APPENDIX

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Facsimile of schedule for one region only.

The questions on the schedules, which relate to color and tenure of the farm operator and value of farm products, were standard for all regions.
NOTES ON PRECISION OF DATA

As noted in chapter II, the figures in the tables in this monograph are marked with an asterisk wherever the coefficient of variation, as indicated by sample data, is approximately 10 percent or more. Thus, the chances are approximately 2 out of 3 that the figures not marked with an asterisk are within 10 percent of the true figures, and 19 out of 20 that they are within 20 percent of the true figures. The coefficient of variation or relative error of a sample average is

\[ V_X = \frac{\sigma}{X} = \frac{\sigma_X}{\sqrt{n} X} \tag{1} \]

where \( \sigma \) is the standard deviation, or measure of the amount of variability of \( X \), and \( X \) is the true or population value for the average, while \( n \) is the number of farms in the sample. The coefficient of variation of a total obtained by multiplying an average by a known factor is the same as the coefficient of variation of the average. For staring purposes the problem is to find the sample size, \( n \), such that, for all sample sizes, \( n \), smaller than this number, the coefficient of variation will be larger than 10 percent; in other words:

\[ \frac{\sigma_X^2}{n_{X^2}} = .01, \quad n = \frac{\sigma^2}{.01X^2}. \tag{2} \]

Hence, if an estimate were made of \( \sqrt{n_{X^2}} \), it would be possible to determine the appropriate value of \( n \). As is indicated in chapter II, the sample drawn represented approximately 2 percent of all farms (operators) in the "Under $10,000" category. Since the stratification was purely geographic, the sampling procedure did not insure the drawing of a 2-percent sample for each of the 8 tenure groups or a 2-percent sample for each of the 2 color groups. Inasmuch as the 1940 population numbers of farms were known for the individual color-tenure groups, the sample figures for each color-tenure group were expanded by the sampling ratio, \( W_i / N_i \), for that particular color-tenure group (which often departed markedly from 50). If the values of \( n_i \), for the color-tenure groups appeared in the tabulations, the procedure would be to start all values of \( n_i \) less than the corresponding values of \( n_i \) calculated from (2). Unfortunately, only the recorded total number of farms, \( N_i \), for a particular color-tenure group is shown; the approximation used is that \( n_i = .02N_i \) and, therefore,

\[ M = \frac{\sigma^2}{.01(0.02)X^2} \tag{3} \]

where \( M \) designates the population number of farms such that, for all numbers of farms smaller than this number, the coefficient of variation, \( V \), will be larger than 10 percent. Hence, if the values of \( V \) are known, it is possible to start the figure when the corresponding value of \( M \) is equal to or less than \( M \).

The problem of obtaining \( V \) differs as between classes of items and types of statistics. The methods used for staring table entries, and the assumptions underlying their use, follow.

CLASS A.—FARM COUNTS AND DERIVED FIGURES

This class of items includes the figures on numbers of farms having specified properties, with their derived figures, which are designated in the tables as follows: (a) Farms reporting specified sources of income, such as number of farms reporting dairy products sold or traded, shown in tables 1 to 13, inclusive; (b) farms classified by specified major sources of income, such as number of poultry farms, shown in tables 13 to 22, inclusive; and (c) farms classified by total value of farm products, such as number of farms in the "$100 to $249" value group, shown in tables 23 to 28, inclusive.

Case 1.—The first case falling under this general class is that where the number of farms in the "Under $10,000" subgroup, having a specified property, is estimated from a sample, or the derived percentage given is this estimate divided by a known total. For example, in table 10 the number of "Farms reporting farm products sold or traded" for "All tenants" in the "Under $10,000" subgroup is an estimate based on the 2-percent sample and, therefore, falls under Case 1 (A). The corresponding percentages for "All tenants" in the "Under $10,000" subgroup, shown in the column "Percent of all farms" and "Percent by color and tenure," were derived by dividing this estimate of the number of "Farms reporting farm products sold or traded" by known total numbers of farms. Therefore, these percentages also come under Case 1 (A).

The mathematical basis for estimating entries which have relative errors of 10 percent or more and, therefore, should be marked with an asterisk is as follows:

The estimate \( R_1 \) for the number of farms having a specified property in Case 1 (A) is

\[ R_1 = r \cdot \frac{W_1}{\pi_1} \tag{4} \]

where \( r \) is the number of farms in the sample for "All tenants" in the "Under $10,000" subgroup having a specified property, \( M_i \) is the known total number of tenants in the "Under $10,000" subgroup, and \( n_i \) is the number of tenants in the sample for the "Under $10,000" subgroup, that is, the sample from the \( N_i \) farms. The coefficient of variation squared of \( R_1 \) is approximately

\[ V_{R_1} = \frac{Q_1}{.02 P_1 W_1} \tag{5} \]

where \( P_1 \) is the proportion of farms "Under $10,000" having a specified property, as for example the proportion of "Farms reporting farm products sold or traded," and \( Q_1 = 1-P_1 \). We want \( M_i \), that value of \( V \) such that \( V_{R_1} = Q_1/0.02 P_1 W_1 = .01 \). Therefore,

\[ M_i = \frac{Q_1}{.0002 P_1} \tag{6} \]

As estimates of \( P_1 \) and \( Q_1 \), we use the sample proportions \( p_1 \) and \( q_1 \). A table was constructed showing the values of \( M_i \) for any value of \( p_1 \). Hence, for a sample estimate of \( P_1 \), that is \( p_1 \), given in the published tables, it was possible to determine whether the number of farms having a specified property should be starred, depending on whether or not the corresponding value of \( M_i \) in the table was equal to or less than \( M_i \). For greater

\[ 1\text{These notes were prepared jointly by Morris E. Hansen, William N. Hurwitz, and Irvin Holmes of the Bureau of the Census.} \)}}
accuracy in determining whether large values of \( P_i \) that is values of \( p \) greater than .70, should or should not be barred, use was made of published tables and charts to determine the confidence limits of \( P_i \) for samples of varying sizes, and thereby to determine values of \( M_i \) such that the chances were approximately 1 out of 20 that the observed value of \( p \) was less than the true value by 10 percent.

As indicated above, the relative error of an estimated total is the same as the relative error of the same estimated total divided by a known total. Therefore, the percentages for "All tenants" in the "Under $10,000" subgroup, described above, were starred whenever the corresponding figure on number of "Farms reporting farm products sold or traded" was starred.

Case 2.—The second case is where the number of farms, having a specified property, is made up of an estimate from a sample for the "Under $10,000" subgroup plus a known total for the "$10,000 and over" subgroup, and the derived percentage given is this number divided by a known total. In table 10 the number of "Farms reporting farm products sold or traded" for "All tenants" is made up of the estimate from the 2-percent sample for the "Under $10,000" subgroup of "All tenants," described under Case 1 (A), plus a known total for the "$10,000 and over" subgroup of "All tenants." Therefore, this figure on number of "Farms reporting farm products sold or traded" for "All tenants" falls under Case 2 (A). The corresponding percentages, appearing in the columns "Percent of all farms" and "Percent by color and tenure," were secured by dividing this estimate of "Farms reporting farm products sold or traded" for "All tenants" by known total number of farms. Consequently, these percentages also come under Case 2 (A). In this case the estimate is

\[
R' = M_i P_i + M_2 P_2 = R_1 + R_2
\]

where

\[
R_1 = M_1 P_1, \quad \text{the estimated number of farms for the "Under $10,000" subgroup having a specified property}
\]

\[
R_2 = M_2 P_2, \quad \text{the known number of farms for the "$10,000 and over" subgroup having a specified property}
\]

\[
M_1 \quad \text{as before, is the known number of all farms for the "Under $10,000" subgroup}
\]

\[
M_2 \quad \text{is the known number of all farms for the "$10,000 and over" subgroup}
\]

\[
P_1 \quad \text{as before, is the sample proportion of farms for the "Under $10,000" subgroup having a specified property}
\]

\[
P_2 \quad \text{is the known proportion of farms for the "$10,000 and over" subgroup having a specified property}
\]

In this case the coefficient of variation squared of \( R' \) is

\[
V_{R'}^2 = \frac{M_1^2 \sigma^2 P_1}{R_1^2} = \frac{R_2}{R_1} \frac{R_1}{R_2} \frac{Q_1}{R_2} = \frac{Q_1}{R_2} \frac{R_2}{R_1} \frac{R_1}{R_2}
\]

where \( R_1 \) is equal to \( M_1 P_1 \) and the other terms are defined as before. For fixed values of \( R/R_1 \) we would like to find \( V_{R'}^2 \).

\[1\] Clopper, C. J., and E. S. Pearson. "The use of confidence or fiducial limits applied to the case of the binomial." Biometrika 34 (1946), 404-412.

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\[ V^2_{\theta_1} \text{ is approximately equal to} \]

\[ \left( 1 - \frac{R}{R^2} \right) V^2_{\theta_1} = \frac{R^2}{R^2} V^2_{\theta_1} = \frac{R^2}{R^2} \cdot 0.02M_{\theta_1}. \]

(14)

This case is similar to that of Case 2 (A). Here, for fixed values of \( R/R \), we would like to find \( M^*_s \), that value of \( M \) such that

\[ \frac{R^2}{R^2} \cdot 0.02M_{\theta_1} = 0.01. \]

Therefore,

\[ M^*_s = \frac{R^2}{R^2} \cdot 0.0002 \frac{P_3}{P_3} = \frac{R^2}{R^2} M_s. \]  

(16)

\( M^*_s \) in this case differs from \( M^*_s \) in Case 2 (A) only in that \( M_s \) is multiplied by \( R^2/R^2 \) instead of by \( R^2/R^2 \). Hence, the tables constructed for Case 2 (A) were used by identifying the proper group interval by \( R^2/R^2 \). The limitations indicated for Case 2 (A) also apply here.

CLASS B.—VALUE OF PRODUCTS AND DERIVED FIGURES

The four cases for the farm counts also occur for this class of items; and in addition there are two special cases involving the average value per farm reporting. This class also presented a further problem in that the tabulations did not provide information on the relative errors on which the varying procedure is based. Special tabulations to estimate roughly the value for \( V \) were made by color-tenure groups for relevant items.

Case 1.—The first case for this class of items corresponds to Case 1 (A) for the farm counts, that is, the value figure for farms in the "Under $10,000" subgroup, having a specified property, is evaluated from a sample, or the derived percentage given is this estimated value divided by a known value. For example, in table 10 the "Value of farm products sold or traded" for "All tenants" in the "Under $10,000" subgroup is an estimate based on the 2-percent sample and, consequently, falls under Case 1 (B). The corresponding percentage, shown in the column "Percent by color and tenure," was derived by dividing this estimate of the "Value of farm products sold or traded" for "All tenants" in the "Under $10,000" subgroup by the known "Value of farm products sold or traded" for all tenure groups in the "Under $10,000" category. Consequently, this percentage also falls under Case 1 (B). The estimate for the value reporting farms is

\[ \frac{N_1}{X_1} \cdot \frac{M_1}{1} = D_1. \]

(17)

where \( X_1 \) is the value figure for the sample for farms having a specified property. \( V^2_{\theta_1} \) is approximately equal to \( \sigma^2_{\theta_1}/10.64 \). As before we want to determine \( M_1 \), a particular value of \( M \), such that for all values of \( M_1 \) less than this number the coefficient of variation is greater than 10 percent. In other words, we want to find \( M_1 \) such that

\[ V^2_{\theta_1} = \frac{\sigma^2_{\theta_1}}{0.0002D_1^2} = 0.01, \text{ or } M_1 = \frac{\sigma^2_{\theta_1}}{0.0002D_1^2} = \frac{V^2_{\theta_1}}{0.0002}. \]

(18)

\[ V^2_{\theta_1} = \frac{\sigma^2_{\theta_1}}{0.0002D_1^2} = 0.01, \text{ or } M_1 = \frac{\sigma^2_{\theta_1}}{0.0002D_1^2} = \frac{V^2_{\theta_1}}{0.0002}. \]

(18)

where \( D_1 \) is the known value for the "$10,000 and over" subgroup. From considerations identical to those given in Case 2 (A) for the farm counts, the value of \( M_1 \), that is, that value of \( M_1 \) for which \( V^2_{\theta_1} \) is equal to 10 percent, is

\[ W^*_r = M_1 = D_1. \]

(19)

where \( D_1 \) is defined in formula 18 under Case 1 (B) and \( M_1 \) is that value of \( M_1 \), such that for all values smaller than \( M_1 \), the coefficient of variation of \( D_1 \) is greater than 10 percent.

For simplicity in constructing the tables for varying purposes, the values of \( D_1^2/D_0^2 \) were grouped into 10 classes and the midpoints of these class intervals were used as approximations. If values of \( D_0/D \) were available, the varying procedure would be to identify the interval in which \( D_0/D \) falls, and to star \( D_0/D \) whenever \( M_1 \) is equal to or less than \( M_1 \). However, only sample estimates of \( D_0/D \) were available. As in Case 2 (A) for the farm counts, because of the grouping and because of sampling errors in the estimates of \( D_0/D \), some values of \( D_1 \) which should have been starred may not have been starred, and conversely.

As in Case 1 (B) the percentage, \( \alpha_m \), for "All tenants," shown in the column "Percent by color and tenure," was starred whenever the corresponding figure on "Value of farm products sold or traded" was starred, since the relative error of an estimated total is the same as the relative error of this same estimated total divided by a known total.

Case 3.—This case for the value-of-products items corresponds to Case 3 (A) for the farm counts. In other words, it covers the percentages for which the numerator is the known value for the "$10,000 and over" subgroup, and therefore not subject to
VALUE OF FARM PRODUCTS

The denominator is made up of an estimated total for the "Under $10,000" subgroup and the known total for the "$10,000 and over" subgroup. In Table 10 this percentage is found under the column entitled "Percent by value groups," where the "Value of farm products sold or traded" for the "$10,000 and over" subgroup is shown as a percent of the "Value of farm products sold or traded" for "All tenants," that is, for the "Under $10,000" and "$10,000 and over" subgroups combined. Here the estimate is

$$\bar{d}_a = \frac{D_a}{D_1 + D_2}. \quad (21)$$

In Case 3 (A) for the farm counts $V_p$, it was found to be approximately equal to $V_p$. From the same considerations $V_{x_2}$ is approximately equal to $V_p$. Hence, $\bar{d}_a$ was starred whenever $D$ was starred.

Case 4.—As for the farm counts, this case for the value-of-products items covers percentages for which the numerator is an estimated value for the "Under $10,000" subgroup, and the denominator is made up of the sum of the estimated values for the "Under $10,000" subgroup and a known value for the "$10,000 and over" subgroup. In Table 10 this percentage is found under the column entitled "Percent by value groups," where the "Value of farm products sold or traded" for the "Under $10,000" subgroup is shown as a percent of "Value of farm products sold or traded" for "All tenants," that is, for the "Under $10,000" and "$10,000 and over" subgroups combined. The estimate is

$$\bar{d}_a = \frac{D_1}{D_1 + D_2}. \quad (22)$$

Here $V_{x_2}$ is equal to $V_p$, ($D_1^2/D^2$) and $W_a$ is equal to $W$, ($D_1^2/D^2$) from the reasoning given in Case 4 (A) for the farm counts. $W_a$ in this case differs from $M_a$ in Case 2 (B) for the value-of-products items only in that $M_a$ is multiplied by $D_2^2/D^2$ instead of by $D_1^2/D^2$. Hence, the tables constructed for Case 2 (B) for the value-of-products items were used by identifying the proper group interval by $D_1^2/D^2$. The limitations indicated for Case 2 (A) of the farm counts and Case 2 (B) of the value-of-products items also apply here.

Case 5.—This case covers the average value per farm reporting a specified value item for the "Under $10,000" subgroup for which the numerator is a value from a sample and the denominator is the sample number of farms reporting the specified value. In Table 10 the average value of farm products sold or traded for the "Under $10,000" subgroup for "All tenants" was secured by dividing the estimated "Value of farm products sold or traded" by the estimated "Farms reporting farm products sold or traded" for that subgroup, consequently this average value per farm reporting falls in Case 5 (B). The estimate in this case is

$$\bar{d}_a = \frac{D_1}{D_1 + D_2} = \frac{D_1}{D_1 + D_2}, \quad (23)$$

where $D_1 = 2D_1$, is the specified value figure for the sample, $r_1 = 2D_1$, is the number of farms in the sample reporting the specified value, and $\bar{d}_a$, as defined previously, is equal to all farms in the sample for the subgroup under consideration whether or not they reported the particular value item. $D_1 = 2D_1$, since the farms not reporting values were assumed to have zero values.

$$\bar{V}^2 \bar{d}_a = \frac{\sigma^2}{\bar{d}_a} \bar{V}_p. \quad (24)$$

where $\sigma^2$ is now calculated only for those farms reporting the specified value, that is,

$$\sigma^2 = \frac{R_1}{\sum_{i=1}^{R_1} (d_i - \bar{d}_a)^2} \quad (25)$$

in which $d_i$ = value for the $i$th reporting farm, $\bar{d}_a = \frac{1}{R_1} \sum_{i=1}^{R_1} d_i$, and $R_1 = \text{the total number of farms in the population reporting a specified value.}$

Estimates for $\sigma^2$ and $\bar{d}_a$ were made for the various items and substituted in formula 24.

The values of $r_1$ do not appear in the tabulations. As an approximation $\bar{G}_a^2$ was used. Hence, for starrin purposes $R_a$, the value for which the coefficient of variation of $\bar{d}_a$ is equal to 10 percent, is approximately

$$R_a = \frac{\bar{V}^2 \bar{d}_a}{0.0002}. \quad (26)$$

A table was constructed from this formula, on the basis of which the entries for $\bar{d}_a$ were starred when the corresponding $R_a$ was equal to or less than $R_a$.

It is to be noted that $\bar{d}_a$ is for reporting farms only, and hence the coefficient of variation depends entirely on the variability among the reporting farms. It is generally true that the coefficients of variation for these averages are less than the coefficients of variation for the preceding cases which involve totals or percentages for all farms. Hence, it is quite commonly true that the entries for the former cases may be starred while those for this case would not be starred.

Case 6.—This case covers the average value per farm reporting a specified value item for the "Under $10,000" and "$10,000 and over" subgroups combined, for which the numerator is made up of a value estimated from the sample for the "Under $10,000" subgroup plus a known value for the "$10,000 and over" subgroup, and the denominator is made up of a figure or farms reporting the specified value estimated from the sample for the "Under $10,000" subgroup plus a known figure on farms reporting the specified value for the "$10,000 and over" subgroup. In Table 10 the average value of farm products sold or traded for "All tenants" was secured by dividing the estimate of "Value of farm products sold or traded" for the "Under $10,000" and "$10,000 and over" subgroups combined, by the estimate of "Farms reporting value of farm products sold or traded" for the "Under $10,000" and "$10,000 and over" subgroups combined. Consequently, this average value per farm reporting comes under Case 6 (B). The estimate is

$$\bar{d}_a = \frac{D_1 + D_2}{R} = \frac{D_1 + D_2}{R_1 + R_2}, \quad (27)$$

where $D_1 + D_2$, $R_1 + R_2$, and $R_a$ are defined as before.

The approximation to the coefficient of variation squared, that was used, was

$$\bar{d}_a^2 = \frac{R}{R_1 + R_2}$$

and the coefficient of variation squared of this estimate is

$$\bar{V}^2 \bar{d}_a^2 = \frac{\sigma^2}{\bar{d}_a} \bar{V}_p \bar{d}_a^2 \quad (28)$$

where $\sigma^2 = \frac{R_1}{\sum_{i=1}^{R_1} (d_i - \bar{d}_a)^2}$ and $\sigma^2 = \frac{R_2}{\sum_{i=1}^{R_2} (d_i - \bar{d}_a)^2}$.
BY COLOR AND TENURE OF FARM OPERATOR

\[ V^2_{\hat{q}} = \frac{1}{D^2} V^2_{\hat{q}} \]  

from the considerations previously given in Cases 2 (B) and 3 (B). Hence the approximate values of \( R'_{z} \) for starring \( \hat{z} \) were obtained by calculating \( R'_{z} = B_{z}/D^2 R_{z} \), \( R_{z} \) being the values obtained from formula 26 in Case 5 (B). The values substituted in formula 26 for \( B_{z}/D^2 \) were the midpoints of group intervals as in Case 2 (B).

GENERAL COMMENTS

It may be pointed out that in every instance, with the possible exception of Case 6 (B) for the value-of-products items, the procedure used may have led to a slight overstarring of the tabulated entries. This results from three causes: (1) As was pointed out in chapter II, the cell entries were adjusted to agree with the recorded marginal totals for all items except one. The adjustment procedure used yields adjusted values approximately equivalent to those obtained from a least-squares adjustment, and hence the actual sampling error in the tabulations is likely to be slightly less than the expected sampling error for the unadjusted data. (2) For the second class of items, value of products, the values for \( V^2 \) were overestimates. (3) No account was taken of the stratification actually involved in drawing the sample for the "Under \$10,000" farms. In other words, it was assumed that the sampling was made unrestricted, at random, throughout a State when actually the sampling was stratified to a county level.
DEPARTMENT OF COMMERCE—BUREAU OF THE CENSUS
WASHINGTON
SIXTEENTH CENSUS OF THE UNITED STATES: 1940
FARM AND RANCH SCHEDULE
(Including Special Agricultural Operations)

1. FARM OPERATOR, APRIL 1, 1940

1. Name of person. 

2. Address. (Street or Route No.) (Post office) (State)

3. Age. (Years)

4. Color or race: (White, Negro, Indian, Chinese, Other, Specify)

5. Do you reside on this farm? (Yes or No)

6. If you rent any farm land from others or manage any farm land for others, give names and addresses of the owners of the land and indicate for each owner whether a corporation: 

Name (Incorporated? (Yes or No))

Address (Street or Route No.) (Post office) (State)

7. What does the landlord furnish as his share in the operation of this farm? 

(a) Work animals (All, Post, or None)

(b) Tractor power (All, Post, or None)

(c) Fertilizer (All, $, or None)

(d) Seed (All, or None)

(e) Other (Name and give source)

8. What did you agree to pay as rent for the year? $.

9. Do you operate this farm for others as hired managers? (Yes or No)


11. How many acres in this farm do you rent from others? Acres.

12. The sum of Questions 10 and 11 must equal Question 12, unless obtained by a hired manager.

13. FARM AVERAGE, APRIL 1, 1940

The sum of Questions 12 to 14, inclusive, must equal Question 13.

14. Total number of acres in this farm. Acres.

15. Gross from this farm may be earned or received by other than the operator. Include all crops and all livestock. Separate sheet if farm is large. Sheet will be obtained from the operator. Include all livestock, including poultry and hogs, and all other products of the farm including livestock products except income from livestock, which is included in Question 13. Acres.

16. Land from which crops were harvested in 1939. Acres.

17. Land from which no crop was harvested in 1939 because of crop failure or destruction. Acres.

18. Cropland lying idle all of 1939 or land in summer fallow. Acres.

19. Land used only for pasture or grazing in 1939 which could be plowed and used for crops without additional clearing, drainage, or irrigation (omits cropland harvested and hayed).

20. Woodland in this farm. Acres.

21. Other land now in this farm. Acres.

VI.—VALUE OF FARM PRODUCTS

22. Total value of this farm land and buildings rented from others. 

23. Value of all buildings on this farm.

24. Value of farm implements and machinery used in operating this farm, including automobiles, tractors, motor trucks, and trailers (present market value).

25. Value of farm livestock and other live animals and livestock products.

26. Value of all farm livestock and other live animals and livestock products.

27. Total value of all livestock and livestock products.

28. Value of all farm crops and crops harvested.

29. Value of all farm livestock and livestock products.

30. Value of all farm products used in operating this farm.

VII.—FARM MORTGAGE DEBT AND FARM TAXES

31. Was there any mortgage debt on the land and buildings so owned on April 30, 1940? 

32. Total amount of outstanding mortgage debt on such land and buildings.

33. What was the annual rate (contract rate) of interest on the first mortgage debt? (Report fractions). 

34. If you own all or part of this farm—

26. Give amount of taxes levied in 1939 on the REAL ESTATE of this farm owned by you on April 30, 1940 (include buildings and other improvements, but do not include taxes levied by drainage or irrigation districts). 

35. Give amount of taxes levied in 1939 on PERSONAL property owned by you on this farm (include livestock, machinery, etc., but do not include automobile taxes, fees, or licences).

VIII.—OTHER LAND OWNED, APRIL 1, 1940

36. Do you own any land in addition to that shown under Question 12? (Do not include residential and nonfarm building sites).

37. How many acres of such land are rented or are to be rented this year to others (including that rented to today)? Acres.

VIII.—WORK OFF FARM AND TEAMS ON THIS FARM

38. How many days in 1939 did you work for pay or income off the farm you operated? Days.

39. Of these, how many were spent—

(a) At farm work, not connected with your farm? Days.

(b) At farm jobs (including road work and relief or "made" work), businesses, or professions? Days.

(c) At nonfarm jobs (including road work and relief or "made" work), businesses, or professions? Days.

(d) Total of (a) and (b) must equal total days worked off the farm.

VIII.—IRRIGATION

40. Land irrigated in 1939. Acres.

41. Irrigation enterprise supplying water. 

(a) Do not irrigate land. 

(b) Irrigation enterprise supplying water. 

42. Irrigation enterprise supplying water: 

(a) Do not irrigate land. 

(b) Irrigation enterprise supplying water: 

Name 

Address (Street or Route No.) (Post office) (State)
### DEFINITION OF A FARM

A farm, for Census purposes, is all the land on which some agricultural operations are performed by one person, either by his own labor alone or with the assistance of members of his household, or hired employees. The land operated by a partnership is likewise considered a farm. A "farm" may be one single tract of land, or a number of separate tracts, and the several tracts may be held under different tenures, as long as each tract is owned by the same owner or by different owners who are associated in the conduct of agricultural operations.

### ENUMERATOR'S RECORD AND CERTIFICATE

<table>
<thead>
<tr>
<th>State</th>
<th>County</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### NUMBER OF FARM LABOR

- **Number of workers 14 years old and over and wages paid for farm work on this farm**
  - **Class of Labor**
    - **Operator and unpaid members of his family:**
    - **Labor hired by month:**
    - **Labor hired by day or week:**
    - **Others (include piece work and contract labor):**

<table>
<thead>
<tr>
<th>Class of Labor</th>
<th>Number</th>
<th>Number</th>
<th>Dollars</th>
<th>(Two or More)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operator and unpaid members of his family</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labor hired by month</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labor hired by day or week</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others (include piece work and contract labor)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### FARM LABOR

<table>
<thead>
<tr>
<th>Class of Labor</th>
<th>Number</th>
<th>Number</th>
<th>Dollars</th>
<th>(Two or More)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operator and unpaid members of his family</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labor hired by month</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labor hired by day or week</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others (include piece work and contract labor)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### FARM EXPENDITURES IN 1939

- **Amount expended in 1939 for hay, grain, milks, and other products for use as feed for domestic animals and poultry:**
- **Amount expended in 1939 for purchase of farm implements and machinery, including automobiles, tractors, motor trucks, and trailers:**
- **Amount expended in 1939 for gasoline, distillate, kerosene, and oil for use on this farm:**
- **Amount expended in 1939 for building materials, including lumber, roofing materials, hardware, cement, paint, fencing material, etc., for use on this farm:**

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Cost</th>
<th>(Cost Basis)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(Cost basis)</td>
</tr>
</tbody>
</table>

### COMMERCIAL FERTILISERS Brought on Farm in 1939

<table>
<thead>
<tr>
<th>Commercial Fertiliser</th>
<th>Cost</th>
<th>(Cost Basis)</th>
</tr>
</thead>
</table>

### LIMING MATERIALS

<table>
<thead>
<tr>
<th>Material Used</th>
<th>Cost</th>
<th>(Cost Basis)</th>
</tr>
</thead>
</table>

### FARM MACHINERY AND FACILITIES, APRIL 1, 1940

- **Number of automobiles on this farm:**
- **Number of motor trucks on this farm:**
- **Number of tractors on this farm:**

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
<th>Basis of latest value</th>
</tr>
</thead>
</table>

### REGION

- **Is there an electric distribution line within 1 mile of the farm dwelling?**
- **Check (\(\times\)) each kind of road on which this farm is located:**
  - Hard surfaced
  - Gravel, shell, etc.
  - Improved dirt
  - Unimproved dirt

<table>
<thead>
<tr>
<th>Region</th>
<th>3</th>
</tr>
</thead>
</table>

### NOTES

- Double cropping must be considered in arriving at your reply to Question 14.
## VALUE OF FARM PRODUCTS

### OMITTED INQUIRY NUMBERS REPRESENT CROPS WHICH WILL BE INFREQUENTLY REPORTED IN THIS

### CORN

- Grain sold as cobs, feed, seed, and for stock feed, except Elsa corn, and grain sold for stock feed in the form of shelled, rolled, or cracked corn.
- Also omit popcorn, "wheat feed," and pelleted corn.
- If shown with other crops, report total amount of grains

### CROPS HARVESTED ON THIS FARM IN 1939

<table>
<thead>
<tr>
<th>Crop</th>
<th>Quantity harvested in 1939</th>
<th>Quantity harvested in 1938</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wheat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oats</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### SMALL GRAIN THRESHED (or combined)

- Note: Report grain hay under question 11.
- Mixed grains, other than a Hay and wheat mixture.
- Threshed into whole wheat and barley, and other end use.
- Under "other" after question 10.

### HAY CROPS

- For each hay, give total production of all cuttings, counting only area of land on which grown.

### HAY FROM

- Alfalfa cut for hay
- Sweetclover cut for hay
- Leopold's cut for hay
- Clover or timothy, alone or mixed, cut for hay (not including sweetclover)
- Small grain hay—wheat, oats, barley, etc.

### OTHER HAY CROPS

- Under "other" after question 10.

### OTHER HAY AND FEED FOR ANIMALS

- Milk and feed for poultry, etc.
- Also omitted are hay, corn, and all other feed for stock feed.

### OTHER CROP PRODUCTS

- Commercial products, including poultry, etc.
- Also omitted are alfalfa, sweetclover, and leopold's cut for hay (not including sweetclover).

### OTHER HAY AND FEED FOR ANIMALS

- Under "other" after question 10.
### General Area: Where Fractional Acreage or Production is Required, Report as: 1.2, 1.6, 4.7, 3.1, etc.

#### SCHEDULE No.

<table>
<thead>
<tr>
<th>CLOVER AND GRASS SEEDS:</th>
<th>Acres harvested in 1949</th>
<th>Quantity harvested in 1949</th>
<th>Bushels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alfalfa seed</td>
<td>Bu.</td>
<td>1-40</td>
<td></td>
</tr>
<tr>
<td>Sweetclover seed</td>
<td>Bu.</td>
<td>1-35</td>
<td></td>
</tr>
<tr>
<td>Lespedezia seed</td>
<td>Bu.</td>
<td>1-35</td>
<td></td>
</tr>
<tr>
<td>Clover seed</td>
<td>Bu.</td>
<td>1-35</td>
<td></td>
</tr>
<tr>
<td>Grass seed</td>
<td>Bu.</td>
<td>1-35</td>
<td></td>
</tr>
</tbody>
</table>

**MISCELLANEOUS CROPS:**

| Irish potatoes         | Bu.                      | 1-35                      |         |
| Tobacco (total, all types) | Bu.                      | 1-35                      |         |
| Sweetpotatoes and yams | Bu.                      | 1-35                      |         |
| Sugar beets            | Bu.                      | 1-35                      |         |

#### STATES

- Alabama
- Georgia
- Mississippi
- South Carolina

**VEGETABLES FOR HOUSEHOLD USE:**

<table>
<thead>
<tr>
<th>Calories</th>
<th>Bushels</th>
</tr>
</thead>
<tbody>
<tr>
<td>126. Apples</td>
<td>1-40</td>
</tr>
<tr>
<td>127. Green beans</td>
<td>1-35</td>
</tr>
<tr>
<td>128. Peas, green or wax beans</td>
<td>1-35</td>
</tr>
<tr>
<td>129. Beets (sugar)</td>
<td>1-35</td>
</tr>
<tr>
<td>130. Celery</td>
<td>1-35</td>
</tr>
<tr>
<td>131. Cucumbers</td>
<td>1-35</td>
</tr>
<tr>
<td>132. Oranges</td>
<td>1-35</td>
</tr>
<tr>
<td>133. Sweet corn</td>
<td>1-35</td>
</tr>
</tbody>
</table>

**CITRUS FRUITS:**

<table>
<thead>
<tr>
<th>Calories</th>
<th>Bushels</th>
</tr>
</thead>
<tbody>
<tr>
<td>134. Oranges (certified)</td>
<td>1-35</td>
</tr>
<tr>
<td>135. Oranges (uncertified)</td>
<td>1-35</td>
</tr>
<tr>
<td>136. Other citrus</td>
<td>1-35</td>
</tr>
</tbody>
</table>

**HORTICULTURAL SPECIALTIES:**

<table>
<thead>
<tr>
<th>Area harvested in 1949</th>
<th>Bushels</th>
</tr>
</thead>
<tbody>
<tr>
<td>138. Tomatoes (certified)</td>
<td>1-35</td>
</tr>
<tr>
<td>139. Tomatoes (uncertified)</td>
<td>1-35</td>
</tr>
</tbody>
</table>

**TREES, FRUITS, NUTS, AND GRAPE:**

<table>
<thead>
<tr>
<th>Calories</th>
<th>Bushels</th>
</tr>
</thead>
<tbody>
<tr>
<td>140. Apples</td>
<td>1-35</td>
</tr>
<tr>
<td>141. Cherries</td>
<td>1-35</td>
</tr>
<tr>
<td>142. Peaches</td>
<td>1-35</td>
</tr>
<tr>
<td>143. Pears</td>
<td>1-35</td>
</tr>
<tr>
<td>144. Plums and prunes</td>
<td>1-35</td>
</tr>
<tr>
<td>145. Grapes</td>
<td>1-35</td>
</tr>
</tbody>
</table>

**VEGETABLES HARVESTED IN 1940 FOR SALE (not for home use):**

<table>
<thead>
<tr>
<th>Calories</th>
<th>Bushels</th>
</tr>
</thead>
<tbody>
<tr>
<td>146. Apples</td>
<td>1-35</td>
</tr>
<tr>
<td>147. Green beans</td>
<td>1-35</td>
</tr>
<tr>
<td>148. Peas, green or wax beans</td>
<td>1-35</td>
</tr>
<tr>
<td>149. Beets (sugar)</td>
<td>1-35</td>
</tr>
<tr>
<td>150. Celery</td>
<td>1-35</td>
</tr>
<tr>
<td>151. Cucumbers</td>
<td>1-35</td>
</tr>
<tr>
<td>152. Oranges</td>
<td>1-35</td>
</tr>
<tr>
<td>153. Sweet corn</td>
<td>1-35</td>
</tr>
</tbody>
</table>

**TABLE 3—VALUE OF PRODUCTS SOLD AND OF FOREST PRODUCTS SOLD IN 1939:**

<table>
<thead>
<tr>
<th>Calories</th>
<th>Bushels</th>
</tr>
</thead>
<tbody>
<tr>
<td>154. Value (estimated) of products of this farm in 1939 that were used by your family and by all householders on this farm</td>
<td>1-35</td>
</tr>
<tr>
<td>155. Value (estimated) of products of this farm in 1939 that were sold</td>
<td>1-35</td>
</tr>
</tbody>
</table>

---

*Note: Use the table format to organize the data as shown in the document.*