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AND IN THE FREE STATE AREA IN
SELECTED YEARS BETWEEN 1908
AND 1926/27

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Estimates of Gross and Net Output and Income Arising in Agriculture in All Ireland and in the Free State Area in Selected Years Between 1908 and 1926/27

R. O'Connor
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Introduction

Income arising in agriculture has always been an important element in the Irish national income. Throughout the 1940s, at the time when the first official estimates of national income were made for Saorstát Éireann, agriculture accounted for about 30 per cent of the total. This proportion is likely to have been higher in the 19th and early part of the 20th Century when manufacturing industry was poorly developed.

In the calculation of income arising in agriculture it is usual to start by estimating gross agricultural output, which broadly speaking represents sales off farms and consumption of own farm produce in farm households. From the gross output is then deducted the non-labour expenses incurred in producing the output to obtain the income arising. Traditionally in Irish accounting practice, the farm expenses are divided into two broad groups. The first referred to as farm materials (and consisting of animal feeding stuffs, fertilisers and seeds) is deducted from gross output to give net output. This entity was used in the early years of farm accounting to give a rough idea of income arising in the agricultural sector. The second group of expenses, consisting of land annuities, rates on land and farm buildings, repairs and depreciation of machinery, transport and marketing costs, etc., is deducted from net output to give income arising in agriculture. This income is also referred to as net value added in agriculture at factor cost. It represents the return to all labour and capital from the national farming activity.

Historical Background

The first official estimate of agricultural output for All Ireland was made for 1908 by the Department of Agriculture and Technical Instruction (*Agricultural Output of Ireland 1908*). It would appear that the main objective of this exercise was to prepare estimates of total agricultural production from all sources. The calculation of output figures seems to have been a secondary consideration.

In the report, output was defined as agricultural produce:-

- (1) Consumed as food by people in Ireland, or used as raw material in Irish industries other than agriculture.
- (2) Consumed by livestock in Ireland belonging to non-agriculturalists (e.g., by horses in towns).
- (3) Exported from Ireland.

Produce used for further agricultural production in Ireland (e.g., crops fed to livestock on farms or used as seed, milk fed to calves and pigs, etc.) was not included in output. This definition is largely that used over the years up to the present time.

The next official estimate of output relating to the year 1912/13 was specially prepared for the use of a Department Committee on Food Production in Ireland set up after the outbreak of the First World War. In this estimate the value of changes in livestock numbers between the beginning and end of the year was included in the output figures. These results were published in Appendix I of the Report of that Committee (*Statistics of the Production and Disposal of Irish Agricultural Products 1912/13*). No further official estimates of agricultural output for All Ireland were produced.

After the ratification of the Treaty in 1922, estimates of agricultural output were produced for Northern Ireland and the Irish Free State. The first estimate for output in Northern Ireland for the year 1925 was published in 1928 (*The Agricultural Output of*

Northern Ireland 1925). That for the Free State relating to 1926/27 appeared in 1930 (*The Agricultural Output of Saorstát Éireann 1926/27*). In these reports, the same definitions as those adopted in 1912/13 were used.

In more recent times, unofficial estimates of agricultural output for earlier years were produced by a number of historians. Barbara Solow (1971) produced figures for the gross value added in Irish agriculture for the years 1876, 1881 and 1886. Cormac O Gráda (1984) produced figures for Irish agricultural output before and after the Famine. W. E. Vaughan (1980) calculated figures for output in the years 1850-1880. P. Solar (1987) produced output data for a number of years before the Famine while Michael Turner (1987) calculated output figures for every year from 1850 to 1914 in preparing an agricultural price index for Ireland for those years.

Turner's work gave rise to a debate on the subject of agricultural productivity and farmers' profits in the decades after the Famine. The central questions in this debate have been discussed in a recent issue of *Irish Economic and Social History* (Vol. XVII, 1990) by Turner himself and by W. E. Vaughan. The debate centred to a considerable extent on the value to be placed on potatoes consumed in farm households. Turner valued these at market prices and showed that in years when the potato crop partially failed, and farmers' standards of living were greatly reduced, the value of agricultural output increased. This occurred because in the years of scarcity market prices for potatoes (which were the staple food for most people) were very high. The high prices were of little use to the large number of farmers who had no potatoes to sell, and had reduced quantities available for eating or feeding to animals. As a result of the debate, Turner revised his figures but the revised data have not yet been published.

In 1985, R O'Connor and C Guiomard (1985) made estimates of gross and net

agricultural output for the Irish Free State area for 1912/13 and 1924/25. These authors produced volume and implied price indices for the years in question and linked them to the official indices available for 1926/27 and subsequent years.

Commenting on the O'Connor and Guiomard data, Professor K. A. Kennedy (1994) drew attention to the fact that there are no estimates of agricultural output for the years between 1912/13 and 1924/25, nor any well developed picture for industry and services in those years. Moreover, he says, "the relative level of income per capita North and South immediately before the First World War and its subsequent trend up to the mid-twenties is very uncertain. Clearly this period requires attention".

The Present Study

This study is the first step towards filling the statistical gap mentioned by Professor Kennedy. To do this we decided to produce output figures for the Free State area for 1908, and 1918/19 similar to those produced by O'Connor and Guiomard for the years 1912/13 and 1924/25. The year 1908 was selected because All Ireland agricultural output figures were already available for that year. The year 1918/19 was selected because it gives a picture of output value at a time of relatively high prices.

Agricultural prices which had been fairly static in pre-war years rose rapidly during the war, reaching a peak in 1920 and declining thereafter. The Agricultural Price Index for Saorstát Éireann rose from 100 in 1911-13 to 255.8 in 1919 and to 287.8 in 1920. It declined drastically thereafter to 83.4 in 1935. Individual commodity prices in All Ireland in those years show similar trends to those in the Free State area (see *Agricultural Statistics, Saorstát Éireann 1927-33*, pp. 130-135, also *Statistical Abstracts for Saorstát Éireann 1931 and 1940*).

Though agricultural prices were at their highest in 1920, this was not a suitable year for the calculation of output data in Ireland. Due to the war of independence, conditions were

very disturbed at that time. Creameries were burned down by the Black and Tans in the early part of 1920 and the country was in a general state of upheaval. The year 1918-19 was, therefore, selected as being more normal, even though prices were lower than in 1920. The split year 1918/19 was selected so as to enable the calculation of the value of livestock changes for inclusion in the output figures. December or January livestock numbers were not collected at that time.

To produce output figures for the Free State area for the years in question it was necessary to look closely at the existing All Ireland data available and to prepare a set of All Ireland figures for 1918/19 as well. Unfortunately it was not feasible to prepare the required data for the latter year. Detailed livestock and crop enumeration figures collected for 1918, were not published for All Ireland and in their absence the estimation of output figures for that year or for any part of it would be hazardous¹. We were forced therefore to produce All Ireland output figures for 1919 although this gave rise to problems in the calculations of the value of livestock changes between the beginning and end of the year. Estimates of December numbers of cattle, sheep and pigs had to be made. These estimates were based on the relationships between January and June livestock numbers in Saorstát Éireann in the 1940s. This exercise gave rise to many difficulties but it was the best we could do in the circumstances.

In the course of examining the available All Ireland output data it was discovered that the 1908 and the 1912-13 figures were not entirely comparable. Five important differences in the two sets of figures were discovered.

1. The official 1908 figures do not include the value of livestock changes between the

¹ The 1918 enumeration data for Saorstát Éireann have been published in *Agricultural Statistics 1847-1926*. Also, some data on crop acreages and livestock numbers for all Ireland for 1918 and other years are published in Mitchell and Deane (1962, pp. 80-81, and 84-86).

beginning and end of the year, whereas the 1912-13 figures include such changes. It was decided, therefore, to prepare figures for the value of livestock changes in 1908 based on 1907 and 1909 June enumeration statistics. The changes calculated were those for cattle, sheep and pigs. Changes in horses, poultry or other livestock were not calculated because the value of such changes would be relatively small.

2. In preparing the 1908 results, exports were included at the values given in the Foreign Trade Report for that year (f.o.b. values) whereas in 1912/13 such exports were valued at the prices received by farmers (market prices). Clearly the 1908 valuations are too high and we reduced them by valuing the quantities involved at market prices or where such were not available at 90 per cent of the f.o.b. prices. (This was the procedure adopted in the Central Statistics Office (CSO) for many years in preparing the Agricultural Output estimates.)
3. Imports of livestock for further feeding in Ireland, i.e., horses, cattle, sheep and store pigs, were not deducted from exports in preparing the 1908 output figures. In the revisions these imports have been deducted at import prices. However, except for horses, the values involved are not very large.
4. The 1908 figures for the number and value of cattle consumed in the country are much higher than the corresponding figures for 1912/13 (296,000) valued at £3.106 million in the former year compared with an estimated 184,000 valued at £2.319 million in the latter). In making the official 1908 estimates it was assumed that the output of cattle (excluding stock changes) was 73 per 100 cows plus heifers in calf in the country in June of that year and when exports were deducted from this output the household consumption was obtained as a residual. As mentioned below in connection with potatoes the use of residuals to estimate household consumption is fraught with danger and in this case (where stock changes were not taken into account) it gave the unrealistically high figure of 0.0675 cattle consumed per head of the population compared with estimated figures of 0.042 for 1912/13 and 0.041 for Saorstat Éireann in 1926/27. In the latter year beef consumption was estimated directly on the basis of enquiries made to butchers under the statistics (Slaughter of Animals for Food) Order 1926 and can be taken as being fairly accurate (see *Agricultural*

Output for Saorstat Éireann op.cit., p. 34).

Accordingly we deemed it necessary to reduce the 1908 figures to bring them into line with those for subsequent years. The adjustment which took account of livestock changes gave a consumption figure of 193,000 cattle. This was over 100,000 less than the published figure (for more detail see under cattle on p. 11). The reduction in value was over £1 million which was compensated for to some extent by an increase in stocks of £320,000.

5. The method used to estimate the consumption by persons of potatoes in 1908 was the same as that adopted in preparing the cattle output. Total production was first estimated. From this was deducted the estimated amounts fed to farm animals (pigs and poultry) and exported leaving a small residual, which was deemed to be the amount consumed by persons. A residual such as this, which contains all the errors of the other estimates, cannot be relied upon and could indeed be in serious error. In fact the quantity of potatoes consumed by persons in the 1908 Report appears to be very much understated when compared with the 1926/27 figures for Saorstat Éireann and with the 1925 figures for Northern Ireland, both of which were estimated by direct survey. Similarly the 1912/13 figures (which were presumably estimated in the same way as those for 1908) appear to be overstated. There are also problems with the prices used for potatoes in both those years. They do not correspond with the published prices which are now available.

For these reasons the potato consumption estimates for All Ireland have been revised for 1908 and 1912/13 to bring them into line with what are considered to be firmer estimates for the later years. The original and revised potato output estimates for 1908 and 1912/13 are given in Table 1 together with comparable 1926/27 figures for Saorstat Éireann.² The original and revised output figures for all items in 1908 are given in Table 2.

The revisions in Table 1 show that for 1908 consumption of potatoes has been

² The Northern Ireland figure for potato consumption in 1925 at 0.239 tons per person is very close to a figure of 0.242 tons per person estimated for Saorstat Éireann in 1926/27. The latter figure was later reduced to 0.212 tons per person as a result of a survey of 30,000 households in one week in December 1935.

Table 1: *Original and Revised Estimates of Household Potato Consumption in All Ireland in 1908 and 1912/13, and in Saorstát Éireann (SE) in 1926/27*

		All Ireland		S.E
		1908	1912/13	1926/27
<i>Original Quantities</i>				
Total Household Consumption	(000) tons	658	1,347	717
Population	No. 000	4,385	4,357	2,964
Consumption per Person	tons	0.150	0.310	0.242
<i>Revised Quantities</i>				
Consumption per Person	tons	0.27	0.27	0.212
Total Consumption	000 tons	1,179	1,168	628
Original Consumption Values	£'000	1,525	5.759	3.667
Original Output Prices	£/ton	2.3167	4.175	5.114
Published Market Prices*	£/ton	3.465	3.628	4.917
Revised Consumption @ Market Prices	£'000	4,089	4,237	3,088

* Given in *Agricultural Statistics for Saorstát Éireann 1927-1933*, p. 130, *op. cit.*

increased from 0.15 to 0.27 tons per person while for 1912/13 this consumption has been reduced from 0.31 to 0.27 tons. For 1908, prices have been increased from £2.32 to £3.5 per ton, while for 1912/13, prices have been reduced from £4.175 to £3.708 per ton. The revised prices adopted are those given for All Ireland in *Agricultural Statistics Saorstát Éireann 1927-1933* (p. 130). The result of these revisions has been to increase the value of household consumption of potatoes in 1908 from £1.5 to £4.1 million and to reduce the 1912/13 value from £5.8 to £4.2 million. In view of the discussion on the Turner figures it might be argued that the price we have used for 1908 is too high, particularly for potatoes consumed on farms. However, we have estimated that if potatoes consumed on farms had to be replaced by flour or by oatmeal the cost would be higher than the value placed on the potatoes.

Original and Revised Output Values for 1908

The original and revised output values for all items in 1908 are given in Table 2. In addition to the export value adjustments, and to those for consumption of potatoes and cattle,

changes have also been made in this table to allow for imported oats fed to non-agricultural horses. Also household consumption of other crops has been increased to include peas, beans, turnips, cabbage and onions which were not included in the published volume. The egg output has also been adjusted slightly to bring it into line with that for 1912/13.

Table 2 shows that the overall value of disposals in 1908 (output excluding the value of livestock changes) has decreased by about £1 million as a result of the revisions (from £45.6 to £44.6 million). The estimated value of livestock changes worked out at + £315 thousand. When this is added to the value of disposals, gross output, including the value of livestock changes comes to £44.9 million.

Gross Agricultural Output in All Ireland in 1919

Because of a scarcity of data, on the use of agricultural produce in industry and on household consumption of agricultural produce, the 1919 results had to be based to a considerable extent on the 1926/27 figures for Saorstát Éireann, on the 1925 figures for Northern Ireland and on the All Ireland data for 1908 and 1912/13. For this reason the results must be taken with a certain amount of caution. The output figures, quantities and values for 1919 are given in Table 3 together with the revised figures for 1908 and 1912/13. We have also included in this table an estimate for turf cut by householders since this fuel has traditionally been included in the Saorstát Éireann agricultural output figures. Table 3 also contains estimates of farm expenses, net output and income arising in agriculture for the years in question. The methods used in calculating the different output items are discussed briefly below.

Horses, Asses, Mules and Jennets

The output of asses, mules and jennets was taken as the net exports (exports less

Table 2: *Original and Revised 1908 Gross Output Values*

	<i>Original</i>			<i>Revised</i>		
	<i>Consumed in Ireland</i>	<i>Exported</i>	<i>Total</i>	<i>Consumed in Ireland</i>	<i>Net Exports</i>	<i>Total</i>
<i>Livestock and Products</i>	<i>£'000</i>			<i>£'000</i>		
Horses, Mules, Jennets, Asses	117	1,353	1,470	117	992	1,109
Cattle	3,106	10,935	14,041	2,026	9,859	11,885
Milk Consumed by Persons	2,909	3	2,912	2,909	3	2,912
Other Milk Products	2,715	4,046	6,761	2,715	3,642	6,357
Pigs	2,162	3,706	5,868	2,162	3,572	5,734
Sheep and Goats	900	1,316	2,216	900	1,118	2,018
Wool	22	407	429	63	366	429
Poultry	363	797	1,160	363	718	1,081
Eggs	1,401	2,729	4,130	1,381	2,593	3,974
Other Livestock Products	77	2	79	77	2	79
Total Livestock and Products	13,772	25,294	39,066	12,713	22,865	35,578
<i>Crops</i>						
Wheat	226	24	250	226	21	247
Oats	942	435	1,377	872	456	1,328
Barley	766	14	780	766	13	779
Potatoes	1,525	396	1,921	4,089	387	4,476
Hay and Straw	706	64	770	620	58	678
Grass Seed*	421	-	421	107	314	421
Flax and Tow	404	+	404	404	+	404
Fruit	347	13	360	347	12	359
Other Crops	97	6	103	185	25	210
Timber	131	-	131	131	-	131
Total Crops	5,565	952	6,517	7,743	1,286	9,033
Total Gross Output	19,337	26,246	45,583	20,460	24,151	44,611
Value of Livestock Changes	-	-	-	-	-	+315
Gross Output including Livestock Changes						44,926

* In the 1908 publication all the grass seed output is given under the heading "consumed in Ireland" with a footnote saying "Considered as a raw material". There were almost 20,000 tonnes of grass seed exported in 1908 and we have included this amount at its output price under net exports, and reduced the home consumption accordingly.

+ Less than £500.

imports) of these animals. The output of horses was taken as net exports plus sales of horses to non-agriculturalists in Ireland. The latter figure as in 1926/27 was taken as 12.5 per cent of the number of horses in the country used for traffic and manufacture and for amusement and recreation. The prices used for such horses were the 1908 prices adjusted in proportion to the change in cattle prices over the period 1908 to 1919. We did not attempt to value the changes in stocks of horses between the beginning and end of the year, but since there was little change in the total number of horses in the State between 1918 and 1919 (see Mitchell and Deane, 1962), any estimate of the value of the change would be small.

Cattle

Output of cattle, including stock changes is equal to births, less mortality. Births and mortality are related to the number of cows and heifers in calf in the State during any year.

In 1908 (as revised) 1912/13 and 1926/27, output including stock changes was estimated at about 68 per cent of the number of cows and heifers in calf in the State in those years. The output in 1919 worked out at about the same ratio. Home consumption in that year was estimated at 0.045 cattle per person compared with 0.042 in 1912/13 and 0.041 in Saorstát Éireann in 1926/27. Exports were valued at 90 per cent of the export values. The price for home consumed cattle was obtained by increasing the 1908 price in the ratio of fat cattle prices in 1919 to fat cattle prices in 1908. The prices used for stock changes were taken from the 1931 Statistical Abstract which gives prices for all classes of stock in Saorstát Éireann for the years 1911 to 1930. There was very little difference between the All Ireland and Saorstát Éireann prices which are published for those years.

Sheep and Wool

As with cattle, sheep output including stock changes is equal to births less mortality,

while births and mortality are related to the number of ewes in the June enumeration. In 1912/13, sheep output, including stock changes was estimated as being 0.94 times the average number of ewes in the country in 1912 and 1913. The ratio for 1908 was 0.84 and for 1926/27 it was 0.85. The figure for 1919 worked out at 0.9. Home consumption was estimated at 0.16 sheep and lambs per person in that year compared with 0.13 in 1908 and 0.17 in 1912/13. Wool output was taken at 7.4 lb per sheep 1 year old and over in June. The corresponding figures were 6.4 lb for 1908, 7.06 lb for 1912/13 and 7.9 lb for 1926/27.

Pigs

Output of pigs including stock changes was taken as 14 times the average number of sows in the country in 1919. This compared with a similar ratio for 1912/13. The figures for 1908 and 1926/27 were 13.3 and 15.0 respectively. Household consumption of pigs was estimated at 0.16 pigs per person in 1919. This compared with 0.146 in 1908, 0.163 in 1912/13 and 0.155 in Saorstát Éireann in 1926/27.

Poultry and Eggs

The output of poultry was related to the estimated number of young birds (under 6 months) of the different breeds on farms in June 1919³. Output ratios used were 0.9 times the estimated number of young turkeys and geese, 0.85 times the number of young ducks and 1.3 times the number of young ordinary fowl in the country in June 1919. These ratios were somewhat similar to those obtaining in 1926/27 in Saorstát Éireann.

After allowing for eggs used for hatching, output of hen eggs was estimated at 105 eggs per adult bird in 1919. This compared with about 95 eggs per adult bird in 1908 and

³ Figures for the different breeds of poultry in All Ireland were not published for 1919 and had to be estimated from the 1917 numbers.

1912/13 and about 119 in 1926/27. The output of duck eggs was estimated at 75 eggs per adult bird on farms in 1919 compared with 90 per adult bird in 1926/27 and 62 in 1908.

Milk and Milk Products

The milk yield was estimated at 440 gallons per cow compared with 400 gals in 1908, 436 and in 1912/13 and 487 gals in 1926/27. Milk fed to animals in 1919 was estimated at 55 gals each per calf and 3 gals per pig sold or consumed on farms. Consumption by persons was reckoned to be 22 gals per head, a figure that compares with 30 gals per person in 1926/27, 20 gals in 1908 and 21 gals in 1912/13. Because the figure given for consumption in Northern Ireland was 24 gals per person in 1924/25, the 1926/27 Saorstat Éireann figure of 30 gallons per person seems rather high. We note, however, that the latter was based on a survey of a large sample of farmers in April and August 1927 and January 1928.

Butter consumption was reckoned at 30 lb per person in 1919 compared with 15 lb in 1908, 28 lb in 1912/13 and 37 lb in 1926/27.

Milk prices for 1919 are not published and had to be estimated from the 1926/27 prices using the price of butter as an adjustor.

Crops

Though annual production figures for all major crops are available for both All Ireland and the Free State area, for all the years under review, most of these data are of little use in calculating crop outputs. Except for wheat, barley and flax the other crops are fed mainly to livestock on the farms where produced and as indicated above there are considerable errors involved in estimating livestock consumption. For these crops the outputs had to be estimated directly from household consumption, industrial use and exports.

Wheat

In 1908 and 1912/13 the output of wheat was estimated at about 95 per cent of total production, the remainder being fed to livestock. We used the same ratio in estimating wheat output for 1919. This output includes the amount of home grown seed used in the following year. It was assumed that all wheat seed was sold and repurchased from seed assemblers in Spring at retail wheat seed prices. In calculating net output this seed is included as a farm cost.

Barley

In the years in question all the barley grown in Ireland was mainly for malting purposes but there was always some left over for animal feeding. The output/production ratio was 75 per cent in 1908, 84 per cent in 1912, and 79 per cent in 1926. We took a figure of 78 per cent for 1919. The barley output includes sales for seed. As with wheat this seed is assumed to be purchased by the growers each Spring from the maltsters, and is included as a cost in calculating net output.

Oats

As most oats are fed to farm animals output was estimated directly, as household consumption of home produced oatmeal, exports of whole oats and oatmeal, and oats fed to non-agricultural horses. It was assumed that 0.556 cwts of oatmeal were manufactured from 1 cwt of oats.

According to the published results household consumption of oatmeal from all sources appears to have declined from an oat equivalent of about 0.32 to 0.21 cwt per person between 1908 and 1926/27. Household consumption is not distinguished separately in the 1912/13 results but we estimate that it was about the same as in 1908. On the basis of the trend in

Table 3: *Agricultural Output and Income Arising in All Ireland in 1908, 1912-13 and 1919*

<i>Livestock and Livestock Products</i>	<i>Unit of Quantity</i>	<i>Quantity (000)</i>			<i>Value £000</i>		
		<i>1908</i>	<i>1912/13</i>	<i>1919</i>	<i>1908</i>	<i>1912/13</i>	<i>1919</i>
Horses, Mules, Jennets, Asses	No	30	36	27	1,109	1,521	1,447
Cattle	No	1,058	1,012	970	11,885	13,052	30,026
Milk Consumed by Persons	Gals (000)	88	92	96	2,912	2,492	7,381
Other Milk Products	Gals (000) ^(a)	434	529	482	6,357	9,888	22,991
Pigs	No	1,731	1,920	1,280	5,734	8,328	14,186
Sheep and Goats	No	1,278	1,636	1,313	2,018	3,296	5,797
Wool	lb	15,263	15,530	15,408	429	696	1,822
Poultry	No	10,522	12,955	11,896	1,081	1,575	4,740
Eggs	Gt Hds	9,686	10,359	10,626	3,974	4,832	17,472
Other Livestock Products	-	-	-	-	79	182	246
Total Livestock and £ Livestock Products	-	-	-	-	35,578	45,862	106,108
<i>Crops and Turf</i>							
Wheat	cwts	707	790	1185	247	306	1,007
Oats	"	5,011	5,140	5,773	1,328	1,715	4,735
Barley	"	2,283	2,613	2,714	779	1,126	3,178
Potatoes	tons	1,291	1,318	1,388	4,476	4,780	10,185
Hay and Straw	tons	223	233	202	678	770	1,957
Grass Seed	cwts	523	586	442	421	385	589
Flax and Tow ^(b)	stones	1,584	2,591	2,760	404	894	4,139
Fruit	-	-	-	-	359	436	2,025
Other Crops	-	-	-	-	210	245	523
Timber	-	-	-	-	131	167	454
Turf	Tons	4,645	4,554	4,472	3,817	3,886	9,588
Total Crops, and Turf					12,850	14,710	38,380
Gross Output excluding Livestock Changes					48,428	60,572	144,488
Value of Livestock Changes					+315	-126	+2,409
Gross Output including Livestock Changes					48,743	60,446	146,897
<i>Farm Materials</i>							
Feeding Stuffs					6,487	7,801	13,456
Fertilisers					616	1,035	2,068
Seeds					592	729	2,476
Total Farm Materials					7,695	9,565	18,000
Value of Net Output including Livestock Changes					41,048	50,881	128,897
Other Expenses					5,100	6,889	16,034
Income Arising in Agriculture					35,948	43,992	112,863

(a) Whole milk equivalent of milk products.

(b) Includes dressed tow.

these figures an estimate of 0.275 cwt per person has been made for 1919. From the total consumption calculated using these coefficients we deducted the net equivalent of oatmeal imports to obtain consumption by persons of home grown oats.

Total oats (home grown and imported) fed to non-agricultural horses rose from about 37 cwt per animal in 1908 to 40 cwt in 1912/13 and declined to about 35 cwt in 1926/27. This variation is due more to the mix of non-agricultural horses in the country than to the pattern of feeding, the working horses receiving more oats than those used for amusement and recreation. We estimated a figure of 37.9 cwt for 1919 and from this we deducted the import of whole oats, since as stated above, such oats are usually fed to racehorses. Such deductions were made in revising the 1908 and 1912/13 published results.

Potatoes

Potato output consists of household consumption, estimated at 0.25 tons per head of the population in 1919, and exports in that year. The exports valued at prices received by farmers were taken from the Import and Export Statistics Report for 1919. (See Imports and Exports Ireland 1919-21.) The household consumption figure of 0.25 tons per person compares with 0.27 tons per annum in 1908 and 1912/13 and 0.21 tons in 1926/27.

Hay and Straw

The hay and straw included in agricultural output were the amounts exported and used by non-agricultural horses in Ireland. Exports in 1919 were 42,000 tons. The quantity of hay fed to non-agricultural horses was estimated at 190,000 tons (i.e., 3 tons per horse used for traffic and manufacture and 2 tons per horse for those used for amusement and recreation). These rates were the same as those used in 1908 and 1912/13. The amount of straw used was estimated at 0.2 tons per horse, the same also as in 1908 and 1912/13.

Grass Seed

It was assumed, as in the published 1908 and 1912/13 results, that all grass seed produced commercially was sold, and the amount not exported, later repurchased from seed merchants for sowing the following year. The output of grass seed was therefore calculated by estimating the amount required for sowing in 1920, adding to this the amount exported in 1919, and deducting from this total imports of grass seed in 1920. The amount required for sowing was taken as the area of first year's hay the following year multiplied by 40 lb.

This definition of output was not the same as that used in preparing the official 1926/27 results for Saorstat Éireann and the O'Connor/Guionard figures for this area in 1924/25 and 1912/13. In these publications, output of grass seed was taken as exports only, while that used within the State was taken as an inter-farm sale. In preparing the Free State area results in this paper we have adopted the All Ireland definition outlined above and revised the previously produced Free State area figures to take account of this.

Flax

The quantity of scutched flax produced every year in All Ireland and published in the Agricultural Statistics Reports was not given in the 1919 Report. The yield per acre for that year in the Free State area was, however, published in the Saorstat Éireann reports and we applied this yield to the All Ireland acreage to obtain the quantity produced for 1919. The price of scutched flax in 1919 was available from Agricultural Statistics 1927-1933. The quantity of tow was taken as being $\frac{1}{4}$ the quantity of scutched flax while the price of tow was taken as $\frac{1}{12}$ the flax price. These were the same as the ratios used in 1908

Other Crops

Other crops which consist mainly of vegetables for human consumption were adjusted

