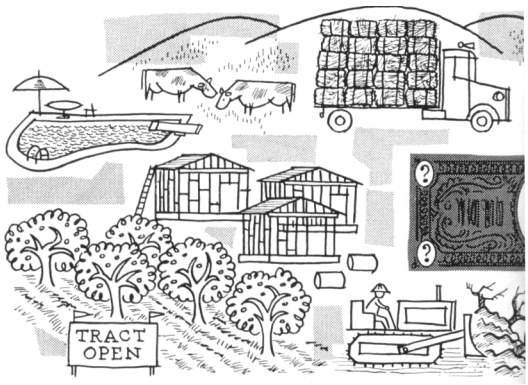
# Problems on the RURAL-URBAN FRINGE




C. C. HARRIS, J

## *Urban Growth and Agricultural Land Use in Sacramento County*

**Total population in Sacramento County increased 81% between 1950 and 1960; but farm population decreased 51%. Projections for Sacramento County indicate a population of 1 million before 1980 and about 2.5 million around the year 2000. This rapid urban growth already has had far-reaching effects on agriculture. Not only does urban growth require additional land, but it has effects on the use of land that remains in agriculture. This study reviews and analyzes several of these effects.**

IF THE DECADE of the fifties is any indication, urban land requirements will increase at a faster rate than population. In the Sacramento urbanized area, population increased 113% and land area increased 221% between 1950 and 1960. These changes were typical for all urbanized areas in the United States.

### Move to suburbs

The move into the suburbs brought urban sprawl—a situation in which land is withdrawn for urban use, but is not actually used for urban purposes. In Sacramento County, it was estimated that twice as many people could be settled on land that is already within the urbanized area. When related to the population projections, this means that the expected population growth to about 1975 could be handled without any expansion in the boundaries of the 1960 urbanized area. This estimate does not call for any sacrifice in the style of living in low density single dwellings. A completed suburban residential area with schools, streets, and small parks, currently has a density of 6,000 to 8,000 persons per square mile. The 1960 density of the Sacramento urbanized area was 3,373, which leaves ample room for twice as many people.

If sprawl continues at the rate indicated in 1960—that is, withdrawing twice as much land as is actually being used—it is estimated that all of Sacramento County, except the Delta area and the southeastern foothills, would be classified as urban before the year 2000.

### Effects on land use

In addition to the direct physical takeover of land, urban growth can affect the use of land remaining in agriculture. These effects can be seen to some extent by the changes in the intensity of land use and the values of the crops produced. Intensity is related to the use of capital and labor—the more capital and labor used on a parcel of land, the more intensive its use.

In some respects, urban growth stimulates more intensive use of agricultural land. The growth of a large urban center means a growth in the local consumers' market and additional demand for high-value and locally-produced perishable farm products. In other respects, however, the effect is just the opposite. On poor quality land and land very close to the approaching urban area, the intensity is sometimes very low or the land may even be idle. Often, it will not pay to put capital improvements on land that soon will be converted to urban use; and if ownership passes to a nonfarmer, the likelihood of the land being idle is increased.

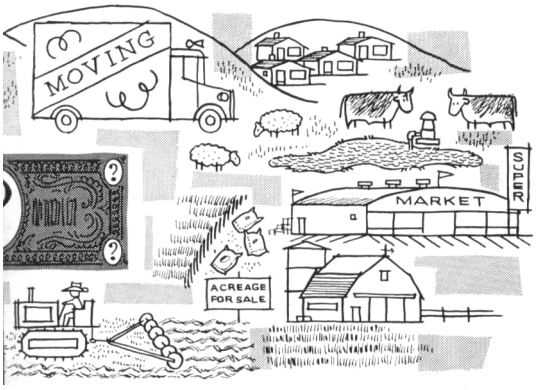
Not all changes in land-use intensity are due to urban growth. Technological advances and changes in costs of production also cause intensity changes, and may even be the dominant factors.

Past urban growth patterns in Sacramento County were related to agricultural land use to determine what past changes in general farming areas within the county were due to urban growth and what changes were due to other economic conditions. Projections as to what commodity groups would be affected directly by future urban growth were made with the aid of a map of the location of agricultural commodity groups within the county for 1961.

In Sacramento County, the physical takeover of land has decreased the acreage of walnuts, olives, small grains, and dry pasture; but the loss in total value has been very small. Increased demand from Sacramento and other urban areas stimulated the dairy industry and the drylot beef feeding operations. Lying in the path of future urban growth of the next 20 to 30 years, are an estimated 65 to 75% of the dairy operations with irrigated pasture, 50 to 65% of the remaining small grain enterprises, a few scattered orchards, 12 to 20% of the row crop acreage, 65 to 75% of the riceland, and most of the present poultry operations.

### Time for adjustments

If these operations were eliminated overnight, it is estimated that gross farm income in the county would drop about one third. But urbanization does not take place that fast—there would be time for adjustments. It is expected that the dairy industry will become concentrated into one or several small areas, utilizing drylot feeding, and that the poultry, row crop, and rice operations will relocate, forcing out less profitable operations. With these expected relocations, the loss of farm gross income due to direct physical take-




# *Uncertainty of Land Values near Urban Centers*

D. J. ALLEE

**Rapid urban growth has an effect on agricultural land values and prices. This is especially true in the rural-urban fringe (lands adjacent to large urban centers), since in the foreseeable future, land in the fringe will be converted from agricultural to urban use. The urban land requirements are not easily projected. Both the timing and direction of the urban growth are uncertain. This uncertainty makes it difficult to value such land for assessment or taxation as well as for sale—or to detect recognizable patterns of land price behavior.**

over of agricultural land would not be as great. This does not mean that a lower total gross income is projected 20 to 30 years from now, even when expressed in constant prices. Increases in gross income are expected from shifts to commodities that use more capital. These would be due to changes in demand and to increases in technical know-how and productivity.

In some respects, Sacramento's agriculture is fortunate. Most of the land in the direct path of urban expansion is hardpan soil from which net returns are relatively low; and with sewer systems, hardpan soil seems just as suitable for urban use as Class I soils. The bulk of the best soil is located in the Delta, which we assumed unfit for urban use because of floods and peat soils. It is expected that farmers in the Delta, and other areas unsuitable for urban use, will increase their gross income, and possibly their profits, through more intensive use of their land. These areas unsuitable for urban use now produce about two thirds of the gross farm income.

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THEORETICALLY, LAND VALUES in rural-urban fringe areas are based on three factors: (1) the future net returns from agriculture, (2) the future net returns when land is in urban use, and (3) the year in which the land will be converted from agricultural to urban use. Valuation of land expected to remain solely in either agricultural or urban use is a difficult problem; but appraisers have developed procedures that are widely accepted. When appraisals are made on many parcels of land, as for tax purposes, there usually is no major problem in obtaining uniform values. But in the rural-urban fringe, uncertainty plays a major role. Because of the uncertainty of the rate and direction of urban expansion, well-established procedures for valuating fringe land and have not been developed and cannot be applied with any high degree of uniformity. In addition, uncertainty makes it almost impossible to determine, or even approximate, the exact year land will be converted.

The year of conversion is a crucial element in determining value. Two parcels of land being used for the same agricultural purpose, and both having the same expected urban use, would have different values if one parcel is expected to convert five years from now and the other in ten years. Because of uncertainty, individuals who make estimates of the year of conversion for a particular parcel of land come up with different answers. Thus, a wide variation in prices and appraised values is observed in the rural-urban fringe.

An important question is, "Do prices reflect values?" That is, can an appraiser use land prices as values or as indicators of values? Certainly, any price that an individual buyer is willing to pay represents the value to him; but this does not mean that it is a market value. A buyer may be willing to pay $100 a share for General Motors stock, but he would be foolish to pay more than the market value, which is closer to $80.

In the stock market, prices are market values because the product is homogeneous, there are many buyers and sellers, one participant cannot influence the price with his action, and the frequency of sales is high. These conditions do not hold in the land market. No two parcels of land are alike. Even the differences in land location distinguish the product, for location is part of the product. There are not many buyers and sellers, and the bargaining of only two participants can set the price. The frequency of sales for comparable property is low, with many of the buyers and sellers being once-in-a-lifetime participants with lack of knowledge. Under these conditions, extreme prices are not ruled out. Prices can be based on unrealistic expectations of future income and other events. There is no averaging or consensus of expectations as in the stock market.

Land market conditions cause prices to vary widely from sale to sale without any recognizable pattern, making explanations of the variations difficult. This is especially true in the rural-urban fringe, as is borne out in a study of land prices in Sacramento County. In the fringe, the unpredictable effects of the market conditions are compounded by the uncertainty of the rate and direction of urban growth.

### Sacramento County prices

The value of land for urban purposes is greater than that for agricultural purposes, otherwise agricultural land would not be converted to urban use. Urban uses are more intensive than agricultural uses; the improvements per acre have a higher value in urban use. Often the value of land is only a small fraction of the total value of the property when fully improved. Thus, land is worth more for urban purposes, and values in the fringe, where land will be converted in the foreseeable future, would be higher than