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NONAGRICULTURAL INFLUENCE ON FARMLAND IN THE UNITED STATES

A Preliminary Study

Ivery D. Clifton

September 1971

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UNITED STATES DEPARTMENT OF AGRICULTURE
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WASHINGTON, D.C. 20250
Farm Production Economics Division

July 2, 1971

SUBJECT: Working Paper; Nonfarm Influence on Land Value

TO: Lynn Rader, Deputy Director
FPED, ERS

The attached manuscript summarizes much of what we currently know about the impact of urban and recreational influence on land values. It was originally intended as a signed article in Farm Real Estate Market Developments. However, I believe that the manuscript could be improved by waiting until we can include the 1969 census data.

Therefore, I'm recommending that it be included in the working paper series until we can carry out an update.

We will also consider some alternative classification systems that might improve the report.

Bob

Robert D. Reinsel, Leader
Farm Real Estate Group

NONAGRICULTURAL INFLUENCE ON FARMLAND IN THE UNITED STATES

Ivery D. Clifton
Agricultural Economist
Farm Production Economics Division

The last two decades have been characterized by dramatic changes in agriculture. Important changes have been the continuous decrease in land used for production, and the much smaller but significant shifting of land to nonagricultural uses. Also during this period, the value of farmland nationally has risen persistently while average returns have remained relatively low. Recently, this seeming paradox has led to widespread speculation that much of the continuous rise in land values is directly attributable to increased nonfarm demand for farmland. More specifically, the value of farmland appears more responsive to nonfarm factors than farm related variables.

The principle aim of this study is to: (1) Quantify the relative area of farmland that is subject to nonagricultural influence, (2) investigate the difference in the rate of change of average values of farmland in SMSA, rural, and forest counties, and (3) assess the general importance of various factors contributing to conversion of farmland to nonfarm use and to the value of farmland 1/.

1/. The distinction between SMSA and NonSMSA counties was based upon the criteria developed by the office of statistical standards. Each SMSA must include at least: (1) A city with 50,000 inhabitants or more, or (2) two cities having contiguous boundaries and consisting, for general economic and social purposes, of a single community with a combined population of at least 50,000, the smaller of which must have a population of at least 15,000. If two or more adjacent counties each has a city of 50,000 inhabitants or more, and the cities are within 20 miles of each other (city or city limits), they will be included in the same area unless there is definite evidence that the two citiss are not functionally intergrated.

In order to estimate the relative area of farmland affected by nonagricultural uses, the nation's farmland was divided into three categories: (1) Farmland in standard metropolitan statistical areas (SMSA) (2) farmland outside metropolitan statistical areas (NonSMSA) and (3) farmland in counties (exclusive of SMSA's) where more than 10 percent of the land area was in national forest. The latter category was selected to provide some idea of the influence of recreation activities on farmland. SMSA's and forest counties are used as proxies for urban and recreational areas. Such classifications contain certain inherent weaknesses. Clearly, not all farmland in SMSA counties is influenced by urban demands nor is it absolutely independent of rural and recreational effects and vice-versa. Nevertheless, such a delineation seems useful.

In the analysis that follows, unless otherwise indicated, data shown are based upon information obtained from the Census of Agriculture. The first part of this report focuses on the quantities of land influenced by rural, urban, and recreational use. The second section is devoted to an analysis of price variations within and among areas. Appendix A shows average values, and percent changes in value of farmland by individual States.

AGGREGATE SUPPLY OF FARMLAND

In 1964, farmland, ranches, groves, and orchards in the 48 contiguous States occupied 53 percent or 1,106 million acres of the total land area--45 percent fewer acres than in 1950 (table 1). Nearly one-third of all "farmland" is situated in the Mountain Region, approximately one-half is located in the Corn Belt and Plains States. The remaining acreage is spread almost evenly throughout other regions.

Table 1.--Farmland: Total acreage and percentage of total farmland in farms, by regions, specified years, 1950-1964

	Total acreage			
	1950	1954	1959	1964
	Million acres			
Northeast	49.1	45.5	40.3	36.0
Lake States	70.6	68.5	66.8	64.8
Corn Belt	140.5	137.5	134.4	132.0
Northern Plains	182.0	184.3	185.8	185.7
Appalachian	81.5	76.3	68.2	63.2
Southeast	75.1	74.0	60.5	56.6
Delta	50.9	50.1	45.4	44.7
Southern Plains	182.6	180.8	179.0	177.8
Mountain	247.9	255.5	264.1	268.1
Pacific	79.3	81.7	79.9	76.6
48 States	1,159.5	1,154.7	1,124.4	1,105.5
	Percentage of total farm land			
Northeast	4	4	4	3
Lake States	6	6	6	6
Corn Belt	12	12	12	12
Northern Plains	16	16	16	17
Appalachian	7	7	6	6
Southeast	6	6	4	5
Delta	4	4	4	4
Southern Plains	16	16	16	16
Mountain	21	20	24	24
Pacific	7	7	7	7
48 States	100	100	100	100

Source: Census of Agr., Vol. I, 1950, 1959, and 1964.

Although the total number of acres of farmland continues to de decline, the distribution of farmland among regions has remained relatively constant. Four of the ten production regions show no change in their proportionate share of the total acres of farmland in over a decade. Likewise, three of the ten experienced only a one percent change.

From 1959 to 1964, more than 3.5 million acres of land in farms were converted each year to nonfarm use, an annual rate of 0.5 percent of the land in farms. This is in contrast to an average yearly conversion rate of 6.1 million acres from 1954 to 1959. The reduction in farmland was mainly concentrated in the Northeast, Southeast, and Appalachian Regions. In these regions, large acreages of farmland have been converted to forestry and recreation enterprises. Also increased population and urbanization are requiring greater use of open land than ten years earlier.

Categorized by areas of potential influence census data show that of the 1,106 million acres of farmland in 1964, 11 percent was found in SMSA counties; 72 percent was located in predominantly rural counties; and 17 percent was situated in recreational (forest) counties. In 1950, SMSA counties comprised 12 percent of the land in farms; rural and recreational counties contained 75 and 13 percent respectively. Though percentages show little differences between periods due to change in total acreage, more than 30 percent of the land cost from farms between 1950 and 1964 occurred in SMSA counties.

URBAN ENCROACHMENT ON FARMLAND

As our population has grown and become more affluent, shifting of farmland to more intensive urban uses has increased. Some have

speculated that the withdrawl of this acreage has had considerable effect on the supply and value of farmland offered on the farm real estate market. However, the full extent to which urbanization encroaches upon farmland is difficult to measure, because not all farmland that is shifted to nonfarm use is subsequently used for urbanization. In addition, data on urban use of farmland is not readily available. Typically, farmland purchased or offered for sale for potential nonfarm use either retains its farm use until developed or is transferred to an idle capacity until used. In either case, an important time lag is introduced. While the effects of either of these transactions can serve to stimulate stronger surrounding land values, only the former can be related to encroachment of urbanization on farmland. In the latter case, farmland loses its identity at the time of transfer to an inactive capacity. The failure to make this distinction has led to numerous cases of over estimating urban demand for farmland.

In 1964, conversion of farmland to urban use was estimated at over 2 million acres annually. Nearly a half million acres more than was released from farmland in SMSA counties. Seemingly, the implied encroachment of urbanization on farmland is a misconjecture. The fact that urban use of land exceeds the supply released from SMSA counties suggests that other sources provide at least a part of the total supply used. Where then did the additional acres come from?

A large part of the land used for urban development is idle and fringe lands. One needs only visit any major city between Miami and

Boston or Chicago and Los Angeles to discover that vast parcels of idle land can be found between the center of metropolitan cities and the outer limits of the suburbs. Normally, these isolated acres represent land by-passed during leap frog development or reclaimed from destructed sites. On the other hand, large acreages represent land brought and being held in expectation of higher returns. Though this acreage is not immediately quantifiable, idle intermetropolis and vacant fringe lands provide a much underrated supply of the land being absorbed annually by urban and local growth. While some of this land is suitable for farm production it is not officially used or enumerated as such.

FARMLAND IN STANDARD METROPOLITAN STATISTICAL AREAS

Since the mid 1940's land in farms near urban areas has undergone a dramatic transformation from a mainly rural environment to one of a complex megalopolis. Several factors seem important in the outward movement of urban areas; (1) continuous growth in population (2) the desire of both people and industrial firms to be spatially separated to lessen congestion and (3) the need and sometimes legal requirement, that certain functions such as airports, reservoirs and power plants be located away from central cities.

In 1964, more than 15 percent of the counties in the United States were classified as SMSA's (see centerfold). Among individual States, only Wyoming and Vermont had no such counties. In 1950, SMSA counties contained nearly 140 million acres of farmland. By 1964, acreage dropped to 122 million (table 2)--a decline of 12

Table 2.--Farmland: Acreage in urban, rural, and recration counties by selected years, 1950-1964

Region	SMSA				Rural				Recreation			
	1950	1954	1959	1964	1950	1954	1959	1964	1950	1954	1959	1964
	Million acres											
Northeast	17.1	15.8	13.6	12.1	30.8	28.6	25.8	23.1	1.2	1.1	0.9	0.8
Lake States	9.3	8.8	8.0	7.4	56.9	55.6	55.1	54.4	4.4	4.1	3.7	3.0
Corn Belt	23.7	22.9	21.9	21.0	112.4	110.5	108.6	107.3	4.4	4.1	3.9	3.7
Northern Plains	4.6	4.5	4.6	4.4	175.1	177.4	178.9	181.2	2.3	2.4	2.3	2.4
Appalachian	7.8	7.1	6.2	5.5	66.3	62.3	55.6	51.9	7.4	6.9	6.4	5.8
Southeast	8.9	9.4	7.6	7.3	61.7	60.4	49.4	46.0	4.5	4.2	3.5	3.3
Delta	3.9	4.0	3.6	3.6	42.3	41.5	37.9	37.1	4.7	4.6	3.9	4.0
Southern Plains	26.6	25.5	26.3	24.9	154.4	153.6	150.8	151.1	1.6	1.7	1.9	1.8
Mountain	17.6	18.0	17.5	16.3	144.2	148.4	150.0	153.5	86.1	89.1	96.6	98.3
Pacific	19.6	20.4	19.8	19.9	26.2	26.2	24.5	23.4	33.5	35.1	35.6	33.3
United States	139.1	136.5	129.1	122.4	870.1	864.5	836.6	829.0	150.1	153.3	158.7	156.4

Source: Census of Agriculture, Vol. I, 1950 and 1964.

percent. The rate of decline in acreage of farmland in SMSA's slowed after 1959 probably reflecting the increased growth in the construction of residental highrises, and other multi-level complexes which reduced space requirements per unit. Also, increased rental probably held many acres in farms that would have otherwise been idle. With slower growth in urban demand for farmland after 1959, the per acre value rose less sharply. As a supply indicator, 122 million acres represent the acreage of farmland in 1964 that was subject to direct intensive nonagricultural demand and price influence.

Distribution of Farmland Among Selected Areas

The distribution of farmland among regions varies substantially primarily because of difference in land area occupied and location patterns of population. The Southern Plains which occupy 11 percent of the total land area contain nearly one quarter of all farmland in SMSA Counties (table 3). Of course, in comparison to rural and recreation farmland, land in farms within SMSA of this region comprise only 14 percent of the total farm acreages.

Large acreage of farmland is also found in SMSA counties of the Corn Belt and Mountain Regions where the latter region comprises nearly 30 percent of the total land area. Normally, one would not expect large acreage of farmland to be within SMSA's of the Corn Belt. But in this region, principle cities are located in or on the fringe of counties that produce a large supply of the nation's feed grain and pork. Likewise, in the Pacific, large segments of the populace are settled in counties that are major fruit, vegetables, and nut producers.

Table 3.--Land and farmland area: Percentage of land area and farmland in rural, urban, and recreational counties, 1964

Region	Total land area 1/	SMSA		Rural		Recreation	
		Land area	Land in farms	Land area	Land in farms	Land area	Land in farms
	Percent						
Northeast	5.9	30.8	33.6	64.6	64.2	4.6	2.2
Lake States	6.5	13.2	11.4	69.7	83.9	17.1	4.7
Corn Belt	8.7	18.2	15.9	76.9	81.3	4.8	2.8
Northern Plains	10.3	2.5	2.4	95.8	96.3	1.7	1.3
Appalachian	6.5	10.2	8.6	76.5	82.2	13.3	9.2
Southeast	6.5	16.4	12.9	75.6	81.3	8.0	5.8
Delta States	4.9	8.2	8.0	78.9	83.0	12.8	9.0
Southern Plains	11.2	14.5	14.0	83.6	85.0	1.0	1.3
Mountain	28.8	6.1	6.3	41.8	57.2	52.1	36.5
Pacific	10.7	27.0	26.0	25.4	30.6	47.5	43.4
United States	100.0	12.9	11.0	62.8	71.5	24.3	17.5

1/ Exclusive of District of Columbia, Alaska, and Hawaii.

Source: Census of Agriculture, Vol. I, 1950 and 1964.

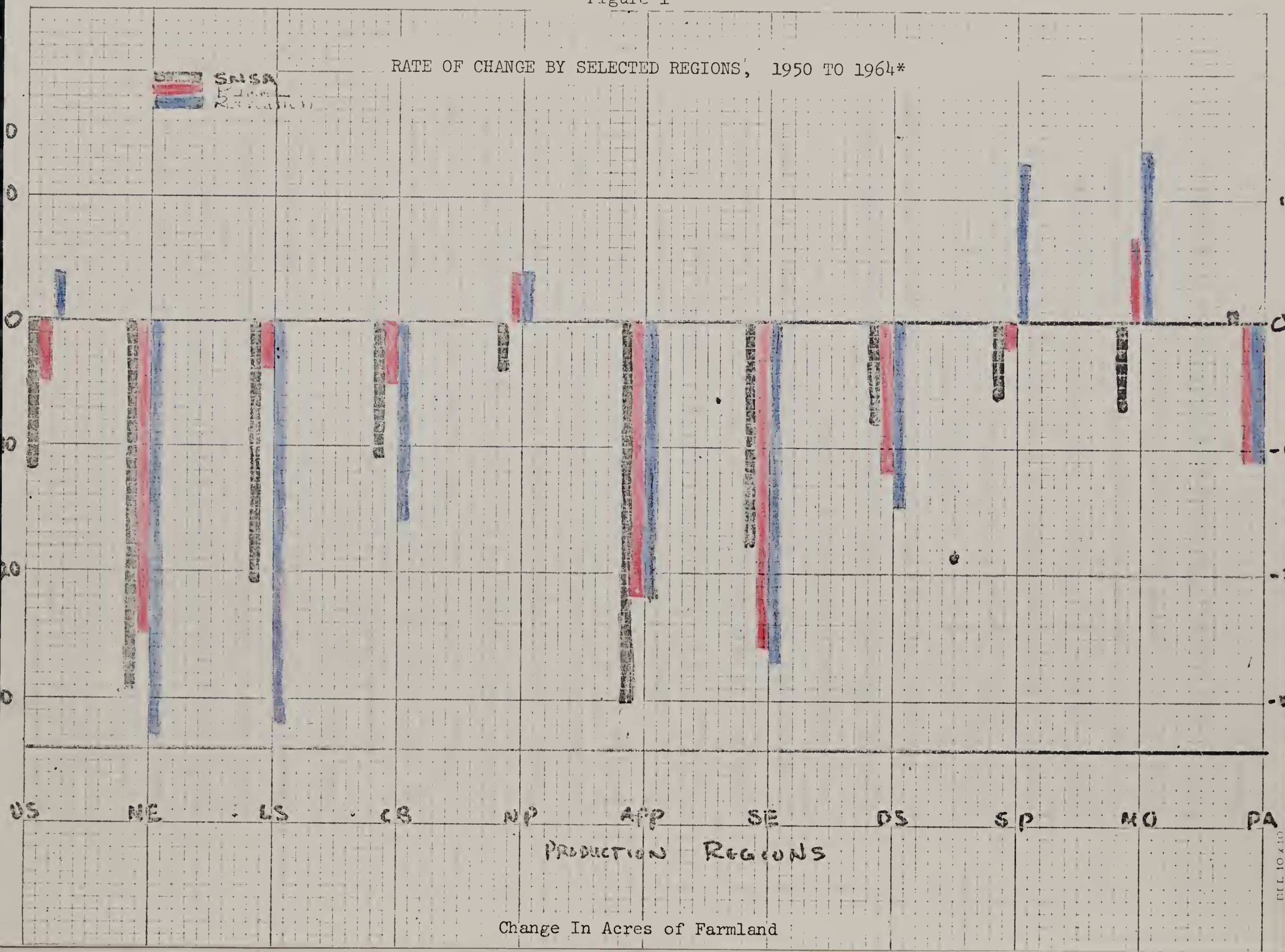
The Midwest and Southwest contains the majority of the 829 million acres of farmland in predominately rural counties. Regionally, the Mountain States accounts for nearly one-quarter of the total acreage of farmland in rural areas. Most of these acres are open dryland with little alternative use. The more productive Plains States and Corn Belt contains approximately 50 percent. The remaining 25 percent of all farmland in rural areas is spread among other regions with fewer acres in the more populated and industrial oriented ones.

As with farmland in SMSA counties, the percentage of farmland in rural areas has remained constant. For example, the majority of the production regions have had no change in the percentage of rural farmland in more than a decade. The slight increase in the percentage of rural farmland in the Northern Plains and Mountain Region probably reflects differences in land accounting procedures and the use of irrigation to convert large acres of otherwise unusable dryland to production. More than 80 percent of the farmland in "recreational" areas is in two regions. The Mountain Region contains more than 60 percent and the Pacific accounts for slightly more than 20 percent.

CONVERSION OF FARMLAND TO NONFARM USE

As shown earlier, (figure 1) a large share of the farmland shifting to nonfarm uses occurred in areas of the South and Northwest. Although all regions witnessed a general decline in farmland except the Plains States and Mountain Region. Nationally, in terms of absolute acreage, between 1959 and 1964, more acres were converted in rural than SMSA counties. For instance, the 129 million acres of farmland in SMSA counties were converted at an average annual

Figure 1


RATE OF CHANGE BY SELECTED REGIONS, 1950 TO 1964*
SMSA
US
NE
LS
CB
NP
APP
SE
DS
SP
MO
PA
PRODUCTION REGIONS
Change In Acres of Farmland

rate of 1.3 million, while the 837 million acres in rural counties were converted at 1.5 million annually. Similarly, the rate of conversion in recreation counties averaged one-half million acres. However, a larger percent of acreage was lost from SMSA counties than rural.

Because SMSA's differ, the potential influence of factors such as urbanization and population on farmland within these areas also varies widely. For example, the nonfarm affect on farmland use and value is much stronger in Los Angeles County, California than in Doughtry County Georgia--both being SMSA's by definition. Not only are there fewer inhabitants per square mile in the latter county but also the fact that farmland in SMSA's of the South tend to be closely aggregated around a single metropolitan area except for a few States. But in the former county the nonfarm influence is not restricted to the metropolitan area of the city of Los Angeles but extends several hundred miles in all directions, due to the contigous settlement of metropolitan areas.

Regional Difference in Rate of Conversion of Farmland in SMSA Counties

Between 1959 and 1964, five percent of the land in farms in SMSA counties was converted to nonfarm use. The largest percentage reduction in acres occurred in the Northeast and Appalachian Regions. However, a considerable shift in acreage occurred in all regions except the Delta and Pacific. In the Delta States, no change occurred in the percentage of acres devoted to farmland. SMSA Counties, the Pacific Region, which contains approximately 26 percent of the regions, farmland gained 20,000 acres of farmland annually.

The Northeast Region, which occupies 6 percent of the total land area (table 3) and has more than 34 percent of its farmland in SMSA counties, converted nearly 300,000 acres annually to nonfarm use. Roughly twice the acreage shifting to nonfarm use in other regions, except for the Mountain. The latter region which occupy 29 percent of the land area and has 6 percent of the farmland in SMSA counties, coverted nearly 250,000 acres annually. The large shift in acreage in the Northeast occurred in the upper New England States which averaged a 20 percent decline in farmland acreage between 1959 and 1964. The heavy shift in acreage in the Mountain States is caused by a large changes in New Mexico and Arizona during this period.

In the lesser populated SMSA counties in the Corn Belt, Lake States, and Delta Regions, fewer acres of farmland disappeared. In these areas, the pressure from urbanizing fringes remain considerably less than other regions.

Regional Difference in Rates of Conversion of Farmland in Rural Counties

A majority of the 1.5 million acres of farmland lost in rural counties took place in the South and Northeast. With the relative absence of urban counties, industrial growth and increased population relied mostly on rural farmland for expansion. Also, the South contains a high proportion of small family farm units. With increasing importance attached to efficiency of operation and the availability of off-farm employment, many small owners have abandoned their farms in search of greater returns for their labor. On an average, the Southeast and Appalachian Region lost three-quarters

of a million acres of farmland annually since 1959. Slightly fewer acres were lost in the Northeast. However, due to the smaller farmland area, a larger percentage of acres shifted in the latter region, principally to residental, recreation, forest and some urban related uses. The Corn Belt and Pacific Regions both lost slightly more than a quarter of a million acres annually.

A myth that exists in reference to farm enlargement is the belief that land voluntarily removed from production is recaptured by neighboring farms striving to enlarge. However, in some areas parcels of abondoned farmland are so dispersed and small in size that it is economically unfeasible to incorporate them into larger size units. Thus in these areas, a substantial quantity of land is lost to lower valued use and contributes to the high conversion rate in these areas.

It is rather difficult to quantify the exact number of acres of land that actually shifts uses, since in some areas land reclamation occurs at about the same rate as conversion to nonagricultural uses. In addition, changes in census definition of a farm also serves to bias estimates of land in farms from year to year. Hence, changes in the number of acres of land in farms can be misleading. For example, in the Delta States, many have been converted annually from forest land to farmland. In the Mountain and Pacific States, new land has been placed under irrigation.

Regional Difference in Rate of Conversion of Farmland in Recreation Counties

In 1964, all regions except the Northern Plains, Delta, and Mountain Regions lost farmland in recreation counties. Of the half million acres disappearing annually, the largest acreage was lost in

the Lake States--140,000 acres in 1964. About 20,000 acres shifted to nonfarm use in the Northeast. In the Lake States, large acreages of farmland border principle recreation sites and are heavily consumed in the development and expansion of new ones. Also growth in population along the Eastern Coast and the Southeast will continue to apply pressure to farmland for use in recreational development. The half million acres per year that disappeared between 1959 and 1964 probably reached nearly one million acres by 1970.

Roughly 340,000 acres of farmland was gained in recreation counties of the Mountain Region. The majority of these acres were previously idle. Increased acreage in the Delta occurred because of land clearance. However, the shift of cotton acreage westward has also resulted in a greater number of open acres being converted to forestry.

FARMLAND VALUES

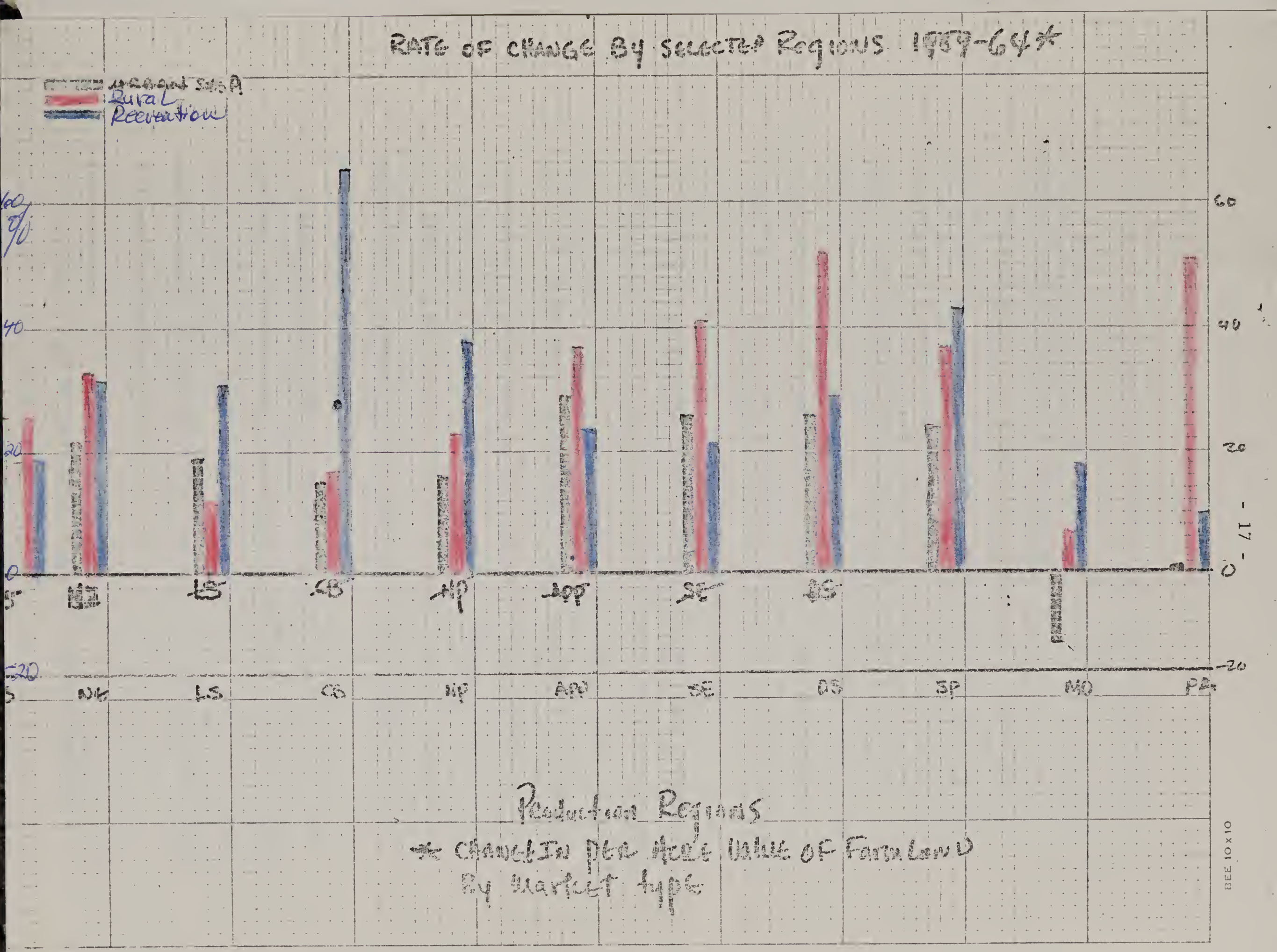
Farmland values have been and remain a complex phenomenon. This is even more pronounced with respect to the value of various market types of land, and especially individual tracts. Having focused upon farmland as a physical input, this section is primarily keyed on variations in market values and the influence exerted by different variables.

Between 1959 and 1964, the average value of farmland in SMSA, rural and recreational counties increased dramatically in all production regions except in SMSA counties of the Mountain Region (table 4). Nationally, the average value of farmland in SMSA counties was $453 per acre--up 17 percent from 1959 (figure 2).

Table 4.--Farmland: Average value of farmland in SMSA, rural, and recreation counties by selected years, 1950-1964

Region	SMSA				Rural				Recreation			
	1950	1954	1959	1964	1950	1954	1959	1964	1950	1954	1959	1964
	Dollars											
Northeast	172	215	306	374	78	96	125	166	63	68	85	112
Lake States	135	176	214	255	85	104	153	171	51	58	67	88
Corn Belt	185	252	347	398	125	163	217	253	32	40	60	99
Northern Plains	105	136	178	207	45	56	73	90	17	22	29	40
Appalachian	127	162	235	304	79	97	133	182	75	90	122	151
Southeast	88	139	254	319	47	61	109	154	54	96	178	217
Delta States	81	127	178	228	62	83	119	181	50	64	99	128
Southern Plains	82	109	152	189	43	55	70	96	37	58	86	123
Mountain	78	104	162	140	21	29	41	44	24	30	40	47
Pacific	237	344	620	624	88	123	146	220	73	97	138	152
United States	130	190	386	453	60	76	102	129	41	51	69	82

Source: Census of Agriculture, Vol. I, 1950 and 1964.


RATE OF CHANGE BY SELECTED REGIONS 1959-64*
Urban SMSA
Rural
Recreation
100 %
40
20
0
-20
60
40
20
0
-20
NE
LS
CB
MP
APP
SE
DS
SP
MO
PA
Production Regions
* Change in per Acre Value of Farm Land
By Market type

In contrast, the average value of rural and recreational farmland reached $129 and $82--an increase of 27 and 19 percent respectively 2/.

Farmland in SMSA Counties in the Pacific

The average value of farmland in SMSA counties ranged from a high of $624 per acre in the Pacific to $140 per acre in the Mountain Region. Generally, the higher valued farmland in the Pacific results from the rich soil and adaption of various crop in the California specialty area. Also capitalized into this value is the strong urbanizing influence present throughout much of California. In 1964, the average value of farmland in SMSA counties of California was $656 per acre--a decline of $13 per acre from 1959.

Strong increases were recorded in the Corn Belt and Northeast. Several factors serve to influence higher values within these regions. First, as noted earlier, principle cities are located in the better land areas (Corn Belt). Consequently large quantities of land have value to agriculture only, but the average value is strongly affected by urban influence. Secondly, these values reflect the quality and also intensity of land use. In the Northeast, average values are responsive to a generally short supply and large nonagricultural demand for farmland.

Among individual states within this region, average values of farmland in SMSA counties rose to $702 in Maryland; New Jersey, $638; Connecticut, $603; and Rhode Island $482 per acre. Increased urbanization in most of these States has resulted in a substantially higher tax base for farmland.

2/ Average values by individual States are shown at Appendix B.

Over the last two decades and with the exception of the Mountain Region, the lowest valued farmland in SMSA counties has been in the South. But as shifts in emphasis away from agriculture have occurred, land values there have increased at twice the rate of other regions. In 1964, the average value of farmland in SMSA counties in the Southeast Region was $319 per acre--up 26 percent from 1959 and nearly 130 percent from a decade earlier. Perhaps, these value changes suggest that farmland in this region is strongly affected by industrial growth.

Corn Belt in Rural Farmland Values

Average farmland values in rural counties ranged from a high of $253 per acre in the Corn Belt to $44 per acre in the Mountain Region. Followed closely, average values in the Pacific stood at $220 per acre. High values in the latter region reflect strong values in California. Long run variations in regional values for farmland in rural counties are also attributed to factors characterizing variations in farmland values in SMSA counties. Notably, even though farmland values in SMSA counties remain higher in absolute terms, farmland values in rural counties have increased at a faster rate.

The most dramatic change in rural farmland values occurred in the South. For example, increases of: 52 percent occurred in the Delta Region, 41 percent in the Southeast, and 37 percent in both the Southern Plains and Appalachian Region. Comparable values among other regions occurred only in the Pacific and Northeast, 51 and 33 percent respectively (figure 2).

The average value of farmland in counties with a predominately recreational base was considerably less than land in rural or SMSA counties. The average value of farmland in recreational counties was $82--up 19 percent from five years earlier (table 5). High valued recreational farmland was found in the Southeast and Pacific, $217 and $152 per acre respectively. Corresponding low values occurred in the Mountain and Lake States, $47 and $88 per acre. In several Regions, recreational farmland increased in value faster than did rural or SMSA between 1959 and 1964.

FACTORS INFLUENCING VARIATIONS IN LAND PRICES

As shown by data in this study, the value of farmland in SMSA counties varies among regions. Von Thunen has indicated that land near the metropolitan core is valued more highly and more intensively used. As the distance from the metropolitan center increases, prices tend to trend downward because of reduced locational advantage and intensity of use. However, extreme variations in land values are noted within constricted areas of the metropolitan area. These differences result from specialization of land use patterns caused by increased nonagricultural demand for land.

For example, a substantial quantity of the land that shifts from agricultural use in SMSA counties can be traced directly to urban sprawl and local development. The higher valued land being used in the development of subdivisions, shopping centers, highrises and other intensive uses. Because such lands are generally well suited for immediate development, away from but within reasonable commuting distance to places of work, their values are pushed upward as the urban fringe expands. In addition, land in nonfarm uses

can usually yield greater returns than farmland, hence, nonfarm buyers are willing to pay more than farm operators. Their action serves to push up the prevailing market price and create a kind of spillover effect on nearby lands. When a particular tract of land is transferred to nonagricultural use, land values in the immediate vacinity are adjusted upward to reflect their strategic location for similar use. In most cases, this price is inflexible downward.

Lower valued farmland in urban areas tends to shift to corresponding lower valued nonagricultural uses, such as, roads, reservoirs, and other less intensive use. The market price for farmland for these uses varies substantially from that used to construct highrises or shopping centers. Therefore, it is not uncommon to find lands within a 10 mile radius valued at totally different prices.

Effect of Population on Land Values

Farmland in SMSA counties should be expected to increase faster in value than rural farmland because of population pressure. In order to observe the aggregate effects of population on SMSA and rural farmland values, the nation's farmland was divided into four regions (see table 5). In regions I and II where approximately 60 percent of the total population resided in 1964, the value of farmland in SMSAs increased at a slightly faster rate than rural values. However, in regions III and IV, where the remaining 40 percent of the population was located, farmland values in SMSA counties increased at a much slower pace than did rural. While there appears to be little difference in the rate of increase between farmland values in SMSA and rural counties in regions I and II, a marked difference favoring the rural sector is evident in Regions III and IV.

Table 5.--Farmland: Acreage, value and percentage change by selected regions, 1959 and 1964

Region 1/	Total			SMSA			Rural			Recreational		
	Average value per acre		Percent change	Average value per acre		Percent change	Average value per acre		Percent change	Average value per acre		Percent change
	1959	1964		1959	1964		1959	1964		1959	1964	
I----------	205	239	17	310	365	18	186	218	17	71	96	35
II----------	129	183	42	197	293	49	121	172	42	130	161	24
III---------	78	102	44	157	193	23	72	95	32	55	76	38
IV----------	101	110	18	196	216	10	66	84	27	71	78	10
Subclass----				285	334	17	58	71	18			

1/ Region I includes the Lake States, Corn Belt, Northeast and Appalachian Regions, Region II includes The Southeast and Delta States, Region III includes the Plains States, Region IV includes Mountain and Pacific Regions.

*In the subclass, the following States were deleted from the urban sector: Arizona, Montana, Idaho, New Mexico and Nevada. In the rural sector California was deleted.

In region III particularly, the majority of the land in farms is within rural counties and overshadows part of the gain in urban counties. In region IV, several states contain few SMSA counties and perhaps serves to lower the real SMSA value. Therefore, the percentage change in values shown probably does not reflect the true influence of population on farmland values. However, the deletion of those states with fewer than three SMSA counties and California in the rural class which has few rural counties produced a subclass (table 5). The net effect of omitting these counties show that farmland values in SMSA counties still increased slower than rural, but by a very small margin. Probably, between the intercensus period, the higher priced farmland near the metropolitan area was sold for nonfarm use leaving low valued land in farms. Thus the rural average was lower in 1964.

It is interesting that in regions I and III, the value of farmland in recreation areas increased faster than either SMSA or rural farmland between 1959 and 1964. In region IV, land in recreation areas increased at a comparable rate with that in SMSA areas.

CONCLUSIONS AND IMPLICATIONS

Growth and affluence of our populace have resulted in increased demands on land near metropolitan and smaller rapidly urbanizing areas. Between 1950 and 1964, large acreages of farmland were lost as urbanization began. But this trend slowed appreciably after 1959 in all regions except those of the South, Northeast, and Pacific.

In 1964, slightly less than 40 percent of the land lost from farms occurred in SMSA's. The migration of industries and people

to metropolitan and fringe areas of the South will continue to demand large acreage of currently used farmland. Increasing demands from population and recreation in the Northeast will also apply continuous pressure on the short supply of farmland in that region. In the Pacific where large concentration of people and major crops already inhabit the same SMSA will convert still larger acres to nonfarm uses.

Farmers caught in the midst of such a land squeeze as is presently occurring in parts of California and elsewhere could be affected. Many could be forced to abandon their farm since the higher tax cost resulting from the presence of urbanizing areas could make farming uneconomical. Others may attempt to relocate on less valued land in which case their total output is likely to initially decline. Also, the purchasing power of their assets at the time of sale will probably be reduced, especially if they bought the land in recent years.

On the other hand, farmers who hold on to their land will reap substantial appreciation at the time of sale.

Nationally, the prospect for continued upward rising prices of farmland appear good as growth in our economy occurs. Farmland near the metropolitan areas will be strongest, reflecting increased pressure from urbanization, recreation and local growth. At the same time, farmland further away from large cities will reflect increasing alternative farm and nonfarm uses.

Appendix A, Table 13.--Farmland: Average value and percentage change in urban counties by regions for selected years, 1950-64

State and Region	Value				Percentage change		
	1950	1954	1959	1964	1950-54	1954-59	1959-64
	Dollars						
Maine	79	88	132	171	11	50	30
New Hampshire	96	111	164	215	16	48	31
Vermont	-	-	-	-	-	-	-
Massachusetts	207	242	320	405	17	32	27
Rhode Island	233	334	392	482	43	17	23
Connecticut	282	310	478	603	10	54	26
New York	139	167	227	256	20	36	13
New Jersey	274	415	606	638	52	46	5
Pennsylvania	163	204	276	333	25	35	21
Delaware	205	275	396	467	34	44	18
Maryland	187	261	407	702	40	79	50
Northeast	172	215	306	374	25	30	22
Michigan	139	193	279	318	39	31	14
Wisconsin	164	189	266	326	15	41	23
Minnesota	96	124	249	285	29	101	39
Lake States	135	176	214	255	30	22	19
Ohio	179	242	340	398	35	40	17
Indiana	173	244	320	376	41	31	18
Illinois	231	319	456	512	38	43	12
Iowa	175	216	268	290	23	24	8
Missouri	122	169	224	263	35	36	17
Corn Belt	185	252	347	398	36	38	15
North Dakota	66	85	113	145	29	33	28
South Dakota	119	156	192	199	31	23	4
Nebraska	143	186	253	290	30	36	15
Kansas	106	135	177	205	27	31	16
Northern Plains	105	136	178	207	30	31	16
Virginia	133	180	241	313	35	34	30
West Virginia	85	106	112	139	25	6	25
North Carolina	110	140	219	297	27	56	36
Kentucky	194	237	324	422	22	37	30
Tennessee	133	169	244	288	27	44	18
Appalachian	127	162	235	304	35	45	29
South Carolina	74	100	168	204	35	68	21
Georgia	77	118	211	289	53	79	37
Florida	142	233	442	506	64	90	15
Alabama	68	90	141	189	32	57	34
Southeast	88	139	254	319	58	83	26
Mississippi	48	80	115	152	67	44	32
Arkansas	91	118	150	220	30	27	47
Louisianna	110	158	237	270	44	50	14
Delta States	81	127	178	228	57	40	26
Oklahoma	57	74	102	145	30	38	42
Texas	87	115	161	197	32	40	22
Southern Plains	82	109	152	189	33	39	24
Montana	23	31	33	42	35	6	27
Idaho	123	158	267	268	29	69	2
Wyoming	---	---	---	---	--	--	--
Colorado	45	60	116	134	33	93	16
New Mexico	29	63	141	150	117	124	6
Arizona	49	65	237	153	33	265	-35
Utah	92	133	184	197	45	38	7
Nevada	57	46	56	90	-19	22	61
Mountain	78	104	162	140	33	56	-11
Washington	209	270	327	407	29	21	25
Oregon	215	270	362	462	27	34	28
California	242	358	669	656	48	87	2
Pacific	237	354	620	624	49	80	1
United States	140	199	286	4[illegible]	46	103	17

Table 15.--Farmland: Average value and percentage change in land in rural counties by regions for selected years, 1950-64

State and region	Value				Percentage change		
	1950	1954	1959	1964	1950-54	1954-59	1959-64
	Dollars				Dollars		
Maine	52	58	78	93	13	43	19
New Hampshire	69	92	106	135	34	15	27
Vermont	54	58	79	100	8	36	27
Massachusetts	127	140	256	276	10	83	8
Rhode Island	---	---	---	---	--	--	--
Connecticut	150	197	235	303	31	19	29
New York	75	87	112	144	15	29	29
New Jersey	301	395	431	689	31	9	60
Pennsylvania	69	87	115	147	25	32	28
Delaware	92	127	203	292	38	60	44
Maryland	93	134	193	282	43	44	46
Northeast	78	96	125	166	23	30	33
Michigan	91	121	173	209	33	43	21
Wisconsin	83	94	122	142	13	30	16
Minnesota	84	105	167	180	25	59	8
Lake States	85	104	153	171	22	48	12
Ohio	115	156	207	252	36	33	22
Indiana	126	180	247	289	43	37	17
Illinois	159	211	282	333	33	34	18
Iowa	159	197	253	270	24	28	7
Missouri	62	79	109	147	27	38	35
Corn Belt	125	163	217	253	30	33	17
North Dakota	28	34	52	67	21	53	29
South Dakota	30	39	52	63	30	33	25
Nebraska	56	70	86	106	25	23	23
Kansas	64	77	177	205	20	130	16
Northern Plains	45	56	73	90	24	30	23
Virginia	76	99	128	173	30	29	35
West Virginia	60	66	73	91	10	20	25
North Carolina	99	131	183	251	32	40	37
Kentucky	79	91	130	173	15	43	33
Tennessee	71	84	115	164	18	37	43
Appalachian	79	97	133	182	23	37	37
South Carolina	70	89	131	171	27	47	31
Georgia	42	57	91	127	36	60	40
Florida	45	82	158	227	82	93	44
Alabama	44	52	78	109	18	50	40
Southeast	47	61	109	154	30	79	41
Mississippi	56	74	104	151	32	41	45
Arkansas	61	77	112	185	26	45	65
Louisianna	77	110	160	229	43	45	43
Delta States	62	83	119	181	34	43	52
Oklahoma	51	64	102	145	26	59	42
Texas	42	53	67	96	26	26	43
Southern Plains	43	55	70	96	28	27	37
Montana	14	21	42	54	50	100	29
Idaho	101	133	171	159	32	29	7
Wyoming	13	15	22	26	15	47	18
Colorado	29	36	52	70	24	44	35
New Mexico	18	32	40	36	78	25	-10
Arizona	11	24	33	37	118	38	12
Utah	33	32	46	42	-3	33	- 9
Nevada	29	35	68	66	21	94	- 3
Mountain	21	29	41	44	38	41	7
Washington	72	101	76	135	40	25	78
Oregon	41	54	43	99	32	20	130
California	144	205	310	395	42	51	27
Pacific	88	123	146	220	40	19	51
United States	60	76	102	129	27	34	26

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~~Appendix~~, Table ~~[illegible]~~--Farmland: Average value and percentage change in recreation counties by regions for selected years, 1950-64

State and Region	Value 1950	Value 1954	Value 1959	Value 1964	Percentage change 1950-54	Percentage change 1954-59	Percentage change 1959-64
	Dollars						
Maine	50	52	52	79	4	19	27
New Hampshire	74	81	101	137	10	25	36
Vermont	--	--	--	--	--	--	--
Massachusetts	--	--	--	--	--	--	--
Rhode Island	--	--	--	--	--	--	--
Connecticut	--	--	--	--	--	--	--
New York	--	--	--	--	--	--	--
New Jersey	--	--	--	--	--	--	--
Pennsylvania	78	82	115	147	5	40	28
Delaware	--	--	--	--	--	--	--
Maryland	--	--	--	--	--	--	--
Northeast	63	68	85	112	8	25	32
Michigan	53	65	80	107	23	23	34
Wisconsin	52	55	122	142	6	122	16
Minnesota	38	40	33	58	5	- 18	76
Lake States	51	58	67	88	14	16	31
Ohio	--	--	--	--	--	--	--
Indiana	45	50	94	96	11	88	2
Illinois	53	66	86	129	25	30	50
Iowa	--	--	--	--	--	--	--
Missouri	29	36	55	95	24	53	73
Corn Belt	32	40	60	99	25	50	65
North Dakota	--	--	--	--	--	--	--
South Dakota	18	23	30	40	28	30	33
Nebraska	12	18	24	37	50	33	54
Kansas	--	--	--	--	--	--	--
Northern Plains	17	22	29	40	29	32	38
Virginia	83	98	135	161	18	38	19
West Virginia	42	58	65	73	38	12	12
North Carolina	86	106	158	198	23	49	25
Kentucky	47	55	59	77	17	7	31
Tennessee	107	124	177	243	16	43	37
Appalachian	75	90	122	151	20	36	24
South Carolina	50	60	114	129	20	90	13
Georgia	43	65	99	138	51	52	39
Florida	68	163	315	358	140	93	14
Alabama	50	55	89	121	10	62	36
Southeast	54	96	178	217	78	85	22
Mississippi	53	66	104	151	25	58	45
Arkansas	39	48	60	100	23	25	67
Louisianna	79	110	161	200	39	46	24
Delta States	50	64	99	128	28	55	29
Oklahoma	--	--	--	--	--	--	--
Texas	37	58	86	123	57	48	43
Southern Plains	37	58	86	123	57	48	43
Montana	23	35	44	56	52	25	18
Idaho	58	73	85	94	26	16	11
Wyoming	16	18	27	31	13	50	15
Colorado	36	39	54	51	8	38	- 6
New Mexico	14	14	19	28	2	7	153
Arizona	10	15	35	28	50	133	-20
Utah	46	47	63	70	2	34	11
Nevada	13	14	26	31	8	85	19
Mountain	24	30	40	47	25	33	18
Washington	77	100	168	136	42	54	-19
Oregon	47	56	76	83	19	36	9
California	104	139	189	247	34	36	31
Pacific	73	97	138	152	32	42	10
United States	41	51	69	82	24	35	19