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CHAPTER 24

FARMERS' INCOME

§ 24a. Introduction

The information concerning farmers' income is fragmentary, but sufficient in volume to justify the hope of attaining a fairly accurate estimate. Before this estimate is presented certain peculiarities of farmers' incomes and of the data concerning them must be mentioned.

(1) There is no other industry in which non-monetary income makes so large a proportion of the total as in farming. Besides the rental values of the farm homes occupied by owners, we must count in the value of the food and fuel which farmers produce for their own consumption.

(2) Usually the farmer is not only a producer but also a land speculator. Indeed, it is rather upon the increase in the value of his land than upon the sale of his produce that the farmer rests whatever hope he cherishes of growing rich. How large the growth in land values is appears from the Censuses of 1900 and 1910, which report an increase in the value of farm lands of $15 billion in addition to an increase of $5 billion in the value of farm buildings, machinery, and live stock.[1] Fifteen billions for all farms in ten years means an average annual increase in the value of each farm amounting to $323. In the decade covered by our estimates the average increase must have been much larger, because of the great rise in the prices of farm lands which culminated in 1920.[2] When a farmer realizes a profit by selling his land at an enhanced price, that profit constitutes income to him as an individual. But gains of this kind do not constitute income to the nation as a whole, except in so far as the increased farm values arise from such improvements as are made by clearing, fencing, draining, irrigating or fertilizing land. The nation gained no increase of useful goods from marking up the price of its farm lands in 1919–20 and lost no useful goods from marking them down again in 1920–21. Hence we make no effort to estimate the profits and losses which farmers make from fluctuations in land values.

(3) Of course farmers obtain some income from other sources than the

[1] Needless to say, these official figures have a wide margin of error. In particular, figures for land values and the value put upon buildings are unsatisfactory, especially in areas of decreasing farm population. In such districts, the selling values of the farms are often less than the cost of the buildings alone.

[2] These figures have since been reported, and show an increase of land values from $28,475 million to $54,830 million.

cultivation of their own farms. Their share in the income from tax-exempt securities has been included under that heading and must not be counted again here. But another item of importance to farmers must be allowed for—the money they make by doing work for others. How much these earnings amount to can be calculated only in the roughest manner. The few small samples of farmers' incomes which cover this point indicate outside earnings varying between $48 and $117 per year per farmer. On this basis the aggregate outside earnings of all farmers run between one-quarter and three-quarters of a billion annually.

Concerning sources of information, it should be noted that income-tax returns are of little help in estimating farmers' incomes. In 1916 when the exemption limit was $3,000, only 14,407 of the six and a half million farmers filed tax returns. Since that year the tax returns have not been classified by occupations. In 1917, however, there was reported net income of $806,163,957 from "agriculture and animal husbandry," divided among 251,838 returns. In 1918 (the latest date for which detailed statistics have been published), the corresponding figures were $1,122,532,163 and 372,336.[1] The reasons why so small a proportion of the farmers figure in these returns even in a prosperous year are clear. As a class, farmers belong among the small business men with average incomes not much in excess of the average earnings of adult male wage-earners. Further, of these modest incomes a considerable part is in form not subject to taxation—the rental value of their owned homes, the food and fuel they produce for themselves. Finally, small business men with incomes near the exemption limit, especially men who do not keep accurate accounts, probably evade more extensively than any other class the obligation to make tax returns.

The basic data upon which all estimates of farmers' incomes must rest are the Department of Agriculture's annual statements of the gross value of agricultural produce. These figures for 1910–20 are shown in Table 24A. Their chief defect is that they contain a vast amount of duplication. Crops fed to live stock are counted twice, first as the value of the crops themselves, second in the value of the live stock. "Feeders" from the ranges are counted once when sold by the ranchman and again when sold as fat stock. The chief problem is to ascertain the amount of this duplication year by year.

The violent price fluctuations of 1916–20 give rise to special difficulties in piecing together the fragmentary data which come from different years. Of the increase in the gross wealth produced on farms according to Table 24A—an increase from $9 billion in 1910 to $25 billion in 1919—much the

[1] The 1919 *Statistics of Income* has since been published. It shows 418,945 businesses under "Agriculture and related industries," with a total net income of $ 1,211,260,562.

TABLE 24A

THE NUMBER OF FARMS AND THE GROSS WEALTH PRODUCED ANNUALLY

1910 to 1920

Year	Number of farms [a] (Thousands)	Gross wealth produced on farms [b] (Millions of dollars)
1910	6,362	$ 9,037
1911	6,371	8,819
1912	6,380	9,343
1913	6,388	9,850
1914	6,396	9,895
1915	6,405	10,774
1916	6,414	13,406
1917	6,423	19,331
1918	6,432	22,479
1919	6,441	24,961
1920	6,450	19,856

[a] Figures for 1910 and 1920 are from an advance bulletin of the Bureau of the Census, entitled *Number of Farms by States and Counties*, 1920. Other figures are interpolated along a straight line.

A "farm" for census purposes is all the land which is directly farmed by one person managing and conducting agricultural operations, either by his own labor alone or with the assistance of members of his household or hired employees. The term "agricultural operations" is used as a general term referring to the work of growing crops, producing other agricultural products, and raising animals, fowls, and bees. A "farm" as thus defined may consist of a single tract of land or of a number of separate and distinct tracts, and these several tracts may be held under different tenures, as where one tract is owned by the farmer and another tract is hired by him. Further, when a landowner has one or more tenants, renters, croppers, or managers, the land operated by each is considered a "farm." *Abstract of the Census*, 1910, p. 265, footnote 1.

[b] *Statistical Abstract* of the U. S. 1919, p. 183. Duplication of animals and grain fed to animals is included.

greater part represents merely a change in monetary values. The wholesale-price index numbers compiled by the Bureau of Labor Statistics show that the prices of farm products rose from 100 in 1914 to 234 in 1919, or somewhat faster than the general price level, for which the corresponding figures are 100 and 212.[1] But not all of the increase was of this nominal character. The index numbers of the physical volume of agricultural output, recently made by Professors E. E. Day and W. W. Stewart, agree in showing that, with the sharp oscillations characteristic of farming, the volume of goods produced was increasing during the decade.

§ 24b. First Estimate—Based on Total Production and Expenses

Dr. E. A. Goldenweiser [2] has attempted to estimate the proportions by which the "gross value of wealth produced on farms" reported by the

[1] *Monthly Labor Review*. February, 1921, pp. 44, 45.
[2] *American Economic Review*, March, 1916.

TABLE 24B

INDICES OF PHYSICAL PRODUCTION FOR AGRICULTURE

Base, Day, 1909–1913 = 100 [a]
Stewart, 1911–1913 = 100 [b]

Year	Day	Stewart	Year	Day	Stewart
1909.....	95	95	1915.....	113.4	116
1910.....	99.1	98	1916.....	100.4	101
1911.....	94.1	93	1917.....	108.5	110
1912.....	111	111	1918.....	107.1	108
1913.....	98.2	96	1919.....	110.6	112
1914.....	108.5	108	1920.....	115.6	

[a] *Review of Economic Statistics*, Harvard Committee on Economic Research, September, 1920, p. 255.
[b] *Annual Proceedings of the American Economic Association*, December, 1920.

Department of Agriculture should be changed in order to arrive at the net value production of farms. In so doing, he has decreased the total amount reported by the value of food crops fed to animals and has increased it by the value of the produce of the farm which is directly consumed by the farmers' families. In this way, he has arrived at the figure for farmers' incomes in 1909 shown on page 302.

These figures were based on the returns of the Census of 1910, supplemented by the estimates of W. J. Spillman [1] and W. C. Funk.[2] The value of crops for 1909 is reduced by the amount fed to live stock (corn, oats, barley, hay, and forage, kafir corn, emmer, and spelt, totalling $2,786 million) except the amount actually sold ($509 million) and corn consumed by the family ($40 million).

The values of house rent, and of food and fuel consumed are based on Mr. Funk's estimate, which was made up by visiting and going over the monetary affairs of 483 farmers in 10 well scattered localities. In this estimate, Mr. Funk arrived at a total figure of $421 per family,[3] but since the census enumerators are believed to have allowed for a certain portion of pork and beef, vegetables and fruits consumed by the farm family (estimated at $161), he reduced this original total of $421 per family to $260.

The expenditures are mostly based on census returns: $651 million for hired labor, $115 million for fertilizers, $300 million for feed, and $840

[1] Bulletin, July 19, 1913, *The Farmers' Income*, by W. J. Spillman, Agriculturist, Office of Farm Management.
[2] U. S. Department of Agriculture, Farmers' Bulletin No. 635, December, 1914.
[3] The Cornell Bureau of Farm Management found the average value of products furnished by 692 farms in New York State in 1919 to be $449.02. This figure excludes rent, and is thus fairly comparable at relative prices to the amount used in the text. The deduction for duplicate census figuring in the Cornell investigation is about 25 per cent, which leads to the belief that Funk's deduction for duplication is ample.

TABLE 24C

INCOME AND EXPENDITURES OF THE AVERAGE FARMER[a]

1909

Items	Total	Per farm
Income:		
Value of crops[b]	$3,250,359,348	$511
Value of live stock products[c]	1,124,678,632	177
Value of animals sold and animals slaughtered on farms	1,833,151,031	288
Value of house rent and of food and fuel consumed by family and not reported by Census (estimated)	1,653,934,100	260
Gross earnings of farm and farm family	$7,862,123,111	$1,236
Expenditures:[d]		
Labor, fertilizers, feed, seed (estimated), threshing (estimated), animals purchased, taxes (estimated), and miscellaneous	$2,750,344,281	$ 432
Maintenance charges (buildings, equipment, machinery, etc.)	505,979,322	80
Total Expenditures	$3,256,323,603	$512
Net earnings of farm and farm family	$4,605,799,508	$724
Interest at 5 per cent on value of farm property (earnings of farm)	2,049,148,628	322
Earnings of farm family	$2,556,650,880	$402

[a] *The Farmer's Income* by E. A. Goldenweiser, *American Economic Review*, March, 1916, p. 42.
[b] Exclusive of crops fed to live-stock on home farms.
[c] Including dairy products (except milk and cream consumed on the farm) poultry, honey and wax, and wool and mohair.
[d] Exclusive of value of unpaid family labor.

million for animals purchased. In addition, seed and threshing are estimated at $290 million, taxes and maintenance of buildings and implements, and miscellaneous expenses at $1,061 million, making a total of $3,256 million or $512 per farm. No elaborate estimate is made of the interest on mortgages, but a probable amount of $34 per farm is ventured in the text.

If the proportions which Dr. Goldenweiser found be accepted for the moment, and applied to the following years, and due allowance be made for the increase in the total number of farms and changes in prices and costs, then the approximation to incomes of farm families shown in Table 24D can be made.

The total value of crops (Column I) is taken from the annual reports of the Department of Agriculture, and this amount has been reduced to 60

TABLE 24D

ESTIMATED GROSS INCOME, EXPENSES, AND NET INCOME OF ALL FARMERS

1909 to 1920
(Millions of Dollars)

Year	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
	Total value of crops	60 per cent of value of crops	Value of animal products sold	Value of animals sold and slaughtered	75 per cent of value of animals sold and slaughtered	Value of food, fuel, and house rent	Value of total production (Column II+III +V +VI)	Total cost of production	Approximate interest on mortgage	Approximate amount of rent paid by tenant farmers at 5 per cent of the value of farms	Total expense (Column VIII +IX +X)	Net total value of production (Column VII less XI)
1909	$ 5,487	$3,292	$1,177	$1,833	$1,375	$1,654	**$ 7,498**	$3,257	$120	$ 560	**$3,937**	**$ 3,561**
1910	5,486	3,292	1,254	2,040	1,530	1,654	**7,730**	3,257	132	569	**3,958**	**3,772**
1911	5,562	3,337	1,123	1,903	1,427	1,656	**7,543**	3,302	144	580	**4,026**	**3,517**
1912	5,842	3,505	1,257	2,037	1,528	1,659	**7,949**	3,433	156	590	**4,179**	**3,770**
1913	6,132	3,679	1,253	2,206	1,655	1,661	**8,248**	3,430	168	621	**4,219**	**4,029**
1914	6,111	3,667	1,270	2,252	1,689	1,697	**8,323**	3,483	180	640	**4,303**	**4,020**
1915	6,907	4,144	1,287	2,318	1,739	1,733	**8,903**	3,564	192	662	**4,418**	**4,485**
1916	9,054	5,432	1,438	2,619	1,964	2,036	**10,870**	4,184	204	724	**5,112**	**5,758**
1917	13,479	8,087	1,909	3,551	2,663	3,126	**15,785**	5,973	216	785	**6,974**	**8,811**
1918	14,330	8,598	3,136	4,370	3,278	3,566	**18,578**	7,062	228	881	**8,171**	**10,407**
1919	14,081	8,449	3,591	4,622	3,467	3,790	**19,297**	7,573	240	987	**8,800**	**10,497**
1920	9,165	5,499	3,952	3,950	2,963	4,172	**16,586**	8,321	252	1,082	**9,655**	**6,931**

per cent of its reported value (Column II), in order to eliminate that part of the crop which was fed to live stock, and which, therefore, appears under the heading "Value of Animals" (Column IV).

The value of animal products (Column III) is reported in the Census of 1909, and certain items included have been reported in the Census of 1914 and the advance sheets of 1919. For the intercensal years, the amounts have been supplied by the Department of Agriculture.[1] These amounts, however, do not check closely in detail with the Census figures. For example, the Department figure for dairy products in 1919 showed an increase of 360 per cent over 1909, while the Census figures indicated an increase of only about 300 per cent. The Department of Agriculture's figure for poultry and eggs shows an increase in 1919 over 1909 of 267 per cent, whereas the advance sheets of the Census indicate an increase of only about 200 or 210 per cent. Assuming that the Census figures are more accurate than the estimates of the Department of Agriculture, which are admittedly rough, it has been concluded from these indications that the Department's figures are from 12 to 22 per cent too high. They have accordingly been reduced by 17 per cent.

The amount of correction to be applied for the value of animals is dubious (Column IV). Some duplication exists in the valuation of animals, owing to re-sales of live stock. This has been placed rather arbitrarily at one-fourth the reported value of animals, an amount which is indicated by unpublished samples available in the Bureau of Farm Economics. Data on this head were collected for the Census of 1910, but some doubt was thrown on their accuracy, and they have not been published.

The value of food, fuel, and house rent (Column VI) is based on the original amount of $260 per farm taken from Dr. Goldenweiser, and multiplied by an index number.[2] This series is made up of the Bureau of Labor Statistics index number of wholesale prices of farm products and fuel,[3] weighted in the proportion of 7 to 1.[4] The index number is further adjusted to take into account the increase in the number of farms.

The total cost of production (Column VIII) is taken from Dr. Goldenweiser's estimate for 1910 and extended over later years by an index number constructed as follows: The figures for 1911, 1912, and 1913 are multiplied by the Bureau of Labor Statistics' index number for wholesale prices, and by the variations in acreage. For 1914 to 1918, the index numbers compiled by the War Industries Board in its *History of Prices during the War* were used for the separate items of expense, i. e., feed and forage, live stock, meats and fats, and fertilizers. These series ceased with 1918,

[1] Office Table No. 423. Department of Agriculture.
[2] No comparative data for rents of farm dwellings are available.
[3] *Monthly Labor Review*, June, 1920, p. 69.
[4] W. C. Funk, Farmers' Bulletin No. 635, p. 5.

and the 1919 and 1920 amounts are arrived at by applying the relative change in wholesale prices of the Bureau of Labor Statistics. An index number for farm labor was computed from the quotations of the Department of Agriculture; Miscellaneous and Maintenance, Expenses, Seed and Threshing were multiplied by the Bureau of Labor Statistics index number of wholesale prices, together with the variations in acreage.

The total amount of farm mortgages (Column IX) in 1910 was reported at $1,726,172,851,[1] and as this is known to be but a partial return, an approximation of $2 billion has been ventured. Interest is estimated at 6 per cent. For 1919, the total of farm mortgages is estimated at $3,598,985,000, by James B. Morman,[2] and $4 billion is used as a round sum. The amounts for the intervening years are interpolated.

The amount of rent paid by tenant farmers (Column X) is found by the following method: $40.9 billion is taken as the value of all farm property in 1910.[3] Early returns of the Fourteenth Census indicate that the corresponding amount is about $77.9 billion in 1920. The amounts for intercensal years have then been interpolated. The proportion of farm land worked by tenants in 1910 was 27½ per cent, having a total value of about $11 billion,[4] and this proportion was continued throughout. Finally, the income of this land which goes to persons outside of agriculture was estimated on a basis of 5 per cent of the reported value of the lands worked by tenants as given in the Census.

§ 24c. Second Method—Based on Average Ratio of Expenses to Total Product

An unpublished study made by Professor G. P. Scoville, of Cornell University, covering 2,784 farms in eight counties in New York State, for the years 1908 to 1918, indicates that (a) the value of total crops raised on farms at the prices for which crops were sold, is roughly equal to (b) the total income from the sale of crops and live stock, including gains and losses in live stock inventory, and to (c) the total gross income, including gain or loss in farm capital and miscellaneous returns. The exact averages for these three items are respectively $1,744, $1,776, and $1,889, giving a grand average of $1,803. The average cash expenses per farm,[5] about $930,[6] were somewhat over one-half of the average amount of $1,803,

[1] Census 1910, Vol. 5, p. 162, Table 6.
[2] *The Place of Agriculture in Reconstruction*, p. 319.
[3] *Abstract of the Census*, 1910, p. 281.
[4] *Abstract of the Census*, 1910, p. 285, shows 226,000,000 acres worked by tenants as against 598,000,000 acres by owners.
[5] Does not include unpaid family labor.
[6] This relationship of expenses to gross sales is corroborated by the *Statistics of Income*, 1917, p. 16. These data refer to business incomes, from agriculture and animals, which "represent only such amounts reported by individuals as were derived from business operations and do not necessarily indicate the principal occupations of, or the total incomes reported by, the persons making the returns." The number of returns is 251,838, the gross

or 51½ per cent. If a generalization of farmers' incomes be attempted on this basis, then the net income is in each case slightly less than one-half of the Department of Agriculture's figures for gross value of agricultural production. The data collected are too scattered to permit of any generalization in regard to variations of costs during any particular year of this period.

That this relation of expenses to gross wealth produced is somewhat too low for the country at large is indicated by other samples. A study of 500 farms in Sumter County, Georgia,[1] indicates that the proportion of farm expenses to farm receipts on a cash basis ranges from 55 to 65 per cent. In the Indiana area, the expenses constitute from 40 to 50 per cent of the farm receipts not including the farmer's own labor.[1] A pamphlet entitled *Farm Business in New Hampshire*,[2] shows average earnings for 303 farms in all parts of the State to be $3,290, and the average expenses to be $1,968, or 59 per cent. This, however, is not strictly comparable with Professor Scoville's estimate, since it does not include grain fed to animals among the expenses.

A fair result will presumably be reached by deducting 55 per cent of the gross value produced for expenses.

That the rise in costs has been somewhat less in proportion than the rise in the value of product is indicated by the following table. The first column is a statement of relative costs from data covering 185 farms in Wisconsin, Ohio, and Indiana collected by the United States Office of Farm Management. The second column is a similar statement of relative costs from data for two counties in Illinois, as ascertained by the Department of Farm Organization and Management of the University of Illinois. The third column is the index number of the United States Bureau of Labor Statistics for prices of farm products in cities. Since the price in cities is not the vital consideration with the farmer, an unweighted index number of 31 farm products on the farm is also shown in Column IV.

We may therefore conclude that the results found by taking farm expenses at 55 per cent of the Department of Agriculture's estimate of wealth produced on farms will not tend to be relatively high for the latter half of the decade in comparison to the first half. This, however, will not hold true in all sections of the country, for prices of different classes of product increased in different ratios. Conditions in different parts of the country vary so greatly that every generalization must be taken with a grain of salt.

sales are $1,622,907,759, the business expenses are $816,743,802, and the net income is $806,163,957. The two are thus approximately equal, bearing out the relationship in so far as the "total income from the sale of crops and live stock" is concerned.

[1] Unpublished data of the Bureau of Farm Economics.

[2] By A. B. Genung, *Farm Management Demonstrator*, 1920.

TABLE 24E

RELATIVE INCREASE OF FARM EXPENSES AND PRICES OF FARM PRODUCTS

Year	I	II	III	IV
	Relative cost of farming in Wisconsin, Ohio and Indiana [a]	Relative cost of farming in two counties in Illinois [b]	Index number of market prices of farm products [c]	Index number of prices of farm products on farm [d]
1913	100	100	100	100
1914	108	90	103	105
1915	111	95	105	107
1916	118	100	122	128
1917	148	120	189	195
1918	193	136	220	210
1919		142	234	213
1920			218	216

[a] Unpublished data of the U. S. Bureau of Farm Management.

[b] Figures furnished by University of Illinois, Department of Farm Organization and Management. The comparability of these cost figures with those collected by the U. S. Department of Agriculture has been questioned.

[c] *Monthly Labor Review*, February, 1921, p. 45, U. S. Bureau of Labor Statistics index number.

[d] These data were supplied by Professor G. F. Warren, and converted into index numbers.

Application of the method suggested yields the following results for each year:

TABLE 24F

ESTIMATE OF FARMERS' INCOMES

(Based on 45 per cent of the total value of farm production reported by the Department of Agriculture)

(Millions of Dollars)

Year	Total value of farm production [a]	45 per cent of gross total value
1910	$ 9,037	$ 4,067
1911	8,819	3,969
1912	9,343	4,204
1913	9,850	4,432
1914	9,895	4,453
1915	10,774	4,849
1916	13,406	6,033
1917	19,331	8,699
1918	22,479	10,116
1919	24,961	11,232
1920	19,856	8,935

[a] *Statistical Abstract of U. S.*, 1919, p. 183.

§ 24d. Third Estimate—Based on Sample Incomes

A third method of attack is suggested by unpublished data collected by the Bureau of Farm Economics, covering the distribution of labor income among 11,000 farms in widely scattered parts of the country. In this study, the years 1910 to 1915 were considered to represent substantially uniform conditions, and so were the years 1916 to 1918. Samples from different years in the first period were averaged together, and so also were samples from different years in the second period. What are shown, therefore, are rough averages covering these respective periods. For each period, the percentages of all farms studied are grouped under the following income ranges:

TABLE 24G

LABOR INCOME OF FARMERS [a]

1910 to 1915

Annual labor income in dollars	Per cent of total farmers receiving income named	Total number in each income range (based on 6,400,000 farmers)	Total labor income (Millions of dollars)
$0–$500	36.5	2,336,000	$ 584
500–1,000	17.7	1,132,800	850
1,000–1,500	7.4	473,600	592
1,500–2,000	3.4	217,600	381
2,000–2,500	1.5	96,000	216
2,500–3,000	1.0	64,000	176
3,000–4,000	1.0	64,000	224
4,000–5,000	.3	19,200	86
5,000–10,000	.4	25,600	192
Over $10,000	.0		
			$3,301
Negative Income			Less
0–500	23.9	1,529,600	382
500–1,000	4.7	300,800	226
1,000–1,500	1.2	76,800	96
1,500 and over	1.0	64,000	96
	100.0	6,400,000	$800
Net Labor Income of All Farmers			$2,501

[a] This table is based on an unpublished distribution of 11,000 farmers' incomes made by the U. S. Bureau of Farm Economics. "Labor Income" is defined as the amount of income remaining after deducting all expenses including a 5 per cent return on the estimated invested capital.

TABLE 24H

LABOR INCOME OF FARMERS[a]

1916 to 1918

Annual labor income in dollars	Per cent of total farmers receiving income named	Total number in each income range (based on 6,500,000 farmers)	Total labor income (Millions of dollars)
$0–$500	28.6	1,859,000	$ 465
500–1,000	19.9	1,293,500	970
1,000–1,500	10.9	708,500	886
1,500–2,000	6.1	396,500	694
2,000–2,500	4.6	299,000	673
2,500–3,000	2.6	169,000	465
3,000–4,000	3.1	201,500	705
4,000–5,000	1.3	84,500	380
5,000–10,000	1.8	117,000	877
Over 10,000	.8	52,000	520
			$6,635
Negative Income			Less
0–500	13.9	903,500	226
500–1,000	4.1	266,500	200
1,000–1,500	1.0	65,000	81
1,500 and over	1.3	84,500	127
	100.0	6,500,000	$ 634
Net Labor Income of All Farmers			$6,001

[a] See Note a, Table 24G.

When the percentages shown in each income group are applied to all the farmers in the country, the results show an average total income for the years 1910 to 1915 of $2½ billion and for the years 1916 to 1918 of $6 billion.

The rental value of land owned by farmers, which is deducted by the Bureau of Farm Management before arriving at its figure for labor income, may be estimated from the following facts: In 1910, the total value of farms was $40 billion and of this operators owned 72½ per cent, or about $29 billion.[1] Five per cent of this amount is $1,450 million, which after deducting $200 million for interest on mortgages, leaves $1,250 million, which may be added as a rough total to the 1910 to 1915 estimate. The

[1] It seems to be generally true that the most valuable farms in the North are worked by tenants. This, however, is not true of farms worked by negro tenants in the South. The percentage value of farms will not, therefore, coincide exactly with the percentage of acreage, though the amount of error is uncertain on account of the variation of conditions in different parts of the country.

1916 to 1918 figure would be somewhat larger; perhaps $2 billion would not be out of the way. The estimate of the value of farm property for 1920 has not yet been published.[1]

The total average annual farm production thus arrived at is therefore as follows:

Period	Average annual labor income	Average annual income from property	Total income of farmers
	(Billions of dollars)		
1910 to 1915	$2½	$1¼	$3¾
1916 to 1918	6	2	8

§ 24e. Final Estimate of Farmers' Incomes

When the three estimates are placed alongside of each other, they are seen to be fairly comparable in general trend. In order to compare the results of the first and second methods with those of the third method, the averages of the corresponding years have been computed. These averages have been weighted in accordance with the number of cases taken from each year in arriving at the results shown by the third method. The figures obtained by the three methods are thus made strictly comparable. It will be seen that this comparison confirms the general results found by the first and second methods. All three methods show a marked rise in monetary incomes between the periods 1910 to 1915 and 1916 to 1918.

The final estimate of farmers' incomes, as shown in Table, 24J, is based on a combination of the results arrived at by the three methods. Where there is a considerable discrepancy, the figures found by the first method are given greater weight. In addition, from $200 to $300 million has been included to take care of the "outside income" which many farmers earn. The results are given in terms of billions of dollars, for they cannot claim to be more than a careful approximation.

§ 24f. Comparison with Other Estimates

Mr. W. R. Ingalls,[2] arrives at $5,200 millions for farmers' incomes in 1916, but he has deducted $2,800 millions for farm laborers, a figure much larger than that used here. If the estimate for farm labor be added to the amount found as income of farmers in 1916, our result is about $7,300 millions as against Mr. Ingalls' $8 billions. It is believed his estimate of expenses other than cost of labor paid is somewhat too low. Mr. W. I.

[1] It has since been placed at $77.9 billion in an advance bulletin of the Census of 1920.

[2] *Labor, the Holder of the Nation's Wealth and Income*, New York Times Annalist, September 13, 20, and 27, 1920.

TABLE 24I

COMPARISON OF TOTAL FARMERS' INCOMES AS FOUND BY THE THREE METHODS EMPLOYED

1910 to 1920

(Billions of Dollars)

	I		II		III
Year	First method [a]	Weighted average	Second method [b]	Weighted average	Third method [c]
1910	$ 3.772		4.067		
1911	3.517		3.969		
1912	3.770	3.93	4.204	4.33	3.75
1913	4.029		4.432		
1914	4.020		4.453		
1915	4.485		4.849		
1916	5.758		6.033		
1917	8.811	7.69	8.699	7.72	8.00
1918	10.407		10.116		
1919	10.497		11.232		
1920	6.931		8.935		

[a] See Table 24D. Based on an estimate of gross income and expenses of farmers.

[b] See Table 24F. Based on deduction of expenses (55 per cent of total produce) from the Department of Agriculture's estimate of gross wealth produced on farms.

[c] See Tables 24G and 24H and text, p. 310. Based on 11,000 samples of the labor income of farmers plus property income.

TABLE 24J

FINAL ESTIMATE OF THE TOTAL INCOME OF FARMERS

1910 to 1920

(Billions of Dollars)

1910	$3.95
1911	3.70
1912	4.00
1913	4.20
1914	4.20
1915	4.70
1916	5.80
1917	8.80
1918	10.45
1919	10.85
1920	7.20

King's estimate for 1910 given in the *Wealth and Income of the People of United States* [1] was $6,842 millions, and this included the income of farm laborers. Even when a deduction is made for the latter item, the estimate appears too high, and Mr. King's recent investigations, aided by more complete evidence, lead him to believe that the amount should be reduced. Mr. H. A. Wallace [2] has made a similar computation, based on the "ratio" method. This computation is based on the assumptions that crops are sold as crops, and not as live stock, and that live stock is taken into consideration solely as the form in which pasture is marketed. These assumptions make his results somewhat too low. But his relative increase in 1917, 1918, and 1919 is somewhat greater than ours, though the general trend of his figures is the same. He generously states in a letter: "I have dug into this matter sufficiently so that I think in the main your figures are accurate." The annual farmers' income, according to his figures, is as follows:

(Millions of Dollars)

1909	$3,570	1913	$3,585	1917	$9,210
1910	3,070	1914	3,600	1918	8,900
1911	3,140	1915	4,000	1919	9 400
1912	3,440	1916	5,700	1920	3,900

§ 24g. Farmers Having Incomes Over and Under $2,000

Finally, how many farmers had incomes over and under $2,000, and what did their total incomes in each of these classes amount to? These figures must be found, in order that they may be carried back to complete the estimates of Chapters 22 and 23.

The only basis for drawing the $2,000 line through our totals is a sample for 1918 of 401 farmers' incomes furnished by Professor G. P. Scoville of the New York State College of Agriculture. While this is a small sample, it is the only one that was found which gives actual income. The assumption implicit is not that these farmers' incomes are typical of the entire country, but that the *distribution* of income among them is typical. The average income of these 401 farmers in 1918 was $1,481, whereas the average income of all farmers in the same year was $1,625. This fact, however, does not invalidate the hypothesis that the distribution shown by the sample was typical. Such comparisons as it has been possible to make with the larger number of 11,000 *labor* incomes, shown in Tables 24G and 24H, after making an allowance for farm income, tend to justify the use of this distribution. On this assumption, the probable division of number

[1] Page 138.
[2] *Agricultural Prices*, pp. 57–61.

of farmers and amount of farmers' incomes by the $2,000 line for each year is as follows:

TABLE 24K

NUMBER OF FARMERS HAVING INCOMES OVER AND UNDER $2,000, AND THE TOTAL AMOUNT OF THESE INCOMES

Year	I	II	III	IV	V	VI
	Total		Over $2,000		Under $2,000	
	Number of farmers (Thousands)	Total income (Billions)	Number of farmers (Thousands)	Amount of income (Billions)	Number of farmers (Thousands)	Amount of income (Billions)
1910	6,362	$ 3.95	111	$ .258	6,251	$3.692
1911	6,371	3.70	79	.182	6,292	3.518
1912	6,380	4.00	111	.262	6,269	3.738
1913	6,388	4.20	143	.340	6,245	3.860
1914	6,396	4.20	144	.340	6,252	3.860
1915	6,405	4.70	208	.516	6,197	4.184
1916	6,414	5.80	448	1.179	5,966	4.621
1917	6,423	8.80	1,313	3.886	5,110	4.914
1918	6,432	10.45	1,861	5.784	4,571	4.666
1919	6,441	10.85	2,008	6.298	4,433	4.552
1920	6,450	7.20	804	2.261	5,646	4.939