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Volume Author/Editor: Alvin S. Tostlebe

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Chapter Author: Alvin S. Tostlebe

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Appendix F

Methods of Adjusting Census Enumerations of Persons Engaged in Agriculture, by States, to Improve Accuracy and Comparability of Regional Estimates of the Farm Labor Force

Two types of adjustment were necessary to increase the accuracy and comparability of the census enumeration of persons engaged in agriculture in each state. To increase accuracy, it was necessary to distribute to the states the estimates of undercounts and overcounts in certain years made by the census for the entire country, and of an undercount confined to thirteen southern states in 1870. Similarly, census estimates of the number of farm laborers in the United States who, for lack of adequate information on the schedules, had in several census years been consigned to a mixed group designated "laborers (not specified)," had to be distributed among the states.

In order to make the enumerations for the various years reasonably comparable it was necessary (1) to remove from the agricultural category some types of workers which had been included in some years, but not in others, and which also tended to impair the homogeneity of the class, and (2) to adjust the 1940 and 1950 data to include workers in the ten- to thirteen-year age group.

When the state data were so adjusted their sums (except for 1940) differed only slightly from those reported by the census.¹ After the adjusted state data were combined into regional totals the latter were forced slightly to make them completely comparable with the census-reported farm labor force of the United States. Forcing the 1940 regional data, which added up to a United States total 5 per cent lower than the census-reported number, probably took care, in a rough way, of a known deficiency in our original regional estimates for that year—the omission of members of the farm labor force who were temporarily doing public emergency work.

The adjustments of the state data that have been made in arriving at the estimates in Table 4 are listed in detail below. It will be noted that an adjustment of territorial data was made for 1870.

1870

The first adjustment involved subtracting "turpentine farmers" and "turpentine laborers" from the category "agriculture."

¹ A. M. Edwards, *Comparative Occupation Statistics for the United States 1870-1940*, Government Printing Office, 1943, p. 104; and *Historical Statistics of the United States, 1789-1945*, Government Printing Office, 1940, p. 63.

A second adjustment was made to correct an undercount of 314,833 agricultural workers in the thirteen southern states.² The 314,833 agricultural workers were distributed to the thirteen states on the basis of the proportion that each state's agricultural workers, as previously reported, were to the previously reported twelve-state total of these workers.

A third adjustment involved the distribution of 616,527 "laborers (not specified)" omitted from the category "agriculture."³ The procedure was the same as in the second adjustment, except that the United States rather than thirteen southern states constituted the base.

A fourth adjustment involved the distribution of 52,755 persons lumped together under "The Territories." These workers were distributed to the individual territories on the basis of the percentage distribution of the number of farms in 1870 for the same territories.

1880

The first adjustment involved subtracting the "turpentine farmers and laborers" from the category "agriculture."

A second adjustment added 925,421 "laborers (not specified)" to the persons engaged in agricultural pursuits.⁴ This was done by prorating the 925,421 persons to the states on the basis of the proportions that each state had of the total before this adjustment was made.

1890

From the numbers reported by the census as engaged in "agriculture, fisheries, and mining," were subtracted the numbers listed as "fishermen and oystermen," "lumbermen and raftsmen," "miners," "quarrymen," and "woodchoppers."

Turpentine farmers and laborers were not listed as such in the 1890 Census of Population, but were included in "other occupations"—a residual class under "agriculture, fisheries and mining." Later the Bureau of the Census estimated their number at 13,571. In order to remove these turpentine farmers and laborers from agricultural workers, by states, it was necessary to allocate them to the states. This was done by averaging the percentages that each state's "turpentine farmers and laborers" were of the United States workers of that type in 1880 and 1900, and applying these state average percentages to the 13,571 estimated to have been in this category in the United States in 1890. The numbers thus distributed to the states were subtracted from the numbers reported under "agriculture, fisheries and mining."

The "laborers (not specified)" of 1890, allocated to agriculture by a later census study, numbered 909,740.⁵ These were distributed to the states in the manner described for the "laborers (not specified)" of 1880.

² Edwards, *Comparative Occupation Statistics for the United States 1870-1940*, as cited, p. 141.

³ *Ibid.*, p. 144.

⁴ *Ibid.*

⁵ *Ibid.*

Finally, an adjustment was made for an undercount of 582,522 persons in the ten- to fifteen-year age group reported later by the census as employed on farms.⁶ This number was prorated to the states on the basis of the distribution of the unadjusted United States total in this age group.

1900

From the numbers listed by the census under "agricultural pursuits" were subtracted the numbers representing "lumbermen and raftsmen," "turpentine farmers and laborers," and "woodchoppers."

The 670,702 "laborers (not specified)" allocated to agriculture by a later census estimate were distributed to the states in the manner described for 1880.⁷

1910

From the numbers reported by the census as employed in "agriculture, forestry, and animal husbandry," were subtracted the numbers reported as "fishermen and oystermen," "foresters," "lumbermen, raftsmen, and woodchoppers," "owners and managers of log camps," and "turpentine farmers and laborers."

A second adjustment of the state totals was made to correct an overcount of 796,542 farm workers.⁸ Of these, 165,557 were boys ten to fifteen years old, 202,942 were girls of ten to fifteen and 428,043 were women sixteen years of age and older. These sex-age groups in each state were reduced by the percentage that the United States total for each group was reduced.

1920

The "turpentine farmers, laborers and foremen," "fishermen and oystermen," "foresters," "lumbermen, raftsmen, and woodchoppers," and "managers of log camps" were subtracted from the number reported in the category "agriculture."

A second adjustment of the state totals was made to correct an undercount of 782,958 farm workers consisting of 352,132 men sixteen years and over; 343,825 boys of ten to fifteen; 12,001 girls of ten to fifteen; and 75,000 women sixteen years and over.⁹ The sex-age groups in each state were increased by the percentage that the corresponding groups for the United States were increased when the above numbers were added to totals originally reported.

1930

In 1930 "agriculture" included farmers (owners and tenants), farm managers and foremen, and farm laborers. There were no known undercounts or overcounts. Hence the state data were accepted as published, and those of other

⁶ *Twelfth Census: 1900, Special Reports, Occupations*, Table XI, p. lxxi.

⁷ Edwards, *Comparative Occupation Statistics for the United States 1870-1940*, as cited, p. 144.

⁸ *Ibid.*, pp. 137-138. ⁹ *Ibid.*, pp. 138-140.

years were made comparable by the adjustments that are described in this appendix.¹⁰

1940

For 1940 "farmers and farm managers" were added to "farm laborers and foremen" to obtain a total comparable with earlier years. In 1940 only those agricultural workers who were fourteen years old or over were listed by census enumerators. In order to make the data comparable with earlier census years, it was necessary to expand the number reported as working on farms in 1940 so as to include the ten- to thirteen-year age group. This was done by fitting a regression curve to the proportion that the ten- to thirteen-year age group was of total agricultural workers in each region for the years 1910, 1920, and 1930 and extending the curve to 1940. Each regional percentage thus obtained was used to expand the 1940 labor force of the states comprising the region.

1950

The only adjustment necessary to make the state enumerations of "farmers and farm managers" plus "farm laborers and foremen" published in Volume II of *Census of Population: 1950*, comparable with the numbers of earlier years was to include an estimate of the ten- to thirteen-year age group. This was done by extending to 1950 the regression curves mentioned in the description of adjustments for 1940.

¹⁰ *Census of Population: 1930*, Vol. V, *General Report on Occupations*, Table 10, p. 56.