Wyoming Farm, Ranch, and Rural Land Market: 1999-2001

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Introduction

This report provides price information on Wyoming farm and ranch land sales that occurred during 1999, 2000, and 2001. This publication is an update of previous Wyoming agricultural land price reports (see Bastian et al., 2000; 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.

Procedure

Wyoming agricultural land sales information was collected from Farm Credit Services of America. Report data came from 448 sales reports for agricultural land sales, which included descriptions of individual tracts. Data was collected for the calendar years 1999, 2000, and 2001. 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 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 were excluded from the analysis. Excluded from ranch unit analyses were ranch sales smaller than 50 animal units (AUs). Sales less than 50 AUs that still represented purchases for agricultural use were included in analyses of cropland or pasture land. Agricultural land can be purchased for reasons other than agricultural production such as development potential, recreation, or as scenic rural homes. Tracts with exceptionally high recreational and / or scenic value were included in the analysis if the sales report for them did not indicate that these lands were to be taken out of agricultural production or deemed as outliers. These types of sales influence the market values for rural and agricultural land and therefore were included in the analysis. It is important

to note that people's demands are becoming more diverse for agricultural land, and these diverse demands are having more significant impacts on rural and agricultural land markets as time goes on.

Wyoming land values vary by region and are influenced by factors such as climate, elevation, water availability, population, recreation, scenery, timber, mining, oil, and gas production. In this study, Wyoming is divided into six regions based on climatic and other factors (listed above) and on the predominant types of agricultural production in each area (See Figure 1).

The six regions of the state and predominant agricultural enterprises within each region are shown in Figure 1.

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

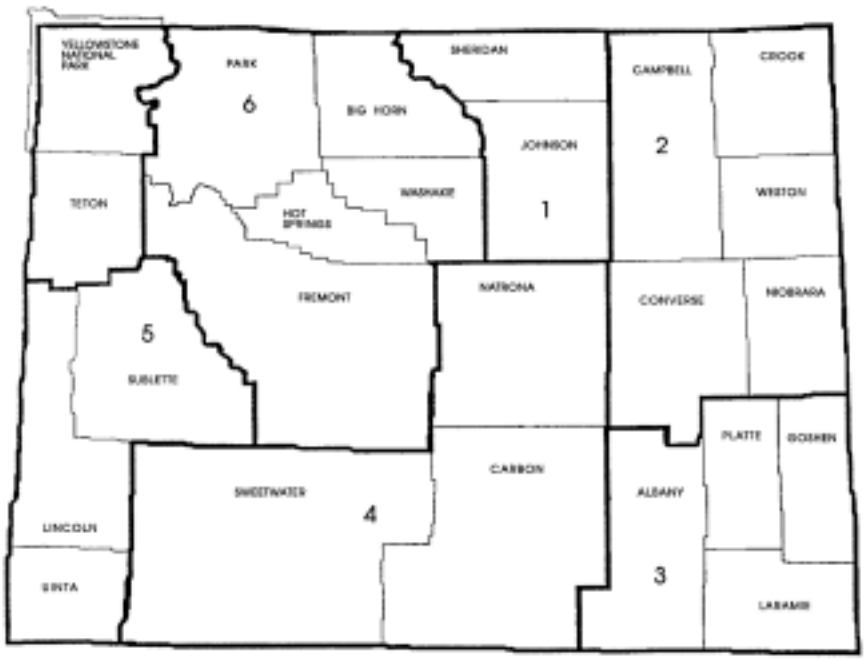


Figure 1. Regional boundaries for reported agricultural land market prices.

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 was also 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 have caused average values to be overstated in a region with a large number of small sales that represented 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 were also 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 analyses (prices reported in $/acre). Weighted averages were used for all land price analyses other than ranch unit prices (sales reported as $/AU). 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 is also 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 1999-2001 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 are reported on a dollar value per-animal unit ($/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, and private leases transferred with deeded land. Thus, reported prices reflect the value of ranch operations on an AU basis.[1]

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 a sale. However, fixed improvements such as fences, stock-water developments, sprinklers, and ditches for gravity irrigation are included when 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

[1] Information on AU carrying capacity for individual ranches was provided by the appraiser reports of land sales transactions used in the analysis.

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 $5,990 per AU. Ranch prices for the mountain valley-desert area averaged $3,002 per AU, and the statewide average was $4,545 per AU.

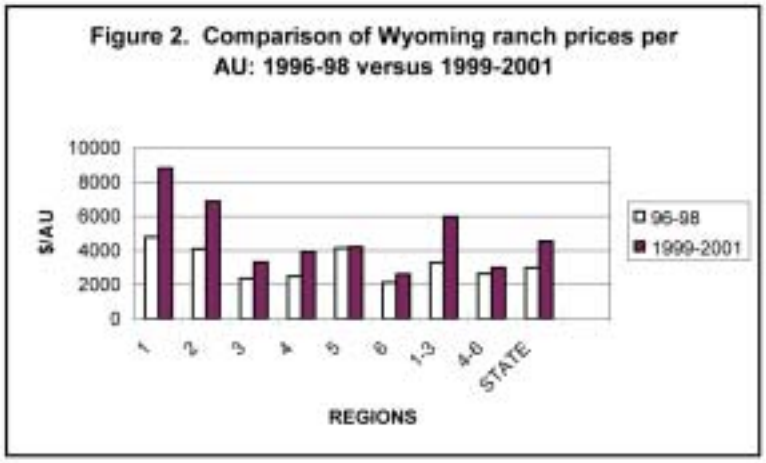
Region 1, Johnson and Sheridan counties, had the highest average with $8,812 per AU. Average prices in Region 1 ranged between $2,590 per AU and $28,223 per AU. Sales in this region averaged 12 percent of the total Animal Unit Months (AUMs) from leased foraged. The eastern plains area averaged 8 percent of the forage provided by leases, while the mountain-valley area had an average of 12 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 $2,631 per AU and a range between $181 per AU and $16,204 per AU.

These prices indicate an increased rate of appreciation for ranch properties when compared with 1996-98 values. This increase was likely due to strengthening cattle prices. Figure 2 compares Wyoming ranch prices on a per-AU basis by region for the 1996-98 and 1999-2001 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 52 percent in ranch prices statewide. The largest average increase took place in Region 1, which had a nominal increase of 84 percent from 1996-98 to 1999-2001. Region 5 had the lowest average increase

Table 1. Price per animal unit for Wyoming ranches by region, 1999–2001.

Region / Counties		Number of sales	Average size	Average sales price	Sales price range		Average percentage leased forage
					Low	High	
				——Dollars per AU——			(% of Total AUMs)
1	Johnson and Sheridan	30	280	8,812	2,590	28,223	12
2	Campbell, Converse, Crook, Niobrara, and Weston	60	209	6,881	1,384	22,183	9
3	Albany, Goshen, Laramie, and Platte	52	239	3,333	704	14,036	5
4	Carbon, Natrona, and Sweetwater	23	408	3,954	1,214	11,429	23
5	Lincoln, Sublette, and Uinta	12	257	4,211	632	7,889	18
6	Big Horn, Fremont, Hot Springs, Park, and Washakie	98	227	2,631	181	16,204	9
1,2,3	Eastern Plains	142	235	5,990	704	28,223	8
4,5,6	Mountain-valley desert	133	261	3,002	181	16,204	12
1-6	Statewide	275	247	4,545	181	28,223	10

with a 2 percent nominal average increase. Ranch prices increased an average of 30 percent from 1988-92, and ranch prices experienced an 11 percent increase statewide from 1990-92 to 1993-95 (Bastian et al., 1994; Bastian and Hewlett, 1997). Comparing this analysis to Bastian and Hewlett (1997) indicates the number of sales in this analysis was down slightly in comparison to 1996-98; however, the decrease was relatively small. The relatively large number of sales plus the ranch price percentage increase suggested a continued strong demand for ranch property in 1999-2001 compared with the 1996-98 study.



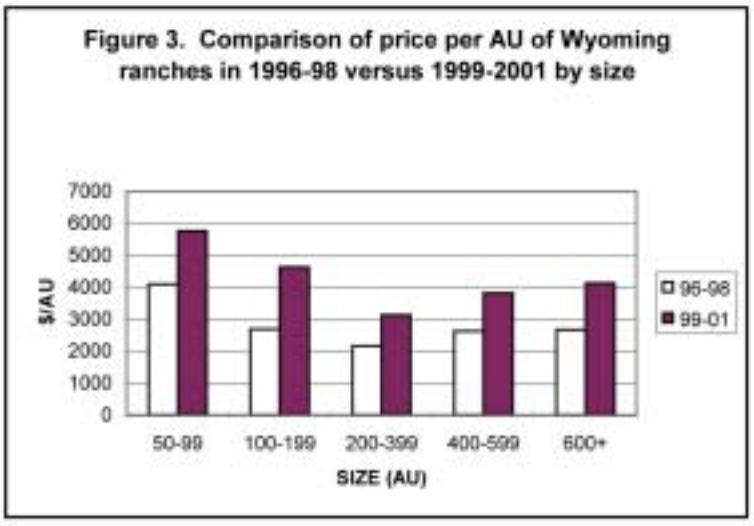
The relationship of ranch prices to the total number of AUs and the percentage of those AUs supplied by leased lands are shown in Table 2. As the size of ranches increased beyond 200-399 AUs, the expected decrease in price per AU did not occur. Average prices for ranches that were 400-599 AUs and more than 600 AUs were higher than the average price for ranches with 200-399 AUs. Those ranches beyond 399 AUs were more likely to be large enough to be economically viable ranch businesses. Moreover, ranches of this size might have been desirable from a recreation standpoint. Overall, this result was another indication of strong demand for ranch property. Average prices per AU ranged from $5,758 for the smallest ranches (50 to 99 AUs) to $3,132 for the 200 to 399-AU size category.

The percentage of leased forage seemed to have somewhat of a depressing effect on prices for those ranches that had more than 25 percent of their forage coming from leases. The average price per AU for ranches with no leased ground was $3,912. The price increased to $6,725 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 might have been 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 87 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 $3,027 per AU. (Large ranches tend to have higher percentages of leased forage.) These relationships were similar to those found in an earlier ranch sales study for 1975-88 (Vanvig and Hewlett, 1990).

Figure 3 compares 1996-98 average ranch prices with values during the 1999-2001 period. This comparison was based on average prices without adjustments for inflation for each period. The largest average increase between the two periods was for the size classification of 100-199 AUs. The average sales price per AU increased 72 percent from 1996-98 to 1999-2001. The smallest increase in the average price for Wyoming ranches was in the 50 to 99 AU size. Nominal prices increased nearly 41 percent between 1996-1998 to 1999-2001 for ranches

Table 2. Price per AU of Wyoming ranches based on size and percentage of forage provided by public and private leases, 1999-2001.

Size range (AUs)	Number of sales	Average size (AUs)	Average price ($/AU)	Average leased forage (Percent)
50-99	82	74	5,758	6
100-199	94	143	4,625	8
200-399	60	276	3,132	12
400-599	20	1,146	3,813	23
600 and over	19	476	4,128	20
Leased forage (Percent)				
0	166	186	3,912	0
1-24	63	309	6,725	9
25-49	27	256	4,091	37
50-74	13	712	3,554	59
75 and over	5	257	3,027	87



in that size category. Figure 3 also indicates an increased demand for ranch property in Wyoming from 1996-98 to 1999-2001, particularly for those ranches supporting AUs greater than 399. Those ranches in the 400 to 599 AU and 600 or more AU categories experienced 46 and 55 percent increases in average price, respectively, which was 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 $65,172. Houses, livestock buildings or shelters, and/or cor-

rals tended to be the most common improvements in this size category. Approximately 73 percent of the ranches sold in this size category had one or more houses. Livestock buildings or shelters were the next most common type of improvement, as 55 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, the value of improvements varied greatly within size categories.

The average value of improvements for ranches in the 600-AU and over category was $273,542. In this size category, 84 percent of the ranches had one or more houses, 74 percent had one or more shops, 80 percent had one or more livestock buildings, 26 percent had at least one set of corrals, and 16 percent had livestock scales. The value of improvements for ranches of 600 AUs and over ranged from $0 to a high of $1,120,418.

Prices for smaller ranches showed 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 present smaller cow herd inventory, there is a relatively positive outlook in cattle prices for the next several years once the market works through the current large meat supplies. This might also be fueling the demand for larger agricultural units. Other factors, such as increased interest in recreational and scenic values of Wyoming cattle ranches and more people (both agriculturalists and nonagriculturalists) from outside the state purchasing agricultural lands, have likely influenced this trend as well. Ranch land with significant private tim-

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

Size (AUs)	No. of sales	$ value of improvements			Type and number of improvements																							
		Avg.	Low	High	No. of houses				No. of shops				No. of livestock buildings					Granaries		No. of corrals				No. of livestock scales	
					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	51	65,172	3,920	326,840	27	59	14	0	0	41	43	10	6	45	33	10	4	8	0	86	14	51	45	4	0	98	2
100-199	69	67,437	1,250	475,092	19	59	22	0	0	44	30	17	9	41	25	13	12	6	4	91	9	44	52	4	0	96	4
200-399	53	72,680	0	420,000	23	53	19	2	4	36	34	21	9	40	26	17	17	0	0	70	30	62	34	4	0	89	11
400-599	15	127,429	24,842	349,128	20	33	27	13	7	33	33	33	0	40	27	7	13	0	13	87	13	73	27	0	0	100	0
600 and over	19	273,542	0	1,120,418	16	11	21	26	26	26	16	32	26	21	37	0	26	5	12	89	11	74	16	5	5	84	16

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

ber lands has also become increasingly under demand, reportedly due to the decreased availability of west coast timber from public lands due to environmental concerns.

Assured Leases

Assured leases include transfers of public and private leases in conjunction with deeded land. Historically, in the case of public lease permits, a 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. The quantity and type of assured leases transferred with ranches seemed to influence Wyoming ranch land sale prices. The value of assured leases per AUM[2] transferred with ranches sold during 1999-2001 are shown in Table 4. However, for each category of lease (state, Bureau of Land Management [BLM], etc.), a weighted average approach was 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 181 from 1999 to 2001, and some sales included more than one lease. This number was down slightly from 219 between 1996 and 1998. The number of AUMs transferred averaged from 200 for private leases to 1,048 for BLM leases. BLM leases included Section 3 and Section 15 leases. Section 3 lands are grazing district lands, while Section 15 leases included lands outside grazing districts. United States Department of Agriculture (USDA) Forest Service leases averaged 821 AUMs. Values assigned to assured leases averaged $53 per AUM for the entire state. State of Wyoming leases averaged $62 per AUM, and private leases averaged $45 per AUM. USDA Forest Service leases averaged $76 per AUM for sales used in this analysis. BLM-assured leases averaged $47 per AUM.

Table 4. Value of assured leases per AUM transferred with ranches sold during 1999-2001.

Agency providing lease	Number of sales	Average AUMs	Average Value	Range	
				Low	High
				($ per AUM)	
State of Wyoming	79	322	62	25	90
BLM	81	1,048	47	45	5,900
USDA Forest Service	18	821	76	40	7,600
Private leases	2	200	45	15	70
Railroad leases	1	1,247	45	45	45
Avg. for all leases	181	1,173	53	25	7,600

[2] An animal unit month (AUM) is defined as the amount of forage required to maintain one 1,000-pound cow for 30 days (approximately equal to 780 pounds of forage on a dry matter basis). In the case of government leases, an AUM can also be defined as the amount of forage required to maintain one cow/calf pair.

Grazing Land Prices

Sales data were collected on 314 parcels of grazing land (dry pasture) in Wyoming during 1999-2001. Prices ranged from a high of $12,000 per acre in Region 1 to a low of $50 per acre in Region 4 (see Table 5). Average prices per acre ranged from $287 per acre in Region 6 to $1,324 per acre in Region 1. The high of $12,000 was not deemed an outlier as there were several other sales in Region 1 near this value. It is extremely likely that these higher value sales were influenced by amenities other than agricultural production. However, since the sales report did not give an indication that the land would no longer be used in agriculture, they were left in the analysis because such sales did influence the land market.

Eastern plains sales averaged $654 per acre, which was $323 per acre higher than the average prices of grazing land in the mountain-valley desert area. This price difference might have been related to contrasting productivity between the two regions. The average productivity of lands sold, according to appraisal reports, was 0.67 AUMs per acre in the eastern plains as opposed to an average productivity of 0.26 AUMs per acre in the mountain-valley desert area (see Table 5). Statewide, the average price per acre of grazing land was $547 per acre.

Except for the high average price in Region 1 and the low average price of $287 in Region 6, other regions ranged between $375 per acre and $575 per acre. The low price in Region 6 may partially be explained by its relatively low productivity. Region 1's high price may be explained by other factors such as scenic and recreation values.

Table 5. Wyoming grazing land prices, 1999-2001.

Region / Counties		Number of sales	Average size	AUMs / acre	Average sales price	Range	
						Low	High
					———Dollars per acre———		
1	Johnson and Sheridan	39	2,949	0.60	1,324	114	12,000
2	Campbell, Converse, Crook, Niobrara, and Weston	108	2,447	0.79	575	80	4,091
3	Albany, Goshen, Laramie, and Platte	63	1,731	0.52	375	78	2,776
4	Carbon, Natrona, and Sweetwater	27	8,058	0.27	410	50	1,500
5	Lincoln, Sublette, and Uinta	9	1,049	0.22	424	115	875
6	Big Horn, Fremont, Hot Springs, Park, and Washakie	68	1,043	0.26	287	70	1,725
	Eastern Plains	210	2,325	0.67	654	78	12,000
	Mountain-valley desert	104	2,865	0.26	331	50	1,725
	Statewide	314	2,504	0.53	547	50	12,000

Irrigated and Subirrigated Pasture

Sales of irrigated, subirrigated, and river or creek bottom pasture parcels totaled 173. Prices of land in this category ranged from $4,414 per acre in Region 1 to $170 per acre in Region 2 (see Table 6). Region 4 had the least number of land sales in this category (seven sales), while Region 6 had the most (79 land sales) in this category. Region 1 had the smallest average acreage per sale for irrigated or subirrigated pasture land. The average parcel size for this type of pasture was 91 acres in Region 1. Region 2 had the largest average acreage per sale with 492 acres per transaction.

The eastern plains reported an average acreage of 256 per transaction, productivity of 1.51 AUMs per acre, and an average price per acre of $921 for irrigated and subirrigated pasture land (see Table 6). The mountain-valley desert area had a higher average productivity and price than the eastern plains. Mountain-valley desert areas of the state reported an average of 159 acres per transaction, 2.63 AUMs per acre, and an average price per acre of $780. Statewide averages for sales of land in this category were 200 acres per transaction, 2.15 AUMs per acre, and an average sales price of $841 per acre. The highest average price per acre for land of this type occurred in Region 1, which averaged $1,454 per acre and had an average productivity of 1.27 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 1.18 AUMs per acre.

Table 6. Wyoming irrigated and subirrigated pasture prices, 1999-2001.

Region / Counties	Number of sales	Average size	AUMs / acre	Average sales price	Range	
					Low	High
				———Dollars per acre———		
1 Johnson and Sheridan	15	91	1.27	1,454	255	4,414
2 Campbell, Converse, Crook, Niobrara, and Weston	24	492	1.15	720	170	2,600
3 Albany, Goshen, Laramie, and Platte	35	165	1.86	831	205	2,777
4 Carbon, Natrona, and Sweetwater	7	486	1.18	718	200	1,500
5 Lincoln, Sublette, and Uinta	13	271	2.15	1,230	450	2,300
6 Big Horn, Fremont, Hot Springs, Park, and Washakie	79	111	2.84	712	225	1,755
Eastern Plains	74	256	1.51	921	170	4,414
Mountain-valley desert	99	159	2.63	780	200	2,300
Statewide	173	200	2.15	841	170	4,414

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 6 with a price of $5,000 per acre (see Table 7). The low sale price also occurred in Region 6. The statewide average price for this land type was $1,631 per acre with an average carrying capacity of 6.03 AUMs per acre. Eastern plains prices averaged lower than the statewide average at $1,495 per acre with an average productivity of 5.02 AUMs per acre. Mountain-valley desert areas had a higher average sale price of $1,686 per acre and an average carrying capacity of 6.43 AUMs per acre. Region 3 had the lowest average sale price at $1,160 per acre and the second lowest average carrying capacity at 4.32 AUMs per acre. Region 3 had the highest average number of acres sold per transaction (632 acres per sale). The highest average sale price for irrigated meadow land occurred in Region 1, which had an average sale price of $2,030 per acre and a relatively high average productivity of 6.20 AUMs per acre.

Irrigated Cropland

Table 8 summarizes irrigated cropland prices by regions. Land in the irrigated cropland category included land under sprinkler, center pivot, and gravity irrigation systems across various quality classifications. Sales of irrigated tracts totaled 142 for 1999-2001. Sale prices across Wyoming ranged from a high of $4,414 per acre in Region 1 to a low

Table 7. Wyoming irrigated meadow land prices, 1999-2001.

Region / Counties		Number of sales	Average size	AUMs / acre	Average sales price	Range	
						Low	High
					———Dollars per acre———		
1	Johnson and Sheridan	5	162	6.20	2,030	1,400	2,727
2	Campbell, Converse, Crook, Niobrara, and Weston	5	263	5.10	1,565	1,201	2,500
3	Albany, Goshen, Laramie, and Platte	9	632	4.32	1,160	524	2,776
4	Carbon, Natrona, and Sweetwater	5	487	4.79	1,466	600	2,940
5	Lincoln, Sublette, and Uinta	11	332	4.05	1,818	850	3,825
6	Big Horn, Fremont, Hot Springs, Park, and Washakie	31	186	7.54	1,675	380	5,000
	Eastern Plains	19	411	5.02	1,495	524	2,776
	Mountain-valley desert	47	252	6.43	1,686	380	5,000
	Statewide	66	298	6.03	1,631	380	5,000

of $300 per acre in Region 2. This broad range of prices reflected differences in land quality, water class, type of irrigation system, and sale methods. Region 1 had the highest average sale price with $2,185 per acre. The average parcel sizes were 338 acres for Region 1. The lowest average sale price, in Region 3, was $1,181 per acre with an average parcel size of 158 acres. Statewide averages for irrigated cropland during 1999-2001 were $1,389 per acre and 188 acres per transaction.

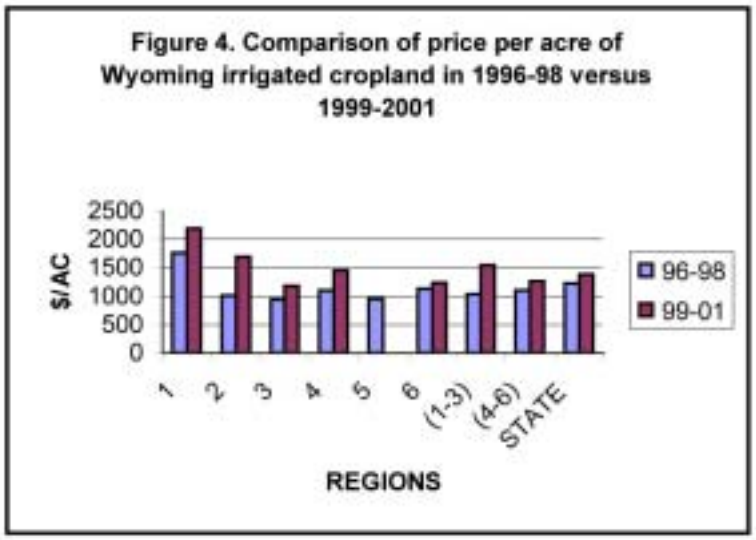
Region 6 had 70 transactions, the highest number, while Region 4 had the lowest with only eight transactions for the region during 1999-2001 (See Table 8). The average sale size ranged between 158 irrigated acres to 338 acres. The two major irrigated cash crop regions in the state were 3 and 6. These regions produced sugar beets, corn, barley, oats, dry beans, and hay, particularly in the Torrington, Worland, Lander, Riverton, and Powell areas. Region 1 had the highest average sale price, likely because of scenic values associated with lands in that area.

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 represented 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.

Table 8. Wyoming irrigated cropland prices, 1999-2001.

Region / Counties	Number of sales	Average size	AUMs / acre	Average sales price	Range	
					Low	High
				———Dollars per acre———		
1 Johnson and Sheridan	17	338	9.9	2,185	1,125	4,414
2 Campbell, Converse, Crook, Niobrara, and Weston	12	178	12.19	1,691	300	3,000
3 Albany, Goshen, Laramie, and Platte	35	158	17.12	1,181	550	2,300
4 Carbon, Natrona, and Sweetwater	8	165	11.72	1,457	971	2,857
5 Lincoln, Sublette, and Uinta	0	–	–	–	–	–
6 Big Horn, Fremont, Hot Springs, Park, and Washakie	70	172	12.44	1,241	465	3,005
Eastern Plains	64	210	14.19	1,543	300	4,414
Mountain-valley desert	78	171	12.37	1,263	465	3,005
Statewide	142	188	13.18	1,389	300	4,414

Figure 4 compares 1996-98 average irrigated cropland prices with the 1999-2001 period. This comparison is based on average prices without adjustments for inflation for each period. The largest average increase between the two periods was for Region 2. The average sales price per acre increased slightly above 69 percent from 1996-98 to 1999-2001. Region 1 experienced only an average increase of 24 percent from the 1996-98 period to the 1999-2001 period. This increase was much lower when compared with the 73 percent increase experienced from 1990-92 to 1993-95 in this region (Bastian and Hewlett, 1997). Region 6 experienced only a 10 percent increase since the period of the last report. The number of reported sales across the state dropped slightly between the two periods for this land type (150 sales in 1993-95 versus 142 sales in 1999-2001). These factors, reduced rates of appreciation, and fewer sales indicated a potentially weaker demand for irrigated cropland in Wyoming from 1996-99 to 1999-2001. This result was probably due to weaker crop prices. Reports of continued migration from out-of-state producers to farming areas in Wyoming might explain why rates of land value appreciation did not weaken even more given relatively weak crop prices.



Dry Cropland

A total of 22 parcels of dry cropland sales were collected for Wyoming during 1999-2001 (see Table 9). The number of sales was comparable to the 1996-98 period but 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. This could have been a function of lower demand for dry cropland due to weakened small grain prices. It was also less likely that dry cropland was associated with non-agricultural amenities, which may have further softened demand for this type of land relative to other types of agricultural land in this analysis.

Region 2 had the highest number of dry cropland sales with 17 transactions. The lowest average price of dry cropland of $465 per acre occurred in Region 2. Region 3 averaged the next lowest price with $753 per acre. The highest average price per acre for dry cropland was in Region 1 at $945 per acre. This region had only three sales and an average parcel size of 176 acres per transaction for this type of land. Statewide dry cropland sales averaged $520 per acre and 230 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 for most types of agricultural lands. 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, are also important. The demand for agricultural lands is becoming more diverse

Table 9. Wyoming dry cropland prices, 1999-2001.

Region / Counties		Number of sales	Average size	Average sales price	Range	
					Low	High
				———Dollars per acre———		
1	Johnson and Sheridan	3	176	945	275	4,414
2	Campbell, Converse, Crook, Niobrara, and Weston	17	261	465	196	1,200
3	Albany, Goshen, Laramie, and Platte	2	47	753	250	800
	Statewide	22	230	520	196	4,414

* The small sample size in Regions 1 and 3 reduce the reliability of these averages being representative for the whole region.

as more buyers are interested in agricultural lands for characteristics other than agricultural production. Current market values represent 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 in part to favorable cattle prices from about 1986-87 through the early 1990s and then again in the late 1990s. The demand for ranch properties also seems to be increasingly influenced by other amenity values such as recreation and scenic views (Bastian et al., 2002). However, crop prices, except for possibly those of sugar beets and malt barley, have not been as favorable. 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 and the demand for other amenities often found on ranch properties increases. 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 lag between improved farm and ranch income from higher product prices and land price increases. Generally, this is a one-year lag. Crop prices were relatively strong until 1997, but fairly large 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, which will likely also depress cropland prices.

Scenic, Recreational, and other Nonagricultural Values

Although sales in this report are primarily of 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, and the demand for such amenities seems to be

increasing. 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. Research results by Bastian et al. (2002) 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, coal, and coal bed methane are prevalent in Johnson, Campbell, Sheridan, 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 1996-99. Because land prices were stronger and cattle prices had increased, many producers may have chosen not to liquidate some of their land assets. Moreover, the relatively attractive crop prices before 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.

Monetary Factors

Nominal interest rates have remained relatively low for several years. 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. 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

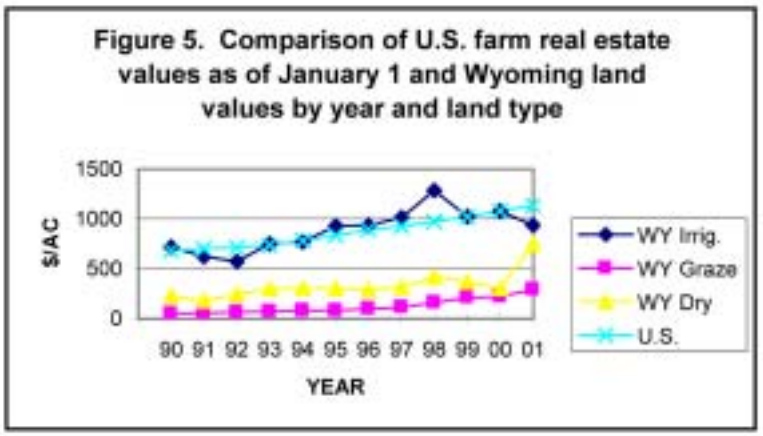
Wyoming

Market prices for major types of Wyoming agricultural land seemed to peak in the early 1980s and then generally declined 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 have seemed 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).[3]

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.

[3] Data for Figure 5 comes from Table 10 and USDA data (1997 & 2001).



farm real estate experienced a 6.5 percent increase in the per-acre value during the 1990s (USDA, 2001). The national average value increases for all agricultural real estate were 5.8 percent from January 1, 1999, to January 1, 2000, and 4.6 percent from 2000 to 2001. The per-acre value of farm real estate in the United States increased almost 22 percent from January 1, 1997, to January 1, 2001. The average nominal value of $1,130 per acre as of January 1, 2001, compares with $823 in 1982, just before the major decline in farm real estate values during the mid-1980s, representing an overall increase of 37 percent since 1982. U.S. cropland values, not including improvements, increased 3.4 percent during 2000 to a value of $1,540 per acre nationwide by January 1, 2001. Pasture values increased 4.4 percent during 2000 to a national average of $547 per acre by January 1, 2001.

Land Rental Rates

Irrigated Land

Typical fixed cash rental arrangements require a 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 below (Hewlett and Bastian, 1992; Hewlett et al., 1994):

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, a 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 is usually 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 (Wyoming Agricultural Statistics Service, 2001).

Year	AUM	Cow/Calf ($/mo)	Per Head ($/mo.)
1996	11.00	13.00	11.10
1997	12.00	14.00	12.20
1998	11.90	13.80	12.30
1999	11.70	13.50	12.00
2000	12.20	14.10	12.60

Summary

This report presents average market prices for agricultural lands sold in Wyoming during 1999, 2000, and 2001. Data were collected on 448 land sales that took place throughout the state. Sales reports for lands that explicitly stated that the lands were not going to remain in agricultural production were excluded from the analysis. It is important to recognize, however, that many nonagricultural amenities could have affected the prices of lands analyzed in this report. Farm Credit Services of America was the 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. Average market prices during 1999, 2000, and 2001 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

Table 10. Average market prices for Wyoming agricultural land and ranches, 1989-2001[a].

	Average Prices												
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Ranches ($/AU)													
Eastern Plains	1,759	1,796	1,890	2,058	2,173	2,293	2,819	3,224	3,423	2,819	4,809	5,861	7,911
Mountain Valley-Desert	1,255	1,627	1,255	1,408	1,681	1,861	1,598	2,714	2,516	1,598	3,007	2,756	3,340
Grazing land ($/Ac)													
Eastern Plains	n/a	56	65	70	79	93	111	131	128	111	268	255	445
Mountain Valley-Desert	n/a	45	51	55	58	64	51	65	95	51	147	186	138
Irrigated cropland ($/Ac)													
Region 3	n/a	865	686	536	639	794	982	883	973	982	1,017	1,071	853
Region 6	n/a	572	557	609	858	741	874	989	1,054	874	1,025	1,084	1,017
Dry cropland ($/Ac)													
Region 2	n/a	241	197	244	295	417	358	284	n/a	n/a	457	371	1,200
Region 3	n/a	214	159	243	300	199	250	n/a	199	421	277	240	300

[a] Data for Table 10 is based on estimated averages for the specified region and year given the data used in the analysis.

Region 5 - Lincoln, Sublette, and Uinta counties

Region 6 - Big Horn, Fremont, Hot Springs, Park, and Washakie counties

Prices for eastern plains ranches (Regions 1, 2, and 3) averaged $5,990 per AU. Ranch prices for mountain valley-desert areas (Regions 4, 5, and 6) averaged $3,002 per AU. The statewide average was $4,545 per AU. The prices per AU declined as the percentage of leased forage increased beyond 25 percent of total forage. The average values of assured leases and permits transferred when ranches sold during 1999-2001 were $62 per AUM for state lands, $47 per AUM for BLM, $76 per AUM for forest service leases, $45 per AUM for private leases, and $45 per AUM for railroad leases. The average value of improvements for ranches of 50 to 99 AUs was $65,172; 100 to 199 AUs, $67,437; 200 to 399 AUs, $72,860; 400 to 599 AUs, $127,429; and ranches 600 AUs and over, $273,542.

For grazing land, average prices were $654 per acre in the eastern plains and $331 per acre in mountain-valley desert areas. Statewide, the average price of grazing land was $547 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 were usually associated with lower prices. Prices for irrigated and subirrigated pasture averaged $841 per acre statewide. Region 1 had the highest average price for irrigated pasture with $1,454 per acre, while Region 6 had the lowest with $712 per acre. Statewide, irrigated meadow land averaged $1,631 per acre. Region 1 had the highest irrigated meadow land average price at $2,030 per acre, while Region 3 had the lowest at $1,160 per acre.

Important irrigated cropland areas in the state were Regions 3 and 6. Region 3 averaged $1,181 per acre for irrigated cropland. Region 6 averaged $1,241 per acre. Statewide, irrigated cropland averaged $1,389 per acre for 1999-2001 sales.

The majority of dry cropland was in Regions 1, 2, and 3. Region 1 averaged $945 per acre for dry cropland. Regions 2 and 3 averaged $465 and $753 per acre respectively. Statewide, prices for dry cropland averaged $520 per acre.

Overall, prices for ranches in 1999-2001 increased compared with 1996-1998. 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, 1/3 - 2/3; dry beans, 1/4 - 3/4; sugar beets, 1/5 - 4/5; and hay, 1/2 - 1/2.

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 $13.00 to $14.10 per month between 1996 and 2000 in Wyoming. Rates on a per-AUM basis ranged between $11.00 and $12.20 for the same time period.

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