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Agriculture in the Appalachian Region: 1965-2000

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Abstract: Agriculture in the Appalachian region has progressed since the ARC was established in 1965 when it was characterized by small farms with low incomes that contributed to the Region's high rate of poverty. However, the region's agriculture remains relatively small compared to that of the United States with an average farm size of 152 compared with 487 acres. The area is more dependent on animal agriculture with three fourths of its income compared to half for the nation. Farm operators obtain a large share of their income from work off-farm. However, farms in the region have become more specialized and oriented more toward market activities.

Keywords: Agriculture, Appalachia, Farm Size, Farm Income

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The Appalachian Regional Commission (ARC) was established in 1965, an era when both the area and its agricultural sector were characterized by persistent poverty and lagging economies.

Coltrane and Baum (1965) analyzed Appalachia's agriculture of the area and concluded that "agricultural development has not occurred on a wide scale..." (p. viii). Characteristics of the area's agriculture included small sizes of farms, low incomes, low percentages of land in farms, a lack of cropland—especially high quality land, high rates of off-farm work, and a concentration on livestock production. They found that only 31 percent of the nonfederal land in the region was suitable for crop production, compared to 44 percent for the U.S. The agricultural situation was derived from an earlier era of relative isolation and subsistence farming and was compounded by a rough terrain that hinders the development of large scale mechanized farming operations.

Although having a comparable growth rate to that of the U.S., Appalachian agricultural operations have remained relatively small with a 1997 average farm size of 152 acres compared with the U.S. average of 487 acres (USDA 1999). The area also remains more dependent on animal agriculture with 75 percent of its income dependent on livestock compared to 50 percent for the U.S. While the region's agricultural sector plays a less significant role in its economy than in the past, it is still an important source of income and other benefits for a large number of households, as well as providing clients for agribusiness and other firms that service the sector and amenities for many urban area residents. Furthermore, agriculture continues to be important in the cultural and social institutions of the region.

Despite its importance, relatively little attention has been given to the sector in recent economic and other analyses of the Appalachian Region. No information about agriculture appears on the ARC website and there have been no articles on agriculture in recent issues of the *Journal of Appalachian Studies* (JAS 2000). Isserman (1996a, 1996b), Rogers and Cushing (1996), Lewis and Billings (1997), and Wood and Bischak (2000) reviewed the socioeconomic progress, culture and poverty in Appalachia with analyses of changes in the region over a thirty-year period. These studies indicate substantial progress, but agriculture was not included in the analyses. This paper helps to remedy that situation by analyzing the region's agriculture, examining and evaluating changes during the existence of the ARC. Agriculture in the region is compared with that of other regions and the United States and implications are developed for the future of agriculture and agricultural research needs in the region.

The Appalachian Region

According to Coltrane and Baum (1965), 55.7 percent of Appalachia's land area is not suitable for agricultural production, while another 13.5 percent has very limited potential. Even within the remaining 30.8 percent, a large share is not suitable for intensive crop production. Thus, forage and livestock production are appropriate for much of the area's limited land resources

although many crops are produced in commercially significant quantities. Agriculture in the region is quite varied, as might be expected for an area that stretches from New York to Alabama.

A relatively large proportion of the Appalachian Region's population is located in rural rather than urban areas, although urbanization has increased and several cities have grown rapidly while rural populations have tended to decline (Isserman 1996a, 1996b, Rogers and Cushing 1996). In the central part of Appalachia, however, there are no large urban centers and a major share of the population remains rural. Thus, while the majority of the population is located in urban settings, the region is more rural than for the U.S. although much of the Plains and Mountain States west of the Mississippi River also is very rural.

Data Sources

The primary sources of data for this analysis of Appalachian agriculture are the 1997 and 1964 of the Censuses of Agriculture. Additional information was obtained from publications by Coltrane and Baum (1965), Colyer (1976), Maher (1967), Economic Research Service, USDA (ERS 2000), and Appalachian Regional Commission (ARC 2000). Census data are reported for states and counties, but not for the Appalachian Region or for that part of each state. Thus, the county data had to be aggregated for the Appalachian portion of each state and then combined to get regional totals and averages. All regional averages are weighted by number of farms, acres of land, or other appropriate measures to obtain regional averages.

Results and Discussion

This section is divided into four parts. First, overall changes in the region are analyzed and compared with those for the U.S. Then, patterns and changes within the individual state parts of the Appalachian are examined. In the following subsection, attention is given to county level changes and patterns on the Region's agricultural characteristics followed by an examination of productivity and specialization. Then niche/specialty crops and other sources of farm income are reviewed. Finally, off-farm work and its impacts on the agriculture of the region are examined.

Regional Patterns and Changes in Agriculture

The census data indicate that progress has been made in the agriculture of the region, although today's Appalachian farms retain some of the characteristics reported by Coltrane and Baum (1965). Between 1964 and 1997, the average size and value of products produced by farms in Appalachia both increased substantially (Figure 1 and Table 1). The average size of farm increased from 122 acres in 1964 to 152 acres in 1997. Cash receipts from farm marketings per farm also increased, in both nominal and real terms, with the real value in 1997 dollars being \$25,193 in 1965 compared with \$44,751 in 1997 (Figure 2). However, when compared with the U.S., agriculture in the Appalachian Region continues to be characterized by smaller size farms and lower incomes; average farm size for the U.S. in 1997 was 497 acres with per farm sales of over \$102,000.

In 1997, there were 230,050 farms in Appalachia consisting of a total of 34.9 million acres, a 36.5 percent decline from the nearly 55.0 million acres reported for 1964. For the U.S., land in farms also declined but only by 16.1 percent, dropping from 1,110 million acres in 1964 to about 932 million in 1997. In Appalachia, more than 75 percent of the farms are under 180 acres while only

50 percent of the farms in the U.S. are in that category. The land in Appalachia is less suitable for intensive crop production than in most other regions because of the rough terrain that characterizes terrain; about half of the cropland was used to produce hay and much of the land in farms is only used for pasture. In 1997, nearly 30 percent of the land in farms was woodland while some 38 percent was used for pasture, including woodland pastured.

About three fourths of Appalachian cash receipts are obtained from livestock sales compared with only half for all U.S. farms (Figure 3). Historically, beef and dairy production were the more important sources, but poultry production has accounted for an increasing proportion of the value of farm production in Appalachia, especially in Alabama, Georgia, North Carolina, Tennessee, Virginia and West Virginia; the number broilers sold increased from 578 million 1964 to over 1.7 billion in 1997 (1.3 billion in Alabama and Georgia); the region accounted for one fourth of the broilers produced in the nation. However, most small farms receive more income from off-farm than from farm sources; in 1997 over 135,000, 58.9 percent, of the farm operators in Appalachia reported that their primary occupations were 'other', i.e., not farming (49.7 percent of farm operators in the U.S. reported 'other' as their primary occupation).

Although average farm size is relatively small in Appalachia, substantial numbers of larger farms are found in the region (Table 2). Some 8.3 percent of farms in Appalachia reported the value of 1997 farm sales of over \$100,000. For the U.S., this percentage was 12.7, which is consistent with the generally larger sizes for the nation. While the patterns of the distributions of sizes based on sales are similar for Appalachia and the U.S., the region has more farms in the three categories for farms with sales under \$10,000 per year while the U.S. has higher proportions of its farms in the three categories with sales of over \$25,000. Within the Appalachian region, operations with larger sales values exist for farms with beef, dairy, pork, poultry, orchards, and tobacco as the primary commodities produced and sold.

Productivity and Specialization

Average crop yields in the Appalachian Region tend to be lower than for the U.S. (Table 3). A comparison for selected crops of U.S. yields with those for the Appalachian region indicates that for the U.S. average corn yield was 122 bushels per acre compared with 87 for the Appalachian region; wheat was 37.5 bushels versus 35, tobacco averaged 2,085 pounds per acre and 1,817, while hay yields averaged 2.3 tons per acre compared with 1.9. Appalachia's yields were also less in 1964, except for wheat and tobacco, and in 1997 for all four crops analyzed; yields generally increased in both the U.S. and the region.

Farm production has become more specialized in both the U.S. and Appalachia. This is a trend that became notable in the post World War II period as farmers turned increasingly toward commercial operations producing for the market. While the census does not report information on specialization, an examination of the percentages of total farms producing a wide range of products indicates that substantially smaller percentages produce most the crops and livestock enterprises (Table 5). Except for cattle and calves in Appalachia, a much smaller percentage of farms produce each of the major products than in the past. In addition, fewer farms seem to be producing products exclusively for home consumption. Production per unit for farms producing a particular product also has increased in both the U.S. and Appalachia, but output per farm in Appalachia still lags considerably behind those of the U.S. This, of course, is consistent with the continued existence of

smaller sizes of farms in the region.

The census no longer reports information on home consumption, but the degree of production for home use can be inferred from comparing the percentages of farms with inventories of a particular livestock enterprise with those selling some of the product. For example, in 1964, only 74 percent of the U.S. farms with hog and pig inventories sold one or more animals, but by 1997 the proportion selling hogs or pigs increased to 93 percent. Appalachian farms appeared to be more oriented toward producing for home use in 1964, with only 42 percent of the farms reporting inventories of hogs and pigs selling one or more of those animals; by 1997 this had increased to 75 percent but was still lower than for the U.S.

Intraregional Variations

While all the Appalachian portions of the states in the region have some similar characteristics, there are sufficient differences to merit examination of variations among them. Farms in all the state parts within the Appalachian Region are relatively small but considerable variation exists among the states, with relatively larger farms existing in New York, Mississippi and West Virginia (Tables 1 and 4, Figure 4). In Mississippi, the 1997 average size of farm in the Appalachian counties was 276 acres compared with 323 for the state. The smallest average size was in North Carolina, about 100 acres (compared with 185 for the entire state), with the Appalachian parts of Tennessee and South Carolina also having relatively small average sizes. With exception of Pennsylvania, the Appalachian portions of the states comprising the region had smaller sizes of farms than was typical of the entire state. In Georgia and South Carolina the states' averages were over twice the sizes in their Appalachian areas. For the Appalachian region, the average farm size was 152 acres compared with 196 for the total farm areas of the 13 states.

Livestock account for the major share of farm income in nearly all the ARC parts of the Appalachian states (Figure 5). Poultry has become a leading source of cash receipts from farm marketings in Appalachia, although beef and dairy enterprises remain important sources of farm production and are dominant on a much larger number of farms than poultry, where relatively few large contract operations account for most of the value of production. In 1997, poultry accounted for nearly 95 percent of cash receipts in the Appalachian part of Georgia and over 80 percent in those parts of Alabama and West Virginia. In these three states, poultry production has become the major livestock's enterprise. However, livestock accounted for only 50 percent of farm receipts in Kentucky where tobacco is an important crop along with corn and soybeans; some 18,800 farms in the Appalachian area of Kentucky produced over 155 million pounds of tobacco, over one third of the state's total. In Mississippi, about 60 percent of the value of farm sales was from crops with corn, cotton, and soybeans being the more important sources. Nearly six million acres of hay were harvested from a total of 10.9 million acres of cropland harvested. Much of the rest of the cropland, another 10 million acres were in pasture as well as substantial areas of permanent and woodland pastures; of 34.9 million acres in farms in the region only 19.2 million acres were cropland.

County Level Agricultural Patterns and Changes

Examination of agricultural characteristics at the county level results in a more refined view of the Region's agricultural production patterns. This is accomplished by plotting a number of

characteristics by county for the entire region (Figures 6-11)—these figures have the counties divided into quartiles with respect to each of the characteristics analyzed. Other analyses of Appalachia have divided the region into northern, central and southern subregions (Isserman 1996a, 1996b, Cushing and Rogers 1996) and the distribution of agricultural characteristics tends to follow a similar pattern, but with many exceptions. The central area consists mostly of southern counties in West Virginia, and eastern counties in Kentucky and Tennessee which tend to be coal producing and the least favorably situated for agricultural purposes (see Cushing and Rogers 1996 for the definition of the subregions).

The percentage of land in farms is low in many of the counties in the central area but is also low in northern Pennsylvania, North Carolina, South Carolina, northern Georgia, and the southern half of the Alabama portion of the Appalachian region (Figure 6). The larger percentages are in the western parts of the Region from Ohio southward as well as in southwestern Virginia and northeastern Tennessee. Average sizes of farms are lower in Appalachian portions of southwestern West Virginia, eastern Tennessee, North Carolina, South Carolina, Georgia, and the central part of Alabama; larger sizes are in New York, the northeast and southeast part of Appalachian Pennsylvania, Virginia, eastern West Virginia, southern Alabama, and Mississippi (Figure 7). The value of land and buildings per acre are lower in New York and an adjacent area of Pennsylvania, northern West Virginia, eastern Kentucky and Mississippi; the larger values per acre are in the central portion of Pennsylvania, eastern portion of Tennessee, North Carolina, South Carolina, Georgia and a few counties in central Alabama (Figure 8). The larger values per acre tend to correspond to the areas with smaller sizes of farms.

Values of farm marketings per farms seem to be lower in West Virginia (except the eastern panhandle), Kentucky, a few counties in the western area of North Carolina, and eastern Tennessee while larger values tend to be in New York, Pennsylvania, the eastern part of North Carolina, Georgia and Alabama (Figure 9). The lower percentages of farmers working off farm (under 60 percent) are concentrated in New York and Pennsylvania with scattered counties in the other areas while the counties with the larger shares tend to be concentrated in Ohio, the western portion of Tennessee, South Carolina, Alabama and Mississippi (Figure 10). Farm population as a percent of total population is relatively, generally under 5 percent but with a few counties with higher percentages, up to 24 percent (Figure 11). The lower percentages tend to be in the center of the region from Pennsylvania southwestward through Alabama; these tend to be in coal producing areas although there are many exceptions. The higher concentrations tend to be in the western counties of Ohio, Kentucky, Tennessee and Mississippi together with some eastern counties in West Virginia, Virginia, Tennessee and northern North Carolina.

Niche, Specialty, and other Farm Income Enterprises

The rough nature of its agricultural resource base makes Appalachia relatively noncompetitive in the production of large scale crop enterprises such as food and feed grains or other enterprises requiring large and relatively flat areas amenable to cultivation with the large equipment used for efficient production. This is a primary reason that animal agriculture has been of such importance to the region's agriculture. However, high value specialty, niche or specialty crops and other sources of income that require relatively little land area due to the intensity of production and/or that can be spread over larger areas where mechanical intervention is not required can be

produced and can add significantly to farm incomes. Historically, tobacco has been such a crop in a large part of Appalachia (Kentucky, North Carolina, Tennessee, Virginia, and West Virginia). In 1997, 304 million pounds were produced in the region compared with 216 million pounds in 1987 (although 314 million pounds had been produced in 1964). Nursery and greenhouse production also have been increasing with \$673.1 million of products sold in 1997 *versus* \$49.4 million in 1964; the numbers of farms selling such products nearly doubled, from 4,912 in 1964 to 8,468 in 1997. Production of vegetables, however, has declined and the acreage in orchards also has decreased, although much of this latter decline has been offset by increased yields. Other specialty crops include Christmas trees and forest products.

The rough terrain of the region results in a relatively large share of the land in farms being in woodlands, 38.5 percent in 1964. Thus, farms in the region are able to derive considerable amounts of income from the sale of forest products. In 1964, some 55,690 farms sold over \$27.7 million of forest products including standing timber, logs, fence posts, firewood, etc. By 1997, the sales of such products totaled over \$60.2 million although from only 8,606 farms. In addition, sales of Christmas trees have become more important as a source of income for many farms. In 1964, sales of 1.5 million trees from 1,844 farms in six states were reported in the Census of Agriculture (no sales were reported for the southern states of the region). By 1997, Christmas tree sales were reported by 3,511 farms from all states in the region except Mississippi; these amounted to a value of nearly \$26.5 million. In addition, many persons in the region harvest and sell ginseng, goldenseal and other forest products.

Recreational enterprises and other forms of service activities also provide significant numbers of farms in the region with opportunities to enhance their incomes, although data on such activities are not readily available. Among these are activities such as fee fishing, renting access to land to hunters, leasing land to hunting clubs, appreciative (nonconsumptive) use of wildlife, nature study, bed and breakfast or other lodging facilities, etc. (Grafton et al. 1990). Such enterprises correspond, to some extent, with areas that have developed tourism as sources of income and tend to be in areas closer to population centers or that have prominent tourist attractions. In 1964, the Census of Agriculture reported that 2,505 farms in Appalachia received an average of \$1,273 from recreational enterprises. In 1997, this income was included in "other sources of a farm related income" which included patronage refunds and cooperative dividends with an average of \$1,535 for 19,758 farms; thus, income from recreational enterprises probably increased but it cannot be separated from the other sources.

Off-Farm Work and Income

Farm income is not an adequate indicator of the well being of farm families since a majority of the farms in both the U.S. and Appalachia receive much of their incomes from off-farm sources including wages and salaries, business profits, investment income, social security, welfare, and/or other payments. In 1998, for example, the average total household income of farm families for the United States was \$59,734 of which \$52,734 (88 percent) came from nonfarm sources (ERS 2000). These data are based on a national survey by ERS and are not available at county or even state levels. However, since 1991, this information has been reported for agricultural production regions including an Appalachian region consisting of the entire states of West Virginia, Kentucky, Tennessee, Virginia and North Carolina. While not strictly comparable to the ARC, the data do

provide a basis for comparing a part of Appalachia with the Nation. In 1997, the 290,455 farms in those five states were reported as having an average total farm household income of \$48,743 of which \$44,392 (91 percent) were from nonfarm sources. Thus, total household income was about \$11,000 less in Appalachia than in the U.S. However, the average farm household in Appalachia had an income only 2 percent less than the average U.S. household (farm and nonfarm households combined) income of \$49,692.

In the U.S., small farms received both a higher proportion and, on average, a larger dollar value from off-farm income than did larger farms. This, however, is somewhat misleading since a large share of the off-farm income was received by small farms that are classified by ERS as “residential style farms,” those where, while producing \$1,000 or more in farm products, the primary use of the property is for a residence by a household that has a nonfarm occupation. The average nonfarm income received by the households owning these farms was \$76,390 while their net farm income averaged -\$4,309.¹ In contrast, limited resource small farms had an off-farm income of \$13,153 and farm income of -\$3,229. Only farms with relatively high farm sales (over \$100,000) had average farm incomes that were positive. Since many of the small farms in Appalachia are limited resource farms, the level of off-farm income for that category may be typical for the region.

Comparable data for farm/nonfarm incomes in the Appalachian Region are not available for the 1960s when the Commission was formed. However, information on days worked off the farm is available, although the categories reported in the Census of Agriculture have changed—in 1959 off farm work was reported for any and 100 days or more while the categories are now any and 200 days or more of off-farm work. In 1964, 38.3 percent of Appalachian farmers worked off the farm for 100 or more days and 50.6 percent worked off their farms at least some of the time. For the U.S., the corresponding figures were 26.1 and 46.3 percent. For Appalachia in 1997, over 58.9 percent of the farm operators reported some off-farm work and 42.3 percent reported 200 or more day’s off-farm work; for the U.S. the comparable figures were 54 and 37 percent. Thus, while off-farm work increased in Appalachia, it increased more rapidly for the rest of the country which now has only a slightly smaller percentage of farmers reporting off farm work than in Appalachia. It should be noted that these data are only for the farm operator and do not include off farm work by other family members.

Conclusions and Implications

Appalachian agriculture is characterized by smaller farms and lower farm incomes than for the averages of the U.S., although the average sizes of farms have increased in both Appalachia and the United States. Farms in Appalachia are about one third the size of the average for the nation and less of the area’s land is in farms due to steeply sloping land, thin or rocky soils and similar conditions that preclude large scale, mechanized agricultural production systems. Because of relatively poor quality of the land, farm numbers and land in farms have declined substantially during the last or four or five decades. While the numbers of farms and land in farms also have declined

¹This negative income is often misleading since many of these small farms have positive cash flows, i.e., those where the values of sales exceed cash expenditures. They become negative when all costs, including imputed land and labor cost, are considered.

nationally, these changes have been more pronounced in the Appalachian region.

Although the sizes of farms, farm incomes, and related characteristics are relatively small in Appalachia, the agriculture of the region has followed trends similar to those elsewhere in the U.S. Thus, farms have become more specialized and are now more commercially oriented; relatively less of the farms and farm enterprises are devoted to production for home consumption although that probably remains more important in Appalachia than for most of the U.S. Comparisons of 1997 and 1964 (and other censuses) Census of Agriculture data for areas of Appalachia and the U.S. indicate that much smaller percentages of the farms in the region (and nation) have small pork, poultry, dairy or orchard enterprises; those that continue with such activities tend to have larger enterprises than in the past and a larger proportion of farms with those enterprises also sell products produced by those enterprises. In 1964, for example, relatively large numbers of Appalachian farms had inventories of hogs and pigs, chickens (especially layers), and dairy cows but did not report any sales from those enterprises. Those farms that now report inventories of livestock have substantially larger numbers and a high proportion report sales of the animals or their products. In addition, the numbers of farms reporting grain production have declined significantly in the region, but those that remain in production produce larger amounts, although less than national averages on a per farm basis.

A smaller portion of Appalachian land in farms is cropland due largely to the hilly terrain that typifies the region; much of the land is best suited to use as pastures and woodlands. Thus, the region's agriculture is more oriented toward livestock production with a much larger share of region's cash receipts from farm marketings derived from livestock sales than for the U.S. Dairy cattle tend to dominate in northern part of the region, beef cattle in the center, and poultry in the south although poultry production has increased in the central area as well, especially in Virginia and West Virginia. Beef cattle and the sale of feeder calves is the predominant agricultural enterprise in much of the region. Since the resource base for the region's agriculture does not permit the development of large scale mechanized operations, especially for grain and other crops, the region will continue to depend on animal agriculture, with specialty crops, recreational enterprises, and other tourist/service related activities growing in importance as sources of additional income.

Farmers in the region, especially those with smaller sizes of operations, depend increasingly on off-farm sources for an important portion of their incomes, often for most or all of the income since the net incomes of small sized operations tend to be negative when all of the costs are taken into account—these may, however, provide a low-cost residence as well as lower cost food from consumption of farm raised products and amenities from country living. For the U.S. as well as Appalachia, incomes from nonfarm sources tend to exceed those from farming in all farm size groups except for large size farms, those with a value farm production of over \$100,000 per farm. While limited resource farms that are typical in many areas of the Appalachian Region earn most of their incomes from nonfarm sources, their total earnings are substantially less than those of larger farms which tend to have incomes equal to or greater than those of the average incomes for the nonfarm population. Operators from limited resource farms often earn far less than operators from larger farms who work off the farm for at least two reasons. One they are often in areas where employment opportunities are relatively limited which is typical of more isolated and more rural areas such as exist in much of the Appalachian region. The other is that more of the operators of limited resource farms also have limitations from the standpoint of their human capital endowments, i.e., their education, training and experience tend to be more limited than is true for many of the

operators of larger farms. Thus, programs to promote rural development and to improve educational opportunities are essential to help overcome the low income problems that result from this situation.

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Table 1. Characteristics of Appalachian and U.S. Agriculture, 1964 & 1997

State (ARC Area)	Land in Farms 1000 acres		Number of Farms		Percent of Land Area in Farms		Average Farm Size, Acres		Average Value \$ per Acre	
	1964	1997	1964	1997	1964	1997	1964	1997	1964	1997
Alabama	7,029	4,380	54,400	27,365	42.1	27.8	129	160	144	1,692
Georgia	2,793	1,504	25,167	12,743	38.1	21.7	111	118	158	2,795
Kentucky	5,194	3,864	51,987	28,689	46.5	35.6	100	135	146	1,141
Maryland	430	275	2,543	1,656	43.4	27.8	169	167	164	1,499
Mississippi	4,451	2,428	31,993	8,808	61.0	36.8	139	276	103	883
New York	4,062	2,055	20,292	9,464	54.2	27.2	200	217	112	953
North Carolina	2,868	1,490	38,175	14,866	36.6	19.6	75	100	220	2,457
Ohio	5,108	3,691	36,550	21,989	56.3	42.0	140	168	139	1,441
Pennsylvania	7,875	5,015	55,057	29,009	33.6	21.4	143	173	150	1,672
South Carolina	925	458	9,725	4,083	36.5	18.3	106	112	214	2,362
Tennessee	5,982	4,118	65,298	40,069	48.3	33.4	92	103	187	2,127
Virginia	2,954	2,176	24,484	13,537	44.4	36.2	121	161	139	1,428
West Virginia	5,279	3,456	34,504	17,272	34.2	22.4	153	194	91	1,090
Appalachia	54,951	34,916	449,176	230,050	42.8	28.0	122	152	144	1,564
United States	1,110,187	931,795	3,157,857	1,911,859	49.0	41.1	352	487	144	993

Sources: Census of Agriculture, 1965 & 1998

Table 2. Distribution of Farms by Value of Farm Sales, 1997

Value of Total Farm Sales	Appalachia		U. S.	
	Number	Percent	Number	Percent
Less than \$2,500	74,487	32.4	496,514	27.7
\$2,500 to \$4,999	40,036	17.4	228,447	12.7
\$5,000 to \$9,999	38,119	16.6	237,975	13.3
\$10,000 to \$24,999	33,752	14.7	274,040	15.3
\$25,000 to \$49,999	14,250	6.2	170,705	9.5
\$50,000 to \$99,999	10,422	4.5	158,160	8.8
\$100,000 or more	18,984	8.3	227,194	12.7
Totals	230,050	100.0	1,793,035	100.0

Table 3. Per Acre Yields of Crops in 1965 and 1997

Crop	United States		Appalachia	
	1964	1997	1964	1997
Corn-bu.	62.3	122	51.1	87.1
Wheat-bu.	23.4	37.5	26.0	35.0
Tobacco-lb.	1939	2085	1987	1817
Hay-tons	1.8	2.3	NA	1.88

Table 4. Farm Numbers, Acres and Sizes in Appalachia, 1997

State	Appalachian Region			Entire State			% in App.
	Number	Acres	Size	Number	Acres	Size	
Alabama	27,365	4,380,390	160	41,384	8,704,385	210	50.3
Georgia	12,743	1,504,460	118	42,334	10,671,246	265	14.1
Kentucky	28,689	3,864,397	135	82,273	13,334,234	162	29.0
Maryland	1,656	275,915	167	12,084	2,154,875	178	12.8
Mississippi	8,808	2,428,303	276	31,318	10,124,822	323	24.0
New York	9,464	2,055,034	217	49,406	9,122,379	228	22.5
North Carolina	14,866	1,490,784	100	31,757	7,254,470	185	20.6
Ohio	21,989	3,691,420	168	68,591	14,103,085	206	26.2
Pennsylvania	29,009	5,015,985	173	45,457	7,167,906	158	70.0
South Carolina	4,083	458,607	112	20,189	4,593,452	228	10.0
Tennessee	40,069	4,118,555	103	76,818	11,122,363	145	37.0
Virginia	13,537	2,176,561	161	41,095	7,167,906	200	30.4
West Virginia	17,272	3,455,532	194	17,272	3,455,532	194	100.0
Totals	230,050	34,915,943	152	559,978	108,976,655	195	32.0

Source: 1997 Census of Agriculture

Table 5. Sales/Production per Farm and Percent of Farms with Enterprise, 1964 and 1997

Enterprise	United States				Appalachia			
	1964		1997		1964		1997	
	Value	%	Value	%	Value	%	Value	%
Cattle & Calves Sold, Number	31.6	63.1	73.2	52.9	12.0	62.0	24.9	62.0
Hogs & Pigs Sold, Number	104.1	25.4	1396.7	5.3	49.7	14.4	382.7	2.5
Layers & Pullets, Number	283	38.3	5054	3.8	281	40.2	2967	4.4
Corn Produced, Bushels	4544	43.8	19917	22.5	549	43.3	4527	13.0
Wheat Produced, Bushels	1646	23.4	9048	12.7	314	9.0	1656	3.2
Tobacco Produced, Pounds	5999	10.5	19483	4.7	2511	27.9	7778	17.1

Figure 1. Average Farm Size, Acres

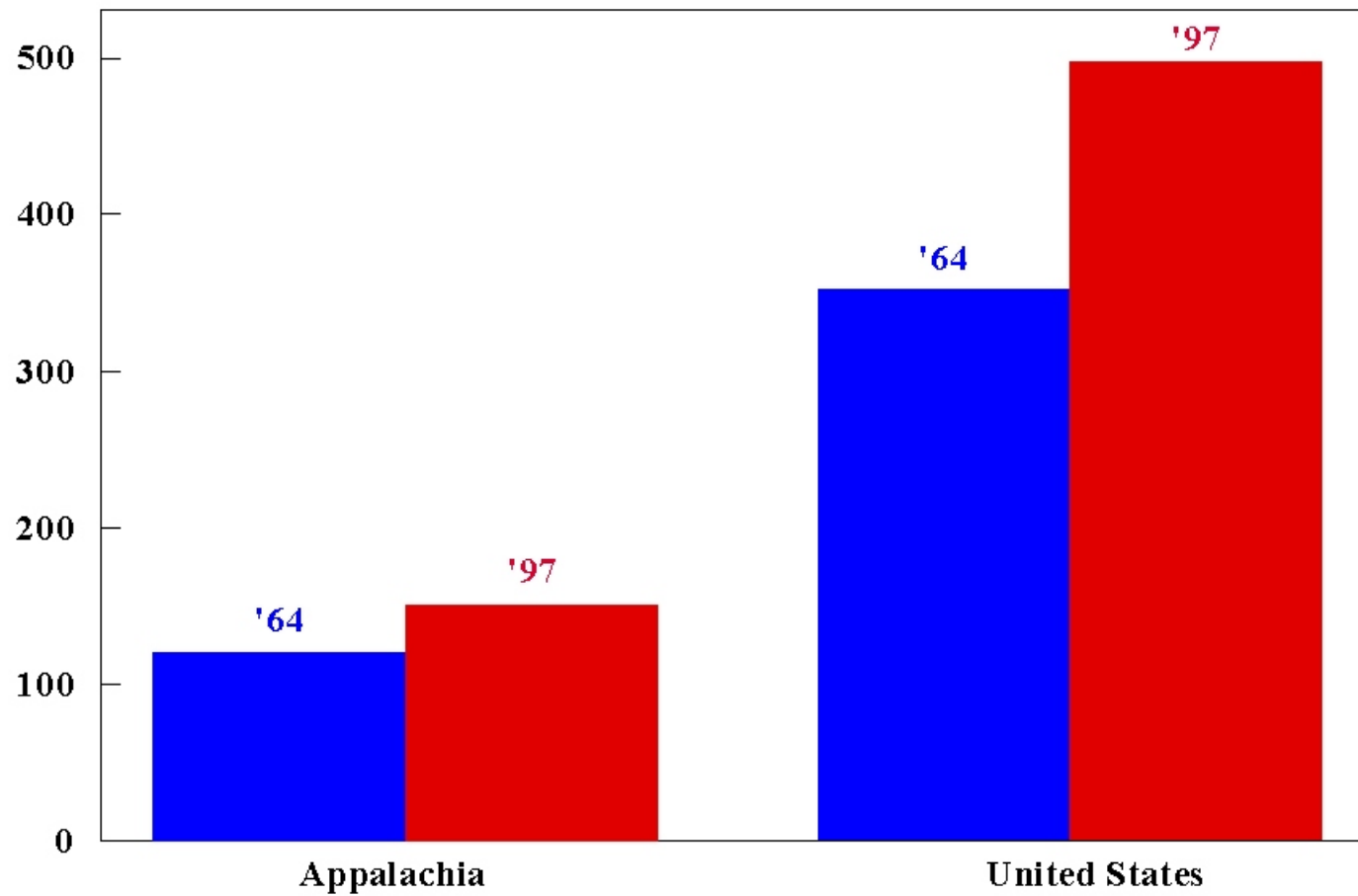


Figure 2. Nominal and Real Value of Farm Marketings

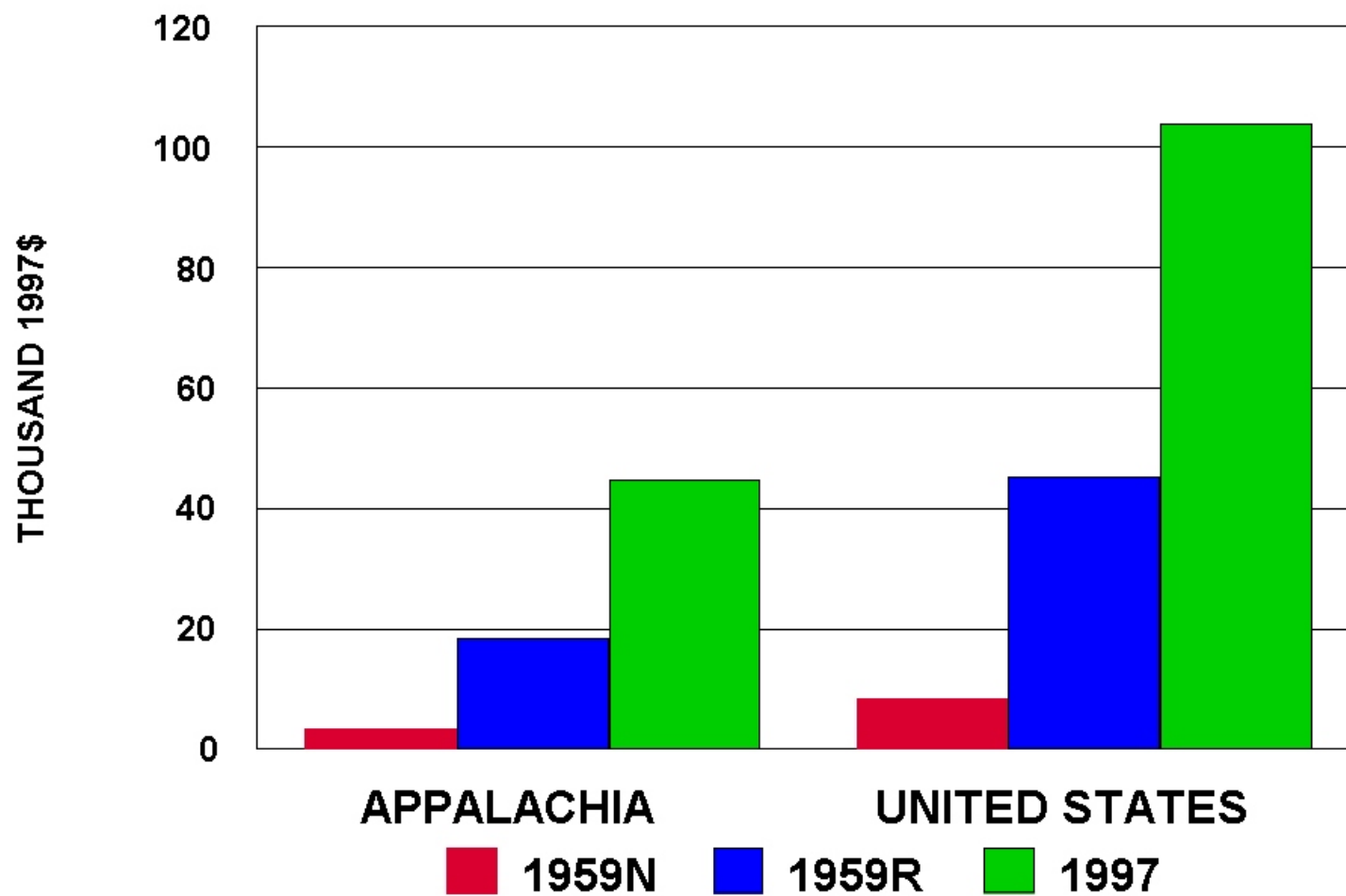


Figure 3. Percent of Farm Marketings from Livestock

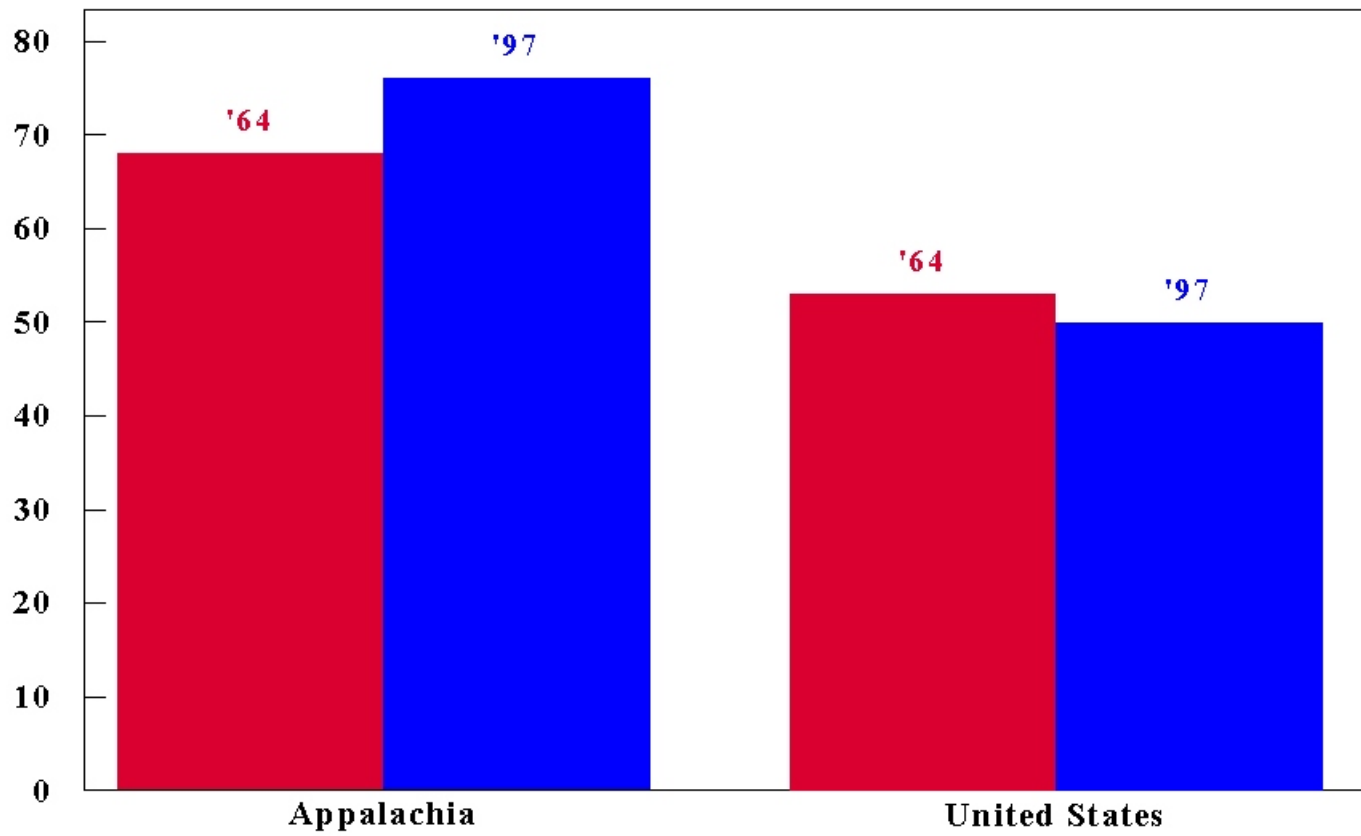


Figure 4. Average Size of Appalachian Farms, 1964 & 1997

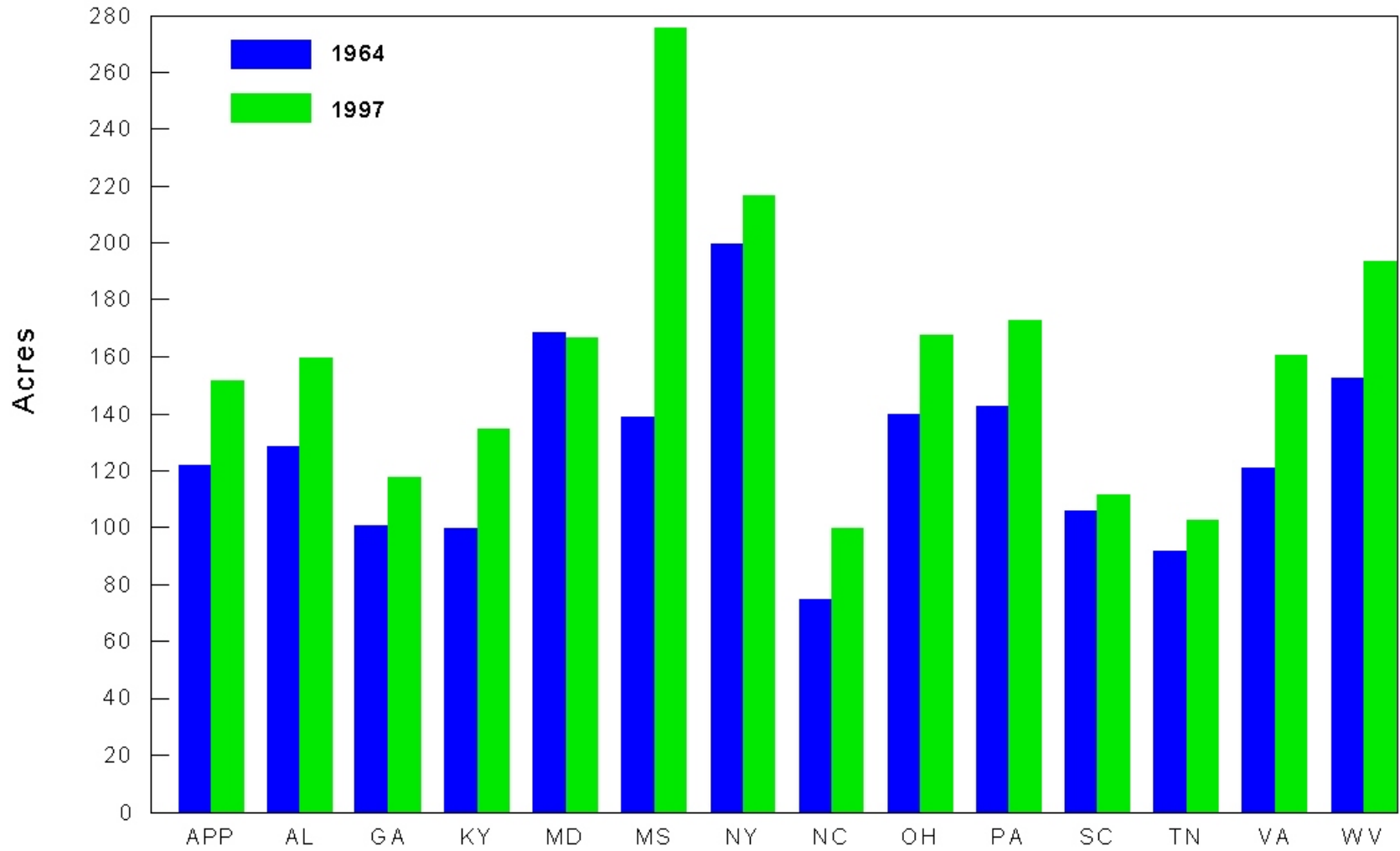
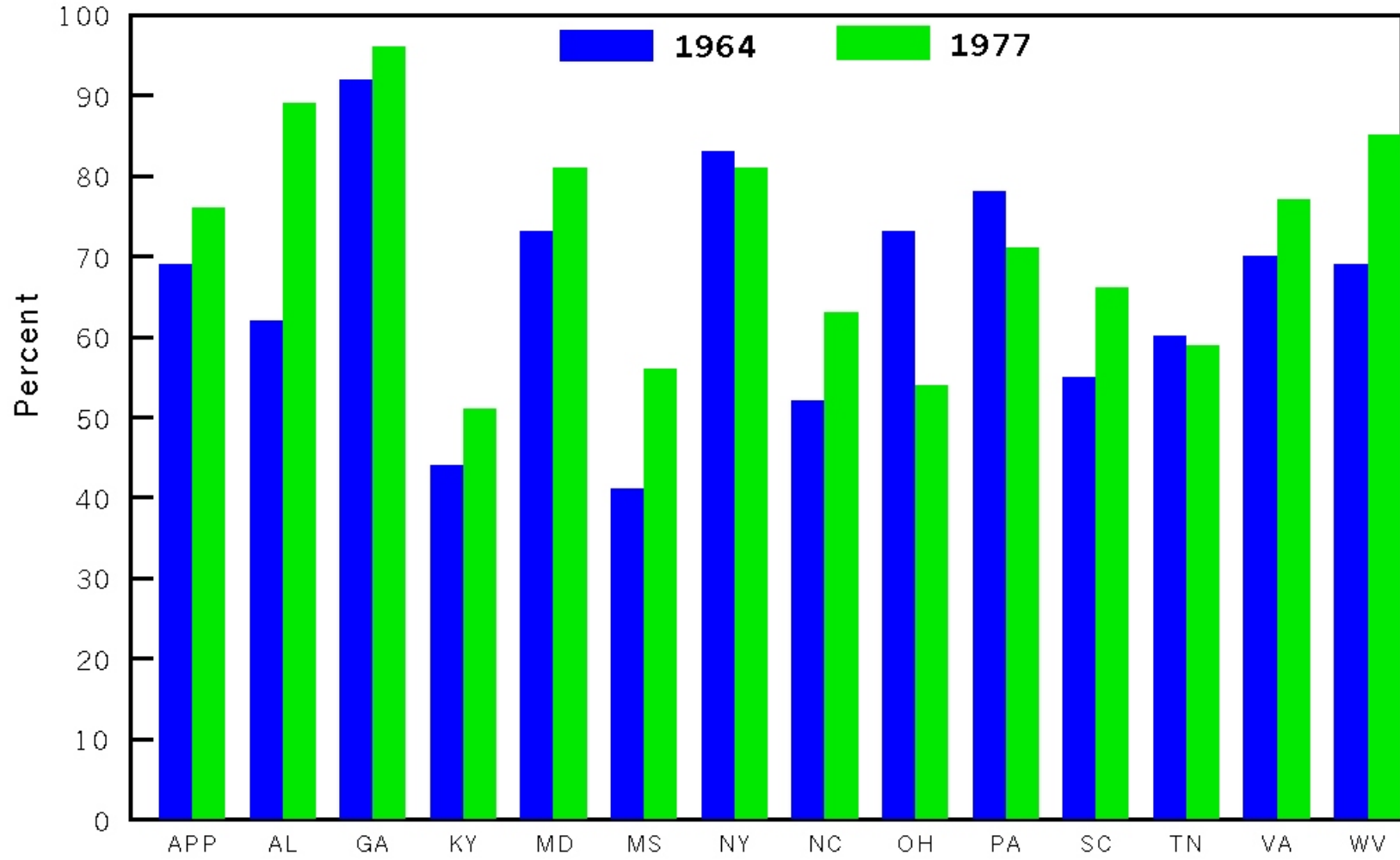


Figure 5. Percentage of Cash Receipts from Livestock, 1964 & 1997



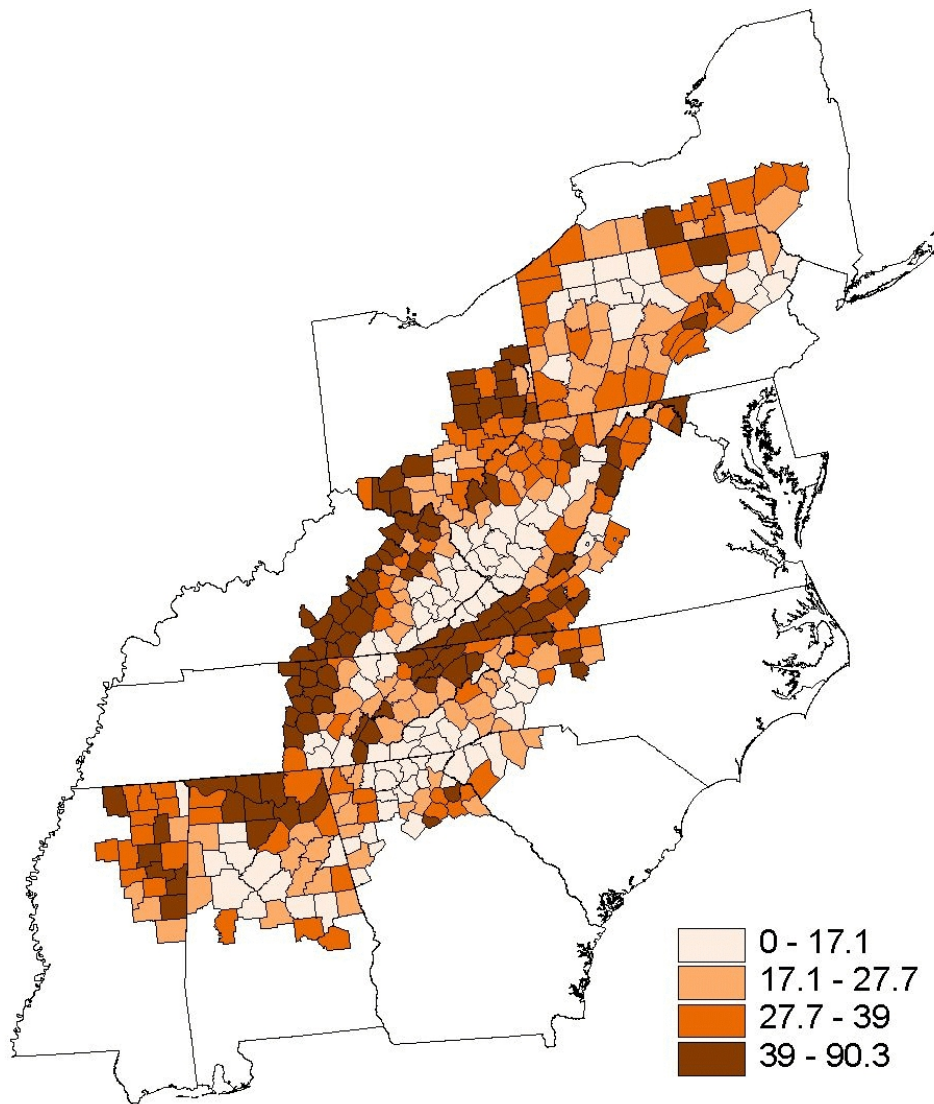


Figure 6. Percent of Land Area in Farms, 1997

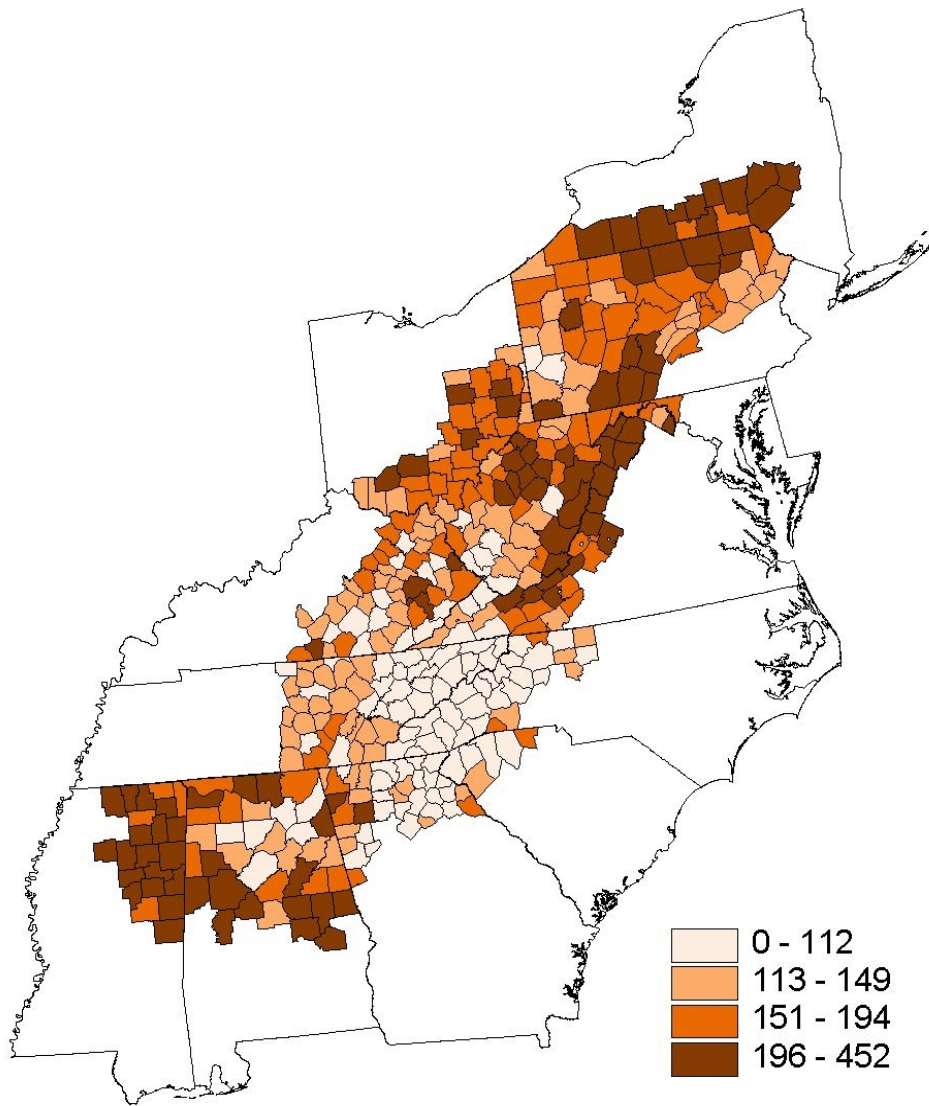


Figure 7. Average Size of Farms, 1997 (acres)

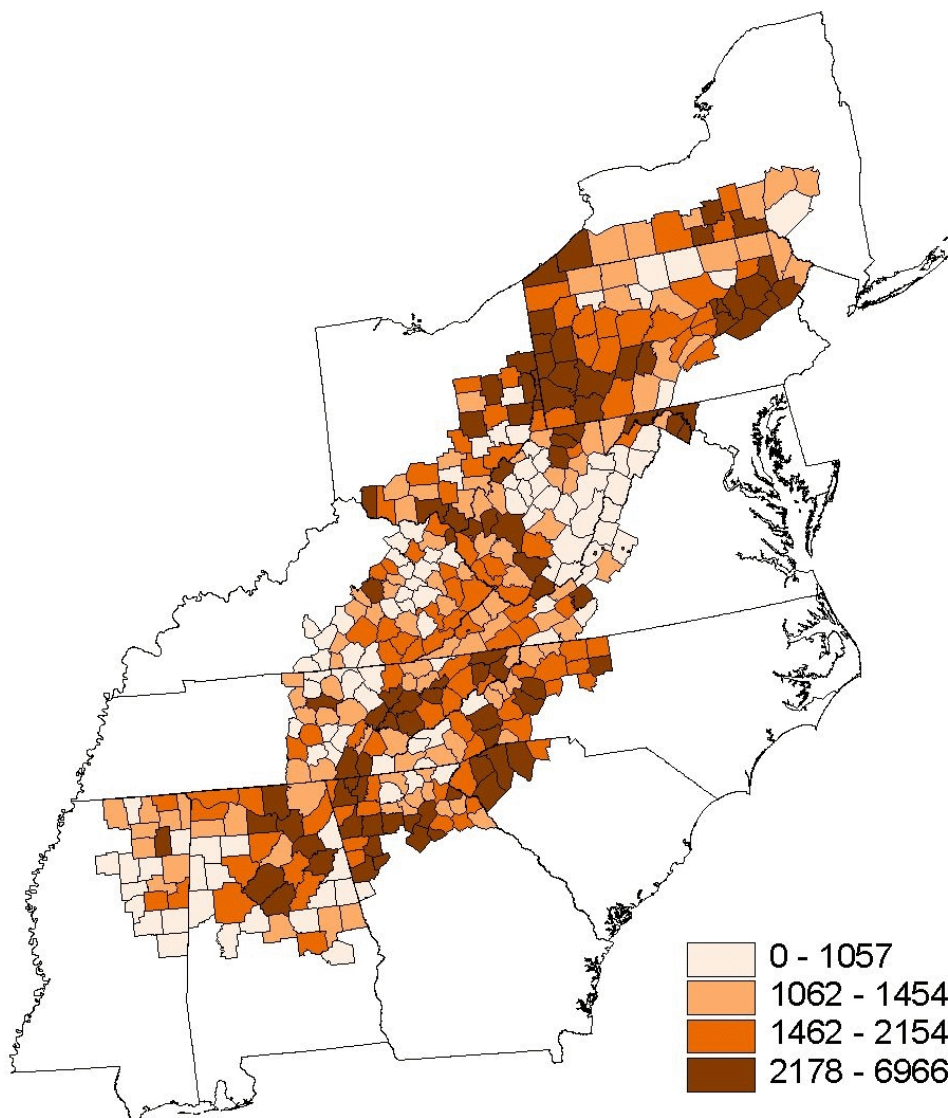


Figure 8. Value of Land and Buildings per Acre, 1997 (\$)

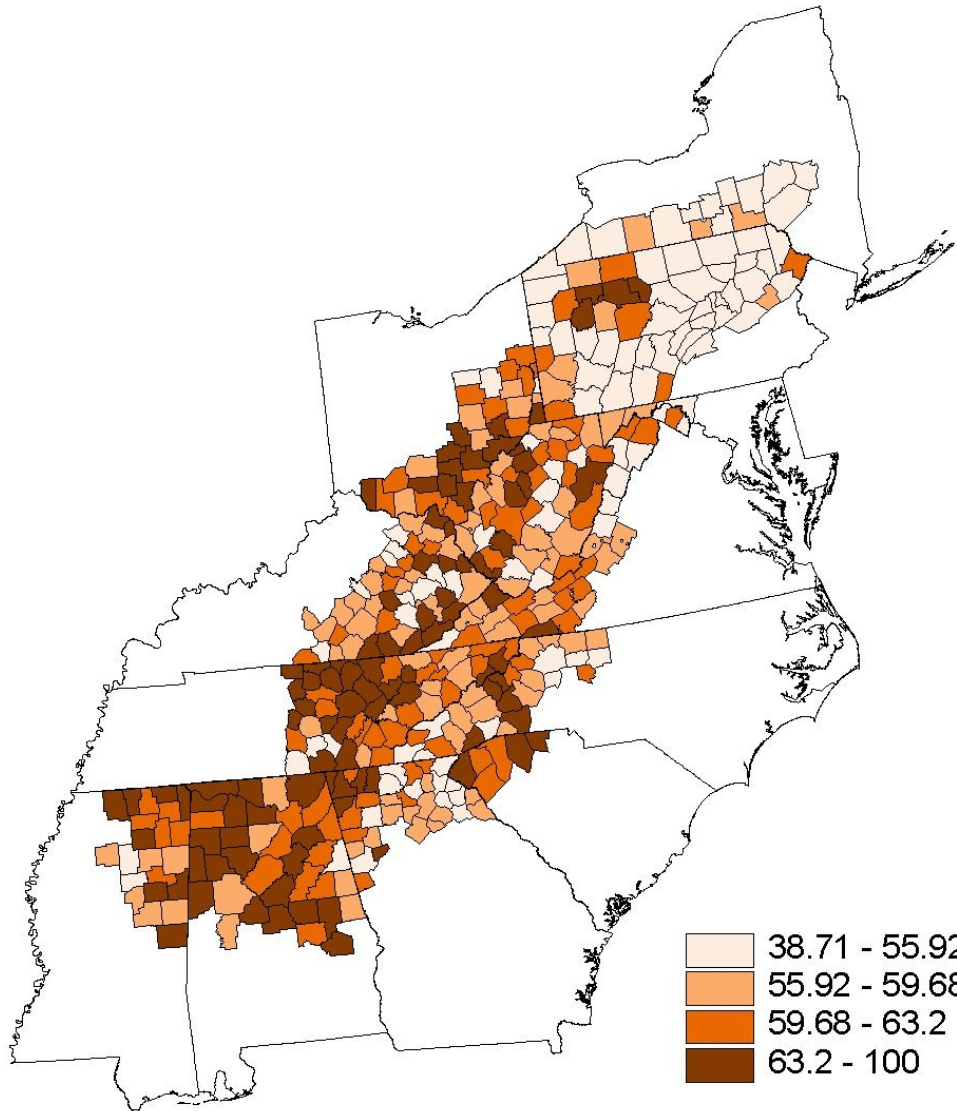


Figure 10. Percent of Farm Operators Working Off Farm, 1997

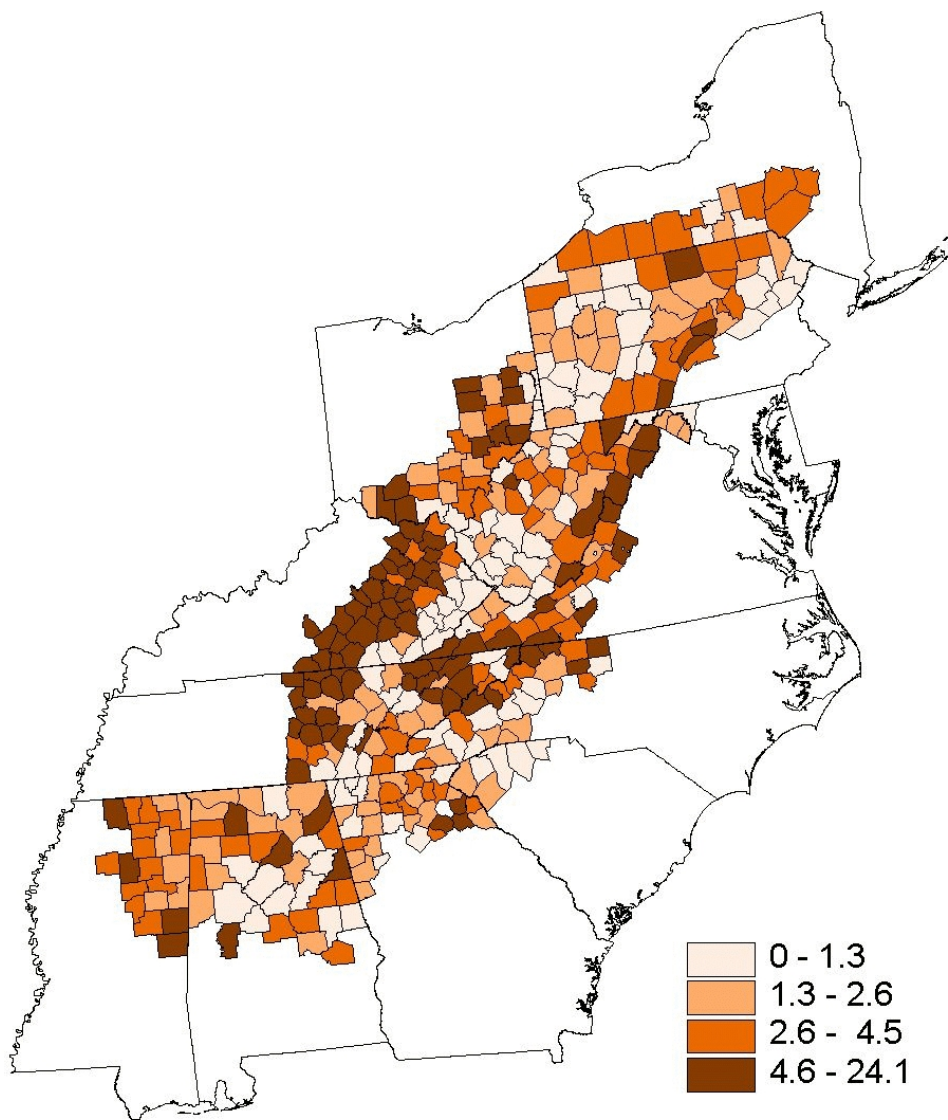


Figure 11. Farm Population as Percent of Total, 1997