

STATUS OF UTAH RANGELANDS

LIVESTOCK GRAZING IN UTAH

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LIVESTOCK NUMBERS

The number of beef cows in Utah has nearly doubled since 1920, while the number of ewes rose to a peak in 1930 and declined by 89 percent since then (Figure 8.1.1). One way to better understand the implications of increases or decreases in different species of animals in relation to forage demand is to convert the total number of animals to animal units (AUs). This conversion is based on the assumption that one AU is equivalent to a 1,000 pound animal, which translates to one cow or five ewes. Although cow numbers have increased markedly since 1920, the total number of animal units (AU) of beef cows and ewes has declined by approximately 26 percent as a result of the dramatic decline in sheep numbers (Figure 8.1.2). Given the fact that beef cows have become progressively larger in body size since 1920, this decline may be more related to an increase in average cow size over the period than to an actual decrease in capacity.

The increase in beef cow numbers in Utah has occurred in almost all Utah counties with Box Elder County having the highest numbers. However, Kane, Grand, and San Juan counties are exceptions in that beef cow numbers in these counties are declining. Kane, San Juan, and Grand counties have relatively small amounts of private land, which may not support increasing cattle numbers. It is apparent that some ranchers in counties, such as Utah, Sanpete, Summit, Carbon, Uintah, and Iron, as well as Box Elder (traditionally centers for sheep production), switched to or reallocated their resources to include cattle production (Figures 8.1.3 and 8.1.4).

The decline in the sheep industry in Utah, which has been dramatic in Iron, Sanpete, and Utah counties, reflects the decline in demand for wool, consumer preference for lamb, more restrictive predator control policies, and difficulties in obtaining labor. In addition, most sheep are no longer trailed to and from seasonal ranges and the cost of trucking has likely played a role in the decline of the sheep industry by increasing production costs. The steady decline in sheep numbers has also resulted in many federal grazing permits being transferred from sheep to cattle. Although actual numbers of sheep and lamb losses to predators have declined from about 53,000 animals in 1987 to 29,300 in 2007, the apparent decline in predation losses is confounded by the declining number of sheep. The per-

centage of losses has remained 10 to 12 percent over the past 20 years. Approximately 80 percent of the annual loss is from loss of lambs, the primary sale product, with the remainder of the loss occurring in breeding herds. The decline in the sheep industry and other factors, such as fire control policies of the past 100 years, are thought by some to have contributed to the gradual increase in woody plant domination on Utah rangelands.

LIVESTOCK GRAZING ON FEDERAL AND STATE TRUST LAND

The Bureau of Land Management (BLM) and the United States Forest Service (USFS) manage most of the federal land in Utah. BLM-administered lands are lands that were in the public domain that had not been included in the national forest system nor taken into private ownership under the homestead acts. The Federal Land Management and Policy Act of 1976 repealed the homestead acts and other settlement acts, closing land administered by BLM to homesteading (Muhn and Stuart, 1988). With this background, it is understandable that most land administered by BLM is often rugged, of relatively low productivity, generally dominated by shrubs or desert vegetation, located in areas of low precipitation, unsuited to farming, and of limited value in terms of timber resources. In Utah, it is generally seasonal range used in fall, winter, or spring. Conversely, national forests are generally found at higher elevations with higher precipitation, the landscape is dominated by forest vegetation, and the land is relatively productive. Forest Service grazing allotments are generally used as seasonal range for livestock grazing in the summer.

The Utah School and Institutional Trust Lands Administration (SITLA) administers approximately 3.5 million acres of Trust Lands (sections 2, 16, 32, and 36), which, for the most part, are dispersed through land administered by BLM for the benefit of schools and other institutions that are trust beneficiaries. Trust land and some private lands within BLM land, called in-holdings, are often managed along with BLM lands under exchange of use agreements. When the scattered trust land sections have been blocked together as a result of land exchanges with the federal land management agencies, SITLA assumes the management. There are few, if any, scattered trust land parcels within national forest or lands taken into private ownership through homesteading or sales. Little livestock grazing occurs on lands administered by other state and federal agencies such as the Utah Division of Wildlife Re-

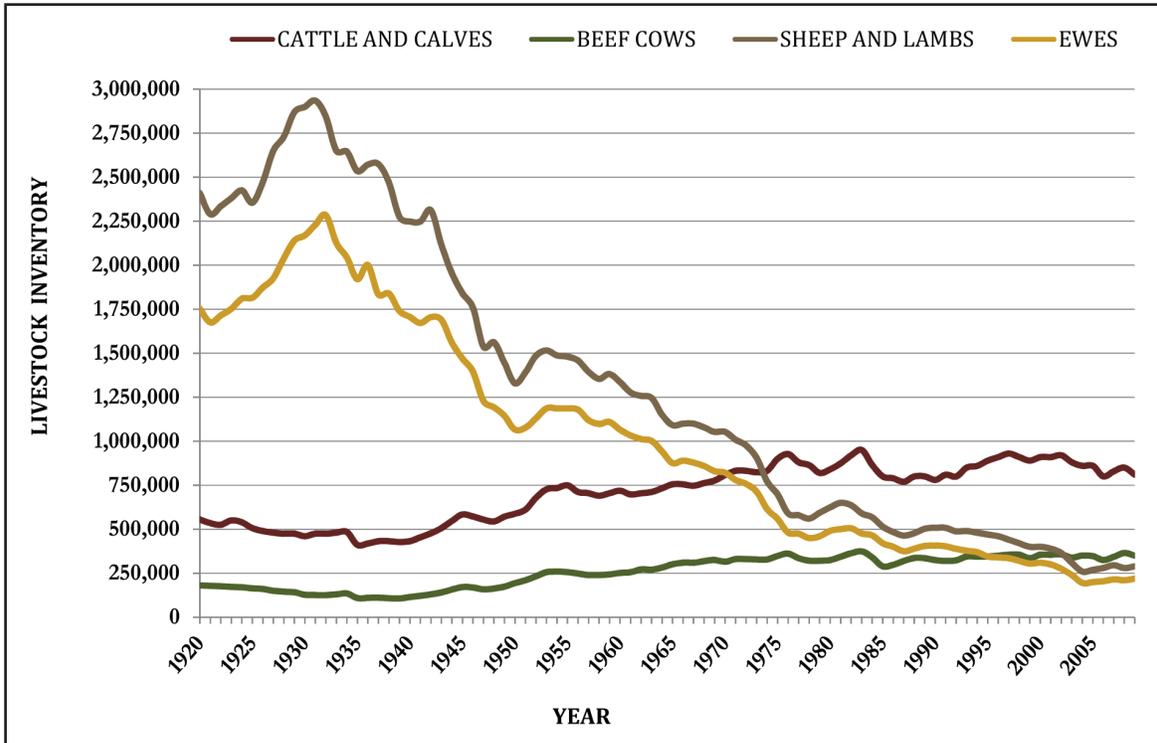


Figure 8.1.1. Livestock inventory in Utah from 1920 to 2009.
Source: National Agricultural Statistics Service (NASS).

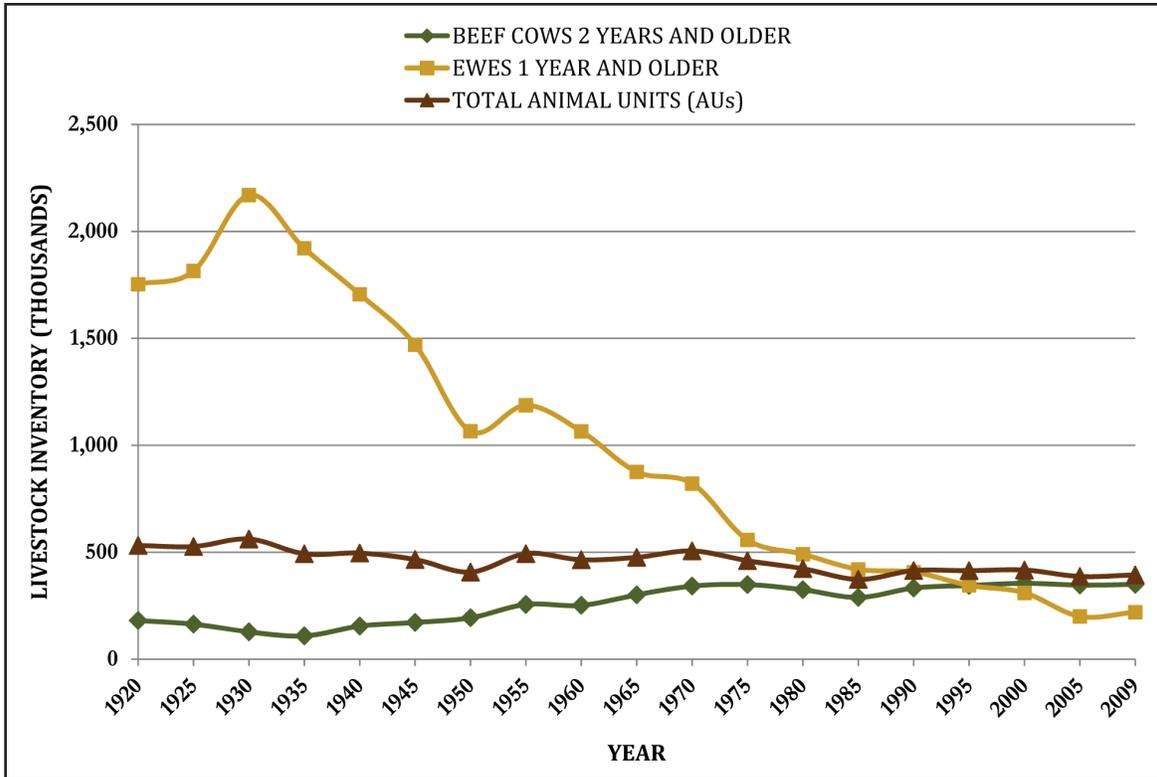


Figure 8.1.2. Trend in beef cows, ewes, and total animal units in Utah from 1920 to 2009.
Source: National Agricultural Statistics Service (NASS).



Figure 8.1.3. Cattle and calves inventory in 2007 by county.

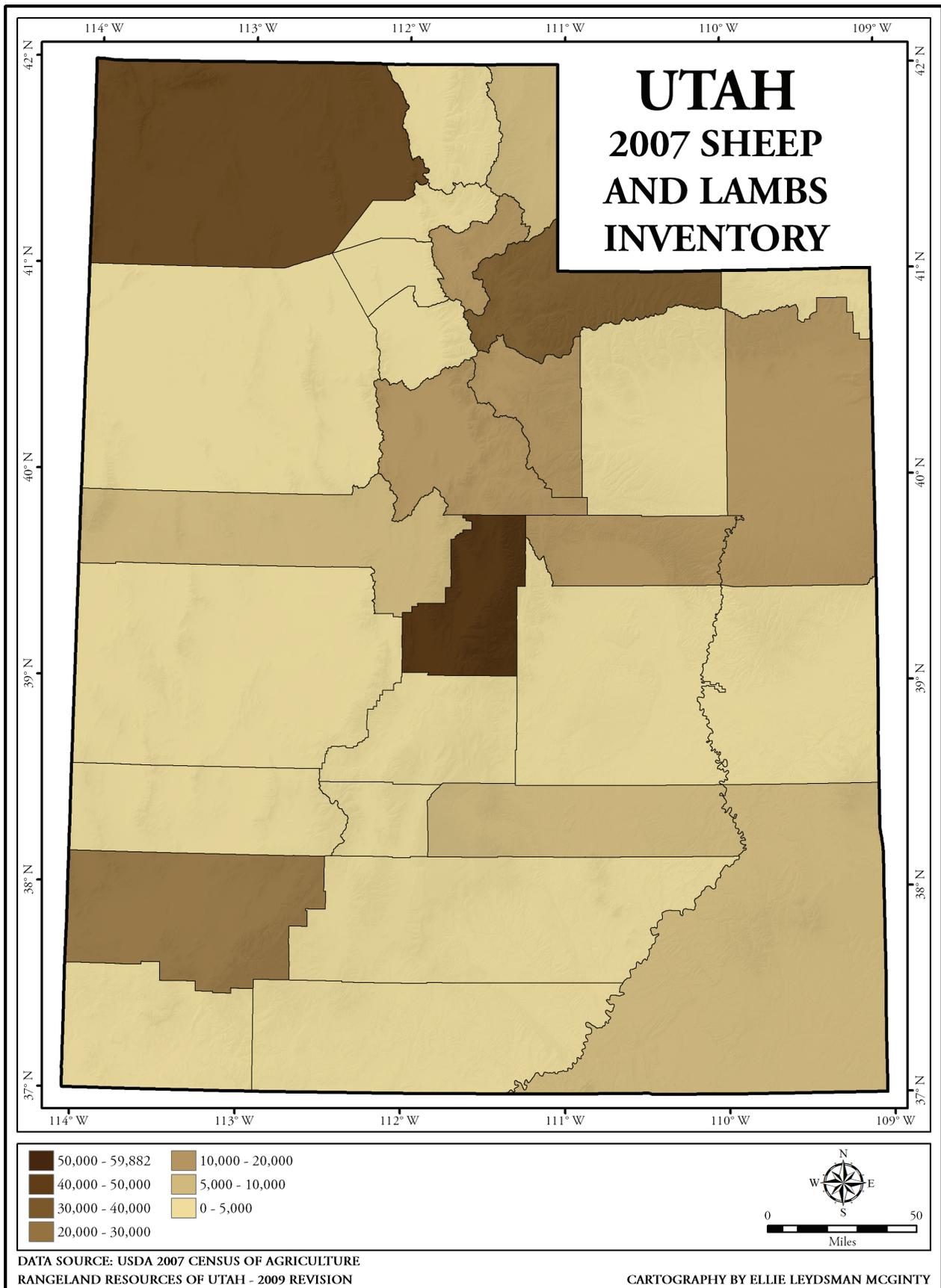


Figure 8.1.4. Sheep and lambs inventory in 2007 by county.

sources, the Utah Division of Parks and Recreation, the Department of Defense, and the National Park Service.

The land management agencies set stocking rates on grazing allotments (Figure 8.1.5) and administer grazing permits held by livestock producers. The permit is divided into two categories: 1) active preference, which may be licensed for grazing use, and 2) suspended preference, which is unavailable for use. Each year, grazing use must be licensed by the BLM. The amount of livestock grazing that actually takes place on BLM-administered rangelands and the amount that is paid is called licensed use. It is determined annually by the land manager based on environmental conditions and other circumstances. The licensed use is restricted to amounts of use equal to or less than the active preference. In order for animal unit months (AUMs) in suspended preference to be used, they must be formally reinstated into the active preference category by the agency manager.

Livestock grazing use on BLM-administered land has declined from 2,749,000 AUMs in 1940 to less than 1,000,000 AUMs currently, a decline of 63 percent (Figure 8.1.6). Much of that decrease came as licensed use decreased in the 1940s, 1950s, and 1960s, with permit reductions associated with adjudication programs to bring livestock stocking rates in line with carrying capacity of allotments.

Grazing permits on BLM-administered rangeland were reduced rather dramatically over several decades after the Taylor Grazing Act of 1934 was passed. Permit reductions in Utah began to level out in the 1960s and 1970s at about 1,250,000 AUMs, which included a substantial amount of grazing preference (AUMs) held in suspended use and unavailable for licensing (Figure 8.1.7). This was in response to excessive grazing use of the public domain prior to and immediately after passage of the Taylor Grazing Act and establishment of the Grazing Service, predecessor to the BLM. Suspended use represents a formal reduction in permit (AUMs) that remains with the permit under the assumption that when and if forage production increases, some or all of the suspended AUMs could be reinstated to active preference. Licensed use and suspended use, when summed, may equal active preference. However, they often do not if drought or other conditions do not support full use of active preference. For example, licensed use was curtailed on BLM-administered land in Utah during the drought years of 2003 to 2005.

Grazing permit reductions continue on BLM land. Active preference has decreased by about 6 percent over the past 12 years. This has occurred for a variety of reasons, including interpretation of BLM policy guidelines; closing of allotments or portions of allotments for wildlife benefit, recreation conflict, watershed health, erosive soils, riparian enhancement, cultural resource conflict; and special area designations, such as Areas of Critical Environmental Concern, specific recreation areas, and area restrictions associated with population goals for some wildlife.

Livestock grazing fees are one of several sources of revenue from BLM-administered lands in Utah and are relatively stable in nominal terms. Recreation, oil, and gas extraction, and minerals lease-related sources are increasing, with recreation receipts increasing over 250 percent since 1997. BLM receipts allocated to state and local governments in Utah have doubled in nominal terms from approximately \$10,000,000 in the mid-1990s to approximately \$20,000,000 in 2005. These payments and other revenue sharing represent only about 33 percent of the tax liability the federal government would have if it paid taxes at the rate state and local governments collect for such services as law enforcement, education, road construction and maintenance, fire protection, and others (Schuster et al., 1999).

Livestock grazing on national forests was curtailed much earlier than on the public domain, depending on when various forests were formally established. Forest reserves were established and restrictions on livestock grazing were implemented early on as a result of public outcry in the 1890s about serious erosion problems and flooding of communities along the mountains.

National forests in Utah provide a disproportionate amount of livestock grazing compared to BLM-administered land, almost an equal number of AUMs on 35 percent of the land area. This reflects the differences in land productivity between land administered by the Forest Service and land administered by the BLM. The Forest Service reports authorized livestock grazing which reflects variable amounts of licensed grazing over the last 20 years (Figure 8.1.8). It also reflects decreased livestock grazing in response to drought conditions that existed in Utah from 2002 to 2005.

The Forest Service, like the BLM, also returns receipts to Utah in support of state and local government efforts to provide services such as public safety, road construction

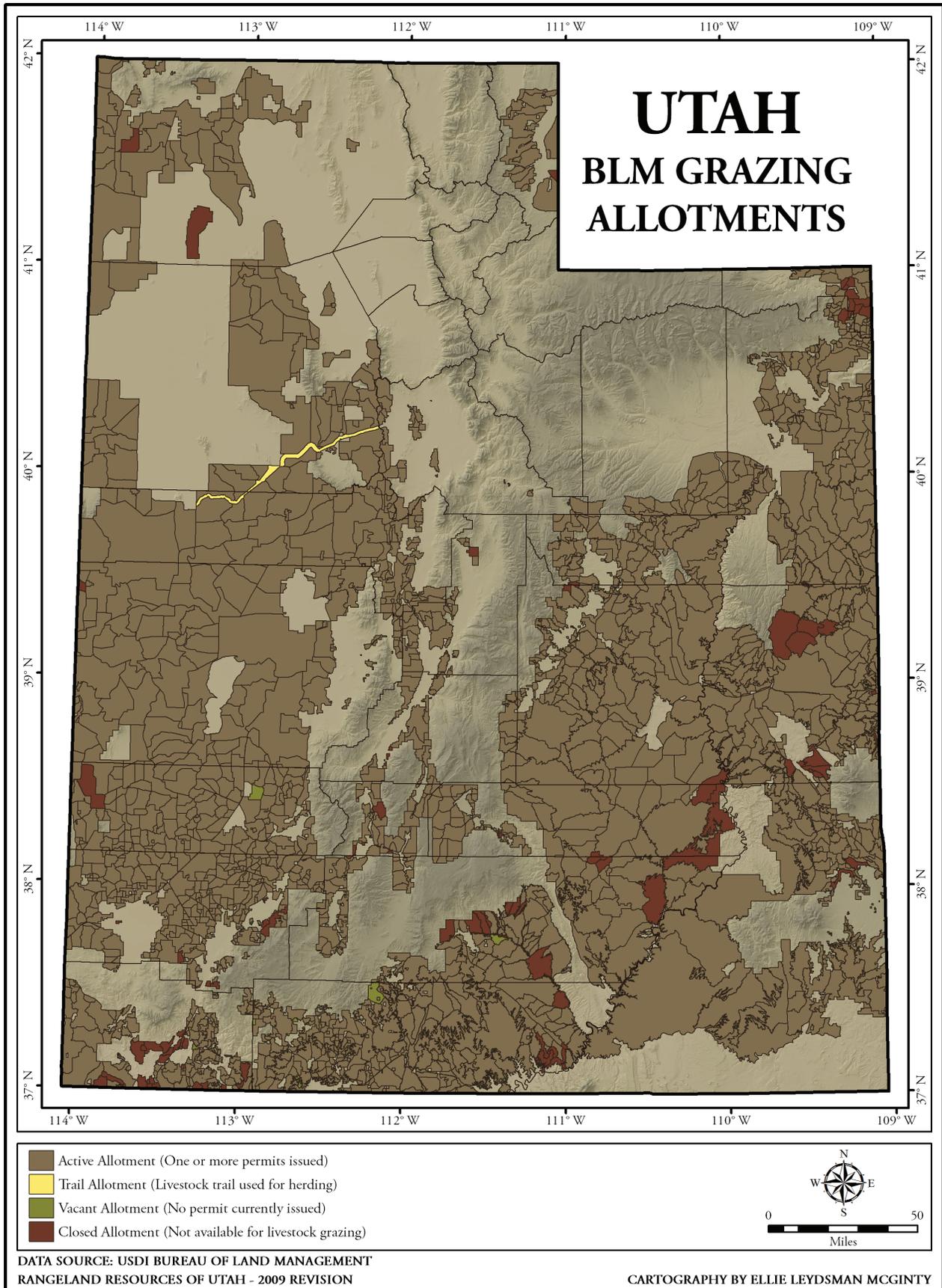


Figure 8.1.5. Bureau of Land Management grazing allotments.

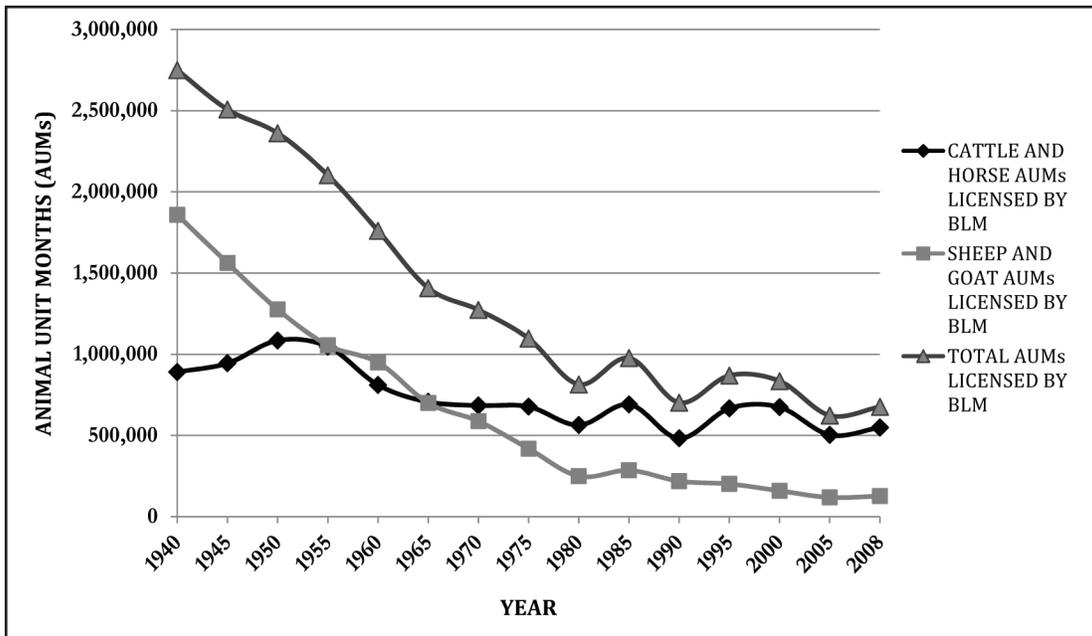


Figure 8.1.6. Trend in AUMs of livestock grazing licensed by the BLM in the state of Utah (1940-2008). Sources: BLM Rangeland Administration (1990-2008), Public Land Statistics (1996-2008), BLM Facts and Figures for Utah (1981-1994). Reference Table 1 in Appendix C.

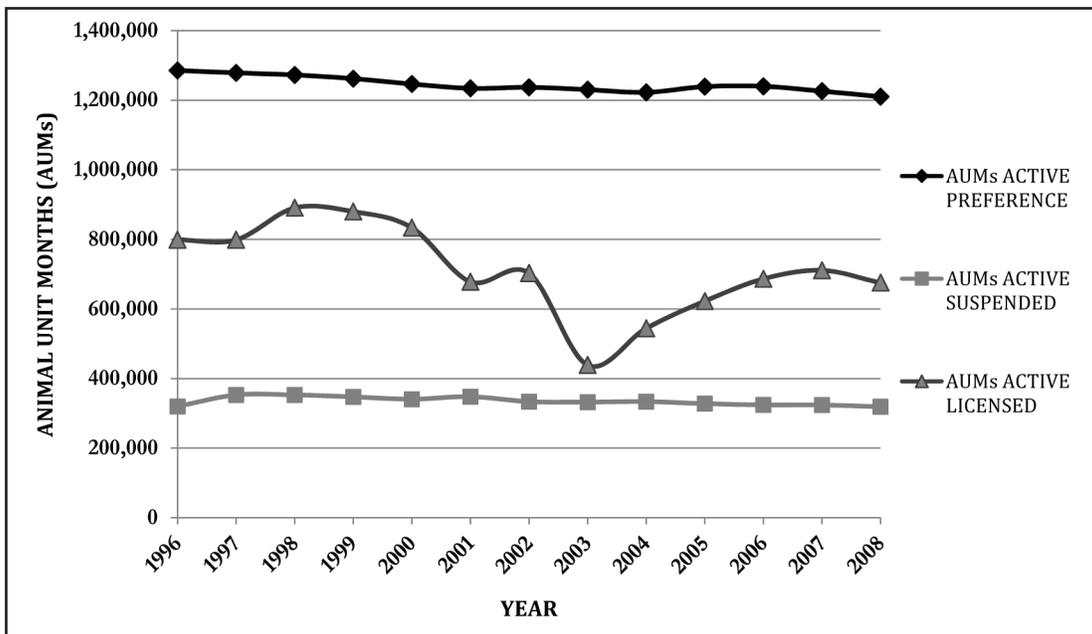


Figure 8.1.7. Trend in AUMs of livestock grazing permitted by the BLM in the state of Utah (1996-2008). Sources: BLM Rangeland Administration (1990-2008), Public Land Statistics (1996-2008). Reference Table 2 in Appendix C.

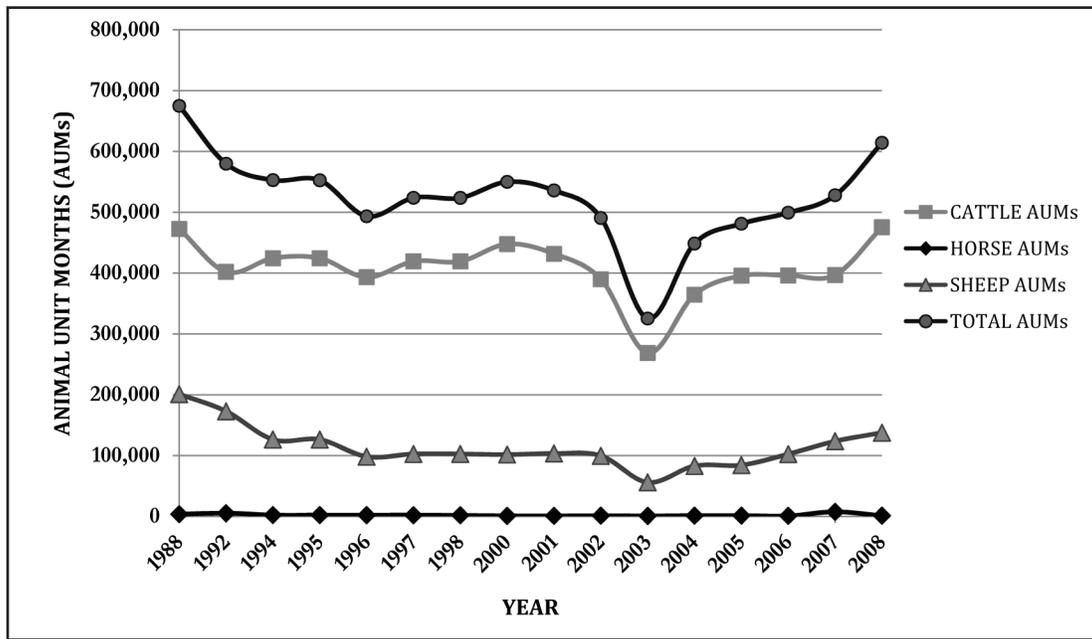


Figure 8.1.8. Trend in AUMs of livestock grazing authorized by the USFS in the state of Utah (1988-2008). Note: AUMs estimated from reported HMs by species (Cattle=1.25 AU; Sheep=0.20 AU; Horses=1.25 AU). Sources: Report of the Forest Service (1988-2008), Grazing Statistical Summary Reports (2000-2008). Reference Table 3 in Appendix C.

and maintenance, education, health services, law enforcement, and more.

LIVESTOCK FEED PRODUCTION

Acreage devoted to production of grains and forages for livestock has increased from 737,000 acres to over 853,000 acres in Utah since 1940. Changes in irrigation technology have likely contributed to making this 16 percent increase in acreage possible. Total harvested cropland reported in the 2002 Census of Agriculture was 961,037 acres. Increasing cost of equipment, energy, or other factors, such as commodity prices, land productivity, or lack of irrigation water may have rendered some of the more marginal cropland uneconomical. The amount of productive cropland in Utah is very limited. Approximately 692,000 acres of the total 844,000 acres, or 82 percent, of irrigated land acreage in Utah is classified as land with low to marginal production potential (Types Irrigated III and IV).

Corn silage and grain acreage increased from 1940 to 1980, but has stabilized or fallen slightly in recent years. Oat and barley acreage averaged 175,000 acres until 2007 when it dropped to less than half of former acreages. This could be related to increased production of crops, like canola on land formerly devoted to small grain. Alfalfa and other hay acreage have increased by 32 percent since 1940.

LIVESTOCK INDUSTRY RECEIPTS

Utah agriculture is dominated by production of livestock, livestock products, and the production of feed crops utilized in the livestock industry. In nominal terms, agricultural receipts in Utah have increased from \$588 million in 1984 to \$1.3 billion in 2007, a 128 percent increase, while Utah livestock and livestock product receipts have also more than doubled in the same period. The implication is that livestock and livestock receipts have fairly consistently contributed from 71 to 78 percent of all agricultural product receipts over the last 24 years (Figures 8.1.9, 8.1.10, and 8.1.11). Beef cattle, dairy cattle, swine, and sheep, in decreasing order, contribute the majority of Utah livestock receipts. In terms of receipts from live animal sales, the cattle and sheep industries' contributions vary from 68 to 79 percent, while the swine industry contributions vary from 20 to 30 percent. Swine production contributions have increased dramatically to \$144 million in 2007 from about \$6 million in 1995.

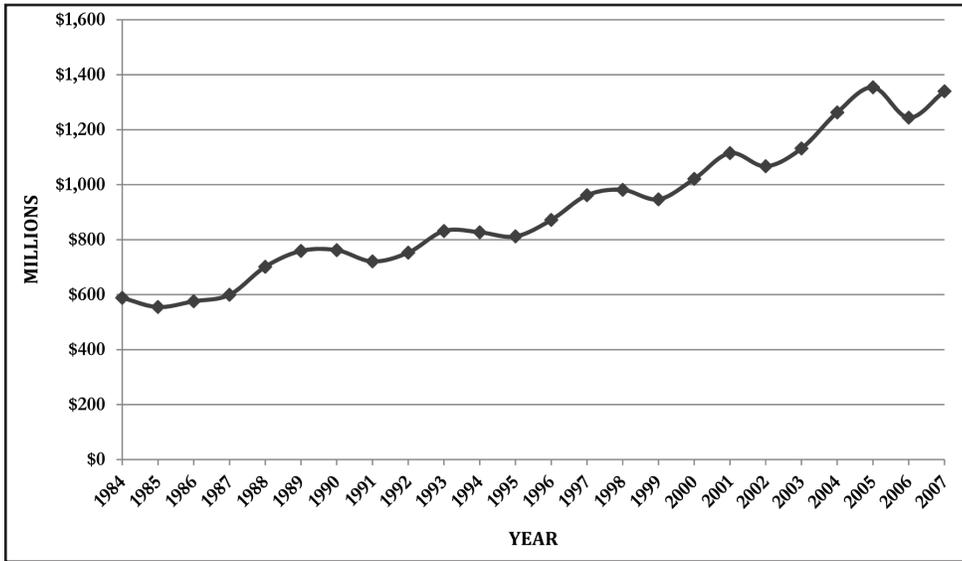


Figure 8.1.9. Trend in agricultural receipts in Utah (1984-2007).
Source: Utah Agricultural Statistics (1984-2008).

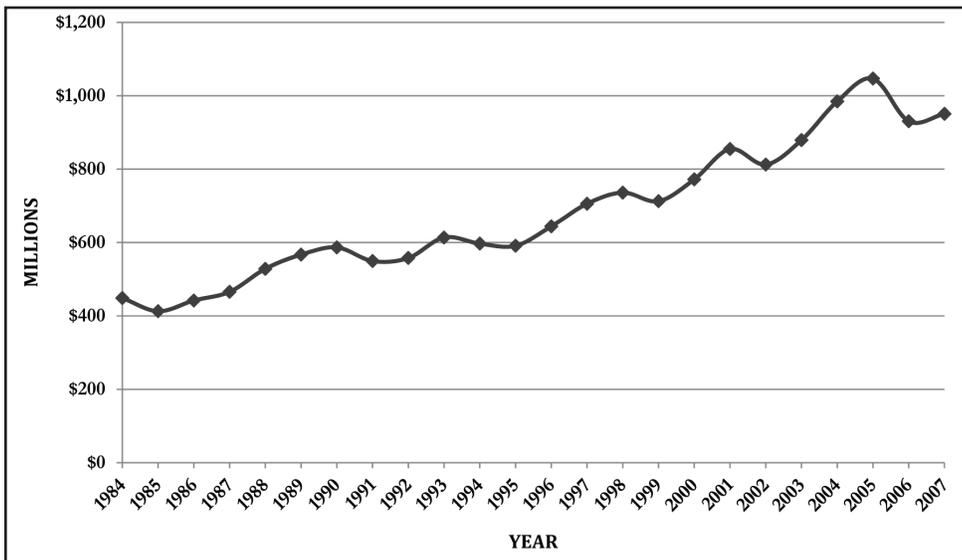


Figure 8.1.10. Trend in livestock and livestock product receipts in Utah (1984-2007).
Source: Utah Agricultural Statistics (1984-2008).

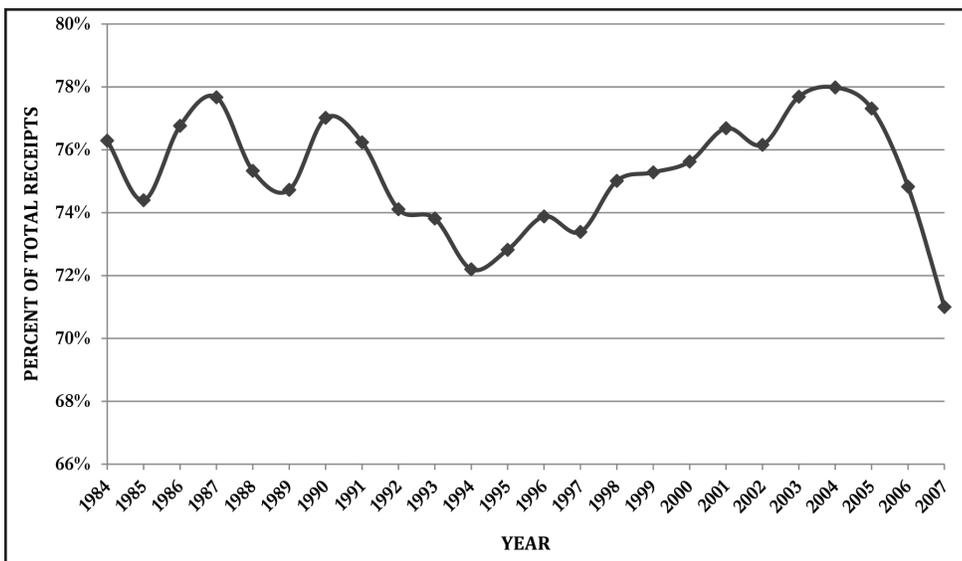


Figure 8.1.11. Livestock and livestock product receipts as a percentage of Utah agricultural receipts (1984-2007).
Source: Utah Agricultural Statistics (1984-2008).