LOCATION FACTORS AFFECTING LAND PRICES IN GRADY COUNTY, OKLAHOMA, 1941-45

By

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INTRODUCTION

Purpose

Information concerning the influence of location on the value of agricultural land should be of importance to farmers, to buyers and appraisers of farm real estate, to county assessors, and to agricultural research workers. In addition to attempting to determine the relationship of selling price to road type, distance to rural and urban markets, and distance traveled over dirt roads to rural and urban markets, attempts were made to determine the effect of a metropolitan area on the per acre selling price. The study is based on data representing a complete coverage of one county of the preliminary type of farming area twelve of Oklahoma (Figure 1).

Unfortunately, there is no way of knowing the influence certain factors exert on sales price. For instance, it is not known whether the mineral factor is constant over the entire county. Site probably is another influential factor. Also, there might be unknown factors that affect value. While it is impossible to eliminate the influence of these factors completely, it is hoped that the study has validity, and will, therefore, add to the fund of knowledge pertaining to the effect of location on land values.

Previous Studies

During the last 30 years, a number of studies have been made of the relationship of land value to distance to market and type of road on which the land is located. For the most part, the research has been fostered by various agricultural experiment stations throughout the United States. Generally, the data for the studies were obtained by the use of questionnaires based on the opinion of the farmer-owner. A few have been based on farm appraisals,

PRELIMINARY TYPE-OF-FARMING MAP OF OKLAHOMA

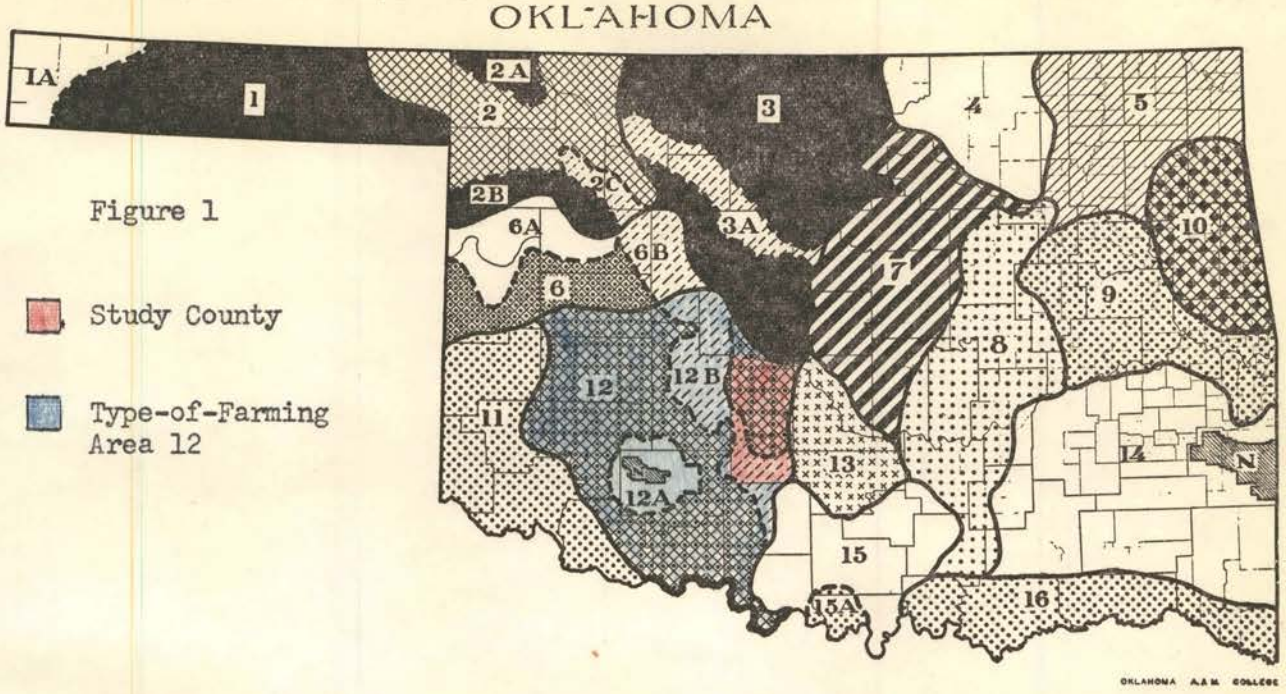

Figure 1

Study County

Type-of-Farming Area 12

Area Description of Counties by Type-of-Farming Areas in Oklahoma

Area 1:
Beaver
Cimarron
Texas

1. Cash grain and livestock
1A.—Largely range livestock.

Area 2:
Ellis
Harper
Woods
Woodward

2. Somewhat broken topography—some small grains, feed crops, livestock.
2A.—Cash wheat primarily. 2B.—Cash wheat primarily.
2C.—Sandy area, general farming.

Area 3:
Alfalfa
Canadian
Garfield
Grant
Kay
Kingfisher
Major
Noble

3. Cash grain, general farming. 3A. A wooded area of sandy soil, general farming, some cotton produced on this strip.

Area 4:
Osage

4. Range livestock—some general farming.

Area 5:
Craig
Mayes
Nowata
Ottawa
Rogers
Tulsa
Washington

5. General farming, livestock, dairy, poultry and self-sufficing.

Area 6:
Blaine
Custer
Dewey
Roger Mills

6. Cash grain, general farming, cotton, livestock.
6A.—Rough, sandy area, scarcely any farming, some range livestock.
6B.—Wooded area, general farming, and cotton.

Area 7:
Cleveland
Lincoln
Logan
Oklahoma
Pawnee
Payne
Pottawatomie

7. General farming, cotton, livestock, dairy, and poultry.

Area 8:
Creek
Hughes
Okfuskee
Pontotoc
Seminole

8. Cotton, general farming, self-sufficing, dairy, (An area of generally poor soil, except on small bottoms).

Area 9:
Haskell
LeFlore
McIntosh
Muskogee
Okmulgee
Sequoyah
Wagoner

9. Cotton, some dairy, potatoes, commercial vegetables, self-sufficing.

Area 10:
Adair
Cherokee
Delaware

10. Some fruit, general farming, dairy and poultry, self-sufficing (rough wooded land).

Area 11:
Beckham
Greer
Harmon
Jackson
Tillman

11. Cotton, supplemented with cash grain, livestock, dairy, and poultry.

Area 12:
Caddo
Comanche
Cotton
Grady
Kiowa
Stephens
Washita

12. Cotton, cash grain, livestock, some dairy and poultry.
12A.—Range livestock.
12B.—Sandy, wooded section, cotton, general farming.

Area 13:
Garvin
McClain

13. Cotton, livestock, general farming, broomcorn.

Area 14:
Atoka
Coal
Latimer
Pittsburg
Pushmataha

14. Cotton, self-sufficing, livestock (rough, mountain and wooded area).

Area 15:
Carter
Jefferson
Johnston
Love
Murray

15. Rang livestock, general farming, self-sufficing.
15A.—Cotton.

Area 16:
Bryan
Choctaw
Marshall
McCurtain

16. Cotton, general farming.

census data, and farm transfers. Regardless of the method used, all studies have shown that location is a real factor in land value.

In a recent study, based on farm sales in Jackson County, Oklahoma, positive relationships were found for value of land and road type, and for value of land and distance to rural and urban markets.[1] Land on all-weather roads sold for $6.75 more per acre than land on improved dirt roads, and $11.20 more per acre than land on unimproved dirt roads. The value of land decreased for 17 miles in moving from the urban market and for approximately seven miles in moving from rural markets.

The sales of 160 farms in Blue Earth County, Minnesota were analyzed by the factors influencing land prices, namely, value of buildings per acre, type of land, crop yields, distance from market, size of adjacent city or village, and type of road upon which located.[2] It was found that other things being equal, land on macadam roads had an average valuation per acre of $21.92 in excess of land on dirt roads; while a farm 11.5 miles from town was worth $35.92 less than the farm a mile from market.

A Vermont study published in 1935 included an analysis of the effect on farm realty prices of soil, topography, distance to a state highway, and to a rail shipping point.[3] Data necessary to the study were obtained from sales deeds, the buyer and seller, and other qualified sources of information.

On the basis of a large number of sales, farm real estate buyers were apparently willing to pay a premium for location near a state highway when the lands were level and rolling. A decrease of about $16.00 occurred for both of these topographic classifications moving from farms less than a mile to those

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1 Donald Lee Wood, M. S. thesis, unpublished, pp. 56-58.

2 G. C. Haas, Sale Prices as a Basis for Farm Land Appraisal, pp. 16-22.

3 T. M. Adams, Prices of Vermont Farm Real Estate, p. 21.

more than eight miles from a state highway. For the rough lands, no consistent tendency appeared for the farms located near a state highway to sell at appreciably higher prices than those at a greater distance.

A Missouri study, the data of which were obtained from farm appraisal reports, presents a clear analysis of the effect that distance from town and cities has on land values.[4] The average land values for townships located at varying distances from Kansas City were shown graphically. According to a curve (fitted free hand) the value at 15 miles was $100.00 per acre, at 25 miles $54.00, and at 40 miles the value was about $47.00 per acre.

The results of a 1926 study conducted in Pennsylvania shows the net relation of the type of road and distance to town to the farm value per acre.[5] The deviation from average value per acre with other factors equal was a plus $24.50 for concrete, asphalt, and macadam roads. For broken stone and gravel roads, the deviation from average was a plus $8.00, while for dirt roads the deviation from average value was a minus $6.90 per acre. The average value per acre by distance deviated from a plus $8.10 at less than one mile to a minus $13.00 at five miles from town.

A Cornell study based on replies from a questionnaire mailed Farm Bureau members in 52 New York counties was published in 1935.[6] Farmers were asked to estimate the sale values of their farm as influenced by a dirt road, a gravel road, and a hard road. A total of 1,047 farmers living on dirt roads estimated their farms were worth $6,060, or $37.00 per acre. They believed

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4 C. H. Hammar, Factors Affecting Farm Land Values in Missouri, pp. 43-47.

5 Mordecai Ezekiel, Factors Affecting Farmers' Earnings in Southeastern Pennsylvania, pp. 53-54.

6 W. M. Curtiss, "Value of Improved Roads to New York Farmers," Farm Economics No. 92 (December, 1935), pp. 2237-2238.

that a gravel road would increase the value to $7,300, or $45.00 per acre; while a hard road would increase the value to $8,753, or $53.00 per acre. The estimates of the value of the three road types to farmers living on gravel roads and hard roads closely parallels these estimates.

Another study fostered at Cornell was based on the replies of a questionnaire sent farm-bureau committeemen in New York State.[7] A total of 174 farmers living on hard surfaced roads estimated the decrease which they believed would occur in the value of their farm if they were located one mile and three miles from a hard-surfaced road. For the one-mile radius, the median of these estimates was $17.82; and for the three-mile radius, the median estimate was $33.75. Of 60 farmers living on gravel roads, the median estimate of the value of a hard surface road was $12.50; while for 212 farmers living on a dirt road, the median estimate was $15.58.

While it may do so, the present study was not designed to substantiate nor refute previous studies. They are cited here to show that where this type of study has been made, positive relationships between land value and location have been shown. However, the only study made in the southwest has been the one made by Wood, previously cited. While this study will parallel that of Wood's, it is for a different type of farming area and is near enough to a metropolitan area to make a further examination of the relationships worthwhile.

Procedure

Data from the legal farm real estate transfers made in Grady County, Oklahoma, during the period 1941-45 had previously been copied from the of-

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7 J. L. Tennant, The Relationships Between Roads and Agriculture in New York, pp. 35-36.

ficial records of the County Clerks Office at Chickasha, Oklahoma, by field workers of the Oklahoma Agricultural Experiment Station. The information necessary to the study included the date of transfer, the legal description of the land transferred, the number of acres involved in each transaction, the percent of mineral rights conveyed, and the total consideration which included cash paid and mortgage balance. In instances where the true consideration was not stated, the consideration was estimated from the federal revenue stamp appearing on the record. Other general information from the records was studied to insure the use of only bona fide transactions.

Both a road map and a soils map of Grady County were obtained, the former from the Oklahoma Department of Highways and the latter from the Soil Conservation Service. The soil qualities were then traced in on the road map, and when the legal description of the farm sold was drawn on the map, its relationship to road types, markets, and soil quality could be determined rather accurately.

Studies made in the past show that the percent of mineral rights conveyed greatly affects the sales price of land in Grady County.[8] In similar quality farms, as indicated by assessed valuation, a difference of almost $12.00 per acre prevailed between sales of land in which only 50 percent of the mineral rights were conveyed, and land in which 100 percent of the mineral rights were conveyed. Hence, it was deemed necessary to control the influence which the conveyance of mineral rights exerted on the location factor.

Regardless of mineral rights conveyed, all bona fide sales were tabulated. These sales were then classified into five categories: Sales conveying all mineral rights; sales conveying 67-99 percent of mineral rights; sales con-

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8 R. D. Davidson and L. A. Parcher, The Influence of Minerals On Transfers of Farm Real Estate in Oklahoma, p. 14.

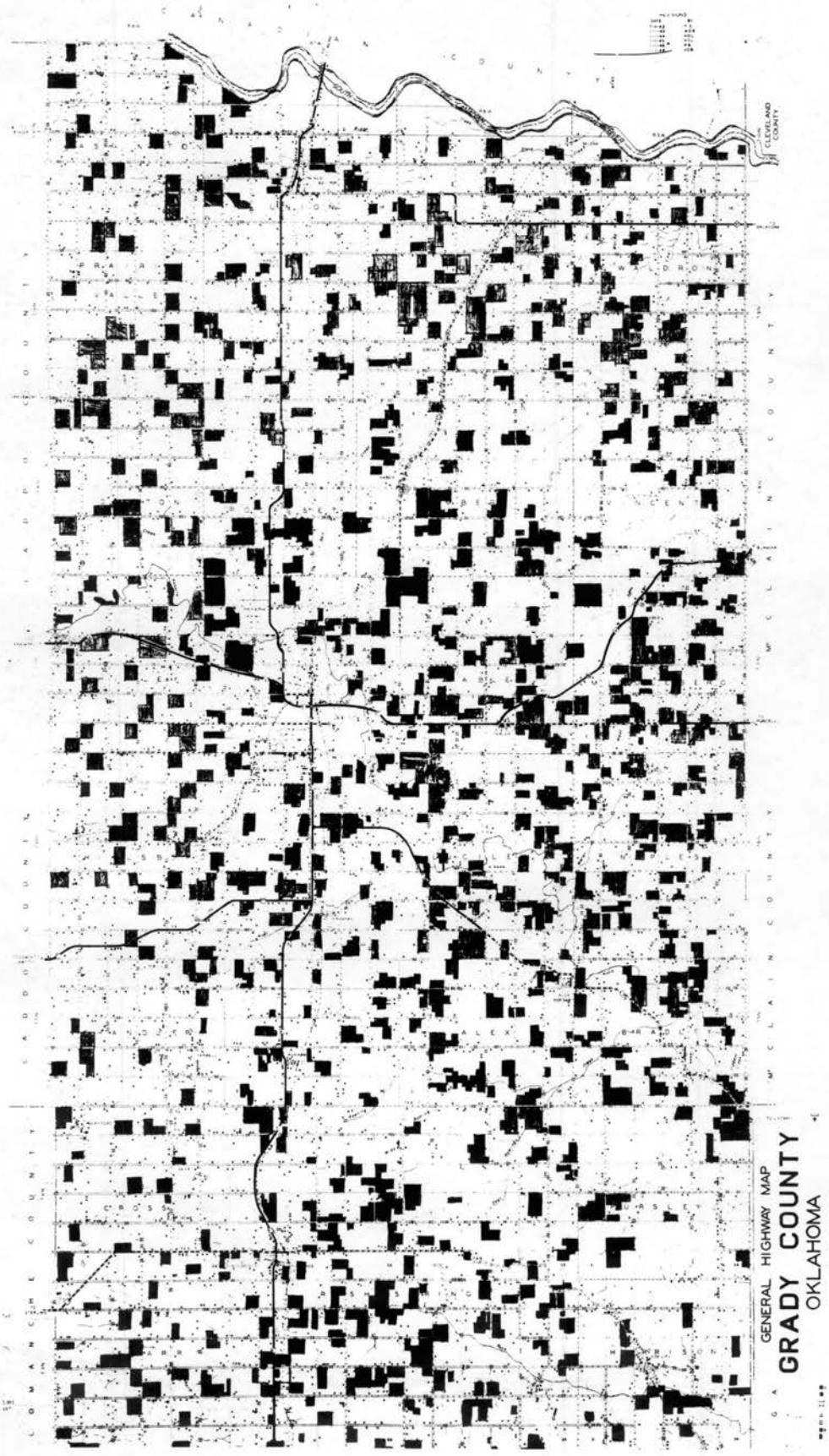
veying 34-66 percent of mineral rights; sales conveying 1-33 percent of mineral rights; and those sales where no mineral rights were conveyed. In an analysis by road type the price per acre decreased accordingly, as less minerals were conveyed (Teble 2 and Appendix Tables 43, 44, 45, and 46). Therefore, it seemed that by using only those sales in which 100 percent of the mineral rights were conveyed, the influence of the mineral factor on the selling price might be controlled to such an extent as to make this study valid.

The group of sales in which 100 percent of the mineral rights were conveyed was then studied by the various soil qualities.

The size of the tract transferred, undoubtedly, has some influence on the sales price, regardless of location. Therefore, each sale was coded according to the census classification of size. These smaller census classifications were grouped into broader class intervals of five size groups, and a study was made on size as related to road types (Appendix Tables 47, 48, 49, 50, and 51). The average price per acre varied among the various size groups, the trend being downward from the all-weather roads in each size group. Also, all transfers of fifteen acres or less, as well as all urban property transfers, were omitted from the study in order to limit the study to sales of agricultural land (Figure 2).

For clarity, it is necessary to define the different types of markets which were used in this study. The nearest market, or rural market, was generally conceived to be a location where there was at least a cotton gin, an elevator, and probably some facilities for marketing poultry and dairy products. The urban market, or the county's principal city, is the county seat, and one which has railroad facilities, livestock auctions, grain elevators, cotton and cotton oil concerns. The metropolitan market studied was Oklahoma City.

Figure 2


GENERAL HIGHWAY MAP
GRADY COUNTY
OKLAHOMA
N
CLEVELAND COUNTY

Since soil quality greatly affects the sales price of land, an attempt was made to group the farms according to soil quality. The map which was obtained from the Soil Conservation Service showed five broad classifications of soil in Grady County. It was believed that four classifications would be sufficient for this study; therefore, after having this belief confirmed by soil conservation technicians, two of the groups were combined. The grouping together of similar soil types according to productivity enabled separate studies to be made of land classified as "best", "good", "fair", and "inferior".

The highway map used showed seven road types, six of which occurred in Grady County. These six road types were grouped into four general types: (1) Pavement, (2) All-weather, (3) Improved dirt, (4) Unimproved dirt. The majority of the paved roads were federal and state highways. All-weather roads included low bituminous roads and stone and gravel roads in addition to the paved roads. The improved dirt roads consisted of county maintained roads which were generally good roads. However, these improved roads might become impassable or difficult to travel during excessively wet weather. The unimproved dirt roads were not maintained, and were generally rough and frequently became impassable.

The multiplicity of data made the services of the International Business Machine punch-card equipment imperative to the study. The following information was coded from the transfer data and the county road map and punched into the International Business Machine cards: total acres, total consideration, average price per acre, size group, minerals conveyed, distance to three markets, distance to all-weather road, type of road farmstead located on, distances traveled over dirt roads to two markets, date of transfer, and soil quality. After these data were punched into International Business Ma-

chine cards, it was relatively simple to tabulate the results by accumulating, sorting, and controlling on the various columns of the card.

Further, the average price paid per acre for each farm was coded by price class intervals. This made it possible to tabulate the range of average price for the sales in each road classification and in each distance interval.

CHAPTER II

SELLING PRICE PER ACRE BY ROAD TYPE AND DISTANCE TO AN ALL-WEATHER ROAD

During the period 1941-45, a total of 1,091 usable, bona fide sales were transacted in Grady County. In this chapter these sales will be analyzed and compiled in two way tables in an effort to determine the effect of road type and distance to an all-weather road on the selling price per acre. The first part is a study of farms by the type of road on which the farmstead is located, while the last part is a study of the selling price per acre by distance from the farmstead to an all-weather road.

Road Type

In an analysis of all sales, it is obvious that relationships between several factors influence the selling price for land on various road types and in various distance intervals. Of these factors, it was believed necessary to control only the factors of soil type and portion of minerals conveyed in order to determine rather accurately the effect of location. A hypothetical illustration will show the necessity for controlling these two factors: The selling price per acre decreases as the distance from an all-weather road increases, but as the distance from an all-weather road increases, it is possible that the soil quality and portion of minerals conveyed decreases. Thus it is evident that in such a case the decrease in the selling price between the class intervals would be due partially to the relative soil quality and portion of sub-surface rights conveyed and not to distance alone. This is the reason for making a separate analysis of minerals conveyed, and for dividing farm sales into four quality groups.

All Land Sales

The analysis of all land sold shows that 95 of the farms sold fronted on pavement, 168 fronted on all-weather roads, 704 fronted on improved dirt roads,

and 219 fronted on unimproved dirt roads (Table 1). The 95 farms on pavement had 9,812 acres selling for a total consideration of $552,493, or an average of $56.30 per acre. Farms fronting on all-weather roads, which also includes the 95 farms on pavement, sold for an average of $50.73 per acre. This was a decline of $5.47 from the average price paid for all farms on pavement.

The modal group, or 61.5 percent of the farms, fronted on improved dirt roads. Here, 92,325 acres were transferred at an average of $34.90 per acre. This was a difference of $15.83 per acre from all-weather roads, which was the greatest decline between road types. This would seem to be the logical place for the widest variation to occur. So long as a farm is located on some type of an all-weather road, a buyer is likely to be somewhat indifferent as to the structure of the road; that is, as to whether the road is pavement, stone, or oiled gravel. At least, the chances of getting to market in any sort of weather conditions generally are favorably on these roads. On the other hand, if the farm is on a dirt road that is likely to become impassable, the choice between an improved dirt road and an unimproved dirt road would be somewhat narrowed since there is always a chance of being marooned on the farm.

A decline of $12.62 in the average price per acre was found in moving from land on improved dirt roads to land on unimproved dirt roads. The decline here is $3.31 per acre less than the decrease observed between all-weather roads and improved dirt roads. It appears that ease of travel, rather than the possibility of becoming impassable, is the most important factor influencing the difference in selling price of land on the two types of dirt roads. An unimproved road is likely to be rough during the entire year, while improved roads are maintained to insure some degree of smoothness during favorable weather.

Table 1

Selling Price Per Acre by Road Type, 1941-45
(All Land)

Road Type	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
Pavement	95	9,812	103	552,493	56.30	161
All-weather	168	20,282	121	1,028,910	50.73	145
Improved Dirt	704	92,325	131	32,222,729	34.90	100
Unimproved Dirt	219	21,329	97	475,128	22.28	64

* See Appendix Table 1 for range in average price.

Table 2

Selling Price Per Acre by Road Type, 1941-45
(All Land - All Minerals Transferred)

Road Type	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
Pavement	44	4,260	97	314,343	73.79	161
All-weather	74	9,027	122	601,105	66.59	145
Improved Dirt	306	37,174	121	1,701,360	45.77	100
Unimproved Dirt	85	7,055	83	211,223	29.94	65

* See Appendix Table 2 for range in average price.

Sales Transferring All Minerals

There were 465 bona fide sales in which all minerals were transferred with the farm (Table 2). The difference in selling price per acre between road types was very similar to that of all sales. The largest decline in the average selling price occurred between all-weather and improved dirt roads, while the smallest separation existed between pavement and all-weather roads. The most striking difference apparent between the two analyses was a considerably higher average price per acre for the farms having all minerals intact.

Farms located on the pavement sold for an average of $73.79 per acre. Those farms located on an all-weather road sold for $66.59 per acre; those on an improved dirt road, $45.77 per acre; and those on an unimproved dirt road sold for $29.94 per acre. These figures are roughly a third higher than the figures shown for all land.

An average, however, is more useful as an analytical tool if something is known of the figures which make the average. On pavement, 22 farms, or 50 percent of the farms sold, transferred for an average price in excess of $75.00 per acre. Fewer than one-third sold for less than $56.00 per acre. For farms on the all-weather roads, only about 42 percent sold for more than $75.00 per acre. Of the farms on improved dirt roads, fewer than one-fifth sold for as much as $75.00 per acre. More than half of the farms so located sold for less than $46.00 per acre. Sales prices of farms on unimproved dirt roads are concentrated below $30.00 per acre, two-thirds of the farms selling for less than this figure. The tendency for an increasing number of sales to concentrate in a lower price range as the quality of the road decreases is further evidence that buyers are willing to pay more for farms on good roads (Appendix Table 2).

Best Soil Quality Farms

The selling price per acre for the best type soil is shown in table 3. the 15 farms on pavement sold for an average price of $119.78, while the 21 farms on all-weather roads sold for $95.73. At least a part of this tremendous decrease of $24.05 between the two classes can be attributed to the difference in size of unit between the road types. The average size of transfer was approximately 45 acres more for farms on all-weather roads than for those on pavement. This means that of the 21 farms included in the all-weather road group, six were not on pavement and these six averaged about 255 acres in size. It was pointed out in Chapter I that the larger farms command a lower price per acre. Calculations show that because of the size of unit sold, or because of the location of these six units on a type of road presumably inferior to pavement, the average price per acre was only $72.58. As a result, the average price per acre for land on all-weather roads is lower than would logically be expected.

The smallest decline between road types occurred moving from all-weather roads to improved dirt roads. However, the average price shown for farms on improved dirt roads is of limited value due to the wide range in average price paid for farms located on this road type. Of the farms on all-weather roads approximately 86 percent sold for an average price of more than $75.00 per acre, and only about five percent sold for less than $60.00 per acre. On improved dirt roads, only about 52 percent of the farms sold for more than $75.00 per acre, while about 36 percent sold for less than $61.00 per acre. This indicates that buyers had considerably more preference for farms on the all-weather roads than the average price implies. Too, the relationship can partially be explained by difference in average size of transfer. The large farms on all-weather roads had the effect of lowering the average price. As

Table 3

Selling Price Per Acre by Road Type, 1941-45
(Best Soil - All Minerals Transferred)

Road Type	No.	Acres	Average	Consideration -dollars-	Average Per Acre*	Index
Pavement	15	1,471	98	176,200	119.78	139
All-weather	21	2,999	143	287,100	95.73	111
Improved Dirt	65	6,907	106	595,776	86.26	100
Unimproved Dirt	19	1,594	84	94,250	59.13	69

* See Appendix Table 3 for range in average price.

Table 4

Selling Price Per Acre by Road Type, 1941-45
(Good Soil - All Minerals Transferred)

Road Type	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
Pavement	9	834	93	65,920	79.04	154
All-weather	19	2,510	132	189,782	75.61	147
Improved Dirt	103	12,674	123	652,430	51.48	100
Unimproved Dirt	18	1,242	69	45,000	36.23	70

* See Appendix Table 2 for range in average price.

a result, the decline in price between the two road types is smaller than it might otherwise have been.

Good Soil Quality Farms

For the good quality soil, buyers were relatively indifferent to location so far as pavement or other types of all-weather roads are concerned (Table 4). Although a difference of $3.42 is apparent, between land on pavement and land on all-weather roads, calculations in appendix tables 48 and 49 would indicate that part or all of this difference in price may be due to difference in size of unit sold. That is, these calculations indicate that farms falling within the size group 70 to 139 acres on all-weather roads sold for about $3.00 per acre more than farms in the next larger size group similarly located.

The difference between the average per acre selling price of farms on all-weather roads and those on improved dirt roads indicates that buyers of this soil type had considerable preference for the better road. Farms on all-weather roads averaged 132 acres and sold for an average price of $75.61 per acre, while farms on improved dirt roads averaged 123 acres and sold for $51.48. Since only nine acres separated the average size of unit for the two road types, the $24.13 appears to represent fairly well the value placed on location. This is emphasized by the fact that only about 21 percent of the farms located on all-weather roads sold for less than $61.00 per acre, while about 57 percent of the farms located on improved dirt roads sold for less than $61.00 per acre (Appendix Table 4).

The farms on unimproved dirt roads averaged $36.23 or $15.25 per acre less than those on improved dirt roads. However, as the farms on unimproved dirt roads averaged only 69 acres in size as compared to 123 acres for those on improved dirt roads, it may be that the dollar difference separating these two road types would have been somewhat greater if the size had been more

nearly equal. Roughly, 89 percent of the farms on unimproved dirt roads sold for less than $46.00 per acre.

Fair Quality Soil Farms

The type of road on which the farmstead is located also appears to be of importance to the buyer of the fair quality soil (Table 5). Sizeable decreases in the average price per acre are apparent between road types moving from the paved roads to the unimproved dirt roads. The pattern of these decreases is essentially the same as that observed for the farms on the good quality soil, with the smallest decrease occurring between the first two road types and the largest decrease occurring between the all-weather roads and improved dirt roads.

The ten farms on pavement totaled 745 acres which sold for an average price of $58.32 per acre. On all-weather roads, 17 farms comprising 1,538 acres sold at an average price of $51.79 per acre. Here a difference of $6.53 separated the two road types as contrasted to $3.43 for the farms on the good land. Since there was some difference in average size of transfer between the two road types for both soil qualities, this difference is hardly sufficient to say that a paved road is worth more than an all-weather road to the buyers of the farms on the fair quality soil.

A total of 95 sales or approximately 60 percent of the farms on the fair quality soil were located on improved dirt roads. The farms averaged 132 acres and sold for an average price of $29.71 per acre, about $22.00 per acre less than for farms on all-weather roads. Nearly two-thirds of these farms sold for $30.00 per acre or less (Appendix Table 5). Size probably influenced the difference in average price between road types here, as the average size of these farms was some 40 acres larger than the average size of those on all-weather roads and unimproved dirt roads. However, it is unlikely that differ-

Table 5

Selling Price Per Acre by Road Type, 1941-45
(Fair Soil - All Minerals Transferred)

Road Type	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
Pavement	10	745	75	43,450	58.32	196
All-weather	17	1,538	90	79,650	51.79	174
Improved Dirt	95	12,496	132	371,298	29.71	100
Unimproved Dirt	28	2,501	89	45,492	18.19	61

* See Appendix Table 5 for range in average price.

Table 6

Selling Price Per Acre by Road Type, 1941-45
(Inferior Soil - All Minerals Transferred)

Road Type	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
Pavement	10	1,210	121	28,773	23.78	148
All-weather	17	1,980	116	44,573	22.51	140
Improved Dirt	43	5,097	119	81,856	16.06	100
Unimproved Dirt	20	1,718	86	26,481	15.41	96

* See Appendix Table 6 for range in average price.

ence in size accounts for all the difference in price. It may be seen from appendix tables 48 and 49 that of farms on improved dirt roads, those of approximately 97 acres in size sold for $39.47, while those of approximately 152 acres in size sold for $32.99 per acre.

On the unimproved dirt roads, 2,501 acres sold for an average of $18.19 per acre. It appears that these farms sold at near a minimum price, as the farms on the same road type, of the inferior soil quality, sold for an average price of $15.41 per acre.

Inferior Quality Soil Farms

A breakdown of the farms on inferior quality soil by selling price per acre and road type is shown in table 6. On paved roads, there were ten sales transferring 1,210 acres for a total consideration of $28,773, while 17 sales on all-weather roads comprising 1,980 acres transferred for a total consideration of $44,573. The average price per acre was $23.78 on paved roads and $22.51 on all-weather roads. This seems to indicate that little preference was exercised for farms on the two road types.

There were 43 farm sales of inferior quality soil on improved dirt roads. Here 5,097 acres transferred for $81,856. On unimproved dirt roads, 20 farms consisting of 1,718 acres transferred for $26,481. The average price per acre was $16.06 for the former group and $15.41 for the latter group. The difference in average size of transfer between the two road types possibly influenced the relationship to a limited extent. However, of the farms on improved dirt roads, 75 percent sold for $20.00 per acre or less, and 17 percent sold for less than $11.00. On the unimproved dirt roads, 65 percent of the farms sold for $20.00 or less, while 40 percent sold for less than $11.00 per acre. This indicates that buyers were not as indifferent to the two road types as the average price suggests.

The increased price paid for farms on pavement and all-weather roads is an indication that poor land sells for a higher price when it enjoys the advantage of a superior location. The average per acre price of the first two classifications combined was $22.99. For the last two classifications combined, the average price was $15.99, or almost one-third less.

Deviations From Standard

Finally, the value that farm real estate buyers place on various road types can be explained percentage-wise. By designating the average price paid for farms on improved dirt roads (the modal group) as 100, deviations from this standard can be shown for the farms on both the better and lower grade roads. However, since relatively few farms were located on pavement, it was deemed necessary to point out the deviations only for farms located on all-weather and unimproved dirt roads.

Figures in table 2 indicate the deviation from standard to all-weather roads is a plus 45, while moving from standard to the unimproved dirt roads the deviation is a minus 35 for all land class transferring all minerals. For the best soil, table 3, the deviation is a plus 11 for farms on all-weather roads, and a minus 31 for farms on unimproved dirt roads. The deviation for good soil quality farms on all-weather roads (Table 4) is a plus 47 from standard and a minus 30 from standard to unimproved dirt roads. On fair soil quality farms, a deviation of plus 74 occurred in moving from standard to all-weather roads (Table 5), while those located on unimproved dirt roads deviated a minus 39. For the inferior soil quality farms (Table 6) the deviation was a plus 40 moving to the all-weather roads and a minus 4 moving to unimproved dirt roads.

Distance to an All-Weather Road

In analyzing the effect of road type, the location of a farm with respect

to distance to an all-weather road would appear to be of importance. If a farmer has to traverse rough or soft slippery roads in order to get to market, the distance traveled after reaching an all-weather road becomes less significant.

All Land Sales

The results obtained from analyzing all farms that fronted on a dirt road are shown in table 7. The 923 farms were in locations which ranged from as little as one-tenth up to more than eleven miles from an all-weather road. However, the farms which were more than 8.5 miles from an all-weather road were too few to be of value to the study.

As the distance from an all-weather road increases, the decline in the average price per acre is fairly constant among the first five distance intervals, averaging about 56 cents per acre for each tenth of a mile increase in distance. However, the farther the sale from an all-weather road the smaller the decrease for each added tenth of a mile increase in distance. While the difference between the fifth and sixth class intervals is not as well defined, the sales by price class intervals (appendix table 7) show that for the fifth class interval approximately 55 percent of the farms sold for less than $21.00 per acre, whereas 69 percent of those farms in the sixth interval sold for less than $21.00 per acre.

Further, it is evident from appendix table 7 that this analysis of all sales is limited considerably by the factors of soil productivity and portion of sub-surface rights conveyed. The various soil qualities and mineral conveyances exert enough influence in most intervals to prevent any concentration in the range of average price paid.

Sales Transferring All Minerals

In order to hold the mineral factor constant, the farms having all sub-

Table 7

Selling Price Per Acre by Distance to an All-Weather Road, 1941-45
(All Land)

Distance -miles-	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
.1 - .3	25	2,323	93	124,981	53.80	177
.4 - 1.0	200	22,680	113	1,002,172	44.19	145
1.1 - 1.9	155	19,539	126	775,643	39.70	130
2.0 - 3.5	278	35,147	127	1,069,999	30.44	100
3.6 - 5.5	170	22,217	131	498,122	22.42	74
5.6 - 8.5	87	10,968	126	217,590	19.84	65
8.6 - 11	6	680	113	5,950	8.75	29
11.1 or more	2	100	50	3,400	34.00	112

* See Appendix Table 7 for range in average price.

Table 8

Selling Price Per Acre by Distance to an All-Weather Road, 1941-45
(All Land - All Minerals Transferred)

Distance -miles-	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
.1 - .3	10	938	94	83,089	88.58	224
.4 - 1	98	9,987	102	556,592	55.73	141
1.1 - 1.9	69	7,588	110	396,121	52.20	132
2.0 - 3.5	123	14,772	120	583,035	39.47	100
3.6 - 5.5	57	7,165	126	198,071	27.64	70
5.6 - 8.5	32	3,679	115	92,275	25.08	64
8.6 - 11	0	0	0	0	0	0
11.1 or more	2	100	50	3,400	34.00	86

* See Appendix Table 8 for range in average price.

surface rights intact were studied as a group (Table 8). The average per acre price of the ten farms within three-tenths of a mile of an all-weather road was $88.58. The sharpest decline occurred moving to the next interval of .4 to 1 mile. Here the average per acre price of 98 farms was $55.73. In moving to the next interval of 1.1 to 1.9 miles, the average per acre price of 69 farms was $52.20. The modal group consisting of 123 farms in the interval of 2 to 3.5 miles sold for an average per acre price of $39.47. For the interval of 3.6 to 5.5 miles and the interval of 5.6 to 8.5 miles, the smallest decrease between intervals was observed. The average per acre price of 57 farms in the 3.6 to 5.5 mile interval was $27.64 as contrasted to $25.08 for 32 farms in the latter interval.

For this breakdown, 70 percent of the farms in the first interval sold for more than $75.00 per acre. Within the next interval of .4 to 1 mile, 53 percent of the farms sold for a per acre price between $20.00 and $61.00. In the interval of 1.1 to 1.9 miles, the average price paid for 52 percent of the farms ranged from $11.00 to $45.00, while for the 2 to 3.5 mile interval about 59 percent of the sales ranged from $11.00 to $45.00. However, for the latter group roughly 46 percent of the farms sold for less than $31.00 compared to only about 31 percent for the former group. Of the 57 farms in the 3.6 to 5.5 mile interval, 62 percent sold for less than $31.00 per acre. For the interval of 5.6 to 8.5 miles, 57 percent of the farms sold for less than $21.00 per acre.

Best Soil Quality Farms

The relationship of distance from an all-weather road and land price per acre for the best soil is shown in table 9. The five farms within three-tenths mile of an all-weather road sold for an average price per acre of $110.36, while 21 farms in the next class interval of .4 to 1 mile sold for

Table 9

Selling Price Per Acre by Distance to an All-Weather Road, 1941-45
(Best Soil - All Minerals Transferred)

Distance -miles-	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
.1 - .3	5	517	103	57,054	110.36	142
.4 - 1	21	1,889	90	197,965	104.80	134
1.1 - 1.9	18	1,995	111	159,457	79.93	103
2.0 - 3.5	25	2,641	106	205,950	77.98	100
3.6 - 5.5	9	894	99	43,100	48.21	62
5.6 - 8.5	5	505	101	23,500	46.53	60
8.6 - 11	0	0	0	0	0	0
11.1 or more	1	60	60	3,000	50.00	64

* See Appendix Table 9 for range in average price.

Table 10

Selling Price Per Acre by Distance to an All-Weather Road, 1941-45
(Good Soil - All Minerals Transferred)

Distance -miles-	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
.1 - .3	3	309	103	23,760	76.89	180
.4 - 1	33	3,466	105	212,880	61.42	144
1.1 - 1.9	24	2,732	114	160,725	58.83	138
2.0 - 3.5	42	5,520	131	235,315	42.63	100
3.6 - 5.5	13	1,275	98	43,900	34.43	81
5.6 - 8.5	6	614	102	20,850	33.96	80
8.6 - 11	0	0	0	0	0	0
11.1 or more	0	0	0	0	0	0

* See Appendix Table 10 for range in average price.

$104.80. Thus, within the distance of 1 mile of an all-weather road, buyers were paying on the average $5.56 more for the farms within the three-tenths mile range than for those in the .4 to 1 mile range. This reflects value attributed to proximity to good roads even though a study of five farms is probably not adequate to give a truly representative picture. Between the intervals of .4 to 1 mile and 1.1 to 1.9 miles, a decline of almost $25.00 per acre occurred. This seems to point out that buyers purchasing farms more than a mile from an all-weather road are conscious of some disadvantage in location, and are not willing to pay as much as for the better locations.

Within the distance of 1.1 to 3.5 miles of an all-weather road, the difference in price paid was so slight as to indicate little preference for location within this range. The farms in the interval of 1.1 to 1.9 miles sold for an average price of $79.93 as against $77.98 for those in the 2 to 3.5 mile interval. However, since about 56 percent of the farms in the 1.1 to 1.9 mile interval concentrated in the average price range of $61.00 to $115.00, and 64 percent of the farms in the 2 to 3.5 mile interval concentrated in the price range of $46.00 to $95.00, buyers were probably not as indifferent to location as the weighted average price implies.

The sharpest decline in average price paid occurred between the distance intervals of 2 to 3.5 miles and 3.6 to 5.5 miles. The average price of the latter group was $48.21 per acre which was $29.77 less than the average price of the former group. This seems to indicate that the effect of location is inherent for a greater distance on the best soil than other soil types. However, the effect of distance to an all-weather road probably is influential for only 4 or 5 miles on the best quality soil. This is apparent from the small decline between the intervals of 3.6 to 5.5 miles and the interval of 5.6 to 8.5 miles.

Good Soil Quality Farms

For the distance of 3.5 miles there was some indication that location in respect to all-weather roads was more important to buyers purchasing farms on the good quality soil (Table 10) than on the best soil type. This was especially apparent between the first two distance intervals, while the possible exception was the second and third distance intervals, which were separated by only $2.58 compared to some $25.00 for the best land. However, the decline between the third and fourth class intervals further supports this indication, as these intervals were separated by $16.21 compared to $1.94 for the best land. For the distance of 3.5 miles, a variation of $32.37 existed for the best soil as contrasted to $34.27 for the good soil. A decline of $8.20 occurred between the interval of 2 to 3.5 miles and 3.6 to 5.5 miles which was only about one-fourth the decrease between similar intervals of the best soil. There was a difference of only 47 cents between the average price per acre in the 3.6 to 5.5 mile interval and the 5.6 to 8 mile interval. However, one-third of the farms in the latter group sold for less than $21.00 per acre, while all farms in the previous group sold for $21.00 or more.

Fair Quality Soil Farms

For the fair quality soil, table 11, the relationships of those farms more than four-tenths miles from an all-weather road were very similar to those of the good soil. The buyers of this soil type were probably not as indifferent to the second and third distance intervals as the 98 cents separating the two classes might imply. Of the farms in the .4 to 1 mile interval, about 82 percent sold in the range of $11.00 to $45.00 with the remaining farms selling for more than $45.00 per acre. On the other hand, about 94 percent of the farms in the interval of 1.1 to 1.9 miles sold in the range of $11.00 to $45.00 with about six percent selling for more than $45.00 per acre.

Table 11

Selling Price Per Acre by Distance to an All-Weather Road, 1941-45
(Fair Soil - All Minerals Transferred)

Distance -miles-	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre *	Index
.1 - .3	1	40	40	750	18.75	78
.4 - 1	34	4,004	118	133,147	33.25	140
1.1 - 1.9	16	1,768	111	57,064	32.27	134
2.0 - 3.5	37	4,182	113	100,809	24.11	100
3.6 - 5.5	22	3,365	153	88,220	26.22	109
5.6 - 8.5	13	1,638	126	36,800	22.47	93
8.6 - 11	0	0	0	0	0	0
11.1 or more	0	0	0	0	0	0

* See Appendix Table 11 for range in average price

Table 12

Selling Price Per Acre by Distance to an All-Weather Road, 1941-45
(Inferior Soil - All Minerals Transferred)

Distance -miles-	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre *	Index
.1 - .3	1	72	72	1,525	21.18	126
.4 - 1	10	628	63	12,600	20.06	119
1.1 - 1.9	11	1,093	99	18,875	17.27	102
2.0 - 3.5	19	2,429	128	40,961	16.86	100
3.6 - 5.5	13	1,631	125	22,851	14.01	83
5.6 - 8.5	8	922	115	11,125	12.07	72
8.6 - 11	0	0	0	0	0	0
11.1 or more	1	40	40	400	10.00	59

* See Appendix Table 12 for range in average price.

The same sharp decline in price paid per acre is evident moving from the third to fourth distance interval as was the case for the good soil. The increase of $2.11 in moving from the fourth to the fifth distance interval might be further evidence that all-weather roads have little influence, after a distance of about four miles is reached.

Inferior Quality Soil Farms

Farm sales for the inferior quality soil are analyzed in table 12. The average per acre price decreased slightly more than $8.00 in moving from the farms within one mile to those 8.5 miles from an all-weather road. The 11 farms in the first two class intervals sold at an average price of $20.18 per acre which was almost $3.00 more than the average per acre price paid for farms in the interval of 1.1 to 1.9 miles. For the remaining distance, the difference in average price between intervals ranged from less than $1.00 to about $2.50 per acre.

Deviations From Standard

In this analysis, the modal group of farms was those 2 to 3.5 miles from an all-weather road. With the average price paid for these farms in table 8 (All Land - All Minerals Transferred) assigned a value of 100, the deviation to the intervals of 1.1 to 1.9 miles and .4 to 1 mile was a plus 32 and 41 respectively. The deviation to the intervals of 3.6 to 5.5 miles and 5.6 to 8.5 miles was a minus 30 and 36 respectively.

The deviations from the modal group of farms for the best quality soil, table 9, varied somewhat differently from those of table 8. The price paid for farms in the 1.1 to 1.9 mile interval deviated a plus 3, while the price paid for those farms in the interval of .4 to 1 mile deviated a plus 34. Moving from standard to intervals of a greater distance, the deviation was a minus 38 for the range of 3.6 to 5.5 miles and a minus 40 for those farms in

the interval of 5.6 to 8.5 miles.

The average price paid for farms on the good soil (Table 10) deviated more in moving from standard to an all-weather road than in moving from standard to a greater distance from an all-weather road. A deviation of plus 38 was apparent for farms located in the 1.1 to 1.9 mile interval, while those in the .4 to 1 mile interval deviated to a plus 44. The farms in the interval of 3.6 to 5.5 miles decreased 19 from standard, whereas those in the interval of 5.6 to 8.5 decreased only 20 from standard.

For the analysis of the fair soil, table 11, a deviation of plus 34 occurred in moving from standard to the interval of 1.1 to 1.9 miles, while the farms in the .4 to 1 mile interval deviated a plus 40. Moving to the distance interval of 3.6 to 5.5 miles, a deviation of plus 9 occurred. However, in the next interval of 5.6 to 8.5 miles the price deviated a minus 7.

Farms on the inferior quality soil, table 12, deviated a plus 2 and 19 in moving from standard to the 1.1 to 1.9 mile and .4 to 1 mile intervals. A minus deviation of 17 and 28 characterized those farms in the 3.6 to 5.5 mile and 5.6 to 8.5 mile intervals.

CHAPTER III

SELLING PRICE PER ACRE BY DISTANCE TO RURAL MARKET AND DISTANCE TRAVELED OVER A DIRT ROAD TO RURAL MARKET

The effect of average selling price per acre as associated with rural markets was studied from two perspectives: distance to rural market, and distance traveled over a dirt road to rural market. These factors were also studied by six divisions in an effort to eliminate the influence of mineral conveyance and relative soil quality on the price paid for location.

Distance to Rural Market

The transactions as related to rural markets were sufficiently distributed over seven distance intervals to make the results reasonably reliable. The end classes are considerably smaller than the other classes which would seem to further support the validity of the class intervals.

All Land Sales

A tabulated analysis of distances to rural markets of all sales for the period studied is presented in table 13. The per acre price difference paid in moving from one distance interval to the next was great enough to say that farmers apparently are willing to pay more for land near a rural market. Actually, the results would have meaning only if the land quality factor and mineral factor tended to average out in each distance interval, and throughout the entire sample. Since attempts were made to control these important factors affecting the price paid for land, conclusions cannot be reached without further analysis.

Sales Transferring All Minerals

The impression gained from table 14 is that farms located from 1 to 2 miles from a rural market enjoy a greater location advantage in terms of average price paid than those farms located less than one mile from a rural

Table 13

Selling Price Per Acre by Distance to Rural Market, 1941-45
(All Land)

Distance -miles-	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
Under 1	14	1,222	87	78,408	64.16	158
1.0 - 2	114	13,990	123	758,945	54.25	134
2.1 - 3	140	16,705	119	807,837	48.36	119
3.1 - 5	293	36,230	124	1,469,144	40.55	100
5.1 - 8	342	42,870	125	1,179,716	27.52	68
8.1 -12	175	21,532	123	411,892	19.13	47
Over 12	13	1,387	107	20,825	15.01	37

* See Appendix Table 13 for range in average price.

Table 14

Selling Price Per Acre by Distance to Rural Market, 1941-45
(All Land - All Minerals Transferred)

Distance -miles-	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
Under 1	13	1,102	85	66,408	60.26	121
1.0 - 2	63	7,469	119	484,679	64.89	130
2.1 - 3	86	10,090	117	619,577	61.41	123
3.1 - 5	128	14,345	112	715,569	49.88	100
5.1 - 8	122	13,840	113	478,409	34.57	69
8.1 -12	49	6,088	124	141,306	23.21	47
Over 12	4	322	81	7,740	24.04	48

* See Appendix Table 14 for range in average price.

market. The average per acre price of the first group was $60.26, while the latter group averaged $64.89 per acre. However, if the same sales are divided into soil quality groups, it is evident that, in all cases, farms less than one mile from a rural market sold for a higher average price per acre than farms one to two miles from a rural market (Tables 15, 16, 17, and 18). This further substantiates the necessity of studying the samples by relative soil quality.

The farms in the 2.1 to 3 mile interval sold for a per acre price of $61.41. Moving to the interval of 3.1 to 5 miles, the average price dropped to $49.88 per acre. This decline of about $11.50 for slightly less than two miles was the largest per acre per mile decrease for the entire range. The largest drop between intervals occurred moving from the $49.88 paid for farms in the 3.1 to 5 mile interval to the per acre price of $34.57 for farms in the 5.1 to 8 mile interval. This was a decrease of $15.31. However, the per mile decrease here amounted to less than that observed between the previous intervals since this interval included a range of almost three miles. For the 8.1 to 12 mile interval, the average price was $23.21. Thus, a decline of less than $3.00 per acre per mile occurred in moving from the previous interval.

The average per acre selling price of the farms making up the first two intervals indicates that the majority of the buyers were paying more for land within one mile than for land one to two miles from a rural market. For the first group of farms, 54 percent of the buyers paid more than $61.00 per acre, while 46 percent paid less than $61.00. On the other hand, 46 percent of the farms in the interval of 1 to 2 miles sold for more than $61.00 and 54 percent for less than that figure. It is apparent from these figures that the average for all sales is misleading. Moving to the intervals of 2.1 to 3

and 3.1 to 5 miles, the percent of buyers paying less than $61.00 per acre increased to 58 and 68 respectively. For the 5.1 to 8 mile interval, 74 percent of the farms sold for less than $46.00, while about 80 percent of those in the 8.1 to 12 mile interval sold for less than $31.00 per acre.

Best Soil Quality Farms

The study by soil quality revealed that a good price was paid for the best soil regardless of its relationship to rural markets (Table 15). The best price was being paid for land closest to the markets. Only two farms on the best quality soil were less than one mile from the market. Here a total of 153 acres was transferred for an average price of $133.99 per acre.

In the next distance interval of 1 to 2 miles, 20 farms were sold involving 2,869 acres at an average price per acre of $91.29. This decrease of $42.70 from the first distance interval to the second is the largest drop between classes for the table. It is evident that little significance can be attached to this figure, since only two sales averaging 76.5 acres make up the first distance interval compared to 20 sales averaging 142 acres in the second interval. A part of the difference in price paid might be attributed to the difference in size of tracts, or perhaps a larger portion of the consideration in the first interval was paid for improvements, or there may have been other factors which would tend to average out in a larger number of sales. The wide margin between the two distance intervals does indicate, however, that farmers place a value on close proximity to rural markets.

The difference between the weighted average price of farms in the 1 to 2 mile and the 2.1 to 3 mile intervals was small enough to suggest that buyers had little preference within this range of a rural market. The 20 sales consisting of 2,839 acres in the 1 to 2 mile interval sold for an average of only $1.32 per acre more than the 33 farms involving 3,388 acres in the 2.1

Table 15

Selling Price Per Acre by Distance to Rural Market, 1941-45
(Best Soil - All Minerals Transferred)

Distance -miles-	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
Under 1	2	153	77	20,500	133.99	156
1.0 - 2	20	2,869	143	261,904	91.29	106
2.1 - 3	33	3,388	103	304,815	89.97	105
3.1 - 5	30	2,907	97	250,207	86.07	100
5.1 - 8	14	1,650	118	110,700	67.09	78
8.1 -12	5	473	95	26,000	54.97	64
Over 12	1	60	60	3,000	50.00	58

* See Appendix Table 15 for range in average price.

Table 16

Selling Price Per Acre by Distance to Rural Market, 1941-45
(Good Soil - All Minerals Transferred)

Distance -miles-	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre	Index
Under 1	6	371	62	25,285	68.15	129
1.0 - 2	23	2,361	103	157,350	66.65	126
2.1 - 3	27	4,446	165	239,312	53.83	102
3.1 - 5	44	5,411	123	285,520	52.77	100
5.1 - 8	34	3,547	104	166,395	46.91	89
8.1 -12	6	290	48	13,350	46.03	87
Over 12	0	0	0	0	0	0

* See Appendix Table 16 for range in average price.

to 3 mile interval. Had the farms in the 2.1 to 3 mile interval averaged nearer in size to the previous class, the difference paid probably would have been slightly greater. Too, the range of average price paid for farms in the two intervals shows that buyers exercised more preference for farms in the 1.1 to 2 mile interval than for those in the 2.1 to 3 mile interval (Appendix Table 15). The decrease in price paid between the class intervals of 2.1 to 3 miles and 3.1 to 5 miles ($3.90 per acre) was sufficient to indicate some preference for the more convenient location.

The second sharpest break in price paid occurred between the 3.1 to 5 and 5.1 to 8 mile intervals. Buyers were paying on the average $18.98 per acre more for farms 3.1 to 5 miles from market than for those 5.1 to 8 miles out. Thus, it appears that a farmer buying land more than 5 miles from rural market must be compensated for this inconvenience by paying a considerably lower price per acre.

Of the best land, 6 farms were more than 8 miles from market, with only one of these in the open-end class of more than 12 miles. This is not a sufficient number on which to place much emphasis; however, these transactions still followed a definite pattern of interval decreases.

Good Soil Quality Farms

Table 16 shows that the average selling price per acre for the good land followed a decreasing pattern similar to that of the best land. A small difference in price paid occurred between the first two distance intervals. The first class interval of .1 to .9 miles consisted of 6 sales involving 371 acres selling for $68.15 per acre. The second class of 1 to 2 miles was composed of 23 sales involving 2,361 acres and selling for $66.65 per acre. This was a difference of $1.50 per acre. Here, again, the farms less than 1 mile of a rural market were too few and small to be of much significance.

Moving from the second class interval down to the fourth class interval, the decreases were somewhat greater than for the same class intervals of the best land. This appears to indicate that as the productivity of a farm decreases, the value placed on a good proximity to market increases.[1] While the slight decline in average price between the third and fourth class intervals indicated that buyers had little preference within this distance of a rural market, a range of relative indifference occurred one distance interval sooner for the best soil type.

A decline of $5.85 occurred between the farms in the 3.1 to 5 and 5.1 to 8 mile intervals which indicates that the latter class was considered less desirable. While only a difference of 88 cents separated the class intervals of 5.1 to 8 and 8.1 to 12, the number of farms in the 8.1 to 12 mile interval was not substantial nor of sufficient size to make a valid comparison. Of the six farms in the interval of 8.1 to 12 miles, five farms or 83 percent sold for less than $31.00, while only 12 percent of the farms in the preceding interval sold for less than $31.00 per acre.

Fair Soil Quality Farms

The average per acre price paid for farms on the fair quality soil (Table 17) declined about $14.00 moving from one mile to 12 miles from a rural market. The average price of the farms in the 1 to 2 mile interval was $36.16 which was almost $2.00 less than the average price of $38.27 paid for farms in the next interval of 2.1 to 3 miles. Generally, the differences separating the average prices for the remaining intervals ranged from about $5.00 to $6.00 per acre. The average per acre selling price was $33.64 in the 3.1 to 5 mile interval, $27.70 in the 5.1 to 8 mile interval, and $21.95

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1 Wood, op. cit.

Table 17

Selling Price Per Acre by Distance to Rural Market, 1941-45
(Fair Soil - All Minerals Transferred)

Distance -miles-	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
Under 1	4	472	118	17,750	37.61	112
1.0 - 2	10	1,395	140	50,450	36.16	107
2.1 - 3	19	1,633	86	62,500	38.27	114
3.1 - 5	37	4,051	109	136,292	33.64	100
5.1 - 8	45	5,659	126	156,739	27.70	82
8.1 -12	24	3,183	133	69,869	21.95	65
Over 12	1	142	142	2,840	20.00	59

* See Appendix Table 17 for range in average price.

Table 18

Selling Price Per Acre by Distance to Rural Market, 1941-45
(Inferior Soil - All Minerals Transferred)

Distance -miles-	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
Under 1	1	106	106	2,873	27.10	123
1.0 - 2	10	844	84	14,975	17.74	80
2.1 - 3	7	623	89	12,950	20.79	94
3.1 - 5	17	1,976	116	43,550	22.04	100
5.1 - 8	29	2,984	103	44,575	14.94	68
8.1 -12	14	2,142	153	32,087	14.98	68
Over 12	2	120	60	1,900	15.83	72

* See Appendix Table 18 for range in average price.

in the 8.1 to 12 mile interval.

Inferior Soil Quality Farms

For the inferior quality soil, table 18, the average price indicates that distance from rural market had little effect on sales price of farms other than those within five miles of market. At the same time, too few sales were transacted within the first three miles to get a valid picture. Nevertheless, the trend is shown that these farms were bringing several dollars more per acre than those a greater distance from market.

Deviations From Standard

The index in table 14 (Sales Transferring All Minerals) shows the relationship of distance to rural market and selling price by percentage deviations. With the interval of 3.1 to 5 miles assigned a value of 100, the 2.1 to 3 mile interval increased to 123 and the interval of 1 to 2 miles increased to 130. Moving down from the model group, the selling price of farms in the 5.1 to 8 and 8.1 to 12 mile interval decreased to 69 and 47.

Calculations for the best quality soil (Table 15) show the index for the interval of 2.1 to 3 miles to be 105, while that for the 1 to 2 mile interval is 106. Moving down from 100, the 5.1 to 8 mile and 8.1 to 12 mile intervals show values of 78 and 64.

The index for the first interval of the good quality soil is 129 (Table 16). The next interval decreased to 126, while the third interval shows an index of 102. For the intervals of 5.1 to 8 miles and 8.1 to 12 miles, the index is 89 and 87 respectively.

In table 17, (Fair Soil Quality Farms) the index of the 1 to 2 mile interval is 107, while the more distant interval of 2.1 to 3 miles shows an index of 114. The 5.1 to 8 mile interval deviated to 82 and the 8.1 to 12 mile interval deviated to 65.

For the inferior quality soil, table 18, the index decreased to 94 in moving from standard to the 2.1 to 3 mile interval and to 80 in moving to the 1 to 2 mile interval. An index of 68 occurred for both the 5.1 to 8 and 8.1 to 12 mile intervals.

Distance Traveled Over a Dirt Road to Rural Market

In studying the distance traveled over a dirt road to rural market, relationships similar to those shown for distance to rural markets were observed. This analysis included only 932 transactions since 159 of the buyers had access to rural markets without traversing a dirt road.

All Land Sales

The results found when all sales were tabulated are shown in table 19. A positive relationship of distance traveled over a dirt road to rural market is apparent up to 11 miles. The decrease in average price per acre between intervals out to 5.5 miles is relatively large, while the distance included in each interval is small. For the intervals of more than 5.5 miles, the decrease in average price is somewhat smaller, while the distance in each interval is greater. This leads to the belief that buyers place less emphasis on location when buying a farm more than 5.5 miles from an all-weather road leading to a rural market. As will be observed, this relationship varies somewhat for the different soil qualities.

Sales Transferring All Minerals

After sorting out the sales in which all mineral rights were not transferred, 393 sales were available for study (Table 20). From the .1 to .3 mile interval through the 5.6 to 8.5 mile interval, the average per acre price declined from $88.58 to $22.39. This was a decrease in selling price of about $66.00 per acre or an average decrease of about $8.00 per acre per mile.

Farms in the .4 to 1 mile interval sold for an average per acre price of

Table 19

Selling Price Per Acre by Distance Traveled Over a Dirt Road to Rural Market, 1941-45
(All Land)

Distance -miles-	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
.1 - .3	20	1,876	94	112,009	59.71	189
.4 - 1	185	20,579	111	936,877	45.53	144
1.1 - 1.9	145	16,774	116	690,339	41.16	131
2.0 - 3.5	286	36,390	127	1,147,624	31.54	100
3.6 - 5.5	167	22,990	138	542,092	23.57	75
5.6 - 8.5	111	13,801	124	269,266	19.58	62
8.6 - 11	14	1,863	133	26,150	14.04	45
11.1 or more	4	322	81	6,740	20.93	66

* See Appendix Table 19 for range in average price.

Table 20

Selling Price Per Acre by Distance Traveled Over a Dirt Road to Rural Market, 1941-45
(All Land - All Minerals Transferred)

Distance -miles-	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
.1 - .3	10	938	94	83,089	88.58	211
.4 - 1	90	9,442	105	538,917	57.08	136
1.1 - 1.9	68	6,952	102	372,057	53.52	128
2.0 - 3.5	120	14,004	117	589,778	41.88	100
3.6 - 5.5	65	7,852	121	224,506	28.59	68
5.6 - 8.5	34	4,420	130	98,946	22.39	53
8.6 - 11	3	370	123	3,550	9.59	23
11.1 or more	3	242	81	6,240	25.79	62

* See Appendix Table 20 for range in average price.

$57.08, while the price in moving to the 1.1 to 1.9 mile interval declined to only $53.52. The average price declined to $41.88 per acre in moving to the modal group of farms in the 2 to 3.5 mile interval and to $28.59 in the 3.6 to 5.5 mile interval.

The general relationships implied by the average price seem to be further substantiated by the per acre selling price of the majority of the farms in each interval. Of the 10 farms that compose the average per acre price of $88.58 in the first class interval, 50 percent sold in the price range of $61.00 to $95.00 per acre, while 30 percent sold for more than $95.00.

In the next interval (.4 to 1 mile) consisting of 90 farms, 50 percent sold in the price range of $21.00 to $60.00 with 10 percent selling for less than $21.00. There were 68 farms in the 1.1 to 1.9 mile interval, two-thirds of which sold for less than $61.00 per acre. Within the range of 2 to 3.5 miles, about 56 percent of the 120 farms sold for less than $46.00, whereas of the 68 farms in the 3.6 to 5.5 mile interval 85 percent sold for less than $46.00 per acre. The majority (76 percent) of the 34 farms in the 5.6 to 8.5 mile interval sold for less than $31.00 per acre.

Best Soil Quality Farms

The average selling price per acre by various class intervals indicates that buyers of the best quality soil were rather responsive to location when buying farms on dirt roads out from rural markets (Table 21). There were five farms in the first distance interval of less than three-tenths of a mile selling for an average price per acre of $110.36. A total of 20 farms were in the second class interval of .4 to 1 mile selling for an average price per acre of $104.73. This was a difference of $5.63 per acre within a distance of one mile.

Moving out from the 25 farms within one mile of an all-weather road to

Table 21

Selling Price Per Acre by Distance Traveled Over a Dirt Road to Rural Market, 1941-45
(Best Soil - All Minerals Transferred)

Distance -miles-	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
.1 - .3	5	517	103	57,054	110.36	150
.4 - 1	20	1,864	93	195,215	104.73	142
1.1 - 1.9	18	1,830	102	150,207	82.08	112
2.0 - 3.5	29	3,013	104	221,550	73.53	100
3.6 - 5.5	9	843	94	47,600	56.47	77
5.6 - 8.5	3	405	135	18,150	44.81	61
8.6 - 11	0	0	0	0	0	0
11.1 or more	1	60	60	3,000	50.00	68

* See Appendix Table 21 for range in average price.

Table 22

Selling Price Per Acre by Distance Traveled Over a Dirt Road to Rural Market, 1941-45
(Good Soil - All Minerals Transferred)

Distance -miles-	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
.1 - .3	3	309	103	23,760	76.89	181
.4 - 1	34	3,546	104	216,080	60.94	143
1.1 - 1.9	21	2,461	117	152,025	61.77	145
2.0 - 3.5	41	5,270	129	224,415	42.58	100
3.6 - 5.5	15	1,710	114	59,800	34.97	82
5.6 - 8.5	6	600	100	21,050	35.08	82
8.6 - 11	1	20	20	300	15.00	35
11.1 or more	0	0	0	0	0	0

* See Appendix Table 22 for range in average price.

the 18 farms in the 1.1 to 1.9 mile interval, the largest decline in price occurred. The drop amounted to $22.65 from the .4 to 1 mile interval and $28.28 from the .1 to .3 mile interval. The implication is that while buyers of this soil type give some attention to location even within the first mile, considerable disadvantage is associated with a location more than one mile's distance from an all-weather road leading to the rural market.

The decline between the intervals of 1.1 to 1.9 miles and 2 to 3.5 miles was only $8.55, although the distance included in the latter interval increased to 1.5 miles, as compared to only a fraction of a mile for the previous intervals. This relationship between the average selling price and distance traveled over a dirt road indicates that buyers are only moderately concerned with location when buying farms in the distance of 1.1 to 3.5 miles of an all-weather road leading to the rural market.

From the interval of 2 to 3.5 miles, the average price decreased from $73.53 per acre to an average price of $56.47 per acre for those farms in the 3.6 to 5.5 mile interval. This decrease probably is influenced by the combination of distance to an all-weather road and distance to rural market. It can be seen that a farm more than 3.5 miles from an all-weather road leading to a rural market is not well located in respect to markets or good roads. However, the large decrease is another indication that the effect of location probably extends for a greater distance on the best soil than for other soil qualities. The decrease shown moving out to the interval of 5.6 to 8.5 is not reliable, since only three farms were involved.

Good Soil Quality Farms

The relationship of distance traveled over a dirt road to the rural market and selling price per acre for the good soil quality is shown in table 22. Of the 121 farms sold, 99 or approximately 82 percent were within 3.5 miles of

an all-weather road, although only three farms made up the interval of .1 to .3 miles.

The three farms in the first class interval averaged $76.89 per acre, or $15.95 more than those in the second interval. The average price seems to indicate that buyers were indifferent to location within the second and third distance intervals. The 34 farms in the .4 to 1 mile interval sold for an average price of $60.94 per acre which was slightly less than the $61.77 per acre paid for the 21 farms in the 1.1 to 1.9 mile interval. However, only 47 percent of the farms in the .4 to 1 mile interval sold for less than $61.00 per acre compared to about 53 percent in the 1.1 to 1.9 mile interval. Thus, the per acre selling price of the majority of farms in the .4 to 1 mile interval tended to be somewhat higher than the majority group in the 1.1 to 1.9 mile interval. A large decrease occurred moving from the third to the fourth class interval. The 41 farms in the fourth class interval of 2 to 3.5 miles sold for an average per acre price of $42.58 which was a decrease of $19.19 from the third class interval.

The effect of distance traveled over a dirt road probably influences the price paid for good land for more than 3.5 miles. The average price per acre dropped from $42.58 from the interval of 2 to 3.5 miles to $34.97 for the interval of 3.6 to 5.5 miles. It is unlikely that the influence extended as far as 5.5 miles, since the interval of 5.6 to 8.5 miles increased to $35.08.

For the distance of 3.5 miles, there seems to be little difference in the value placed on location for the best and good soil qualities. Moving from the first interval out to 3.5 miles, the decrease in average price for the best soil was $36.83, contrasted to $34.31 for the good soil. The decline between various intervals within this range varied a great deal for the two soil qualities, with the buyers of the good soil placing more emphasis on the

.1 to .3 mile range.

Fair Soil Quality Farms

The average selling price of farms on the fair quality soil decreased about $14.00 per acre in moving from the .4 to 1 mile interval to the 5.6 to 8.5 mile interval (Table 23). The selling price of the former group was $33.63, while the latter group averaged $19.61 per acre. This is roughly a $2.00 per acre per mile decrease as the distance increases.

Inferior Soil Quality Farms

The relationship between the distance traveled over a dirt road to rural market and average selling price for the inferior quality soil is shown in table 24. The trend of average price per acre is generally downward moving out on dirt roads. The difference between the .4 to 1 mile interval and the 5.6 to 8.5 mile interval is slightly more than $6.50. The former group sold for $20.07 and the latter group for $13.44 per acre. Hence, the decrease was about one-third of the average price paid for the .4 to 1 mile group.

Deviations From Standard

From a standard of 100 assigned the average selling price of the farms in the 2 to 3.5 mile interval, the sales in the intervals of 1.1 to 1.9 miles and .4 to 1 mile deviated a plus 26 and 36 respectively for the sales transferring all minerals (Table 20). In the same breakdown, the intervals of 3.6 to 5.5 miles and 5.6 to 8.5 miles deviated a minus 32 and 47 in moving from standard.

The deviations from standard for the best quality farms, table 21, show a value of 142 for the .4 to 1 mile interval and 112 for the 1.1 to 1.9 mile interval. While the index of the farms in the 3.6 to 5.5 mile interval dropped to 77, the index for the 5.6 to 8.5 mile interval dropped to 61.

The farms in the interval of .4 to 1 mile in the analysis of the good quality soil (Table 22) deviated a plus 43 from standard which was slightly

Table 23

Selling Price per Acre by Distance Traveled Over Dirt Road to Rural Market, 1941-45
(Fair Soil - All Minerals Transferred)

Distance -miles-	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
.1 - .3	1	40	40	750	18.75	67
.4 - 1	28	3,444	123	115,822	33.63	120
1.1 - 1.9	16	1,498	94	49,500	33.04	118
2.0 - 3.5	36	4,002	111	111,973	27.98	100
3.6 - 5.5	26	3,738	144	94,605	25.31	90
5.6 - 8.5	16	2,173	136	43,050	19.81	71
8.6 - 11	0	0	0	0	0	0
11.1 or more	1	142	142	2,840	20.00	71

* See Appendix Table 23 for range in average price.

Table 24

Selling Price Per Acre by Distance Traveled Over Dirt Road to Rural Market, 1941-45
(Inferior Soil - All Minerals Transferred)

Distance -miles-	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
.1 - .3	1	72	72	1,525	21.18	120
.4 - 1	8	588	74	11,800	20.07	113
1.1 - 1.9	13	1,163	89	20,325	17.48	99
2.0 - 3.5	14	1,799	129	31,840	17.70	100
3.6 - 5.5	15	1,561	104	22,501	14.41	81
5.6 - 8.5	9	1,242	138	16,696	13.44	76
8.6 - 11	2	350	175	3,250	9.29	52
11.1 or more	1	40	40	400	10.00	56

* See Appendix Table 24 for range in average price.

less than a deviation of plus 45 for the 1.1 to 1.9 mile interval. Both the interval of 3.6 to 5.5 miles and the interval of 5.6 to 8.5 miles deviated a minus 18 in moving from standard.

In moving from standard to the intervals of 1.1 to 1.9 miles and .4 to 1 mile, deviations of plus 16 and 20 occurred for the fair soil quality farms (Table 23). The deviation from standard to the 3.6 to 5.5 mile interval was a minus 10. However, the farms in the 5.6 to 8.5 mile interval deviated a minus 29.

The farms in the .4 to 1 mile interval of table 24 (Inferior Quality Soil) showed an index of 113. The index of the 1.1 to 1.9 mile interval was 99. Moving down from standard to the 3.6 to 5.5 mile and 5.6 to 8.5 mile intervals, the index decreased to 81 and 76.

CHAPTER IV

SELLING PRICE PER ACRE BY DISTANCE TO URBAN MARKET AND DISTANCE TRAVELED OVER DIRT ROAD TO URBAN MARKET

Studies were made of both the selling price per acre as related to distance to urban market, and as related to distance traveled over dirt road to urban market. The first part of this chapter is devoted to an analysis of all sales and to those sales conveying all sub-surface rights as a unit and by various soil qualities. The last part deals with the same data by distance traveled over a dirt road to urban market.

Distance to Urban Market

The tables were originally divided into seven intervals of distance. The first interval of less than one mile was dispensed with, as no sales were transacted within this range of an urban market. All those sales that occurred more than twenty miles from the urban market were treated as an open-end class. It was felt that other factors such as proximity to rural markets and adjoining county seat towns would tend to overshadow any influence that the urban market might have on the selling price. Considerable evidence is apparent that this probably occurred sooner, somewhere within the distance interval of 14.1 to 20 miles.

All Land Sales

In observing an analysis of all sales in table 25 (in which no attempt was made to control soil quality and mineral rights conveyed) a big decrease in average price paid per acre is apparent until the distance from the urban market is increased to 14 miles. The average decrease is about $4.30 per acre for each mile increase in distance. From 14.1 to 20 miles, a slight rise over the preceding interval is apparent. Slightly less was paid for those farms more than 20 miles out than for the preceding two distance

Table 25

Selling Price Per Acre by Distance to Urban Market, 1941-45
(All Land)

Distance -miles-	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
1.0 - 2	5	799	160	73,104	91.49	126
2.1 - 5	95	9,203	97	666,001	72.37	100
5.1 - 9	134	17,350	129	807,573	46.55	64
9.1 - 14	249	32,381	130	984,475	30.40	42
14.1 - 20	275	33,894	123	1,040,537	30.70	42
Over 20	333	40,309	121	1,155,077	28.66	40

* See Appendix Table 25 for range in average price.

Table 26

Selling Price Per Acre by Distance to Urban Market, 1941-45
(All Land - All Minerals Transferred)

Distance -miles-	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
1.0 - 2	4	679	170	69,704	102.66	119
2.1 - 5	60	5,664	94	484,649	85.57	100
5.1 - 9	58	6,382	110	400,560	62.76	73
9.1 - 14	99	11,752	119	426,677	36.31	42
14.1 - 20	121	14,498	120	454,319	38.24	45
Over 20	123	14,281	116	577,779	40.46	47

* See Appendix Table 26 for range in average price.

intervals.

Sales Transferring All Minerals

The pattern of those sales transferring all mineral rights (Table 26) is similar to the results in table 25 until the distance of 14 miles is reached. However, the prices from 14.1 to 20 miles were up slightly over the preceding distance interval, while those farms of more than twenty miles sold for still a higher average price per acre. Here, the average price again shows that other influences have off-set the advantage of nearness to urban market, somewhere within the distance interval of 14.1 to 20 miles.

There were four farm sales in the interval of 1 to 2 miles. These farms averaged 170 acres in size and sold for a per acre price of $102.66. The interval of 2.1 to 5 miles was composed of 60 sales commanding an average per acre price of $85.57. In moving to the interval of 5.1 to 9 miles, an average per acre price of $62.76 was paid for 58 farms. The decline of $22.81 from the preceding interval represents almost $6.00 per acre per mile. For 99 farms in the interval of 9.1 to 14 miles, the average per acre selling price was $36.31. This represents a decline of $26.45 per acre over a distance of about five miles which closely parallels the per mile decrease of the intervals of 2.1 to 5 miles and 5.1 to 9 miles. The average per acre price paid for 121 farms in the 14.1 to 20 mile interval was $38.24, while the average price paid for 123 farms in the last interval was $40.46.

The range of average price for farms transferring all mineral rights can be seen in appendix table 26. Of the farms in the interval of 2.1 to 5 miles, 56 percent sold for more than $75.00 per acre. In the next interval of 5.1 to 9 miles, 59 percent of the farms sold for an average price of between $46.00 and $115.00 per acre. The majority of the farms in the interval of 9.1 to 14 miles (72 percent) sold in the range of $21.00 to $60.00 per acre.

For the last two class intervals, the per acre price at which the largest concentration of farms sold varied only a small amount. The greatest proportion of farms, 60 percent, in the 14.1 to 20 mile interval and 63 percent in the interval of more than 20 miles sold in the range of $11.00 to $45.00 per acre. This shows that a majority of the buyers purchasing land 14.1 to 20 miles and more than 20 miles were actually paying less than those in the 9.1 to 14 mile range, in spite of the fact that the average price was somewhat higher. The minority group of farms in these intervals tended to raise the weighted average price of these groups higher than the preceding group of farms.

Best Soil Quality Farms

An examination of the best quality soil (Table 27) shows that only three farms were within two miles of an urban market. These farms averaging 213 acres sold for an average price of $101.65 per acre. In the next distance interval (2.1 to 5 miles), 28 farms averaging 98 acres sold at an average price per acre of $119.19. It was found in this study that farms of 90 to 100 acres in size commanded slightly more per acre than did farms of around 200 acres with similar locations (Appendix Tables 48 and 50). This and the fact that sufficient samples were lacking in the class interval probably explains these results.

With little difference in average size of transfer, moving from the 2.1 to 5 mile interval through the 14.1 to 20 mile interval, an almost constant relationship is shown. The largest drop occurred between the farms in the interval of 5.1 to 9 miles which averaged $100.22 per acre and the farms in the interval of 9.1 to 14 miles which averaged $70.26 per acre. The decline from the 9.1 to 14 mile interval to the 14.1 to 20 mile interval was $15.02. Using the range of the distance between the mid-points of these two intervals, the

Table 27

Selling Price Per Acre by Distance to Urban Market, 1941-45
(Best Soil - All Minerals Transferred)

Distance -miles-	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
1.0 - 2	3	639	213	64,954	101.65	85
2.1 - 5	28	2,754	98	328,257	119.19	100
5.1 - 9	16	1,669	104	167,265	100.22	84
9.1 - 14	18	1,932	107	135,750	70.26	59
14.1 - 20	20	1,862	93	102,850	55.24	46
Over 20	20	2,644	132	178,050	67.34	56

* See Appendix Table 27 for range in average price.

Table 28

Selling Price Per Acre by Distance to Urban Market, 1941-45
(Good Soil - All Minerals Transferred)

Distance -miles-	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
1.0 - 2	1	40	40	4,750	118.75	180
2.1 - 5	15	1,293	86	85,400	66.05	100
5.1 - 9	19	2,327	122	136,995	58.87	89
9.1 - 14	28	3,494	125	136,165	38.97	59
14.1 - 20	37	5,069	137	279,432	55.13	83
Over 20	40	4,203	105	244,470	58.17	88

* See Appendix Table 28 for range in average price.

indications are that prices decreased about $1.88 per acre for each mile increase in distance.

There was a total decrease in price paid for land of the best soil of $63.96 per acre in moving from those farms in the second distance interval to those in the interval of 14.1 to 20 miles. Again using the mid-points of each of these distance intervals, a range of 14 miles is found which indicates a decrease per acre of about $4.50 for each mile increase in distance.

Good Quality Soil Farms

The good quality soil shows a positive relationship between average selling price and distance to the urban market for a distance of 14 miles (Table 28). The failure of the relationship to be reflected for 20 miles as was the case with the best soil quality seems to be another indication that, as productivity decreases, the effect of location is influential over a shorter distance. On the other hand, part of the increased price paid for good quality soil more than 14 miles from the urban market undoubtedly can be attributed to the effect of location in respect to other markets. The majority of the farms of this soil quality were located in the northern part of the county. In general, they enjoyed good proximity to rural markets and to the metropolitan area studied. Whatever the cause, the range of average price paid as well as the weighted average price indicates that farms more than 14 miles from market were commanding a higher price than those in the 9.1 to 14 mile interval.

Since only one small farm was in the first class interval of 1 to 2 miles, the meaningful decline in average price for the good soil is confined to the range of 2.1 to 14 miles of the urban market. The farms in the 2.1 to 5 mile interval sold for $7.17 per acre more than those farms in the 5.1 to 9 mile interval, while the farms in the 5.1 to 9 mile interval sold for $19.90 per

acre more than those in the 9.1 to 14 mile interval. This seems to indicate that the effect of the urban market on selling price increases throughout the entire range of its effectiveness. Within this 11 mile range, the average decrease was about $3.40 per acre for each added mile of distance.

Fair Quality Soil Farms

An analysis of the fair quality soil shows that for each distance interval removed from the urban market, less was paid for a farm (Table 29). The reason those farms more than 14 miles from the urban market failed to show an increase over those of less than 14 miles, might be explained by the fact that the majority of the farms with fair grade soil were not well situated in relation either to other markets of similar size or to Oklahoma City. These farms also tend to support the thought often advanced (and pointed out in the analysis of road type) that the poorer land must have a superior location to demand a good price. Those sales within the second and third class intervals sold for a good price, while those further out sold for considerably less. At the same time, little difference was evident between intervals for the more distant classes. The difference in price paid for those farms in the second class interval and those in the fifth class interval, indicates that prices were about $1.40 per acre lower for each mile increase in distance.

Inferior Quality Soil

For the inferior quality soil, sufficient sales were lacking in the 1 to 2, 2.1 to 5, and 5.1 to 9 mile intervals to obtain any worthwhile results (Table 30). The distance interval of 14.1 to 20 miles was down from the 9.1 to 14 mile interval, while the farms of more than 20 miles away sold for an average price per acre of slightly more than the two distance intervals preceding it. As advanced in the analysis of the fair land, it appears that any superior location that the inferior land might have to a good road or rural

Table 29

Selling Price Per Acre by Distance to Urban Market, 1941-45
(Fair Soil - All Minerals Transferred)

Distance -miles-	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
1.0 - 2	0	0	0	0	0	0
2.1 - 5	16	1,457	91	68,192	46.80	100
5.1 - 9	21	2,181	104	92,800	42.55	91
9.1 - 14	34	4,083	120	114,099	27.94	60
14.1 - 20	35	4,666	133	127,312	27.29	58
Over 20	34	4,149	122	94,037	22.66	53

* See Appendix Table 29 for range in average price.

Table 30

Selling Price Per Acre by Distance to Urban Market, 1941-45
(Inferior Soil - All Minerals Transferred)

Distance -miles-	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
1.0 - 2	0	0	0	0	0	0
2.1 - 5	1	160	160	2,800	17.50	100
5.1 - 9	2	206	103	3,500	16.99	97
9.1 - 14	19	2,243	118	40,663	18.13	104
14.1 - 20	29	2,901	100	44,725	15.42	88
Over 20	29	3,285	113	61,222	18.64	107

* See Appendix Table 30 for range in average price.

market tends to influence the selling price more than the urban market in the more distant classes. In other words, a farm several miles from an urban market might sell at a premium price due to its superior location in regard to roads and rural markets. This would have a tendency to cause the more distant classes to sell for as much or more as any inferior soil, except that which enjoys a superior location to the urban market. As noticed earlier, too few sales were available to determine the effect that a superior location to an urban market might have on the selling price of inferior quality soil.

Deviations From Standard

The modal group of farms for this analysis is those more than 20 miles from the urban market. However, since the intervals of more than two miles are represented by a sizeable number of sales, deviations from the interval of 2.1 to 5 miles will probably show fairly well the relationships of the various intervals.

For the breakdown of sales transferring all minerals, table 26, the deviations from the value of 100 assigned the farms in the interval of 2.1 to 5 miles was slightly greater than the deviations from the similar intervals for the various soil breakdowns. The value of the farms in the interval of 5.1 to 9 miles deviated to 73, those in the 9.1 to 14 mile interval deviated to 42, while the last two intervals showed a value of 45 and 47 respectively.

In moving from the 2.1 to 5 mile interval, the sales of the best quality soil, table 27, deviated to 84 in the interval of 5.1 to 9 miles and to 59 in the interval of 9.1 to 14 miles. The farms in the interval of 14.1 to 20 miles continued to deviate downward from the previous intervals, while the farms more than 20 miles from the urban market deviated less from standard than the group preceding it. The farms in the 14.1 to 20 mile interval deviated to 46. Those more than 20 miles deviated to only 56.

The farm sales of the good quality soil, table 28, deviated less from the interval of 2.1 to 5 miles than did the sales of the best quality soil. The interval of 5.1 to 9 miles deviated to 38, whereas the interval of 9.1 to 14 miles deviated to 59. On the other hand, the last two intervals deviated only to 83 and 88 moving from the urban market.

The deviations from the interval of 2.1 to 5 miles increased for the entire range of data in the analysis of the fair quality soil (Table 29). The value of the sales in the 5.9 to 9 mile interval deviated to 91, those in the 9.1 to 14 mile interval deviated to 60, those in the 14.1 to 20 mile interval deviated to 58, and those over 20 miles deviated to 53.

Since there were only three sales in the intervals of 2.1 to 5 miles and 5.1 to 9 miles for farms of inferior quality soil, table 30, deviations for this breakdown would have little if any meaning.

Distance Traveled Over Dirt Road To Urban Market

In mapping the most likely route to the urban market from the 1,091 farms sold during the period studied, it was found that 947 of the farmers would have to travel part or all the way on a dirt road. Several cases were observed in which farmers buying land on all-weather roads would have to leave the road and travel part of the way on a dirt road in order to get to the market, or else take a route that was much longer.

All Land Sales

The effect of distance traveled over a dirt road to the urban market for all sales transacted is analyzed in table 31. The sales are well distributed over eight distance intervals, with the outside classes considerably smaller than the other intervals. The average price paid per acre was continually downward until those farms more than eleven miles out on dirt roads were reached. Then a slight rise in selling price is apparent.

Table 31

Selling Price Per Acre by Distance Traveled Over a Dirt Road to Urban Market, 1941-45
(All Land)

Distance -miles-	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
.1 - .3	18	1,706	95	102,509	60.09	179
.4 - 1	161	17,269	107	781,242	45.24	135
1.1 - 1.9	115	13,755	120	523,089	38.03	114
2.0 - 3.5	256	34,169	133	1,144,619	33.50	100
3.6 - 5.5	201	26,085	130	811,872	31.12	93
5.6 - 8.5	133	16,960	128	396,407	23.37	70
8.6 - 11	45	5,373	119	106,181	19.76	59
11.1 or more	18	2,122	118	54,640	25.75	77

* See Appendix Table 31 for range in average price.

Table 32

Selling Price Per Acre by Distance Traveled Over a Dirt Road to Urban Market, 1941-45
(All Land - All Minerals Transferred)

Distance -miles-	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
.1 - .3	10	938	94	83,089	88.58	209
.4 - 1	73	7,212	99	433,732	60.14	142
1.1 - 1.9	49	4,921	100	265,407	53.93	127
2.0 - 3.5	105	14,116	134	597,215	42.31	100
3.6 - 5.5	95	11,215	118	442,200	39.43	93
5.6 - 8.5	53	6,142	116	183,462	29.87	71
8.6 - 11	8	970	121	23,300	24.02	57
11.1 or more	6	442	74	8,990	20.34	48

* See Appendix Table 32 for range in average price.

For all land, the greatest decline occurred between the distance intervals of .1 to .3 and .4 to 1 mile. A total of 18 sales involving 1,706 acres were within three-tenths of a mile of an all-weather road leading to the urban market. These farms sold at a per acre price of $60.09. Within the distance interval of .4 to 1 mile, 161 sales were transacted, consisting of 17,269 acres. These farms sold for an average price of $45.24, or $14.85 less per acre than those within three-tenths of a mile. This seems to indicate that a high price is paid for location when a farm is within easy reach of an all-weather road leading to the urban market. For the intervals of more than one mile, the decrease between intervals was considerably smaller but generally consistent. However, the results from analyzing all sales are useful only as a generalization. The breakdowns by various soil qualities are more reliable.

Sales Transferring All Minerals

In table 32, with the analysis limited to those farms conveying all subsurface rights, the results are positive from one distance interval to the next, as the distance traveled over a dirt road increases. For this breakdown, a difference of $28.44 is observed between the average selling price of farms within .3 of a mile and those .4 to 1 mile out on dirt roads. The farms in the first interval sold for a per acre price of $88.58, while those in the second interval sold for $60.14. However, a total of five or one-half of the farms in the first distance interval are of the best soil quality which accounts for part of the difference. A drop of $6.21 per acre existed between the selling price for land within .4 to 1 mile and land within 1.1 to 1.9 miles of an all-weather road entering the urban market since the latter group sold for a per acre price of $53.93. The average per acre selling price of farms in the interval of 2 to 3.5 miles was $42.31, while the average price paid for farms in the 3.6 to 5.5 mile interval dropped less than $3.00 per

acre to $39.43. Moving to the interval of 5.6 to 8.5 miles, the average price declined to $29.87 per acre.

The average per acre price paid for farms in the various intervals indicates the same general relationships as those implied by the weighted averages. The majority of the farms (70 percent) in the .1 to .3 mile interval sold for a per acre price in excess of $75.00. In the next interval of .4 to 1 mile, 59 percent of the farms sold for less than $61.00, while in the interval of 1.1 to 1.9 miles 66 percent of the farms sold for less than $61.00 per acre. Moving to the intervals of 2 to 3.5 miles, 3.6 to 5.5 miles, and 5.6 to 8.5 miles, the per acre selling price was less than $46.00 for 61 percent, 66 percent and 79 percent of the farms respectively.

Best Soil Quality Farms

The disadvantage of traveling over a dirt road to the urban market seems to be strongly reflected in the average selling price of farms of the best soil quality (Table 33). Within the distance of one mile of an all-weather road, 24 farms comprising 2,281 acres sold for an average price of $105.64 per acre. This was approximately $20.00 more than the average price paid for 15 farms in the 1.1 to 1.9 mile interval. The decline, moving from the 1.1 to 1.9 mile interval to the 2 to 3.5 mile interval was slightly more than $10.00. There was a per acre decrease of $8.48 moving from the 2 to 3.5 mile interval to the 3.6 to 5.5 mile interval. A large decrease also characterized the 3.6 to 5.5 and 5.6 to 8.5 mile intervals. However, farms this far removed from an all-weather road undoubtedly have poor proximity to other location factors such as rural and metropolitan markets.

Good Soil Quality Farms

The average selling price per acre on the good quality soil shows that buyers had considerable preference for farms within 3.5 miles of an all-

Table 33

Selling Price Per Acre by Distance Traveled Over a Dirt Road to Urban Market, 1941-45
(Best Soil - All Minerals Transferred)

Distance -miles-	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
.1 - .3	5	517	103	57,054	110.36	145
.4 - 1	19	1,764	93	183,915	104.26	137
1.1 - 1.9	15	1,680	112	144,457	85.99	113
2.0 - 3.5	20	2,358	118	178,900	75.87	100
3.6 - 5.5	13	1,173	90	79,050	67.39	89
5.6 - 8.5	11	949	86	43,650	46.00	61
8.6 - 11	0	0	0	0	0	0
11.1 or more	1	60	60	3,000	50.00	66

* See Appendix Table 33 for range in average price

Table 34

Selling Price Per Acre by Distance Traveled Over a Dirt Road to Urban Market, 1941-45
(Good Soil - All Minerals Transferred)

Distance -miles-	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
.1 - .3	3	309	103	23,760	76.89	152
.4 - 1	23	2,336	102	148,945	63.76	126
1.1 - 1.9	12	1,075	90	60,875	56.63	112
2.0 - 3.5	36	5,879	163	296,727	50.47	100
3.6 - 5.5	36	4,261	118	213,335	50.07	99
5.6 - 8.5	16	1,583	99	67,150	42.42	84
8.6 - 11	1	80	80	7,750	96.88	192
11.1 or more	0	0	0	0	0	0

* See Appendix Table 34 for range in average price.

weather road leading to the urban market (Table 34). In general, however, the preference was not as pronounced as that for the best soil quality. The three farms in the first class interval averaged $76.89 per acre contrasted to $63.76 for the 23 farms in the second class interval. This was a difference of $13.13, or slightly more than twice the difference shown between the same class intervals of the best quality soil. However, the drop in average price between intervals, moving from the second interval out to the fourth class interval, was considerably less than half the decline for the same class intervals of the best soil type.

The farms in the fourth class interval of 2 to 3.5 miles averaged $50.47 per acre, whereas those in the 3.6 to 5.5 mile interval averaged $50.07 per acre. However, of the farms in the 2 to 3.5 mile interval, only 58 percent sold for less than $61.00 per acre as contrasted to 72 percent for the latter group. This indicates that buyers probably were not as indifferent to the range of 2 to 5.5 miles as that implied by the two averages. Buyers apparently associated considerable disadvantage with location in buying farms 8.6 to 11 miles from an all-weather road leading to the urban market. The average per acre price dropped to $42.42 with 75 percent of the farms selling for less than $46.00 per acre.

Fair Soil Quality Farms

The average selling price of the farms on the fair quality soil decreased almost $12.00 per acre moving from the farms in the .4 to 1 mile interval to those in the 5.6 to 8.5 mile interval (Table 35). While the average per acre price of the farms in the interval of .4 to 1 mile was $34.65 and the average per acre price of those in the interval of 1.1 to 1.9 miles was $37.20, slightly more than 79 percent of the farms in the first group sold for less than $46.00 whereas about 82 percent of those farms in the last group sold for less

Table 35

Selling Price Per Acre by Distance Traveled Over a Dirt Road to Urban Market, 1941-45
(Fair Soil - All Minerals Transferred)

Distance -miles-	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
.1 - .3	1	40	40	750	18.75	81
.4 - 1	24	2,644	110	91,622	34.65	151
1.1 - 1.9	11	1,133	103	42,150	37.20	162
2.0 - 3.5	32	3,660	114	84,223	23.01	100
3.6 - 5.5	30	4,135	138	128,005	30.96	135
5.6 - 8.5	16	2,273	142	52,150	22.94	100
8.6 - 11	6	810	135	14,050	17.35	75
11.1 or more	4	342	86	5,590	16.35	71

* See Appendix Table 35 for range in average price.

Table 36

Selling Price Per Acre by Distance Traveled Over a Dirt Road to Urban Market, 1941-45
(Inferior Soil - All Minerals Transferred)

Distance -miles-	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
.1 - .3	1	72	72	1,525	21.18	126
.4 - 1	7	468	67	9,250	19.76	117
1.1 - 1.9	11	1,033	94	17,925	17.35	103
2.0 - 3.5	17	2,219	131	37,365	16.84	100
3.6 - 5.5	16	1,646	103	21,810	13.25	79
5.6 - 8.5	10	1,337	134	20,512	15.34	91
8.6 - 11	1	80	80	1,500	18.75	111
11.1 or more	1	40	40	400	10.00	59

* See Appendix Table 36 for range in average price.

than $46.00 per acre.

The average price paid for farms in the interval of 2 to 3.5 miles was $23.01 per acre. This probably is a reliable average, as two-thirds of the farms in this interval sold in the range of $11.00 to $30.00 per acre. At the same time, the per acre price range supports fairly well the increase to $30.96 per acre in moving to the interval of 3.6 to 5.5 miles. Of the figures making up the $22.94 average for the interval of 5.6 to 8.5 miles, three-fourths were between $11.00 and $30.00.

Inferior Soil Quality Farms

The results obtained from analyzing the inferior quality soil indicate that distance traveled over a dirt road to urban market was a relatively unimportant factor to buyers of this soil type (Table 36). There were too few farms in the first two class intervals to determine the effect of an excellent location. For the remaining class intervals, little, if any, relationship was evident. The decline in moving from the interval of 1.1 to 1.9 miles to the interval of 5.6 to 8.5 miles was about $2.00 per acre.

Deviations From Standard

The interval of 2 to 3.5 miles is the modal group of farms by distance traveled over a dirt road to urban market. With the average price of this group in each breakdown assigned a value of 100, deviations to the various intervals probably conveys the general relationship of value and distance.

In table 32, sales transferring all minerals, a deviation of plus 27 occurred in moving to the interval of 1.1 to 1.9 miles and a deviation of plus 42 occurred in moving to the interval of .4 to 1 mile. Moving down from standard, the interval of 3.6 to 5.5 miles deviated a minus 7 and the interval of 5.6 to 8.5 miles deviated a minus 29.

The price paid per acre for land of the best soil quality (Table 33)

deviated a plus 13 and 37 for the intervals of 1.1 to 1.9 miles and .4 to 1 mile respectively. Deviations of a minus 11 and 39 occurred for the intervals of 3.6 to 5.5 and 5.6 to 8.5 miles.

The per acre price of land in the good soil (Table 34) deviated a plus 12 and 26 moving from standard to the intervals of 1.1 to 1.9 miles and .4 to 1 mile. For the intervals of 3.6 to 5.5 miles and 5.6 to 8.5 miles, the deviations are a minus 1 and 16.

For the breakdown of the fair soil, table 35, a deviation of plus 62 occurred in moving from standard to the interval of 1.1 to 1.9 miles, while the farms in the .4 to 1 mile interval deviated a plus 51. The farms in the interval of 3.6 to 5.5 miles deviated a plus 35. The value of the 5.6 to 8.5 mile interval equalled the interval designated as 100.

Farms on the inferior quality soil, table 36, deviated a plus 3 and 17 moving to the 1.1 to 1.9 mile and .4 to 1 mile intervals. A minus deviation of 21 and 9 occurred moving from standard to the 3.6 to 5.5 and 5.6 to 8.5 mile intervals.

CHAPTER V

SELLING PRICE PER ACRE BY DISTANCE TO METROPOLITAN AREA

The results of an investigation of land prices and distance to a metropolitan area are presented in this chapter. The metropolitan area studied was Oklahoma City, which is some 20 miles from the closest point in Grady County. This, unfortunately, confines the data to farms of more than 20 miles from the area. Since few transactions were within a range of 25 miles, the first class interval was set up to include those farms of not more than 30 miles. The farms of more than 30 miles were divided into intervals of approximately five miles each until the distance of 50 miles was reached. The farms of more than 50 miles constitute an open-end class which includes farms as much as 85 miles from the metropolitan area.

All Land Sales

In an attempt to determine the effect of the metropolitan area on the selling price of land, the same general procedure was employed as that in the analysis of road type and distance to rural and urban markets. The influence of factors such as soil quality, protion of minerals conveyed, and proximity to local markets tended to overshadow the effects in the breakdown of all land (Table 37). Therefore, the analysis of all sales with 100 percent mineral rights conveyed with the farm was used to point out the general relationships. Then the data were further analyzed by the four soil qualities to ascertain the effect of the metropolitan area on the selling price of various soil types. The advantage of the analysis of those sales conveying all mineral rights is that it affords a greater number of samples within each distance interval. It is recognized, however, that the various soil qualities distort the true relationships to a limited extent.

Sales Transferring All Minerals

The average selling price per acre by distance to the metropolitan area

Table 37

Selling Price Per Acre by Distance to Metropolitan Area, 1941-45
(All Land)

Distance -miles-	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
30.0 or under	84	8,990	107	410,059	45.61	100
30.1 - 35	88	12,005	136	594,227	49.50	109
35.1 - 40	100	12,842	128	346,068	26.95	59
40.1 - 45	100	14,729	147	489,357	33.22	73
45.1 - 50	133	16,114	121	737,872	45.79	100
50.1 or more	586	69,256	118	2,159,184	31.18	68

* See Appendix Table 37 for range in average price.

Table 38

Selling Price Per Acre by Distance to Metropolitan Area, 1941-45
(All Land - All Minerals Transferred)

Distance -miles-	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
30.0 or under	33	3,471	105	203,941	58.76	100
30.1 - 35	54	6,886	128	371,277	53.92	92
35.1 - 40	42	4,819	115	154,550	32.07	55
40.1 - 45	46	6,644	144	255,733	38.49	65
45.1 - 50	60	6,695	112	427,775	63.89	109
50.1 or more	230	24,741	108	1,100,412	44.48	76

* See Appendix Table 38 for range in average price.

of those sales having all mineral rights intact is shown in table 38. A downward trend occurred moving from those farms within 30 miles down to those in the 35.1 to 40 mile interval. The average per acre price paid for land within 30 miles of the metropolitan area was $58.76. In the next interval, 30.1 to 35 miles, the average price declined to $53.92. The 35.1 to 40 mile interval shows the lowest average price for the six intervals. These farms sold for an average price of $32.07 per acre. A slight rise was apparent for the 40.1 to 45 mile interval, while the average selling price of those farms in the 45.1 to 50 mile interval was the highest for the entire range of data. The average price of the former group was $38.49 per acre, while the latter group sold for $63.89. The farms in the distance interval of more than 50 miles, which was the modal group, sold for $44.48 per acre. This was a higher per acre price than that paid for farms in the 35.1 to 40 mile and 40.1 to 45 mile intervals.

The average price paid for farms in the various distance intervals did not conform to a short range of price class intervals (Appendix Table 38). This might well be expected for farms this far removed from a location factor, since the effect of local influences such as rural and urban markets tend to stimulate price. The average price paid for the majority of the farms within the first two distance intervals tended to concentrate below $76.00 per acre. In the first interval, about 70 percent of the farms sold in this price range, while slightly more than 74 percent of those farms in the second interval concentrated in this range of average price per acre.

While approximately 77 percent of the farms in the distance interval of 35.1 to 40 miles sold for less than $46.00 per acre, only 68 percent of those farms in the 40.1 to 45 mile interval sold for less than $46.00. Of the farms in the 45.1 to 50 mile interval, 53 percent sold for less than $61.00 per acre,

which indicates a trend of considerably higher prices. However, for the interval of more than 50 miles, 62 percent of the sales were for less than $46.00 per acre.

The indication here is that the metropolitan area probably has enough influence on the sales price of land to be reflected approximately 40 miles, which generally conforms with the findings of Dr. C. H. Hammar of Missouri.[1] In a study of land prices at varying distances from Kansas City, Dr. Hammar concluded that residual effects on land values probably remain constant at 40 miles from metropolitan areas, and that the city probably is influential no farther than 50 miles.

It is quite evident that the urban market exerts more influence on the sales price of land immediately surrounding it than the metropolitan area exerts on land 20 or more miles away. This is obvious from the fact that the farms in the class interval of 45.1 to 50 miles sold for the highest average price of all class intervals. Chickasha, the urban market and county's principal city, is approximately 50 miles from the metropolitan area studied.

Best Soil Quality Farms

The difference in the selling price among varying distance intervals for the best soil quality is set forth in table 39. A scarcity of sales is found in those intervals of less than 45 miles, while 22 percent of the data falls in the interval of 45.1 to 50 miles, and 47 percent falls in the open-end class of more than 50 miles. This limits the value of the average price per acre, but sufficient sales are available in most intervals to give a reliable trend of what buyers were paying for farms at various distances.

The seven farms within 30 miles of the metropolitan area sold for an

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1 Hammar, op. cit., p. 46.

Table 39

Selling Price Per Acre by Distance to Metropolitan Area, 1941-45
(Best Soil - All Minerals Transferred)

Distance -miles-	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
30.0 or under	7	485	69	39,800	82.06	100
30.1 - 35	9	713	79	52,500	73.63	90
35.1 - 40	2	175	88	8,250	47.14	57
40.1 - 45	4	460	115	36,400	79.13	96
45.1 - 50	23	2,537	110	257,200	101.38	124
50.1 or more	60	7,130	119	582,976	81.76	100

* See Appendix Table 39 for range in average price.

Table 40

Selling Price Per Acre by Distance to Metropolitan Area, 1941-45
(Good Soil - All Minerals Transferred)

Distance -miles-	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
30.0 or under	16	1,926	120	139,300	72.33	100
30.1 - 35	36	5,108	142	290,527	56.88	79
35.1 - 40	18	1,936	108	83,850	43.31	60
40.1 - 45	14	2,241	160	98,865	44.12	61
45.1 - 50	18	2,195	122	113,100	51.53	71
50.1 or more	38	3,020	79	161,570	53.50	74

* See Appendix Table 40 for range in average price.

average price of $62.06 per acre. This average price was exceeded only by the 23 farms in the 45.1 to 50 mile interval. It is conceivable that the majority of the 23 farms in this group which sold at an average price of $101.38 are located in the general vicinity of the urban market studied since some 50 miles separate the two markets. In the second class interval, 9 farms averaged $73.63 per acre which was a drop of $8.43, or about $1.69 per acre per mile from the first class interval.

The sharpest decline occurred between the average price paid for the nine farms in the 30.1 to 35 mile interval and the two farms in the 35.1 to 40 mile interval. It was recognized that little emphasis could be attributed to this drop as two sales might be influenced more by the state of improvements and other non-locational amenities than by location.

Good Soil Quality Farms

The influence of location in respect to the metropolitan area probably can best be seen from a look at the farms of the good soil quality (Table 40). The number of sales for each class group probably is sufficient to average out any effect which various non-locational amenities might have on the sales price of one or two farms. At the same time, the difference in average size of farms is not great enough to account for much of the decline between intervals.

The decline of $15.45 between the first and second class intervals is much greater than the decrease for the same interval of the best land which amounted to only $8.43 and probably is more reliable than the results shown for the best land. A decrease of $13.57 occurred between the average selling price of the 36 farms in the 30.1 to 35 mile interval and the 18 farms in the 35.1 to 40 mile interval. Unfortunately, the best land had only two farms in the 35.1 to 40 mile interval. Therefore, the difference between the second

Table 41

Selling Price Per Acre by Distance to Metropolitan Area, 1941-45
(Fair Soil - All Minerals Transferred)

Distance -miles-	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
30.0 or under	7	740	106	16,450	22.23	100
30.1 - 35	8	905	113	24,650	27.24	123
35.1 - 40	20	2,668	133	61,850	23.18	104
40.1 - 45	18	2,956	164	103,530	35.02	158
45.1 - 50	14	1,315	94	50,200	38.17	172
50.1 or more	73	7,951	109	239,760	30.15	137

* See Appendix Table 41 for range in average price.

Table 42

Selling Price Per Acre by Distance to Metropolitan Area, 1941-45
(Inferior Soil - All Minerals Transferred)

Distance -miles-	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre*	Index
30.0 or under	3	320	107	8,391	26.22	100
30.1 - 35	1	160	160	3,600	22.50	86
35.1 - 40	2	40	20	600	15.00	57
40.1 - 45	10	987	99	16,938	17.16	65
45.1 - 50	5	648	130	7,275	11.23	43
50.1 or more	59	6,640	113	116,106	17.49	66

* See Appendix Table 42 for range in average price.

and third intervals of the best type soil is not a dependable figure to contrast with the difference obtained between these same intervals for the good land.

Fair Soil Quality Farms

There seemed to be no relationship existing between distance to the metropolitan area and average selling price per acre for the fair quality land (Table 41). If such existed, it was so small as to be easily covered up by local influences. Had data been available to make possible a study of farms at relatively close distances to the metropolitan area, it might have borne out the assumption often made that poorer farms sell at a premium price only when they enjoy a superior location.

Inferior Quality Soil Farms

The possibility of determining whether the metropolitan area influenced the selling price of inferior type soil was impaired by the exceedingly low number of sales in the first three distance intervals (Table 42). It was believed that a total of six sales in the distance intervals of 40 miles and less was entirely too few to be of much value to the study.

CHAPTER VI

SUMMARY AND CONCLUSIONS

Summary

In the process of isolating the influence which road type and distance to markets exert on land value, a great deal of caution was exercised in an effort to hold the effect of mineral rights conveyed and relative soil quality constant. The general analysis was based on sales where all mineral rights were transferred with the farm. Generally, the price paid for these farms was about one-third higher than that paid for all land. For example, farms located on improved dirt roads with all minerals transferred with the land sold for 31 percent more than all land located on improved dirt roads.

Sales of farms transferring all minerals were broken down into four soil qualities: "best", "good", "fair", and "inferior" as classified by soil technicians. Of the farms on the improved dirt roads, those of the best soil type sold for approximately five times the price paid for those on the inferior type soil. Also, studies were made of the effect of size of transfer, and efforts were made to explain this influence.

Because of lack of data, it was not possible to extend control over some factors such as farm site, state of improvements, and other possible unknown influences. However, it is believed that these influences will largely cancel out in a sizeable number of sales.

While it is recognized that the influence of the preceding factors has not been completely eliminated, the following findings based on this study probably indicate fairly well the value buyers place on the specific proximity to roads and markets.

Road Type

The farms located on improved dirt roads sold for approximately 45 per-

cent less than those on all-weather roads and for roughly 35 percent more than those on unimproved dirt roads with but three exceptions. In one such case, size probably was a factor in the lack of difference in selling price between road types. There was only an 11 percent increase in average price from improved dirt roads to all-weather roads for the best soil type which probably is not as great as the difference would have been had the farms been more nearly equal in size. Another exception was the tendency for farms with fair quality soil located on all-weather roads to sell for about 75 percent higher than those on improved dirt roads. Finally, the farms with inferior quality soil on the improved dirt roads sold for only about four percent more than those on unimproved dirt roads.

Distance to an All-Weather Road

The price paid for farms within one mile of an all-weather road was about twice that paid for farms 5.6 to 8.5 miles from such roads. The majority of the price change occurred in the range of 2 to 5.5 miles. For the distance of more than 5.5 miles, the decline in price was very small.

Distance to Rural Market

The per acre price paid for farms 3.1 to 5 miles from rural market was about 30 percent less than that paid for farms within two miles, and about 50 percent higher than that paid for farms more than eight miles from market. However, there was at least one variation from this general pattern in that the farms on the best type soil within two miles of market sold for only about eight percent more than those 3.1 to 5 miles from market.

Distance Traveled Over Dirt Road to Rural Market

The farms not over one mile out on a dirt road sold about 35 percent higher than those 2 to 3.5 miles, while those out to 8.5 miles sold for roughly 40 percent less. There was considerable variation, however, in selling

price for the various soil types. The price paid for the best quality soil farms decreased about 60 percent with the decrease relatively constant for the 8.5 miles. The decrease for the other soil types was only about 40 percent and largely occurred within the first 5.5 miles.

Distance to Urban Market

Generally, a positive relationship existed between selling price and distance to urban market until the distance of 14 miles was reached. However, the relationship extended for 20 miles on the best quality soil and for the entire range of data on the fair quality soil. With the exception of the inferior quality soil, the farms 9.1 to 14 miles from market sold for about 40 percent less than those within five miles. At the same time, there were not enough farms of the inferior quality soil for comparison since only three sales were transacted within nine miles of the urban market.

Distance Traveled Over Dirt Road to Urban Market

The relationship of price and distance traveled over dirt road to urban market was more pronounced for the best soil quality than for the other soil types. On the best soil, farms 5.6 to 8.5 miles sold for slightly less than half the price paid for farms within one mile of an all-weather road. The decrease was relatively constant for the entire distance.

The selling price of the farms on land classified as good, fair and inferior decreased only about 50 percent in moving from one mile to 8.5 miles out on a dirt road. Most of the decrease for these soil qualities occurred within the first 3.5 miles.

Distance to Metropolitan Area

The results from the investigation of land prices and distance to metropolitan area are necessarily confined to sales of more than 20 miles from the area. Few sales were transacted within 25 miles of the area; therefore, farms

within 30 miles were designated as the first class interval.

The metropolitan area exerts enough influence on the selling price of the best and good quality soils to be reflected for about 40 miles. Generally, the farms of more than 40 miles sold for only slightly less than those within 30 miles of the area. However, the majority of these farms are well situated in relation to the urban market of Chickasha. There were not enough sales of the fair and inferior quality soil within 40 miles of the area to determine the influence of selling price on these soil types.

Conclusions

There is a direct relationship between the price paid for land and the location of that land. However, the relationship of price to location varies with the productive quality of the soil. In general, the poorer the productive quality of the soil the more sensitive the value of that land to a favorable location in regard to roads and markets.

The dollar difference paid per acre seems to vary as much between the various soil quality farms as the percentage difference in price paid. That is, difference in location shows neither a dollar per acre relationship nor a percentage price change that holds true throughout the various soil qualities.

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APPENDIX

Appendix Table 1

Distribution of Sales by Price Class Intervals for Various Road Types, 1941-45 (All Land)

Price Class	Road Type							
	Pavement		All-weather		Improved Dirt		Unimproved Dirt	
Dollars	No.	%	No.	%	No.	%	No.	%
10 or under	3	3	6	4	75	11	57	26
11- 20	16	17	32	19	193	27	67	31
21- 30	13	14	23	14	124	18	50	23
31- 45	10	10	27	16	116	17	21	9
46- 60	13	14	21	12	78	11	9	4
61- 75	7	7	17	10	43	6	4	2
76- 95	10	10	12	7	28	4	10	4
96-115	11	12	16	10	25	3	1	1
116 or more	12	13	14	8	22	3	0	0
Total	95	100	168	100	704	100	219	100

Appendix Table 2

Distribution of Sales by Price Class Intervals for Various Road Types, 1941-45 (All Land - All Minerals Transferred)

Price Class	Road Type							
	Pavement		All-weather		Improved Dirt		Unimproved Dirt	
Dollars	No.	%	No.	%	No.	%	No.	%
10 or under	0	0	1	1	8	3	10	12
11- 20	4	9	7	9	58	19	20	23
21- 30	5	11	7	9	52	17	27	32
31- 45	5	11	9	12	53	17	13	16
46- 60	5	12	9	12	46	15	4	5
61- 75	3	7	11	15	30	10	2	2
76- 95	7	16	9	13	20	6	8	9
96-115	6	14	10	14	22	7	1	1
116 or more	9	20	11	15	17	6	0	0
Total	44	100	74	100	306	100	85	100

Appendix Table 3

Distribution of Sales by Price Class Intervals
for Various Road Types, 1941-45
(Best Soil - All Minerals Transferred)

Price Class	Road Type							
	Pavement		All-weather		Improved Dirt		Unimproved Dirt	
Dollars	No.	%	No.	%	No.	%	No.	%
10 or under	0	0	0	0	0	0	0	0
11- 20	0	0	0	0	1	2	0	0
21- 30	0	0	0	0	1	2	3	16
31- 45	0	0	0	0	8	12	4	21
46- 60	0	0	1	5	13	20	2	11
61- 75	1	6	2	9	8	12	1	5
76- 95	3	20	5	24	7	11	8	42
96-115	4	27	5	24	14	21	1	5
116 or more	7	47	8	38	13	20	0	0
Total	15	100	21	100	65	100	19	100

Appendix Table 4

Distribution of Sales by Price Class Intervals
for Various Road Types, 1941-45
(Good Soil - All Minerals Transferred)

Price Class	Road Type							
	Pavement		All-weather		Improved Dirt		Unimproved Dirt	
Dollars	No.	%	No.	%	No.	%	No.	%
10 or under	0	0	0	0	0	0	0	0
11- 20	0	0	0	0	3	3	1	6
21- 30	0	0	0	0	12	12	8	44
31- 45	0	0	1	5	23	22	7	39
46- 60	2	22	3	16	21	20	2	11
61- 75	2	22	7	37	20	19	0	0
76- 95	3	34	3	16	12	12	0	0
96-115	1	11	3	16	9	9	0	0
116 or more	1	11	2	10	3	2	0	0
Total	9	100	19	100	103	100	18	100

Appendix Table 5

Distribution of Sales by Price Class Intervals
for Various Road Types, 1941-45
(Fair Soil - All Minerals Transferred)

Price Class	Road Type							
	Pavement		All-weather		Improved Dirt		Unimproved Dirt	
Dollars	No.	%	No.	%	No.	%	No.	%
10 or under	0	0	0	0	1	1	2	7
11- 20	0	0	0	0	29	31	14	50
21- 30	1	10	1	6	29	31	10	36
31- 45	3	30	6	35	21	22	1	4
46- 60	3	30	5	29	12	12	0	0
61- 75	0	0	1	6	2	2	1	3
76- 95	1	10	1	6	1	1	0	0
96-115	1	10	2	12	0	0	0	0
116 or more	1	10	1	6	0	0	0	0
Total	10	100	17	100	95	100	28	100

Appendix Table 6

Distribution of Sales by Price Class Intervals
for Various Road Types, 1941-45
(Inferior Soil - All Minerals Transferred)

Price Class	Road Type							
	Pavement		All-weather		Improved Dirt		Unimproved Dirt	
Dollars	No.	%	No.	%	No.	%	No.	%
10 or under	0	0	1	6	7	17	8	40
11- 20	4	40	7	41	25	58	5	25
21- 30	4	40	6	35	10	23	6	30
31- 45	2	20	2	12	1	2	1	5
46- 60	0	0	1	6	0	0	0	0
61- 75	0	0	0	0	0	0	0	0
76- 95	0	0	0	0	0	0	0	0
96-115	0	0	0	0	0	0	0	0
116 or more	0	0	0	0	0	0	0	0
Total	10	100	17	100	43	100	20	100

Appendix Table 7

Distribution of Sales by Price Class Intervals
for Various Distances to an All-weather Road, 1941-45
(All Land)

Price Class	Distance															
	.1-.3		.4-1		1.1-1.9		2-3.5		3.6-5.5		5.6-8.5		8.6-11		Over 11	
Dollars	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 or under	2	8	11	6	15	10	33	12	40	23	26	30	4	67	1	50
11- 20	7	28	42	21	36	23	84	30	55	32	34	39	2	33	1	50
21- 30	3	12	42	21	26	17	53	19	40	24	10	12	0	0	0	0
31- 45	0	0	30	15	33	21	47	17	18	11	9	10	0	0	0	0
46- 60	2	8	21	10	16	10	29	10	14	8	5	6	0	0	0	0
61- 75	3	12	16	8	10	7	13	5	2	1	3	3	0	0	0	0
76- 95	4	16	16	8	7	5	10	4	1	1	0	0	0	0	0	0
96-115	1	4	12	6	7	4	6	2	0	0	0	0	0	0	0	0
116 or more	3	12	10	5	5	3	3	1	0	0	0	0	0	0	0	0
Total	25	100	200	100	155	100	278	100	170	100	87	100	6	100	2	100

Appendix Table 8

Distribution of Sales by Price Class Intervals
for Various Distances to an All-weather Road, 1941-45
(All Land - All Minerals Transferred)

Price Class	Distance															
	.1-.3		.4-1		1.1-1.9		2-3.5		3.6-5.5		5.6-8.5		8.6-11		Over 11	
Dollars	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 or under	0	0	1	1	0	0	6	5	6	10	4	13	0	0	1	50
11- 20	1	10	10	10	13	19	24	20	15	26	14	44	0	0	1	50
21- 30	1	10	25	26	8	12	26	21	15	26	3	9	0	0	0	0
31- 45	0	0	14	15	15	22	22	18	10	18	5	16	0	0	0	0
46- 60	0	0	12	12	9	13	16	13	9	16	4	12	0	0	0	0
61- 75	1	10	8	8	8	11	12	10	1	2	2	6	0	0	0	0
76- 95	4	40	10	10	5	7	8	6	1	2	0	0	0	0	0	0
96-115	1	10	9	9	7	10	6	5	0	0	0	0	0	0	0	0
116 or more	2	20	9	9	4	6	3	2	0	0	0	0	0	0	0	0
Total	10	100	98	100	69	100	123	100	57	100	32	100	0	0	2	100

Appendix Table 9

Distribution of Sales by Price Class Intervals
for Various Distances to an All-weather Road, 1941-45
(Best Soil - All Minerals Transferred)

Price Class	Distance															
	.1-.3		.4-1		1.1-1.9		2-3.5		3.6-5.5		5.6-8.5		8.6-11		Over 11	
Dollars	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 or under	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11- 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	100
21- 30	0	0	3	14	0	0	1	4	0	0	0	0	0	0	0	0
31- 45	0	0	0	0	4	22	2	8	4	44	2	40	0	0	0	0
46- 60	0	0	2	9	2	11	5	20	4	45	2	40	0	0	0	0
61- 75	0	0	1	5	3	17	4	16	0	0	1	20	0	0	0	0
76- 95	2	40	2	10	2	11	7	28	1	11	0	0	0	0	0	0
96-115	0	0	6	29	5	28	4	16	0	0	0	0	0	0	0	0
116 or more	3	60	7	33	2	11	2	8	0	0	0	0	0	0	0	0
Total	5	100	21	100	18	100	25	100	9	100	5	100	0	0	1	100

Appendix Table 10

Distribution of Sales by Price Class Intervals
for Various Distances to an All-weather Road, 1941-45
(Good Soil - All Minerals Transferred)

Price Class	Distance															
	.1-.3		.4-1		1.1-1.9		2-3.5		3.6-5.5		5.6-8.5		8.6-11		Over 11	
Dollars	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 or under	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11- 20	0	0	0	0	0	0	3	7	0	0	2	33	0	0	0	0
21- 30	0	0	3	9	1	4	8	19	6	46	0	0	0	0	0	0
31- 45	0	0	6	18	5	21	13	31	4	31	2	33	0	0	0	0
46- 60	0	0	6	18	7	29	6	14	3	23	1	17	0	0	0	0
61- 75	1	33	6	18	4	17	8	19	0	0	1	17	0	0	0	0
76- 95	1	33	7	22	3	13	1	3	0	0	0	0	0	0	0	0
96-115	1	34	3	9	2	8	2	5	0	0	0	0	0	0	0	0
116 or more	0	0	2	6	2	8	1	2	0	0	0	0	0	0	0	0
Total	3	100	33	100	24	100	42	100	13	100	6	100	0	0	0	0

Appendix Table 11

Distribution of Sales by Price Class Intervals
for Various Distances to an All-weather Road, 1941-45
(Fair Soil - All Minerals Transferred)

Price Class	Distance															
	.1-.3		.4-1		1.1-1.9		2-3.5		3.6-5.5		5.6-8.5		8.6-11		Over 11	
Dollars	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 or under	0	0	0	0	0	0	2	5	1	5	0	0	0	0	0	0
11- 20	1	100	6	17	5	32	12	32	10	45	8	61	0	0	0	0
21- 30	0	0	15	44	5	31	11	30	6	27	3	23	0	0	0	0
31- 45	0	0	7	21	5	31	7	19	2	9	1	8	0	0	0	0
46- 60	0	0	4	12	0	0	5	14	2	9	1	8	0	0	0	0
61- 75	0	0	1	3	1	6	0	0	1	5	0	0	0	0	0	0
76- 95	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0
96-115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
116 or more	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	100	34	100	16	100	37	100	22	100	13	100	0	0	0	0

Appendix Table 12

Distribution of Sales by Price Class Intervals
for Various Distances to an All-weather Road, 1941-45
(Inferior Soil - All Minerals Transferred)

Price Class	Distance															
	.1-.3		.4-1		1.1-1.9		2-3.5		3.6-5.5		5.6-8.5		8.6-11		Over 11	
Dollars	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 or under	0	0	1	10	0	0	4	21	5	38	4	50	0	0	1	100
11- 20	0	0	4	40	8	73	9	47	5	39	4	50	0	0	0	0
21- 30	1	100	4	40	2	18	6	32	3	23	0	0	0	0	0	0
31- 45	0	0	1	10	1	9	0	0	0	0	0	0	0	0	0	0
46- 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61- 75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
76- 95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
96-115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
116 or more	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	100	10	100	11	100	19	100	13	100	8	100	0	0	1	100

Appendix Table 13

Distribution of Sales by Price Class Intervals
for Various Distances to Rural Market, 1941-45
(All Land)

Price Class	Distance .1-.9		1-2		2.1-3		3.1-5		5.1-8		8.1-12		Over 12	
Dollars	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 or under	0	0	4	3	9	6	22	7	54	16	46	26	4	31
11- 20	0	0	15	13	29	21	61	21	112	33	66	38	9	69
21- 30	3	23	19	17	22	16	47	16	63	18	42	24	0	0
31- 45	1	8	22	19	19	13	55	19	55	16	12	6	0	0
46- 60	2	16	16	14	18	13	44	15	29	8	4	2	0	0
61- 75	1	8	11	10	15	11	23	8	10	3	1	1	0	0
76- 95	1	8	8	7	8	6	19	6	10	3	3	2	0	0
96-115	4	31	10	9	6	4	14	5	6	2	1	1	0	0
116 or more	2	16	9	8	14	10	8	3	3	1	0	0	0	0
Total	14	100	114	100	140	100	293	100	342	100	175	100	13	100

Appendix Table 14

Distribution of Sales by Price Class Intervals
for Various Distances to Rural Market, 1941-45
(All Land - All Minerals Transferred)

Price Class	Distance .1-.9		1-2		2.1-3		3.1-5		5.1-8		8.1-12		Over 12	
Dollars	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 or under	0	0	1	2	2	2	3	2	9	8	3	6	1	25
11- 20	0	0	6	9	7	8	16	13	33	27	21	43	3	75
21- 30	3	23	9	14	14	16	24	19	22	18	15	31	0	0
31- 45	1	8	10	16	10	12	22	17	26	21	5	10	0	0
46- 60	2	15	8	13	17	20	22	17	15	12	2	4	0	0
61- 75	1	8	8	13	11	13	13	10	6	5	1	2	0	0
76- 95	1	8	6	10	6	7	14	11	6	5	1	2	0	0
96-115	3	23	9	14	5	6	9	7	4	3	1	2	0	0
116 or more	2	15	6	9	14	16	5	4	1	1	0	0	0	0
Total	13	100	63	100	86	100	128	100	122	100	49	100	4	100

Appendix Table 15

Distribution of Sales by Price Class Intervals
for Various Distances to Rural Market, 1941-45
(Best Soil - All Minerals Transferred)

Price Class	Distance													
	.1-.9		1-2		2.1-3		3.1-5		5.1-8		8.1-12		Over 12	
Dollars	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 or under	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11- 20	0	0	0	0	0	0	0	0	0	0	0	0	1	100
21- 30	0	0	1	5	1	3	2	7	0	0	0	0	0	0
31- 45	0	0	1	5	3	9	2	7	4	29	2	40	0	0
46- 60	0	0	3	15	6	18	3	10	3	21	1	20	0	0
61- 75	0	0	2	10	5	15	3	10	0	0	1	20	0	0
76- 95	0	0	2	10	3	9	10	33	4	29	1	20	0	0
96-115	1	50	7	35	4	12	6	20	2	14	0	0	0	0
116 or more	1	50	4	20	11	34	4	13	1	7	0	0	0	0
Total	2	100	20	100	33	100	30	100	14	100	5	100	1	100

Appendix Table 16

Distribution of Sales by Price Class Intervals
for Various Distances to Rural Market, 1941-45
(Good Soil - All Minerals Transferred)

Price Class	Distance													
	.1-.9		1-2		2.1-3		3.1-5		5.1-8		8.1-12		Over 12	
Dollars	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 or under	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11- 20	0	0	0	0	2	7	1	2	0	0	1	17	0	0
21- 30	0	0	2	9	4	15	6	13	4	12	4	66	0	0
31- 45	0	0	6	26	5	19	6	14	14	41	0	0	0	0
46- 60	2	33	2	9	7	26	14	32	8	23	0	0	0	0
61- 75	1	17	5	21	4	15	10	23	4	12	0	0	0	0
76- 95	1	17	4	17	2	7	3	7	2	6	0	0	0	0
96-115	1	17	2	9	0	0	3	7	2	6	1	17	0	0
116 or more	1	16	2	9	3	11	1	2	0	0	0	0	0	0
Total	6	100	23	100	27	100	44	100	34	100	6	100	0	0

Appendix Table 17

Distribution of Sales by Price Class Intervals
for Various Distances to Rural Market, 1941-45
(Fair Soil - All Minerals Transferred)

Price Class	Distance													
	.1-.9		1-2		2.1-3		3.1-5		5.1-8		8.1-12		Over 12	
Dollars	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 or under	0	0	0	0	1	5	1	3	1	2	0	0	0	0
11- 20	0	0	2	20	3	16	8	22	15	33	14	58	1	100
21- 30	2	50	3	30	5	26	10	27	15	33	6	25	0	0
31- 45	1	25	2	20	2	11	12	32	8	18	3	13	0	0
46- 60	0	0	3	30	4	21	5	13	4	9	1	4	0	0
61- 75	0	0	0	0	2	11	0	0	2	5	0	0	0	0
76- 95	0	0	0	0	1	5	1	3	0	0	0	0	0	0
96-115	1	25	0	0	1	5	0	0	0	0	0	0	0	0
116 or more	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	4	100	10	100	19	100	37	100	45	100	24	100	1	100

Appendix Table 18

Distribution of Sales by Price Class Intervals
for Various Distances to Rural Market, 1941-45
(Inferior Soil - All Minerals Transferred)

Price Class	Distance													
	.1-.9		1-2		2.1-3		3.1-5		5.1-8		8.1-12		Over 12	
Dollars	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 or under	0	0	1	10	1	14	2	12	8	28	3	21	1	50
11- 20	0	0	4	40	2	29	7	41	18	62	6	43	1	50
21- 30	1	100	3	30	4	57	6	35	3	10	5	36	0	0
31- 45	0	0	1	10	0	0	2	12	0	0	0	0	0	0
46- 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61- 75	0	0	1	10	0	0	0	0	0	0	0	0	0	0
76- 95	0	0	0	0	0	0	0	0	0	0	0	0	0	0
96-115	0	0	0	0	0	0	0	0	0	0	0	0	0	0
116 or more	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	100	10	100	7	100	17	100	29	100	14	100	2	100

Appendix Table 19

Distribution of Sales by Price Class Intervals for Various Distances Traveled Over a Dirt Road to a Rural Market, 1941-45
(All Land)

Price Class	Distance															
	.1-.3		.4-1		1.1-1.9		2-3.5		3.6-5.5		5.6-8.5		8.6-11		Over 11	
Dollars	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 or under	0	0	11	6	12	8	34	12	35	21	31	28	7	50	2	50
11- 20	6	30	36	19	34	24	77	27	56	33	44	39	5	36	2	50
21- 30	2	10	36	19	26	18	56	20	37	22	20	18	0	0	0	0
31- 45	0	0	27	15	29	20	46	16	24	14	12	11	2	14	0	0
46- 60	1	5	19	10	15	10	38	13	11	7	3	3	0	0	0	0
61- 75	3	15	16	9	10	7	14	5	2	1	1	1	0	0	0	0
76- 95	4	20	16	9	6	4	12	4	1	1	0	0	0	0	0	0
96-115	1	5	11	6	8	6	5	2	1	1	0	0	0	0	0	0
116 or more	3	15	13	7	5	3	4	1	0	0	0	0	0	0	0	0
Total	20	100	185	100	145	100	286	100	167	100	111	100	14	100	4	100

Appendix Table 20

Distribution of Sales by Price Class Intervals for Various Distances Traveled Over a Dirt Road to a Rural Market, 1941-45
(All Land - All Minerals Transferred)

Price Class	Distance															
	.1-.3		.4-1		1.1-1.9		2-3.5		3.6-5.5		5.6-8.5		8.6-11		Over 11	
Dollars	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 or under	0	0	1	1	0	0	4	3	7	11	4	12	1	33	1	34
11- 20	1	10	8	9	13	19	21	18	17	26	14	41	2	67	1	33
21- 30	1	10	20	22	10	15	24	20	15	23	8	23	0	0	0	0
31- 45	0	0	13	15	13	19	19	15	16	25	6	18	0	0	1	33
46- 60	0	0	12	13	9	13	21	18	7	11	1	3	0	0	0	0
61- 75	1	10	8	9	8	12	13	11	1	2	1	3	0	0	0	0
76- 95	4	40	10	11	4	12	10	8	1	1	0	0	0	0	0	0
96-115	1	10	8	9	8	6	5	4	1	1	0	0	0	0	0	0
116 or more	2	20	10	11	3	4	3	3	0	0	0	0	0	0	0	0
Total	10	100	90	100	68	100	120	100	65	100	34	100	3	100	3	100

Appendix Table 21

Distribution of Sales by Price Class Intervals for Various Distances Traveled Over a Dirt Road to a Rural Market, 1941-45
(Best Soil -All Minerals Transferred)

Price Class	Distance															
	.1-.3		.4-1		1.1-1.9		2-3.5		3.6-5.5		5.6-8.5		8.6-11		Over 11	
Dollars	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 or under	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11- 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21- 30	0	0	2	10	0	0	1	4	0	0	0	0	0	0	0	0
31- 45	0	0	0	0	4	22	3	10	3	33	2	67	0	0	1	100
46- 60	0	0	2	10	2	11	7	24	4	45	0	0	0	0	0	0
61- 75	0	0	1	5	3	17	4	14	0	0	1	33	0	0	0	0
76- 95	3	60	2	10	1	6	9	31	1	11	0	0	0	0	0	0
96-115	0	0	5	25	6	33	3	10	1	11	0	0	0	0	0	0
116 or more	2	40	8	40	2	11	2	7	0	0	0	0	0	0	0	0
Total	5	100	20	100	18	100	29	100	9	100	3	100	0	0	1	100

Appendix Table 22

Distribution of Sales by Price Class Intervals for Various Distances Traveled Over a Dirt Road to a Rural Market, 1941-45
(Good Soil - All Minerals Transferred)

Price Class	Distance															
	.1-.3		.4-1		1.1-1.9		2-3.5		3.6-5.5		5.6-8.5		8.6-11		Over 11	
Dollars	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 or under	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11- 20	0	0	0	0	0	0	3	7	0	0	0	0	1	100	0	0
21- 30	0	0	3	9	1	5	8	20	6	40	2	33	0	0	0	0
31- 45	0	0	6	18	4	19	10	25	7	47	3	50	0	0	0	0
46- 60	0	0	7	20	6	29	7	17	2	13	1	17	0	0	0	0
61- 75	1	33	6	18	4	19	9	22	0	0	0	0	0	0	0	0
76- 95	1	33	7	20	3	14	1	2	0	0	0	0	0	0	0	0
96-115	1	34	3	9	2	9	2	5	0	0	0	0	0	0	0	0
116 or more	0	0	2	6	1	5	1	2	0	0	0	0	0	0	0	0
Total	3	100	34	100	21	100	41	100	15	100	6	100	1	100	0	0

Appendix Table 23

Distribution of Sales by Price Class Intervals for Various Distances Traveled Over a Dirt Road to a Rural Market, 1941-45
(Fair Soil - All Minerals Transferred)

Price Class	Distance															
	.1-.3		.4-1		1.1-1.9		2-3.5		3.6-5.5		5.6-8.5		8.6-11		Over 11	
Dollars	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 or under	0	0	0	0	0	0	1	3	2	8	0	0	0	0	0	0
11- 20	1	100	5	17	5	31	11	31	10	38	10	63	0	0	1	100
21- 30	0	0	12	43	5	31	11	31	6	23	5	31	0	0	0	0
31- 45	0	0	6	21	4	25	6	16	6	23	1	6	0	0	0	0
46- 60	0	0	3	11	1	7	7	19	1	4	0	0	0	0	0	0
61- 75	0	0	1	4	1	6	0	0	1	4	0	0	0	0	0	0
76- 95	0	0	1	4	0	0	0	0	0	0	0	0	0	0	0	0
96-115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
116 or more	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	100	28	100	16	100	36	100	26	100	16	100	0	0	1	100

Appendix Table 24

Distribution of Sales by Price Class Intervals for Various Distances Traveled Over a Dirt Road to a Rural Market, 1941-45
(Inferior Soil - All Minerals Transferred)

Price Class	Distance															
	.1-.3		.4-1		1.1-1.9		2-3.5		3.6-5.5		5.6-8.5		8.6-11		Over 11	
Dollars	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 or under	0	0	1	12	0	0	3	21	5	33	4	44	1	50	1	100
11- 20	0	0	3	38	8	61	7	50	7	47	4	45	1	50	0	0
21- 30	1	100	3	38	4	31	4	29	3	20	1	11	0	0	0	0
31- 45	0	0	1	12	1	8	0	0	0	0	0	0	0	0	0	0
46- 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61- 75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
76- 95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
96-115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
116 or more	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	100	8	100	13	100	14	100	15	100	9	100	2	100	1	100

Appendix Table 25

Distribution of Sales by Price Class Intervals
for Various Distances to Urban Market, 1941-45
(All Land)

Price Class	Distance 1-2		2.1-5		5.1-9		9.1-14		14.1-20		Over 20	
Dollars	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 or under	0	0	2	2	4	3	31	12	36	13	66	20
11- 20	0	0	5	5	18	14	72	29	91	33	105	32
21- 30	1	20	8	8	19	14	55	22	57	21	57	17
31- 45	0	0	12	13	32	24	42	17	36	13	42	12
46- 60	0	0	19	20	19	14	24	10	26	10	19	6
61- 75	1	20	8	8	12	9	11	4	9	3	23	7
76- 95	0	0	15	16	12	9	8	3	8	3	8	2
96-115	1	20	10	11	10	7	4	2	7	2	10	3
116 or more	2	40	16	17	8	6	2	1	5	2	3	1
Total	5	100	95	100	134	100	249	100	275	100	333	100

Appendix Table 26

Distribution of Sales by Price Class Intervals
for Various Distances to Urban Market, 1941-45
(All Land - All Minerals Transferred)

Price Class	Distance 1-2		2.1-5		5.1-9		9.1-14		14.1-20		Over 20	
Dollars	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 or under	0	0	0	0	0	0	0	0	7	6	6	5
11- 20	0	0	2	3	4	7	4	4	28	23	33	27
21- 30	0	0	5	8	7	12	21	21	25	21	24	19
31- 45	0	0	5	8	8	14	29	30	20	16	21	17
46- 60	0	0	10	17	10	17	21	21	19	16	8	6
61- 75	1	25	5	8	8	14	12	12	7	6	18	15
76- 95	0	0	13	22	8	14	7	7	4	3	5	4
96-115	1	25	6	10	8	14	4	4	7	6	7	6
116 or more	2	50	14	24	5	8	1	1	4	3	1	1
Total	4	100	60	100	58	100	99	100	121	100	123	100

Appendix Table 27

Distribution of Sales by Price Class Intervals
for Various Distances to Urban Market, 1941-45
(Best Soil - All Minerals Transferred)

Price Class	Distance 1-2		2.1-5		5.1-9		9.1-14		14.1-20		Over 20	
Dollars	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 or under	0	0	0	0	0	0	0	0	0	0	0	0
11- 20	0	0	0	0	0	0	0	0	0	0	1	5
21- 30	0	0	0	0	0	0	2	11	1	5	1	5
31- 45	0	0	0	0	0	0	3	17	6	30	3	15
46- 60	0	0	2	7	2	13	2	11	7	35	3	15
61- 75	1	33	0	0	0	0	2	11	2	10	6	30
76- 95	0	0	9	32	4	25	5	28	0	0	2	10
96-115	1	33	3	11	6	37	3	17	3	15	4	20
116 or more	1	34	14	50	4	25	1	5	1	5	0	0
Total	3	100	28	100	16	100	18	100	20	100	20	100

Appendix Table 28

Distribution of Sales by Price Class Intervals
for Various Distances to Urban Market, 1941-45
(Good Soil - All Minerals Transferred)

Price Class	Distance 1-2		2.1-5		5.1-9		9.1-14		14.1-20		Over 20	
Dollars	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 or under	0	0	0	0	0	0	0	0	0	0	0	0
11- 20	0	0	0	0	0	0	3	11	0	0	1	2
21- 30	0	0	1	6	1	5	6	21	6	16	6	15
31- 45	0	0	1	7	3	16	7	25	8	22	12	30
46- 60	0	0	4	27	4	21	5	18	9	24	4	10
61- 75	0	0	4	27	5	26	4	14	4	11	10	25
76- 95	0	0	2	13	4	21	2	7	4	11	3	8
96- 115	0	0	2	13	2	11	1	4	3	8	3	8
116 or more	1	100	1	7	0	0	0	0	3	8	1	2
Total	1	100	15	100	19	100	28	100	37	100	40	100

Appendix Table 29

Distribution of Sales by Price Class Intervals
for Various Distances to Urban Market, 1941-45
(Fair Soil - All Minerals Transferred)

Price Class	Distance											
	1-2		2.1-5		5.1-9		9.1-14		14.1-20		Over 20	
Dollars	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 or under	0	0	0	0	0	0	0	0	2	6	1	3
11- 20	0	0	1	6	2	9	9	26	14	40	17	50
21- 30	0	0	4	25	6	29	11	32	10	28	9	26
31- 45	0	0	4	25	5	24	9	27	5	14	5	15
46- 60	0	0	4	25	5	24	4	12	3	9	1	3
61- 75	0	0	0	0	2	9	1	3	0	0	1	3
76- 95	0	0	2	13	0	0	0	0	0	0	0	0
96- 115	0	0	1	6	0	0	0	0	1	3	0	0
116 or more	0	0	0	0	1	5	0	0	0	0	0	0
Total	0	0	16	100	21	100	34	100	35	100	34	100

Appendix Table 30

Distribution of Sales by Price Class Intervals
for Various Distances to Urban Market, 1941-45
(Inferior Soil - All Minerals Transferred)

Price Class	Distance											
	1-2		2.1-5		5.1-9		9.1-14		14.1-20		Over 20	
Dollars	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 or under	0	0	0	0	0	0	4	21	5	17	7	24
11- 20	0	0	1	100	2	100	9	47	14	48	11	38
21- 30	0	0	0	0	0	0	4	21	8	28	10	35
31- 45	0	0	0	0	0	0	2	11	1	4	1	3
46- 60	0	0	0	0	0	0	0	0	0	0	0	0
61- 75	0	0	0	0	0	0	0	0	1	3	0	0
76- 95	0	0	0	0	0	0	0	0	0	0	0	0
96- 115	0	0	0	0	0	0	0	0	0	0	0	0
116 or more	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	100	2	100	19	100	29	100	29	100

Appendix Table 31

Distribution of Sales by Price Class Intervals for Various Distances Traveled Over a Dirt Road to an Urban Market, 1941-45
(All Land)

Price Class	Distance															
	.1-.3		.4-1		1.1-1.9		2-3.5		3.6-5.5		5.6-8.5		8.6-11		Over 11	
Dollars	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 or under	0	0	10	6	12	10	35	14	26	13	30	22	12	27	7	39
11- 20	6	33	37	23	28	24	75	29	52	26	38	29	18	40	8	44
21- 30	2	11	30	19	20	17	45	18	46	23	24	18	11	24	0	0
31- 45	0	0	21	13	26	23	34	13	32	16	26	19	0	0	2	11
46- 60	0	0	15	9	9	8	33	13	21	11	8	6	3	7	1	6
61- 75	3	17	14	9	7	6	14	5	9	4	5	4	0	0	0	0
76- 95	4	22	14	9	3	3	10	4	7	3	1	1	0	0	0	0
96-115	1	6	10	6	7	6	7	3	4	2	1	1	1	2	0	0
116 or more	2	11	10	6	3	3	3	1	4	2	0	0	0	0	0	0
Total	18	100	161	100	115	100	256	100	201	100	133	100	45	100	18	100

Appendix Table 32

Distribution of Sales by Price Class Intervals for Various Distances Traveled Over a Dirt Road to an Urban Market, 1941-45
(All Land - All Minerals Transferred)

Price Class	Distance															
	.1-.3		.4-1		1.1-1.9		2-3.5		3.6-5.5		5.6-8.5		8.6-11		Over 11	
Dollars	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 or under	0	0	0	0	0	0	7	7	4	4	5	9	1	13	1	17
11- 20	1	10	9	12	10	21	21	20	16	17	12	23	4	50	5	83
21- 30	1	10	16	22	6	12	21	20	25	27	9	17	2	25	0	0
31- 45	0	0	8	11	11	23	15	14	17	18	16	30	0	0	0	0
46- 60	0	0	10	14	5	10	13	12	15	16	7	13	0	0	0	0
61- 75	1	10	7	10	6	12	13	12	6	6	3	6	0	0	0	0
76- 95	4	40	9	12	2	4	9	9	6	6	0	0	1	12	0	0
96-115	1	10	6	8	7	14	4	4	4	4	1	2	0	0	0	0
116 or more	2	20	8	11	2	4	2	2	2	2	0	0	0	0	0	0
Total	10	100	73	100	49	100	105	100	95	100	53	100	8	100	6	100

Appendix Table 33

Distribution of Sales by Price Class Intervals for Various Distances Traveled Over a Dirt Road to an Urban Market, 1941-45
(Best Soil - All Minerals Transferred)

Price Class	Distance															
	.1-.3		.4-1		1.1-1.9		2-3.5		3.6-5.5		5.6-8.5		8.6-11		Over 11	
Dollars	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 or under	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11- 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21- 30	0	0	3	16	0	0	0	0	0	0	1	9	0	0	0	0
31- 45	0	0	0	0	2	13	2	10	3	23	4	37	0	0	0	0
46- 60	0	0	2	10	1	7	5	25	3	23	4	36	0	0	1	100
61- 75	0	0	1	5	2	13	1	5	2	16	2	18	0	0	0	0
76- 95	0	0	2	11	1	7	7	35	2	15	0	0	0	0	0	0
96-115	2	40	4	21	6	40	2	10	3	23	0	0	0	0	0	0
116 or more	3	60	7	37	3	20	3	15	0	0	0	0	0	0	0	0
Total	5	100	19	100	15	100	20	100	13	100	11	100	0	0	1	100

Appendix Table 34

Distribution of Sales by Price Class Intervals for Various Distances Traveled Over a Dirt Road to an Urban Market, 1941-45
(Good Soil - All Minerals Transferred)

Price Class	Distance															
	.1-.3		.4-1		1.1-1.9		2-3.5		3.6-5.5		5.6-8.5		8.6-11		Over 11	
Dollars	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 or under	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11- 20	0	0	0	0	0	0	3	8	0	0	1	6	0	0	0	0
21- 30	0	0	2	8	1	8	5	14	10	28	2	13	0	0	0	0
31- 45	0	0	2	9	3	25	8	22	8	22	9	56	0	0	0	0
46- 60	0	0	5	22	3	25	5	14	8	22	2	13	0	0	0	0
61- 75	1	33	5	22	3	25	11	31	3	9	1	6	0	0	0	0
76- 95	1	33	6	26	1	9	2	6	3	8	0	0	0	0	0	0
96-115	1	34	2	9	1	8	2	5	1	3	1	6	1	100	0	0
116 or more	0	0	1	4	0	0	0	0	3	8	0	0	0	0	0	0
Total	3	100	23	100	12	100	36	100	36	100	16	100	1	100	0	0

Appendix Table 35

Distribution of Sales by Price Class Intervals for Various Distances Traveled Over a Dirt Road to an Urban Market, 1941-45
(Fair Soil - All Minerals Transferred)

Price Class	Distance															
	.1-.3		.4-1		1.1-1.9		2-3.5		3.6-5.5		5.6-8.5		8.6-11		Over 11	
Dollars	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 or under	0	0	0	0	0	0	2	6	0	0	0	0	1	17	0	0
11- 20	1	100	5	21	2	18	12	38	8	27	8	50	3	50	4	100
21- 30	0	0	9	37	3	27	10	31	11	38	4	25	2	33	0	0
31- 45	0	0	5	21	4	37	5	16	6	20	3	19	0	0	0	0
46- 60	0	0	3	13	1	9	3	9	4	12	1	6	0	0	0	0
61- 75	0	0	1	4	1	9	0	0	1	3	0	0	0	0	0	0
76- 95	0	0	1	4	0	0	0	0	0	0	0	0	0	0	0	0
96-115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
116 or more	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	100	24	100	11	100	32	100	30	100	16	100	6	100	4	100

Appendix Table 36

Distribution of Sales by Price Class Intervals for Various Distances Traveled Over a Dirt Road to an Urban Market, 1941-45
(Inferior Soil - All Minerals Transferred)

Price Class	Distance															
	.1-.3		.4-1		1.1-1.9		2-3.5		3.6-5.5		5.6-8.5		8.6-11		Over 11	
Dollars	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 or under	0	0	0	0	0	0	5	30	4	25	5	50	0	0	1	100
11- 20	0	0	4	57	8	73	6	35	8	50	3	30	1	100	0	0
21- 30	1	100	2	29	2	18	6	35	4	25	2	20	0	0	0	0
31- 45	0	0	1	14	1	9	0	0	0	0	0	0	0	0	0	0
46- 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61- 75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
76- 95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
96-115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
116 or more	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	100	7	100	11	100	17	100	16	100	10	100	1	100	1	100

Appendix Table 37

Distribution of Sales by Price Class Intervals
for Various Distances to Metropolitan Area, 1941-45
(All Land)

Price Class	Distance											
	Under 30.1		30.1-35		35.1-40		40.1-45		45.1-50		Over 50	
Dollars	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 or under	3	4	2	2	13	13	5	5	12	9	103	18
11- 20	21	25	11	13	27	27	31	31	22	17	179	31
21- 30	12	14	15	17	23	23	18	18	21	16	107	18
31- 45	14	17	17	19	24	24	18	18	21	16	70	12
46- 60	9	11	14	16	4	4	15	15	19	14	46	8
61- 75	8	9	11	13	7	7	4	4	15	11	22	4
76- 95	4	5	9	10	1	1	4	4	10	7	22	4
96-115	8	9	6	7	1	1	3	3	4	3	20	3
116 or more	5	6	3	3	0	0	2	2	9	7	17	2
Total	84	100	88	100	100	100	100	100	133	100	586	100

Appendix Table 38

Distribution of Sales by Price Class Intervals
for Various Distances to Metropolitan Area, 1941-45
(All Land - All Minerals Transferred)

Price Class	Distance											
	Under 30.1		30.1-35		35.1-40		40.1-45		45.1-50		Over 50	
Dollars	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 or under	1	3	0	0	1	2	1	2	2	3	14	6
11- 20	3	9	3	6	12	29	14	31	5	8	48	21
21- 30	5	15	8	15	10	24	8	18	8	13	47	20
31- 45	6	19	10	18	9	22	8	17	7	12	35	15
46- 60	3	9	9	17	2	5	8	17	10	17	27	12
61- 75	5	15	10	18	6	14	2	4	9	15	11	5
76- 95	2	6	6	11	1	2	3	7	7	12	18	8
96-115	5	15	6	11	1	2	2	4	3	5	16	7
116 or more	3	9	2	4	0	0	0	0	9	15	14	6
Total	33	100	54	100	42	100	46	100	60	100	230	100

Appendix Table 39

Distribution of Sales by Price Class Intervals
for Various Distances to Metropolitan Area, 1941-45
(Best Soil - All Minerals Transferred)

Price Class	Distance											
	Under 30.1		30.1-35		35.1-40		40.1-45		45.1-50		Over 50	
Dollars	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 or under	0	0	0	0	0	0	0	0	0	0	0	0
11- 20	0	0	0	0	0	0	0	0	0	0	1	2
21- 30	0	0	0	0	0	0	1	25	1	4	2	3
31- 45	1	14	0	0	1	50	0	0	0	0	10	17
46- 60	1	14	2	22	0	0	0	0	5	22	8	13
61- 75	1	14	3	33	1	50	0	0	2	9	4	7
76- 95	1	14	0	0	0	0	1	25	5	22	13	22
96-115	2	29	4	45	0	0	2	50	1	4	11	18
116 or more	1	15	0	0	0	0	0	0	9	39	11	18
Total	7	100	9	100	2	100	4	100	23	100	60	100

Appendix Table 40

Distribution of Sales by Price Class Intervals
for Various Distances to Metropolitan Area, 1941-45
(Good Soil - All Minerals Transferred)

Price Class	Distance											
	Under 30.1		30.1-35		35.1-40		40.1-45		45.1-50		Over 50	
Dollars	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 or under	0	0	0	0	1	5	0	0	0	0	0	0
11- 20	0	0	0	0	0	0	2	14	0	0	2	5
21- 30	1	6	4	11	4	22	2	14	2	11	7	18
31- 45	4	25	8	22	6	33	3	22	4	22	6	16
46- 60	1	6	7	19	1	6	4	29	4	22	9	24
61- 75	4	25	7	19	4	22	1	7	6	33	5	13
76- 95	1	6	6	17	1	6	2	14	1	6	4	11
96-115	3	19	2	6	1	6	0	0	1	6	3	8
116 or more	2	13	2	6	0	0	0	0	0	0	2	5
Total	16	100	36	100	18	100	14	100	18	100	38	100

Appendix Table 41

Distribution of Sales by Price Class Intervals
for Various Distances to Metropolitan Area, 1941-45
(Fair Soil - All Minerals Transferred)

Price Class	Distance											
	Under 30.1		30.1-35		35.1-40		40.1-45		45.1-50		Over 50	
Dollars	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 or under	1	14	0	0	0	0	0	0	0	0	2	3
11- 20	3	43	3	37	10	50	4	22	2	14	21	29
21- 30	1	14	3	38	6	30	4	22	5	36	21	29
31- 45	1	14	2	25	2	10	5	28	3	22	15	21
46- 60	1	15	0	0	1	5	4	22	1	7	10	14
61- 75	0	0	0	0	1	5	1	6	1	7	1	1
76- 95	0	0	0	0	0	0	0	0	1	7	1	1
96- 115	0	0	0	0	0	0	0	0	1	7	1	1
116 or more	0	0	0	0	0	0	0	0	0	0	1	1
Total	7	100	8	100	20	100	18	100	14	100	73	100

Appendix Table 42

Distribution of Sales by Price Class Intervals
for Various Distances to Metropolitan Area, 1941-45
(Inferior Soil - All Minerals Transferred)

Price Class	Distance											
	Under 30.1		30.1-35		35.1-40		40.1-45		45.1-50		Over 50	
Dollars	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 or under	0	0	0	0	0	0	1	10	2	40	12	20
11- 20	0	0	0	0	2	100	8	80	3	60	24	41
21- 30	3	100	1	100	0	0	1	10	0	0	17	29
31- 45	0	0	0	0	0	0	0	0	0	0	4	7
46- 60	0	0	0	0	0	0	0	0	0	0	0	0
61- 75	0	0	0	0	0	0	0	0	0	0	1	2
76- 95	0	0	0	0	0	0	0	0	0	0	0	0
96- 115	0	0	0	0	0	0	0	0	0	0	1	1
116 or more	0	0	0	0	0	0	0	0	0	0	0	0
Total	3	100	1	100	2	100	10	100	5	100	59	100

Appendix Table 43

Selling Price Per Acre by Road Type, 1941-45
(All Land - 67 to 99 Percent of Minerals Transferred)

Road Type	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre
Pavement	11	1,329	121	61,050	45.94
All-weather	24	3,114	130	129,600	41.62
Improved Dirt	120	18,862	157	604,571	32.05
Unimproved Dirt	25	3,017	121	69,285	22.96

Appendix Table 44

Selling Price Per Acre by Road Type, 1941-45
(All Land - 34 to 66 Percent of Minerals Transferred)

Road Type	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre
Pavement	29	2,885	99	138,650	48.06
All-weather	53	6,332	119	253,815	40.08
Improved Dirt	177	24,098	136	693,206	28.77
Unimproved Dirt	54	5,698	106	130,216	22.85

Appendix Table 45

Selling Price Per Acre by Road Type, 1941-45
(All Land - 1 to 33 Percent of Minerals Transferred)

Road Type	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre
Pavement	7	1,030	147	34,750	33.74
All-weather	9	1,141	127	37,250	32.65
Improved Dirt	24	3,147	131	64,731	20.57
Unimproved Dirt	6	785	131	18,900	24.08

Appendix Table 46

Selling Price Per Acre by Road Type, 1941-45
(All Land - No Minerals Transferred)

Road Type	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre
Pavement	4	308	77	3,700	12.01
All-weather	8	668	84	7,140	10.69
Improved Dirt	77	9,044	117	158,861	17.57
Unimproved Dirt	49	4,774	97	45,504	9.53

Appendix Table 47

Selling Price Per Acre by Road Type, 1941-45
(All Land - Size Groups 1,2, and 3*)

Road Type	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre
Pavement	34	1,374	40	109,120	79.42
All-weather	54	2,182	40	144,925	66.42
Improved Dirt	124	4,786	39	188,997	39.49
Unimproved Dirt	74	2,874	39	73,654	25.63

* 15-69 acres

Appendix Table 48

Selling Price Per Acre by Road Type, 1941-45
(All Land - Size Groups 4 and 5*)

Road Type	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre
Pavement	32	3,114	97	174,423	56.01
All-weather	51	4,866	95	236,173	48.54
Improved Dirt	283	27,543	97	1,089,880	39.57
Unimproved Dirt	90	8,536	95	204,429	23.95

* 70-139 acres

Appendix Table 49

Selling Price Per Acre by Road Type, 1941-45
(All Land - Size Group 6*)

Road Type	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre
Pavement	18	2,826	157	143,950	50.94
All-weather	33	5,237	159	240,550	45.93
Improved Dirt	146	22,194	152	732,340	33.00
Unimproved Dirt	39	6,122	157	130,055	21.24

* 140-179 acres

Appendix Table 50

Selling Price Per Acre by Road Type, 1941-45
(All Land - Size Group 7 and 8*)

Road Type	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre
Pavement	7	1,399	200	60,750	43.42
All-weather	18	3,726	207	152,350	40.89
Improved Dirt	106	21,868	206	728,247	33.30
Unimproved Dirt	12	2,440	203	41,960	17.20

* 180-259 acres

Appendix Table 51

Selling Price Per Acre by Road Type, 1941-45
(All Land - Size Group 9 and 10*)

Road Type	No.	Acres	Average Size	Consideration -dollars-	Average Per Acre
Pavement	4	1,099	275	64,250	58.46
All-weather	12	4,271	356	254,912	59.68
Improved Dirt	45	15,214	338	483,265	31.76
Unimproved Dirt	4	1,357	339	25,030	18.45

* 260-999 acres

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