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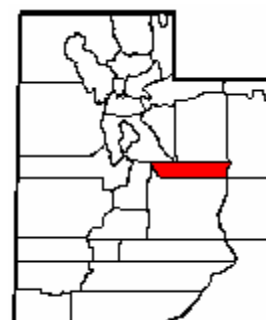
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Size and Scope of Carbon County Agriculture 2019

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Location

Carbon County is located south of Duchesne and Wasatch counties in east-central Utah. Along with Emery County to the south, it is often referred to as Utah's Castle Country. The county became industrialized very early after statehood with the arrival of the railroads and discovery of many coal beds for which the county is named. It is also a large producer of natural gas within the state. Its primary economic base today comes from regional services, retail, tourism, recreation and resource extraction. As of 2017, the population was estimated at 20,295. Price is the largest city and county seat.

All of the federally owned ground is under the jurisdiction of the Bureau of Land Management (BLM) and the U.S. Forest Service (USFS). The state-owned ground is primarily part of wildlife preserves with a sizeable portion under the jurisdiction of the Utah School and Institutional Trust Land Administration (SITLA). The private ground is primarily farm ground and grazing areas.

The 2017 Census of Agriculture indicated that there were 230,942 acres in farms and ranches in the county with an average size of 747 acres and an average value of \$1,238 per acre. The county had 15,829 acres in cropland of which 8,011 acres were harvested. There were 9,253 irrigated acres, of which a good portion was irrigated pasture.

Land Ownership

Figure 1 shows the division of land ownership within the county.

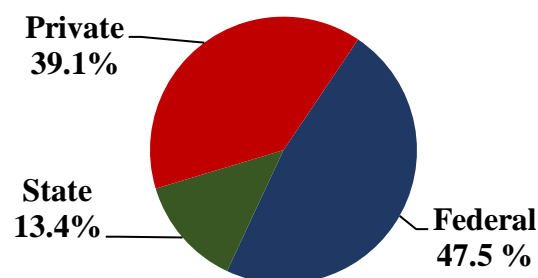


Figure 1. Carbon County Land Ownership

Source: 2017 Utah Counties Fact Book

Growing Season

The growing season in Carbon County averages about three months. Table 1 displays some of the details on climatology in three areas of Carbon County according to the Utah Climate Center (2019). The three locations are examples of variations in growing season: Sunnyside is located in the east portion of the county, Price BLM is in the south-central part of the county, and Scofield Dam is located in the northwest corner at 7,618 feet elevation.

Table 1. Carbon County Annual Precipitation and Average Frost-Free Days				
Location	Annual Precip.	Last spring freeze	First fall freeze	Freeze-free period
Sunnyside City Center	13.3 inches	May 22	Oct. 02	134 days
Price BLM	9.17 inches	May 14	Oct. 6	146 days
Scofield Dam	14.56 inches	June 22	Sept. 5	75 days

Crop Production

Hay forages are the most economically significant crops grown in Carbon County, which support beef and sheep production, and to a smaller extent, recreational horse use. While some forages are exported out of the area to support livestock and dairy operations, the majority of it (likely 95%) is used within the Carbon-Emery region with most being used on-farm during the winter months. Since the region is frequently impacted by drought and most producers are also influenced by the current livestock market cycle, producers are much more likely to hold older hay stock than move it off-farm. Total hay acres harvested and yields for 2017 are displayed in Table 2.

Table 2. Carbon County 2017 Crop Acres and Yields			
Primary Crops	Yields	Harvested Acres	Average Yield/Acre
Hay	26,723 tons	7,759	3.4 tons

Source: 2017 USDA-NASS Census of Agriculture

Typical ground preparation for planting alfalfa is begun by spraying Roundup in the fall or early spring to kill the quack grass prior to disking. The ground is then harrowed and planted. The procedure is the same for planting small grains, except Roundup is not always used prior to planting grains. About 98% of all grain is planted in the spring of

the year. Most small grains grown in the county are hayed for forage, with oats, triticale, and “three-way” mixes of oats, wheat, and barley being common. Forage sorghum hybrids have recently gained more interest for largescale producers as a high-yield forage crop.

The most prevalent crop rotation that producers practice is to leave alfalfa in for seven or more years, plant small grains for two years, then replant alfalfa. Producers typically get two to three cuttings of alfalfa each year. Often, fields are left to regrow after second cutting and are subsequently grazed off by livestock. Producers purchase about 25% of all inputs (e.g., seed, fertilizer, pesticides, etc.) locally, while buying the remaining 75% in a neighboring county.

There were 212,476 total pasture acres in 2017. Pastures are often located in areas with limited watering capacity or marginal soils where high salinity, unfavorable perched water tables, or poor drainage preclude profitable field crop production. These areas may be exclusively grazed or occasionally swathed and baled for hay. Often, pastures play a crucial role as temporary livestock holding areas during seasonal movements to lower desert range, or they may hold livestock all winter.

Irrigation water sources include the Price River and its tributaries. Almost 60% of irrigated acres are under sprinkler irrigation compared to furrow flood irrigation. More flood-irrigated acres are converted to sprinkler irrigation annually as a mitigation measure to reduce salinity mobilization in the Upper Colorado River Basin.

Livestock Production

Livestock production is the major driving force behind the county’s agricultural economy. Public lands grazing plays a large role in the county’s livestock production. The mountains of the Wasatch Plateau in the eastern portion of the county, which are part of the Manti-La Sal National Forest and the Book Cliffs (Tavaputs Plateau) in the northern and

western portions of the county, contain high elevation summer grazing lands. Lower elevation areas typical of the Colorado Plateau Desert in the central and southern portion of the county are used for winter grazing. Many livestock are moved between Carbon and Emery counties annually as animals are moved off high elevation allotments down to the desert allotments, including areas of the San Rafael Swell. During the transition times between high and low allotments, and in some cases during winter, irrigated pastures and fields are grazed. Many producers prefer to graze these irrigated areas in the valley that are closer to home during calving and lambing season.

Primarily, cow-calf operations hold the most cattle while a very small minority of head are locally raised to slaughter. There is very little replacement heifer production marketed to buyers outside of the county. The vast majority, most likely over 95%, of cattle are sold as stockers destined for feedlots in the Midwest. Replacement heifers are primarily on-farm. A similar percentage of lambs that are produced are also destined for feedlots in Colorado or further east. Many lambs produced in the county are sold to “holding markets” in Arizona and California where they graze hay fields until they are sent to feedlots in others areas. Many of the larger livestock operations in the county are producing on contract or have direct buyers, and occasionally brokers, that operate in the area. The vast majority of medium- to small-sized operators sell their cattle through auctions in Salina, Utah or Loma, Colorado. Lambs are often auctioned in Colorado. The inventories of the major classes of livestock produced in the county as of 2017 compared with 2012 inventories are listed in Table 3.

Table 3. Major Livestock Commodities			
Livestock	2012	2017	% Change
All Cattle	10,585	6,378	-39.7%
Beef Cows	7,561	Not Reported	
Sheep and Lambs	17,958	5,655	-68.5%

Source: 2017 USDA-NASS Census of Agriculture

Farm Income and Age of Operator

Cash receipts from 2017 crops equaled \$2,321,000 and cash receipts from livestock totaled \$4,139,000. Total 2017 cash receipts were \$6,459,000, down \$2,552,000 from 2012 (\$9,011,000). The average age of the primary farmer or rancher was 54.3 in 2017. Figure 2 below graphs the principal operator average age for all USDA-NASS Census of Agriculture years since 1997.

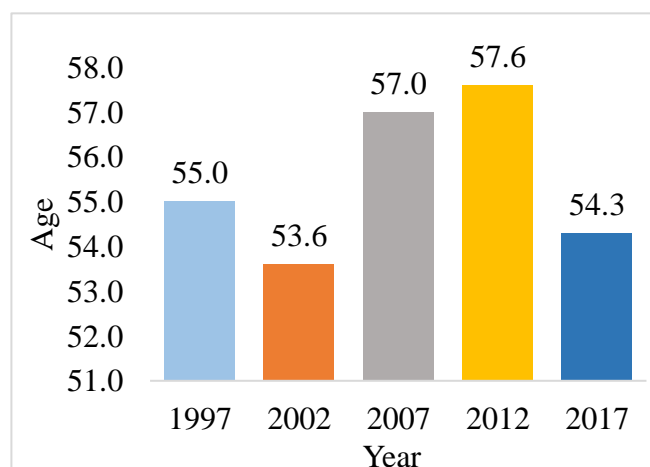


Figure 2. Principal Operator Age

Source: 2017 USDA-NASS Census of Agriculture

Sources

United States Department of Agriculture National Agricultural Statistics Service. (2019). 2017 Ag Census Data. Retrieved from https://www.nass.usda.gov/Publications/AgCensus/2017/Online_Resources/Census_Data_Query_Tool/index.php

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Utah Climate Center. (2019). Utah State University. Retrieved July 10, 2019, from <https://climate.usu.edu/>

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