The U.S.A.'s Land Data Legacy from the 19th Century:

A Message from the Henry George-Francis A. Walker Controversy over Farm Land Distribution

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ABSTRACT. Today's perception of *land* problems stems in part from agriculturally-oriented data developed in the late 19th Century and continued in present day series. *Henry George* criticized the agricultural statistics of his time but he was as much a captive of the data as his antagonist, *Francis A. Walker.* The historical identity of *farm* with *farm operator* in agricultural statistics is a basis for current concerns about the *structure of agriculture. Landownership* issues now transcend agriculture. The *distribution of wealth, control of use, incidence of taxes* and *subsidies* require land data not tied to a particular *firm, industry* or program.

I

Introduction

ONE OF THE CELEBRATED INCIDENTS of Georgian folklore is the public exchange on farm tenure between Henry George and General Francis A. Walker, Superintendent of the 1880 Census.[1] The controversy was rooted in the explanatory text of the 1880 agricultural census, which noted a decline in the average size of farm from 153 to 134 acres between 1870 and 1880.

When Mr. George challenged the accuracy of the statement, the General condescendingly explained that the 1880 average was lower than the 1870 average because during the decade 1870-1880 there was a greater increase in the number below 153 acres than the number above 153 acres. The General then offered "to resort to a more elementary statement, illustrated with diagrams, if desired."[2] With apparent relish, George responded: "I never met anybody, except very little children, to whom all coins are pennies . . . An

*[Gene Wunderlich, Ph.D., is senior economist, Economic Research Service, United States Department of Agriculture, 500 12th Street, S.W., Room 420, Washington, D.C. 20250.] A paper presented at a joint session of the American Economic Association and the History of Political Economy Society commemorating the centenary of the publication of Henry George's classic, *Progress and Poverty,* in Atlanta, Ga., December 30, 1979. The session, arranged and chaired by Dr. Mason Gaffney, professor and chairman of the department of economics, University of California, Riverside, concluded the association's three-day annual meeting.

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average does not, as General Walker says, increase or diminish according to the numerical preponderance, on one side or the other, of the items added, but according to the preponderance in number and quality [acres in this case]."[3]

The significance of this exchange is not the correction of a naive statement by Superintendent Walker, an academician whose credentials included the presidencies of the American Statistical Association, the American Economic Association and Massachusetts Institute of Technology. George challenged the asserted decline in average size of farm because:

> . . . this assertion has been quoted all over the country as a conclusive reason why the people of the United States should not trouble themselves about the reckless manner in which what is now left of their once great public domain is being disposed of, and the rapid rate at which it is passing in enormous tracts into the private estates of non-resident speculators, English lords and foreign syndicates.[4]

George, in short, was concerned about the mischief in land policy that inheres in a few facts—or in too few facts. MacDowell noted that George expressed "an abiding concern for facts for policy formation." In his examination of Malthus and George on the Irish land question, for example, MacDowell commented: "more than other economists of their time, Malthus and George shared a concern for factual analysis . . . Both economists sought to find factual grounds and information on which to base their theory, and their respective writings on Ireland exemplify this quest."[5]

The factual analysis of Malthus and George might charitably be described by today's standards as crude empiricism. Both, however, did acknowledge the importance of useful, comprehensible, accurate, and consistent facts for policy.

One hundred years ago Henry George's concern about the distribution of wealth in, and income from, land was expressed in a criticism of the agricultural statistics of that time. Thus, he underscored the importance of data in land policy. In his critique of the Walker explanation of agricultural expansion, George, using the size classes provided in the 1870 and 1880 Censuses, indicated how concentration was inadequately represented; indeed, was avoided in the census text. George's emphasis on acreage by size class to some extent anticipated turn of the century measures of inequality developed by Ammon, Lorenz and Gini.

George's challenge was not explicitly methodological. Nonetheless, he questioned the structure and use of evidence in analyzing a policy issue. This note attempts to extend and generalize George's emphasis on data in terms of familiar problems—specifying a universe, measurement and estimation,

comparability over time, and specifying a unit of observation—as they apply to landownership and tenure. It concludes with a recommendation of which George surely would have approved.

II

Specifying the Universe

EQUALITY OF ACCESS to land is a familiar tenet of land policy. In order to determine the state of equality or judge the probable effect of a distribution measure, it is essential to specify the land to be distributed and the persons or entities among whom it is to be distributed. Obvious as this requirement may appear, policies are not always clear on what is to be distributed among whom. Illustrations may connect the Georgian era to our own.

George apparently viewed the distribution of U.S. farmland in the period 1870-80 as an extension of the distress and famine in Ireland in the 1840s and 50s.[6] He became involved in the interpretations of the Irish question and sided with one political sentiment of the time that attributed the famine to English lords and the Irish tenure system rather than population and the potato blight. The Irish question became the universal question[7] and landlordism in agriculture was equated with the U.S. land policy. His concern about the reported decline in average size of farm was less about the technical accuracy of the Census than a challenge of the view that land holdings were trending toward equality.

George wrote in a period of agricultural expansion. The Homestead Act had just begun the distribution of land which eventually amounted to over 270 million acres.[8] By 1870, the United States had grown to almost its present size.[9] Agriculture, however, had expanded to only about one-third of its current and maximum area of 1.1 billion acres of land, mostly private. In the period 1870-80 the Census reported an increase of 130 million acres of land in farms.[10]

The 1870 population of 40 million grew to 50 million by 1880.[11] During this period of rapid population increase, the proportion of the population occupying rural places remained almost constant—a decrease from only 73 to 72 percent between 1870-80. Expansion of the agricultural territory apparently kept pace with the population expansion. Grants to railroads and then homesteading rapidly converted public lands into private.[12]

If George were to examine egalitarianism in U.S. landholding, which of the universes should he have specified? In land, should it have been U.S. territory, private land, or agricultural land? In persons or owners should it

have been among all citizens, all citizens and legal entities (the corporation was just coming into its own), owners of land, or owners of agricultural land? Curiously, George selected a period, country and land use that might least have illustrated a skewed distribution, and then generated a squabble with the Census about the accuracy of the data. Concentration of holdings by railroads and others in nonagricultural land probably were much greater than concentrations in agricultural land. Farmers as a group were expanding their share of America's land, regardless of the distribution among them. Farm numbers were increasing while land in farms was also increasing, much of it into formerly public domain.

George's view of land policy was somewhat constricted because of its emphasis on agriculture, due perhaps to its origin in the Irish question. Specification of his universe might have brought more force to his arguments. Specification of the universe is equally necessary for data on today's land policies. Again, consider agriculture and the distribution of land-ownership. In 1790, 95 percent of the population was rural,[13] most of which was agricultural. In 1970, the rural population was about one-fourth of all people but farm people were less than 5 percent of the total population.[14]

In 1790 an equal distribution of agricultural land among all persons in the population would not differ greatly from an equal distribution of the agricultural land among farmers. In 1970, an equal distribution among persons in the population would differ radically from an equal distribution among farmers. Is equal access to land within the agricultural universe consistent with equal access in the universe of the total population?

Of the 1.3 billion acres of private land in the United States, over 60 percent is in farms or ranches. Another 30 to 35 percent is in forests. Ownership of agricultural land therefore accounts for as much as 95 percent of private land. It is owned by a relatively small number of owners—perhaps less than 10 million—while the remaining 5 percent is shared by more than 50 million owners, mostly of residential land.[15] The numbers are approximate because, until recently,[16] no national survey of landownership had been undertaken and secondary sources are notably non-comparable. There are no national estimates of the number of persons who own land.

Measures of concentration of one type of land, such as agriculture, can be misleading unless carefully specified. Farms may be equivalent to farm operator but not to farmland owners. Owners of farmland may own non-farmland. One owner may own land in many farms. Many owners may own land in one farm. Size of farm has no necessary relation to the distribution of farmland ownership.

Conventional indexes of concentration (*e.g.*, Lorenz curve or Gini ratio) which measure only the distribution of land among the owners understate the degree of concentration.[17] For example, the concentration of ownership of agricultural land among farmers and farm landlords will be less than the concentration of ownership of agricultural land among all U.S. citizens. If 5 percent of the persons in a nation hold 60 percent of the land, there is a measure of concentration even if each of the persons in the 5 percent holds an equal amount of land. Concentration may be better represented by specifying a universe which includes the relevant zeroes, those who do not own land. This should be noted by those whose farm policy interests are limited to the internal structure of agriculture. Specification of a larger universe leads to the question: Should non-farmer ownership of land be encouraged to insure a broader, more egalitarian, base of farmland ownership?

III

Specifying the Unit of Observation

DATA THAT ARE RELIABLE for policy require not only a specified universe but carefully specified and defined elements, or units of observation. Land policy, for example, might refer to units of territory, management, value, right, persons, or legal entities.

Problems or issues pertaining to landownership may require data on the relationship between a right-holder and property object. Should owners of land be the nominal owners of record or the beneficial owners? Recently much concern has been directed at the means by which aliens, strangers and absentees conceal their true identity with cover-up-corporations which hold title to land. In fact the owner is the corporation. Holding stock in a company which owns land is not the same as holding land. Data which included stockholders of a land-holding corporation would show much more widespread interest in land than a count of the owners of record.

Several proposed federal enactments to tax the capital gains of foreign owners of U.S. real estate have ranged over capital gains in all property, real estate, or only farm real estate. As between all real estate and agricultural real estate the scope of the bills could differ by a factor of 10 or greater.[18]

Similarly, the relationships between farm operators and the land they use may impact differently on distribution, use, or conservation policies. In landownership and tenure data the particular rights or duties included in, and excluded from, the unit of observation should be carefully specified.

Not too much should be made of the distinction between defining universes and defining units of observation. Defining a universe and defining the ele-

ments thereof, in a sense, are limits of the same process.

The universe of landowners may be defined broadly to include all persons or entities holding any recognizable interest or narrowly to include only holders of warranty deeds on property without encumbrance. The former and larger universe would contain all the elements of the latter universe. The units in a survey or time series depend upon the analysis or policy prescription for which the data will be used.

Units of observation, inadequately defined, may also fall into two different but overlapping populations—with policy consequences. There are farm operators who own land, and there are landowners who farm.

In statistical applications it is customary to distinguish between a conceptual or ideal universe and a population of observable units. The observable units are in a sense proxies for the ideal elements in the ideal universe. The farm operator historically has been the proxy for farm, the unit of observation for the Census of Agriculture. The bundle of rights concept of property is a useful concept in the abstract but not for assembling basic data on landownership. The landowner or owner of record is the proxy for a common set of interests held by surface right holders of real estate.

In the early days of implementing the Agricultural Foreign Investment Disclosure Act of 1978,[19] which required foreign owners of U.S. agricultural real estate to report their holdings, persons in the Department of Agriculture responsible for administering the program debated the inclusion of leasehold interests, options, conditional estates, mineral interests, and other separable interests. The Department issued regulations to clarify the definitions and it is likely that further clarifications and clarification of clarifications will continue. Presumably the intent of Congress, perhaps interpreted by the courts, and the regulations of USDA will create a workable proxy for ownership for purposes of the act. If Congress had had access to ownership data with sufficient refinement in the separation of interests it might have drafted legislation more directly related to their intentions and few definitions after the fact would have been needed.

The definitional issue relating to land data—or any such body of data for that matter—is the level of refinement that should be obtained in advance of specific uses. A data set committed to a refined specification may not meet some future requirement. Not having such specification may mean not having the data at all or having miscellaneous data sets that are not comparable. In the Agricultural Foreign Investment Disclosure Act of 1978 (AFIDA), for example, agricultural land was defined to include forest land. As a consequence the potential scope of the act increased in terms of area from about

60 percent of private land (farming and ranching) to about 95 percent of private land (farming, ranching and forestry). In terms of actual reported acreages, half of the land being held by foreigners is forest. Initially the concern of Congress was the impact of foreign ownership on "family farms and rural communities." Had the act defined agricultural land to include only farming and ranching, data would not have been collected on an important portion of the foreign-held land in rural areas. If however, Congress is indeed only interested in farm landownership, the additional data may be redundant.

The definition of farm employed by the Census of Agriculture has changed 9 times.[20] The ninth change in 1974 by itself produced a 6 percent difference in 1974 farm numbers. Instead of 2,466,123 farms in 1974 by the 1959-69 definition there were 2,314,013 farms by the new definition in 1974. Texas lost 12,549 farms by stroke of definition.[21]

Early definitions of farm varied and tended to be less confining. In 1860, for example, no definition was given to enumerators but only places producing $100 or more were counted. In 1870-90, a place could not be a farm without 3 acres or $500 value of produce sold in the census year. In 1900 there were no acreage or value criteria but one person or more had to be involved in the operation.[22]

The modifications over time in the Census definition of farm illustrates the problem of comparability over time. Rigidly maintaining the same definition over time might only cause a widening separation between the universe ideal and the operational unit of observation. Farms of 1880 are not the same as farms of 1980. Neither are farms in New Hampshire the same as farms in New Mexico. Cattle ranches are not vegetable farms. Yet the number of farms and changes in number are a frequently noted policy variable.

Ever since 1880, the concept of farm operator has been defined as the person or entity that is in charge of a farm. All resources of a farm presumably are under the control of the farm operator. Tenure describes in general terms the relation between the landowners and farm operators. The interchangeability of farm and farm operator has never been precise. Increasingly there is reason to distinguish the two. Decisionmaking is diffused among suppliers of inputs such as fertilizer, accounting, fuel and feed, management literature and consultation, and marketing information, or receivers of output such as truckers, food and fiber processors, viewers of farmland scenery, consumers of farm runoff. Management, in fact, is a group process combining agronomists, biological scientists, Internal Revenue Service, Extension, contract suppliers and buyers, union leaders, and farmers.

Persistence in maintaining the conceptual equivalence of farm operator and

farm causes an appearance of concentration in farm size and resources where diffusion might otherwise appear. A focus on sets of resources (labor, land, several forms of capital, management) rather than farm operators might encourage insight into other less familiar decision processess—off-farm returns in unionized labor, landowner views of leasing, investment, strategies of machine contractors, etc.

Definitions used for program operation do not always correspond to standard Census series. Agricultural Stabilization and Conservation programs use interchangeably the concepts of producer, farmer, and operator. These concepts are not equivalent to farm operator as defined in the Census. The producer may be an operator, tenant or owner but for purposes of the program the producer is the one who is responsible for compliance (for example, acreage limitation, or conservation practice) and the one toward whom incentives are directed.

The ownership of land has been examined in the Censuses of Agriculture in 1900 and 1920. The definitions of farm, farm operator and tenure in the Census of Agriculture have discouraged examination, on similar scale, of landownership. The specification of landownership within the farm context, especially the equivalence of farm and farm operator, is a significant factor in the shape of issues currently termed the structure of agriculture.[23]

IV

Data Define Policies

WHEN THE PROFESSIONS are concentrating on more sophisticated procedures for manipulating data and national policymakers are concentrating on organization and institution building,[24] should we be concerned about rudimentary problems of specifying the universe and units of observation? At the climax of a debate does one call for a definition of terms? From what we observe about land tenure policy and data—Henry George's time to today—the answer appears to be yes. There continues to be a place for relating definitions, through data, to policy. A policy concerning the distribution of land among owners, for example, cannot be served by data about which the inclusion of urban or residential land is obscure. (Residential landowners are the most numerous of landowners.) Does the universe of land include all surface areas, all private land, agricultural land, or citrus groves in California? The ownership of rural lands is not limited to farm operators and landlords.[25]

In 1880, the Census of Agriculture first reported the number of farms by tenure and it formed the basis for the identity of farm and farm operator that remains today. "A farm may consist of a number of separate tracts held under

different tenures, some owned, some rented . . ." by a person. For nearly 100 years, and to a great extent still, the farm is personified as a farm operator. Until 1969 the Census did not report separately corporate or other legal entities. With the depersonalization of operatorship, and the diffusion of management, the farm/farm operator concepts and many of the farm tenure (in contrast to "land" tenure) images are beginning to come apart. Some of the current concern about the structure of agriculture may be the product of old definitions and new conditions. Next year's agriculture policy may be impeded to some extent, by concepts and definitions contained in General Walker's Census of 1880.

V

Other Land Data

IRONICALLY, THE LAND TENURE DATA about which George and Walker debated, and which the Census of Agriculture has faithfully reported since 1880, are among the superior land data. Agricultural land is perhaps better described and measured than land in any other use. Land tenure and tenure of farm operator, despite the changes in definition and lack of precise specification of observation units, are represented by numbers and definitions. Land price data for agricultural land are far less abundant than tenure data. Land price and tenure data for non-agricultural land are virtually nonexistent.[26]

Values of farmland and buildings, meaning generally a market price assessment, have been variously reported since 1850.[27] The earlier data are reported as totals and averages of all farm real estate, with farm buildings separately reported first in 1900.[28] Index numbers on the value of farm real estate first appeared in 1912 and are in series published annually, or more frequently, since then.[29] Procedures are designed to limit the values to market prices for agricultural land, exclusive of other effects. In New England particularly the measurement of farmland values has been hampered by the actual and potential nonagricultural uses of land.[30] While these procedures yield a useful series to describe land as a farm production input, they have excluded many of the forces impacting land values even in rural areas.[31] Farm real estate indexes probably understate the recent upward trend in rural real estate values, to the extent that farm real estate estimates successfully exclude nonfarm influences. One of the most active areas of land policy is the conversion of farm land to other purposes. Land price data should adequately reflect the impact of transportation, commercial, industrial and residence.

But land values may be otherwise understated. Market prices of land such as those reported in the USDA farm real estate series are the prices at which willing buyers and sellers exchange land for money or future money. A larger, say, social, view of value would add to this market price at least a capitalized value of real estate taxes. The market price of land reflects only the value of interest held by the sellers reduced by transaction costs. The public normally has a number of valuable interests in privately held real estate—one of those interests is revenue in the form of taxes.

VI

Data as an Institution

WE MEASURE what was important to us in the past.

Current data on farm tenure and landownership reflect the images and issues illuminated by a century of Georges and Walkers. They have left us a legacy of land data that is substantively agricultural. From this diet of data are formed the questions and models of today's land policy. In *A Framework for Planning U.S. Federal Statistics for the 1980's,* for example, land tenure is omitted except as a topic under agricultural statistics with the observation:

> Land data is the least adequate of the information on the basic resources used in farm production. Data on shifts in land use, investment in land improvements and ownership of land are needed to fill current gaps. Land supply and productivity estimates would be improved by these data as well as the ability to address other policy issues like the importance of alien ownership of land.[32]

Land tenure is frequently regarded as a status of condition of farm operators or farms. Regarded as a farm input, land is identified and measured in agricultural terms, particularly commercial agriculture. To the extent that it relies on available data, land policy is likely to carry a heavy bias toward agriculture. Equal opportunity for access to land shades into the farm size issue. Land reform often means agricultural reform. Ownership and control of land is an important part, perhaps all, of the concern about structure in agriculture.

This is not to say that agriculture is insignificant in the use of land; obviously it is not. Neither is it to say that land policy should not include agriculture. It is saying that agriculturally oriented perceptions of land issues, particularly ownership, result from a lack of land data other than for farms.

Our policy concerns, our analytical models, our images, are the products of our data.

The real problem is not that we have too few data or the wrong data for our models or policies. That problem could be solved by filling the perceived need. The real problem is that our data have defined our perceptions. Our

images are the product of our data. Thus, our data needs derive from our data supply—a Say's Law of Facts. To change our perceptions of land we need a new data orientation, a new set of measures.

Issues involving land such as concentration of ownership, distribution of wealth, control of use, and incidence of taxes and subsidies, call for data on land stated in its own terms, not stated as a feature of a particular industry, firm, use, agency, or program. A census of land, comparable to the census of population, might incorporate some of the information found disparately, for example, in the Censuses of Agriculture and Government, in the Geological Survey, and in the soil surveys. Data from a census of land, with suitable identifiers and descriptors, could be reported periodically to account for the dynamics of transfer, use change, and rights modification, taking place in and on the land. Surely Henry George would have found delight in the data from such a land census. For that matter, so would have General Walker.

Notes

1. Originally appeared in May and June, 1883 issues of *Frank Leslie's Illustrated Newspaper*, also reprinted in the Appendix of Henry George, *Complete Works, Social Problems*, 1918, pp. 247–59. Francis A. Walker reacted strongly to George's land nationalization doctrines but held similar views of rent. See Walker, *Land and Its Rent* (London: MacMillan, 1883).

2. *Ibid*, p. 248.

3. *Ibid*, p. 250, brackets mine.

4. *Ibid*, p. 249. George by electing to concentrate on facts relating to the change in average size neglected the issue of distribution.

5. Michael MacDowell, "Malthus and George on the Irish Question: The Single Tax, Empiricism and Other Positions Shared by 19th Century Economists," *American Journal of Economics and Sociology*, Vol. 36, No. 4 (October, 1977), p. 404.

6. H. G. was born in 1839, just seven years before the great Irish potato famine.

7. Henry George, *The Land Question* (New York: Doubleday, 1906), Chapter III.

8. For discussion see Paul Gates, *History of Public Land Law Development* (Washington, D.C: Public Land Law Committee (1968), pp. 387, 780. Only 1/2 million of the 270 million acres were transferred by 1870.

9. U.S. Dept. of Commerce, *Historical Statistics of the United States: Colonial Times to 1957*, p. 236.

10. *Ibid*, p. 278.

11. *Ibid.*, p. 14.

12. *Ibid.*, p. 236. Between 1850 and 1912 the public domain acreage dropped from 1.2 to .6 billion.

13. *Ibid.*, p. 14.

14. U.S. Bureau of the Census, *Statistical Abstract of the United States*, 100th edition (Washington: U.S.G.P.O., 1979), p. 684.

15. Some of the housing owners may be the same persons or entities that own farm and ranch land. In other words, the 10 and the 50 are not necessarily different persons or entities.

For discussion see G. Wunderlich, "Facts about U.S. Landownership," USDA, AIB 422, April, 1979, p. 11.

16. The U.S. Department of Agriculture conducted in 1978-79 a national sample survey of private land ownership. A summary of the survey is reported in J. Lewis, "Landownership in the United States, 1978," U.S. Dept. of Agriculture, *Agricultural Information Bulletin* 435, April, 1980.

17. George apparently did not measure the distribution of landownership with Lorenz type devices. Despite his concern for the distribution of land holdings, he did little to bring measures of distribution to land holdings issues. So far as I can determine the Lorenz and Gini measures, which trace to Ammon in 1895, Lorenz in 1905, and Gini in 1914, were not used to measure land distribution before 1957. Discussed in G. Wunderlich, "Concentration of Land Ownership," *Journal of Farm Economics,* Vol. 60, No. 5 (December, 1958), p. 1887. For additional measures of distribution applied to agriculture see, F. Dovring, "Distribution of Farm Size and Income: Analysis of Exponential Functions," *Land Economics,* Vol. 49, No. 2, (May, 1973).

18. U.S. Dept. of Agriculture, Economics, Statistics, and Cooperatives Service, "Monitoring Foreign Ownership of U.S. Real Estate," Special Report 1979, Vol. 3, p. 236.

19. Public Law No. 95–460, 92 Stat. 1263 (1978) (to be codified in 7 U.S.C. §§3501–3508).

20. The definitional changes are documented in U.S. Bureau of Census, *1974 Census of Agriculture,* Vol. II, part I, (1977). See also, U.S. Bureau of Census, *Historical Statistics of the United States: Colonial Times to 1957,* Chapter K, 1960.

21. *Census of Agriculture, op. cit.,* p. 5.

22. *Historical Statistics, op. cit.,* p. 257.

23. See USDA, *Structure Issues of American Agriculture,* AER-438, (November, 1979).

24. U.S. Dept. of Commerce, Office of Federal Statistical Policy and Standards, *A Framework for Planning U.S. Federal Statistics for the 1980's,* July 1978.

25. R. Boxley, *Landownership Issues in Rural America,* U.S. Dept. of Agriculture, ERS-655, 1977, p. 4.

26. See H. S. Reuss, "Need for a Land Price Index," *American Journal of Economics and Sociology,* Vol. 39, No. 1 (January, 1980), pp. 109. The federal government under the chairmanship of the Congressional Research Service has undertaken an inquiry into land value data. The U.S. Department of Housing and Urban Development through a grant to the Urban Land Institute has prepared a series of papers relating to land values in urban areas. See, *e.g.*, "Urban Land Markets: Price Indices, Supply Measures and Public Policy Effects," T. Black and S. J. Hoben, eds., U.L.I. Research Report No. 30 (Washington, D.C.: Urban Land Institute, 1980). In 1982 the Economic Research Service of the U.S. Department of Agriculture initiated a review of its research and data series on rural landownership.

27. *Historical Statistics, op. cit.,* pp. 258, 278.

28. *Ibid.*

29. U.S. Department of Agriculture, *Major Statistical Series of the U.S. Department of Agriculture,* Vol. 6, *Agr. Handbook 118* (1957) and *Agr. Handbook* 365 (1971).

30. *Ibid.*, Bull. 365, p. 10.

31. Although limited to farmland, recent series have added information on "probable use 5 years after acquisition" which includes recreation, residence, commercial, etc.

32. *Loc. cit.*, p. 39.