

## Box Elder County Agriculture Profile

### Economics Department

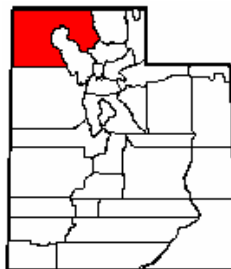
### Box Elder County

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Area: 5,723 square miles  
(3,662,720 acres)

Population: 44,504  
(U.S. Census Bureau  
Estimate, 2003)



County seat: Brigham City

### Location

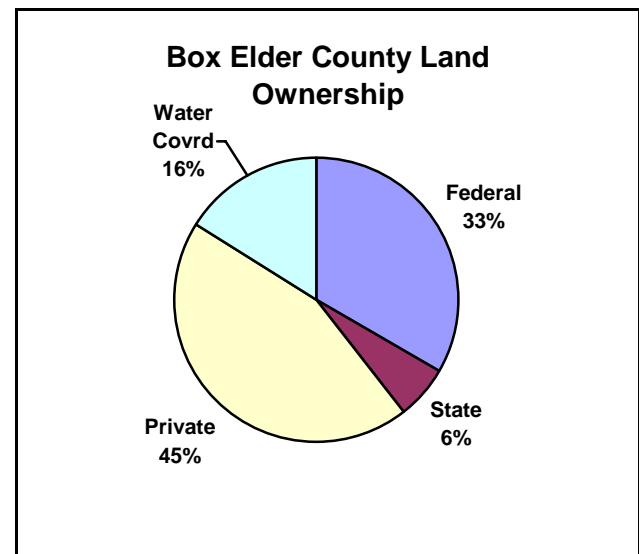
Box Elder County is located in the northwest corner of Utah and is bordered by the states of Idaho and Nevada. The eastern part of the county is where the majority of the population is located and where the majority of the irrigated farmland lies. The western part of the county has more dryland agriculture and cattle ranching and is characterized with a steppe desert climate. The Golden Spike Monument in Promontory in the eastern central part of the county is famous as the meeting point of the first transcontinental railroad completed in 1869.

### Land Ownership

Almost all of the federally owned ground, about 75%, is under the jurisdiction of the Bureau of Land Management (BLM). The majority of the remainder is controlled by the military and the United States Forest Service (USFS). About 89% of the state owned ground is under the jurisdiction of the Utah School and Institutional Trust Land Administration (SITLA) and the remainder is part of the Utah

State Wildlife Reserves. The private ground is primarily residential living space, farmland and grazing areas.

The land ownership within the county is divided as follows:



Source: (Utah County Fact Book, 2002)

The 2002 Census of Agriculture indicated that there were 1,400,759 acres in farms or ranches in the county with an average size of 1259 acres and an average value of \$527 per acre. The county had 335,315 acres in cropland of which 141,462 acres were harvested and 113,251 were irrigated. The value of livestock and crops produced was listed at \$113,800,000.

### Agricultural Snapshot

Box Elder County is one of the primary agricultural production regions in the state. In 2003 county production statistics (2004 Utah Agricultural Statistics), the county ranked number one in the following commodities: Winter wheat, spring wheat, oats, corn for

grain, corn for silage, peaches, apricots, and dry onions. It was second in production of barley, sweet and tart cherries, and apples. The county was third in dry bean production and fourth in the production of potatoes, alfalfa hay and other hay.

The county has the largest inventory of cattle and calves as well as beef cattle. It was second in sheep inventory and had the third largest number of milk cows.

Box Elder County was ranked second in the categories of total cash receipts and crop revenue and was ranked fifth in livestock revenue according to data published in the 2004 Utah Department of Food and Agriculture Annual Report.

The major irrigated crops grown in Box Elder County with 2004 yields and total acres harvested were:

<b>2004 Primary Crops</b>	<b>Yields</b>	<b>Total harvested acres</b>	<b>Average yield/acre</b>
All alfalfa hay	196,000 tons	55,500	3.5 tons
Other hay	25,000 tons	12,000	2.1 tons
Corn for silage	160,000 tons	6,400	25 tons
Corn for grain	540,000 bu	3,100	174 bu
Barley	397,500 bu	4,100	97 bu
Oats	69,900 bu	700	100 bu
All wheat	2,013,000 bu	21,100	95 bu

There is a lot of variety in crop rotation practices in Box Elder County. There is not a typical rotation practiced by many producers on irrigated crop land. A couple of methods practiced on dryland cropland is to alternate

planting wheat and leaving the ground fallow every other year. It is also becoming more common to follow a wheat crop with safflower for a year before allowing the ground to stand fallow for a season. The typical hay producer will leave the alfalfa stand in for four to five years. The typical crop producer in the Bear River Valley harvests four crops of alfalfa annually while the producers further west only get one to two depending on available water and other crop conditions.

The typical ground preparation procedures vary for different crops. For grain production, the ground is usually disced after fall harvest, then smoothed and leveled with a Danish harrow. It is then fertilized (about 40-50% of producers use anhydrous ammonia on irrigated ground) and planted. The dryland ground is deep plowed in the spring of the year. It will remain fallow and then is prepared similar to the irrigated ground prior to being planted with winter wheat. Most alfalfa ground is plowed with a moldboard plow in the fall prior to planting. The seed bed is prepared in the same manner as for irrigated crop ground with special attention to building a smooth and flat planting surface.

Much of the dryland grain in the county is planted utilizing deep furrow drills while most irrigated ground is planted using double disk drill systems. About 94% of wheat planted is winter wheat and 6% is spring wheat.

About 85% of all seed, fertilizer, and pesticides are purchased locally while the remaining 15% is bought in neighboring counties. The majority of the farming is done in the eastern half of the county from Snowville to the Wasatch Mountain Range. Ranching is done countywide with many of the larger commercial ranches located in the western part. Most of the grazing for the eastern part of the county is done on public lands.

Box Elder County producers raise some unique crops. Onions are grown in the Bear

River Valley from Tremonton south. Many other vegetables such as sweet corn, tomatoes, squash, pumpkins and peppers are grown valley wide. In the area around Corinne it is common to see mint grown for commercial crops. The county is also famous for the Fruit Way which is located south of Brigham City through the small towns of Willard and Perry. The land lies along the base of the mountains and the climate is ideal for growing peaches, apples and cherries.

About 60% of the irrigation water available in Box Elder County is from the Bear River Canal System. Pine View reservoir contributes another 15% while deep wells provide the remaining 25% of needed irrigation water.

### Growing Season

The growing season in Box Elder County averages about 3½-4 months in length in the western part and usually lasts more than 5 months in the eastern part. Brigham City is located in the southeastern part of the county, Snowville is located in the north central part of the county and Park Valley is in the west central part of the county. Following are some of the details on climatology in the three areas.

Box Elder	Climate Characteristics			
	County locations	Annual Precip.	Last spring freeze	First fall freeze
Brigham City	19.41 in	May 2	Oct. 11	163 days
Park Valley	11.15 in	May 23	Sept. 26	126 days
Snowville	12.07 in	June 6	Sept. 13	100 days
Tremonton	17.8 in	Apr 28	Oct 8	165 days

There tends to be a significant difference in the length of the growing season within the valley. Brigham City is located in the Bear River Valley and tends to receive more rain and warmer weather year-round. The average precipitation received countywide also tends to be significantly different. Brigham City weather station receives an average of 19.41 inches annually, while Snowville receives 12.07 inches and Park Valley averages 11.15 inches. The dryer and colder climates in the central and western part of the county influence the yield potential of the limited number of crops able to be raised.

The major classes of livestock produced in the county along with their associated inventories as of January 2004 were:

Livestock Type	Number of Head
All Cattle & Calves	104,000
Beef Cows	37,500
Milk Cows	10,200
Sheep	36,000

For more information visit these Web sites:

<http://www.wrcc.dri.edu/htmlfiles/ut/ut.ppt.html>

<http://climate.usu.edu/utahclim/freeze/default.htm>

<http://www.wrcc.dri.edu/summary/listut.html>

[http://www.utahweather.org/UWC/utahs\\_climate/climate\\_of\\_utah.html](http://www.utahweather.org/UWC/utahs_climate/climate_of_utah.html)

<http://biology.usgs.gov/s+t/SNT/noframe/gb150.htm>

<http://utahreach.org/box%20elder/visitor/about.htm>

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