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R. D. LEWIS, DIRECTOR
College Station, Texas

BULLETIN NO. 688

APRIL, 1947

**THE PRICE OF TEXAS
FARM AND RANCH LANDS**

JOE R. MOTHERAL

Department of Agricultural Economics and Sociology

and

JOHN H. SOUTHERN and SAMUEL L. CROCKETT

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AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS

GIBB GILCHRIST, President

To the farmer, an investment in land is necessarily a matter of serious concern, particularly during periods of rising land prices. During the past five years there has been an insistent demand for information about trends in the market for farm and ranch land in Texas. The Texas Agricultural Experiment Station and the Bureau of Agricultural Economics, USDA, have attempted to meet this demand through a continuing study of land transfers in selected sample areas.

This report presents the findings based upon a 26-year record, 1920-1945, of sales in 24 counties. It covers four significant periods—postwar, depression, recovery, and the war years. A more detailed analysis is offered for the war years, 1941-1945, in three counties for special study—Ellis, Jones, and Nacogdoches.

For those who are concerned with the future of land prices in Texas, careful consideration of what has happened in other years may help materially in finding the answer to what lies ahead. It is the purpose of this bulletin, as well as the 12 progress reports that have preceded it, to eliminate some of the guesswork from land purchases as they affect the well-being of rural people.

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THE PRICE OF TEXAS FARM AND RANCH LANDS 1920-1945

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The purchase of a farm is a milestone in the life of any farmer. It is the one conventional act in agriculture which may be performed in a day, and yet affect a farmer's future and the future of his family for years.

An error in judgment may spoil the best of his earning years; while wisdom in the selection of the location, size, soil type, and improvements most suitable to the farm family can spell success for the father and smooth the way for the generation that follows. Of all the factors of selection in a land purchase, none is more important than the amount and terms of the financial commitment involved. Every prospective buyer of land is confronted with the problem of reconciling the price to be paid with the long-time productive capacity of a particular farm or ranch.

Land prices become a subject of special interest during and immediately after a war, because relationships between costs and income which appear to be fairly well established are altered greatly during such periods. Income and subsequently land prices rise, often very rapidly, and the bases for investment-evaluation become more complicated and uncertain. The current postwar situation is no exception.

Since the beginning of recovery in business and agriculture during the late 1930's, the demand for information about trends in land prices has increased steadily. Landowners, tenants, non-farmer buyers, returning veterans, and farm loan organizations, have been concerned particularly; however, the implications of potential dislocation in agriculture by no means have escaped the attention of the general public. Memories of the slump that followed the first World War still are fresh in the minds of many people throughout the State.

As a result of this interest, a study of the land market in Texas was started in 1942 by the Bureau of Agricultural Economics, U. S. Department of Agriculture, in cooperation with the Texas Agricultural Experiment Station.¹ While it was not possible to examine land sales in all parts of the State, three counties were selected as representative

¹Based upon this study the following Progress Reports have been released by the Texas Agricultural Experiment Station: No. 870, 884, 897, 902, 916, 942, 948, 956, 971, 972, 987, and 1015.

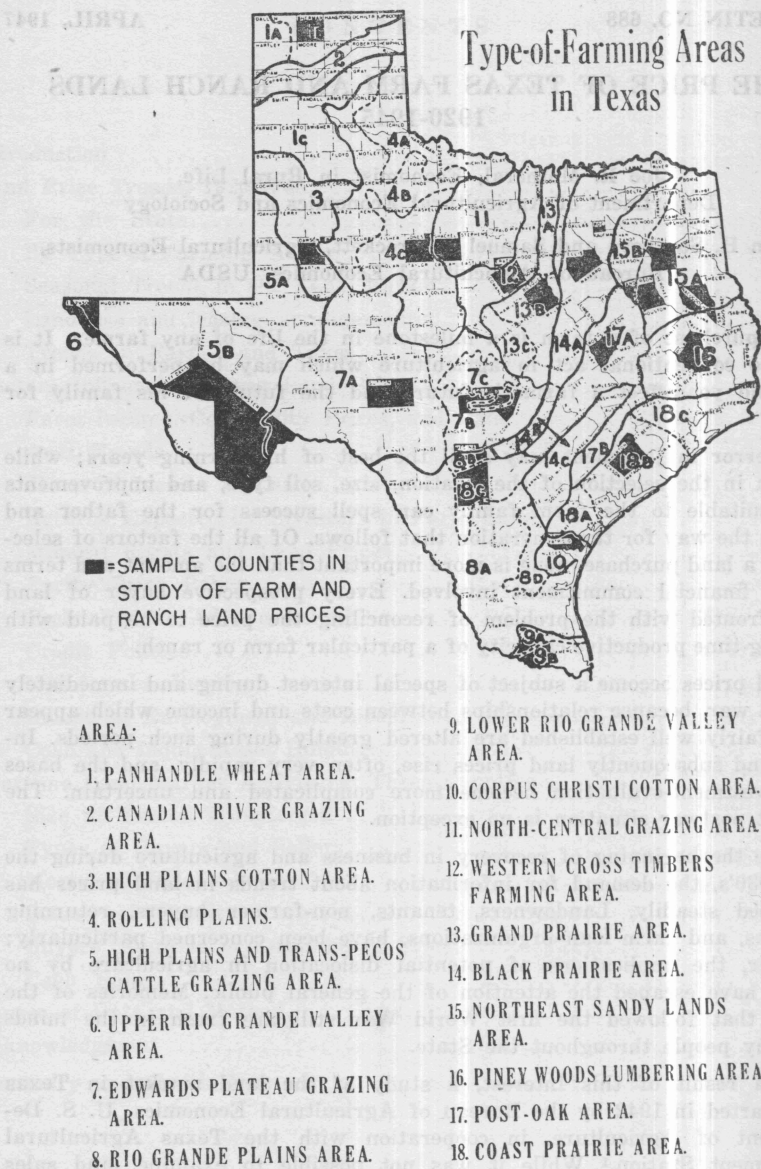


Figure 1. Map showing location of sample counties with respect to type-of-farming areas.

of as many major farming areas. These furnished the basis for a continuing analysis that was believed to have considerable application to general characteristics of the land market.

In 1945 the three-county data were supplemented by the collection of information on land prices in 13 additional counties.² A record of land sales was obtained in these counties for the period 1920 through 1944, thus providing a recent history of land prices in the State. The presentation of this material was limited primarily to an interpretation of data, without much emphasis upon causal relationships. It was evident that a larger sample was needed for a more thorough study of the basic factors operating in the land market. Consequently, early in 1946 information was obtained for 1945 in the counties previously studied, and 8 more counties were added to bring the total to 24. This report is based upon that material.³

This report presents the average annual price paid per acre in 16 different type-of-farming areas during the last 26 years. While the data are not available for certain of these years in 5 type-of-farming areas, the only area omitted entirely is the Canadian River grazing area. The report also offers an index figure over the same period which reflects price trends on a statewide basis.

Since the land market functions as a part of a broader economic system, an effort is made to single out those forces which exert a dominant influence and to demonstrate the extent of their effect upon land prices. Insofar as possible, price trends in specific areas are shown in their relationship to the prices of the major commodities produced in those areas. In the three counties in which the details are available, the characteristics of land sales which tended to change the pattern of ownership during the war years are shown in summary form. These include the types and intentions of buyers and the methods of financing that were employed.

For those who are concerned with the future of land prices in Texas, careful consideration of what has happened in other years may help materially in finding the answer to what lies ahead. If this report eliminates some of the guesswork from land purchases as they affect the well-being of rural people, it will have served its purpose.

LAND PRICE TRENDS, 1920-1945

For the State

During the last 26 years, prices of farm and ranch lands in Texas have tended to rise and fall with the tide of national prosperity. The correlation has not been perfect, however. Indicative of this sometimes erratic behavior of land prices in comparison with the general trend in national prosperity was the 1926 break in land prices. This break occurred despite the continued rise in the general price level until 1929.

²See Progress Report No. 971, Texas Agricultural Experiment Station, Nov., 1945.

³For source of data and method see p. 35.

Land, unlike commodities, moves in comparatively large units with a low annual rate of turnover. The land market, therefore, is not highly sensitive to day-to-day shifts in demand nor to short-run fluctuations in the general price level. Evidence of this inertia may be noted in any comparison between trends in land prices and trends in commodity prices, or the income data which usually reflect commodity price levels.

A second reason for the variations between Texas land prices and general business activity is to be found in the kinds of crops and livestock produced on Texas farms and ranches. Trends in the production and prices of important commodities such as cotton have not always coincided with those of industrial goods and other income-yielding products of other states. Moreover, such departures from the general economic trends of the country have been reflected almost unfailingly in a varying demand pressure for land. These qualities of the land market should be kept in mind in interpreting the material that follows.

During 1945 the index of land prices in Texas rose to 79 points above the 1935-1939 average, registering the sharpest gain in any 12-month period since 1926 (Table 1). It was the highest mark reached in 16 years and has been exceeded only twice since a comprehensive record has

Table 1. Average annual sales price per acre and index of farm and ranch land prices in Texas, 1920-1945

Year	Average price per acre	Land price index ⁴
1920.....	\$35.40	200
1921.....	31.50	178
1922.....	30.38	172
1923.....	23.47	133
1924.....	31.44	178
1925.....	26.94	152
1926.....	37.11	210
1927.....	32.03	181
1928.....	33.16	188
1929.....	31.66	179
1930.....	30.17	171
1931.....	25.77	146
1932.....	19.68	111
1933.....	19.29	109
1934.....	18.24	103
1935.....	17.72	100
1936.....	18.24	103
1937.....	18.28	103
1938.....	17.03	96
1939.....	17.11	97
1940.....	18.54	105
1941.....	18.94	107
1942.....	19.50	110
1943.....	23.33	132
1944.....	26.26	148
1945.....	31.69	179

⁴Average annual sales price for the period 1935-1939 = 100.

been kept, in 1920 and during the 1926-1928 peak years. Furthermore, as subsequent discussion will indicate, there are yet no signs of an early leveling-off of land prices.

The low point was reached in 1938 with an index of 96, after an erratic decline from the boom generated in 1920 by the first World War. After 1920 a succession of setbacks in commodity prices dragged the land market downward until, in 1926, rallying commodity prices and record crop production, led by cotton, combined to push the index up to 210. This was the highest point reached during the entire 26 years. The downward trend following this peak lasted for more than a decade and recovery was slow until 1943.

Average land prices are a synthesis of prices paid for many different grades of land and have little meaning in an absolute sense for any one year. Such measures are meaningful, however, when viewed from a relative standpoint over a period of years. They possess another value in that they are susceptible to checking against other sources for reliability. A comparison between census data on the average value per acre of Texas farm land and the averages based on actual sales in Table 1 shows a close parallel, as follows:

	1945	1940	1935	1930	1925	1920
Census ⁵	\$25.29	\$18.81	\$18.70	\$28.85	\$27.77	\$32.45
Table 1	\$31.69	\$18.54	\$17.72	\$30.17	\$26.94	\$35.40

In 1945 land sold on the average at almost double the low price of 1938. This increase from \$17.03 to \$31.69 per acre occurred mostly after 1942 when war-induced commodity price rises began to have an effect upon the land market. Previously there had been four different years when the price per acre of land sold was even higher. They were: 1920, \$35.40; 1926, \$37.11; 1927, \$32.03; and 1928, \$33.16.

By Type-of-Farming Areas

Representative conditions, as shown by the sample counties, indicate that wartime advances in the price of farm and ranch lands were by no means uniform throughout the State (Table 2).

In the Panhandle wheat area (1) the average price rose from \$14.43 per acre in 1940 to \$21.32 in 1945, but it dipped as low as \$12.23 in 1944. There were erratic gains during this period in all the other areas for which data are available, except in the Coast Prairie (18) where there was a small decline from \$42.07 per acre in 1940 to \$40.07 in 1945.⁶

⁵U. S. Census of Agriculture, Texas, Vol. 1, Part 26, 1945.

⁶Land prices in Wharton County, the sample county for the Coast Prairie area, did not behave in accordance with observed conditions in other parts of the area, nor with the logical consequences to be expected from steep rises in the prices of beef cattle, rice, and cotton, the three principal commodities produced there. The explanation probably lies in a sharp differential in the quality of land offered on the market from one year to the next during the war. Wharton County sales activity in 1945 was marked by a large volume of small tracts apparently below average in quality. There were 215 bona fide transfers averaging 102 acres during 1945, as compared with only 24 transfers averaging 137 acres during 1940. In the light of sampling characteristics such as these, caution should be exercised in drawing conclusions from the data for the Coast Prairie area for these years.

Table 2. Average annual sales price of farm and ranch lands in Texas, by type-of-farming areas, 1920-1945.
(In dollars per acre.)

Year	Type-of-farming areas and sample counties ⁷																		State ¹⁰
	1 Sherman	3 Dawson	4 Jones	5 Jeff Davis and Brewster	6 El Paso ⁸	7a Sutton	7b & 7c Blanco and Gillespie	8b & 8c Frio and Medina ⁹	10 San Patricio	11 Shackelford	12 Erath	13b Bosque	14 Rock- wall and Ellis	15 Nacog- doches, Smith, and Anderson	16 Polk	17 Robertson	18 Whar- ton		
1920	19.20	24.19	42.38	3.16	*	13.13	28.33	24.82	106.60	23.05	27.81	25.28	142.33	28.85	10.21	26.87	36.29	35.40	
1921	16.77	24.67	35.72	3.88	*	10.90	27.03	19.99	78.25	16.44	*	63.91	118.24	19.71	16.50	31.67	44.47	31.50	
1922	14.65	25.94	36.47	2.68	*	8.00	22.83	29.20	75.21	15.50	19.67	38.24	108.50	31.04	12.18	18.29	35.00	30.38	
1923	17.49	18.51	37.56	2.59	*	9.53	20.81	16.90	54.17	12.58	16.42	24.95	57.83	22.81	13.10	23.21	36.31	23.47	
1924	14.44	28.88	36.52	3.81	*	10.20	23.44	21.42	78.68	15.96	33.08	26.26	120.06	20.67	19.54	25.90	40.00	31.44	
1925	17.24	31.96	40.91	1.76	*	12.62	22.66	24.26	82.45	18.69	12.73	28.34	71.57	20.48	18.88	26.80	33.03	26.94	
1926	14.78	32.97	42.57	6.95	*	11.01	20.52	34.20	97.91	28.85	27.03	28.14	1128.75	27.77	18.10	34.11	48.86	37.11	
1927	15.63	31.50	50.54	4.76	*	8.52	23.79	23.23	70.84	18.59	25.58	19.96	92.20	23.41	15.78	42.46	39.18	32.03	
1928	19.86	33.42	45.44	5.79	*	13.64	19.55	23.04	80.52	19.70	20.52	21.83	109.27	21.34	17.76	36.91	44.58	33.16	
1929	20.96	34.63	49.53	4.82	160.67	16.82	25.41	31.51	79.09	14.94	26.84	19.51	74.44	21.48	23.70	42.77	33.06	31.66	
1930	25.71	30.59	42.91	8.25	203.83	14.22	17.89	23.35	67.04	26.90	17.38	23.70	83.54	22.00	13.67	32.08	34.77	30.17	
1931	19.26	26.01	36.75	3.14	131.17	11.55	15.34	19.95	62.46	19.08	17.94	17.17	73.06	22.42	17.50	20.22	36.80	25.77	
1932	13.99	24.07	26.14	4.90	125.33	9.21	18.64	15.52	41.00	10.09	13.87	16.45	44.98	21.18	8.14	21.81	30.12	19.63	
1933	17.03	22.55	24.53	4.07	97.89	9.78	15.12	17.23	41.37	15.15	14.03	14.15	43.12	18.10	18.77	18.30	25.40	19.29	
1934	13.37	20.46	25.48	5.06	86.89	9.60	9.94	15.28	35.22	13.39	8.78	*	42.56	13.86	13.22	19.38	31.86	18.24	
1935	12.58	10.62	28.86	2.67	129.71	12.11	12.39	17.34	42.19	17.10	9.38	*	41.72	11.53	11.88	15.46	29.11	17.72	
1936	19.63	17.27	28.20	4.22	110.45	8.47	11.48	12.98	43.68	13.09	9.15	*	38.22	13.47	19.73	13.26	31.91	18.24	
1937	9.38	26.17	29.83	2.52	138.60	9.53	13.15	14.13	47.39	16.28	8.36	*	41.64	14.20	12.37	13.96	33.00	18.28	
1938	10.93	23.11	24.21	2.70	169.87	10.53	14.74	15.82	33.78	18.19	11.40	14.20	35.30	12.73	12.75	8.77	34.88	17.03	
1939	7.98	20.26	27.32	3.41	130.68	8.59	15.26	15.14	36.95	18.49	10.80	14.52	39.40	11.18	11.51	12.07	27.85	17.11	
1940	14.43	24.33	23.02	2.59	197.72	15.45	12.39	17.37	51.32	19.25	11.46	14.26	38.05	11.91	17.48	14.47	42.07	18.54	
1941	13.09	26.54	30.02	3.41	159.89	8.49	18.22	15.09	42.86	20.64	14.12	15.79	38.71	13.12	11.03	11.90	34.02	18.94	
1942	13.02	21.51	33.84	3.41	223.13	8.21	20.32	16.63	56.18	17.90	15.13	17.50	37.79	13.53	14.34	9.86	32.60	19.50	
1943	16.13	32.73	32.94	3.77	176.56	9.02	27.15	23.62	53.08	22.24	21.79	23.69	44.44	17.56	19.41	11.83	32.37	23.33	
1944	12.23	38.36	38.05	3.32	215.51	13.82	28.89	22.37	78.68	29.25	23.04	27.48	46.24	23.82	24.50	21.25	46.78	26.26	
1945	21.32	52.25	51.29	6.57	223.98	*	32.52	31.19	62.45	37.32	27.34	24.68	52.21	27.07	24.50	19.48	40.07	31.69	

*Data not available.

⁷Data for only four years were summarized for Hidalgo county, representing land under irrigation or subject to irrigation in type-of-farming area 9. Average prices were as follows: 1942—\$186.95, 1943—\$183.95, 1944—\$261.98, 1945—\$396.30.

⁸Covers only land under irrigation or subject to irrigation.

⁹Irrigated and dry land combined.

¹⁰State average covers only counties for which complete data are available. Component counties weighted by total land area in respective areas.

¹¹Rockwall County average only for 1926.

In six areas selling prices soared to figures in 1945 that were more than 100 percent higher than the 1940 levels. These areas were the High Plains cotton area (3), Rolling Plains (4), Trans-Pecos cattle grazing area (5), Edwards Plateau (7), Western Cross Timbers (12), and the Northeast Sandy Lands (15).

In most instances the production of cotton, beef cattle, or grain sorghum was identified with the areas having pronounced advances in land prices. However, spectacular increases also occurred where peanuts constituted a major crop. In the Western Cross Timbers prices climbed from \$11.46 per acre in 1940 to \$27.34 in 1945, and were up in the Northeast Sandy Lands from \$11.91 to \$27.07 per acre.

In the Trans-Pecos cattle grazing area ranch property was selling at a figure 254 percent higher than before the war. Smaller ranches in the Edwards Plateau (sub-areas 7b and 7c) were marketed in 1945 at 262 percent of the 1940 prices. It is an open question whether even a continuation of wartime earnings would support for very long such top-heavy capital investments in a grazing economy.

In the five other areas 1945 land prices were the highest on record. Averaging \$52.25 per acre, selling prices in the High Plains cotton area far surpassed any previous annual average in the 26-year history. At \$51.29 per acre, the average in the Rolling Plains exceeded the former peak of 1927. While the story was incomplete in the Upper Rio Grande Valley area (6), land under irrigation or subject to irrigation in that area sold at a top recorded price of \$223.98 per acre. The Piney Woods lumbering area (16), at \$24.50 an acre, passed the old 1929 mark, and the North-Central grazing area (11) set a new high of \$29.25 per acre in 1944, only to climb still higher to an average of \$37.32 the following year.

The slowest land market recovery in the State appeared to be in the Black Prairie area (14). The 1945 average of \$52.21 was barely more than one-third of the top average price of 1920.

Seasonal Trends in the Land Market

Three measures of the amount of turnover of farm real estate are the number of acres sold, the total consideration, and the number of transactions. In Figure 2, all three are utilized to examine the seasonal influence upon sales volume in the land market throughout the State.

The data for 21 counties¹² for a 12-year period were summarized by quarterly intervals to determine to what extent land sales activity customarily varies during different seasons of the year. Each bar in the diagram indicates the proportion of all the transfers through the year that occurred in specified quarters. Nearly 19,000 transactions, involving approximately 5½ million acres valued at 86 million dollars, were condensed into a composite year's business in this summary.

¹²Counties represented in the summary: Anderson, Blanco, Brewster, Dawson, Ellis, El Paso, Erath, Frio, Gillespie, Jeff Davis, Jones, Medina, Nacogdoches, Polk, Rockwall, Robertson, San Patricio, Shackelford, Sherman, Smith, and Wharton.

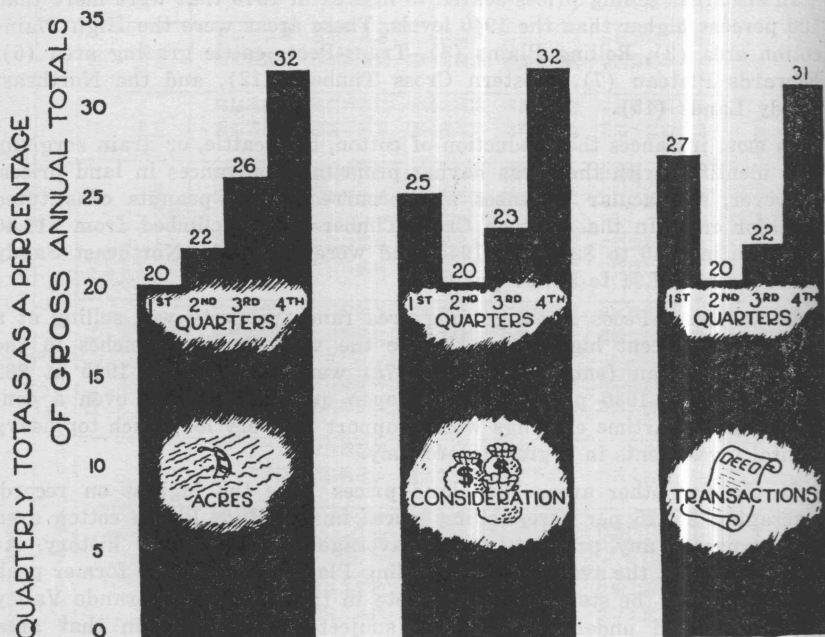


Figure 2. Summary of land sales in 21 selected Texas counties, by quarters 1934-1945.

The market is more active during the last three months of the calendar year than at any other time. Normally, 32 percent of the annual sales in terms of acreage and cash, or cash-equivalent, are made between the end of September and the first of January. Thirty-one percent of the year's total transactions are closed during this period.

The first quarter is second in importance as a season for buying and selling farm real estate, according to the amount of money and number of tracts changing hands (25 percent and 27 percent, respectively). However, fewer acres, 20 percent of the yearly total, are sold during these first three months than in any subsequent quarter. This anomaly gives rise to the question of what *kinds* of farm and ranch land move through sales channels at various times of the year. Further attention will be given to this matter presently.

A mid-year dip may be observed where seasonal trends are measured by the aggregate amount of the consideration and the volume of transactions. In both cases, the turnover in the second quarter consists of 20 percent of the yearly total and for the third quarter rises to 23 percent in the price category and to 22 percent in the number of transactions.

Sales in terms of acres, on the other hand, mount steadily from the low point of the first quarter to the end of the year. This suggests that

the lower-priced, large units are not sold in conformity with the seasonal pattern as valued in dollars and deeds. An investigation of land-selling practices in specific counties will serve to clarify this situation.

Land Use and Leasing Arrangements

To illustrate the seasonal characteristics of the land market under different conditions of tenure and land use, data are shown for three range counties and for three counties in which field crops are the chief source of income (Table 3). This comparison accounts for the discrepancy noted above between the three measures of sales activity in farm and ranch lands.

In areas devoted primarily to grazing and held in large tracts there is no tendency for land sales to be concentrated in the first and last quarters of the year. On the contrary, 59 percent of the sales are made during the middle half of the year. In one major grazing county, Brewster, 73 percent of all transactions in land from 1934 through 1945 were consummated between March and October. Both in Blanco and Jeff Davis Counties the third quarter is the period of maximum sales activity.

In sharp contrast to this practice, most land sales in the field-crop counties are made during the fourth quarter (37 percent) and during the first quarter (29 percent). Scarcely one-third of the selling takes place during the six months in the middle of the year, and in Dawson County the rate is still lower: 23 percent.

Why is there a mid-year sales peak in the range areas and a mid-year decline in field-crop areas? One must look to the comparative types of land use and leasing systems for the explanation.

Beef cattle and wool are two products that dominate the agricultural economy of West Texas. The year's business on cattle closes, or at least

Table 3. Comparative volume of transactions in three range counties and three field-crop counties, combined by quarters, 1934-45

Counties	Combined quarterly totals									
	First quarter		Second quarter		Third quarter		Fourth quarter		Total	
	No.	Per-cent	No.	Per-cent	No.	Per-cent	No.	Per-cent	No.	Per-cent
Range counties										
Blanco.....	120	21	142	26	170	30	130	23	562	100
Brewster.....	27	11	103	43	73	30	39	16	242	100
Jeff Davis.....	20	21	19	20	28	30	28	29	95	100
Total.....	167	19	264	29	271	30	197	22	899	100
Field-crop counties										
Dawson.....	406	37	144	13	105	10	444	40	1,099	100
Ellis.....	537	27	376	19	393	20	681	34	1,987	100
Rockwall.....	126	23	91	16	120	22	215	39	562	100
Total.....	1,026	29	611	17	618	17	1,340	37	3,638	100

becomes relatively static, when the stock is marketed. Range conditions and other factors sometimes force an adjustment in marketing dates, but normally the busiest months are in the spring and fall. It is then that prospective buyers are most likely to have the funds for the purchase of land, and prospective sellers are most likely to be receptive to offers. A corresponding break in wool production comes at the season when lambs are weaned, ordinarily during August and September.

Another important influence is the length of the lease on rented lands. Most grazing leases, being adjusted to the time factor in livestock enterprises, run for a term of years rather than expiring annually.¹³ Often neither buyer nor seller, therefore, has any occasion to be concerned about the imminence of a terminating lease and can negotiate a sale whenever funds such as receipts from the marketing of livestock become available. Also, many grazing leases terminate in the spring rather than at the end of the calendar year.

In areas such as the Black Prairie and the High Plains cotton area, the entire mechanism of production is geared to a strictly annual cash crop and, in the case of tenant-operated farms, almost wholly to a system of one-year leases terminating on the last day of December.

In the High Plains, which is represented here by Dawson County, more than 70 percent of the farm cash receipts for the year are earned between October 1 and January 31.¹⁴ The harvesting season is earlier in the Black Prairie, but changes in land ownership, like the movement of tenant operators, tend to be keyed to the close of the calendar year.

Trends in Farm Land Taxes

As a production cost in agriculture, taxes are always present and capable of affecting the land market. However, farm taxes on the average rarely have exceeded 1 percent of the prevailing land values, and the trend has not been closely related to the movement either of land prices or of commodity prices (Table 4).

Characteristically inflexible, tax rates on Texas farm and ranch lands ranged from an average of 16.6 cents to an average of 26.5 cents during the 1920-1945 period. In a year of abnormally low prices for farm commodities, 1932, taxes were relatively high at an average of 20.1 cents per acre; while in 1945, when commodity prices had risen 84 percent above the base period, farmers averaged paying only 18.3 cents per acre in taxes. At no time did it appear that taxes were high enough to discourage land purchases generally.

Between 1920 and 1931, taxes rose while farm commodity prices declined. In response to the insistent demands of farmers, general reductions oc-

¹³For example, West Texas lands owned by the University of Texas, amounting to approximately 2 million acres, are operated uniformly under a 10-year leasing arrangement. In other instances, leases for 3 years and for 5 years are common.

¹⁴Thibodeaux, Bonnen, and Magee, "An Economic Study of Farm Organization and Operation in the High Plains Cotton Area of Texas," Bulletin No. 568, Texas Agricultural Experiment Station, Jan., 1939.

Table 4. Farm taxes per acre, index of farm taxes, index of farm prices, and ratio of farm taxes to farm prices, 1920-1945

Year	Tax per acre (cents) ¹⁵	Tax index ¹⁶	Price index ¹⁷	Ratio ¹⁸
1920.....	16.7	98	217	.45
1921.....	17.4	102	105	.97
1922.....	18.9	111	132	.84
1923.....	19.9	116	167	.69
1924.....	20.7	121	166	.73
1925.....	21.9	128	156	.82
1926.....	22.3	130	126	1.03
1927.....	23.5	137	129	1.06
1928.....	23.8	139	150	.93
1929.....	25.0	146	145	1.01
1930.....	25.5	149	109	1.37
1931.....	26.5	155	70	2.21
1932.....	21.4	125	51	2.45
1933.....	20.1	118	64	1.84
1934.....	17.9	105	90	1.17
1935.....	16.9	99	102	.97
1936.....	17.0	99	101	.98
1937.....	16.9	99	102	.97
1938.....	17.1	100	81	1.23
1939.....	17.5	102	85	1.20
1940.....	17.1	100	92	1.09
1941.....	17.0	99	119	.83
1942.....	17.7	104	155	.67
1943.....	16.6	97	173	.56
1944.....	17.3	101	176	.57
1945.....	18.3	107	184	.58

¹⁵Data collected on Project No. 246, Texas Agricultural Experiment Station.

¹⁶Tax index equals the average annual tax for the State expressed in percentages. Average annual tax for the period 1935-1939 = 100.

¹⁷Farm Economics, No. 150, Cornell University, March, 1946.

¹⁸Ratio approximates the real trend or weight of farm taxes, and is derived by dividing the tax index by the index of farm prices.

curred during the depression years, and these have not yet been restored. The real weight of taxation on land, as measured by the ratio of the price index to the tax index, was lower during World War II than at any time since 1920. But if post-war history repeats itself, taxes again may increase in relation to farm income and impose an added burden on land buyers as commodity prices recede from current high levels.

FACTORS INFLUENCING TEXAS LAND PRICES

The foregoing farm and ranch land prices are a reflection of many factors. Indirectly these prices are related to a world economy at war and to a confusion following the end of active fighting. The flow of relief and rehabilitation food and fiber crops to enemy-invaded lands halfway around the globe, may influence to some extent what an individual in Texas has to pay for a blackland farm. The level of industrial employment, the accumulation of investment funds, and the demand deposits in country banks, all may contribute in one manner or another to determining land prices.

However, the degree to which these factors determine land prices can be evaluated only in terms of the influence they exert on other economic aspects which are more closely related to actual prices of land. Among

these latter items are: (1) size of farm income, (2) share of farm income going to the land, (3) returns expected by investors in farm land,¹⁹ and (4) values that are attached to land because of potential mineral production.

Farm Income, Commodity Prices, and Land

The first of the factors listed above, size of income, is dependent on, or is a total of the prices received for, the various commodities produced and sold by farm people.

In Texas, the three chief commodities from the standpoint of income are cotton, wheat, and beef cattle. The prices received for these products, particularly cotton and beef cattle, affect incomes in nearly all sections of the State. Other commodities, though locally important from the income standpoint, are limited to smaller areas. Examples of these are rice, grown only along the Gulf Coast, and citrus fruits, which are confined mainly to a small area of the Lower Rio Grande Valley.

High commodity prices alone do not necessarily mean that incomes will be proportionately high. Among other factors, the volume of produc-

Table 5. Index of gross farm income and index of farm and ranch land prices in Texas, 1920-1945

Year	Gross farm income ²⁰ (1935-39 = 100)	Land prices (1935-39 = 100)
	Index	Index
1920	200	178
1921	178	172
1922	172	133
1923	133	178
1924	156	152
1925	141	210
1926	128	181
1927	149	188
1928	161	179
1929	142	171
1930	97	146
1931	68	111
1932	58	109
1933	75	103
1934	89	100
1935	88	103
1936	91	103
1937	117	96
1938	97	97
1939	106	105
1940	109	107
1941	141	110
1942	182	132
1943	228	148
1944	230	179
1945	218	

¹⁹For more detailed discussion of these three points see United State Department of Agriculture Circular No. 743, "The Farm Real Estate Situation, 1944-45."

²⁰Bureau of Agricultural Economics, USDA. Index based on total cash receipts from farm marketings plus government payments.

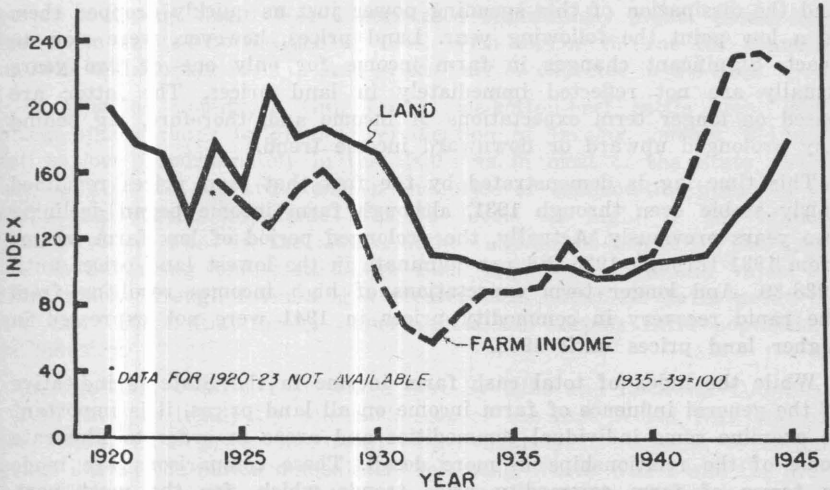


Figure 3. Trends in gross farm cash income (including government payments) and in the price of farm and ranch land, Texas, 1920-1945.

tion, high or low, directly influences total returns. For this reason gross cash farm income, rather than commodity prices, has been used on a statewide basis to indicate reasons for price trends in the land market.

Land prices generally have moved up and down in the wake of total farm income received from the sale of all farm commodities. A comparison of the index of land prices since 1920 with the index of gross farm income reveals that a close relationship exists between these two movements (Table 5). The graphic relationship (Figure 3) illustrates that land prices usually lag one or two years behind farm income. A sharp decline in farm income in 1921 was reflected two years later in a low price for land. A new peak in Texas land prices was registered in 1926 following a recovery period in farm income. Beginning in 1927 and continuing through 1938, land prices dropped steadily under the impact of successively lower farm incomes after 1928. It will be remembered that farm commodity prices dropped precipitously during this period. Although commodity prices and farm incomes began a slow recovery about 1933, land prices remained rather stable at a low level and did not begin to rise until 1940, or after a second World War had begun.

Since 1943, land prices have increased consistently following the rapid wartime increase in Texas farm incomes. Showing a response to four consecutive years of heavy farm production combined with continuously increasing commodity prices, land prices made their fastest gains of the wartime period from 1944 to 1945.

The period immediately following World War I was one of drastic adjustments in commodity prices and farm income. Pent-up spending power sent these prices and incomes to an extremely high level in 1920,

and the dissipation of this spending power just as quickly dropped them to a low point the following year. Land prices, however, were slow to react. Significant changes in farm income for only one or two years usually are not reflected immediately in land prices. The latter are based on longer term expectations of income and, therefore, lag behind any prolonged upward or downward income trend.

This time lag is demonstrated by the fact that land prices remained fairly stable even through 1931, although farm income began declining two years previously. Actually, the prolonged period of low farm income from 1931 through 1935 did not culminate in the lowest land prices until 1938-39. And longer term expectations of high incomes resulting from the rapid recovery in commodity prices in 1941 were not expressed in higher land prices until 1943.

While the index of total cash farm income in the State is indicative of the general influence of farm income on all land prices, it is important to examine some individual commodities and areas in order to illustrate some of the relationships in more detail. These comparisons are made in terms of farm commodity price trends which, for the most part, parallel trends in farm income.

Area Trends

Land price trends in Erath County reflect quite closely the price of the main cash crop. This county lies in the Western Cross Timbers type-of-farming area and is representative of a large area of sandy soils devoted more or less to general and self-sufficing farming. Here a transition from cotton to peanuts as the chief cash crop has been accomplished, and land prices, reflecting peanut prices, have recovered rapidly from the lows of the 1930's (Figure 4). Land has followed fairly closely, with little lag, the upward surge in the prices paid to farmers for peanuts and is

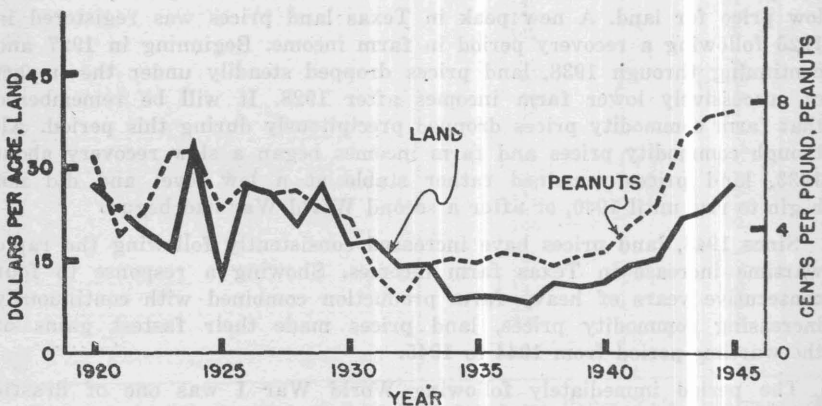


Figure 4. Price received by farmers for peanuts and average price of land, Erath County, Texas, 1920-1945. *Data for 1921 not available.

now approaching the high prices of the middle 1920's. Only the "boom" period following World War I registered significantly higher prices for land than existed at the end of 1945. With higher returns for peanuts in 1946, still further rises in land prices may be expected in the area.

In Wharton County, a Gulf Coast rice-cotton-beef cattle area, land prices, due perhaps to great diversification of income sources, did not fall so low proportionately in the 1930's as in most of the State (Figure 5). And the upward trend in the price of commodities promises to carry land of this important area to levels as high, if not higher than have prevailed in the past. Another significant aspect of the area lies in advancing industrialization. Such expansion may add value to farm realty through furnishing a greater local outlet for farm products and more substantial income opportunities for surplus farm population in industry.

In the Black Prairie, represented here by Ellis and Rockwall Counties, cotton was practically the sole cash crop of the first World War and of the 1920's. Land prices fluctuated rather sharply in response to cotton prices during the period immediately following World War I and the first decade thereafter (Figure 6). However, since 1933 the area has adopted a more diversified type of agriculture. Cotton acreage has been reduced by about one-half, and other sources of income have placed the area in a more favorable position with respect to its dependence upon a single crop. Perhaps due to this adjustment, land has not risen as high nor reacted as sharply in price during the last five years as when under the dominant influence of one commodity. Relatively, the area has experienced a smaller increase in land prices than any other in the State.

Land prices in the beef cattle-sheep-goat area of the Edwards Plateau have more than regained the high registered in 1920. An all-time high average for land prices was reached in 1945 in this area. In general,

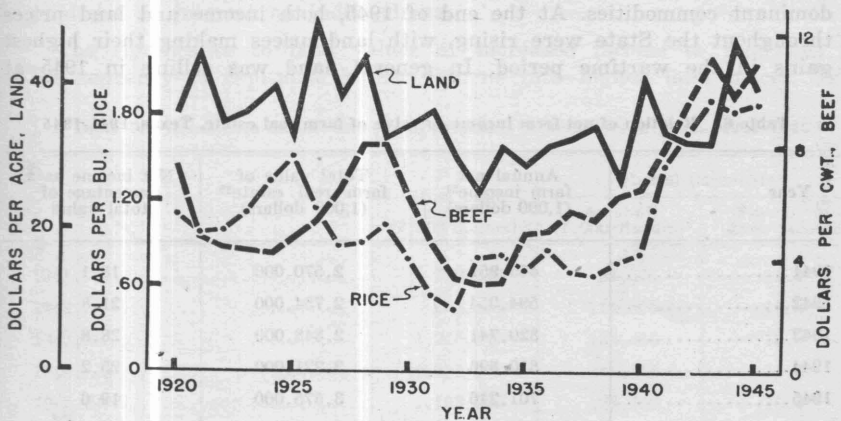


Figure 5. Prices received by farmers for rice and beef cattle, and average price of land, Wharton County, Texas, 1920-1945.

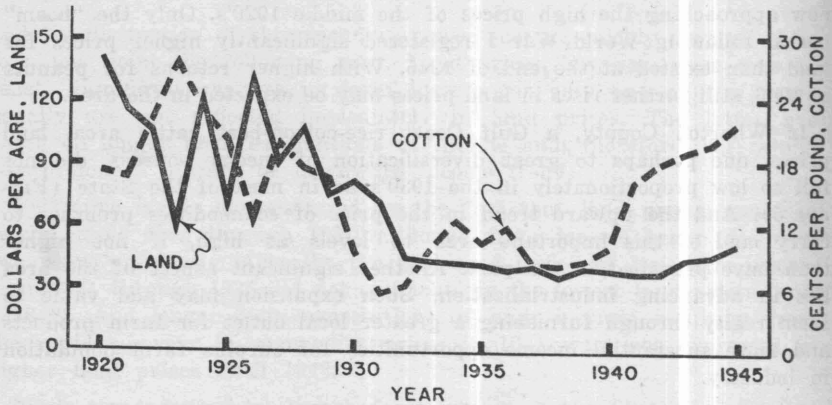


Figure 6. Price received by farmers for cotton and average price of land, Ellis and Rockwall Counties, Texas, 1920-1945.

wool, mohair, and beef cattle, the chief sources of income in the area, have made rapid price recoveries. And, since the greatest proportionate price increases have been made in livestock and livestock products as compared to general farm crops, it is to be expected that land prices in such areas also may show marked increases.

In summarizing the interrelationships of income and Texas land prices, it is apparent that land has followed the trends in farm income as it has moved upward from the force of rising commodity prices and high production levels. While following the movement of income, land prices have tended to lag behind by a year or more. In areas where one commodity, or a group of similar commodities, provides the important source of income, land prices follow rather closely the trend in prices of the dominant commodities. At the end of 1945, both income and land prices throughout the State were rising, with land prices making their highest gains in the wartime period. In general, land was selling in 1945 at

Table 6. Relation of net farm income to value of farm real estate, Texas, 1941-1945

Year	Annual net farm income ²¹ (1,000 dollars)	Total value of farm real estate ²² (1,000 dollars)	Net income as a percentage of total value
1941.....	465,951	2,570,000	18.1
1942.....	594,954	2,734,000	21.8
1943.....	820,741	2,848,000	28.8
1944.....	810,896	3,221,000	25.2
1945.....	701,246	3,575,000	19.6

²¹Bureau of Agricultural Economics, USDA.

²²Data based on adjusted U. S. Census of Agriculture figures.

about the same average level as in 1929 while farm income in 1945 was much higher than in 1929. In some type-of-farming areas, land prices have reached the highest mark on record, and in others the 1945 price levels were about equal to the high of the 1920's.

To indicate the strong pressure of increased income on land prices it is only necessary to compare the estimated total net farm income with the total value of farm real estate. During each year of the wartime period 1941-1945, net farm income represented approximately one-fifth or more of the total value of all farm real estate (Table 6). This meant, in general, that the net farm income would have paid for the total value of farm real estate during the five-year war period, and this despite the fact that land prices were increasing greatly from year to year.

Share of Income to Land

The farm income level, as indicated above, is ordinarily the prime factor in influencing land prices. However, it should be noted that prices of farm products might be high while, at the same time, land prices might be relatively low. Such a situation would exist where a proportionately large amount of the income to land was drained off to pay taxes or interest on a heavy outstanding real estate indebtedness.

This situation apparently does not exist at present in Texas. General increases in commodity prices have resulted in greater incomes to the land owned by non-operators. Rental payments on Texas farm and ranch lands increased from \$87,576,000 in 1941 to \$148,660,000 in 1944 (Table 7). This increase in rental payments during the war period was roughly proportional to the increase in gross cash income. During the same period certain expenses common to land held by non-operators, i.e., taxes and mortgage interest, remained practically the same (Table 8). Actually the slight increase in taxes has been offset by the decreasing amount paid out as interest on indebtedness.

The significance to land values of increased income to land lies in the tendency to capitalize higher returns into higher land prices. This

Table 7. Gross cash income and rental payments to landlords in Texas, 1941-1945²³

Year	Gross cash income (1,000 dollars)	Rental payments	
		Amount (1,000 dollars)	Percent of gross income
1941.....	770,239	87,576	11.4
1942.....	992,178	111,805	11.3
1943.....	1,246,047	134,936	10.8
1944.....	1,260,076	148,660	11.8
1945.....	1,193,009	124,788	10.4

²³Data from Bureau of Agricultural Economics, USDA. Gross cash income is all income from farm marketings plus government payments.

Table 8. Farm real estate mortgage interest and farm taxes in Texas, 1941-1945²⁴

Year	Mortgage interest (1,000 dollars)	Taxes (1,000 dollars)	Total (1,000 dollars)
1941.....	18,111	20,428	38,539
1942.....	17,658	22,164	39,822
1943.....	15,774	21,263	37,037
1944.....	15,166	21,830	36,996
1945.....	13,982	24,420	38,402

tendency becomes greater as the period of higher returns lengthens. Such a tendency in combination with higher commodity prices may accelerate further increases in the prices demanded for land.

A consideration of the share of income to land leads to the question of rates of return expected by investors in farm and ranch land.

Returns Expected by Investors in Farm Land

A third factor which may directly influence land prices is the rate of return expected by those who invest money in farm and ranch land. There are no objective data available which bear on this subject as applied to Texas. However, there always has been a supposition that investors in agricultural holdings are satisfied with smaller rates of return because of the tangible character of land.

In other words, a quarter-section of land remains a quarter-section of land with its inherent productive capacity when other assets of an intangible nature may become almost worthless during periods of extreme deflation. Land, as such, becomes a depository for funds seeking safety rather than an object of risk investment for production expansion. Because of this safety feature, land purchasers often are less concerned than other types of investors with high rates of return.

Mineral Rights and Land Prices

A fourth factor of importance in establishing land prices in Texas is to be found in the extensive development of oil and gas production. The influence of mineral production, of course, is due to real or prospective income from royalties to land. While operating in a manner similar to income from farm commodities, mineral returns are often much larger and more spectacular.²⁵

There is virtually no area in the State which has not experienced, directly or indirectly, the economic exhilaration of an "oil boom." Of

²⁴Data from Bureau of Agricultural Economics, USDA.

²⁵For an elaboration of this subject, see "Mineral Rights and Land Prices, Smith County, Texas," Progress Report 1052, Texas Agricultural Experiment Station, Jan. 23, 1947.

Table 9. Average price per acre of farm land sold with varying interests in the mineral rights reserved, Smith County, Texas, 1943, 1944, 1945

Year	Fraction of mineral rights reserved		
	None	One-half	All
1943: Average price per acre.....	\$26.51	\$20.49	\$11.41
1944: Average price per acre.....	41.62	25.50	21.44
1945: Average price per acre.....	44.99	39.06	17.29

the 254 counties of Texas, 155 were producing oil in 1944 and 174 counties were producing oil or gas, or both. There was land under lease or drilling in every county. Total acreage under lease amounted to 29 percent of the entire land area of the State.²⁶

It follows that the status of mineral rights in any land tract greatly affects its market value, even though the purchaser may buy in contemplation of surface use only. The extent to which the sub-surface factor affects land prices is hard to determine. While the problem varies in importance in proportion to the time and intensity of development activities in any vicinity, its presence may be observed even where the possibilities of oil discovery appear to be remote. In order partially to answer this question some information about the reservation of mineral rights in land was studied in Smith County, which is located in the big East Texas field.

A study of 309 transactions covering the three years, 1943-1945, revealed that land prices vary roughly in direct proportion to the share in minerals transferred with the title (Table 9). For example, in 1945, farm land in Smith County with all mineral rights transferred with the title sold for \$45 per acre, as compared with \$17 per acre for land with no mineral rights transferred. Corresponding data for 1944 were \$42 and \$21, respectively; and for 1943, \$27 and \$11, respectively. Tracts in which one-half of the mineral rights were transferred with the title sold at an average price ranging between these two extremes in each of the years.

The three-year average price paid for land including all sub-surface rights was \$36.28 per acre (Figure 7). For those transferred with one-half these rights, the price was \$30.06 per acre. Land transferred with no sub-surface rights passing with the title averaged \$16.62 per acre. In other words, the average buyer was willing to pay approximately twice as much for land with one-half or all the mineral rights in the title than for land with surface rights only.

Implications of this problem to Texas farmers who purchase land are merely suggested here. More intensive research is required in order to indicate the ultimate influence of mineral rights on the tenure structure and the pattern of land utilization in Texas.

²⁶Texas Almanac, 1945-46, p. 237.

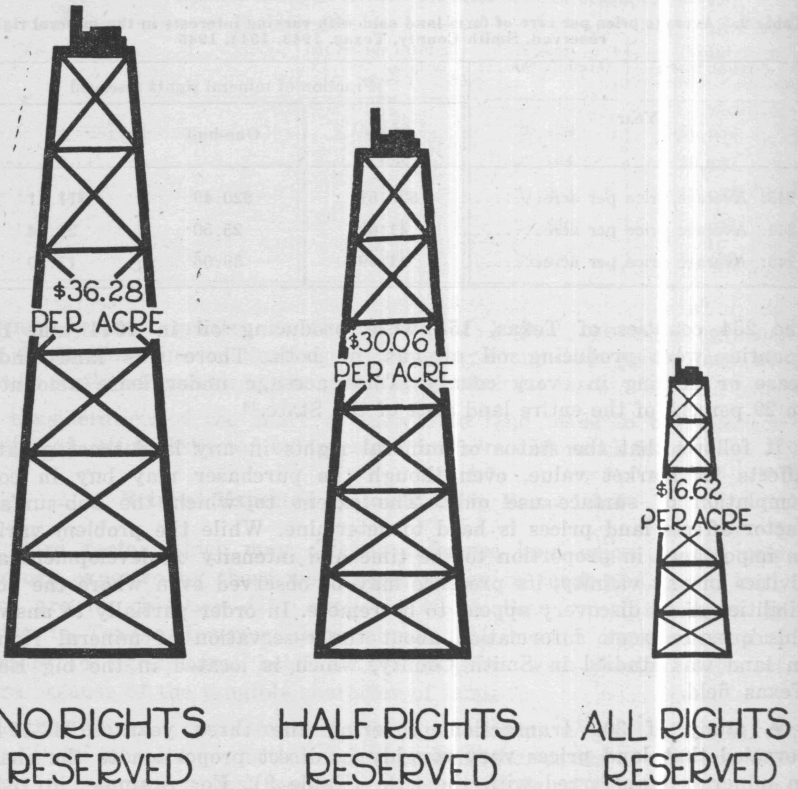


Figure 7. Prices paid for farm land with varying interests in the mineral rights reserved, Smith County, Texas (three-year average, 1943-1945).

In addition to the immediate factors discussed above there are many more which may influence land prices in one manner or another. Some of these may influence farm incomes directly and some may have less direct effects through other phases of the economy.

Parity Price Policy

No list of factors influencing farm incomes directly, and land prices indirectly, would be complete without mention of the price support program now being followed by the Federal government. Important commodities grown in Texas covered by price guarantees include corn, wheat, rice and peanuts (for nuts) with supports at 90 percent of parity. Cotton is supported at 92.5 percent of parity. Other commodities, including hogs, chickens, eggs, milk, butterfat, and potatoes, are supported at not less than 90 percent of parity. Important Texas products not included under the price support program are beef cattle, sheep (although wool is supported at 90 percent of parity), fruits, fresh vegetables, and grain sorghums.

An important aspect of present price supports is the Federal statutory commitment that the price levels referred to above will be supported at not less than the specified percentages of parity for two years after December, 1946. This means that farm incomes may be influenced by these supports through 1948. More than a year after active fighting had ceased most commodities were selling above parity prices, so that actual supports in terms of income may have little real effect. However, in terms of a longer trend, land prices may reflect commodity support prices, since there is a general expectancy of some price revision downward under an uncontrolled market situation.

Many farmers have not given enough consideration to the fact that commodity price supports are to be lowered as the price of objects the farmer buys is reduced. Because of Texas' position in a psychology of agricultural surpluses and low commodity prices for so long a period, the general impression is that parity operates only to raise prices. For this reason, and because under parity there is some security against precipitous and disproportionate drops in commodity prices and therefore farm income, the trend effect of parity prices may be to enhance the value of Texas farm and ranch land.

The relative importance of price support programs in relation to land prices will vary by areas within the State. For example, grain sorghums, now an important cash crop in the High and Rolling Plains areas, are not included in the price support program. Neither are beef cattle and sheep. These facts may be important in tending to influence land prices in the areas concerned from a short-time standpoint. The areas that are most likely to be influenced by price supports are those in which wheat, cotton, rice, and peanuts constitute important crops (See Figure 1).

Technological Advancements

Technological developments tend indirectly to influence land prices toward higher levels over the short term period, if other factors do not at the same time cancel these gains. In many areas, mechanization and production per agricultural worker have progressed so fast that they have more than offset the rapidly rising wage rates paid to labor (Figure 8). Widespread use of large-scale combines, two- and four-row equipment, pick-up hay balers, rice combines and dryers, and other equipment have all tended to increase total value of production per worker and to reduce unit costs of production. Better types of livestock combined with improved varieties of field crops and pastures, and conservation practices also point to a higher, more economical level of production.

This trend in overall technological advancement tends to stimulate competition in the land market, especially for the smaller tracts which are needed as supplementary acreage for existing farm units. In some type-of-farming areas of the State, many farms are too small for the operators to take full advantage of these advances. To do so requires larger units which actually take on a greater per acre value under tenure

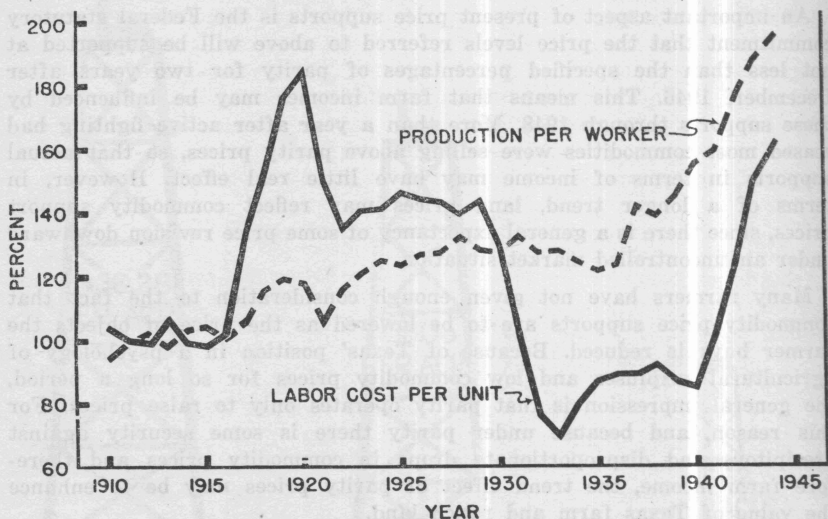


Figure 8. Production per agricultural employee and labor cost per unit of agricultural production, United States, 1910-44. (1910-14 equals 100.)
Source: Bureau of Agricultural Economics, USDA.

of a more favorable nature. Equipment usually has been available to most operators to handle an additional 80 acres or a quarter-section. Predominant purchasers of farm tracts during the wartime period have been owner-operators enlarging their size of operations.

Credit Policies

The type of credit extended by private and public lending agencies might influence land prices at certain stages of the business cycle. Agencies that extend credit for a very large proportion of the purchase price of a farm during inflationary periods encourage higher land prices. However, during the wartime years under study credit policies were a minor influence, since most of the transactions were for cash, and those purchasers who used credit generally kept its use at a minimum. The liberal credit policies of the Federal government in the farm purchase program apparently provided little impetus to increasing land prices, since this program was slowed almost to a standstill by the practice of extending credit only at conservatively appraised values.

Non-farmer Buying

In some areas land prices have been influenced upward due to the increased buying by "city farmers." In the latter part of 1946 it was reported that 70 percent of the farm land in Dallas County was in the hands of this type of owner.²⁷ Under such a situation land prices are

²⁷Editorial in Dallas Morning News, Wednesday, November 13, 1946, based on report of the County Agent.

often pushed so high that a bona fide farmer cannot compete in the land market with the buyer who has other sources of income and investment capital. The extent of this practice in the wartime land market over the rest of the State cannot be ascertained from present data. But it is obviously a significant factor in establishing farm realty prices in a large proportion of the land around urban centers. Moreover, it is reasonable to assume that many of these buyers are purchasing land at prices above those justified by long time expectations of farm income.

Industrial Employment and Incomes

An indirect factor in the farm real estate situation appears in another segment of the national economy; namely, industrial employment and incomes of industrial workers. The purchasing power of the chief consumers of agricultural products greatly influences the demand for certain farm products, which in turn, is reflected in commodity prices and subsequently in farm income. When effective demand among purchasing consumers of farm products declines, lower incomes to farmers and lower levels of land values must be the result. If the rate of employment, wages, and purchasing power on a national level remain high, an effective outlet for most Texas products will be available, and substantial farm incomes will continue to be reflected in high land prices.

Cash and Liquid Asset Holdings

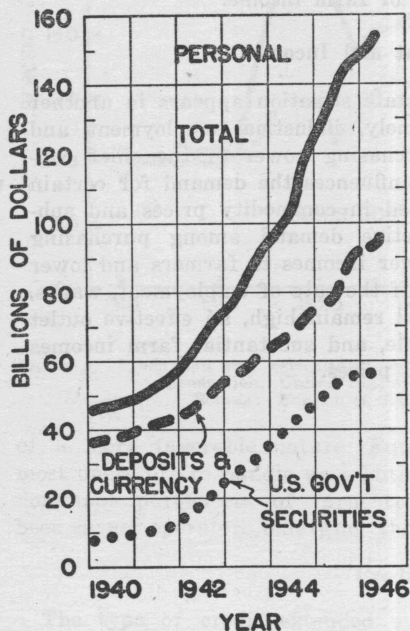


Figure 9. Status of personal liquid asset holdings.
Source: Federal Reserve Bulletin, November, 1946.

Although the term personal does not necessarily represent exclusively individual asset holdings, it does include the holdings of individuals. The amount of money on hand is not of itself a major price determining factor. Rather it is the liquidity or ability of the volume of money on hand to move readily into trade channels.

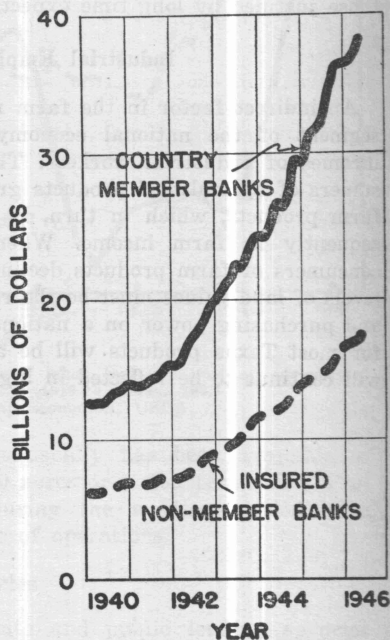


Figure 10. Deposits in country banks.
Source: Federal Reserve Bulletin, November, 1946.

Deposits in country banks are presented rather than total demand deposits for the reason that country bank deposits represent more nearly the liquid assets of agricultural entrepreneurs. Farmers desiring investment outlets for surplus capital traditionally seek to invest in land. The wartime study reveals that this situation has not changed materially in recent years.

WARTIME LAND MARKET ACTIVITY IN THREE COUNTIES

In addition to the basic data on land prices already presented, more detailed information on the land market is available from a special study in three counties (Ellis, Jones, and Nacogdoches). This phase of the report is concerned only with the war years, 1941-1945. For purposes of analysis, the new material is integrated with some of the factors to which reference has already been made.

Activity in the farm real estate market continued at a high level in the three counties for special study throughout the wartime period. The most important characteristics of activity in the last war year, or 1945, may be summarized briefly.

The actual number of bona fide transactions in the sample area was 2 percent greater than in 1944. The high level of farm sales in 1945, however, was 21 percent below the peak attained in 1943. Prices paid per acre were approximately 9 percent above the 1944 prices and 46 percent above the 1941 level. Total acreage involved in sales was down 11 percent from the 1944 figure. This is an indication of a tightening sellers' market, with offerings of smaller tracts of land for sale. The average price per acre continued to move upward, while the overall rate of increase in price per acre was approximately 20 percent above the 1944 price. For individual counties the rate of increase in price per acre was as follows: Ellis, 11 percent; Jones, 35 percent; and Nacogdoches, 13 percent.

In general, farm units being offered were smaller, price per acre and per unit greater. From questionnaires and field contacts made in the counties it was evident that there is still a strong demand for farm units of every type at the prevailing high prices.

Predominant purchasers of farm units to date have been owner-operators who find it advantageous to enlarge their present operations. Toward the end of the wartime period, however, serious competition appeared to be developing between farm operators and non-farmers in the purchase of

Table 10. Acres of farm land sold as a percentage of total farm acreage, three sample counties, Texas, 1941-1945

Year	Total acres of land in farms ²⁸ (1,000 acres)			Acres of farm land sold (1,000 acres)			Percent sold of total land in farms		
	Ellis	Jones	Nacog- doches	Ellis	Jones	Nacog- doches	Ellis	Jones	Nacog- doches
1941	555	701	352	30	25	29	5.4	3.6	8.2
1942	555	701	352	18	17	19	3.2	2.4	5.4
1943	555	701	352	33	28	35	5.9	4.0	9.9
1944	530	576	340	30	18	22	5.7	3.1	6.5
1945	530	576	340	18	18	26	3.4	3.1	7.6

²⁸U. S. Census of Agriculture (1940 data for years 1941-43; for other years, 1945 data).

available lands. There are many factors contributing to this condition; lack of conventionally attractive investment opportunities for increased capital accumulation, and adjustments of accounts for income tax purposes apparently are two of the more important.

Total acreage of land transferred in the three counties for the entire period of study, 1941-1945, inclusive, represented only 23 percent of the total land area in farms (Table 10). However, the acreage transferred varied by counties with about one-third the total farm land in Nacogdoches County changing hands. Of this total, a considerable number of units changed hands several times over this five-year period. Resales of properties held for two years or less, on the average, accounted for 6 to 8 percent of all transactions recorded. At no time during any one of the war years did more than 10 percent of the total farm land in any of the three counties change hands through open market or bona fide sales transaction. It would appear, therefore, that no major dislocation in the future agriculture of these areas is likely to result from the transfer of farm lands during the wartime period. However, one result of significance is the enlargement of farm units and the reduction in the total number of farms. Also, there appeared to be a significant number of smaller subsistence tracts purchased by war workers, particularly in Nacogdoches County.

Size of Tracts Transferred

The trend in the size of holdings transferred presents an interesting factor in the land market situation (Figure 11). In 1941, the average acreage per transfer in the three sample counties was 143 acres. In 1945, this average had dwindled to 99 acres per transfer, or a decrease of 31 percent; whereas, the average consideration per unit transferred

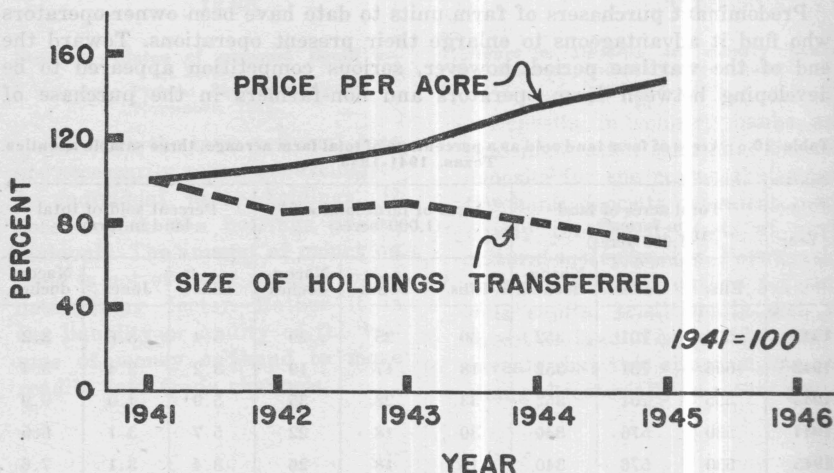


Figure 11. Trends in the average price of land and the average size of holdings transferred, three sample counties, Texas, 1941-1945.

actually increased slightly. In other words, in 1941 it required less funds to purchase 143 acres of land than was required to purchase 99 acres of land in 1945.

It appears that the situation with regard to the transfer of farm lands during the war period was not vastly different from that of many other scarce producer goods and many basic commodities. The land market developed into a sellers' market primarily, with many prospective buyers and relatively few sellers. Increasing pressure from both farm and non-farm groups to acquire additional land became one of the many factors which forced the price to continue upward. Sellers who had land to release usually were those with small holdings which were comparatively less efficient than the large operating units. Prices were such as to encourage the release of the small unit.

There is no information available to indicate that prices reached levels sufficient to induce the breaking up of large operating units in order to take advantage of a situation where there were many buyers willing to accept small-acreage units at relatively high prices. It is true that credit agencies sold many large units early in the war period, but the objective of these agencies was to recoup a satisfactory return, or perhaps to obtain relief from what had been in many cases an unprofitable venture.

The wartime level of farm commodity prices was sufficient inducement to discourage active farmers from selling their property. On the other hand, a more compelling influence than "inflated price" was responsible for many farm units being placed on the market. In a period in which experienced farm labor was difficult to obtain, many farmers approaching retirement age were confronted with the alternative of selling or of operating their units at a loss. In numerous cases the farmer forced to make a decision on this alternative chose to sell the farm for what he considered a desirable price.

Types of Buyers and Sellers

The dominance of farm operators in the land market was an outstanding feature throughout the war period (Table 11). Except for the early period, 1941-1943, when insurance companies and other credit agencies unloaded their holdings—which for the most part had been acquired through foreclosures—both buyers and sellers of farm land predominantly have been farm operators. However, the purchase of farm land by non-farmers steadily increased throughout this period. This tendency was most pronounced in Ellis and Nacogdoches Counties. As prices of land increased and desirable tracts came into greater demand as additions to going farm units, and as investments or experiments for surplus funds, tenant farmers became less able to compete for land being offered for sale.

Non-farmer buyers increased in importance throughout the war years, although the owner-operator farmer remained the heaviest buyer of land. The tendency of farmers to invest their surplus capital in land is, and apparently always has been, a common practice in the United States. How-

Table 11. Farm real estate sales classified by type of buyer, three sample counties, Texas, 1941-1945

County and type of buyer	1941		1942		1943		1944		1945	
	No.	Per-cent	No.	Per-cent	No.	Per-cent	No.	Per-cent	No.	Per-cent
Ellis										
Owner-operator..	138	69	106	73	176	68	147	70	78	51
Non-farmer.....	63	31	28	19	72	27	54	26	73	48
Tenant.....			11	8	14	5	8	4	1	1
Total.....	201	100	145	100	262	100	209	100	152	100
Jones										
Owner-operator..	70	67	85	79	79	59	59	63	86	72
Non-farmer.....	17	16	6	5	29	22	26	28	25	21
Tenant.....	18	17	17	16	25	19	8	9	9	7
Total.....	105	100	108	100	133	100	93	100	120	100
Nacogdoches										
Owner-operator..	132	63	71	44	137	46	134	55	176	58
Non-farmer.....	67	32	69	43	143	47	96	39	83	27
Tenant.....	12	5	22	13	22	7	14	6	47	15
Total.....	209	100	162	100	302	100	244	100	306	100

ever, the rapid progress made in mechanizing farm operations probably has been the most significant single factor in encouraging farm operators to expand their present holdings through acquiring additional tracts. The impelling motives of non-farmer buyers are not so easy to ascertain.

Mortgage Indebtedness

Although a considerable acreage of land was sold during the war with first and second mortgage liens attached, the general level of farm mortgage indebtedness declined steadily (Table 12). Data on the amount of indebtedness incurred in farm land sales are available for the sample county area during the war period, but there are no comparable data available for other periods from which comparisons may be drawn. The

Table 12. Relationship of mortgage debt to total value of farm real estate and interest rates, Texas, 1941-1945²⁹

Year	Total out-standing farm mortgage debt (1,000 dollars)	Total value of farm real estate (1,000 dollars)	Mortgage debt as a percentage of total value	Farm mortgage interest rates
1941.....	421,448	2,570,000	16.4	4.5
1942.....	417,817	2,734,000	15.2	4.6
1943.....	386,271	2,848,000	13.5	4.6
1944.....	345,642	3,221,000	10.7	4.7
1945.....	316,357	3,575,000	8.8	30

²⁹Source: Bureau of Agricultural Economics, USDA.

³⁰Rate not reported.

current level of farm mortgage indebtedness for the State of Texas has followed closely the national trend and shows a marked downward trend during the war years.

Source of Credit

Without exception, individuals were the leading source of credit for the purchase of farm lands throughout the war period, no single credit agency in any year having equaled the number of mortgage loans from individual sources (Table 13). From 1942 through 1945, over 50 percent of all credit used by buyers was furnished by this class of lenders. These loans were made directly on a personal basis, or else funds were made available through loans underwritten by individuals. In Nacogdoches County credit extended by individuals was an especially important factor in facilitating the transfer of farm land, accounting for as high as 75 percent of all the mortgage loans made in a single year. Jones County buyers also relied heavily upon this source of credit.

Insurance companies continued to favor the Black Prairie in their lending activities; although 1941, when these firms furnished one-third

TABLE 13. Sources of credit used for purchase of farm lands, three sample counties, Texas, 1941-1945

County and credit source	Amount and percentage of credit									
	1941		1942		1943		1944		1945	
	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent
Ellis										
Individuals.....	145,671	28	127,465	33	238,628	31	321,514	50	143,720	49
Federal Land Bank and Commissioner ³¹	75,777	14	91,549	24	203,957	26	60,893	10	21,945	8
Insurance companies.....	175,074	33	93,290	25	210,358	27	152,729	24	47,028	16
Commercial banks.....	1,500	³²	11,080	3	55,360	7	54,305	8	51,493	18
Other ³³	133,248	25	58,025	15	69,129	9	47,995	8	27,644	9
Total.....	531,270	100	381,409	100	777,432	100	637,432	100	291,830	100
Jones										
Individuals.....	154,129	35	165,180	62	187,999	49	160,225	60	269,689	83
Federal Land Bank and Commissioner ³¹	47,046	11	49,970	19	153,625	40	78,557	30	24,049	7
Insurance companies.....	55,434	13	14,630	5	34,219	9	11,369	4	.....	.....
Commercial banks.....	55,295	12	3,500	1	5,600	2	.....	.....	10,313	3
Other ³³	127,912	29	34,613	13	.....	.....	15,423	6	22,604	7
Total.....	439,816	100	267,893	100	381,443	100	265,574	100	326,655	100
Nacogdoches										
Individuals.....	59,701	68	58,049	67	130,874	67	130,298	75	121,340	65
Federal Land Bank and Commissioner ³¹	20,551	23	22,343	26	25,422	13	4,664	3	6,534	4
Insurance companies.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Commercial banks.....	5,330	6	6,280	7	40,183	20	23,726	14	55,625	30
Other ³³	3,000	3	200	³²	122	³²	13,250	8	1,879	1
Total.....	88,582	100	86,872	100	196,601	100	171,938	100	185,378	100

³¹Includes Joint Stock Land Banks.

³²Less than 1 percent.

³³Includes FSA and loan and mortgage companies.

of the mortgage credit in Ellis County, was their biggest year in the sample area. No loans were made by insurance companies in Nacogdoches County during the entire five years.

The volume of loans made by the Federal Land Bank declined steadily as the war progressed and land prices soared, until by 1945, the bank was providing less than one-tenth of the mortgage credit for financing transfers in each of the sample counties. Much of this reduction was absorbed by commercial banks which became the second most important source of credit for land purchases in Ellis and Nacogdoches Counties. Commercial banks were fairly active in Jones County.

Buyers' Equities in Encumbered Sales

A prime consideration in the purchase of land on a credit basis for farming purposes is the amount of the purchase price liquidated at the time of sale in a cash payment. A buyer who obtains a considerable equity in farm land at the time of purchase, of course, is in a relatively better position to withstand adversities in retiring the encumbrance. In these three counties, an analysis of credit-financed transfers reveals that a considerable portion of the selling price was paid in cash (Table 14). For the entire period, 1941-1945, the average down payment at the time of purchase was consistently above 25 percent of the sales price in each of the three counties.

In 1945, notwithstanding the high level of prices at which farm land was being sold, equities secured by buyers in encumbered transactions in the special study area averaged over 40 percent of the sales price. In Jones County, the average equity purchased by buyers in 1945 amounted to 50 percent of the total sales price.

Because of the generally high rate of farm production maintained through the war years and a continued high level of prices received for farm commodities, buyers who purchased lands on credit terms in the early part of the war period have had an excellent opportunity to increase substantially their equities in these properties. As pointed out earlier, net farm income during the war period would have retired an approximate 100 percent indebtedness on the total value of all real estate. The continued

Table 14. Buyer's equity in encumbered sales of three sample counties, Texas, 1941-1945

County	1941		1942		1943		1944		1945	
	Number of encumbered sales	Buyer's equity (percent)	Number of encumbered sales	Buyer's equity (percent)	Number of encumbered sales	Buyer's equity (percent)	Number of encumbered sales	Buyer's equity (percent)	Number of encumbered sales	Buyer's equity (percent)
Ellis.....	157	28	99	25	198	31	142	35	78	45
Jones.....	101	25	80	38	105	43	63	45	77	50
Nacogdoches....	119	27	109	34	178	34	128	35	149	38

downward trend in the level of farm mortgage indebtedness through 1945 indicates that land buyers have, in fact, taken advantage of this opportunity.

Cash Sales

Low interest rates and comparatively easy credit terms during the war years apparently had little influence on buyer tendencies to make outright cash purchases of farm land. This marked trend toward more cash transactions was one of the outstanding characteristics of the land market during the war period. Cash sales reached an unprecedented level in 1945 (Table 15). Of all sales recorded in the three counties, 52 percent were made on a straight cash basis.

Table 15. Proportion of farm land transfers made on cash basis, three sample counties, Texas 1941-1945

Year	Ellis County			Jones County			Nacogdoches County		
	Total transfers recorded	Number of cash transfers	Percent of transfers	Total transfers recorded	Number of cash transfers	Percent of transfers	Total transfers recorded	Number of cash transfers	Percent of transfers
1941.....	238	81	34	142	41	29	209	90	43
1942.....	148	49	33	111	31	28	182	73	40
1943.....	270	72	27	148	43	29	336	158	47
1944.....	224	82	37	105	37	35	281	153	54
1945.....	156	78	50	122	45	37	345	196	57
Total.....	1,036	362	35	628	197	31	1,353	670	50

The importance of direct cash outlay to purchase farm lands in a period of high land prices warrants special attention. From past experience it is known that prices for lands purchased through the utilization of credit are sometimes far in excess of the price that a farm by its income can liquidate over a given period, or more properly, over an amortized loan liquidation period. If, however, these same farms had been purchased for cash rather than through the use of credit, the story of many an unsuccessful venture in the business of farming in all probability would have to be rewritten. If the trend of cash sales continues there can be no large scale postwar foreclosure problem in Texas.

SOURCE OF DATA AND METHOD

The primary source of data used here was the deed records from the offices of county clerks in the various sample counties. The aim in the method of collecting the material was to obtain an accurate indication of the *market values* of agricultural land.

Therefore, only warranty deeds covering transfers of land outside the corporate limits of cities and towns were included in the tabulations.

Excluded were deeds of trust, forced sales and foreclosures, gifts, quit-claim deeds, and other transfers not regarded as bona fide sales. Transfers in which the buyer and seller obviously were related were eliminated in order to avoid the inclusion of prices that might have been below the true market level.

An arbitrary minimum of 10 acres was applied in all cases (5 acres in irrigated sections) so as not to combine semi-urban lands and highly improved homesites with genuine agricultural production units.

A check was maintained on extraordinarily high or low prices by observing the amount of the internal revenue tax paid on the sale. Also, due to the practice of many individuals of recording the consideration as "\$10 and other good and valuable considerations" and similar phraseology to obscure the actual selling price, the correct consideration was estimated from the taxes on a number of sales.

On real estate sales the internal revenue tax is 55 cents for each \$500 of the consideration, or fraction thereof. In estimating the consideration, it was assumed in each case that the last revenue stamp bought covered one-half of the \$500 limit, or \$250. Thus, the maximum error was held to \$250, an error which was insignificant on big sales and largely compensatory on a sizeable volume of transactions. Assumed debt, if any—not being subject to taxation—was added to this estimated figure to arrive at the approximate total consideration.

Final editing resulted in the elimination of a variety of sales that were not believed to represent market values. Between 1935 and 1942, for example, the "United States of America" was listed either as a buyer or seller of a number of tracts along the Rio Grande River in El Paso County. Inquiry revealed that these transactions were made in connection with the problem of correcting the international boundary to conform to the meanderings of the river. Most of these transfers involved individual landowners and buyers and, presumably, the prices were in line with prevailing rates. However, transfers of this type are not representative of willing buyer and seller transactions. Therefore, this series of sales was deleted from the summaries for El Paso County. In each of the other counties, all sales were eliminated where there was any reason to doubt that they were altogether voluntary.

After editing was completed, the data for each county were combined by quarters and by years. The average price per acre for the county was calculated by dividing the total consideration on all sales by the total acreage transferred. For those areas in which there was more than one sample county (Areas 5, 6, 7, 8, 14, and 15), the area average was derived by weighting the individual county figure according to the proportion of the land represented by that county in the total area sample.

Weighting often makes a significant difference in the results. For instance, in 1945 in the Trans-Pecos cattle grazing area, prices averaged \$10.60 per acre on sales in Jeff Davis County and \$5.11 per acre in Brewster County. The unweighted average would have been \$7.86.

However, Brewster County is much the larger of the two—3,973,000 acres as compared with 1,445,000 acres in Jeff Davis County—containing 73.33 percent of the combined land area. Therefore, an acreage factor of .2667 was applied to the \$10.60 average for Jeff Davis County and a factor of .7333 was applied to the \$5.11 average for Brewster County. The result was a weighted average for the area of \$6.57 per acre, or 16 percent below that of the unweighted figure. This avoids overrepresentation by small counties which usually have a correspondingly small sales volume.

The State average was obtained by the same weighting process, the weight in each case being the total land area within the type-of-farming area sampled. Using the relatively normal years, 1935-1939, as 100, an index of land prices was devised from the State averages.

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This report is a phase of a broader study of land tenure problems at the Texas Agricultural Experiment Station, which has been developed in close collaboration with the Southwestern Regional Land Tenure Project. The regional project is under the supervision of the Southwestern Land Tenure Research Committee composed of representatives of the departments of Agricultural Economics and Rural Sociology in the Land-Grant Colleges of Arkansas, Louisiana, Mississippi, Oklahoma, and Texas, and one representative each from the Bureau of Agricultural Economics, USDA, and the Farm Foundation. The Regional Land Tenure Research Project has been financed jointly by the institutions represented and the General Education Board.

SUMMARY AND CONCLUSIONS

This study has attempted to examine the Texas farm and ranch land market with special attention to the war period, and to point out some of its characteristics. A summary of the existing facts and some implications follows.

At the end of 1945 the average price of Texas farm and ranch land was 79 percent higher than during the base period 1935-39. The most rapid increase in land prices occurred during 1945 when the index rose from 148 to 179.

On the average, the price per acre increased from \$18.54 in 1940 to \$31.69 in 1945.

Land prices generally follow the trend in farm commodity prices. The general level of the latter is a year or more in advance of the land price trend.

In certain type-of-farming areas, mainly livestock grazing and peanut-producing areas, the price of land in 1946 was near an all-time high.

Land transferred with all mineral rights intact demands a significantly greater price than does land transferred with only a fractional interest in the sub-surface rights.

In general, farm owner-operators have been the largest class of buyers during the entire war period. To a great extent these buyers are enlarging operating units already owned.

Tenant buyers have not been an important group in the land market since the first year or two of the war. Apparently, tenants cannot compete successfully in the land market in periods of rapidly rising prices of land.

Non-farmer buyers are becoming a more significant group in the land market as prices continue to rise.

A large proportion of transactions are for cash. Those buyers using credit with mortgage encumbrances usually obtain a large portion of the equity at the time of purchase. Individuals have extended most of the credit used during the period but commercial banks became more important during 1945.

Available facts indicate that land prices have reached what might be termed "boom" proportions in many areas of the State. This is particularly true in view of the commonly held opinion that farm commodity prices cannot maintain the high levels of the war period. The income-yielding capacity of land does not justify existing high land prices unless commodities are held at a high wartime price level. This situation prevails especially in grazing areas.

Some of the usual characteristics of a land boom do not exist in the Texas land market. Relatively slow turnover, as it appears in many areas, is not characteristic of a land boom. A large volume of credit transactions and subsequent mortgages, another mark of a general land boom, is not a part of the present land market. On the contrary, a large proportion of transactions have been for cash and most buyers using credit hold a sizeable equity in the purchased tract.

If the usual lag behind commodity prices occurs, a further increase in land prices may be expected. Except for the increasing cost of production coupled with the psychology of impending lower commodity prices, all factors as summarized in the above text tend to point toward higher land prices.

Higher prices than existed in 1945 for land may lead to several results. One of these is that non-farm buyers may become the chief group buying land. Farmers who earn their living from the soil cannot compete in an excessively high market with the non-farmer who has other sources of

income. Returning veterans and tenant farmers will find it increasingly difficult to enter agriculture as owner-operators except through inheritance or gifts. Farm ownership loans to veterans and tenants have almost stopped due to insufficient land at conservatively appraised prices.

Because of unfavorable prices many farmers may be buying units too small for efficient operation. There is evidence that some may be buying smaller acreages to offset the larger expenditure of funds required by advancing prices. On the other hand, farm owner-operators who can enlarge their present operations may find it advantageous to buy small adjoining or nearby tracts at relatively high prices. Increased returns due to more efficient use of labor and equipment in many instances may offset high investment costs on additional acreage.