

Library of Wyoming
UNIVERSITY OF WYOMING
LARAMIE WYOMING

RJ 209
August 1988
Agricultural Experiment Station
University of Wyoming

Wyoming Farm and Ranch Land Market 1986-88

by Andrew Vanvig
and John P. Hewlett



Persons seeking admission, employment or access to programs of the University of Wyoming shall be considered without regard to race, color, national origin, sex, age, religion, political belief or handicap.

Colin Kaltenbach, Director, Agricultural Experiment Station, University of Wyoming, Box 3354, University Station, Laramie, WY 82071.

WYOMING FARM AND RANCH LAND MARKET: 1986-88

Andrew Vanvig and John P. Hewlett*

Agricultural Experiment Station
University of Wyoming
Laramie, Wyoming
August 1988
Research Journal 209

*Professor and research associate, respectively; Department of Agricultural Economics, University of Wyoming, Laramie, Wyoming.

TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION.....	1
PROCEDURE.....	1
MARKET PRICES OF WYOMING AGRICULTURAL LAND.....	4
Ranch Prices.....	5
Assured Leases.....	8
Grazing Land Prices.....	9
Irrigated and Subirrigated Pasture Prices.....	10
Irrigated Cropland Prices.....	12
Dry Cropland Prices.....	15
FACTORS AFFECTING AGRICULTURAL LAND VALUES.....	16
Expected Farm and Ranch Income.....	16
Scenic, Recreational, and Other Non-Agricultural Values.....	17
Reasons for Buying and Selling.....	17
Method of Sale and Purchase.....	19
FINANCING AGRICULTURAL LAND PURCHASES.....	20
Financing Terms.....	21
RECENT TRENDS IN WYOMING AND NATIONAL AGRICULTURAL LAND PRICES.....	21
Wyoming.....	21
United States.....	24
SUMMARY.....	27

TABLES AND FIGURES

<u>Table</u>	<u>Page</u>
1 Price per Animal Unit for Wyoming Ranches over 50 AUs, 1986-88.....	6
2 Price per Animal Unit of Wyoming Ranches Based on Size and Percentage of Forage Provided by Public and Private Land Leases, 1986-88.....	7
3 Value of Assured Leases per AUM Transferred with Ranches Sold During 1986-88.....	8
4 Wyoming Grazing Land Prices, 1986-88.....	9
5 Wyoming Irrigated Pasture Prices, 1986-88.....	11
6 Wyoming Irrigated Cropland Prices, 1986-88.....	13
7 Reported Methods of Irrigation on Irrigated Farm and Ranch Land Sales in Wyoming, 1986-88.....	14
8 Wyoming Dry Cropland Prices, 1986-88.....	15
9 Reported Reasons for Selling Farm and Ranch Land in Wyoming, 1986-88.....	18
10 Reported Reasons for Purchase of Farm and Ranch Land in Wyoming, 1986-88.....	18
11 Reported Methods Used by Sellers of Farm and Ranch Land in Wyoming to Sell Land, 1986-88.....	19
12 Reported Methods Used by Buyers to Finance Purchase of Farm and Ranch Land in Wyoming, 1986-88.....	20
13 Average Market Prices for Wyoming Agricultural Land and Ranches, 1980-87.....	22

<u>Figure</u>	<u>Page</u>
1 Regional Boundaries for Which Market Prices for Agricultural Land are Reported.....	3
2 Trends in Average Market Prices for Wyoming Ranches and Agricultural Land, 1980-87.....	23
3 Trends in Real and Nominal Per Acre Values of U.S. Farm Land.....	25
4 Trends in Farm Real Estate Values and Cash Farm Income.....	25
5 Percentage Change in Farm Land Value Per Acre, February 1987-February 1988 and Peak Year to February 1988.....	26
6 Percentage Change in Farm Land Value Per Acre, February 1987-February 1988 and Peak Year to February 1988, by Farm Regions.....	26

WYOMING FARM AND RANCH LAND MARKET: 1986-88

by

Andrew Vanvig and John P. Hewlett*

INTRODUCTION

The primary purpose of this report is to provide price information on Wyoming farm and ranch land based on sales occurring during 1986, 1987, and early 1988. The objective is to show average sale prices for major types of agricultural land sold during this time period by areas of the state. It is not intended to show values of specific land parcels. This report is an update of previous reports on Wyoming agricultural land prices (Vanvig and Gleason, 1986; Vanvig and Collins, 1984; and Collins and Vanvig, 1982). In addition, a brief report of factors affecting land values and financing terms is provided. Also included is a discussion of recent trends in land prices for Wyoming and the United States. This report is intended for those interested in the Wyoming agricultural land market, including farmers, ranchers, realtors, appraisers, lenders, investors, and others.

PROCEDURE

Wyoming agricultural land sales information was collected from Farm Credit Services offices in Casper and Worland, and the Bureau of Land Management and the Wyoming Farm Loan Board in Cheyenne during March and April 1988. This data includes 451 sales of agricultural land composed of 970 individual tracts. Data was collected for the calendar years 1986, 1987, and early 1988. Values are established for each of the following categories when

*Professor of agricultural economics and research associate, respectively, Department of Agricultural Economics, University of Wyoming, Laramie, Wyoming.

included in a sale: (1) type of land (grazing land, irrigated pasture, irrigated cropland and dry cropland); (2) structural improvements; and (3) public and private land grazing leases and permits. When valuable mineral rights were included in a sale, they were valued separately from the agricultural value of the land. Additional sale details were collected when available. These included methods and terms of financing, reasons for the sale or purchase, method of irrigation, and classification of water supply for irrigated lands.

Farm and ranch sale data used in the analysis are limited to those units that could be characterized as bona fide agricultural units. Sales smaller than 50 animal units (AUs) were excluded. Each land sale was classified, and then each group of sales was inspected for extremely high or low sale prices. Screening the data excluded rural home sales and tracts too small to be viable agricultural units as well as tracts in which exceptional recreational and scenic values caused land prices to be higher than expected.

Wyoming land values vary by region, as influenced by such factors as climate, elevation, availability of water, population, recreation, mining, and oil and gas production. The type of agricultural production common to various regions of Wyoming are related to some of these factors. In this study, Wyoming is divided into six regions based upon climatic and other factors (listed above) and on the predominant types of agricultural production in each area (fig. 1).

The six regions of the state and the predominant agricultural enterprises within each region are as follows*:

*Teton County and Yellowstone National Park are not included.

<u>Counties</u>	<u>Region</u>	<u>Primary Enterprises</u>
Johnson, Sheridan	1	Beef cattle, sheep, and hay
Campbell, Converse, Crook, Niobrara, Weston	2	Beef cattle, sheep, hay, wheat
Albany, Goshen, Laramie, Platte	3	Beef cattle, sheep, wheat, sugar beets, corn, dry beans, barley, hay, and other irrigated crops
Sweetwater, Carbon, Natrona	4	Sheep, beef cattle, hay
Lincoln, Sublette, Uinta	5	Beef cattle, sheep, hay, dairy cattle
Big Horn, Fremont, Hot Springs, Park, Washakie	6	Beef cattle, sheep, barley, sugar beets, oats, hay, dry beans, and other irrigated crops

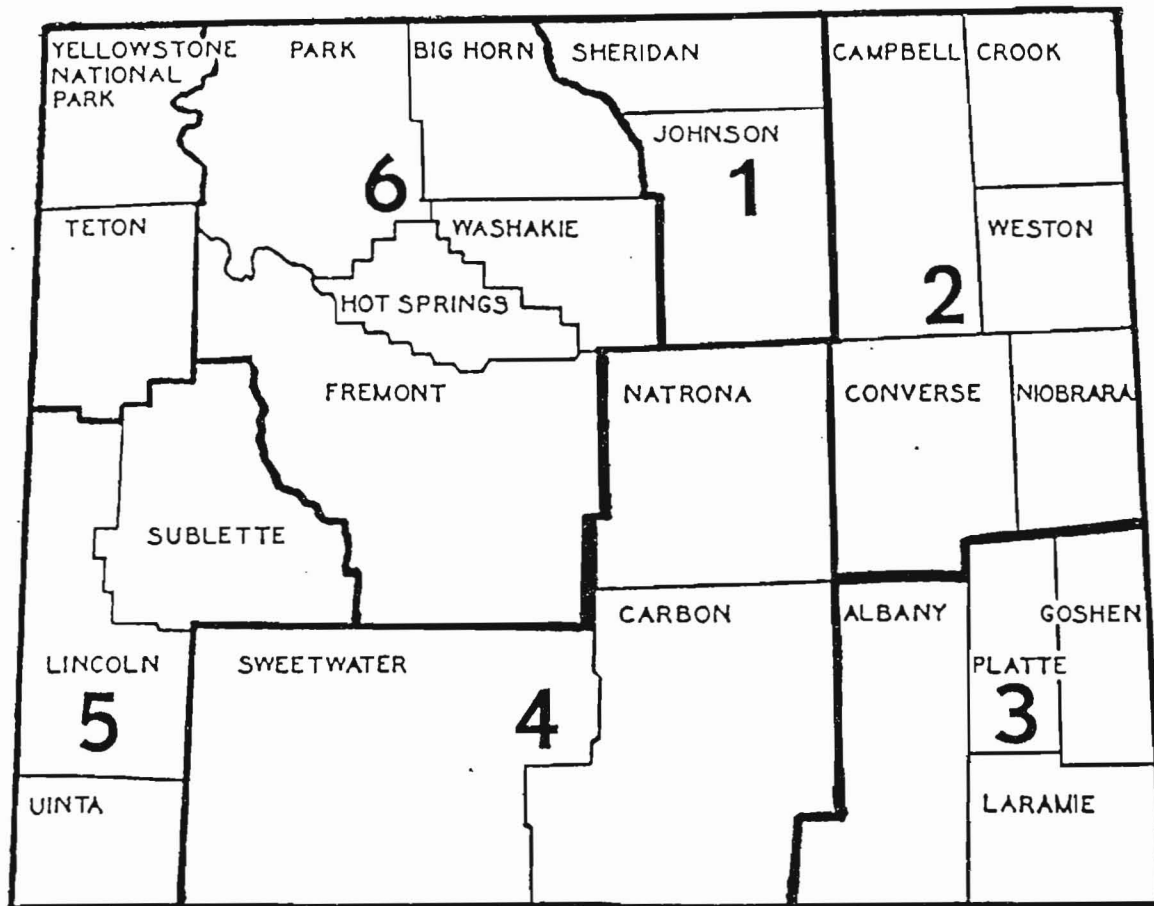


Fig. 1. Regional boundaries for which market prices for agricultural land are reported.

Variations among counties within each region do exist, but the regions identified are relatively homogeneous. Yellowstone National Park and Teton County are excluded from this report, because no privately owned agricultural land exists within the park. Teton County is also influenced by significant recreation and development factors as a result of its natural beauty and the extent of public land holdings (96%). Thus, agricultural production potential is of little or no significance in establishing the market values of land in this area.

Agricultural land prices are summarized and reported for ranches and various land categories and regions. Average values reported are calculated as the simple average of those observations within a particular category. This gives a different result than averages weighted by some factor such as acreage. In such a method of calculation the larger acreage sales are given more weight. Using the simple average more accurately reflects the average for a given region, because larger land sales often have correspondingly lower prices per acre.

MARKET PRICES OF WYOMING AGRICULTURAL LAND

Average market prices by type of land and region are reported in this section for 1986-88. This includes (1) ranches, (2) grazing land, (3) irrigated and subirrigated pasture, (4) irrigated cropland, and (5) dry cropland.

Ranch sale prices are reported on a dollar value per animal unit (\$/AU) basis. For the purposes of this report, an AU is defined as the feed required to maintain one 1,000-pound cow with or without a calf for one twelve-month period. An animal unit month (AUM) is defined as one-twelfth (1/12) of an animal unit. Ranch prices per animal unit include the value of structural

improvements (buildings) and public and private grazing leases and permits transferred with the deeded land. Thus, reported prices reflect the value of ranch operations on an animal unit basis.¹

In contrast, the per-acre prices given for grazing land, irrigated pasture, irrigated cropland, and dry cropland do not include the value of any buildings, wasteland, or grazing leases associated with the sale. However, fixed-type improvements, such as fences, stock-water developments, and ditches for gravity irrigation were included where relevant to the per-acre land sale prices.

Ranch Prices

Ranch prices per animal unit are reported in table 1 for the eastern plains and mountain valley-desert areas, as well as by region and on a statewide basis. The eastern plains area includes regions 1, 2, and 3; the mountain valley-desert area covers regions 4, 5, and 6. Prices for the eastern plains ranches averaged \$1,659 per animal unit, while those for the mountain valley-desert area averaged \$1,278/AU for 1986-88.

Region 3 ranches had the highest value per animal unit compared to all other regions (\$1,719/AU). The higher values are due in part to non-agricultural influences of the Medicine Bow National Forest and urban influences of Laramie, Wheatland, and Cheyenne, as well as the higher percentage of deeded land on ranches in the eastern plains area. Prices in regions 1 and 2 averaged \$1,630/AU and \$1,610/AU, respectively. Most ranches in these regions also contain a relatively high percentage of deeded land. Region 6 had the lowest value per animal unit (\$1,256/AU). The average value in this region was heavily influenced by lower sale prices in Big Horn and

¹ Information on animal unit carrying capacity for individual ranches was provided by appraiser reports of land sales transactions.

Fremont counties and the generally higher percentage of forage supplied by leases and permits in this region.

Table 1. Price per animal unit for Wyoming ranches over 50 AUs, 1986-88.

Region/COUNTIES	Number of Sales	Average Size (AUs)	Average Sales Price	Sales Price Range		Average Percentage Leased Forage (% of total AUMs)
				Low	High	
1 Johnson, Sheridan	17	509	1,630	608	3,399	31
2 Campbell, Converse, Crook, Niobrara, Weston	34	236	1,610	941	3,592	16
3 Albany, Goshen, Laramie, Platte	36	240	1,719	785	4,210	24
4 Carbon, Natrona, Sweetwater	13	453	1,342	383	3,722	57
5 Lincoln, Sublette, Uinta	16	241	1,277	326	2,857	43
6 Big Horn, Fremont, Park, Hot Springs, Washakie	39	321	1,256	390	2,986	52
1,2,3 Eastern plains	87	291	1,659	608	4,210	22
4,5,6 Mtn valley-desert	68	327	1,278	326	3,722	51
1 - 6 Statewide	155	307	1,492	326	4,210	35

The relationship of ranch prices to the total number of animal units and the percentage of those animal units supplied by leased lands can be seen in table 2. As the size of the ranch increases (measured by AUs), the price per

AU declines. Average prices per animal unit ranged from \$1,865/AU for the smallest ranches to \$767/AU for the largest.

The percentage of leased forage had a similar effect on ranch prices. As the percentage of leased forage increased, the average price per AU decreased. Prices ranged from a high of \$1,779/AU for the group of ranches leasing the lowest percentage of forage (under 25%) to \$865/AU for those ranches leasing the highest percentage of forage (over 75%). Quantities of forage leased varied from an average of 8% in the lower group to 90% in the highest group, while the statewide average of leased forage was 35%. Large ranches tend to have a larger percentage of leased forage.

Table 2. Price per animal unit of Wyoming ranches based on size and percentage of forage provided by public and private land leases, 1986-88.

Size (AUs)	Number of Sales	Average Price (\$/AU)	Average Size (AUs)	Average Leased Forage (%)
50-99	46	1,865	75	28
100-499	89	1,406	241	37
500-999	11	1,217	744	42
1,000 and over	9	767	1,609	43

Leased Forage				

(%)				
0-24	70	1,779	266	8
25-49	37	1,450	318	37
50-74	29	1,263	320	61
75 and over	19	865	417	90

Assured Leases

Assured leases include transfers of public and private leases in conjunction with deeded land as well as a few outright sales of lease agreements. Quantity and quality of assured leases transferred with ranches can influence sale prices. The number of assured leases and permits transferred in agricultural land sales totaled 300 from 1986 to 1988, with some sales including more than one lease. Transfers of grazing leases were reported for all counties except Campbell. The number of animal units included in an assured lease ranged from 8 to 14,003 animal unit months (AUMs) with an average of 754 AUMs. Values assigned to assured leases and permits transferred in ranch sales averaged \$53/AUM statewide, with a \$61/AUM average for state leases, a \$48/AUM average for United States Forest Service permits, a \$46/AUM average for Bureau of Land Management (BLM) permits and a \$26/AUM average for private leases (table 3).

Table 3. Value of assured leases per AUM transferred with ranches sold during 1986-88.

Agency Providing Lease	Number of Sales	Average AUMs	Average Sales Price	Sales Price Range	
				Low	High
(-Dollars per Animal Unit Month-)					
BLM	120	802	46	5	185
Forest service	25	951	48	10	90
Private leases	8	802	26	15	50
State of Wyoming	132	478	61	10	233
Average for all leases and permits	300	754	53	5	233

Grazing Land Prices

There were 375 grazing land sales in Wyoming during the period of 1986-88. Average prices ranged from a high of \$98/AC in region 1 to a low of \$57/AC in region 6 (table 4). Region 1 grazing land prices were heavily influenced by higher average carrying capacities and scenic and recreational values. Region 1 had the fewest observations of the regions studied. Region 6 had lower carrying capacities and a particularly high number of stressed sales as compared to other regions.

Table 4. Wyoming grazing land prices, 1986-88.

Region/Countries	Number of Sales	Average Size (Acres)	Average AUMs/AC	Average Sales Price	Sales Price Range	
					Low	High
1 Johnson, Sheridan	26	7,233	0.39	98	25	300
2 Campbell, Crook, Converse, Weston, Niobrara	78	2,471	0.35	72	15	265
3 Albany, Goshen, Laramie, Platte	102	2,010	0.35	73	11	180
4 Carbon, Natrona, Sweetwater	30	3,087	0.29	70	17	300
5 Lincoln, Uinta, Sublette	27	1,387	0.25	61	14	179
6 Big Horn, Park, Hot Springs, Washakie, Fremont	112	1,306	0.27	57	8	313
Eastern plains	206	2,844	0.35	76	11	300
Mountain-valley desert	169	1,635	0.27	60	8	313
Statewide	375	2,299	0.32	68	8	313

The average price for grazing land in the eastern plains was \$76/AC with an average carrying capacity of 0.35 AUM/AC. Prices in this area ranged from a high of \$300/AC for a tract in Johnson County to a low of \$11/AC for a parcel in Laramie County. The higher-priced land parcels in this area are located near the national forests. The lower-priced parcels in this region reflected financial stress. In the mountain valley-desert area, the average grazing land price was \$60/AC, with an average carrying capacity of 0.27 AUM/AC. Prices in region 6 ranged from \$313/AC for a tract in Park County to \$8/AC for a tract in Big Horn County. The higher-priced sales were near Casper, the Platte River, or national forest boundaries. Lower-priced sales were for desert lands in the Big Horn Basin with low carrying capacity and relatively few alternative uses.

Statewide, the average price for grazing land was \$68/AC with an average carrying capacity of 0.32 AUM/AC. The average parcel size was 2,299 acres. Mountain-foothill pasture sales averaged \$87/AC with an average of 2,708 acres. All other dry pasture lands averaged \$66/AC with an average size of 2,243 acres.

Irrigated and Subirrigated Pasture Prices

Sales of irrigated, subirrigated, and bottom pasture parcels totaled 204 in Wyoming for 1986-88. Prices of this category of land ranged from an average of \$213/AC in region 5 to \$133/AC in region 2 (table 5). Region 1 reported the fewest sales, while region 6 had the most. Region 1 sales were smallest, averaging only 65 acres per transaction. Region 2 had the highest average acreage per sale, 893 acres per transaction. This partially explains the lower average prices in that region.

Prices for irrigated pasture in the eastern plains averaged \$166/AC and had an average carrying capacity of 1.49 AUM/AC. The range of sale prices

included a high of \$460/AC for a tract in Platte County to a low of \$32/AC for a parcel in Crook County. Some higher-priced sales in this region may have been influenced by proximity to population centers, while the lows were stressed or foreclosure sales. Irrigated mountain valley-desert pasture prices averaged \$195/AC with an average carrying capacity of 1.62 AUM/AC. Sale prices for this area ranged from \$20/AC to \$480/AC, both in Natrona County. Higher-priced sales in this region were influenced by proximity to urban areas, while the lows were stress sales or tracts of very low productivity. Statewide the average price was \$185/AC with an average carrying capacity of 1.58 AUM/AC. The average tract size was 378 acres.

Table 5. Wyoming irrigated pasture prices, 1986-88.

Region/Counties	Number of Sales	Average Size (Acres)	Average AUMs/AC	Average Sales Price - -Dollars per Acre- -	Sales Price Range	
					Low	High
1 Johnson, Sheridan	7	65	1.33	197	42	400
2 Campbell, Crook, Converse, Weston, Niobrara	20	893	1.06	133	32	440
3 Albany, Goshen, Laramie, Platte	40	203	1.74	178	40	460
4 Carbon, Natrona, Sweetwater	23	202	1.34	185	20	480
5 Lincoln, Uinta, Sublette	36	288	1.72	213	72	450
6 Big Horn, Fremont, Hot Springs, Park, Washakie	78	456	1.65	189	40	450
Eastern Plains	67	395	1.49	166	32	460
Mountain-Valley Desert	137	369	1.62	195	20	480
Statewide	204	378	1.58	185	20	480

Prices in this land category are lower than in past land market reports because subirrigated and bottom pastures are included. Readers may also notice that low prices in this category are in some cases below average prices for dry grazing land. These figures do not necessarily conflict considering that rocky, river-bottom lands may not be as useful to livestock operators as good- to high-quality rangeland. Also, in some cases the lower parcel prices in this category reflect severe financial stress.

Irrigated Cropland Prices

The number of parcels of irrigated crop- and hayland sold in Wyoming in 1986-88 totaled 293. Sale prices across Wyoming ranged from an average of \$674/AC in region 6 to an average of \$400/AC in region 2 (table 6). The two major irrigated cash crop regions are 3 and 6. Higher prices in these regions reflect the opportunity to produce sugar beets, corn, barley, oats, and hay, particularly in the Torrington, Worland, and Powell areas. Region 6 had the highest number of sales, while region 1 had the lowest number of observations. The average size of sales in region 1 was larger (469 acres) than in other regions, while region 6 had the lowest average size (145 acres). The statewide average price for irrigated cropland was \$572/AC with a range of \$100 to \$2,234/AC. The highest sale price of irrigated cropland was for a tract in the Big Horn Basin. While the range for irrigated cropland was rather wide, the lower prices were related to parcels of irrigated hayland with low productivity and farms sold by financial institutions where the previous owner had severely neglected or abused the farm.

Irrigated lands can also be classified by primary water supply classes. Water supply classifications based on availability of water are important determinants of value for irrigated cropland, especially in irrigated regions of Wyoming. Farm Credit Services uses a classification system based on

availability of water. Data reported in table 6 for regions 3 and 6 are based on that classification. Class I water supplies, the highest classification, provide water sufficient to support maximum production of the most profitable crops at least 95% of the time. Class II supplies support production of the most profitable crops but are subject to moderate shortages in some years. Class III does not support production of the most profitable crops because only 25-66% effective supply is provided, which causes material shortages during normal years (Vanvig and Gleason 1984). Class IV water supplies provide only marginal irrigation water. Table 6 gives irrigated cropland prices by water class as reported by Farm Credit Services loan officers.

Table 6. Wyoming irrigated cropland prices, 1986-88.

Region/Counties	Number of Sales	Average Size (Acres)	Average Sales Price	Sales Price Range	
				Low	High
- -Dollars per Acre- -					
1 Johnson, Sheridan	13	469	516	190	1,100
2 Campbell, Converse, Crook, Niobrara, Weston	25	166	400	117	1,448
3 Albany, Goshen, Laramie, Platte	71	180	503	160	1,050
Class I water	15	89	600	204	1,050
Class II water	30	166	539	200	962
Class III water	9	228	315	190	750
4 Carbon, Natrona, Sweetwater	21	236	538	100	975
5 Lincoln, Sublette, Uinta	32	453	489	160	1,400
6 Big Horn, Park, Hot Springs, Washakie	131	145	674	137	2,234
Class I water	77	132	723	187	2,234
Class II water	16	246	499	167	1,050
Class III water	7	105	284	137	375
Statewide	293	210	572	100	2,234

In region 3, cropland irrigated with class I water supply averaged \$600/AC, class II cropland \$539/AC, and class III \$315/AC. In region 6, class I water supply cropland averaged \$723/AC, class II cropland \$499/AC, and class III \$284/AC. Statewide, irrigated lands with class I water averaged \$695/AC. The highest-priced land with class I water sold at \$2,041/AC in Big Horn Basin.

Shown in table 7 are the various methods of irrigation reported for the irrigated land sales category and percentages of each method used. As expected, most irrigated land sold was flood (gravity) irrigated, followed by the combination of methods category, which likely included more flood irrigation. About 7.3% of the tracts sold was sprinkler irrigated.

Table 7. Reported* methods of irrigation on irrigated farm and ranch land sales in Wyoming, 1986-88.

Method of Irrigation	Percentage of Reported Sales
Gravity	81.4
Hand/wheel moved	3.9
Self-propelled	3.4
Other	0.5
Combination of types	10.8
	100.0

* Not all sales included irrigated land and in some instances method of irrigation was not given.

Dry Cropland Prices

There were 68 parcels of dry cropland in the survey data for the state for 1986-88. Only a few sales were reported for region 1, so these were combined with those for region 2 (table 8). No sales were reported in region 4. One sale in region 5 was combined with region 6 sales.

The greatest number of sales of dry cropland was in region 3. Average prices were \$205/AC for region 3 and \$143/AC for regions 5 and 6. Statewide values were \$188/AC, with an average size of 236 acres.

The Conservation Reserve Program, providing annual rentals of \$30-\$40/AC for a 10-year period, has helped to maintain or even strengthen prices of erodible land that qualifies for this program. Prices of 5-6 times the annual rental have been reported for this type of land when sold.

Table 8. Wyoming dry cropland prices, 1986-88.

Region	Counties	Number of Sales	Average Size (Acres)	Average Sales Price - -Dollars per Acre- -	Sales Price Range	
					Low	High
1 & 2	Johnson, Sheridan, Campbell, Crook, Converse, Weston, Niobrara	23	179	174	50	400
3	Albany, Goshen, Laramie, Platte	38	220	205	90	550
5 & 6	Big Horn, Park, Hot Springs, Uinta, Washakie, Lincoln, Sublette	7	127	143	72	400
Statewide		68	236	188	50	550

FACTORS AFFECTING AGRICULTURAL LAND VALUES

Expected Farm and Ranch Income

Farm and ranch land values are affected by many factors. Expected net income is an important determinant in all areas. Other factors, such as recreation and scenic values, minerals, real interest rates, (nominal rates adjusted for inflation), urban influences, investment potential, and stressed sales, are also important. Current market value represents consideration of all the above factors by buyers and sellers in the market.

Net farm and ranch income has been under severe stress since 1979. This is due to increasing costs of production and relatively low prices for products. Nominal interest rates have decreased since the early 1980s. However, rates on farm and ranch loans are still relatively high (Vanvig 1986). Further, real interest rates continue at historically high levels. Wyoming is somewhat sheltered from international influences due to its largely range livestock industry. However, foreign competition does have influence, especially on prices of irrigated and dryland cash crops. Prices for crops have improved considerably (as of June 1988) because of widespread drought over much of the Corn Belt, the Southeast, and the Northern Plains states. Livestock prices strengthened in late 1987 and have continued relatively strong in 1988.

Investment potential from speculation on possible increased real estate values has declined. With declining land prices, potential investors have turned to other investments.

Other factors influencing land values are the number of foreclosures and degree of financial stress prevalent in the agricultural land market. Of the sales data collected for this study, 1.6% (7) were foreclosure sales, while 6.4% (29) reported some sort of financial stress related to the sale.

However, because such information is highly personal, it is likely that a much higher percentage of sales was influenced by similar factors.

Scenic, Recreational, and Other Non-Agricultural Values

Although sales in this report are limited to properties in agricultural production, scenic and recreational values are important in Wyoming and can contribute significantly to the market value of agricultural properties. This is an especially significant consideration for ranches and grazing lands located near national forests. Important scenic areas are found near Sheridan, Saratoga, Jackson Hole, Pinedale, Cody, and in the Black Hills of northeastern Wyoming.

Other non-agricultural influences on the farm and ranch land market include (1) expansion of urban areas through residential and commercial development and (2) mineral rights and royalties, including coal, oil, and gas leases. Urban influences exist near most cities and towns in Wyoming. Areas affected by mineral leases include Johnson, Campbell, and Natrona counties for oil and coal, and southwestern Wyoming for oil and natural gas. Boom and bust cycles associated with uranium and coal development have in the past and may in the future influence land values in some areas.

Reasons for Buying and Selling

The reasons for buying and selling agricultural land can prejudice the selling price of a given tract. For example, if a particular parcel is adjacent to and fits well with a neighboring ranch, the farmer or rancher may be willing to pay a premium to acquire the property. There are also cases in which the seller wants a particular party to own a unique piece of land and is willing to sell it at a discount to that party. Shown in tables 9 and 10 are reasons reported by the Farm Credit Services for selling and purchasing agricultural lands.

Table 9. Reported* reasons for selling farm and ranch land in Wyoming, 1986-88.

Reason for Sale	Percentage of Reported Sales
Voluntary liquidation	48.0
Involuntary liquidation	12.6
Settle estate	6.1
Retirement	4.9
Leave farming	2.8
Realize appreciation	2.8
Purchase other land	2.0
Other and Unknown	<u>20.8</u>
	100.0

*Reasons for selling were not given for all land transactions.

Table 10. Reported* reasons for purchase of farm and ranch land in Wyoming, 1986-88.

Reason for Purchase	Percentage of Reported Sales
Expansion	49.4
Establish own farm	21.5
Investment	13.8
Other	<u>15.4</u>
	100.0

*Reasons for purchase were not given for all land transactions.

Voluntary liquidation sales (48%), which were largely but not exclusively to reduce debt, and involuntary liquidation, i.e., foreclosure (12.6%), were

major reasons given for selling farms and ranches in 1986-88. Other less significant reasons included settling estate, retirement, and leaving farming.

Expansion was the most frequent reason for purchasing land (49.4%), down as compared to 66% for the period of 1984-86. The next most frequent buyers were those establishing their own farms (21.5%). Investment (13.8%) is still given as a reason for purchasing agricultural land in Wyoming, even though new federal tax laws have reduced this incentive.

Method of Sale and Purchase

Methods used to sell and purchase agricultural land can impact sale prices. Shown in table 11 are methods of sale used by sellers of land as recorded by Farm Credit Services. The most frequent methods of selling land were realtor and private treaty sales, representing 58% and 36% of reported sales, respectively. Other methods were auctions, both open- and closed-bid, which accounted for only 2.5% of reported sales.

Table 11. Reported* methods used by sellers of farm and ranch land in Wyoming to sell land, 1986-88.

Method of Sale	Percentage of Reported Sales
Realtor sale	58.0
Private sale	36.1
Auction, open bid	2.2
Auction, sealed bid	0.3
Other	<u>3.4</u>
	100.0

*Method of sale was not given for all land transactions.

FINANCING AGRICULTURAL LAND PURCHASES

Buyers used a variety of methods to finance purchase of agricultural lands. However, the most commonly used method of purchasing land was cash, making up 35.2% of all reported sales (table 12).

Table 12. Reported* methods used by buyers to finance purchase of farm and ranch land in Wyoming, 1986-88.

Method of Purchase	Percentage of Reported Sales
Cash	35.2
Financed by:	
Seller	19.6
Federal Land Bank	8.3
Commercial banks	7.3
Wyoming Farm Loan Board	6.3
Farmers Home Administration	1.0
Production Credit Association	1.0
Insurance companies	0.7
Combination of financing sources	7.0
Other and unknown	<u>13.6</u>
	100.0

*Method of purchase was not given for all land transactions.

This is an increase in cash purchases over the 31% percent reported for 1984-85 (Vanvig and Gleason 1986). Seller-financing, at 19.6% of all sales, was the most frequently cited source for financing farm and ranch purchases. Institutional financing included the Federal Land Bank (8.3%), commercial banks (7.3%), and the Wyoming Farm Loan Board (6.3%). A combination of sources, often including the Federal Land Bank, accounted for a total of 7.0%. The Farmer's Home Administration, life insurance companies, and the Production

Credit Association were other sources cited. The percentage of land sales financed in 1986 and 1987 by the Wyoming Farm Loan Board, the Federal Land Bank, and life insurance companies does not reflect the importance of these institutions for financing farm and ranch loans in Wyoming. As of January 1, 1987, the Wyoming Farm Loan Board had 34%, the Federal Land Bank 19%, and life insurance companies 16% of total farm and ranch real estate loans outstanding in the state (Vanvig 1987).

Financing Terms

Terms of financing were reported for 197 sales of agricultural land between 1986 and 1988. Of those 197 sales reporting loans, 43 sales reported a second loan, and three of those reported a third source of financing. The average down payment on credit-financed sales was \$135,743. Of the credit-financed purchases, the average loan was \$172,635, with an interest rate of 8.63% and term of 15 years. Because of the recent severe financial stress in agriculture, a higher percentage of purchases were made by buyers with cash. There appeared to be a reluctance on the part of many buyers to undertake heavy debt loads at this time. The 15-year average loan term was influenced by a number of seller-financed loans, which are normally of shorter duration than those provided by institutional lenders.

RECENT TRENDS IN WYOMING AND NATIONAL AGRICULTURAL LAND PRICES

Wyoming

Market prices for the major types of agricultural land in Wyoming tended to peak in the early 1980s (table 13 and fig. 2). Ranch prices reached a peak in 1980, then generally declined from 1981 through 1987 with a sharp decline in 1985. In 1987, prices for eastern plains ranches averaged \$1,534/AU and \$1,142/AU for mountain-valley ranches. Grazing land prices peaked in 1982 and have declined each year since then except for a brief period in 1986 for the mountain valley-desert area. Irrigated cropland prices (with class I water

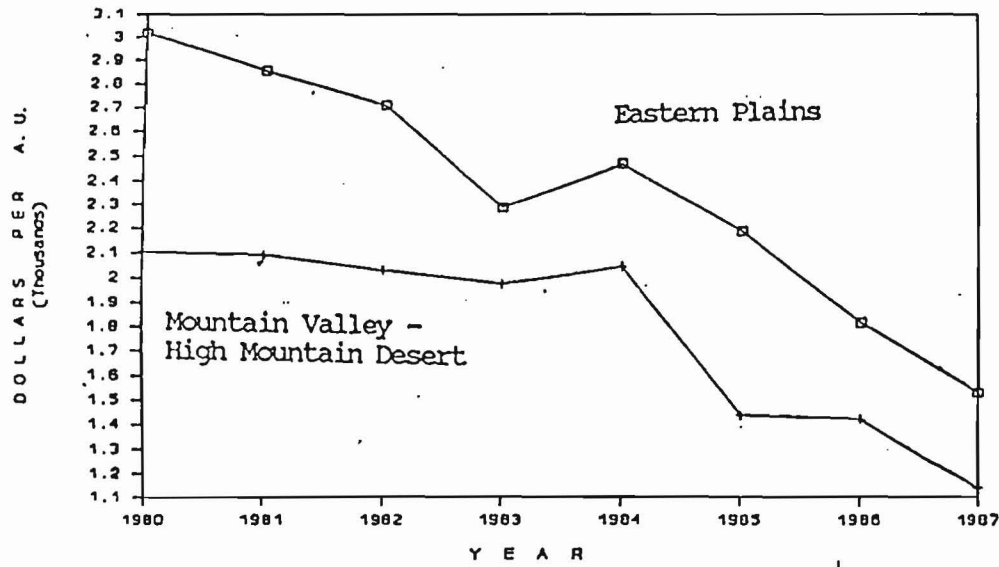
Table 13. Average market prices for Wyoming agricultural land and ranches, 1980-87.

	1980	1981	1982	-----Average Prices-----				1987
				1983	1984	1985	1986	
Ranches (\$/AU)								
Eastern plains	3,019	2,857	2,713	2,292	2,477	2,196	1,821	1,534
Mtn valley-desert	2,105	2,093	2,033	1,978	2,048	1,438	1,421	1,142
Grazing land (\$/AC)								
Eastern plains	148	154	158	148	120	99	83	70
Mtn valley-desert	95	94	123	103	75	66	71	51
Irrigated cropland (\$/AC)								
Region 3, class I	1,378	1,443	1,463	1,266	1,143	992	645	514
Region 6, class I	1,039	1,003	1,098	1,189	1,025	963	754	717
Dry cropland (\$/AC)								
Region 2	346	350	387	323	352	288	182	173
Region 3	272	308	300	270	286	263	223	193

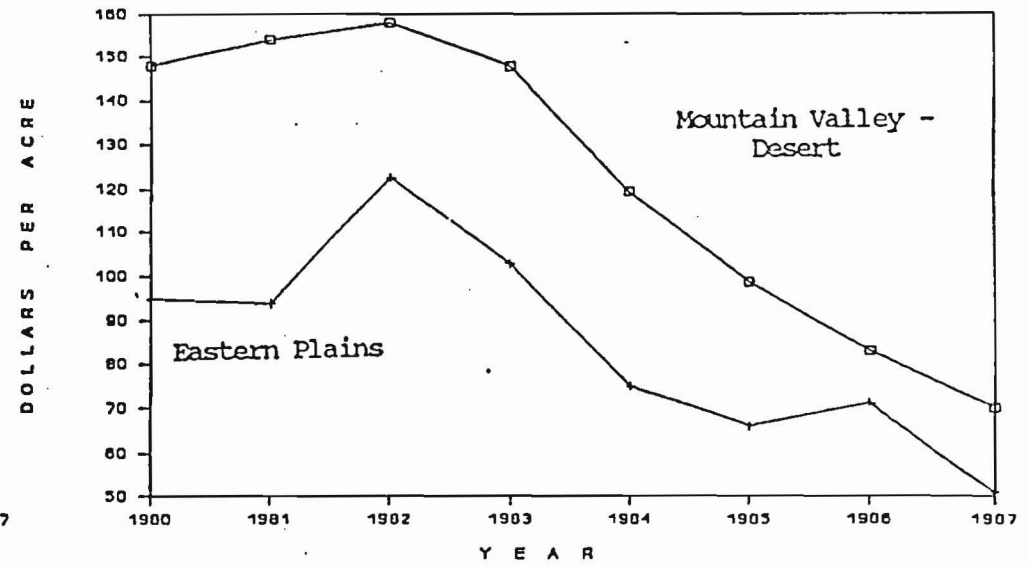
supply) reached a high in 1982 in region 3, and in 1983 in region 6. In both areas, market prices have subsequently declined substantially. There was a very limited number of sales of irrigated cropland with class I water supply in region 3 in 1986 and 1987. Dry cropland prices tended to peak in 1981 and 1982 in region 2. They have since shown a somewhat erratic behavior with some increases noted in both regions in 1984. Prices for all types of agricultural lands in Wyoming continued to decline through 1985, 1986, and 1987.

From 1984 through 1987, the Wyoming agricultural land market was sluggish, with many properties on the market. Buyers were generally cautious because of low product prices and relatively high interest rates. While nominal interest rates declined, real interest rates remained high. Generally, market prices trended downward in late 1987 and early 1988 with

RANCHES

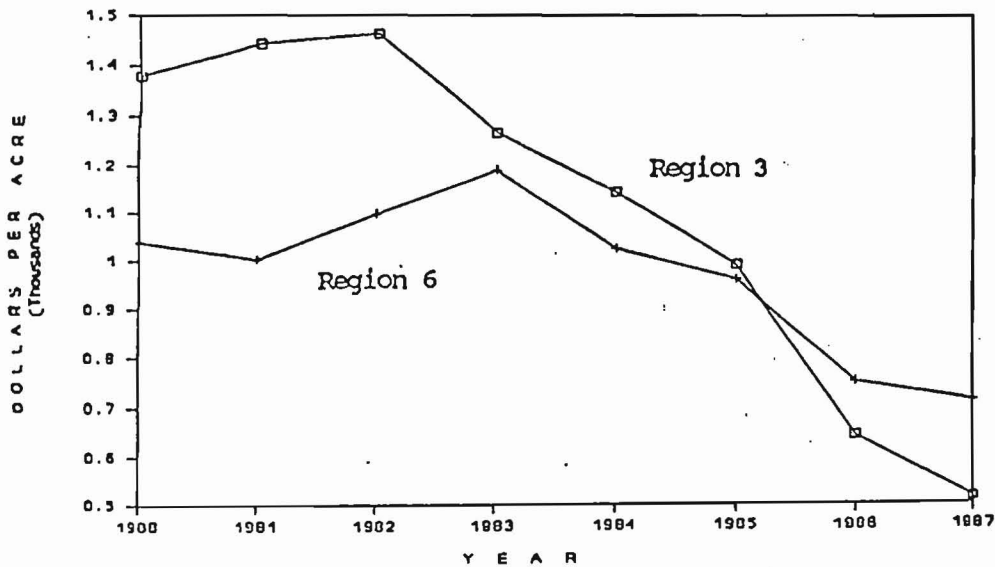


GRAZING LAND



23

IRRIGATED CROPLAND (CLASS 1)



DRY CROPLAND

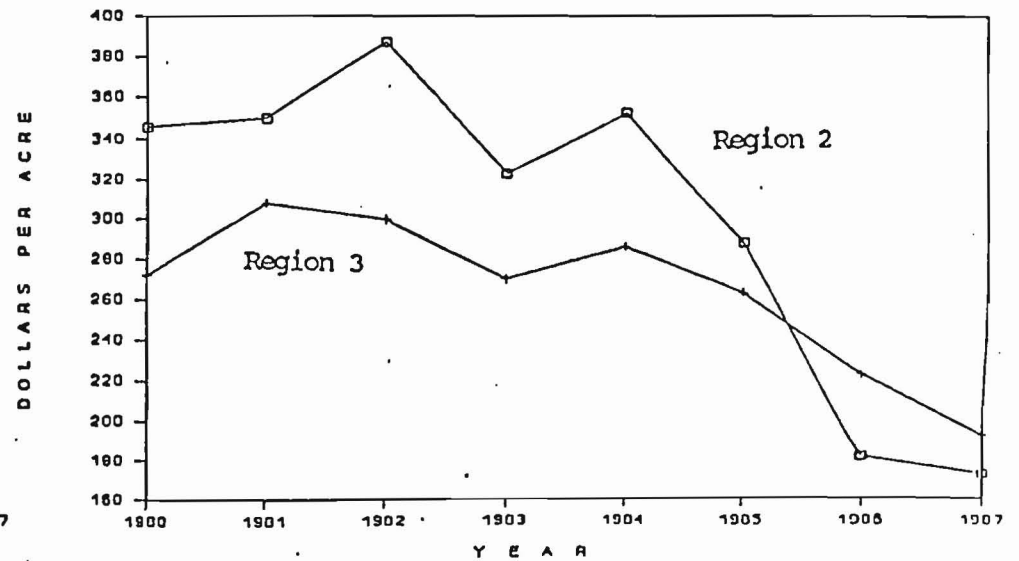


Fig. 2. Trends in average market prices for Wyoming ranches and agricultural land, 1980-87.

wide variations in sale prices. Relatively low sale prices predominated over the state except for the scenic areas of Saratoga Valley, the eastern slope of the Big Horn Mountains, Jackson, Cody, and the Black Hills area of northeastern Wyoming, where prices held steady.

The pressure on real estate prices caused by low returns to land and high interest rates seemed to have accentuated the uniqueness of each parcel and sale. The result is that prices varied more than normal.

Preliminary information on land sales in the spring of 1988 indicates that prices may have stabilized, or in the case of better-quality ranches, may have turned upward as the result of improved cattle prices.

United States

Agricultural land values in the United States increased rapidly in the 1970s after a long period of rather gradual increases (fig. 3). U.S. average farm land values leveled off in 1981-82 at about \$820 per acre. Prices have since fallen to about \$564/AC in February 1988 (USDA, ERS, 1988). Average land values increased by 3% in the United States from February 1987 to February 1988. The largest increase, 9%, occurred in the Northeast and the Corn Belt regions. However, prices continued to decline in 17 states (fig. 5). Land prices in the Corn Belt dropped further than other areas on a percentage basis from their peak in the early 1980s to 1987, while land values in the Northeast have generally trended upward during this period (fig. 6). Real values of agricultural land also increased until about 1980 and have since declined. Farm real estate values closely followed net cash farm income trends until the early 1970s. In 1971 the farm income trends rose above land values until 1975, when cash income dropped below the farm value trends (fig. 4).

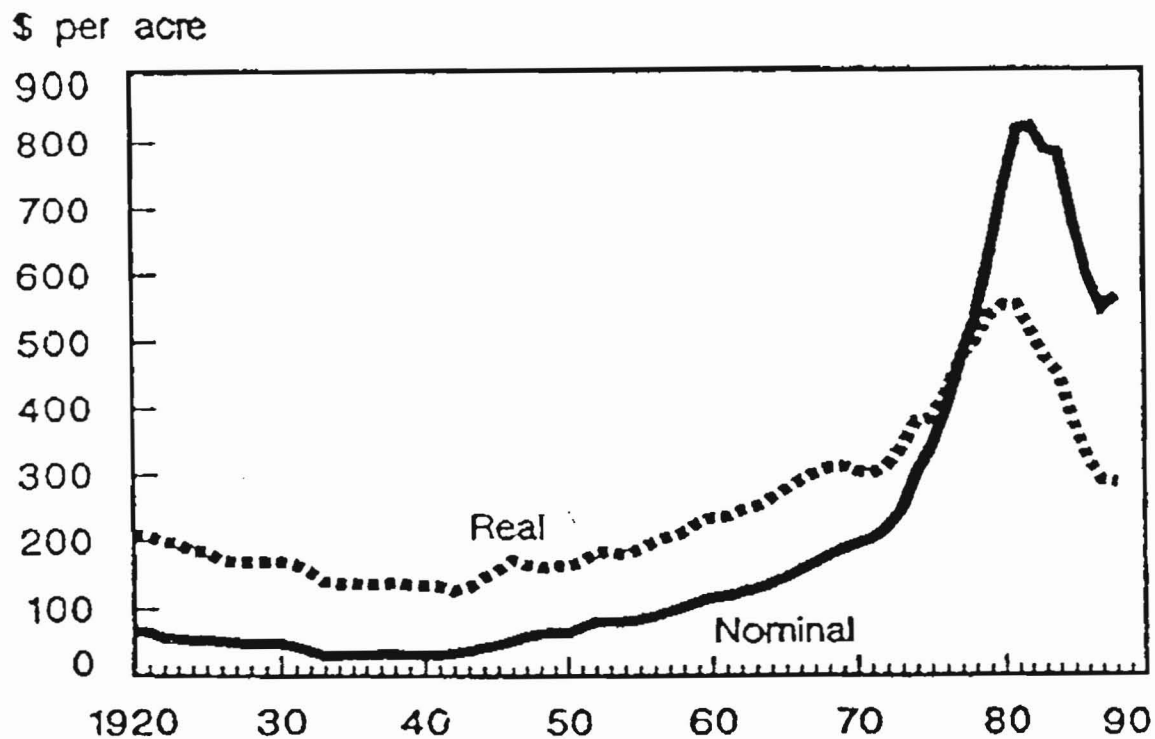


Fig. 3. Trends in real and nominal per-acre values of U.S. farm land since 1960

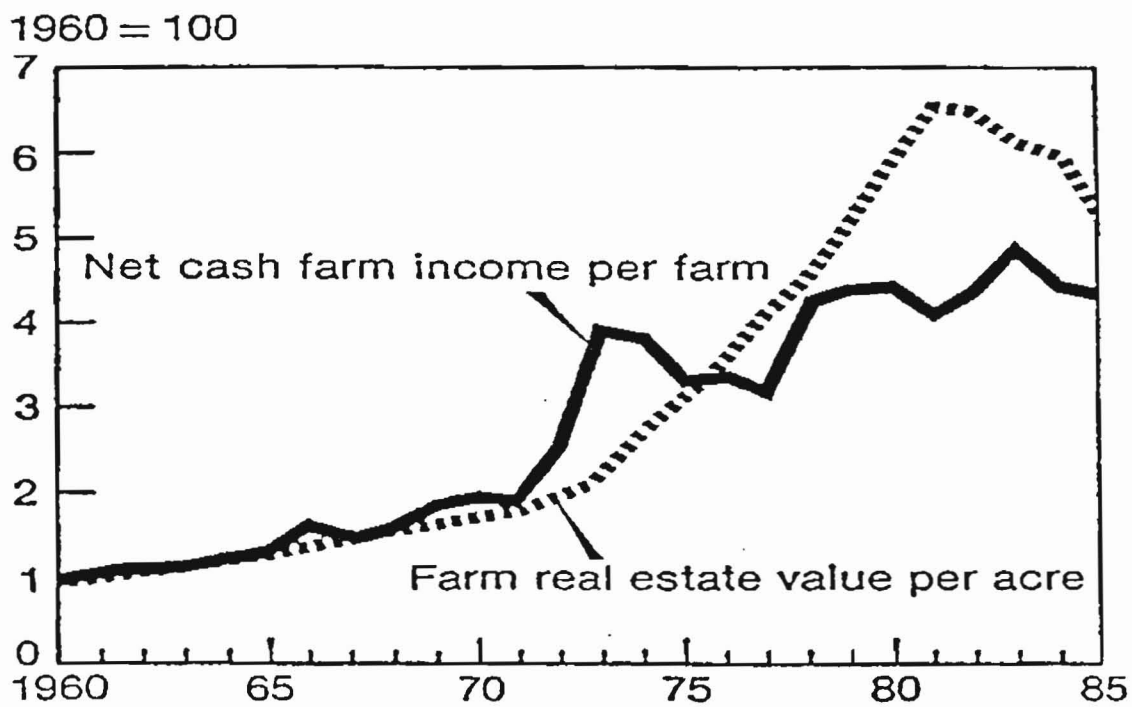


Fig. 4. Trends in farm real estate values and cash farm income

Source: U.S. Department of Agriculture (ERS).

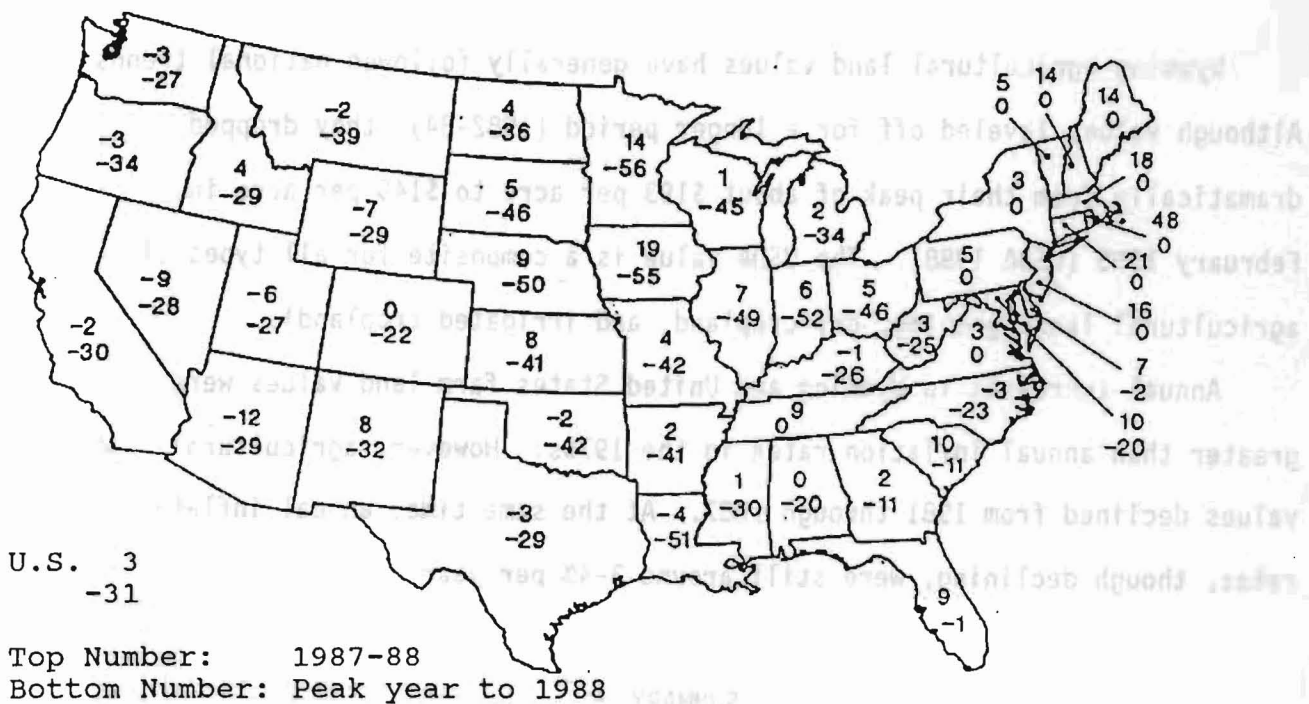


Fig. 5. Percentage change in farm land value per acre February 1987-February 1988 and peak year to February 1988, by states

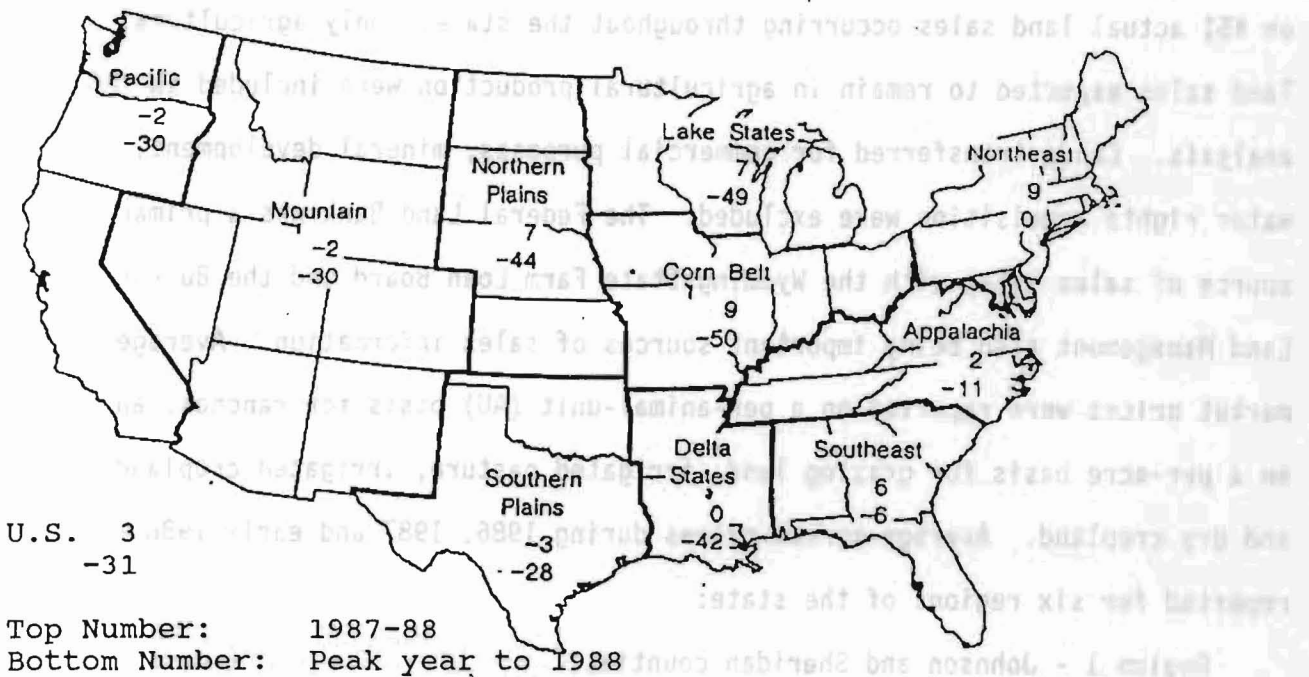


Fig. 6. Percentage change in farm land value per acre February 1987-February 1988 and peak year to February 1988, by farm production regions

Source: U.S. Department of Agriculture (ERS)

Wyoming agricultural land values have generally followed national trends. Although values leveled off for a longer period (1982-84), they dropped dramatically from their peak of about \$193 per acre to \$140 per acre in February 1988 (USDA 1988). The USDA value is a composite for all types of agricultural land (grazing, dry cropland, and irrigated cropland).

Annual increases in Wyoming and United States farm land values were greater than annual inflation rates in the 1970s. However, agricultural land values declined from 1981 through 1987. At the same time, annual inflation rates, though declining, were still around 3-4% per year.

SUMMARY ✓

This report presents average market prices for agricultural lands sold in Wyoming during 1986, 1987, and early 1988. Data were collected in early 1988 on 451 actual land sales occurring throughout the state. Only agricultural land sales expected to remain in agricultural production were included in this analysis. Lands transferred for commercial purposes, mineral development, or water rights acquisition were excluded. The Federal Land Bank was a primary source of sales data, with the Wyoming State Farm Loan Board and the Bureau of Land Management also being important sources of sales information. Average market prices were reported on a per-animal-unit (AU) basis for ranches, and on a per-acre basis for grazing land, irrigated pasture, irrigated cropland, and dry cropland. Average market prices during 1986, 1987 and early 1988 were reported for six regions of the state:

- Region 1 - Johnson and Sheridan counties;
- Region 2 - Campbell, Converse, Crook, Niobrara, and Weston counties;
- Region 3 - Albany, Goshen, Laramie, and Platte counties;
- Region 4 - Carbon, Natrona, and Sweetwater counties;
- Region 5 - Lincoln, Sublette, and Uinta counties;
- Region 6 - Big Horn, Fremont, Hot Springs, Park, and Washakie counties.

Two years of sales data were combined in this report to obtain sufficient observations by region to compute average prices for each type of land. It should be noted that prices trended downward during 1986 and 1987. Most average prices for the two-year period were somewhat higher than those prevailing at the end of 1987. However, preliminary information on sales occurring in early 1988 indicate that market prices for some better-quality units may have stabilized and possibly are turning upward. This is particularly true on ranches because of recent more favorable livestock prices and the perception among some buyers that the land market has bottomed out.

Average ranch prices were higher in eastern Wyoming (regions 1, 2, and 3) than in western Wyoming (regions 4, 5, and 6) because of more deeded and less leased land on typical eastern Wyoming ranches. The average sales price for Wyoming ranches during 1986-88 was \$1,659 per AU for eastern plains ranches and \$1,278 per AU for the mountain valley-desert area. Over the entire state, the average ranch price per AU declined with increases in size of tract sold and also declined as the percentage of leased forage increased. Average values for leases and permits transferred when ranches were sold during 1986, 1987, and early 1988 were \$61/AUM for state leases, \$46/AUM for BLM permits and \$48/AUM for U.S. Forest Service permits.

For grazing land, average prices were \$76 per acre in the eastern plains area and \$60 per acre in the mountain valley-desert areas. Scenic and recreational values and high carrying capacities were factors closely associated with higher prices. Large tracts, relatively low carrying capacity rangeland, and stressed sales were associated with lower prices. Prices for irrigated pasture averaged \$185 per acre in Wyoming in 1986-88. Regions 1 and 5 had the highest prices, averaging \$197 and \$213 per acre, respectively, while region 2 had the lowest prices at \$133 per acre.

The important cash- and feed-crop areas in the state are regions 3 and 6. In these regions, irrigated cropland was divided into three classes based on the percentage of irrigation water requirements supplied in years of adequate precipitation. In region 3, prices for irrigated cropland with class I water supply (the best), located mainly in Goshen County, averaged \$600 per acre. Cropland with class II water supplies (primarily in Platte County) averaged \$539 per acre, and irrigated cropland with class III water supply (in Albany and Laramie counties), averaged \$315 per acre. Irrigated cropland with class I water supply in the Big Horn Basin, region 6, averaged \$723 per acre, class II water supply land averaged \$499 per acre, and class III water supply averaged \$284 per acre.

Dry cropland average prices were reported for regions 1 and 2 (combined), region 3, and regions 5 and 6 (combined), though small acreages were sold in other regions. The majority of dry cropland is located in regions 1 and 2 (combined), and region 3, where prices averaged \$174 and \$205 per acre, respectively. The average price statewide for dry cropland was \$188 per acre during 1986-88.

Statewide, prices for ranches on an AU basis and prices for each of the three types of agricultural land declined in 1986 and 1987.

Comparison of average prices during the 1980-87 period showed prices peaking in the early 1980s, followed by declines in price through 1987 for all major types of agricultural land. Ranch prices per AU peaked in 1980, grazing land prices peaked in 1982, irrigated cropland prices in 1982-83, and dry cropland prices in 1981-82. Declines in prices from their peaks to the end of 1987 were 49% for eastern plains ranches, 56% for eastern plains grazing land, 40% for irrigated cropland (region 6), and 37% for dry cropland in region 3. It should be stressed that current market prices (early- to mid-1988) may be lower than prices reported in this study, which are based on the average of

1986-87 sales, when prices were trending downward. There is some indication that prices in mid-1988 may be bottoming out and possibly trending upward for some better-quality land.

From 1985 through 1987, Wyoming's agricultural land market was fairly slow and inactive. Contributing to the continued decline of agricultural land prices during 1986 and 1987 was the increase in liquidation of properties by financially stressed farmers and ranchers, continued relatively high interest rates, and low speculative investment activity. The Wyoming farm and ranch land market continued to be a buyer's market during 1986 and 1987, with listed properties outnumbering potential buyers. With the recent strengthening in cattle prices, there has been an increased interest in ranch land and some strengthening of ranch prices. Also, the sharp increases in cash and feed crop prices occurring in May and June 1988 could stimulate interest and cause increased prices for cropland in areas not affected by the drought.

Expansion buyers continue to be the dominant force in the Wyoming land market and accounted for 49.4% of all purchases during 1986-88. Voluntary (some under financial stress) and involuntary liquidation were major reasons listed for selling properties, accounting for 60% of those reporting. Other factors included retirements, leaving farming or ranching, and estate settlements.

During 1986-87, about 35% of the sales were cash transactions. This percentage was up slightly from that reported in 1984-85 (31%). Seller financing was the leading credit source, providing financing for about 20% of all sales. Although seller financing terms vary widely, they normally provide lower and fixed rates of interest, which are attractive to some buyers. Other important sources of farm real estate financing are the Federal Land Bank, the Wyoming Farm Loan Board, life insurance companies, Farmers Home Administration, and commercial banks. The Wyoming Farm Loan Board has become

an increasingly important source of credit with very competitive interest rates of 8% and 9% on their real estate loans.

REFERENCES

- Collins, A. and A. Vanvig. Wyoming Farm and Ranch Land Market. University of Wyoming, Agricultural Experiment Station Research Journal 176. 1982.
- _____. Wyoming Farm and Ranch Land Market: 1982-84. University of Wyoming, Agricultural Experiment Station Research Journal 196. 1984.
- U.S. Department of Agriculture, Economic Research Service. Farm Real Estate Market Developments. Washington, D.C. Selected issues.
- _____. Agricultural Resources: Agricultural Land Values and Markets. Washington, D.C. June 1988.
- Vanvig, A. Agricultural Loan Volume and Market Shares by Lender. Wyoming Agricultural Economics. University of Wyoming. July 1987.
- Vanvig, A. and A. Collins. Credit for Wyoming Agricultural and Commercial Sectors - The Scope and Size of Public Lending Programs. Agricultural Experiment Station, University of Wyoming, Bulletin 880. February 1987.
- _____. Market Prices of Wyoming Agricultural Lands. Wyoming Agricultural Economics. University of Wyoming. September-October 1984.
- Vanvig, A. and S. Gleason. Wyoming Farm/Ranch Land Market 1984-86. Agricultural Experiment Station, University of Wyoming Research Journal 179. August 1986.
- Vanvig, A. and S. J. Hundley. Wyoming Farm/Ranch Finance Survey. Wyoming Agricultural Economics. University of Wyoming. February 1986.
- Vanvig, A., S. Mendenhall and L. Held. Alternative Debt Restructuring Programs, Agricultural Experiment Station, University of Wyoming, Bulletin 905. February 1988.

