	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
Autumn Calving Sucklers	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Spring Calving Sucklers	5	4	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
Feed/Heifer Replacements	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
3/2.5 Year Beef	103	96	90	83	71	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	
18 Month Beef	13	12	12	11	10	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	
Sheep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Less Purchased Bull Feed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sub Total Livestock	275	211	197	183	167	167	155															
Arable Crop Gross Margins																						
Wheat Feed	3011	2947	2801	2681	2442	2420	2420	2420	2420	2420	2420	2420	2420	2420	2420	2420	2420	2420	2420	2420	2420	
Wheat-Milling	1622	1595	1586	1516	1505	1474	1474	1474	1474	1474	1474	1474	1474	1474	1474	1474	1474	1474	1474	1474	1474	
Barley - Winter	2093	1839	1692	1512	1388	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	
Barley - Spring	717	713	750	727	706	685	685	685	685	685	685	685	685	685	685	685	685	685	685	685	685	
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Potatoes - Non irrigated main crop	56	50	44	38	33	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	
- Irrigated main crop	65	65	64	64	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	
Sugar beet	517	542	507	472	439	406	406	406	406	406	406	406	406	406	406	406	406	406	406	406	406	
Beans	301	357	333	310	288	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	
Non-Cultivated Crops:																						
Peas, comprising -	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
winning peas	156	150	144	138	126	126	126	126	126	126	126	126	126	126	126	126	126	126	126	126	126	
barrel/ramming peas	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	
French beans	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	
lettuce	186	178	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	
Orchard and small fruit	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	
Greenhouse crops	19	23	27	31	35	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	
Other vegetables	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Onion Seed Rape	503	565	612	652	682	702	702	702	702	702	702	702	702	702	702	702	702	702	702	702	702	
Other Crops, not Stock feed	21	20	31	38	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	
Sub Total Crops	9120	8845	8558	8267	7971	7671																
Recurrent Fixed Costs																						
Repairs/Labour	1330	1316	1278	1208	1128	1127	1127	1127	1127	1127	1127	1127	1127	1127	1127	1127	1127	1127	1127	1127	1127	
Barbwire - Repairs	828	828	827	826	826	825	825	825	825	825	825	825	825	825	825	825	825	825	825	825	825	
Fuel	409	395	384	368	353	342	342	342	342	342	342	342	342	342	342	342	342	342	342	342	342	
Maintenance & Miscellaneous	1037	1017	1037	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	
Additional Irrigation O & M Costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Additional Grain Drying Costs	0	4	0	12	16	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	
Sub Total Recurrent Costs	3466	3193	3105	3172	3159	3153																
Additional Capital Costs																						
Irrigation Equipment	0	4	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
Grain Drying/Storage Equipment	0	83	81	82	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	
Sub Total Capital Costs	0	86	85	85	85	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	
ANNUAL CASH FLOW	5547	5577	5285	4992	4697	4392	4176															
NET FRESHWATER VALUE																						

Projected EC Economic Agricultural Gross Margins, Recurrent and Additional Capital Costs -
Cambridgeshire - 10% Restriction Case - £'000 - \$1.3-\$1.5 : £1

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Livestock Gross Margins	50	48	45	43	41	38	36	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Dairy Cows	14	13	12	11	11	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Dairy Youngstock	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Auton Exiting Stockers	5	5	5	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Spring Exiting Stockers	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Beef Heifer Replacements	104	90	91	85	78	72	77	72	72	72	72	72	72	72	72	72	72	72	72	72	72
3/2.5 Year Beef	13	13	12	11	10	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
10 Month Beef	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stamps	38	35	32	30	27	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
Sheep	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11
Less Purchased Bulk Feed	217	203	189	175	167	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140
Sub Total Livestock	3333	3082	3406	3327	3266	3162	3162	3162	3162	3162	3162	3162	3162	3162	3162	3162	3162	3162	3162	3162	3162
Arable Crop Gross Margins	1275	956	939	922	904	805	805	805	805	805	805	805	805	805	805	805	805	805	805	805	805
Wheat - Feed	1978	1817	1662	1513	1371	1215	1215	1215	1215	1215	1215	1215	1215	1215	1215	1215	1215	1215	1215	1215	1215
Wheat - Milling	294	270	247	225	204	185	185	185	185	185	185	185	185	185	185	185	185	185	185	185	185
Barley - Winter	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barley - Spring	57	50	44	38	33	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28
Oats	64	64	64	63	63	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62
Podemes - Non Irrigated main crop	576	541	507	460	407	407	407	407	407	407	407	407	407	407	407	407	407	407	407	407	407
Podemes - Irrigated main crop	381	357	333	310	288	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267
Non-cultivated Crops:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peas, Cowpeas - vining peas	156	150	144	138	132	126	126	126	126	126	126	126	126	126	126	126	126	126	126	126	126
Harvest/Feeding peas	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
French beans	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69
Lettuce	193	193	193	193	193	193	193	193	193	193	193	193	193	193	193	193	193	193	193	193	193
Brunch and small fruit	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131
Greenhouse crops	18	22	26	30	34	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39
Other vegetables	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Crops, and Stock-feed	896	555	605	645	675	675	675	675	675	675	675	675	675	675	675	675	675	675	675	675	675
Sub Total Crops	8955	8656	8414	8128	7837	7542	7542	7542	7542	7542	7542	7542	7542	7542	7542	7542	7542	7542	7542	7542	7542
Recurrent Fixed Costs	1331	1310	1329	1329	1328	1327	1327	1327	1327	1327	1327	1327	1327	1327	1327	1327	1327	1327	1327	1327	1327
Regular Labour	628	628	627	627	626	626	626	626	626	626	626	626	626	626	626	626	626	626	626	626	626
Machinery - Repairs	410	395	384	368	353	342	342	342	342	342	342	342	342	342	342	342	342	342	342	342	342
Fuel	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037
Maintenance & Miscellaneous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Additional Irrigation O & M Costs	-4	0	4	8	17	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Additional Grain Drying Costs	3402	3389	3382	3367	3356	3348	3348	3348	3348	3348	3348	3348	3348	3348	3348	3348	3348	3348	3348	3348	3348
Sub Total Recurrent Costs	0	4	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Additional Capital Costs	0	2	81	80	80	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79
Irrigation Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grain Drying/Storage Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Capital Costs	0	6	85	83	81	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
ANNUAL CASH FLOW	5016	5504	5139	4851	4560	4266	4142	4142	4142	4142	4142	4142	4142	4142	4142	4142	4142	4142	4142	4142	4142
NET PRESENT VALUE																					

70418

Projected EC Economic Agricultural Gross Margins, Recurrent and Additional Capital Costs -
Cambridgeshire - 20% Restriction Case - £'000 - \$1.3-\$1.5 : £1

	1905	1906	1907	1908	1909	1970	1971	1972	1973	1974	1975	1976	1997	1998	1999	2000	2001	2002	2003	2004
Livestock Gross Margins																				
Bairy Cows	51	48	46	43	41	50	50	50	50	50	50	50	30	38	30	30	30	30	30	38
Bairy Youngstock	14	13	12	12	11	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Aulion Calving Sucklers	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Spring Calving Sucklers	5	5	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Beef Heifer Replacements	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
106	97	93	87	80	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74
37.5 Year Beef	11	13	12	11	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
11 Month Beef	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stewers	30	36	33	30	28	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Sheep	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24
Less Purchased Bulk Feed	208	194	180	166	153	139	137	137	137	139	139	137	139	139	139	139	137	139	137	139
Sub Total Livestock																				
Arable Crop Gross Margins																				
Wheat - Feed	3506	3650	3572	3491	3409	3322	3322	3322	3322	3322	3322	3322	3322	3322	3322	3322	3322	3322	3322	3322
Wheat - Milling	950	707	695	682	667	656	656	656	656	656	656	656	656	656	656	656	656	656	656	656
1940	1789	1637	1490	1350	1217	1217	1217	1217	1217	1217	1217	1217	1217	1217	1217	1217	1217	1217	1217	1217
Barley - Winter	289	266	244	223	201	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183
Barley - Spring	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oats	57	50	44	39	33	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29
Potatoes - Non Irrigated main crop	62	63	62	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61
- Irrigated main crop	574	540	506	473	441	407	407	407	407	407	407	407	407	407	407	407	407	407	407	407
Sugar Beet	361	357	353	340	310	287	267	267	267	267	267	267	267	267	267	267	267	267	267	267
Beans	156	150	144	130	137	126	126	126	126	126	126	126	126	126	126	126	126	126	126	126
Other Crops	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
French beans	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67
Lettuce	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188
Orchard and small fruit	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127
Greenhouse crops	18	22	26	29	33	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37
Other vegetables	406	544	593	633	663	684	684	684	684	684	684	684	684	684	684	684	684	684	684	684
Oilseed Rape	22	27	31	35	40	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Other Crops, not Stock-feed	8051	8259	8392	8002	7718	7410	7410	7410	7410	7410	7410	7410	7410	7410	7410	7410	7410	7410	7410	7410
Sub Total Crops																				
Recurrent Fixed Costs																				
Regular Labour	1331	1310	1310	1329	1329	1320	1320	1320	1320	1320	1320	1320	1320	1320	1320	1320	1320	1320	1320	1320
Machinery Repairs	628	628	627	627	627	626	626	626	626	626	626	626	626	626	626	626	626	626	626	626
Fuel	411	395	384	369	353	343	343	343	343	343	343	343	343	343	343	343	343	343	343	343
Maintenance & Miscellaneous	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037
Additional Irrigation O & R Costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Additional Grain Drying Costs	9	4	0	3	7	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Sub Total Recurrent Costs	3198	3386	3378	3465	3552	3544	3544	3544	3544	3544	3544	3544	3544	3544	3544	3544	3544	3544	3544	3544
Additional Capital Costs																				
Irrigation Equipment	0	4	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Grain Drying/Storage Equipment	0	0	0	69	77	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76
Sub Total Capital Costs	0	4	2	72	81	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
ANNUAL CASH FLOW	5641	5363	5085	4737	4430	4144	4174	4174	4174	4174	4174	4174	4274	4274	4274	4274	4274	4274	4274	4274
NET FRESH VALUE																				

AB046

Projected EC Economic Agricultural Gross Margins, Recurrent and Additional Capital Costs -
Cambridgeshire - 30% Restriction Case - £'000 - \$1.3-\$1.5 : £1

	1995	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004*
Livestock Gross Margins																				
Dairy Cows	51	49	46	44	41	37	37	37	37	37	37	37	37	37	37	39	39	39	39	39
Dairy Youngstock	14	13	11	12	11	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Autumn Calving Sucklers	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Spring Calving Sucklers	6	5	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Feed Heifer Replacements	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3/2.5 Year Beef	107	101	95	88	87	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76
18 Month Beef	14	13	12	11	11	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Stores	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sheep	39	36	33	31	20	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
Less Purchased Bulk Feed	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36
Sub Total Livestock	198	185	171	157	144	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
Arable Crop Gross Margins																				
Wheat - Feed	1303	4217	4123	4038	3944	3847	3847	3847	3847	3847	3847	3847	3847	3847	3847	3847	3847	3847	3847	3847
Wheat - Milling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barley - Winter	1909	1753	1604	1460	1371	1192	1192	1192	1192	1192	1192	1192	1192	1192	1192	1192	1192	1192	1192	1192
Barley - Spring	204	261	240	270	200	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Potatoes - Non irrigated main crop	57	54	65	39	34	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
Potatoes - Irrigated main crop	61	61	61	60	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57
Sugar Beet	571	538	505	473	441	410	410	410	410	410	410	410	410	410	410	410	410	410	410	410
Beans	381	357	331	310	288	263	267	267	267	267	267	267	267	267	267	267	267	267	267	267
Horticultural Crops:																				
Peas, comprising:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- vining peas	126	157	158	160	162	163	163	163	163	163	163	163	163	163	163	163	163	163	163	163
- harvesting peas	13	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
- french beans	65	65	65	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64
- lettuce	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183
- Orchard and small fruit	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122
- greenhouse crops	17	21	25	28	32	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
- Other vegetables	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oilseed Rape	467	523	500	609	610	659	657	657	657	657	657	657	657	657	657	657	657	657	657	657
Other Crops, not Stock-feed	21	26	30	34	38	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43
Sub Total Crops	8608	8347	8085	7815	7545	7260	7260	7260	7260	7260	7260	7260	7260	7260	7260	7260	7260	7260	7260	7260
Recurrent Fixed Costs																				
Regular Labour	1331	1330	1329	1329	1329	1330	1330	1330	1330	1330	1330	1330	1330	1330	1330	1330	1330	1330	1330	1330
Mechanics - Repairs	629	628	627	627	627	627	627	627	627	627	627	627	627	627	627	627	627	627	627	627
Fuel	411	395	384	369	353	343	343	343	343	343	343	343	343	343	343	343	343	343	343	343
Maintenance & Miscellaneous	1037	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017
Additional Irrigation & H Costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Additional Grain Drying Costs	-14	-10	-8	-2	1	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Sub Total Recurrent Costs	3393	3301	3313	3360	3347	3340	3340	3340	3340	3340	3340	3340	3340	3340	3340	3340	3340	3340	3340	3340
Additional Capital Costs																				
Irrigation Equipment	0	4	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Grain Drying/Storage Equipment	0	0	0	0	30	104	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Capital Costs	0	4	2	4	34	107	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANNUAL ESSH FLOW	5413	5148	4879	4669	4108	3951	4058	4058	4058	4058	4058	4058	4058	4058	4058	4058	4058	4058	4058	4058
NET FRESH VALUE																				

65937

Projected EC Economic Agricultural Gross Margins, Recurrent and Additional Capital Costs -
Cambridgeshire - 40% Restriction Case - £'000 - \$1.3-£1.5 : £1

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	
Livestock Gross Margins																					
Dairy Cows	51	49	47	44	42	41	39	37	37	37	37	37	37	39	39	39	39	39	39	39	
Dairy Youngstock	14	14	13	12	11	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
Autumn Calving Sucklers	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Spring Calving Sucklers	6	5	5	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
Beef Heifer Replacements	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
3/6.5 Year Beef	109	103	96	90	84	78	70	70	70	70	70	70	70	78	78	78	78	78	78	78	
18 Month Beef	14	13	12	12	11	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
Stores	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sheep	39	37	34	31	29	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	
Less Purchased Bulk Feed	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	
Sub total Livestock	191	177	168	150	137	123	121	121	121	121	121	123	123	123	123	123	123	123	123	123	
Arable Crop Total Gross Margins																					
Wheat-feed	4167	4093	4014	3913	3807	3761	3761	3761	3761	3761	3761	3761	3761	3761	3761	3761	3761	3761	3761	3761	
Wheat-hilling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Barley - Winter	1805	1689	1538	1394	1257	1125	1125	1125	1125	1125	1125	1125	1125	1125	1125	1125	1125	1125	1125	1125	
Barley - Spring	274	253	235	214	195	177	177	177	177	177	177	177	177	177	177	177	177	177	177	177	
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Potatoes- Non irrigated main crop	56	51	45	39	34	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	
Potatoes- Irrigated main crop	59	59	59	59	58	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	
Sugar Beet	384	533	502	471	440	416	410	410	410	410	410	410	410	410	410	410	410	410	410	410	
Beans	381	337	333	310	288	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	
Horticultural Crops:																					
Peas,comprising:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
winning peas	156	289	257	210	217	226	226	226	226	226	226	226	226	226	226	226	226	226	226	226	
harvest/cramming peas	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	
French Beans	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	
lettuce	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	
Orchard and small fruit	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	
Greenhouse crops	16	20	21	27	31	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	
Other vegetables	442	433	481	521	552	575	575	575	575	575	575	575	575	575	575	575	575	575	575	575	
Other Crops, not Stock-feed	20	24	28	32	36	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	
Sub total Crops	0149	0146	0087	0615	1144	1069	1069	1069	1069	1069	1069	1069	1069	1069	1069	1069	1069	1069	1069	1069	
Recurrent Fixed Costs																					
Regular Labour	1331	1332	1332	1337	1331	1331	1331	1331	1331	1331	1331	1331	1331	1331	1331	1331	1331	1331	1331	1331	
Machinery - Repairs	629	630	629	629	629	628	628	628	628	628	628	628	628	628	628	628	628	628	628	628	
fuel	411	398	305	370	354	344	344	344	344	344	344	344	344	344	344	344	344	344	344	344	
Maintenance & Miscellaneous	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	
Additional Irrigation O & R Costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Additional Grain Drying Costs	-22	-17	-11	9	-6	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Sub total Recurrent Costs	3365	3377	3370	3350	3345	3310	3310	3310	3310	3310	3310	3310	3310	3310	3310	3310	3310	3310	3310	3310	
Additional Capital Costs																					
Irrigation Equipment	0	4	2	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Grain Drying/Storage Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sub total Capital Costs	0	4	2	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
GRAND CASH FLOW	5154	4943	4674	4404	4112	3851	3851	3851	3851	3851	3851	3855	3855	3855	3855	3855	3855	3855	3855	3855	3855

APPENDIX X

LINCOLNSHIRE AND CAMBRIDGESHIRE CATCHMENT AREAS
EUROPEAN COMMUNITY ECONOMIC AGRICULTURAL CASH FLOWS
1985 \$1.30:£1 - 1990 \$1.80:£1

Projected EC Economic Agricultural Gross Margins, Recurrent and Additional Capital Costs - 10% Restriction Case -
 \$1.3-\$1.8 : £1

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004+
Livestock Gross Margins	144	102	91	79	67	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56
Dairy Cows	24	22	20	18	16	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Bairy Youngstock	6	6	5	5	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Autumn Calving Sucklers	17	15	13	12	10	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Spring Calving Sucklers	5	4	4	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Beef Heifer Replacements	119	108	98	87	77	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67
3/2.5 Year Beef	44	40	36	32	28	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
18 Month Beef	67	62	57	51	46	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Stores	144	123	103	85	68	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53
Sheep	-44	-43	-43	-42	-42	-41	-41	-41	-41	-41	-41	-41	-41	-41	-41	-41	-41	-41	-41	-41
Less Purchased Bulk Feed	495	439	384	330	277	226	226	226	226	226	226	226	226	226	226	226	226	226	226	226
Sub Total Livestock	2463	2368	2414	2286	2145	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992
Arable Crop Gross Margins	674	633	457	438	416	393	393	393	393	393	393	393	393	393	393	393	393	393	393	393
Wheat-Feed	1003	836	684	546	423	314	314	314	314	314	314	314	314	314	314	314	314	314	314	314
Wheat-Milling	797	737	679	621	564	508	508	508	508	508	508	508	508	508	508	508	508	508	508	508
Barley - Winter	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barley - Spring	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dats	509	416	331	254	185	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124
Rye	566	546	520	488	451	408	408	408	408	408	408	408	408	408	408	408	408	408	408	408
Potatoes - Non irrigated main crop	1385	1204	1026	851	678	509	509	509	509	509	509	509	509	509	509	509	509	509	509	509
- Irrigated main crop	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugar Beet	672	675	677	680	683	686	686	686	686	686	686	686	686	686	686	686	686	686	686	686
Beans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Horticultural Crops :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peas,comprising-	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
winning peas	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
harvest/canning	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Turnip/swedes	14	32	51	70	89	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107
Broad beans	531	517	498	474	445	411	411	411	411	411	411	411	411	411	411	411	411	411	411	411
French beans	10	12	14	16	18	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Other vegetables	8668	8039	7394	6767	6141	5515	5515	5515	5515	5515	5515	5515	5515	5515	5515	5515	5515	5515	5515	5515
Oilseed Rape	531	517	498	474	445	411	411	411	411	411	411	411	411	411	411	411	411	411	411	411
Other Crops, not Stock-feed	10	12	14	16	18	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Sub Total Crops	8668	8039	7394	6767	6141	5515	5515	5515	5515	5515	5515	5515	5515	5515	5515	5515	5515	5515	5515	5515
Recurrent Fixed Costs	1869	1867	1865	1862	1860	1857	1857	1857	1857	1857	1857	1857	1857	1857	1857	1857	1857	1857	1857	1857
Regular Labour	745	743	741	739	738	736	736	736	736	736	736	736	736	736	736	736	736	736	736	736
Machinery - Repairs	487	455	424	398	361	336	336	336	336	336	336	336	336	336	336	336	336	336	336	336
-Fuel	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027
Maintenance & Miscellaneous	3	3	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Additional Irrigation O & M Costs	-4	0	4	7	11	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Additional Grain Drying Costs	4126	4095	4064	4038	4001	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975
Sub Total Recurrent Costs	4126	4095	4064	4038	4001	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975
Additional Capital Costs	101	25	25	23	25	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Irrigation Equipment	0	0	77	80	80	81	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grain Drying/Storage Equipment	101	25	101	103	105	106	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Capital Costs	4936	4358	3612	2956	2312	1661	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767
ANNUAL CASH FLOW	4936	4358	3612	2956	2312	1661	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767
NET PRESENT VALUE																				

Projected EC Economic Agricultural Gross Margins, Recurrent and Additional Capital Costs - Lincolnshire - 20% Restriction Case - \$1.3-\$1.8 : £1

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004+	
Livestock Gross Margins																					
Dairy Cows	115	103	92	80	68	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57
Dairy Youngstock	25	22	20	18	16	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Autumn Calving Sucklers	6	6	5	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Spring Calving Sucklers	17	16	14	12	11	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Beef Heifer Replacements	5	4	4	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3/2.5 Year Beef	122	111	101	90	80	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70
18 Month Beef	45	41	37	33	29	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Stores	68	63	57	52	47	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41
Sheep	147	126	106	88	71	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
Less Purchased Bulk Feed	-80	-79	-78	-77	-76	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75
Sub Total Livestock	469	413	358	305	253	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202
Arable Crop Gross Margins																					
Wheat-Feed	2582	2628	2510	2378	2234	2076	2076	2076	2076	2076	2076	2076	2076	2076	2076	2076	2076	2076	2076	2076	2076
Wheat-Milling	499	322	310	297	283	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267
Barley - Winter	982	816	666	529	407	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300
Barley - Spring	787	729	672	616	561	506	506	506	506	506	506	506	506	506	506	506	506	506	506	506	506
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rye	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Potatoes - Non irrigated main crop	517	423	337	259	188	126	126	126	126	126	126	126	126	126	126	126	126	126	126	126	126
-Irrigated main crop	554	534	508	477	440	398	398	398	398	398	398	398	398	398	398	398	398	398	398	398	398
Sugar Beet	1381	1202	1026	853	682	514	514	514	514	514	514	514	514	514	514	514	514	514	514	514	514
Beans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Arable Crops	672	675	677	680	683	686	686	686	686	686	686	686	686	686	686	686	686	686	686	686	686
Other Crops, not Stock-feed	520	507	488	465	437	404	404	404	404	404	404	404	404	404	404	404	404	404	404	404	404
Sub Total Crops	8558	7922	7301	6680	6061	5442	5442	5442	5442	5442	5442	5442	5442	5442	5442	5442	5442	5442	5442	5442	5442
Recurrent Fixed Costs	1871	1889	1867	1864	1862	1860	1860	1860	1860	1860	1860	1860	1860	1860	1860	1860	1860	1860	1860	1860	1860
Regular Labour	747	743	743	741	740	738	738	738	738	738	738	738	738	738	738	738	738	738	738	738	738
Machinery - Repairs	488	456	425	400	362	337	337	337	337	337	337	337	337	337	337	337	337	337	337	337	337
- Fuel	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027
Maintenance & Miscellaneous	3	3	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Additional Irrigation O & M Costs	-8	-4	0	3	7	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Additional Grain Drying Costs	4127	4096	4065	4040	4003	3977	3977	3977	3977	3977	3977	3977	3977	3977	3977	3977	3977	3977	3977	3977	3977
Sub Total Recurrent Costs	4127	4096	4065	4040	4003	3977	3977	3977	3977	3977	3977	3977	3977	3977	3977	3977	3977	3977	3977	3977	3977
Additional Capital Costs																					
Irrigation Equipment	101	25	25	23	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Grain Drying/Storage Equipment	0	0	0	76	78	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79
Sub Total Capital Costs	101	25	25	99	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103
ANNUAL CASH FLOW	4800	4214	3569	2847	2209	1564	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667
NET PRESENT VALUE																					

Projected EC Economic Agricultural Gross Margins, Recurrent and Additional Capital Costs - Lincolnshire - 40% Restriction Case - \$1.3-\$1.8 p.a.

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004+	
Livestock Gross Margins																					
Dairy Cows	117	106	94	82	71	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59
Dairy Youngstock	26	23	21	19	17	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Autumn Calving Sucklers	18	17	15	13	12	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Spring Calving Sucklers	5	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Beef Heifer Replacements	128	117	107	96	86	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
3/2.5 Year Beef	47	43	39	35	31	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
18 Month Beef	70	65	59	54	48	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43
Stores	153	132	111	93	75	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
Sheep	-171	-169	-167	-164	-162	-160	-160	-160	-160	-160	-160	-160	-160	-160	-160	-160	-160	-160	-160	-160	-160
Less Purchased Bulk Feed	399	344	289	237	186	136	136	136	136	136	136	136	136	136	136	136	136	136	136	136	136
Sub Total Livestock																					
Arable Crop Gross Margins																					
Wheat-Feed	2889	2805	2703	2584	2447	2293	2293	2293	2293	2293	2293	2293	2293	2293	2293	2293	2293	2293	2293	2293	2293
Wheat-Milling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barley - Winter	920	728	571	423	293	181	181	181	181	181	181	181	181	181	181	181	181	181	181	181	181
Barley - Spring	750	698	646	594	543	493	493	493	493	493	493	493	493	493	493	493	493	493	493	493	493
Dats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oye	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Potatoes - Non-irrigated main crop	523	428	340	261	189	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125
- Irrigated main crop	527	508	483	453	417	376	376	376	376	376	376	376	376	376	376	376	376	376	376	376	376
Sugar Beet	1360	1188	1018	850	683	518	518	518	518	518	518	518	518	518	518	518	518	518	518	518	518
Beans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Horticultural Crops :																					
Peas,comprising-	672	675	677	680	683	686	686	686	686	686	686	686	686	686	686	686	686	686	686	686	686
winning peas	0	103	323	348	369	385	385	385	385	385	385	385	385	385	385	385	385	385	385	385	385
harvest/canning	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Turnip/swedes	30	30	30	30	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29
Broad beans	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
French beans	12	29	45	62	79	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95
Other vegetables																					
Oilseed Rape	472	369	277	251	225	199	199	199	199	199	199	199	199	199	199	199	199	199	199	199	199
Other Crops, not Stock-feed	9	10	12	14	16	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
Sub Total Crops	8172	7659	7136	6559	5982	5405	5405	5405	5405	5405	5405	5405	5405	5405	5405	5405	5405	5405	5405	5405	5405
Recurrent Fixed Costs																					
Regular Labour	1875	1876	1876	1875	1874	1873	1873	1873	1873	1873	1873	1873	1873	1873	1873	1873	1873	1873	1873	1873	1873
Machinery - Repairs	749	750	751	750	749	748	748	748	748	748	748	748	748	748	748	748	748	748	748	748	748
Fuel	490	469	429	404	367	342	342	342	342	342	342	342	342	342	342	342	342	342	342	342	342
Maintenance & Miscellaneous Costs	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027
Additional Irrigation & H Costs	3	3	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Additional Grain Drying Costs	-19	-14	-9	-5	-2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Sub Total Recurrent Costs	4124	4102	4078	4055	4020	3997	3997	3997	3997	3997	3997	3997	3997	3997	3997	3997	3997	3997	3997	3997	3997
Additional Capital Costs																					
Irrigation Equipment	101	25	25	23	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Grain Drying/Storage Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Capital Costs	101	25	25	23	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
ANNUAL CASH FLOW	4346	3876	3323	2718	2123	1480	1544	1544	1544	1544	1544	1544	1544	1544	1544	1544	1544	1544	1544	1544	1544
NET PRESENT VALUE																					

Projected EC Economic Agricultural Gross Margins, Recurrent and Additional Capital Costs - 50% Restriction Case - \$1.3-\$1.8 : \$1

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004+
Livestock Gross Margins	119	107	95	84	72	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
Dairy Cows	26	24	22	20	18	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
Dairy Youngstock	7	6	6	5	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Autumn Calving Sucklers	19	17	16	14	12	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Spring Calving Sucklers	5	5	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Beet Heifer Replacements	131	120	110	99	89	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78
3/2.5 Year Beef	48	44	40	36	32	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28
18 Month Beef	71	65	60	55	49	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Stores	156	134	114	95	78	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62
Sheep	-216	-213	-210	-207	-205	-202	-202	-202	-202	-202	-202	-202	-202	-202	-202	-202	-202	-202	-202	-202
Less Purchased Bulk Feed	365	310	256	203	153	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103
Sub Total Livestock	2747	2694	2620	2525	2409	2272	2272	2272	2272	2272	2272	2272	2272	2272	2272	2272	2272	2272	2272	2272
Arable Crop Gross Margins	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wheat-feed	868	666	485	325	186	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69
Wheat-hilling	715	667	619	571	524	476	476	476	476	476	476	476	476	476	476	476	476	476	476	476
Barley - Winter	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barley - Spring	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oats	525	430	342	262	190	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125
Rye	514	495	470	440	405	365	365	365	365	365	365	365	365	365	365	365	365	365	365	365
Potatoes - Non-irrigated main crop	1334	1169	1004	840	677	515	515	515	515	515	515	515	515	515	515	515	515	515	515	515
Potatoes - Irrigated main crop	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugar Beet	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Beans	672	675	677	680	683	686	686	686	686	686	686	686	686	686	686	686	686	686	686	686
Horticultural Crops :	0	335	636	644	647	646	646	646	646	646	646	646	646	646	646	646	646	646	646	646
Peas, comprising-	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
winter peas	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
harvest/canning	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
Turnip/swedes	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Broad beans	11	27	42	57	73	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
Other vegetables	435	260	110	99	89	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78
Oilseed Rape	8	10	11	13	14	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
Other Crops, not Stock-feed	7866	7463	7052	6493	5933	5371	5371	5371	5371	5371	5371	5371	5371	5371	5371	5371	5371	5371	5371	5371
Sub Total Crops	1877	1880	1884	1883	1883	1882	1882	1882	1882	1882	1882	1882	1882	1882	1882	1882	1882	1882	1882	1882
Recurrent Fixed Costs	751	754	757	757	756	756	756	756	756	756	756	756	756	756	756	756	756	756	756	756
Regular Labour	491	462	433	408	370	346	346	346	346	346	346	346	346	346	346	346	346	346	346	346
Machinery - Repairs	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027
Fuel	3	3	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Maintenance & Miscellaneous Costs	-27	-21	-16	-12	-8	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4
Additional Irrigation & M Costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Additional Grain Drying Costs	4121	4105	4089	4057	4033	4011	4011	4011	4011	4011	4011	4011	4011	4011	4011	4011	4011	4011	4011	4011
Sub Total Recurrent Costs	101	25	25	23	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Additional Capital Costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Irrigation Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grain Drying/Storage Equipment	101	25	25	23	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Sub Total Capital Costs	4010	3642	3194	2607	2028	1439	1464	1464	1464	1464	1464	1464	1464	1464	1464	1464	1464	1464	1464	1464
ANNUAL CASH FLOW	29760	29760	29760	29760	29760	29760	29760	29760	29760	29760	29760	29760	29760	29760	29760	29760	29760	29760	29760	29760
NET PRESENT VALUE	1664	1664	1664	1664	1664	1664	1664	1664	1664	1664	1664	1664	1664	1664	1664	1664	1664	1664	1664	1664

Projected EC Economic Agricultural Gross Margins, Recurrent and Additional Capital Costs - No Restriction Case - \$1.3-\$1.8 : £1

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004+	
Livestock Gross Margins																					
Dairy Cows	50	45	39	34	28	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
Dairy Youngstock	14	13	11	10	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Autumn Calving Sucklers	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Spring Calving Sucklers	5	5	4	4	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Beef Heifer Replacements	103	93	88	74	65	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
3/2.5 Year Beef	13	12	11	10	8	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
18 Month Beef	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stores	37	33	29	25	21	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
Sheep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Less Purchased Bulk Feed																					
Sub Total Livestock	225	203	181	158	136	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114
Arable Crop Gross Margins																					
Wheat-Feed	3011	2833	2649	2461	2268	2071	2071	2071	2071	2071	2071	2071	2071	2071	2071	2071	2071	2071	2071	2071	2071
Wheat-Milling	1622	1538	1451	1362	1271	1177	1177	1177	1177	1177	1177	1177	1177	1177	1177	1177	1177	1177	1177	1177	1177
Barley - Winter	2003	1768	1547	1300	1148	970	970	970	970	970	970	970	970	970	970	970	970	970	970	970	970
Barley - Spring	297	283	239	200	172	146	146	146	146	146	146	146	146	146	146	146	146	146	146	146	146
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Potatoes- Non irrigated main crop	56	46	36	27	19	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
- Irrigated main crop	65	61	57	52	46	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Sugar Beet	577	504	433	362	294	226	226	226	226	226	226	226	226	226	226	226	226	226	226	226	226
Beans	381	346	312	288	258	222	222	222	222	222	222	222	222	222	222	222	222	222	222	222	222
Horticultural Crops:																					
Peas, comprising-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
vining peas	156	146	135	125	114	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
harvest/canning peas	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
French beans	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70
Lettuce	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196
Orchard and small fruit	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134
Greenhouse crops	19	23	27	31	35	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Other vegetables																					
Oilseed Rape	503	545	572	583	579	560	560	560	560	560	560	560	560	560	560	560	560	560	560	560	560
Other Crops, not Stock-feed	23	28	33	38	42	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47
Sub Total Crops	9128	8513	7896	7275	6652	6027	6027	6027	6027	6027	6027	6027	6027	6027	6027	6027	6027	6027	6027	6027	6027
Recurrent Fixed Costs																					
Regular Labour	1330	1329	1329	1328	1328	1327	1327	1327	1327	1327	1327	1327	1327	1327	1327	1327	1327	1327	1327	1327	1327
Machinery - Repairs	628	628	627	626	626	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625
Machinery - Fuel	410	394	358	338	307	286	286	286	286	286	286	286	286	286	286	286	286	286	286	286	286
Maintenance & Miscellaneous	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037
Additional Irrigation & H Costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Additional Grain Drying Costs	0	4	8	11	15	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
Sub Total Recurrent Costs	3406	3383	3360	3341	3312	3293	3293	3293	3293	3293	3293	3293	3293	3293	3293	3293	3293	3293	3293	3293	3293
Additional Capital Costs																					
Irrigation Equipment	0	4	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Grain Drying/Storage Equipment	0	83	83	82	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81
Sub Total Capital Costs	0	86	85	85	85	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84
ANNUAL CASH FLOW	5947	5247	4632	4007	3392	2763	2848	2848	2848	2848	2848	2848	2848	2848	2848	2848	2848	2848	2848	2848	2848
NET PRESENT VALUE																					

Projected EC Economic Agricultural Gross Margins, Recurrent and Additional Capital Costs - 30% Restriction
Case - \$1.3-\$1.8 : £1

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004*
Livestock Gross Margins	51	46	40	35	29	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
Dairy Cows	14	13	12	11	9	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Dairy Youngstock	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Autumn Calving Sucklers	6	5	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Spring Calving Sucklers	107	98	89	79	70	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
Beef Heifer Replacements	14	12	11	10	9	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
3/2.5 Year Beef	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18 Month Beef	39	35	31	27	23	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Stores	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36
Sheep	198	176	154	131	109	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87
Less Purchased Bulk Feed																				
Sub Total Livestock	4303	4052	3795	3530	3260	2982	2982	2982	2982	2982	2982	2982	2982	2982	2982	2982	2982	2982	2982	2982
Arable Crop Gross Margins																				
Wheat-Feed																				
Wheat-Milling																				
Barley - Winter	1909	1684	1473	1277	1093	924	924	924	924	924	924	924	924	924	924	924	924	924	924	924
Barley - Spring	284	252	221	193	167	142	142	142	142	142	142	142	142	142	142	142	142	142	142	142
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Potatoes- Non irrigated main crop	57	46	36	27	19	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Potatoes- Irrigated main crop	61	57	53	48	43	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37
Sugar Beet	571	501	432	364	298	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230
Beans	381	346	312	280	250	222	222	222	222	222	222	222	222	222	222	222	222	222	222	222
Horticultural Crops:																				
Peas, comprising-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
harvest/canning peas	156	145	135	125	114	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
French beans	13	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Lettuce	65	65	65	65	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64
Orchard and small fruit	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183
Greenhouse crops	127	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122
Other vegetables	17	21	25	28	32	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
Oilseed Rape	467	506	532	543	540	523	523	523	523	523	523	523	523	523	523	523	523	523	523	523
Other Crops, not Stock-feed	21	26	30	34	38	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43
Sub Total Crops	8608	8018	7426	6832	6235	5636	5636	5636	5636	5636	5636	5636	5636	5636	5636	5636	5636	5636	5636	5636
Recurrent Fixed Costs																				
Regular Labour	1331	1331	1330	1324	1329	1328	1328	1328	1328	1328	1328	1328	1328	1328	1328	1328	1328	1328	1328	1328
Machinery - Repairs	629	628	628	628	627	627	627	627	627	627	627	627	627	627	627	627	627	627	627	627
Fuel	411	385	359	338	307	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287
Miscellaneous	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037
Additional Irrigation O & H Costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Additional Grain Drying Costs	-14	-10	-6	-2	1	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Sub Total Recurrent Costs	3393	3371	3348	3330	3301	3283	3283	3283	3283	3283	3283	3283	3283	3283	3283	3283	3283	3283	3283	3283
Additional Capital Costs																				
Irrigation Equipment	0	4	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Grain Drying/Storage Equipment	0	0	0	0	30	104	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Capital Costs	0	4	2	4	34	107	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANNUAL CASH FLOW	5413	4820	4230	3630	3009	2332	2439	2439	2439	2439	2439	2439	2439	2439	2439	2439	2439	2439	2439	2439
NET PRESENT VALUE																				

Projected EC Economic Agricultural Gross Margins, Recurrent and Additional Capital Costs - Cambridgehire - 40% Restriction
Case - \$1.3-\$1.8 : £1

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004+	
Livestock Gross Margins																					
Dairy Cows	51	46	40	35	29	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
Dairy Youngstock	14	13	12	11	10	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Autumn Calving Sucklers	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Spring Calving Sucklers	6	5	5	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Beef Heifer Replacements	109	100	90	81	71	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62
3/2.5 Year Beef	14	13	11	10	9	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
18 Month Beef	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stores	39	35	31	27	23	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
Sheep	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46
Less Purchased Bulk Feed	191	167	146	124	102	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79
Sub Total Livestock																					
Arable Crop Total Gross Margins																					
Wheat-feed	4167	3931	3687	3437	3170	2913	2913	2913	2913	2913	2913	2913	2913	2913	2913	2913	2913	2913	2913	2913	2913
Wheat-Milling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barley - Winter	1845	1622	1413	1218	1038	871	871	871	871	871	871	871	871	871	871	871	871	871	871	871	871
Barley - Spring	274	244	215	188	163	139	139	139	139	139	139	139	139	139	139	139	139	139	139	139	139
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Potatoes- Non irrigated main crop	58	47	36	27	19	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
- Irrigated main crop	59	55	51	47	41	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
Sugar Beet	564	496	429	362	296	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230
Beans	381	346	312	280	250	222	222	222	222	222	222	222	222	222	222	222	222	222	222	222	222
Horticultural Crops:																					
Peas,comprising- vining peas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
harvest/canning peas	156	261	242	224	205	186	186	186	186	186	186	186	186	186	186	186	186	186	186	186	186
French beans	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Lettuce	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63
Orchard and small fruit	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176
Greenhouse crops	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115
Other vegetables	16	20	23	27	31	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34
Oilseed Rape	442	419	448	464	466	455	455	455	455	455	455	455	455	455	455	455	455	455	455	455	455
Other Crops, not Stock-feed	20	24	28	32	36	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Sub Total Crops	8349	7830	7252	6671	6088	5503	5503	5503	5503	5503	5503	5503	5503	5503	5503	5503	5503	5503	5503	5503	5503
Recurrent Fixed Costs																					
Regular Labour	1331	1332	1332	1332	1331	1331	1331	1331	1331	1331	1331	1331	1331	1331	1331	1331	1331	1331	1331	1331	1331
Machinery - Repairs	629	629	629	629	629	628	628	628	628	628	628	628	628	628	628	628	628	628	628	628	628
Fuel	411	386	360	339	308	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287
Maintenance & Miscellaneous	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037
Additional Irrigation O & M Costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Additional Grain Drying Costs	-22	-17	-13	-9	-5	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2
Sub Total Recurrent Costs	3385	3368	3345	3327	3299	3281	3281	3281	3281	3281	3281	3281	3281	3281	3281	3281	3281	3281	3281	3281	3281
Additional Capital Costs																					
Irrigation Equipment	0	4	2	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grain Drying/Storage Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Capital Costs	0	4	2	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANNUAL CASH FLOW	5154	4628	4051	3464	2887	2298	2301	2301	2301	2301	2301	2301	2301	2301	2301	2301	2301	2301	2301	2301	2301
NET PRESENT VALUE																					

43127

Projected EC Economic Agricultural Gross Margins, Recurrent and Additional Capital Costs - Cambridgeshire - 50% Restriction
 Case - \$1.3-\$1.8 : £

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004+	
Livestock Gross Margins																					
Dairy Cows	52	46	41	35	30	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
Dairy Youngstock	15	13	12	11	10	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Autumn Calving Sucklers	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Spring Calving Sucklers	6	5	5	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Beef Heifer Replacements	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3/2.5 Year Beef	111	101	92	82	73	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63
18 Month Beef	14	13	12	10	9	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Stores	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sheep	40	36	32	28	23	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
Less Purchased Bulk Feed	-56	-56	-56	-56	-56	-56	-56	-56	-56	-56	-56	-56	-56	-56	-56	-56	-56	-56	-56	-56	-56
Sub Total Livestock	184	161	139	117	94	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72
Arable Crop Total Gross Margins																					
Wheat-Feed	3964	3781	3584	3374	3151	2915	2915	2915	2915	2915	2915	2915	2915	2915	2915	2915	2915	2915	2915	2915	2915
Wheat-Hilling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barley - Winter	1752	1502	1271	1039	866	693	693	693	693	693	693	693	693	693	693	693	693	693	693	693	693
Barley - Spring	261	232	205	180	156	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Potatoes- Non irrigated main crop	57	46	36	27	19	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Potatoes- Irrigated main crop	57	54	50	45	40	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34
Sugar Beet	554	488	423	358	293	229	229	229	229	229	229	229	229	229	229	229	229	229	229	229	229
Beans	381	346	312	280	250	222	222	222	222	222	222	222	222	222	222	222	222	222	222	222	222
Horticultural Crops:																					
Peas, comprising-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
vining peas	156	403	612	666	739	772	772	772	772	772	772	772	772	772	772	772	772	772	772	772	772
harvest/canning peas	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
French beans	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59
Lettuce	167	167	167	167	167	167	167	167	167	167	167	167	167	167	167	167	167	167	167	167	167
Orchard and small fruit	108	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106
Greenhouse crops	15	18	22	25	28	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
Other vegetables	410	319	238	214	190	166	166	166	166	166	166	166	166	166	166	166	166	166	166	166	166
Oilseed Rape	18	22	26	30	33	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37
Other Crops, not Stock-feed	7968	7553	7122	6621	6109	5587	5587	5587	5587	5587	5587	5587	5587	5587	5587	5587	5587	5587	5587	5587	5587
Sub Total Crops	1331	1335	1339	1339	1341	1343	1343	1343	1343	1343	1343	1343	1343	1343	1343	1343	1343	1343	1343	1343	1343
Recurrent Fixed Costs																					
Regular Labour	629	632	634	635	637	638	638	638	638	638	638	638	638	638	638	638	638	638	638	638	638
Machinery - Repairs	411	387	362	342	312	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292
Fuel	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037
Maintenance & Miscellaneous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Additional Irrigation O & B Costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Additional Grain Drying Costs	-32	-26	-21	-16	-12	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8
Sub Total recurrent Costs	3376	3363	3359	3338	3315	3301	3301	3301	3301	3301	3301	3301	3301	3301	3301	3301	3301	3301	3301	3301	3301
Additional Capital Costs																					
Irrigation Equipment	0	4	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Grain Drying/Storage Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Capital Costs	0	4	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
ANNUAL CASH FLOW	4776	4147	3909	3396	2895	2354	2358	2358	2358	2358	2358	2358	2358	2358	2358	2358	2358	2358	2358	2358	2358
NET PRESENT VALUE																					

APPENDIX XI

LINCOLNSHIRE AND CAMBRIDGESHIRE CATCHMENT AREAS
EUROPEAN COMMUNITY ECONOMIC AGRICULTURAL CASH FLOWS
1985 \$1.30:£1 - 1990 \$1.20:£1

Projected EC Economic Agricultural Gross Margins, Recurrent and Additional Capital Costs - No Restriction Case - \$1.3-\$1.2 : £1

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Livestock Gross Margins	113	116	119	122	125	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128
Dairy Cows	24	23	22	21	21	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Dairy Youngstock	6	6	6	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Autumn Calving Sucklers	16	16	15	14	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
Spring Calving Sucklers	4	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Beef Heifer Replacements	116	112	107	103	98	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94
3/2.5 Year Beef	43	41	40	39	37	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
18 Month Beef	67	65	63	62	60	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58
Stores	141	131	121	111	102	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93
Sheep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Less Purchased Bulk Feed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Livestock	529	513	496	481	465	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
Arable Crop Gross Margins	2334	2474	2618	2766	2918	3074	3074	3074	3074	3074	3074	3074	3074	3074	3074	3074	3074	3074	3074	3074
Wheat-feed	853	903	956	1010	1065	1121	1121	1121	1121	1121	1121	1121	1121	1121	1121	1121	1121	1121	1121	1121
Wheat-milling	1015	941	861	777	688	594	594	594	594	594	594	594	594	594	594	594	594	594	594	594
Barley - Winter	805	815	826	836	845	855	855	855	855	855	855	855	855	855	855	855	855	855	855	855
Barley - Spring	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rye	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Potatoes - Non irrigated main crop	512	507	498	485	470	451	451	451	451	451	451	451	451	451	451	451	451	451	451	451
- Irrigated main crop	572	629	688	750	815	882	882	882	882	882	882	882	882	882	882	882	882	882	882	882
Sugar Beet	1387	1440	1491	1541	1590	1637	1637	1637	1637	1637	1637	1637	1637	1637	1637	1637	1637	1637	1637	1637
Beans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Horticultural Crops :	672	671	669	668	667	665	665	665	665	665	665	665	665	665	665	665	665	665	665	665
Peas,comprising-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
vining peas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
harvest/canning	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Turnip/swedes	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Broad beans	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34
French beans	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Other vegetables	14	33	52	72	91	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110
Oilseed Rape	539	570	600	631	661	692	692	692	692	692	692	692	692	692	692	692	692	692	692	692
Other Crops, not Stock-feed	10	12	14	16	18	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Sub Total Crops	8758	9039	9319	9596	9872	10146	10146	10146	10146	10146	10146	10146	10146	10146	10146	10146	10146	10146	10146	10146
Recurrent Fixed Costs	1868	1866	1864	1862	1860	1857	1857	1857	1857	1857	1857	1857	1857	1857	1857	1857	1857	1857	1857	1857
Regular Labour	744	743	741	739	737	736	736	736	736	736	736	736	736	736	736	736	736	736	736	736
Machinery - Repairs	486	491	496	495	500	505	505	505	505	505	505	505	505	505	505	505	505	505	505	505
-Fuel	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027
Maintenance & Miscellaneous	3	3	4	5	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Additional Irrigation O & M Costs	0	3	8	13	17	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
Additional Grain Drying Costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Recurrent Costs	4128	4134	4140	4140	4146	4152	4152	4152	4152	4152	4152	4152	4152	4152	4152	4152	4152	4152	4152	4152
Additional Capital Costs	101	25	25	23	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Irrigation Equipment	0	86	87	87	87	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
Grain Drying/Storage Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Capital Costs	101	111	112	110	112	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113
ANNUAL CASH FLOW	5058	5307	5563	5827	6079	6331	6444	6444	6444	6444	6444	6444	6444	6444	6444	6444	6444	6444	6444	6444
NET PRESENT VALUE																				

Projected EC Economic Agricultural Gross Margins, Recurrent and Additional Capital Costs - Lincolnshire - 20% Restriction Case - \$1.3-\$1.2 : £1

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004+
Livestock Gross Margins																				
Dairy Cows	115	119	122	126	129	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133
Dairy Youngstock	25	24	23	23	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
Autumn Calving Sucklers	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Spring Calving Sucklers	17	17	16	16	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Beef Heifer Replacements	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
3/2.5 Year Beef	122	118	115	112	108	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
18 Month Beef	45	44	43	42	41	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Stores	68	67	66	64	63	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61
Sheep	147	137	128	119	110	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101
Less Purchased Bulk Feed	-80	-79	-78	-77	-76	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75
Sub Total Livestock	469	457	445	433	421	409	409	409	409	409	409	409	409	409	409	409	409	409	409	409
Arable Crop Gross Margins																				
Wheat-Feed	2582	2901	3074	3252	3434	3621	3621	3621	3621	3621	3621	3621	3621	3621	3621	3621	3621	3621	3621	3621
Wheat-Milling	499	353	374	395	417	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440
Barley - Winter	982	901	814	723	625	523	523	523	523	523	523	523	523	523	523	523	523	523	523	523
Barley - Spring	707	799	812	824	836	848	848	848	848	848	848	848	848	848	848	848	848	848	848	848
Dats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rye	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Potatoes - Non-irrigated main crop	517	514	507	497	483	467	467	467	467	467	467	467	467	467	467	467	467	467	467	467
-Irrigated main crop	554	610	667	728	791	857	857	857	857	857	857	857	857	857	857	857	857	857	857	857
Sugar Beet	1381	1436	1491	1544	1597	1649	1649	1649	1649	1649	1649	1649	1649	1649	1649	1649	1649	1649	1649	1649
Beans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Horticultural Crops :																				
Peas-comprising-	672	671	669	668	667	665	665	665	665	665	665	665	665	665	665	665	665	665	665	665
winning peas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
harvest/canning	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Turnip/swedes	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
Broad beans	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
French beans	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Other vegetables	13	31	50	68	86	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
Oilseed Rape	520	551	583	614	645	676	676	676	676	676	676	676	676	676	676	676	676	676	676	676
Other Crops, not Stock-feed	10	11	13	15	17	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
Sub Total Crops	8558	8821	9096	9370	9641	9911	9911	9911	9911	9911	9911	9911	9911	9911	9911	9911	9911	9911	9911	9911
Recurrent Fixed Costs																				
Regular Labour	1871	1869	1867	1864	1862	1860	1860	1860	1860	1860	1860	1860	1860	1860	1860	1860	1860	1860	1860	1860
Machinery - Repairs	747	745	743	741	740	738	738	738	738	738	738	738	738	738	738	738	738	738	738	738
-Fuel	488	493	498	496	501	506	506	506	506	506	506	506	506	506	506	506	506	506	506	506
Maintenance & Miscellaneous	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027
Additional Irrigation & M Costs	3	3	4	5	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Additional Grain Drying Costs	-8	-4	0	4	8	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Sub Total Recurrent Costs	4127	4132	4138	4138	4143	4149	4149	4149	4149	4149	4149	4149	4149	4149	4149	4149	4149	4149	4149	4149
Additional Capital Costs																				
Irrigation Equipment	101	25	25	23	25	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grain Drying/Storage Equipment	0	0	0	76	78	79	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Capital Costs	101	25	25	99	103	103	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANNUAL CASH FLOW	4800	5121	5378	5566	5816	6068	6171	6171	6171	6171	6171	6171	6171	6171	6171	6171	6171	6171	6171	6171
NET PRESENT VALUE																				

Projected EC Economic Agricultural Gross Margins, Recurrent and Additional Capital Costs - Lincolnshire - 40% Restriction Case - \$1.3-\$1.2 : £1

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004+	
Livestock Gross Margins																					
Dairy Cows	117	121	125	129	132	136	136	136	136	136	136	136	136	136	136	136	136	136	136	136	136
Dairy Youngstock	26	25	25	24	24	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
Autumn Calving Sucklers	7	7	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Spring Calving Sucklers	18	18	18	17	17	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
Beef Heifer Replacements	5	5	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
3/2.5 Year Beef	128	125	122	119	116	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113
18 Month Beef	47	46	45	44	43	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42
Stores	70	69	68	66	65	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64
Sheep	153	144	134	125	116	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108
Less Purchased Bulk Feed	-171	-169	-167	-164	-162	-160	-160	-160	-160	-160	-160	-160	-160	-160	-160	-160	-160	-160	-160	-160	-160
Sub Total Livestock	399	389	380	370	361	352	352	352	352	352	352	352	352	352	352	352	352	352	352	352	352
Arable Crop Gross Margins																					
Wheat-Feed	2889	3099	3316	3539	3770	4008	4008	4008	4008	4008	4008	4008	4008	4008	4008	4008	4008	4008	4008	4008	4008
Wheat-Milling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barley - Winter	920	804	700	579	450	315	315	315	315	315	315	315	315	315	315	315	315	315	315	315	315
Barley - Spring	750	766	781	796	810	825	825	825	825	825	825	825	825	825	825	825	825	825	825	825	825
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rye	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Potatoes - Non-irrigated main crop	523	521	517	509	498	484	484	484	484	484	484	484	484	484	484	484	484	484	484	484	484
- Irrigated main crop	527	581	636	694	755	818	818	818	818	818	818	818	818	818	818	818	818	818	818	818	818
Sugar Beet	1360	1420	1479	1538	1596	1653	1653	1653	1653	1653	1653	1653	1653	1653	1653	1653	1653	1653	1653	1653	1653
Beans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Horticultural Crops :																					
Peas,comprising-	672	671	669	668	667	665	665	665	665	665	665	665	665	665	665	665	665	665	665	665	665
vining peas	0	199	382	450	521	595	595	595	595	595	595	595	595	595	595	595	595	595	595	595	595
harvest/canning	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Turnip/swedes	30	30	30	30	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29
Broad beans	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
French beans	12	29	45	62	79	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95
Other vegetables																					
Oilseed Rape	472	402	333	334	335	336	336	336	336	336	336	336	336	336	336	336	336	336	336	336	336
Other Crops, not Stock-feed	9	10	12	14	16	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
Sub Total Crops	8172	8540	8708	9221	9535	9851	9851	9851	9851	9851	9851	9851	9851	9851	9851	9851	9851	9851	9851	9851	9851
Recurrent Fixed Costs																					
Regular Labour	1875	1876	1876	1875	1874	1873	1873	1873	1873	1873	1873	1873	1873	1873	1873	1873	1873	1873	1873	1873	1873
Machinery - Repairs	749	750	751	750	749	748	748	748	748	748	748	748	748	748	748	748	748	748	748	748	748
Fuel	490	496	503	502	508	513	513	513	513	513	513	513	513	513	513	513	513	513	513	513	513
Maintenance & Miscellaneous Costs	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027
Additional Irrigation D & H Costs	3	3	4	5	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Additional Grain Drying Costs	-19	-15	-10	-6	-2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Sub Total Recurrent Costs	4124	4138	4151	4153	4161	4169	4169	4169	4169	4169	4169	4169	4169	4169	4169	4169	4169	4169	4169	4169	4169
Additional Capital Costs																					
Irrigation Equipment	101	25	25	23	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grain Drying/Storage Equipment	0	0	0	0	0	39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Capital Costs	101	25	25	23	25	64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANNUAL CASH FLOW	4346	4767	5112	5415	5710	5970	6034	6034	6034	6034	6034	6034	6034	6034	6034	6034	6034	6034	6034	6034	6034

Projected EC Economic Agricultural Gross Margins, Recurrent and Additional Capital Costs - Lincolnshire - 50% Restriction Case - \$1.3-\$1.2 : 1

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004+	
Livestock Gross Margins																					
Dairy Cows	119	122	126	130	134	138	138	138	138	138	138	138	138	138	138	138	138	138	138	138	138
Dairy Youngstock	26	26	25	25	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
Autumn Calving Sucklers	7	7	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Spring Calving Sucklers	19	19	18	18	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
Beef Heifer Replacements	5	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
3/2.5 Year Beef	131	128	125	123	120	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118
18 Month Beef	49	47	46	45	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Stores	71	70	69	67	66	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65
Sheep	156	147	137	128	120	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111
Less Purchased Bulk Feed	-216	-213	-210	-207	-205	-202	-202	-202	-202	-202	-202	-202	-202	-202	-202	-202	-202	-202	-202	-202	-202
Sub Total Livestock	365	356	348	340	332	324															
Arable Crop Gross Margins																					
Wheat-Feed	2747	2979	3218	3466	3723	3988	3988	3988	3988	3988	3988	3988	3988	3988	3988	3988	3988	3988	3988	3988	3988
Wheat Milling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barley - Winter	868	736	595	446	288	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121
Barley - Spring	715	732	749	766	782	799	799	799	799	799	799	799	799	799	799	799	799	799	799	799	799
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rye	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Potatoes - Non-irrigated main crop	525	526	522	516	507	494	494	494	494	494	494	494	494	494	494	494	494	494	494	494	494
- Irrigated main crop	514	566	621	677	737	799	799	799	799	799	799	799	799	799	799	799	799	799	799	799	799
Sugar Beet	1334	1397	1460	1522	1584	1646	1646	1646	1646	1646	1646	1646	1646	1646	1646	1646	1646	1646	1646	1646	1646
Beans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Horticultural Crops :																					
Peas,comprising-																					
vining peas	672	671	669	668	667	665	665	665	665	665	665	665	665	665	665	665	665	665	665	665	665
harvest/canning	0	365	753	831	913	998	998	998	998	998	998	998	998	998	998	998	998	998	998	998	998
Turnip/swedes	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Broad beans	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
French beans	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Other vegetables	11	27	42	57	73	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
Oilseed Rape	435	284	132	133	133	134															
Other Crops, not Stock-feed	8	10	11	13	14	16															
Sub Total Crops	7866	8327	8808	9131	9456	9784															
Recurrent Fixed Costs																					
Regular Labour	1877	1880	1884	1883	1883	1882	1882	1882	1882	1882	1882	1882	1882	1882	1882	1882	1882	1882	1882	1882	1882
Machinery - Repairs	751	754	757	757	756	756	756	756	756	756	756	756	756	756	756	756	756	756	756	756	756
- Fuel	491	499	507	507	513	518	518	518	518	518	518	518	518	518	518	518	518	518	518	518	518
Maintenance & Miscellaneous Costs	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027
Additional Irrigation D & M Costs	3	3	4	5	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Additional Grain Drying Costs	-27	-22	-17	-13	-9	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
Sub Total Recurrent Costs	4121	4141	4162	4165	4174	4183															
Additional Capital Costs																					
Irrigation Equipment	101	25	25	23	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Grain Drying/Storage Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Capital Costs	101	25	25	23	25																
ANNUAL CASH FLOW	4010	4517	4969	5283	5589	5900	5925														

Projected EC Economic Agricultural Gross Margins, Recurrent and Additional Capital Costs - Cambridgeshire - 20% Restriction
Case - \$1.3-\$1.2 : £1

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004+	
Livestock Gross Margins																					
Dairy Cows	51	53	55	56	58	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
Dairy Youngstock	14	14	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
Autumn Calving Sucklers	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Spring Calving Sucklers	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Beef Heifer Replacements	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3/2.5 Year Beef	106	103	101	98	95	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93
18 Month Beef	13	13	13	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Stores	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sheep	38	38	37	36	36	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
Less Purchased Bulk Feed	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24
Sub Total Livestock	208	205	203	201	198	196															
Arable Crop Gross Margins																					
Wheat-Feed	3506	3867	4011	4157	4306	4456	4456	4456	4456	4456	4456	4456	4456	4456	4456	4456	4456	4456	4456	4456	4456
Wheat-Milling	958	746	773	801	829	858	858	858	858	858	858	858	858	858	858	858	858	858	858	858	858
Barley - Winter	1948	1896	1838	1774	1706	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631
Barley - Spring	289	282	273	264	254	243	243	243	243	243	243	243	243	243	243	243	243	243	243	243	243
Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Potatoes - Non irrigated main crop	57	57	57	56	55	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54
- Irrigated main crop	62	68	75	81	88	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95
Sugar Beet	574	596	618	639	660	681	681	681	681	681	681	681	681	681	681	681	681	681	681	681	681
Beans	381	374	366	357	348	337	337	337	337	337	337	337	337	337	337	337	337	337	337	337	337
Horticultural Crops:																					
Peas, comprising:																					
- vining peas	156	157	158	158	159	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160
- harvest/canning peas	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
- Lettuce	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67
- Orchard and small fruit	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188
- Greenhouse crops	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127
- Other vegetables	18	22	26	29	33	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37
Oilseed Rape	486	571	655	738	820	901	901	901	901	901	901	901	901	901	901	901	901	901	901	901	901
Other Crops, not stout-feed	22	27	31	35	40	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Sub Total Crops	8851	9055	9274	9486	9693	9893															
Recurrent Fixed Costs																					
Regular Labour	1331	1330	1330	1329	1329	1328	1328	1328	1328	1328	1328	1328	1328	1328	1328	1328	1328	1328	1328	1328	1328
Machinery - Repairs	628	628	627	627	627	626	626	626	626	626	626	626	626	626	626	626	626	626	626	626	626
Maintenance - Fuel	411	415	420	420	425	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430
Additional Irrigation O & H Costs	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037	1037
Additional Grain Drying Costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total recurrent Costs	-9	-5	0	4	8	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Sub Total Capital Costs	3398	3503	3506	3509	3513	3516	3433														
Additional Capital Costs																					
Irrigation Equipment	0	4	2	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grain Drying/Storage Equipment	0	0	0	69	77	76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Capital Costs	0	4	2	72	81	80	0														
ANNUAL CASH FLOW	5661	5755	5970	6106	6298	6493	6656														
NET PRESENT VALUE																					

APPENDIX XII

LINCOLNSHIRE AND CAMBRIDGESHIRE CATCHMENT AREAS
RESULTS OF THE EUROPEAN COMMUNITY ECONOMIC ANALYSIS
1985 \$1.30:£1 - 1990 £1.80:£1

Table 1 - EC Economic Analysis - 1985 \$1.3:£1 - 1990 \$1.8:£1 - Summary of Present Values of Agricultural Cash Flows - 24.4/34.4 MI per Day Abstraction - £'000

% Restriction from Current Nitrogen Application Rates	Lincolnshire - 24.4 MI per Day Abstraction			Cambridgeshire - 34.4 MI per Day Abstraction		
	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) Only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)
0	37177	11514	21028	51761	22430	44860
10	35452	10980	21968	49082	21616	43231
20	33883	10494	20988	47527	20595	41190
30	32184	9968	19935	45385	19667	39334
40	31427	9733	19466	43127	18688	37377
50	29760	9217	18434	42956	18614	37229

Table 2 - EC Economic Analysis - 1985 \$1.3:£1 - 1990 \$1.8:£1 - Summary of Present Values of Agricultural Cash Flows - 4.5/5.3 MI per Day Abstraction - £'000

% Restriction from Current Nitrogen Application Rates	Lincolnshire - 4.5 MI per Day Abstraction			Cambridgeshire - 5.3 MI per Day Abstraction		
	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) Only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)
0	37177	2310	4607	51761	3251	6526
10	35452	2703	4188	49882	3133	6289
20	33883	2105	4194	47527	2985	5993
30	32184	2000	3981	45385	2850	5722
40	31427	1953	3890	43127	2708	5438
50	29760	1849	3684	42956	2698	5416

Table 3 - EC Economic Analysis - 1985 \$1.3:£1 - 1990 \$1.8:£1 - Summary of the Incremental Present Value of Agricultural Benefits - 24-47 34.4 MI per Day Abstraction - £'000

% Restriction from Current Nitrogen Application Rates	Lincolnshire - 24.4 MI per Day Abstraction			Cambridgeshire - 34.4 MI per Day Abstraction		
	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) Only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)
10	(1725)	(534)	(1868)	(1879)	(814)	(1629)
20	(3294)	(1020)	(2040)	(4234)	(1835)	(3670)
30	(4993)	(1506)	(3093)	(6376)	(2763)	(5526)
40	(5750)	(1781)	(3562)	(8634)	(3742)	(7483)
50	(7417)	(2297)	(4594)	(8805)	(3816)	(7631)

Table 4 - EC Economic Analysis - 1985 \$1.3:£1 - 1990 \$1.8:£1 - Summary of the Incremental Present Value of Agricultural Benefits - 4.5/5.3 MI per Day Abstraction - £'000

% Restriction from Current Nitrogen Application Rates	Lincolnshire - 4.5 MI per Day Abstraction			Cambridgeshire - 5.3 MI per Day Abstraction		
	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) Only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)
10	(1725)	(107)	(214)	(1879)	(118)	(237)
20	(3294)	(205)	(408)	(4234)	(266)	(531)
30	(4993)	(310)	(618)	(6376)	(401)	(804)
40	(5750)	(357)	(712)	(8634)	(543)	(1088)
50	(7417)	(461)	(918)	(8805)	(553)	(1110)

Note: Brackets denote negative figures

Table 5 - EC Economic Analysis - 1985 \$1.3:£1 - 1990 \$1.8:£1 - Summary of Present Values of Engineering Costs - 24.4/34.4 MI and 4.5/5.3 MI per Day Abstraction - £'000

% Restriction from Current Nitrogen Application Rates	Lincolnshire				Cambridgeshire				
	24.4 MI per Day Abstraction		4.5 MI per Day Abstraction		14.4 MI per Day Abstraction		5.3 MI per Day Abstraction		
	Ion Exchange	Biological Denitrification	Blending 1/	Ion Exchange	Biological Denitrification	Ion Exchange	Biological Denitrification	Ion Exchange	Biological Denitrification
0	3/54	3058	9216	538	863	691	814	182	309
10	3377	2851	8986	433	768	640	766	171	300
20	2987	2639	8718	267	485	452	679	150	269
30	2652	2418	8409	173	349	497	632	133	234
40	2187	2167	7726	77	170	420	550	122	227
50	1758	1920	7285	25	71	188	461	106	198

Table 6 - EC Economic Analysis - 1985 \$1.3:£1 - 1990 \$1.8:£1 - Summary of Present Values of Engineering Costs Saved Through the Restriction of Nitrogen Fertiliser Usage - £'000

% Restriction from Current Nitrogen Application Rates	Lincolnshire				Cambridgeshire				
	24.4 MI per Day Abstraction		4.5 MI per Day Abstraction		14.4 MI per Day Abstraction		5.3 MI per Day Abstraction		
	Ion Exchange	Biological Denitrification	Blending 1/	Ion Exchange	Biological Denitrification	Ion Exchange	Biological Denitrification	Ion Exchange	Biological Denitrification
10	377	207	230	105	95	51	48	11	9
20	767	581	498	271	378	179	135	32	40
30	1102	640	807	365	514	194	182	49	75
40	1567	891	1490	461	693	271	264	60	82
50	1996	1138	1931	513	790	353	351	76	111

1/ costs are the same as financial analysis as no transport/disposal of waste materials is required.

Note - There is no blending option in Lincolnshire on the 4.5 MI per Day Abstraction.

Table 7 - Results of the EC Economic Analysis - 1985 \$1.3:£1 - 1990 \$1.8:£1 - 24.4 Ml per Day Abstraction - Protection of the Entire Water Resource in the Catchment Area - Lincolnshire - f'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(1725)	(3294)	(4993)	(5750)	(7417)
Present Value Biological Denitrification Costs Saved	207	581	640	891	1138
Net Present Value	(1518)	(2713)	(4353)	(4859)	(6279)

Table 8 - Results of the EC Economic Analysis - 1985 \$1.3:£1 - 1990 \$1.8:£1 - 4.5 Ml per Day Abstraction - Protection of the Entire Water Resource in the Catchment Area - Lincolnshire - f'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(1725)	(3294)	(4993)	(5750)	(7417)
Present Value of Ion Exchange Costs Saved	105	271	365	461	513
Net Present Value	(1620)	(3023)	(4628)	(5289)	(6904)

Table 9 - Results of the EC Economic Analysis - 1985 \$1.3:£1 - 1990 \$1.8:£1 - 34.4 Ml per Day Abstraction - Protection of the Entire Water Resource in the Catchment Area - Cambridgeshire - f'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(1879)	(4234)	(6376)	(8634)	(8805)
Present Value of Ion Exchange Costs Saved	51	139	194	271	353
Net Present Value	(1828)	(4095)	(6182)	(8363)	(8452)

Table 10 - Results of the EC Economic Analysis - 1985 \$1.3:£1 - 1990 \$1.8:£1 - 5.3 Ml per Day Abstraction - Protection of the Entire Water Resource in the Catchment Area - Cambridgeshire - f'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(1879)	(4234)	(6376)	(8634)	(8805)
Present Value of Ion Exchange Costs Saved	11	32	49	60	76
Net Present Value	(1868)	(4202)	(6327)	(8574)	(8729)

NOTE: Brackets denote negative figures

Table 11 - Results of the EC Economic Analysis - 1985 \$1.3:£1 - 1990 \$1.8:£1 - 24.4 MI per Day Abstraction - Protection of the Borehole Catchment Area Only - Lincolnshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(514)	(1020)	(1546)	(1781)	(2297)
Present Value Biological Denitrification Costs Saved	207	581	640	891	1138
Net Present Value	(327)	(439)	(906)	(890)	(1159)

Table 12 - Results of the EC Economic Analysis - 1985 \$1.3:£1 - 1990 \$1.8:£1 - 4.5 MI per Day Abstraction - Protection of the Borehole Catchment Area Only - Lincolnshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(107)	(205)	(310)	(357)	(461)
Present Value of Ion Exchange Costs Saved	105	271	365	461	513
Net Present Value	(2)	66	55	104	52

Table 13 - Results of the EC Economic Analysis - 1985 \$1.3:£1 - 1990 \$1.8:£1 - 34.4 MI per Day Abstraction - Protection of the Borehole Catchment Area Only - Cambridgeshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(814)	(1835)	(2763)	(3742)	(3816)
Present Value of Ion Exchange Costs Saved	51	139	194	271	353
Net Present Value	(763)	(1696)	(2569)	(3471)	(3463)

Table 14 - Results of the EC Economic Analysis - 1985 \$1.3:£1 - 1990 \$1.8:£1 - 5.3 MI per Day Abstraction - Protection of the Borehole Catchment Area Only - Cambridgeshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(118)	(266)	(401)	(543)	(553)
Present Value of Ion Exchange Costs Saved	11	32	49	60	76
Net Present Value	(107)	(234)	(352)	(483)	(477)

NOTE: Brackets denote negative figures

Table 15 - Results of the EC Economic Analysis - 1985 \$1.3:£1 - 1990 \$1.8:£1 - 24.4 MI per Day Abstraction - Protection of an Area Twice the Specific Borehole Catchment Area - Lincolnshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(1068)	(2040)	(3093)	(3562)	(4594)
Present Value Biological Denitrification Costs Saved	207	581	640	891	1138
Net Present Value	(861)	(1459)	(2453)	(2671)	(3456)

Table 16 - Results of the EC Economic Analysis - 1985 \$1.3:£1 - 1990 \$1.8:£1 - 4.5 MI per Day Abstraction - Protection of an Area Twice the Specific Borehole Catchment Area - Lincolnshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(214)	(408)	(618)	(712)	(918)
Present Value of Ion Exchange Costs Saved	105	271	365	461	513
Net Present Value	(109)	(137)	(253)	(251)	(405)

Table 17 - Results of the EC Economic Analysis - 1985 \$1.3:£1 - 1990 \$1.8:£1 - 34.4 MI per Day Abstraction - Protection of an Area Twice the Specific Borehole Catchment Area - Cambridgeshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(1629)	(3670)	(5526)	(7483)	(7631)
Present Value of Ion Exchange Costs Saved	51	139	194	271	353
Net Present Value	(1578)	(3531)	(5332)	(7212)	(7278)

Table 18 - Results of the EC Economic Analysis - 1985 \$1.3:£1 - 1990 \$1.8:£1 - 5.3 MI per Day Abstraction - Protection of an Area Twice the Specific Borehole Catchment Area - Cambridgeshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(237)	(533)	(804)	(1088)	(1110)
Present Value of Ion Exchange Costs Saved	11	32	49	60	76
Net Present Value	(226)	(501)	(755)	(1028)	(1034)

NOTE: Brackets denote negative figures

APPENDIX XIII

LINCOLNSHIRE AND CAMBRIDGESHIRE CATCHMENT AREAS
RESULTS OF THE EUROPEAN COMMUNITY ECONOMIC ANALYSIS
1985 \$1.30:£1 - 1990 \$1.20:£1

Table 1 - EC Economic Analysis - 1985 \$1.3:£1 - 1990 \$1.2:£1 - Summary of Present Values of Agricultural Cash Flows - 24.4/34.4 MI per Day Abstraction - £'000

% Restriction from Current Nitrogen Application Rates	Lincolnshire - 24.4 MI per Day Abstraction			Cambridgeshire - 34.4 MI per Day Abstraction		
	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) Only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)
0	95073	29405	56890	103893	45020	90040
10	92935	28783	57566	101612	44032	88064
20	91070	28205	56410	99112	42949	85897
30	89161	27614	55228	95887	41551	83102
40	88395	27377	54753	92707	40173	80346
50	86344	26741	53483	92669	40157	80313

Table 2 - EC Economic Analysis - 1985 \$1.3:£1 - 1990 \$1.2:£1 - Summary of Present Values of Agricultural Cash Flows - 4.5/5.3 MI per Day Abstraction - £'000

% Restriction from Current Nitrogen Application Rates	Lincolnshire - 4.5 MI per Day Abstraction			Cambridgeshire - 5.3 MI per Day Abstraction		
	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) Only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)
0	95073	5907	11769	103893	6525	13100
10	92935	5775	11504	101612	6381	12812
20	91070	5659	11273	99112	6224	12497
30	89161	5540	11037	95887	6022	12090
40	88395	5493	10942	92707	5822	11589
50	86344	5365	10688	92669	5820	11684

Table 3 - EC Economic Analysis - 1985 \$1.3:£1 - 1990 \$1.2:£1 - Summary of the Incremental Present Value of Agricultural Benefits - 24.4/31.4 MI per Day Abstraction - £'000

% Restriction from Current Nitrogen Application Rates	Lincolnshire - 24.4 MI per Day Abstraction			Cambridgeshire - 31.4 MI per Day Abstraction		
	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) Only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)
10	(2138)	(662)	(1124)	(2281)	(988)	(1976)
20	(4003)	(1240)	(2488)	(4781)	(2071)	(4143)
30	(5912)	(1831)	(3662)	(8006)	(3469)	(6938)
40	(6678)	(2068)	(4137)	(11186)	(4847)	(9694)
50	(8729)	(2704)	(5407)	(11224)	(4863)	(9727)

Table 4 - EC Economic Analysis - 1985 \$1.3:£1 - 1990 \$1.2:£1 - Summary of the Incremental Present Value of Agricultural Benefits - 4.5/5.3 MI per Day Abstraction - £'000

% Restriction from Current Nitrogen Application Rates	Lincolnshire - 4.5 MI per Day Abstraction			Cambridgeshire - 5.3 MI per Day Abstraction		
	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) Only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)	Protection of the Entire Water Resource in the Catchment Area	Protection of the Catchment Area of the Borehole(s) only	Protection of an Area Equal to Twice the Catchment Area of the Borehole(s)
10	(2138)	(132)	(265)	(2281)	(144)	(288)
20	(4003)	(248)	(496)	(4781)	(301)	(603)
30	(5912)	(367)	(732)	(8006)	(503)	(1010)
40	(6678)	(414)	(827)	(11186)	(703)	(1411)
50	(8729)	(542)	(1081)	(11224)	(705)	(1416)

Note: Brackets denote negative figures

Table 5 - EC Economic Analysis - 1985 \$1.3:£1 - 1990 \$1.2:£1 - Summary of Present Values of Engineering Costs - 24.4/34.4 MI and 4.5/5.3 MI per Day Abstraction - £'000

% Restriction from Current Nitrogen Application Rates	Lincolnshire						Cambridgeshire					
	24.4 MI per Day Abstraction			4.5 MI per Day Abstraction			34.4 MI per Day Abstraction			5.3 MI per Day Abstraction		
	Ion Exchange	Biological Denitrification	Blending 1/	Ion Exchange	Biological Denitrification		Ion Exchange	Biological Denitrification		Ion Exchange	Biological Denitrification	
	0	3791	3062	9216	549	863		697	815		186	309
10	3410	2855	8986	441	768		645	767		175	300	
20	3015	2642	8718	272	485		556	680		153	269	
30	2675	2421	8409	176	349		500	633		135	234	
40	2206	2169	7726	78	170		423	550		124	227	
50	1772	1922	7285	25	73		341	461		108	198	

Table 6 - EC Economic Analysis - 1985 \$1.3:£1 - 1990 \$1.2:£1 - Summary of Present Values of Engineering Costs Saved Through the Restriction of Nitrogen Fertiliser Usage - £'000

% Restriction from Current Nitrogen Application Rates	Lincolnshire						Cambridgeshire					
	24.4 MI per Day Abstraction			4.5 MI per Day Abstraction			34.4 MI per Day Abstraction			5.3 MI per Day Abstraction		
	Ion Exchange	Biological Denitrification	Blending 1/	Ion Exchange	Biological Denitrification		Ion Exchange	Biological Denitrification		Ion Exchange	Biological Denitrification	
	10	381	207	230	108	95		52	48		11	9
20	776	420	498	277	378		141	135		33	40	
30	1116	641	807	373	514		197	182		51	75	
40	1585	893	1490	471	691		274	265		62	82	
50	2019	1140	1931	524	790		356	354		78	111	

1/ Costs are the same as financial analysis as no transport/disposal of waste materials is required.

Note - There is no blending option in Lincolnshire on the 4.5 MI per Day Abstraction

Table 7 - Results of the EC Economic Analysis - 1985 \$1.3:£1 - 1990 \$1.2:£1 - 24.4 MI per Day Abstraction - Protection of the Entire Water Resource in the Catchment Area - Lincolnshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(2138)	(4003)	(5912)	(6678)	(8729)
Present Value Biological Denitrification Costs Saved	207	420	641	893	1140
Net Present Value	(1931)	(3583)	(5271)	(5785)	(7589)

Table 8 - Results of the EC Economic Analysis - 1985 \$1.3:£1 - 1990 \$1.2:£1 - 4.5 MI per Day Abstraction - Protection of the Entire Water Resource in the Catchment Area - Lincolnshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(2138)	(4003)	(5912)	(6678)	(8729)
Present Value of Ion Exchange Costs Saved	108	277	373	471	524
Net Present Value	(2030)	(3726)	(5539)	(6207)	(8205)

Table 9 - Results of the EC Economic Analysis - 1985 \$1.3:£1 - 1990 \$1.2:£1 - 34.4 MI per Day Abstraction - Protection of the Entire Water Resource in the Catchment Area - Cambridgeshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(2281)	(4781)	(8006)	(11186)	(11224)
Present Value of Ion Exchange Costs Saved	52	141	197	274	356
Net Present Value	(2229)	(4640)	(7809)	(10912)	(10868)

Table 10 - Results of the EC Economic Analysis - 1985 \$1.3:£1 - 1990 \$1.2:£1 - 5.3 MI per Day Abstraction - Protection of the Entire Water Resource in the Catchment Area - Cambridgeshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(2281)	(4781)	(8006)	(11106)	(11224)
Present Value of Ion Exchange Costs Saved	11	33	51	62	78
Net Present Value	(2270)	(4748)	(7955)	(11124)	(11146)

NOTE: Brackets denote negative figures

Table 11 - Results of the EC Economic Analysis - 1985 \$1.3:£1 - 1990 \$1.2:£1 - 24.4 MI per Day Abstraction - Protection of the Borehole Catchment Area Only - Lincolnshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(662)	(1240)	(1831)	(2068)	(2704)
Present Value Biological Denitrification Costs Saved	207	420	641	893	1140
Net Present Value	(455)	(820)	(1190)	(1175)	(1564)

Table 12 - Results of the EC Economic Analysis - 1985 \$1.3:£1 - 1990 \$1.2:£1 - 4.5 MI per Day Abstraction - Protection of the Borehole Catchment Area Only - Lincolnshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(132)	(248)	(367)	(414)	(542)
Present Value of Ion Exchange Costs Saved	108	277	373	471	524
Net Present Value	(24)	29	6	57	(18)

Table 13 - Results of the EC Economic Analysis - 1985 \$1.3:£1 - 1990 \$1.2:£1 - 34.4 MI per Day Abstraction - Protection of the Borehole Catchment Area Only - Cambridgeshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(988)	(2071)	(3469)	(4887)	(8863)
Present Value of Ion Exchange Costs Saved	52	141	197	274	356
Net Present Value	(936)	(1930)	(3272)	(4573)	(84507)

Table 14 - Results of the EC Economic Analysis - 1985 \$1.3:£1 - 1990 \$1.2:£1 - 5.3 MI per Day Abstraction - Protection of the Borehole Catchment Area Only - Cambridgeshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(144)	(301)	(503)	(703)	(705)
Present Value of Ion Exchange Costs Saved	11	33	51	62	78
Net Present Value	(133)	(268)	(452)	(641)	(627)

NOTE: Brackets denote negative figures

Table 15 - Results of the EC Economic Analysis - 1985 \$1.3:£1 - 1990 \$1.2:£1 - 24.4 MI per Day Abstraction - Protection of an Area Twice the Specific Borehole Catchment Area - Lincolnshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(1324)	(2400)	(3662)	(4137)	(5407)
Present Value Biological Denitrification Costs Saved	207	420	641	893	1140
Net Present Value	(1117)	(2060)	(3021)	(3244)	(4267)

Table 16 - Results of the EC Economic Analysis - 1985 \$1.3:£1 - 1990 \$1.2:£1 - 4.5 MI per Day Abstraction - Protection of an Area Twice the Specific Borehole Catchment Area - Lincolnshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(265)	(496)	(732)	(827)	(1081)
Present Value of Ion Exchange Costs Saved	108	277	373	471	524
Net Present Value	(157)	(219)	(359)	(356)	(557)

Table 17 - Results of the EC Economic Analysis - 1985 \$1.3:£1 - 1990 \$1.2:£1 - 34.4 MI per Day Abstraction - Protection of an Area Twice the Specific Borehole Catchment Area - Cambridgeshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(1976)	(4143)	(6938)	(9694)	(9727)
Present Value of Ion Exchange Costs Saved	52	141	197	274	356
Net Present Value	(1924)	(4002)	(6741)	(9420)	(9371)

Table 18 - Results of the EC Economic Analysis - 1985 \$1.3:£1 - 1990 \$1.2:£1 - 5.3 MI per Day Abstraction - Protection of an Area Twice the Specific Borehole Catchment Area - Cambridgeshire - £'000

Per Cent Restriction from Current Nitrogen Application Rates	10%	20%	30%	40%	50%
Present Value of Agricultural Benefits	(288)	(603)	(1010)	(1411)	(1416)
Present Value of Ion Exchange Costs Saved	11	33	51	62	78
Net Present Value	(277)	(570)	(959)	(1349)	(1338)

NOTE: Brackets denote negative figures