

## CHAPTER FIVE AGRICULTURAL LAND USES

### 5.1 EXISTING AGRICULTURAL LAND USE

Agricultural land in the State of Wyoming refers to lands where, at least, \$1,000 of income have been derived from some type of agricultural production in a given tax year (U.S. Department of Agriculture, National Agricultural Statistics Service, 2001).

As stated in Chapter Three, the U.S. Department of Agriculture, National Agricultural Statistics Service, reported that 2,132,000 acres of private land in Johnson County were in use for agricultural purposes in 1997 (U.S. Department of Agriculture, National Agricultural Statistics Service, 1999). However, these findings are inconsistent with Johnson County property tax assessment records for FY 1997.

Johnson County Assessor records indicate that 1,567,787 acres of privately owned land in Johnson County were used for agricultural purposes in FY 1997 (Table 5-1). Approximately 96 percent of these lands were determined to be agricultural rangelands. About 3.6 percent were irrigated croplands; the remaining lands were determined to be non-irrigated, dry croplands (Johnson County Assessor's Office, 2002).

Available property tax assessment records indicate that the total amount of land in agricultural production has increased slightly during the FY 1997-FY 2002 period (Table 5-1). However, the proportional distribution of agricultural lands used for rangeland, cropland, and dry crop production purposes has remained about the same during the same period.

<b>TABLE 5-1 AGRICULTURAL LANDS IN JOHNSON COUNTY FY 1997-FY 2002</b>							
<b>Fiscal Year</b>	<b>Agricultural Range Lands (acres)</b>	<b>Proportion of Total Ag Land (percent)</b>	<b>Irrigated Croplands (acres)</b>	<b>Proportion of Total Ag Land (percent)</b>	<b>Non-Irrigated, Dry Croplands (acres)</b>	<b>Proportion of Total Ag Land (percent)</b>	<b>Total Agricultural Lands (acres)</b>
1997	1,508,976	96.2	56,382	3.6	2,429	0.2	1,567,787
1998	1,523,452	96.2	57,713	3.6	2,431	0.2	1,583,596
1999	1,523,369	96.2	57,728	3.6	2,391	0.2	1,583,488
2000	1,521,976	96.2	57,627	3.6	2,406	0.2	1,582,009
2001	1,521,215	96.2	57,657	3.6	2,406	0.2	1,581,278
2002	1,515,588	96.2	57,251	3.6	2,406	0.2	1,575,245

Source: Johnson County Assessor's Office, 2002

Agricultural lands in Johnson County are primarily used for cattle and sheep production. Alfalfa and hay production are made primarily upon irrigated lands to support livestock production. The trends associated with livestock and crop production are discussed more fully in Chapter Three.

## **5.2 AGRICULTURAL LAND USE ISSUES**

The sustained use of agricultural lands in Johnson County for livestock and crop production suggests the presence of a stable agricultural industry. The stability of agricultural land use is remarkable when considered in the context of a significant drought period between 1998 and 2002 and the concurrent need to reduce livestock production levels (see Chapter Three). These trends indicate a high level of commitment by local ranchers to continue their contribution to agricultural production, and sustain their preferred rural lifestyle.

About 68 percent of the ranch managers in Johnson County consider ranching their primary occupation. This compares with a statewide average of about 40 percent (U.S. Department of Agriculture, National Agricultural Statistics Service, 1999). This also demonstrates the commitment of local ranchers to agriculture, and their economic dependence upon profitable agricultural production.

The continued economic viability of ranch operations in Johnson County is also influenced by federal and state resource management policies. Expanded attempts continue to be made by various federal and state agencies to improve and conserve aquatic and wildlife habitat, surface water quality, and other resources. While it is important to have objectives aimed at protecting these resources, it should be noted that much of Johnson County's aquatic and wildlife habitat, surface water quality, and other resources exist due to the open space, water, and other resources provided by agricultural operations. If efforts by the state and federal government become intrusive to the point that they threaten the viability of agricultural operations, it may become more lucrative for ranchers to convert to another land use. This would likely result in an even greater threat to aquatic and wildlife habitat, surface water quality, and other resources.

Recent market trends associated with agricultural sales, changes in the size and number of agricultural operations, and other related trends bear watching. As with any commodity-based business, agriculture is regularly confronted with physical and economic variables that can significantly influence future agricultural land use.

Because of split-estates issues when agricultural landowners do not own mineral development rights on their property, extraction of minerals on such property can disrupt agricultural operations. It is essential that mineral interests coordinate access, exploration, and production activities with local agricultural landowners.

### **5.2.1 Recent Market Trends**

Available records of agricultural land sales indicate that about 1,066 acres of land were sold during the CY 1999-CY 2001 period. The average cost of agricultural land sold was roughly \$771 per acre (Buffalo Board of Realtors, MLS, 2002).

The agricultural property sales that occurred during the 1999-2001 period may, in part, be indicative of the changing trends associated with the size of agricultural operations that were also evident between 1992 and 1997.

Data obtained from the U.S. Department of Agriculture's 1997 Census of Agriculture revealed a significant increase in agricultural enterprises that were less than 179 acres, as well as substantive increase in agricultural operations over 2,000 acres in size.

## **5.2.2 Diversification of Ranch Operations**

Because the rural lifestyle associated with agriculture is rewarding in many ways, ranch families frequently become highly creative in their efforts to supplement income derived from livestock and hay crop sales. Some ranch operations in Johnson County have chosen to establish guest ranch operations, recreational outfitter services, guest cabins, or other onsite recreational opportunities.

These activities have enabled ranch owners to diversify the scope of their operations and source of revenues to obtain a more favorable return-on-investment. At the same time, family-owned ranches are better able to sustain the productive rural lifestyle that the owners prefer and enjoy. Both of these motivations should prompt Johnson County to not discourage the future diversification of ranch operations.

## **5.2.3 Conversion of Agricultural Lands to Rural Residential Use**

### ***5.2.3.1 Division of Land to Support Financial Needs of Agricultural Operators***

As the economic value of agricultural lands increases, some ranchers in Johnson County may consider selling a portion, or all, of their agricultural lands in order to:

- sustain the financial viability of ranch operations;
- repay personal or corporate debt;
- avoid tax burdens to future heirs of ranch property; and/or
- generate capital to support retirement.

The greatest return-on-investment, which would be gained from the sale of most agricultural properties, would be derived from sales to individuals who desire to establish a rural residence in the unincorporated area of Johnson County. The amount of acreage desired by buyers is dependent upon the intended land use and desired lifestyle of the buyer. Current Wyoming subdivision laws and county subdivision regulations enable landowners to make the division of land a relatively simple process, particularly land divisions that are 35 acres in size or greater.

Other landowners may sell larger tracts of agricultural lands to developers of rural residential property. In order to achieve a reasonable return-on-investment, the developer generally seeks to develop smaller land parcels that are attractive to the rural residential market. Most developers of residential subdivisions seek to limit their investments for onsite utilities and roads to reduce risk and maximize the return-on-investment.

The division of larger agricultural land tracts to create smaller agricultural parcels and/or the development of rural residential subdivisions ultimately disperses the resident population over a larger area within Johnson County. Local real estate brokers indicate that a growing number of buyers are seeking smaller land parcels for rural living purposes.

Rural residential land and lot sales information indicates that almost half of rural land buyers purchased smaller land parcels within a five-mile radius of Buffalo during the 1999-2001 period (Table 5-2). The other 54 percent purchased smaller rural residential land further away from Buffalo (Buffalo Board of Realtors, MLS, 2002). If the availability of smaller rural land parcels diminishes, buyers can be expected to seek properties at a greater distance from Buffalo.

**TABLE 5-2  
RURAL RESIDENTIAL LAND AND LOT SALES  
UNINCORPORATED AREA OF JOHNSON COUNTY  
CY 1999-CY 2001**

Location	Distance from Buffalo (miles)	1999		2000		2001	
		Number of Lots	Average Sales Price (\$)	Number of Lots	Average Sales Price (\$)	Number of Lots	Average Sales Price (\$)
<b>Rural Subdivisions</b>							
Buena Vista	3.5 to 5	1	\$ 22,000				
Cloud Peak Ranchettes	3.5 to 5	2	\$ 38,400				
Diamond Cross Ranch	3.5 to 5			3	\$ 44,667	1	\$ 67,000
Elk Ridge	3.5 to 5			2	\$ 64,300	8	\$ 70,650
Johnson Creek Ranchettes	3.5 to 5	1	\$ 36,000	1	\$ 33,500		
Robbers Roost	3.5 to 5	1		1	\$ 50,000		
Little Piney Estates	10 to 20	4	\$ 13,750	1	\$ 29,500		
Mountain Ridge Estates	1.5			1	\$ 25,000		
Richardson Park	1.5					1	\$ 14,000
<b>Total Number of Properties</b>		<b>9</b>		<b>9</b>		<b>10</b>	
<b>Average Price</b>			<b>\$ <sup>1</sup>22,980</b>		<b>\$ <sup>1</sup>45,511</b>		<b>\$ <sup>1</sup>64,620</b>
<b>Other Unincorporated Areas</b>							
	1.5						
	2 to 3						
	3.5 to 5					2	\$ 60,250
	5 to 10	1	\$ 43,000			3	\$115,667
	10 to 20			1	\$ 68,787	3	\$ 68,667
	20 to 50	4	\$ 54,850	3	\$ 64,167		
	50 plus	2	\$ 73,200				
	Undetermined					3	\$ 42,833
<b>Total Number of Properties</b>		<b>7</b>		<b>4</b>		<b>11</b>	
<b>Average Price</b>			<b>\$ <sup>1</sup>44,654</b>		<b>\$ <sup>1</sup>65,322</b>		<b>\$ <sup>1</sup>61,955</b>

Note: Residential land and lot sales are vacant lands that are being sold primarily for rural residential use.  
<sup>1</sup>Average prices are based upon actual sales prices divided by the total number of properties sold, not the average price calculated for each rural subdivision.

Source: Buffalo Board of Realtors, Multiple Listing Service, 2002; Pedersen Planning Consultants, 2002.

### **5.2.3.2 Implications of a More Dispersed Rural Population**

Utilizing rural property for residential purposes is an attractive lifestyle that, historically, has attracted many people to Wyoming. For example, early settlers of Johnson County were attracted to the opportunity to establish homesteads and agricultural operations. However, the experience of early settlers was dramatically different. One of the more significant differences that contrasts sharply with today's rural residential living is the expectation for public services. The availability of county services for road maintenance, law enforcement, and emergency services are examples of public services that residents in the unincorporated area of Johnson County have come to expect in return for payment of property taxes.

In a recent study of The Cost of County Rural Residential Development, the University of Wyoming, Department of Agricultural and Applied Economics, concluded that the replacement of agricultural land with rural residential uses costs Wyoming counties and school districts more than they receive in tax revenue. On the average, rural residential development in Wyoming requires \$1.16 in county government services for every dollar of tax revenue contribution (Coupal, Taylor, and McLeod, 2001). In Johnson County, rural residential development requires \$1.54 for every dollar of tax revenue contribution.

The lesson learned from the Department of Agricultural and Applied Economics study, as well as similar studies by the American Farmland Trust, is that rural residential development costs county governments more to serve. This higher cost warrants the concentration of future residential development within and around the existing communities of Buffalo and Kaycee. However, it is important that residents not be denied opportunities to pursue rural living in appropriate areas.

### **5.2.4 The Impact of Federal Resource Management Policies Upon Livestock Grazing**

#### **5.2.4.1 Potential Reductions in Animal Units Months on Federal Grazing Allotments**

One of the primary public land concerns of Johnson County is the continued availability of public lands for livestock grazing. Many ranching operations in Johnson County are dependent upon grazing allotments from the U.S. Forest Service (USFS) and the U.S. Bureau of Land Management (BLM). Available data indicates that there are over 1.8 million acres of federal allotments in Johnson County. Any significant decline in the number of animal unit months may adversely impact the economic viability of many livestock operations in Johnson County. Proposed amendments to BLM's 1995 Grazing Regulations may facilitate cooperative efforts to meet BLM conservation objectives. It is vital that federal agencies consider operational requirements needed to sustain profitable livestock operations in its application of livestock grazing requirements.

Forage management policies adopted by the Forest Service in recent years and the implementation of more stringent regulations have had a discouraging affect on permittees' use of the forest allotments resulting in reduced utilization of the forest forage resources. The additional AUM's of grazing that the forest provides is an important economic asset to the livestock industry and the local community.

Therefore, Johnson County encourages the USFS and BLM to keep all available grazing allotments in use and adjust management practices to facilitate the re-issue of vacant allotments.

#### **5.2.4.2 Introduction of Threatened or Endangered Species**

The Endangered Species Act often has a profound impact on land management and agricultural operations. While the listing of any species as endangered may have an adverse effect upon agriculture, the species of primary concern in Johnson County include wolves, grizzly bears, eagles, wolverines, and the Canadian lynx due to their predatory nature. The designation of the sage grouse and the black-tailed prairie dog, as well as other species, could also negatively impact land management and agricultural operations. Due to the livestock dependent nature of agriculture in Johnson County, the introduction of predators, or the expansion of current predator populations, would have adverse economic impacts on the industry and should be opposed.

*"The Forest Service and Bureau of Land Management are proposing to amend land management plans for 18 national forests (including the Bighorn National Forest) and four BLM units in the northern Rocky Mountains to include measures to conserve Canada lynx"* (U.S. Forest Service, Bighorn National Forest, 2002).

The primary concern of Johnson County is for potential establishment of new measures to conserve the Canada lynx. Should this Canada lynx be conserved throughout the Bighorn National Forest and public rangelands in Johnson County, it is possible that this mammal will gradually establish habitat and roam in portions of Johnson County. Some community leaders and residents are concerned that the lynx may become a predator to commercial livestock in portions of Johnson County if the abundance of hares and mice are inadequate to support the diet preferences of the lynx.

However, the greater impact would be the constraints that introduction or management for the Canadian lynx would place on land management and agricultural operations. It should be noted that the Wyoming Game and Fish Department has stated that the Big Horn Mountains provides only marginal habitat for the lynx and the potential for a significant population of the lynx does not exist (Fink, 2003).

Species that harm agricultural operations are not limited to predators. Restrictions placed on lands because of most endangered species may also affect the economic viability of agricultural operations. For example, prairie dogs can pose a major threat to agriculture.

#### **5.2.5 Impact of Rural Subdivisions Upon Commercial Agricultural Operations**

##### **5.2.5.1 Incompatibility of Rural Subdivisions with Agriculture**

When other adjacent land uses are incompatible with agricultural land uses, such incompatibilities can create problems for agriculture. Rural subdivisions are one example of a land use that can be incompatible with agricultural uses.

Factors that accompany residential uses such as pets, recreational vehicles, and the mere presence of people, can disturb agricultural operations. Pets and vehicles can disturb or cause injuries to livestock.

##### **5.2.5.2 Wyoming Right to Farm and Ranch Act**

Residential occupants close to agricultural operations are often bothered by noises, smells and other products of agriculture. In accordance with the Wyoming Right to Farm and Ranch Act (Wyoming Title 11, Chapter 44), a farm or ranch operation shall not be found to be a public or private nuisance by reason of the operation if the farm or ranch operation:

1. Conforms to generally accepted agricultural management practices; and
2. Existed before a change in the land use adjacent to the farm or ranch land and the farm or ranch operation would not have been a nuisance before the change in land use or occupancy occurred.

To avoid these issues, rural subdivisions should not be encouraged in many agricultural areas.

#### **5.2.5.3 Fragmentation of Agricultural Land**

Rural subdivisions may fragment tracts of agricultural land. Small parcels of agriculture land, resulting after residential subdivisions, are often taken out of agricultural production. Large tracts of agricultural land are more useful for livestock grazing and crop production. When rural subdivisions occur on agricultural land, they should be situated in such a manner as to minimize the fragmentation of the agricultural land. More specifically, whenever rural subdivision of agricultural land occurs, the amount of land used for residential purposes should be minimized and the amount of land retained for agriculture should be maximized.

The use of conservations tools should be explored as alternatives to *traditional* rural residential subdivision of agricultural land in order to keep agricultural land in production while providing incentives to agricultural landowners. These tools include, but may not be limited to, cluster development, transfer of development rights, purchase of development rights and conservation easements. Where such tools are not supported by Wyoming statutes, Johnson County should encourage the Wyoming legislature to adopt such statutory provisions.

#### **5.2.5.4 Ground Water Issues**

The Wyoming State Engineer's Office imposes a limitation on the rate of groundwater use at the time a groundwater well permit is issued. However, the volumes of groundwater use are rarely monitored unless complaints are received from nearby landowners. Consequently, rural subdivisions may, in some situations, adversely impact the availability of ground water that supports local agricultural production.

There is no measure of the long-term effects on groundwater supplies due to an increasing number of private wells drawing water from aquifers. Residential users with private wells can draw as much water as the well will support, causing an inefficient use of water. On the other hand, residential units connected to public water systems have a metered water supply. A continued supply of adequate ground water is crucial to sustaining agricultural production.

#### **5.2.5.5 Stock Trails**

All Johnson County roads are considered to be stock trails. Local ranchers periodically use roads for moving livestock from one location to another. As rural subdivisions are developed along county roads, fences are often damaged or not maintained, which hamper the movement of livestock. County subdivision regulations should be modified to require owners of new residential properties to maintain existing fences along county roads. In many cases, new subdivision lots should also be fenced to keep livestock from entering the subdivision from the county road/stock trail. For county roads that are used as stock trails, accesses to subdivisions from those roads should be equipped with cattle guards or gates. These issues should be addressed during the subdivision review process.

### **5.2.6 Conservation of Lands for Agricultural Production**

Sustained agricultural production in Johnson County is one of the most effective methods of long-term land and resource conservation. For this reason, it is important that lands for agricultural production be preserved.

The Johnson County Land Use Plan presents an opportunity for Johnson County to recommend and designate lands within Johnson County that are most suitable for agricultural production. These lands include but are not limited to:

- land where cropland production already takes place,
- land where agricultural grazing already takes place,
- irrigated lands, and
- lands with good soil qualities.

Data that identifies precipitation levels and croplands can provide a basis for the determination of areas most suitable for current and future agricultural production. Tax assessment records and delineations of cropland resource areas also provide important information about existing rangeland and cropland resources to help determine agricultural suitability. Rangeland and cropland resource areas currently used by the Johnson County Assessor's Office were adopted by the State of Wyoming in 1998. The delineation of these resource areas were based upon the insights and experience of a former U. S. Soil Conservation Service soil scientist, Jim Stevens, who was well acquainted with soil resource and agricultural activities in Johnson County (Elsom, 2002).

Irrespective of factors that indicate where lands most suitable for agriculture exist, it should be noted that most land in Johnson County is suitable for some form of agriculture.

As mentioned earlier, the use of conservation tools should be explored as alternatives to *traditional* rural residential subdivision of agricultural land in order to keep agricultural land in production while providing incentives to agricultural landowners. These tools include, but may not be limited to, cluster development, transfer of development rights, purchase of development rights, and conservation easements.

### **5.3 FUTURE DEMAND FOR AGRICULTURAL LAND**

Recent agricultural land sales suggest that there is a general stability in agricultural land uses and the ownership of agricultural properties. Future demand for agricultural land in Johnson County can be expected from persons seeking a rural lifestyle in either part-time or full-time agricultural activities. Some existing agricultural operations may choose to expand by acquiring additional lands. Agricultural property sizes will vary, depending on the financial resources of the buyers, lifestyles and preferences of buyers, and intended uses for the property.

Developers must balance land investment and site development costs with market demands to achieve a reasonable return on investment. Developers are often attracted to better agricultural land because its topography makes it more economical to develop. This type of development, however, often escalates the cost of public services when the development is situated a considerable distance from where public services are based. It can also result in the reduction of agricultural land and the decline of the quality of life in Johnson County that agriculture provides.

#### 5.4 AREAS FOR FUTURE AGRICULTURAL EXPANSION

Start-up costs associated with the establishment of a new ranch operation can discourage the development of larger tracts of rural lands for new commercial agricultural production. Consequently, expansion of agricultural land uses will likely involve the expansion of existing ranches and farms.

Other agricultural expansion may occur on rural properties where small farm or ranch operations will be established. Some of these smaller parcels may include property sold by larger ranchers and landowners. Johnson County should encourage both small-scale and large-scale agricultural production. Small-scale agricultural operations often provide a nominal return in investment, and can also provide meat and produce for local residents.

