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Economic accounts for agriculture

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The accounting framework

The relative and not unimportant contribution made by farming to the economic wealth of the United Kingdom is indicated by the statistic that agriculture contributes something over 3 per cent of gross domestic product at factor cost, and achieves this by employing under 3 per cent of the total working population. The calculation of the first of these two percentages requires a numerator which is derived from one of the economic analyses of the performance of United Kingdom agriculture carried out by the Economics and Statistics divisions of the Ministry of Agriculture, Fisheries and Food—an analysis involving the compilation of a 'production account' to measure the results of economic activity on all farms (agricultural holdings) within Great Britain and Northern Ireland (see also first two paragraphs of *Requirement to serve a multiplicity of needs* below). This article considers only the production account; it does not deal either with the capital account or with sample surveys of accounts on individual farms.

The production account at national level shows the main items of receipts and expenses calculated on the assumption that holdings are all operated by tenant farmers (that is, a notional rent is imputed for the owner-occupier). The composition and coverage of the account and hence the definition of terms used therein have evolved and been refined over the years, and it is the purpose of this article to show how and why such changes have been introduced. The present position can be seen from an inspection of the accounts shown in Appendix III, the lay-out of which enables the various major components and their constituent parts to be clearly distinguished. For a better understanding of the subject, however, four of the terms now used in the accounts merit closer definition:

(i) *Output* generally covers the value of production (a) sold off farms, including feed and seed so sold but subsequently bought back after or without processing; and (b) consumed in farm households or given to farm workers as payment in kind; it also includes changes in work-in-progress (that is, changes in the areas of different crops and in livestock numbers), and changes in the levels of stocks of finished products. Output does not, however, cover that part of production retained for use on the farm of origin. The components of Total, Gross, Intermediate and Final output and the relationship between them can be seen without difficulty from Appendix III.

(ii) *Final output* in essence represents the value of farm produce available for use in the rest of the economy after agriculture's own requirements for home-grown feed and seed have been met.

(iii) *Net product* (*previously Net output*) measures the value added by farmers, landowners and farm workers to all the goods and services purchased from outside the agricultural sector—whether from abroad, or from other industries within the United Kingdom.

(iv) *Farming net income* represents the difference between total receipts and total expenditure adjusted for changes in work-in-progress and in stocks, depreciation, labour costs, net rent and interest. This income is the reward for the manual and managerial labour of the farmer and his wife, and for the use of the occupier's investment after provision has been made for depreciation.

A fairly detailed history of the evolution of economic accounts for agriculture is given at Appendix I from which it will be seen that separate measurements of output and income proceeded independently of each other until they were brought together soon after the end of the Second World War when data were required to be assembled for the purposes of the statutory Annual Review of the economic conditions and prospects of the agricultural industry. Measurements of gross and net output (now called net product) are necessary for understanding whether, and if so, how supplies of food, feed and fibres from home agriculture are changing over time; likewise, the concept of farming net income is another important factor in the assessment of the economic health of the industry.

Some anomalies

The separate historical origins of the two assessments of agriculture's economic health (the one based largely on the value and volume of output, the other on the income generated for farm operators), resulted over time in numerous small, avoidable, mostly unimportant but sometimes highly inconvenient differences in the treatment and use of the same basic data for the separate indicators of economic performance. For many years there were not merely two accounts, one at current prices and one at constant prices, but effectively three[1], one of which measured gross output at current prices, one net income, also at current prices, and the third net output at constant prices. (The definition of 'net' has changed over time—see fourth and fifth paragraphs of Appendix I.)

Two of the main differences between the two current-priced accounts lay in the treatment of work-in-progress and stocks; firstly, some but not all stock appreciation was included in the net income account, and most but not all stock appreciation was excluded from the gross output account; secondly, whereas the former valued changes in work-in-progress at cost of work done excluding the value of the labour of the farmer and his wife, the latter valued these changes at actual or notional market prices including profit. There were, too, presentational differences, for example (i) the value of own-account capital formation was treated as a part of revenue in the Annual Abstract table on net income but as a negative element of expenses in the Annual Review White Paper table and in the constant-priced account in the Abstract; (ii) the net income account valued the input of fertilisers before subsidy and included the subsidy on the output side of the account, whereas the constant-priced net output account

valued fertilisers net of subsidy and showed a correspondingly lower figure for production grants on the output side; and (iii) deficiency payments on retained cereals in the constant-priced account were included in the output of cereals, whilst in the net income account such payments on cereals retained on farms were excluded from the value of sales of cereals but included instead under Sundry output (or Other products, depending upon the publication in which the table appeared). Other minor anomalies were discovered during the most recent rebasing of the constant-priced account (see fifth paragraph of Appendix I).

The objectives of harmonisation and some unsolved problems

During recent years the concepts and methods used in constructing the economic accounts for agriculture have been harmonised to remove anomalies. In achieving this it has been possible firstly to limit the accounts to two, one at current, the other at constant prices (an account in which quantities and constant prices of output and input items are separately and objectively measured); secondly, and this was one of the chief innovations, to bring about the maximum simplicity and clarity of relationship between the two main indicators; and thirdly, to present the accounts in sufficient detail to meet a multiplicity of needs.

When considering basic concepts, it is, of course, imperative to establish what one should be attempting to measure as an indicator of economic activity, and how one can measure this consistently both at the 'micro' level of an individual product and at the 'macro' levels of the national farm and of the national economy. It must also be borne in mind that whilst it is essential to achieve consistency between the output and input sides of the account, it is not always possible—or necessary (although needs change over time)—to achieve consistency of treatment between individual items of output or of input. For example, until 1957, gross output of cereals did not include sales for feed or for seed. In 1958 cereals sold off the national farm and repurchased as feed were included in output[2], and in 1959, this principle was extended to other crops sold for feedingstuffs[3]. Sales of seeds, however, continued to be excluded until 1971[4] from which year onwards they have been treated in the same manner as feed. To remain consistent with this changing definition of the output of certain individual commodities, it was, of course, necessary to keep in step by broadening simultaneously the definition of the corresponding input items.

From the point of view of measuring the result of agricultural effort, that is the output, commodity by commodity, resulting from the input of manual and managerial labour, land, capital and all the supporting current material inputs of fertiliser, fuel, etc., this progressive widening of the coverage of the concepts output and input was an improvement to be welcomed. One could go further and argue that not only all sales of crops and livestock should be covered but retentions of harvested crops too, since it is total crop production and not just that part of production which is sold that is the result of all the inputs. Produce retained on farms for consumption as food by the farm household (or given as payment in kind to farm workers) is regarded as part of output, notionally sold by the farmer as a producer to himself (or his labour force) as a consumer. Why not regard crops retained on the farm of origin for use as feed or seed likewise?

Then, too, sales of store livestock (that is, animals, mostly cattle, not yet fully fattened) are still treated in the accounts in the manner originally adopted for seed and feed; the value of sales between farms whether directly or through a market or a dealer is ignored, both as output and input, and only the dealers' or marketing margins and transport costs are entered as the input resulting from this domestic trade. (The full value of imported store animals from outside the United Kingdom, however, is entered on the input side of the account.) To ensure the accuracy of the accounts for separate countries of the United Kingdom (see paragraph two of Appendix I), the full value of those store animals moving, say, from Scotland to England must be included as part of each country's output or input as appropriate since they are one of the results of the producing country's usage of inputs. Simple addition to the United Kingdom level of separate country accounts so constructed, would however give rise to levels of United Kingdom output and input which, while meaningful for some types of economic analysis, would be overstated for others. Present practice therefore is to ignore these 'within United Kingdom' store livestock movements in the United Kingdom economic account for agriculture although an estimate of the full value of such sales *is* included in the United Kingdom input/output matrix which is inclusive of all inter-establishment transactions within each industry[5].

The questions posed in the two preceding paragraphs have been (partially) answered by adhering to the national accounts principle that the results of economic activity are to be recorded as output only when goods or services move from producers in one industry (and agriculture is an 'industry' in this context) to purchasers who receive those goods or services either in another industry (for example, food or feed processing) or in the final consumption sectors of the economy (for example, households, catering establishments, institutions, etc. or exports).

Unfortunately, the tidying up which put seeds on to the same basis as feed raised new problems in connection with the compilation of the matrix of United Kingdom input/output transactions. Such a matrix can be constructed on one of several bases (for example, industry/commodity, industry/industry or commodity/commodity), but one universal convention is that the distributive industry is recorded as purchasing only the inputs of fuel, wrapping materials and the like needed in order to sell its services; it is not recorded in that matrix as having an input and an output of all the goods that pass through it. This is a major departure from the 'crossing the boundary' or 'change of ownership' principle referred to above as the criterion for deciding whether the results of an industry's economic activity should be recorded as part of its output. The rigorous adoption of the input/output convention in the case of sales to distribution means that, in the case of agriculture, sales of seed and feed off the national farm to merchants who do no more than merchants ordinarily do (bulk, store, break bulk, re-pack, etc.) before selling the seed or feed to other farmers, are in effect inter-farm sales accompanied by an input to agriculture of distributive services. It follows from this that in a matrix that excludes all inter-establishment transactions within an industry—that is, a matrix in which all the diagonal cells are blank—

the total output of agriculture would include only such sales of feed as are purchased and processed by the feed compounding industry or exported[6]. Hence, in answer to the question implied in an earlier paragraph, the measurement of output depends entirely on the type of analysis for which the concept is to be used. In the interests of flexibility, the economic accounts for agriculture should ideally record separately sales of home-grown feed to: (a) Distribution, repurchased by Agriculture and (b) Manufacturing. In terms more familiar to the agricultural economist or statistician, these correspond respectively to home-grown feed sold and repurchased 'straight', and sales to compounders for processing (but excluding home-grown cereals sold by compounders unprocessed).

There is a further problem arising from the progressive widening of the definition of crop output for although this has provided an increasingly more meaningful measurement of that output, there is some inconsistency in including in gross and total output both the seed and feed sold and the crops and livestock products which result from the consumption of that seed and feed. One continually encounters this statistical dilemma: if the full results of agricultural effort are to be assessed, then one should add together in some acceptable accounting unit (usually but not always, money values) all the produce, both sold and retained, that is the physical result of all the inputs to the activity—but this involves double-counting seed and feed; alternatively one should add together only that which produces a total value that is free from all duplication—but this does not reveal at the gross and total output level the full result of the inputs used. Since 1972 these twin needs have been met in part by showing in that year's Annual Review White Paper[7] gross output (which includes this duplication of sales but excludes retentions), intermediate output (which consists of the ex-farm value of seed and feed sold but subsequently repurchased) and final output (which is the difference between the two). On the input side of the account, the corresponding concept of net input, equal to gross input *less* intermediate output, was introduced at the same time. Final output as defined in the second paragraph represents the value of farm produce available for use in the rest of the economy after agriculture's own requirements for home-grown seed and feed have been met; it also includes agriculture's own account capital formation and the change in work-in-progress. Net input represents agriculture's net demand on the rest of the economy for goods and services (excluding the services of land, labour and capital) required for agricultural production.

It is recognised that in introducing the new concept of intermediate output, a definitional inconsistency has been introduced between the accounts for agriculture and those for the economy as a whole in the input/output context. Strictly speaking, the intermediate output of any industry in a transactions matrix consists of all sales to other industries (and,' in a 'gross' matrix, includes sales to itself); in other words it covers all sales except those to final consumers. Thus all sales from agriculture to processing industries are 'intermediate output' irrespective of whether those industries sell to farmers (for example feed) or to final consumers (for example food). It nevertheless seemed convenient and defensible to use the term, in the context of the agricultural accounts considered on their own, to describe one important component of agriculture's total sales.

A shortened version of the fully harmonised accounts at current prices, showing successively gross product, net product and net income, was published for the first time in the Annual Review White Paper for 1971[8], and fuller versions at both current and at constant prices were given in the Annual Abstract of Statistics for the same year[9] (with the constant-priced account extending only to net product). The other main innovations in the harmonised accounts are the separate entry for total depreciation (both landlords' and tenants') with a consequential narrowing of the former item of gross rent to net rent (that is, by excluding landlords' maintenance and depreciation); the separation of stocks of input items on the input side of the account from work-in-progress on the output side of the account; the subdivision of each of these components into the change due to cost (or stock appreciation) and the change due to volume; the valuing of these stocks and work-in-progress at the average cost per unit during the year of account; and, finally, the recording of fertilisers before subsidy on the input side of both the current and constant-priced accounts, with the subsidy included on the output side.

Requirement to serve a multiplicity of needs

At present, farming net income excludes (with some unimportant exceptions) income received by farmers from non-farming activities. If the productivity of resources used in agriculture rather than in other industries is of interest, then the present method is the appropriate one, but if interest were to be concentrated on the income accruing to farmers and their families from all sources and from all their activities, then it would be quite proper to include in the account all income and expenditure of the farmer associated with his agricultural holding whether or not directly related to agricultural activities, for example, that arising from taking in holiday guests, from campers, caravan sites, and the like. Furthermore, the physical coverage of farming net income is now limited to 'All commercially significant holdings'. (Broadly these are holdings with 26 standard man-days per year or more, where a standard man-day represents 8 hours' productive work by an adult male worker under average conditions.) This physical coverage replaced from 1970 the definition previously used for farming net income of 'holdings of over 1 acre of crops and grass'.

The dual restriction of farming net income to farming activities on holdings above a certain threshold of commercial significance, although appropriate for the Government's review of the economic condition of farming, is not the one used for the National Accounts. The gross product of agriculture for the National Income Blue Book differs in that it includes not only the value added by agricultural contractors and stud farms (which are formally part of the industry Agriculture according to the Standard Industrial Classification), but also the value of any sales from 'commercially insignificant' holdings. These components have to be added in order that at the national level, total expenditure shall be equal to total income and that all incomes shall have an industry of origin.

One of the difficulties produced by the earlier 'unharmonised' accounts was the fact that the gross product of agriculture for the National Accounts had to be calculated by different methods depending on whether it was required at current or at constant prices. Although the National Income Blue Book does not show in absolute terms the GDP by industry at constant prices, it does give volume indices for Agriculture, forestry and fishing combined. The agricultural component of these indices was (and is) derived fairly readily from the constant-priced account by adding total depreciation to net output (or net product). Net product at current prices, however, was not immediately available, so that the current-priced value of agriculture's gross product had to be calculated somewhat clumsily by starting with net income and adding back to it labour, interest, tenants' depreciation and the former item gross rent *less* landlords' maintenance (see reference above). With the new style harmonised accounts it is now much easier to meet National Income Blue Book requirements and, also, to analyse changes from year to year in the value, volume and prices of certain main elements of farming net income.

Conclusion

As in so many other fields of endeavour, progress is made by slowly improving what we have ready to hand and the statistical models of today can trace their parentage back to the relatively unsophisticated models of yesterday. Perfection is nevertheless as elusive as ever and there are still many improvements which can, no doubt, be made in the series of estimates described in this article. Meanwhile, to illustrate the significant developments that have already taken place, the first and the latest economic accounts at current prices for United Kingdom agriculture as published in the 1951[10] and 1973[7] Annual Review White Papers are reproduced at Appendices II and III. Appendix IV shows the latest published fully detailed accounts at both current and constant prices[11].

References

(1) *Annual Abstract of Statistics No. 106*, Tables 216, 218 and 219 (HMSO 1969)

(2) *Output and Utilisation of Farm Produce in the United Kingdom* 1946/47–1955/56 (HMSO 1958)

(3) *Output and Utilisation of Farm Produce in the United Kingdom* 1956/57–1958/59 (HMSO 1961)

(4) *Output and Utilisation of Farm Produce in the United Kingdom* 1964/65–1969/70. Ministry of Agriculture, Fisheries and Food (1971)

(5) *Input-Output Tables for the United Kingdom 1963*, Table B: Studies in Official Statistics No. 16 (HMSO 1970)

(6) See, for example, *National Income and Expenditure 1971*, Table 19 (HMSO 1971)

(7) *Annual Review of Agriculture 1973*, Table 20. Cmnd. 5254 (HMSO 1973)

(8) *Annual Review and Determination of Guarantees 1971*. Cmnd. 4623 (HMSO 1971)

(9) *Annual Abstract of Statistics No. 108*, Tables 223 and 224 (HMSO 1971)

(10) *Annual Review and Fixing of Farm Prices 1951*. Cmd. 8239 (HMSO 1951)

(11) *Annual Abstract of Statistics 1972*, Tables 230 and 231 (HMSO 1972). These tables give the account at, respectively, current and constant (1964/67) prices and cover the years 1964/65–1971/72

(12) *The Agricultural Output of Great Britain*. Cd. 6277 (HMSO 1912)

(13) *The Agricultural Output of England and Wales 1925*. Cmd. 2815 (HMSO 1927)

(14) *The Agricultural Output of Scotland 1925*. Cmd. 3191 (HMSO 1928)

(15) *The Agricultural Output of Northern Ireland 1925*. Cmd. 87 (HMSO 1928)

(16) *The Agricultural Output and the Food Supplies of Great Britain* (HMSO 1929)

(17) *Agricultural Statistics, United Kingdom Part II: Output and Utilisation of Farm Produce* 1939/40–1945/46 (HMSO 1949)

(18) *Annual Review and Fixing of Farm Prices 1952*. Cmd. 8556 (HMSO 1952)

(19) *Journal of Proceedings of the Agricultural Economics Society Vol. VII No. 1* (1946). In 'Agriculture and Economic Progress', Oxford University Press (1952), E. M. Ojala published estimates of United Kingdom agricultural net product from 1867 to 1938/39 using Kirk's paper as a basis for estimating many of the input items.

(20) *Economic Trends* No. 77, March 1960 (HMSO)

(21) *Annual Review and Determination of Guarantees 1960*. Cmnd. 970 (HMSO 1960)

(22) *Annual Review and Determination of Guarantees 1969*. Cmnd. 3965 (HMSO 1969)

(23) 'The Index of Agricultural Net Output in the United Kingdom: Rebasing on 1964/65–1966/67' *Economic Trends* No. 194, December 1969 (HMSO)

(24) *Agricultural Statistics 1903*. Cd. 2131 (HMSO 1904)

(25) Several references to estimates of the value of agricultural output and income made by private research workers and published from 1855 onwards are given by E. M. Ojala (op. cit.)

(26) *Journal of Royal Statistical Society Vol. CIV Pt. II* (1941)

(27) *The Farm Economist Vol. VII No. 5*. The Agricultural Economics Research Institute, Parks Road, Oxford (1953)

APPENDIX I

The origins and development of economic accounts for agriculture in the United Kingdom

Output

The first published official estimates of the total value of agricultural output from holdings in Great Britain were those relating to the 1908 census of agriculture[12] and it was nearly twenty years before the second estimates were published, relating to the census of 1925[13, 14, 15]. The 1908 report also gave estimates of the total value of milling offals and oilcakes for use as feedingstuffs, and of fertilisers and Irish store livestock but it was not able to estimate the value of imported cereals used for feed or of any other inputs. The reports on the 1925 census went further, and not only introduced a constant-priced comparison of total output in 1908 and 1925, but attempted for the first time (in the report for N. Ireland[15]) to put a value on the feed and seed use of imported cereals as well as on the inputs covered in the 1908 report for Great Britain. This attempt was not made in the separate reports for England and Wales[13] and Scotland[14] because of the impossibility at that time of estimating the usage by the constituent countries of cereals imported into Great Britain.

There was a different problem on the output side of the account: sales of store livestock from N. Ireland to Great Britain, for example, are properly part of the output of N. Ireland but if both the store animals and the resulting fattened animals are counted in the total output of the United Kingdom, then they are counted twice. A similar problem occurs with sales of store animals from Scotland to England and Wales. The 1908 census report avoided this double-count by including only sales of fat animals in GB output. The 1925 census reports avoided the problem by keeping individual country values of output separate and not combining them to produce a figure for GB or UK total output.

A year or so later, in 1929, the first estimate of total output for the United Kingdom, and the first production account for Great Britain as a single national farm were published[16], in which, as in 1908, only sales of fat animals were counted as livestock on the output side of the account and imports of store animals into Great Britain from Eire were included on the input side of the account. The other inputs covered were imported feed, feed produced as by-products of milling and seed-crushing in this country, imported seed and artificial fertilisers. It had been recognised earlier (page xii of the 1925 EW report[13]) that there should in principal also be input items for 'machinery, implements, rates and many other charges' or, as the report on the 1925 census in N. Ireland[15] put it rather more fully (on page 40) . . .

> 'expenditure on spraying materials, farm work and veterinary surgeons' fees . . . in addition to other items of expense such as fuel for threshing machines and tractors and repairs done to farm implements'.

The data on these additional input items, however, did not become available at national level until much later (see below).

The Second World War gave a very considerable boost to the development of economic accounts for UK agriculture. Whilst the problem of food supply and distribution were the essentially physical ones of providing sufficient shipping space, food stores and labour to work on a limited supply of productive land, the economic planners found money-values a useful basis for aggregating outputs and inputs and for evaluating supplies from home agriculture and from foreign sources. It was not until after the end of the war, however, that the detailed results of this work were formally published[17]. At that time, the components of gross output—which was valued both at current and at constant (1945/46) prices—were almost identical with those covered by the present definition but only agricultural inputs, *viz.* feed, seed and store animals were deducted in order to arrive at net output. Index numbers of the volume of net output thus defined appeared in the 1952 Annual Review White Paper[18].

A fuller production account at current prices, including all the inputs listed in the Northern Ireland report on the 1925 census[15] (and a few more), was published in a paper by Kirk delivered to the Agricultural Economics Society in 1945[19]. In the same paper, Kirk reproduced the limited net output account (see above) of the Ministry of Agriculture (as it then was), but he did not give a constant-priced account on either definition of net output. The Ministry of Agriculture, Fisheries and Food itself first published a full net output—or, as we would now say, net product—account at constant (1954/55-1956/57)* prices in 1960[20], and it published the net output volume index numbers derived from this measurement of 'value added' in Annual Review White Papers from 1960[21] until 1971[8]. From the 1969 Annual Review White Paper[22] onwards a rebased series using 1964/65-1966/67 constant prices[23] has been published. As mentioned above these White Papers had included, since 1952 (and until 1963), volume indices based on the more limited concept of net output already described. The Ministry is at present engaged on a further rebasing of the constant-priced net product account onto the average of the four years 1968/69-1971/72 for both price weighting and time reference purposes. The decision on this occasion to use a four-year period instead of three was taken in order to 'centre' the new base period around calendar year 1970 which is the base currently being adopted by international organisations (and hence by the Central Statistical Office).

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* Because of year-to-year fluctuations in production and output caused by varying weather conditions a minimum period of 3 years is now considered desirable as a base for weighting and time-reference purposes.

Income

Statistics on gross income derived from the ownership of land in Great Britain were first published by the then Board of Agriculture and Fisheries in 1904[24]. The series stretched back to 1869/70 and is probably the earliest published attempt by government in this country to assess the economic condition of agriculture otherwise than by looking only at such physical parameters as acreages of crops, numbers of livestock or quantities of produce sold, or at the prices of wheat and of other farm products[25]. These income figures were a mixture of rents received by agricultural landowners from their tenant farmers and net income of landowners actively engaged in farming their own land, but excluded the incomes of tenant farmers and of all hired workers. After this early work, it was not until 1941 that Kendall in a paper to the Royal Statistical Society[26], gave a tentative income and expenditure account for the average of 1937-39 leading up to an estimate of what is now called 'Farming net income'. During the next ten years, preparatory work within the Ministry, on much the same lines as Kendall's, led, in 1951, to the publication of income estimates[10] which had been (and which continue to be) used as background data for the annual reviews of the economic conditions and prospects of the agricultural industry. A description of the methods used in measuring gross output, net output and net income, and a discussion of some of the problems involved was given in a paper by Napolitan in 1953[27].

References – see page 89

APPENDIX II

Production account at current prices (1951 version)

Details of 'Departmental' Calculation of Aggregate Farming Net Income in the United Kingdom Forecast for 1950-51

£ million

Farm Expenses			**Sales**		
Labour	242½		Milk and milk products	299	
Rent and interest	58½		Fatstock	216	
Machinery expenses	115½		Eggs and Poultry	132½	
Feedingstuffs	139½		Farm crops	193½	
Fertilisers	54		Horticulture products	91	
Other expenses	126½		Other sales	18	
		736½			950
			Subsidies, sundry receipts, and other credits		35½
Net Income		293½	**Increases in value of farm stocks and work in hand**		44½
		1,030			1,030

Notes :

(i) Owing to the one-large-farm character of the calculation, the figure for sales (£950 million) excludes inter-farm transactions, and therefore does not fully represent the annual turnover of the industry.

(ii) The increase in value of farm stocks and work in hand (£44½ million) represents a component of net income which is not realised in cash during the year. A figure of £293½ million *less* £44½ million (i.e., £249 million) could be described as 'spendable net income,' i.e. available for living expenses, direct taxation, and financing necessary increases in fixed capital.

Source : *Annual Review and Fixing of Farm Prices 1951*, Cmd. 8239 (HMSO 1951)

APPENDIX III

Production account at current prices (1973 version)

Output, input and net income (*a*)

June/May years — £ million

	1968/69	1969/70	1970/71	1971/72	1972/73 (forecast)
OUTPUT (*b*)					
Farm crops (*c*)					
Wheat	89	91	126	137	144
Barley	134	144	137	140	165
Oats	10	10	12	10	10
Other cereals	—	—	1	1	1
(*Total cereals*)	(*232*)	(*246*)	(*275*)	(*288*)	(*320*)
Potatoes	90	125	100	99	108
Sugar beet	43	41	44	57	50
Hops	6	7	8	9	9
Other (*d*)	17	18	18	16	16
1. *Total crops*	389	437	445	469	503
Horticulture					
Vegetables (including mushrooms)	142	152	158	163	175
Fruit	56	56	56	64	86
Other (*e*)	55	60	63	65	72
2. *Total horticulture*	253	268	277	292	333
Livestock					
Fat cattle and calves	312	337	388	409	538
Fat sheep and lambs	87	84	95	103	124
Fat pigs	220	249	281	292	330
Poultry	118	127	138	153	165
Other (*f*)	10	13	11	12	12
3. *Total livestock*	747	810	913	969	1,170
Livestock products					
Milk and milk products	442	455	512	584	626
Eggs	196	192	199	194	179
Clip wool	15	14	13	14	14
Other (*g*)	3	4	3	4	4
4. *Total livestock products*	656	665	727	795	822
5. *Sundry output (h)*	11	12	12	13	14
6. TOTAL OUTPUT (1+2+3+4+5)	2,056	2,191	2,374	2,538	2,841
7. *Sundry receipts (i)*	30	32	27	48	32
8. *Production grants*	100	100	116	121	94
9. TOTAL RECEIPTS (6+7+8)	2,186	2,324	2,517	2,708	2,967
Work-in-progress (*j*)					
Change due to cost	+56	+69	+122	+97	+140
Change due to volume	—	+14	+9	+39	+45
10. *Total change*	+56	+83	+131	+136	+185
11. GROSS OUTPUT (9+10)	**2,241**	**2,406**	**2,648**	**2,843**	**3,152**

Production account at current prices (1973 version)

Output, input and net income (*a*)

June/May years — £ million

	1968/69	1969/70	1970/71	1971/72	1972/73 (forecast)
Intermediate output (*k*)					
Feed (*l*)	125	118	164	143	171
Seed	24	28	30	26	31
12. *Total intermediate output*	149	146	195	169	202
13. FINAL OUTPUT (11−12)	2,092	2,260	2,454	2,674	2,950
INPUT					
Expenditure					
Feedingstuffs	513	544	636	605	706
Seeds	50	54	57	52	59
Livestock (imported and inter-farm expenses)	71	71	76	92	92
Fertilisers and lime (before subsidy)	150	140	169	225	159
Machinery	150	157	176	193	212
of which: Repairs	(73)	(78)	(87)	(95)	(105)
Fuel and oil	(56)	(57)	(66)	(72)	(79)
Other (including contract services)	(20)	(21)	(23)	(26)	(28)
Farm maintenance (*m*)	88	94	100	106	115
Miscellaneous expenditure (*n*)	148	156	170	183	194
14. TOTAL EXPENDITURE	1,169	1,216	1,384	1,456	1,537
Stocks (*o*)					
Change due to cost	−1	−1	−7	−1	−12
Change due to volume	−2	+5	−6	−32	+36
15. *Total change*	−3	+4	−12	−32	+25
16. GROSS INPUT (14+15)	1,166	1,220	1,372	1,424	1,562
17. NET INPUT (16−12)	1,017	1,074	1,178	1,254	1,360
18. GROSS PRODUCT (11−16) or (13−17)	**1,075**	**1,186**	**1,276**	**1,420**	**1,590**
Depreciation					
Machinery	121	130	140	160	179
Other (*m*)	43	49	56	65	74
19. *Total depreciation*	164	179	196	225	252
20. NET PRODUCT (18−19)	**911**	**1,007**	**1,080**	**1,194**	**1,338**
Labour	333	342	366	400	449
Net rent (*p*)	53	55	55	51	51
Interest (*q*)	36	42	41	38	48
21. FARMING NET INCOME	**489**	**568**	**618**	**706**	**790**

(*a*) The estimates represent values for commercially significant holdings which, broadly speaking, are holdings with 26 standard man-days or more.
(*b*) Because this table is on a June/May basis and relates to output rather than total production, the quantities used are not the same as those shown for home production in the supply tables (Tables 5-17).
(*c*) Excludes deficiency payments on retained cereals and compensation payments on unsold potatoes—see (*i*).
(*d*) Beans for stockfeed, hay and dried grass, oilseed rape, grass and clover seed and other farm crops.
(*e*) Flowers, bulbs and nursery stock, seeds and other minor products.
(*f*) Breeding animals exported, poultry for stock and export, rabbits and game, horses sent to knackeries and other minor livestock.
(*g*) Honey, goat milk, export of eggs for hatching and other minor livestock products.
(*h*) Own account capital formation, timber, osiers, peat and turf.
(*i*) Deficiency payments on cereal retentions, Potato Marketing Board compensation payments, animal disease compensation, co-operative society dividends and interest and other miscellaneous receipts.
(*j*) Growing crops and livestock numbers: closing level *minus* opening level each valued at estimated cost.
(*k*) Sales included in Output but subsequently repurchased and so reappearing as Input.
(*l*) Cereals, potatoes, beans, hay and dried grass.
(*m*) Including landlord-type.
(*n*) Electricity, veterinary expenses, pesticides, rates and miscellaneous costs.
(*o*) Feed (including retentions) and fertilisers. Opening stock *minus* closing stock.
(*p*) Gross rent is the sum of net rent and the landowner share of maintenance and of depreciation. The figures for gross rent were £140 million in 1968/69, £151 million in 1969/70, £160 million in 1970/71, £168 million in 1971/72 and £180 million in 1972/73.
(*q*) On commercial debt for current farming purposes.

Source: *Annual Review of Agriculture 1973*, Cmnd. 5254 (HMSO 1973)

APPENDIX IV

Production accounts at current and constant prices [1]

£ million

	At current prices				At 1964/65 to 1966/67 constant prices			
	1968/69	1969/70	1970/71	1971/72 [2]	1968/69	1969/70	1970/71	1971/72 [2]
Output								
1. Farm crops [3]: Total	383	429	438	475	373	372	389	410
Wheat	89	91	126	133	82	79	102	105
Barley	134	144	137	151	132	139	120	134
Oats	10	10	12	10	9	10	11	9
Potatoes	90	125	100	106	94	89	99	98
Sugar beet	43	41	44	57	40	39	42	49
Hops	6	7	8	9	7	7	8	7
Beans for stock feed	5	5	4	3	4	5	3	3
Other [4]	6	6	7	6	5	5	5	5
2. Livestock: Total	737	797	900	952	688	708	740	750
Fat cattle and calves	312	337	388	413	277	284	299	297
Fat sheep and lambs	87	84	95	99	78	73	75	72
Fat pigs	220	249	281	290	207	219	233	238
Poultry	118	127	136	149	125	133	133	142
3. Livestock products: Total	653	661	723	782	630	640	648	644
Milk and milk products	442	455	511	565	422	428	434	434
Eggs for food	196	192	199	203	193	198	200	196
Clip wool	15	14	13	14	15	14	14	15
4. Horticulture: Total	253	268	275	282	218	236	242	241
Vegetables (including mushrooms)	142	152	158	158	122	132	138	138
Fruit	56	56	55	60	46	51	53	52
Other [5]	55	60	62	64	50	52	51	51
5. Sundry output: Total	31	36	34	35	28	32	28	28
Grass and other fodder crop seed	3	4	4	4	3	4	4	4
Minor products [6]	18	22	20	20	16	18	15	15
Own account capital formation	10	10	10	11	9	9	9	9
6. Total output i.e. items 1-5	2,057	2,191	2,370	2,525	1,937	1,987	2,048	2,074
7. Sundry receipts: Total	30	32	27	44	30	28	37	36
Deficiency payments on retained cereals	16	19	3	27	15	16	15	19
P.M.B. compensation payments	—	—	11	3	—	—	10	6
Animal disease compensation	2	2	2	1	2	2	1	1
Other [7]	13	11	12	12	12	10	10	10
8. Production grants: Total	100	100	116	112	100	99	108	107
Fertilisers and lime	38	36	45	38	42	40	47	46
Other [8]	62	64	71	74	58	59	61	61
9. Total receipts i.e. items 6-8	2,187	2,324	2,513	2,681	2,067	2,115	2,193	2,217
10. Work in progress [9]: Total	+56	+83	+131	+109	—	+13	+7	+7
Growing crops	+10	+17	+ 27	+ 30	−7	+ 1	−1	−1
Livestock numbers	+46	+66	+104	+ 80	+6	+12	+9	+9
11. Gross output i.e. items 9-10	2,242	2,406	2,644	2,791	2,067	2,128	2,200	2,224
12. Intermediate output [10]: Total	149	146	194	175	144	139	152	161
Feed [11]	125	118	165	149	120	114	127	137
Seed	24	28	29	26	23	25	25	24
13. Final output i.e. items 11 *minus* 12	2,094	2,260	2,450	2,616	1,923	1,989	2,048	2,063

Production accounts at current and constant prices [1]

£ million

	At current prices				At 1964/65 to 1966/67 constant prices			
	1968/69	1969/70	1970/71	1971/72 [2]	1968/69	1969/70	1970/71	1971/72 [2]
Input								
14. Expenditure: Total	1,169	1,216	1,384	1,416	1,087	1,092	1,121	1,101
Feedingstuffs	513	544	636	610	489	494	502	479
Seeds	50	55	57	54	49	50	49	47
Livestock (imported and inter-farm expenses)	71	71	76	87	59	59	60	63
Fertilisers and lime (before subsidy) ..	150	140	169	184	142	134	155	152
Machinery: Total	150	157	176	192	133	134	136	138
Repairs	74	78	87	94	65	65	63	64
Fuel and Oil	56	57	66	72	48	48	51	52
Other (including contract services) ..	20	21	23	26	20	21	21	22
Farm maintenance: Total	88	94	100	107	78	78	76	75
Tenant-type	31	33	36	40	29	29	29	29
Landlord-type	56	60	64	67	49	50	47	46
Miscellaneous expenditure [12]	148	156	170	182	137	141	144	147
15. Stocks [13]	−3	+4	−9	−4	−2	+4	−2	−4
16. Gross input i.e. items 14-15	1,166	1,221	1,374	1,412	1,085	1,096	1,119	1,097
17. Net input i.e. 16 *minus* 12	1,018	1,075	1,180	1,237	941	957	967	936
18. Gross product i.e. items 11 *minus* 16 or 13 *minus* 17 ..	1,076	1,186	1,270	1,378	982	1,032	1,081	1,127
19. Depreciation: Total	174	192	210	231	159	166	167	167
Tenant-type:								
Machinery	121	130	140	152	110	113	112	108
Other	12	14	14	15	11	12	11	12
Landlord-type	41	48	55	64	38	41	44	47
20. Net product i.e. items 18 *minus* 19	902	994	1,060	1,147	823	866	914	960
Labour	333	342	366	404	..	..	..	..
Net rent [14]	43	42	42	37	..	..	..	..
Interest [15]	36	42	41	38	..	..	..	..
21. Farming net income	490	567	611	668	..	..	..	..

[1] The figures relate to commercially significant holdings which, broadly speaking, are holdings with 26 standard man-days or more where a standard man-day is taken to be 8 hours' productive work by an adult male in average condition. [2] Forecast prepared in mid-January 1972. [3] Includes receipts from crops and sold off farms and subsequently bought back for feed or seed but excludes deficiency payments on retained cereals and compensation payments on unsold potatoes. [4] Mixed corn, rye, hay and dried grass. [5] Flowers, bulbs, nursery stock and seeds. [6] Rabbits and game, straw, mustard for seeds, exports of breeding animals, and other minor products. [7] Co-op dividends, sub-letting of land, receipts from epidemic insurance and other miscellaneous receipts. [8] Hill livestock, calf and beef cow subsidies and other non-capital production grants. [9] Closing level *minus* opening level each valued at estimated cost. [10] Sales included in Output but subsequently repurchased and included in Input. [11] Cereals, potatoes, beans, hay and dried grass. [12] Electricity, veterinary expenses, pesticides, rates and other miscellaneous costs. [13] Feed (including retentions) and fertiliser. Opening stock *minus* closing stock. [14] Net rent represents landlords agricultural net income from the ownership of agricultural land and buildings before any charges for interest or taxes. Gross rent is the sum of net rent and the landlord-share of maintenance and depreciation. The figures for gross rent corresponding to those for net rent in the columns of the above table, in £ million, were as follows: 1964/65 106; 1965/66 114; 1966/67 122; 1967/68 132; 1968/69 140; 1969/70 151; 1970/71 161; 1971/72 169. [15] On commercial debt for current farming purposes.

Index of net product Average of 1964/65 to 1966/67 = 100	*100*	*105*	*111*	*116*

Source: *Annual Abstract of Statistics 1972*, Tables 230 and 231 (HMSO 1972)