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Wyoming Farm and Ranch Land Market: 1996 - 1998

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Contents

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This report provides price information on Wyoming farm and ranch land sales that occurred during 1996, 1997, and 1998. This publication is an update of previous Wyoming agricultural land price reports (Bastian and Hewlett, 1997; Bastian et al., 1994; Vanvig and Hewlett, 1990; Vanvig and Hewlett, 1988; Vanvig and Gleason, 1986; and Vanvig and Collins, 1984). The objective of the authors is to show average sale prices, by regions within the state, of major types of agricultural land sold. This report does not, nor is it intended to, show values of specific land parcels. A brief discussion of factors that affect land values and recent trends in land prices for Wyoming and the United States is included.

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Procedure

Wyoming agricultural land sales information was collected from Farm Credit Services. Report data came from 484 appraisal reports for agricultural land sales, which included descriptions of individual tracts. Data was collected for the calendar years 1996, 1997, and 1998. Values were established for each of the following categories when included in a sale: (1) type of land, such as grazing land, irrigated and subirrigated pasture, irrigated meadow land, irrigated cropland, and dry cropland; (2) structural improvements; and (3) public and private grazing leases and permits. Additional sale details, such as type of financing (owner, etc.), productivity, and irrigation methods, were obtained from the sales reports when available.

Farm and ranch sale data used in the analysis were limited to those units that could be classified as true agricultural units. All land sale data was entered, and a preliminary analysis was done to identify extremely high or extremely low sale prices. Those sales deemed as outliers, which did not represent true agricultural land sales, were excluded from the analysis. Excluded from ranch unit analyses were ranch sales smaller than 50 animal units (AUs), rural home sales, and tracts with exceptionally high recreational and/or scenic value that caused prices to be significantly higher than the average market price for a particular area. Sales less than 50 AUs that still represented purchases for agricultural use were included in analyses of cropland or pasture land.

Wyoming land values vary by region and are influenced by factors such as climate, elevation, water availability, population, recreation, timber, mining, oil, and gas production. 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 (see Figure 1).

Wyoming land values vary by region and are influenced by factors such as climate, elevation, water availability, population, recreation, timber, mining, oil, and gas production.

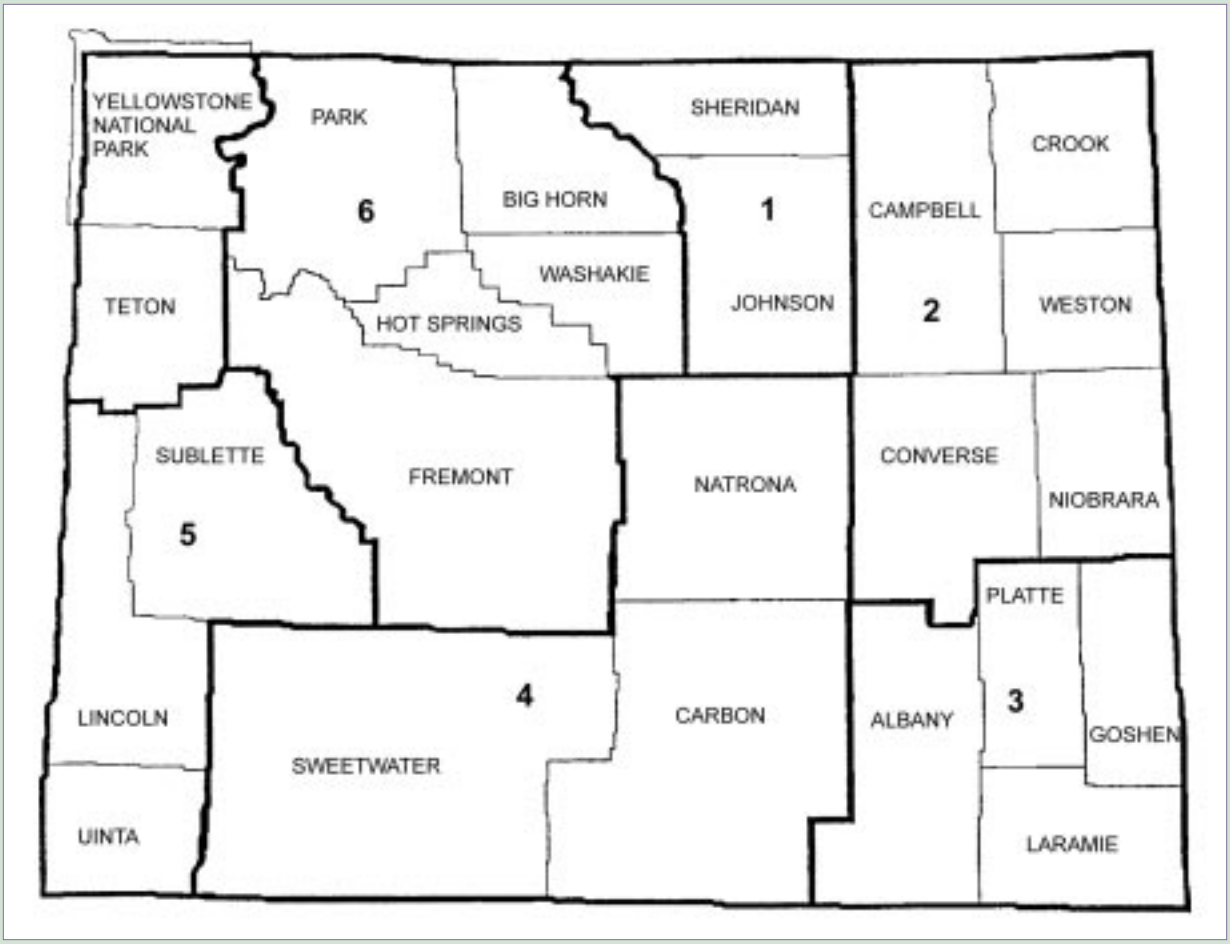
Variations among counties within each region do exist, but the regions identified are relatively homogeneous. Yellowstone National Park was excluded from this report because no privately owned agricultural land exists within the park. Teton County also was excluded because of significant recreational and residential development factors, resulting from its scenic beauty and the extent of public land holdings (96 percent). Therefore, agricultural production potential is of little or no significance when establishing market values for land in the Teton County area.

Agricultural land prices were summarized and reported for ranch units and various land categories and regions. Average values were reported on a per AU or per acre basis. However, simple averages of ranch sale prices ($/AU) reported by region and size were estimated to be consistent with Vanvig and Hewlett (1990). Reporting simple averages could cause average values to be overstated in a region with a large number of small sales, representing only a small percentage of total agricultural units sold. Therefore, average ranch prices were obtained by dividing total dollars for each individual sale by total estimated AUs available in each sale. An average of the individual sales was then calculated for each region or each size classification. The high and low sales price per AU also were reported for each category and region, indicating the broad variation of sale prices.

Some smaller sales not included in the ranch unit analysis were in the pasture land and cropland

Figure 1. Regional boundaries for reported agricultural land market prices.

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



analyses (prices reported in $/ac). Weighted averages were used for all land price analyses other than ranch unit prices (sales reported as $/AU). Averages were based on total sales dollars within a region divided by the total number of acres sold, representing the type of land for which an average was reported. For example, average grazing land prices included mountain pasture, foothills pasture, dry pasture, and crested wheatgrass. Total sales dollars for grazing land types within a region were added and then divided by the total acres in this grazing land category. This method also is consistent with Vanvig and Hewlett (1988, 1990) and Bastian and Hewlett (1997).

Market Prices for Wyoming Agricultural Land

Average market prices by type of land and region for 1996-98 are reported in this section. Land types include ranches, grazing land, irrigated and subirrigated pasture, irrigated meadow land, irrigated cropland, and dry cropland.

Ranch sale prices were reported on a $/AU basis. In this report, an AU is defined as the feed required to maintain one 1,000-pound cow with or without a calf for a 12-month period. Ranch prices per AU include the value of structural improvements (buildings), public grazing permits,

Table 1. Price per animal unit for Wyoming ranches by region, 1996-98.

Region	Counties	Number of sales	Average size (AU)	Average sale price	Sale price range		Average percentage leased forage
					Low	High	
				$ per AU			% of total AUMs
1	Johnson and Sheridan	15	214	4,792	819	8,745	16
2	Campbell, Converse, Crook, Niobrara, and Weston	59	176	4,104	1,229	16,658	10
3	Albany, Goshen, Laramie, and Platte	75	257	2,372	591	10,665	5
4	Carbon, Natrona, and Sweetwater	47	362	2,502	875	7,077	27
5	Lincoln, Sublette, and Uinta	28	309	4,146	1,958	11,436	13
6	Big Horn, Fremont, Hot Springs, Park, and Washakie	65	237	2,144	193	6,523	10
1, 2, 3	Eastern plains	149	221	3,301	591	16,658	8
4, 5, 6	Mountain-valley desert	140	293	2,664	193	11,436	16
1-6	Statewide	289	256	2,993	193	16,658	12

and private leases transferred with the deeded land. Thus, reported prices reflect the value of ranch operations on an AU basis. (Information on AU carrying capacity for individual ranches was provided by the appraisal reports of land sales transactions used in the analysis).

Per acre prices shown 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 improvements, such as fences, stock-water developments, sprinklers, and ditches for gravity irrigation, were included where relevant to the per-acre land sale prices.

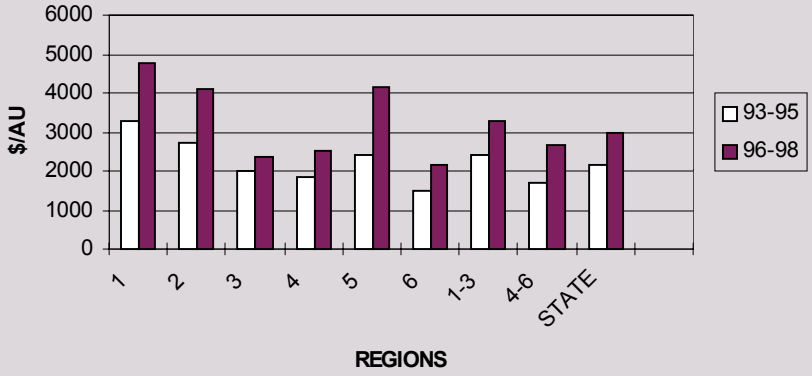
Ranches

Ranch prices per AU for the eastern plains area, the mountain-valley desert area, and statewide are shown in Table 1. The eastern plains area includes regions 1, 2, and 3, and the mountain-valley desert area covers regions 4, 5, and 6. Prices for eastern plains ranches averaged $3,301 per AU. Ranch prices for the mountain valley-desert area averaged $2,664 per AU, and the statewide average was $2,993 per AU.

Region 1, Johnson and Sheridan Counties, had the highest average with $4,792 per AU. Average prices in region 1 ranged between $819 per AU and $8,745 per AU. Sales in this region averaged 16 percent of the total Animal Unit Months (AUMs) from leased forage. The eastern plains area averaged 8 percent of the forage provided by leases, while the mountain-valley area had an average of 16 percent leased forage. Higher values were due, in part, to the scenic and recreational value of ranch land in the area around the Big Horn Mountains. The lowest average was in region 6 with $2,144 per AU and a range between $193 per AU and $6,523 per AU.

These prices indicate an increased rate of appreciation for ranch properties when compared with 1993-95 values, which was likely due to strengthening cattle prices. Figure 2 compares Wyoming ranch prices on a per AU basis by region for the 1993-95 and 1996-98 periods; these averages have not been adjusted for inflation. Comparing the nominal (unadjusted for inflation) average prices for the two periods indicates an overall increase of nearly 39 percent in ranch prices statewide. The largest average increase took place in region 5, which had a nominal increase of 72 percent from 1993-95 to 1996-98. Region 3 had the lowest average increase with an 18 percent nominal average increase. Ranch prices increased an average of 30 percent from 1988-90 to 1990-92, and ranch prices experienced an 11 percent increase statewide from 1990-92 to 1993-95

Figure 2. Comparison of Wyoming ranch prices per AU: 1993-95 versus 1996-98.



(Bastian et al., 1994; Bastian and Hewlett, 1997). According to Bastian and Hewlett (1997), the number of sales in this analysis is down slightly in comparison to 1993-95; however, the number of sales is still relatively strong. The relatively large number of sales plus the ranch price percentage suggest a stronger demand for ranch property in 1996-98 compared with the 1993-95 study.

The relationship of ranch prices to the total number of AUs and the percentage of those AUs supplied by leased lands are shown in Table 2. As the size of ranches increased beyond 100 AUs, the expected decrease in price per AU did not occur. This result is another indication of strong demand for ranch property. Average prices per AU ranged

from $4,089 for the smallest ranches (50 to 99 AUs) to $2,157 for the 200 to 399 AU size category.

The percentage of leased forage seemed to have a somewhat depressing effect on prices for those ranches that had more than 25 percent of their forage coming from leases. Average price per AU for ranches with no leased ground was $2,574. Prices increased to $4,139 per AU for ranches with leased forage of up to 24 percent of total forage. However, as the percentage of leased forage increased beyond 24 percent, the price per AU declined. This outcome may be due to risks associated with having a large percentage of leased forage from public rangeland, in light of the political uncertainty about public range policy. The proportion of forage leased varied from zero to an average of 90 percent in the category of 75 percent and over of leased forage. Ranches in the 75 percent and over category had an average price of $1,257 per AU; large ranches tended to have higher percentages of leased forage. These relationships are similar to those found in an earlier ranch sales study for 1975-88 (Vanvig and Hewlett, 1990).

Figure 3 compares 1993-95 average ranch prices with values during the 1996-98 period. This comparison is based on average prices for each period and has not been adjusted for inflation. The largest average increase between the two periods is for the over 600 AU classification. Average sale price per AU increased 95 percent from 1993-95 to 1996-98. The smallest increase in the average price for Wyoming ranches was in the 100 to 199 AU size. Nominal prices increased nearly 21 percent between 1993-1995 to 1996-98 for ranches in that size category. Figure 3 also indicates an increased demand for ranch property in Wyoming from 1993-95 to 1996-98, particularly for those ranches supporting AUs

Table 2. Price per AU of Wyoming ranches based on size and percentage of forage provided by public and private leases, 1996-98.

Size range (AUs)	Number of sales	Average size (AUs)	Average price ($/AU)	Average leased forage (Percent)
50-99	88	69	4,089	10
100-199	97	143	2,683	10
200-399	62	280	2,157	16
400-599	20	485	2,620	13
600 and over	22	1,223	2,669	22
Leased forage (Percent)				
0	160	177	2,574	0
1-24	73	287	4,139	12
25-49	34	410	3,037	36
50-74	15	553	2,322	61
75 and over	6	374	1,257	90

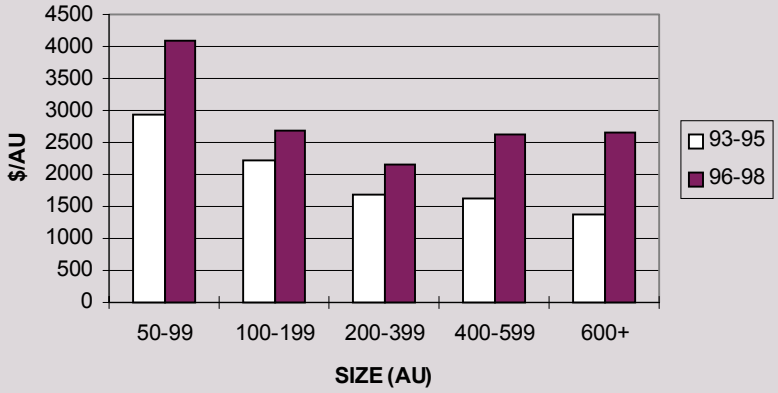
greater than 399. Those ranches in the 400 to 599 AU and 600 or more AU categories experienced the largest increases in average price, which is likely due to increased cattle prices and possibly a strong demand for larger ranches with other amenities such as recreation potential.

Table 3 shows the average value of improvements and the frequency of ranches with a specified number of structures such as the percentage of ranches sold with zero, one, two, three, or more houses. Table 3 indicates that, generally, as the size of the ranch unit increased so did the average value of improvements. Those ranch units in the 50 to 99 AU size category had an average value of improvements equal to $51,469. Houses, livestock buildings or shelters, and/or corrals tended to be the most common improvements in this size category. Approximately 89 percent of ranches sold in this size category had one or more houses. Livestock buildings or shelters were the next most common type of improvement, as 77 percent of the ranches had one or more livestock buildings. The frequency of reported improvements and the number of structures tended to increase with size and average value of improvements. As with ranch prices, value of improvements varied greatly within size categories.

Average value of improvements for ranches in the 600 AU and over category was $226,368. In this size category, 95 percent of the ranches had one or more houses, 75 percent had one or more shops, 78 percent had one or more livestock buildings, 49 percent had at least one set of corrals, and 19 percent had livestock scales. Value of improvements in the 600 AU and over category ranged from $0 to a high of $1,170,764.

Prices for smaller ranches have shown continued strength since early 1990. However, prices for the larger ranch units slowed in appreciation during the middle 1990s, which was a reflection of lower returns to cattle producers in the mid-1990s, as well as other factors. Given the positive outlook in cattle prices for the next several years, the demand for larger agricultural units seems to be growing. Other factors, such as increased interest in recreational and scenic values of Wyoming cattle ranches and more people (both agriculturists and nonagriculturists) from outside the state purchasing agricultural lands, are likely influencing this trend. Ranch land with significant private timber lands also is in higher demand, reportedly due to decreasing availability of West Coast timber from public lands due to environmental concerns.

Figure 3. Comparison of price per AU of Wyoming ranches in 1993-95 versus 1996-98 by size.



Assured Leases

Assured leases include transfers of public and private leases in conjunction with deeded land. Historically, in the case of public lease permits, the rancher owning the required commensurate property has been allowed to renew the permit attached to the land under the previous owner. Thus, the purchaser is assured the use of the resource. Some sales are outright sales of lease agreements. Although public rangeland leases are not property rights, they are long-term leases awarded based upon prior use patterns. Quantity and type of assured leases transferred with ranches seem to influence Wyoming ranch-land sale prices. Values of assured leases per AUM

Table 3. Average value of improvements and percentage of Wyoming ranches with the specified type and number of improvements based on size (AU), 1996-98.

Size (AUs)	Number of sales	Value of improvements ($)			Type and number of improvements																											
					Number of houses						Number of shops						Number of livestock buildings						Granaries		Number of corrals				Number of livestock scales			
		Avg.	Low	High	0	1	2	3	4+	0	1	2	3+	0	1	2	3	4	5+	no	yes	0	1	2	3	0	1+
					Percent of ranches with type and number of improvements[a]																											
50-99	88	51,469	0	283,084	12	74	10	0	5	29	43	12	17	24	43	17	10	7	0	90	10	57	43	0	0	98	2
100-199	97	67,687	0	1,181,734	20	63	16	1	0	36	41	13	10	39	34	17	4	1	4	90	10	57	42	1	0	94	6
200-399	62	57,874	0	192,517	14	62	19	0	5	21	41	24	14	57	17	19	5	2	0	83	17	28	65	7	0	95	5
400-599	20	96,745	3,200	310,000	20	35	10	20	15	15	60	5	20	45	20	15	10	0	10	90	10	70	30	0	0	95	5
600+	22	226,368	0	1,170,764	5	19	33	19	24	24	38	10	29	24	43	14	5	14	0	81	19	52	33	10	5	81	19

[a]Total percentage of ranches with that type of improvement may add up to more than 100 because percentages are rounded to the nearest whole number..

transferred with ranches sold during 1996-98 are shown in Table 4. However, for each category of lease (state, BLM, etc.), a weighted average approach has been used to calculate average values. The dollar values for all leases within a category were summed for all sales and divided by total AUMs estimated for all leases within that category. This methodology is consistent with Vanvig and Hewlett (1988, 1990), Bastian et al. (1994), and Bastian and Hewlett (1997).

The number of assured leases and permits transferred in the sampled agricultural land sales totaled 219 from 1996 to 1998, and some sales included more than one lease. This number was down slightly from 238 between 1993 and 1995. The number of AUMs transferred averaged from 134 for private leases to 1,172 for BLM leases. BLM leases include Section 3 and Section 15 leases. Section 3 lands are grazing district lands, while section 15 leases include lands outside grazing districts. USDA Forest Service leases averaged 674 AUMs. Values assigned to assured leases averaged $43 per AUM for the entire state. State of Wyoming leases averaged $62 per AUM, and private leases averaged $60 per AUM. USDA Forest Service leases averaged $68 per AUM for sales used in this analysis. BLM assured leases averaged $38 per AUM.

Grazing Land Prices

Sales data were collected on 297 parcels of grazing land (dry pasture) in Wyoming during 1996-98. Prices ranged from a high of $1,087 per acre in region 1 to a low of $25 per acre in region 4 (see Table 5). Average prices per acre ranged from $267 per acre in region 5 to $63 per acre in region 4.

Eastern plains sales averaged $129 per acre, which was $35 per acre higher than average prices of grazing land in the mountain-valley desert area. This price difference may have been related to contrasting productivity between the two regions. Average productivity of lands sold, according to appraisal reports, was 0.46 AUMs per acre in the eastern plains, as opposed to an average productivity of 0.39 AUMs per acre in the mountain-valley desert area (see Table 5). Statewide, the average price per acre of grazing land was $112 per acre.

Table 4. Value of assured leases per AUM transferred with ranches sold during 1996-98.

Agency providing lease	Number of sales	Average AUMs	Average value	Range	
				Low	High
			$ per AUM		
State of Wyoming	98	366	62	30	170
BLM	98	1,172	38	30	105
USDA Forest Service	17	674	68	40	100
Private leases	4	134	60	40	100
Railroad leases	2	1,123	31	30	31
Avg. for all leases	219	753	43	30	170

Except for the high average price in region 5 and the low average price of $63 in region 4, other regions ranged between $113 per acre and $183 per acre. The low price in region 4 is partially explained by two factors. First, the average size of grazing land parcels sold was largest in region 4, with an average of 7,793 acres per sale. The second factor relates to productivity; region 4 had the lowest average productivity of all the regions, with 0.30 AUMs per acre. Also, region 4 likely has fewer parcels of land that can be classified as scenic, which can influence price. The higher average price of $267 per acre in region 5 can be explained by the same factors. Region 5 had the lowest average number of acres of grazing land per sale with an average of 1,298 acres. Average productivity in region 5 was the second lowest in the sample with 0.38 AUMs per acre (see Table 5). In addition to a smaller average size of tracts sold, region 5 has some very scenic areas that probably influenced many buyers to pay higher prices for grazing land than they would in other areas.

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Irrigated and Subirrigated Pasture

Sales of irrigated, subirrigated, and river or creek bottom pasture parcels totaled 187. Prices of land in this category ranged from $2,564 per acre in region 1 to $60 per acre in region 4 (see Table 6). Region 1 had the least number of land sales in this category (9 sales), while region 6 had the most (44 land sales) in this category. Region 6 had the smallest average acreage per sale for irrigated or subirrigated pasture land. Average parcel size for this type of pasture was 72 acres in region 6. Region 5 had the largest average acreage per sale with 349 acres per transaction.

The eastern plains reported an average acreage of 276 per transaction, productivity of 1.70 AUMs per acre, and an average price of $290 per acre for irrigated and subirrigated pasture land (see Table 6). The mountain-valley desert area had a higher productivity average and price than the eastern plains. Mountain-valley desert areas of the state reported an average of 221 acres per transaction, 1.92 AUMs per acre, and an average price per acre of $474. Statewide averages for sales of land in this category were 244 acres per transaction, 1.83 AUMs per acre, and an average sales price of $389 per acre. The highest average price per acre for land of this type occurred in region 1, which averaged $719 per acre and had an average productivity of 1.79 AUMs per acre. The lowest average price per acre for this type of pasture occurred in region 4. This region had the second lowest corresponding average productivity of 1.33 AUMs per acre.

Irrigated Meadow Land

Irrigated meadow land is a separate category intended to reflect information about irrigated meadows not cultivated or rotated with other crops. The wide price range for this land type reflects the varying productivities and scenic amenities associated with these lands. The high sales for this type of land occurred in region 5, with a price of $3,300 per acre (see Table 7). The low sale price occurred in region 3. The statewide

Table 5. Wyoming grazing land prices, 1996-98.

Region	Counties	Number of sales	Average size (acres)	AUMs/acre	Average sale price	Range	
						Low	High
					$ per acre		
1	Johnson and Sheridan	17	3,520	0.44	162	85	1,087
2	Campbell, Crook, Converse, Weston, and Niobrara	80	2,840	0.46	132	38	700
3	Albany, Goshen, Laramie, and Platte	62	2,957	0.46	113	49	1,000
4	Carbon, Natrona, and Sweetwater	47	7,793	0.30	63	25	1,000
5	Lincoln, Sublette, and Uinta	29	1,298	0.38	267	70	1,075
6	Big Horn, Park, Hot Springs, Washakie, and Fremont	62	936	0.47	183	31	750
Eastern plains		159	2,958	0.46	129	38	1,087
Mountain-valley desert		138	3,347	0.39	94	25	1,075
Statewide		297	3,139	0.43	112	25	1,087

Table 6. Wyoming irrigated and subirrigated pasture prices, 1996-98.

Region	Counties	Number of sales	Average size (acres)	AUMs/acre	Average sale price	Range	
						Low	High
					$ per acre		
1	Johnson and Sheridan	9	253	1.79	719	150	2,564
2	Campbell, Crook, Converse, Weston, and Niobrara	22	260	1.16	240	105	900
3	Albany, Goshen, Laramie, and Platte	36	292	2.00	224	125	1,000
4	Carbon, Natrona, and Sweetwater	22	335	1.33	252	60	1,400
5	Lincoln, Sublette, and Uinta	32	349	2.26	570	175	2,250
6	Big Horn, Park, Hot Springs, Washakie, and Fremont	44	72	1.96	649	159	2,000
Eastern plains		67	276	1.70	290	105	2,564
Mountain-valley desert		98	221	1.92	474	60	2,250
Statewide		165	244	1.83	389	60	2,564

average price for this land type was $932 per acre with an average carrying capacity of 5.18 AUMs per acre. Eastern plains prices averaged lower than the statewide average at $623 per acre with an average productivity of 5.35 AUMs per acre. Mountain-valley desert areas had a higher average sale price of $992 per acre and an average carrying capacity of 5.16 AUMs per acre. Region 3 had the lowest average sale price at $500 per acre and the lowest average carrying capacity at 4.14 AUMs per acre. Region 3 had the highest average number of acres sold per transaction (758 acres per sale). The highest average sale price for irrigated meadow land occurred in region 1, which had an average sale price of $1,856 per acre and a relatively high average productivity of 6.50 AUMs per acre.

Irrigated Cropland

Table 8 summarizes irrigated cropland prices by regions. Land in the irrigated cropland category includes land under sprinkler, center pivot, and gravity irrigation systems across various quality classifications. Sales of irrigated tracts totaled 150 for 1996-98. Sale prices across Wyoming ranged from a high of $2,500 per acre in regions 1 and 5 to a low of $202 per acre in region 2. This broad range of prices reflects differences in land quality, water class, type of irrigation system, and sale methods. Regions 1 and 5 had the highest average sale price, with $2,500 per acre. The average parcel sizes were 333 and 437 acres for regions 1 and 5, respectively. The lowest average sale price was in region 3 at $935 per acre and an average

parcel size of 191 acres. Statewide averages for irrigated cropland during 1996-98 were $1,219 per acre and 189 acres per transaction.

Region 6 had 67 transactions, the highest number, while regions 1 and 5 had the lowest with only four transactions per region in the sample during 1996-98 (see Table 8). Average sale size ranged between 150 irrigated acres to 333 acres. The two major irrigated cash crop regions in the state are 3 and 6. These regions produce sugar beets, corn, barley, oats, dry beans, and hay, particularly in the Torrington, Worland, Lander, Riverton, and Powell areas. Regions 1 and 5 had the highest average sale price because of scenic values associated with lands in those areas.

Water supply classifications based on water availability are important determinants of value for irrigated cropland; unfortunately, data on irrigated cropland prices by water class was not available. Consequently, land sale prices reported represent an average of all sales of irrigated cropland for each region. Those acres having relatively good water supplies normally would range higher, while those lands with uncertain water supplies would range lower in price.

Figure 4 compares 1993-95 average irrigated cropland prices with the 1996-98 period. This comparison is based on average prices for each period, which have not been adjusted for inflation. The largest average increase between the two periods is for region 6. Average sales price per acre increased slightly over 36 percent from 1993-95 to 1996-98. This increase is much lower when compared with the 73 percent increase experienced from 1990-92 to 1993-95 in this region (Bastian and Hewlett, 1997). Region 5

Table 7. Wyoming irrigated meadow land prices, 1996-98.

Region	Counties	Number of sales	Average size (acres)	AUMs/acre	Average sale price	Range	
						Low	High
					$ per acre		
1	Johnson and Sheridan	2	138	6.5	1,856	1,500	2,340
2	Campbell, Crook, Converse, Weston, and Niobrara	3	89	6.58	1,098	375	1,800
3	Albany, Goshen, Laramie, and Platte	5	758	4.14	500	300	723
4	Carbon, Natrona, and Sweetwater	15	536	5.59	611	400	1,200
5	Lincoln, Sublette, and Uinta	30	419	4.22	1,176	350	3,300
6	Big Horn, Park, Hot Springs, Washakie, and Fremont	15	107	6.60	1,465	850	2,500
Eastern plains		10	433	5.35	623	300	2,340
Mountain-valley desert		60	370	5.16	992	350	3,300
Statewide		70	379	5.18	932	300	3,300

Table 8. Wyoming irrigated cropland prices, 1996-98.

Region	Counties	Number of sales	Average size (acres)	AUMs/acre	Average sale price	Range	
						Low	High
					$ per acre		
1	Johnson and Sheridan	4	333	9.83	1,763	1,150	2,500
2	Campbell, Crook, Converse, Weston, and Niobrara	8	199	9.83	1,002	202	1,625
3	Albany, Goshen, Laramie, and Platte	52	191	19.65	935	369	1,691
4	Carbon, Natrona, and Sweetwater	15	150	12.93	1,102	900	1,400
5	Lincoln, Sublette, and Uinta	4	437	8.88	954	700	2,500
6	Big Horn, Park, Hot Springs, Washakie, and Fremont	67	171	12.70	1,124	378	2,000
Eastern plains		64	201	17.91	1,029	202	2,500
Mountain-valley desert		86	180	12.54	1,101	378	2,500
Statewide		150	189	15.00	1,219	202	2,500

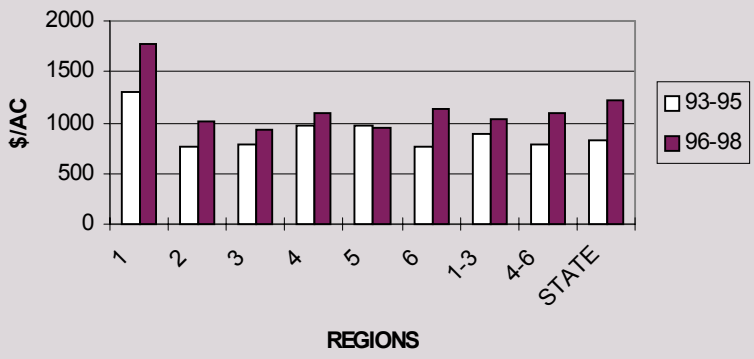
actually experienced a 1 percent decrease in average price for irrigated cropland between 1993-95 and 1996-98. Overall, nominal prices increased less between these two periods in comparison to the 1990-92 to 1993-95 periods. Moreover, the number of reported sales across the state dropped between these two periods for this land type (189 sales in 1993-95 versus 150 sales in 1996-98). These factors, reduced rates of appreciation, and less sales indicate a potentially weaker demand for irrigated cropland in Wyoming from 1993-95 to 1996-98. This result is probably due to weaker crop prices. Reports of continued migration from out of state producers to farming areas in Wyoming may explain why rates of land value appreciation have not weakened even more, given crop prices.

Dry Cropland

A total of 35 parcels of dry cropland sales were collected for Wyoming during 1996-98 (see Table 9). These sales were comparable to the 1993-95 period, but the number of sales was down from 80 parcels reported in the 1990-92 period. Regions 4, 5, and 6 did not have enough sales to be reported separately in Table 9; however, one dry cropland sale in region 5 was included in the statewide average.

Region 2 had the highest number of dry cropland sales with 29 transactions. The lowest average price of dry cropland of $319 per acre occurred in region 2. Region 3 averaged the next lowest price with $328 per acre. The highest average price per acre for dry cropland was in region 1 at $789 per acre. This region had only two sales and an

Figure 4. Comparison of price per acre of Wyoming irrigated cropland in 1993-95 versus 1996-98.



average parcel size of 70 acres per transaction for this type of land. Statewide dry cropland sales averaged $354 per acre and 189 acres in size.

Factors Affecting the Agricultural Land Market

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, interest rates, urban influences, investment potential, supply of agricultural land on the market, and sales due to financial stress, also are important. Current market value represents consideration of all these factors by both buyers and sellers.

Agricultural land prices seem to be trending upward after bottoming out in 1987. This turnaround came about somewhat earlier for cattle ranches and grazing land than for irrigated cropland and dry cropland, which is probably due to favorable cattle prices from about 1986-87 through the early 1990s. However, crop prices, except possibly for sugar beets and malt barley, have not been as favorable until recently. Since 1989, prices for all types of agricultural land appear to have stabilized and turned upward. Large increases were reported for cattle ranches during the early 1990s. This trend moderated in the mid-1990s as cattle prices dropped considerably after 1993. Ranch land prices seem to be gaining strength again as cattle prices improve. Cropland prices are still showing strength, but the appreciation rate seems to be moderating due to the weak prices for most crops.

Normally, there is a one-year lag between improved farm and ranch income from higher

Table 9. Wyoming dry cropland prices, 1996-98.

Region	Counties	Number of sales	Average size (acres)	Average sale price	Range	
					Low	High
				$ per acre		
1	Johnson and Sheridan	2	70	789	150	267
2	Campbell, Crook, Converse, Weston, and Niobrara	29	204	319	37	485
3	Albany, Goshen, Laramie, and Platte	3	130	328	390	400
Statewide		35	189	354	37	485

product prices and land price increases. Crop prices were relatively strong until 1997, but grain supplies are predicted to persist for the next several years. This outlook suggests crop prices will continue to be depressed over the next several years and likely decrease cropland prices compared with those in this study.

Scenic, Recreational, and Other Nonagricultural Values

Although sales in this report are limited primarily to production agricultural properties, scenic and recreational values are important in Wyoming and can contribute significantly to the market value of agricultural lands. This relationship is an especially significant consideration for ranches and grazing lands located near national forests and scenic mountain areas. Important scenic areas are found near Sheridan, Saratoga, Jackson Hole (Teton County was not included in this analysis), Pinedale, Cody, and in the Black Hills of northeastern Wyoming. Preliminary research results by McLeod et al. (1999) indicated hunting, fishing, and scenic views contribute significantly to agricultural land values.

Other nonagricultural influences on the agricultural land market include: expansion of urban areas through residential and commercial development; mineral rights and royalties, including coal, oil, and gas leases; recreational hunting and fishing leases, which provide income from nonagricultural activities; and the purchase of agricultural lands for their scenic value and privacy by nonagricultural or absentee owners for retirement or vacation purposes. Urban influences exist near most cities and towns in Wyoming. Mineral leases for oil and coal are prevalent in Johnson, Campbell, and Natrona Counties. Oil and natural gas leases are common in southwestern Wyoming. In the past, boom and bust cycles associated with uranium and coal development have influenced land values, and such cycles may be a consideration in the future.

Supply of Farms and Ranches on the Market

Another factor affecting Wyoming land prices is the supply of farms and ranches available for sale, which appears to have decreased slightly compared with 1993-95. Because land prices were stronger and cattle prices increased, many producers may have chosen not to liquidate some of their land assets. Moreover, the relatively attractive crop prices until 1997 may have reduced the supply of cropland due to financial stress. In addition, as agricultural lands are purchased for reasons other than agricultural production, factors, such as agricultural income, may be less of a determinant for the supply of agricultural lands.

In the past, boom and bust cycles associated with uranium and coal development have influenced land values, and such cycles may be a consideration in the future.

Monetary Factors

Until recently, nominal interest rates have experienced several years of relatively low values. The Federal Reserve tried to stimulate economic activity by lowering the prime lending rate, which, in turn, lowered long-term interest rates and strengthened real estate markets. This trend may have turned around this year, as the Federal Reserve has started to raise interest rates to keep inflation in check. Long-term interest rates have risen since the last half of 1999. Overall, a relatively good supply of credit for farm real estate financing exists in most areas of the United States, but this situation may change as the crop sector continues to face financial stress. Credit for purchasing grazing and ranch lands should continue to be in good supply given the income outlook for cattle over the next several years.

Recent Trends in Wyoming and National Agricultural Land Prices

Wyoming

Market prices for major types of Wyoming agricultural land seemed to peak in the early 1980s, then generally decline until 1987 (Bastian et al., 1994). In 1989, average ranch prices turned upward, and they appear to be continuing in that direction. Grazing land prices peaked in 1982 and declined until 1989 (Vanvig and Hewlett, 1990). Grazing land prices seem to be trending upward since 1989 (see Figure 5 and Table 10). Prices for cropland have stabilized and increased since 1987 (see Figure 5 and Table 10; data for Figure 5 comes from Table 10 and 1997 USDA data).

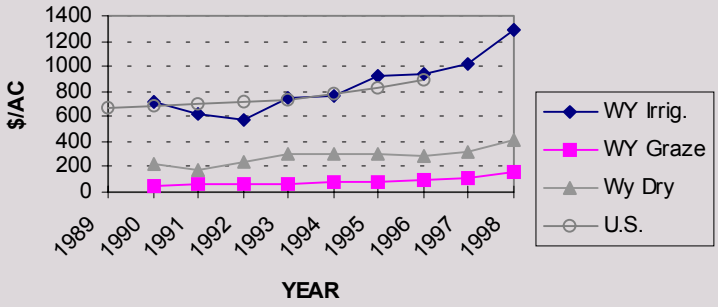
The United States

Agricultural land values in the United States increased rapidly in the 1970s, peaked in 1981-82, declined rapidly until 1987, and have since increased (Vanvig and Hewlett, 1990). According to the latest USDA report published on agricultural land values, U.S. farm real estate experienced a 7 percent increase in the per acre value during 1995 (USDA, 1997). In comparison, the value increases were 6.4 percent in both 1994 and 1993. The per acre value of farm real estate in the United States increased almost 49 percent since the upturn in 1987. The average nominal value of $890 per acre as of January 1, 1996, compares with $823 in 1982, just before the major decline in farm real estate values during the mid-1980s. In January 1995, farm real estate values exceeded the 1982 level.

On a real - or inflation - adjusted basis, U.S. farm real estate values increased 4.4 percent during 1995. This increase compares with 4.0 and 3.5 percent increases during 1994 and 1993, respectively. Prior to 1993, real values had fallen for 10 of 12 years. In real terms, the January 1, 1996, average was still 40 percent below the 1981 peak.

The per acre value of farm real estate in the United States increased almost 49 percent since the upturn in 1987.

Figure 5. Comparison of U.S. farm real estate values as of January 1 and Wyoming land values by year and land type.



Land Rental Rates

Irrigated Land

Typical fixed cash rental arrangements require the landlord to pay real estate taxes and water costs. Cash rental rates tend to vary from year to year depending upon crop prices, yield changes, and the demand for rental land. The Wyoming Agricultural Statistics Service no longer estimates gross cash rent for cropland in Wyoming. Hewlett et al., (1994) estimated the cash rent for irrigated land at $75 per acre in the Fremont County area.

Share-rental arrangements for irrigated cropland are relatively constant from year to year, although specific provisions of individual leases will vary and rental rates may differ from region to region. Typical shares for various irrigated crops are listed on page 17 (Hewlett and Bastian, 1992).

Table 10. Average market prices for Wyoming agricultural land and ranches, 1983-95[a].

	Average prices												
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Ranches ($/AU)													
Eastern plains	1,821	1,534	1,530	1,759	1,796	1,890	2,058	2,173	2,293	2,819	3,224	3,423	2,819
Mountain-valley desert	1,421	1,142	1,284	1,255	1,627	1,255	1,408	1,681	1,861	1,598	2,714	2,516	1,598
Grazing land ($/Ac.)													
Eastern plains	83	70	n/a	n/a	56	65	70	79	93	111	131	128	111
Mountain-valley desert	71	51	n/a	n/a	45	51	55	58	64	51	65	95	51
Irrigated cropland ($/Ac.)													
Region 3	645	514	n/a	n/a	865	686	536	639	794	982	883	973	982
Region 6	754	717	n/a	n/a	572	557	609	858	741	874	989	1,054	874
Dry cropland ($/Ac.)													
Region 2	182	173	n/a	n/a	241	197	244	295	417	358	284	n/a	n/a
Region 3	223	193	n/a	n/a	214	159	243	300	199	250	n/a	199	421

[a]Data is based on estimated averages for the specified region and year, given the data used in the analysis.

Crop	Landlord	Lessee/renter
Grains	1/3	2/3
Dry beans	1/4	3/4
Beets	1/5	4/5
Hay	1/2	1/2

In addition to real estate taxes, the landlord typically pays water costs for irrigated land. Some variable costs, such as fertilizers, herbicides, harvesting, and hauling, may be shared in the same proportion as the crop share. When entering into lease arrangements, lessors and lessees need to assess what is fair and acceptable based on the unique characteristics of the arrangement being considered.

Dry Cropland

In Wyoming, dry cropland usually is rented on a crop share basis rather than with a fixed cash arrangement. The typical crop share rental rate is one-third to the landlord and two-thirds to the renter in the major dryland wheat producing areas. The landlord pays real estate taxes and usually shares in some variable costs such as pesticides, harvest, and hauling (Vanvig and Hewlett, 1990).

Private Grazing Leases

The most common rental method for privately owned grazing land is on an AUM basis or a cow/calf pair basis in which the landowner provides salt, water, and some health care for the livestock. The following average rates for Wyoming have been reported by the Wyoming Agricultural Statistics Service, 1999.

Year	AUM	Cow/calf ($/mo.)	Per head ($/mo.)
1994	10.50	12.40	11.00
1995	11.30	13.00	11.50
1996	11.00	13.00	11.10
1997	12.00	14.00	12.20
1998	11.90	13.80	12.30

Summary

This report presents average market prices for agricultural lands sold in Wyoming during 1996, 1997, and 1998. Data were collected on 484 land sales that took place throughout the state. Only agricultural land sales expected to remain in agricultural production were included in the analysis. Farm Credit Services was the primary data source for this report. Average market prices were reported on an AU basis for ranches and on a per acre basis for grazing land, irrigated pasture, irrigated meadow land, irrigated cropland, and dry cropland.

Prices for eastern plains ranches (regions 1, 2, and 3) averaged $3,301 per AU. Ranch prices for mountain valley-desert areas (regions 4, 5, and 6) averaged $2,664 per AU. The statewide average was $2,993 per AU. The statewide average ranch price per AU declined with size increases for each ranch sold. Prices also declined as the percentage of leased forage increased beyond 25 percent of total forage. Average values of assured leases and permits transferred when ranches sold during 1996-98 were $62 per AUM for state lands, $38 per AUM for BLM, $68 per AUM for Forest Service leases, $60 per AUM for private leases, and $31 per AUM for railroad leases. The average value of improvements for ranches of 50 to 99 AUs was $51,469; 100 to 199 AUs, $67,687; 200 to 399 AUs, $57,874; 400 to 599 AUs, $96,745; and ranches 600 AUs and over, $226,368.

For grazing land, average prices were $129 per acre in the eastern plains and $94 per acre in mountain-valley desert areas. Statewide, the average price of grazing land was $112 per acre. Productivity, scenic, and recreational values were factors that seemed to explain most of the variation in grazing land prices. Large tracts and relatively low carrying capacity rangelands usually were associated with lower prices. Prices for irrigated and subirrigated pasture averaged $389 per acre statewide. Region 1 had the highest average price for irrigated pasture with $719 per acre, while region 3 had the lowest with $224 per acre. Statewide, irrigated meadow land averaged $932 per acre. Region 1 had the highest irrigated meadow land average price at $1,856 per acre, while region 3 had the lowest at $500 per acre.

Important irrigated cropland areas in the state are regions 3 and 6. Region 3 averaged $935 per acre for irrigated cropland. Region 6 averaged $1,124 per acre. Statewide, irrigated cropland averaged $1,219 per acre for 1996-98 sales.

The majority of dry cropland is in regions 1, 2, and 3. Region 1 averaged $789 per acre for dry cropland. Regions 2 and 3 averaged $319 and $328 per acre, respectively. Statewide, prices for dry cropland averaged $354 per acre.

Overall, prices for ranches in 1996-98 increased compared with 1993-95. However, the strongest increases were for ranches that had greater than 400 AU carrying capacity. Cropland and pasture prices seemed to continue to strengthen since the agricultural land market hit bottom in 1987. However, dry cropland showed the least increase.

Both cash and crop share rental arrangements are used in Wyoming. Cash rental rates tend to vary year-by-year depending upon crop prices, yields, and other factors.

Crop share arrangements, however, tend to be fairly stable over time. Typical crop share arrangements for landlords and tenants, respectively, are grains one-third to two-thirds, dry beans one-quarter to three-quarters, sugar beets one-fifth to four-fifths, and hay one-half to one-half.

Wyoming pasture rental rates on privately owned grazing land are typically quoted on a per AUM or cow/calf basis. Rates for cow/calf pairs ranged from $12.40 to $14 per month between 1994 and 1998 in Wyoming. Rates on a per AUM basis ranged between $10.50 and $12 for the same time period.

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