

# **Texas Economic Analysis of Animal Agriculture: 2010-2020**

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*Prepared For:*



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## Texas Executive Summary

The use of soybean meal as a key feed ingredient is an important part of Texas animal agriculture. While the degree to which animal agriculture utilizes this versatile feed ingredient has fluctuated with time, it remains a key driver of animal agriculture's success in the State of Texas. The success of Texas animal agriculture in turn has a large impact on the rest of the state and regional economies. For example, in the State of Texas during 2020 animal agriculture contributed:

- \$34.7 billion in economic output
- 244,047 jobs
- \$7.6 billion in earnings
- \$1.5 billion in income taxes paid at local, state, and federal levels
- \$698.2 million in the form of property taxes

Texas's animal agriculture consumed almost 2.1 million tons of soybean meal in 2020. This soybean meal was fed primarily to:

- Broilers (1.5 million tons)
- Egg-Laying Hens (308.7 thousand tons)
- Beef Cattle (111.6 thousand tons)

This report examines animal agriculture in Texas over the last decade. While this analysis is certainly instructive and allows improved understanding of animal agriculture's impact during that time, as the next decade unfolds in Texas, many opportunities and challenges will arise. And, if past is prologue, animal agriculture will continue to be a major contributor to the economic well-being of the people of Texas and beyond.

## Texas Economic Impact of Animal Agriculture

Animal agriculture is an important part of Texas’s economy. In 2020, Texas’s animal agriculture contributed the following to the economy:

- About \$34.7 billion in economic output
- \$7.6 billion in household earnings
- 244,047 jobs
- \$1.5 billion in income taxes

And the animal agriculture sector has shown some change during challenging economic times, primarily due to uncertainty caused by COVID-19. During the last decade Texas’s animal agriculture has:

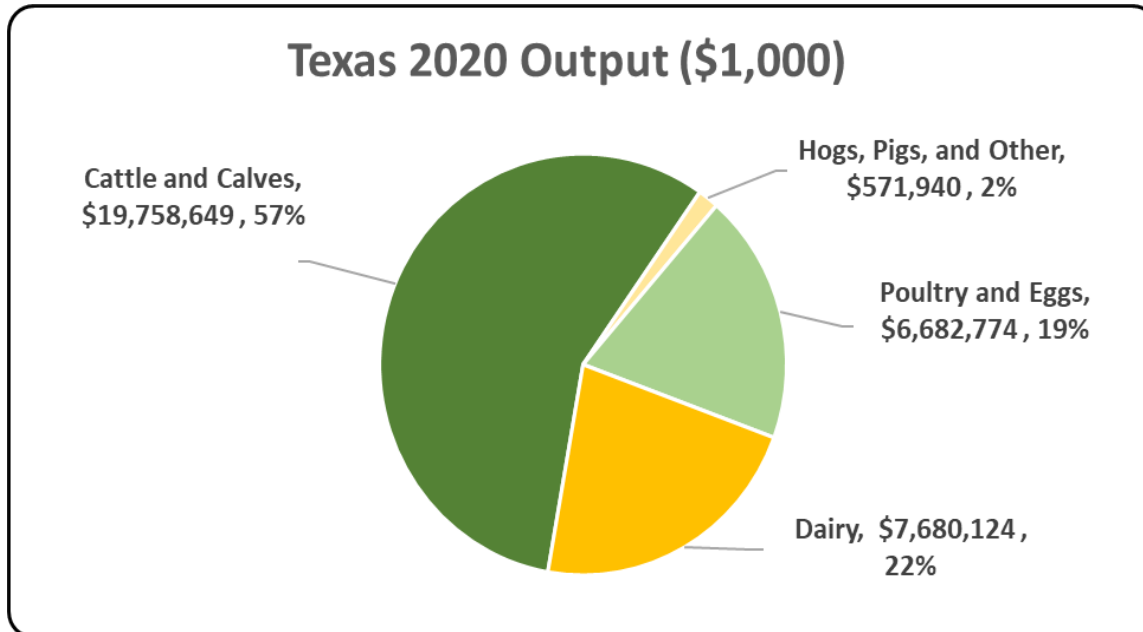
- Increased economic output by \$457.5 million
- Boosted household earnings by \$116.3 million
- Added 4,971 jobs
- Paid \$23.5 million more in income taxes

Below is a table which demonstrates this decade of change.

| Measure                               | 2020          | Change 2010-2020 | % Change 2010-2020 |
|---------------------------------------|---------------|------------------|--------------------|
| Output (\$1,000)                      | \$ 34,693,487 | \$ 457,453       | 1.34%              |
| Earnings (\$1,000)                    | \$ 7,646,419  | \$ 116,290       | 1.54%              |
| Employment (Jobs)                     | 244,047       | 4,971            | 2.08%              |
| Income Taxes Paid (\$1,000)           | \$ 1,544,577  | \$ 23,491        | 1.54%              |
| Property Taxes Paid in 2017 (\$1,000) | \$ 698,248    |                  |                    |

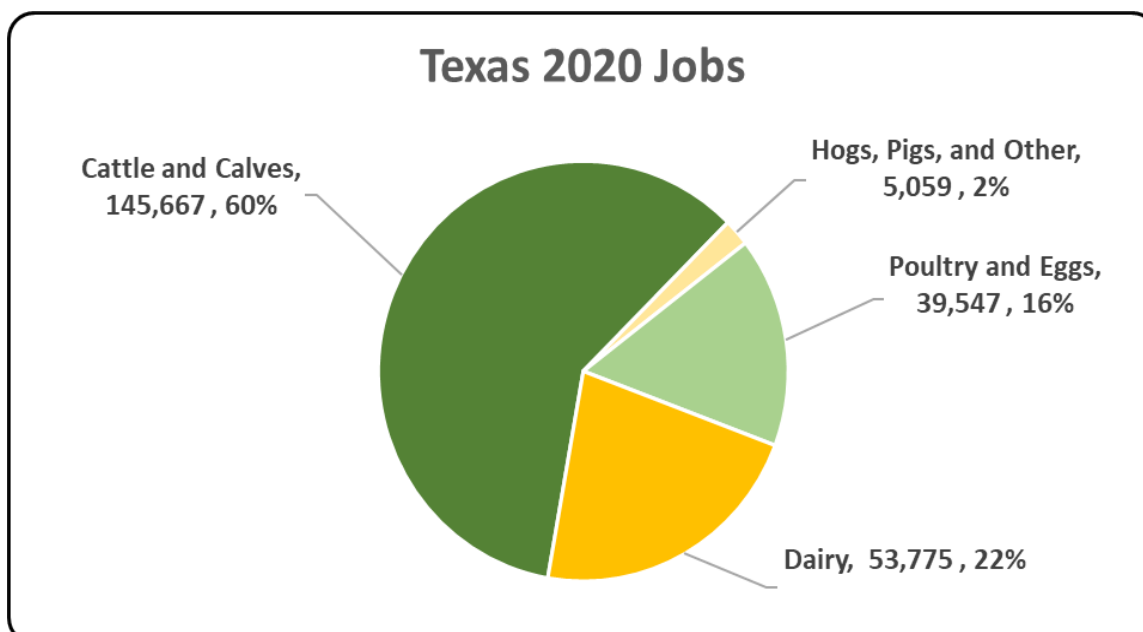
## Texas Output

“Output” refers to the total value of all the output (production or sales) of a study area and/or industry within a study area and was calculated using RIMS II multipliers. This is a gross number that does not make any deductions for the cost or origination of inputs that were used in the production process. The chart illustrates the impact of animal agriculture to the Texas economy. Animal agriculture’s impact on Texas total economic output is about \$34.7 billion.



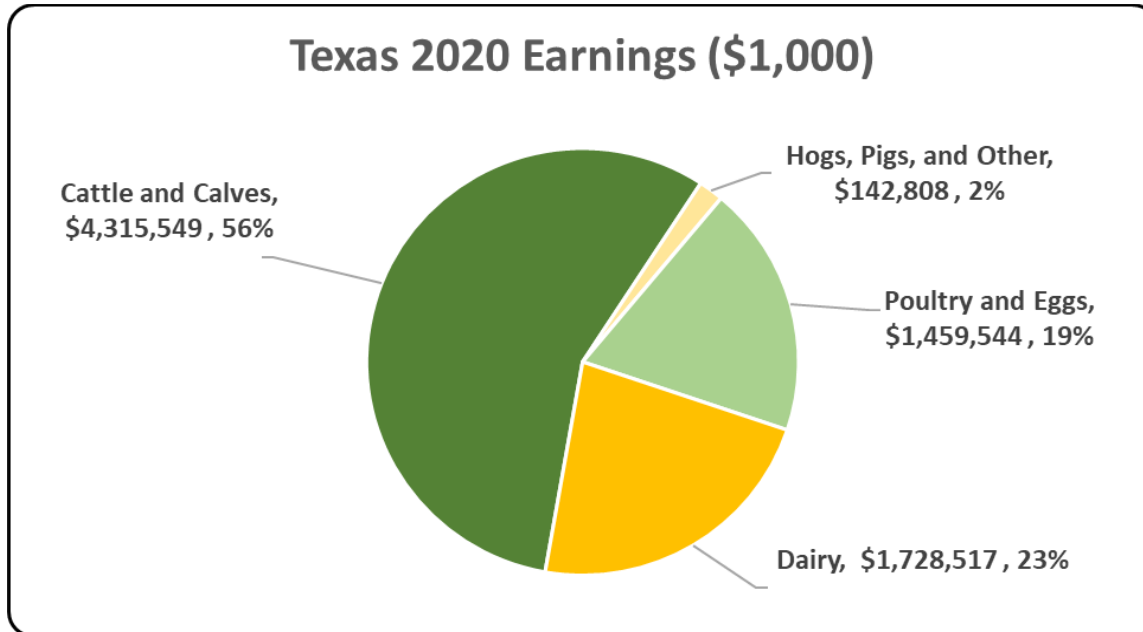
## Texas Jobs

“Jobs” represents an estimate of the number of full or part-time positions (jobs) currently filled in an area and/or industry. The chart illustrates the contribution to Texas in terms of animal agriculture jobs. As shown, animal agriculture contributes significantly to Texas total jobs, contributing 244,047 jobs within and outside of animal agriculture.



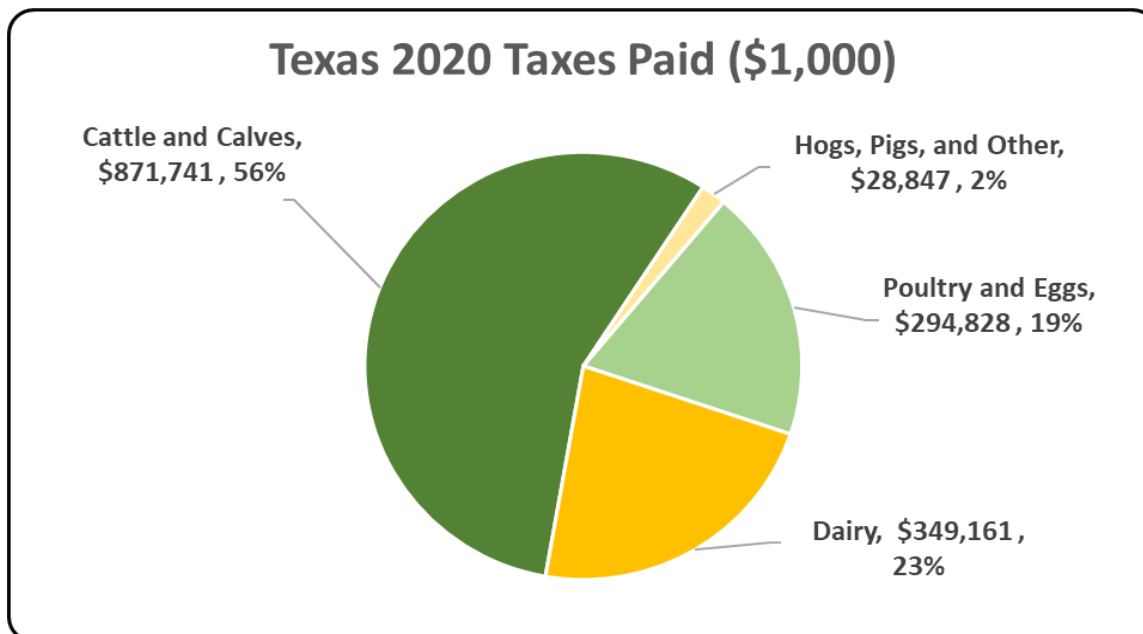
## Texas Earnings

Earnings includes wages and salaries plus proprietors' income, which is the net earnings of sole-proprietors and partnerships. The chart illustrates the impact of animal agriculture to the Texas economy in terms of earnings. Texas's animal agriculture contributed about \$7.6 billion to household earnings in 2020.



## Texas Taxes Paid by Animal Agriculture

Texas's animal agriculture is also a significant source of tax revenue. In 2020, the state's animal agriculture industry paid about \$1.5 billion in income taxes at local, state, and federal levels. Plus, the 2017 Census of Agriculture estimated \$698.2 million in property taxes paid by all of Texas agriculture during 2017. Estimates of income taxes paid by animal agriculture are shown in the following chart.



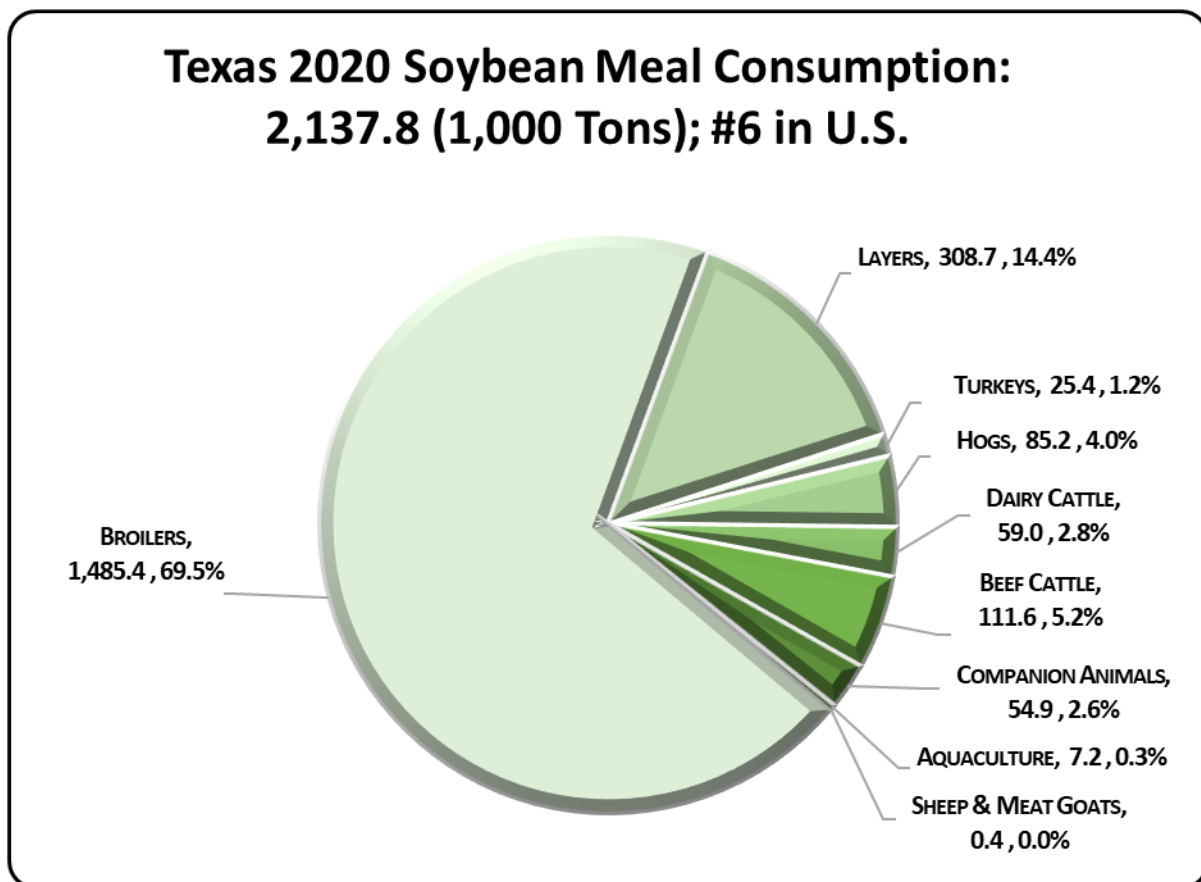
## Texas Animal Agriculture Soybean Meal Consumption

The choice to use soybean meal in animal agriculture is highly dependent upon nutritional requirements of animals (which would encompass varying life stages within an animal species), accessibility to various feed ingredients capable of competing with soybean meal (from both a nutritional and price standpoint), and consumer preferences which have influence on production practices.

Through in-depth conversations with many of the nation’s top nutritionists and researchers from both private industry and public institutions, “bottom up” estimates of soybean meal usage by animal type were determined. Using the input from these conversations and additional analysis performed by Decision Innovation Solutions, the quantity of soybean meal used during the 2019-20 soybean marketing year by up to sixteen specific animal species has been estimated.

Texas’s animal agriculture consumed almost 2.1 million tons of soybean meal in 2020, placing the state as 6 in the nation in terms of soybean meal consumption (see figure below). Additionally, animal agriculture in Texas consumed 252.0 thousand tons in soy hulls. The three segments of animal agriculture that led the state in estimated soybean meal consumption are:

1. Broilers (1.5 million tons)
2. Egg-Laying Hens (308.7 thousand tons)
3. Beef Cattle (111.6 thousand tons)

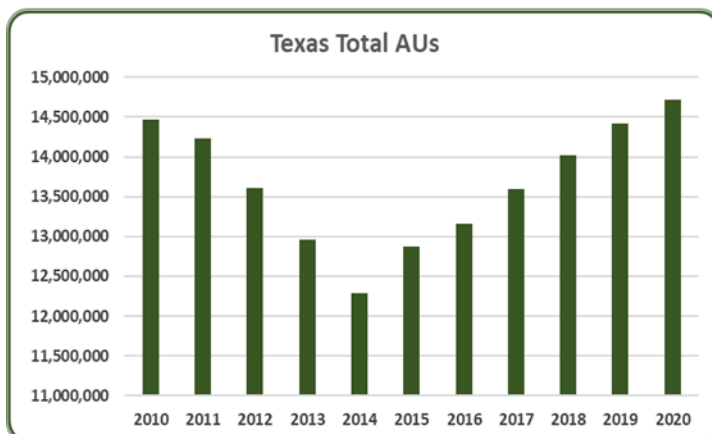
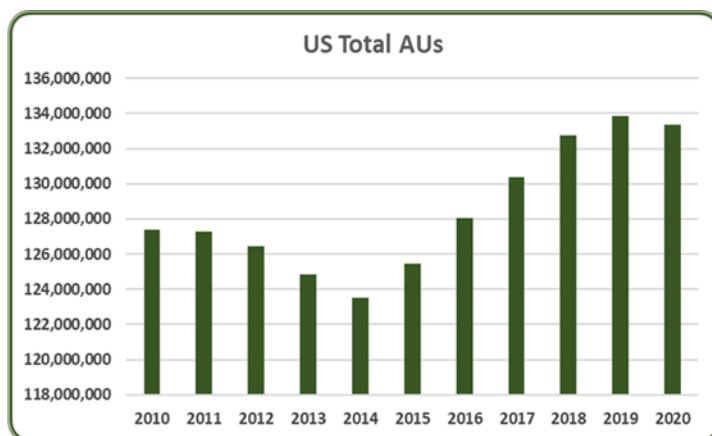


## Texas Animal Unit (AU) Trends

Over time, prices of feed, meat, eggs and milk, as well as levels of demand for these products in the United States and abroad have an impact on the size of animal agriculture in the State of Texas. Due to this reality, using a single year as a measure of the presence and strength of a sector can be misleading. The use of animal units allows for a more accurate comparison of differing sizes of livestock and poultry. This section is included to bring context to the question of what animal agriculture means to Texas and to give perspective on Texas’s contribution to the nation’s animal agriculture industry and beyond.

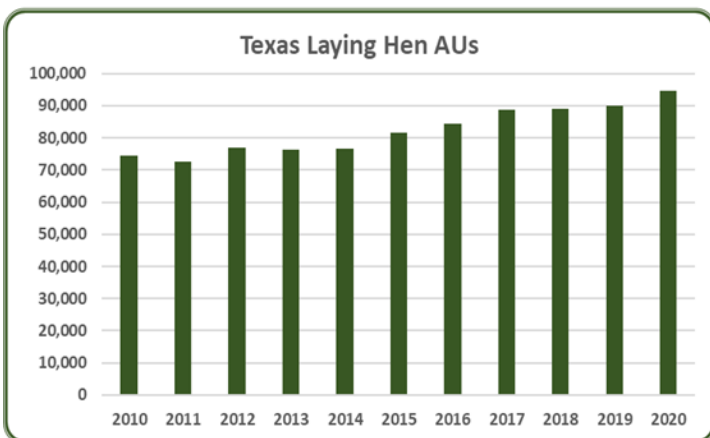
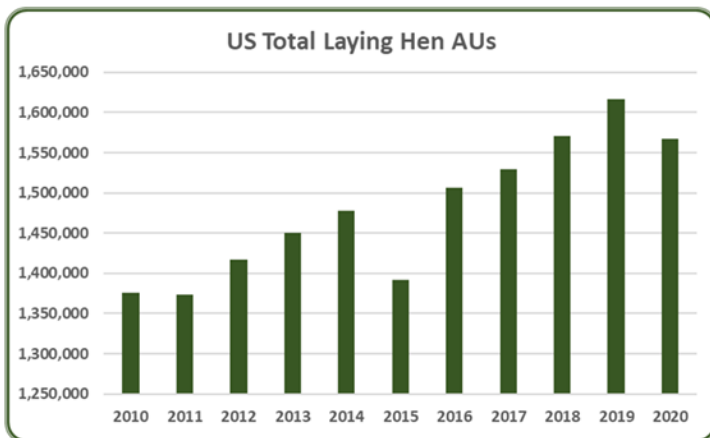
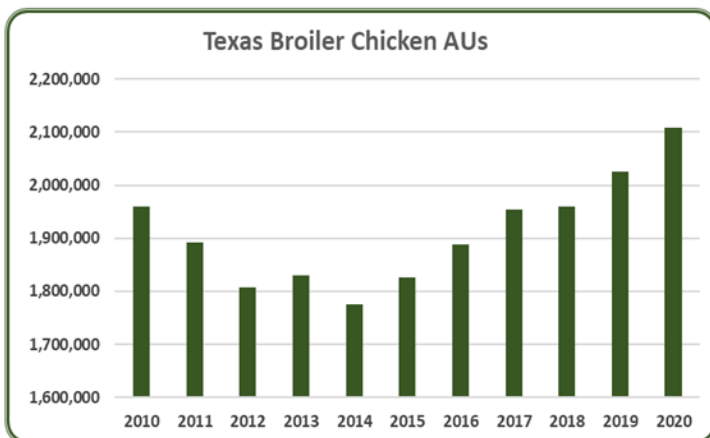
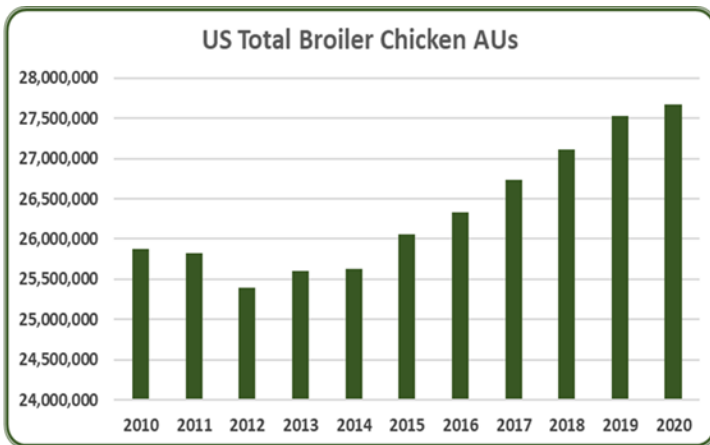
Similar to using a single year to measure the presence and strength of a sector, in some circumstances AUs can be misleading. This is because AUs do not reflect important considerations like increased weights, improved livability, increased laying potential, etc.

As shown in the accompanying charts and written commentary, certain components of animal agriculture are more present, and therefore more dominant than others. This is due primarily to geography (i.e., weather patterns and access to certain transportation hubs), proximity to high quality, relevant feed ingredients, and the local animal agriculture regulatory framework. In Texas, the largest three segments of animal agriculture in terms of AUs during 2020 were: Beef Cattle (10.63 million AUs), Broilers (2.11 million AUs), and Dairy Cattle (1.25 million AUs). Total animal units in Texas during 2020 were 14.72 million AUs.

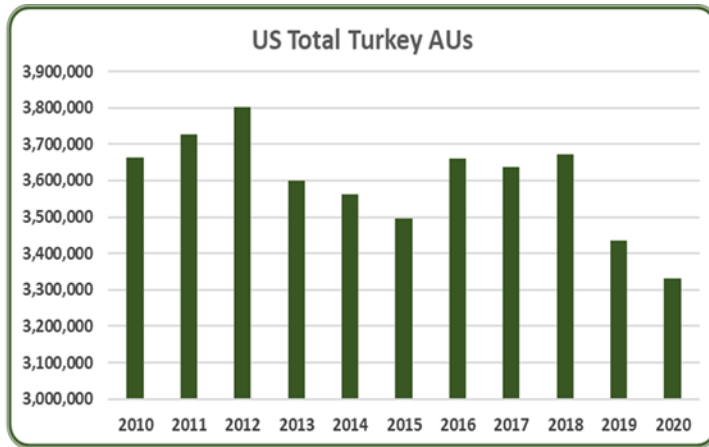


- In 2020, the 2019 decade high of almost 134 million total AUs in the U.S. decreased by 0.39% to 133 million. Seven out of the ten commodities followed saw a decrease, with four seeing a decrease of over 100,000 AUs. 2013 and 2014 AUs were the lowest of the period. There has been an upward trend in total AUs since 2015.
- The average total AUs from 2010 to 2020 was 13.67 million in Texas. Total AUs were 14.72 million in 2020, for all species included in this study. This is an increase of 2.12% from 2019 to 2020. This decrease was mainly due to a combined increase of 324,934 broiler, dairy cattle, and beef cattle AUs.

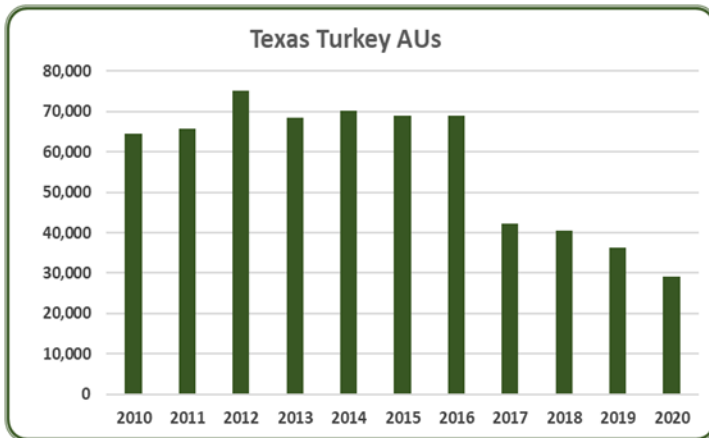




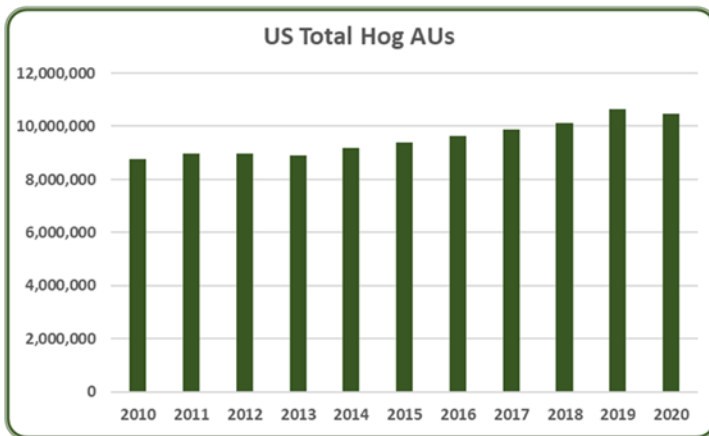
- U.S. broiler production is concentrated in the southern states – Georgia being the largest producer. On average, from 2010 to 2020, broiler chicken AUs were 26 million across the U.S. Between 2019 and 2020 there was a 0.49% increase (134,700) in broiler chicken AU – with respectively, Alabama, North Carolina, and California, as the largest contributors to this increase.
- Texas’s average broiler AUs during 2010 - 2020 were 1.91 million. In 2020, there was a 4.07% increase in broiler AUs from 2019 values, for a total of 2.11 million broiler AUs. Broiler AUs in Texas have increased by 7.53% since 2010. Furthermore, broilers are the second largest animal sector in the state accounting for 14.32% of the total AUs (14.72 million), in Texas.
- On average, broiler chicken AUs were 26 million across layer AUs during 2010 -2020 were 1.5 million. In 2020, layer AUs were 1.57 million, a 3.07% decrease from the year before – 37 states experienced a decrease in layer AUs. However, 2020 yielded the third largest increase in growth since 2015 - 2016 when the industry was recovering from avian influenza.
- Texas’s average layer AUs during 2010 - 2020 were 82,315. In 2020, there was a 5.26% increase in layer AUs from 2019 values, for a total of 94,656 layer AUs. Layer AUs in Texas have increased by 27.08% since 2010 and account for 0.64% of the total AUs (14.72 million) in Texas.



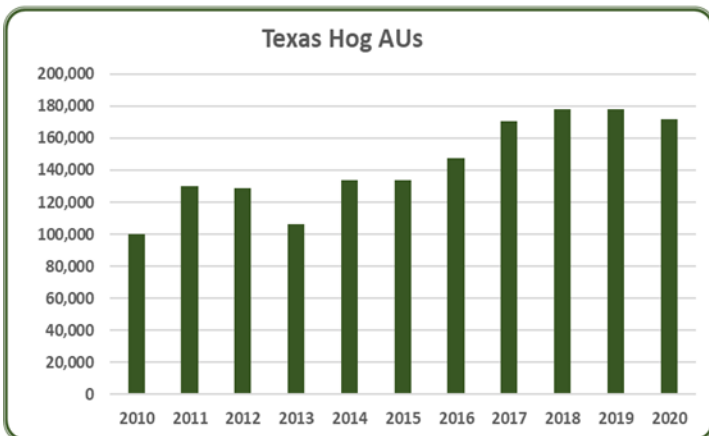
- In 2020, turkey AUs were at 3.3 million, a 3.06% drop from the previous year. Minnesota had the most turkey AUs during 2020 with 17.57% of the total U.S. turkey AUs. Although growth occurred immediately following the 2015 avian influenza outbreak, 2020 AUs reached a decade low – 41 states experienced a decrease in turkey AUs.



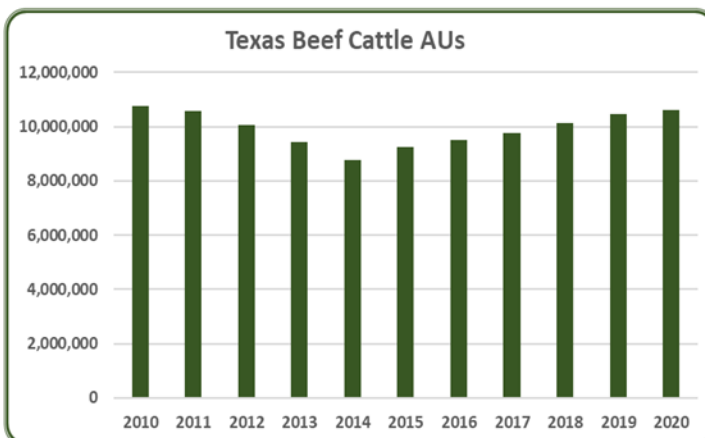
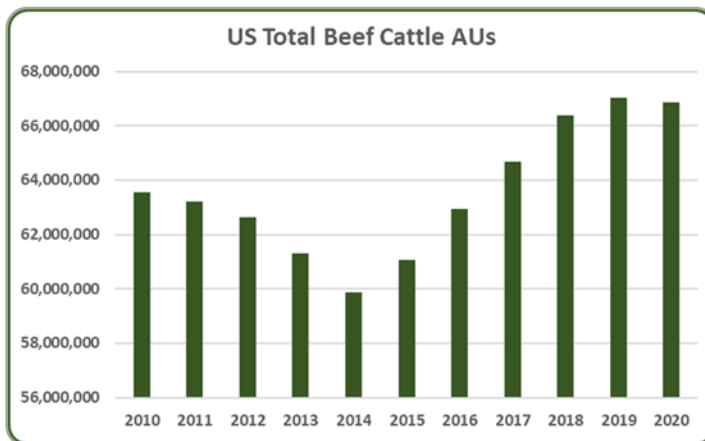
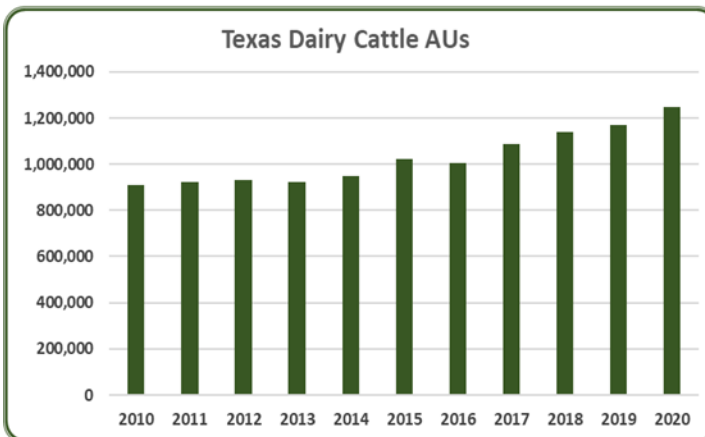
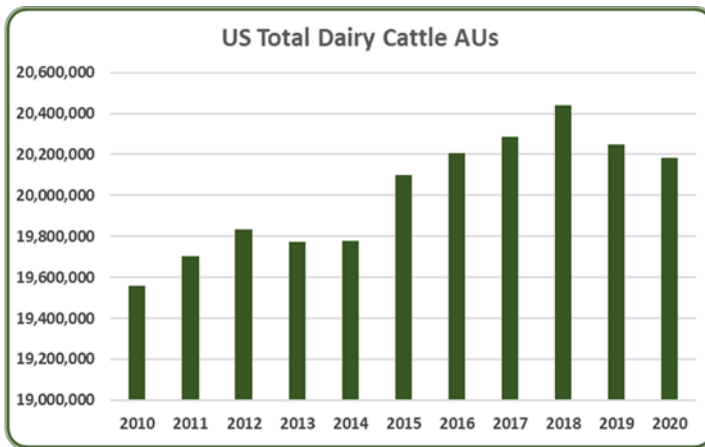
- In 2020, Texas had 29,127 turkey AUs, a 19.80% decrease from 2019. Furthermore, turkeys account for 0.20% of the total AUs (14.72 million) in Texas. Turkey AUs in Texas have decreased by 54.83% since 2010. The average turkey AUs from 2010 – 2020 is 57,284.



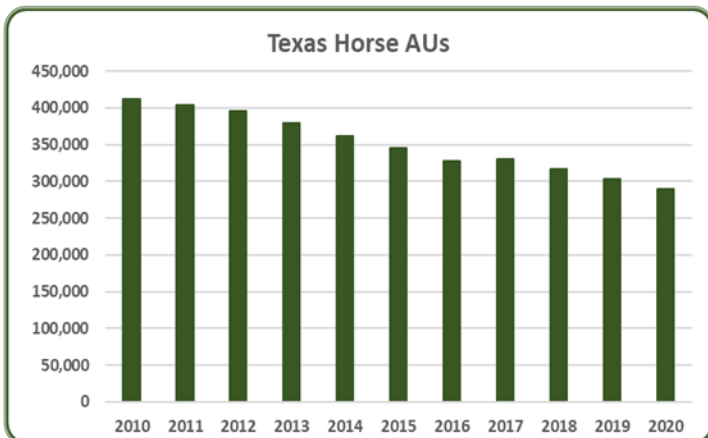
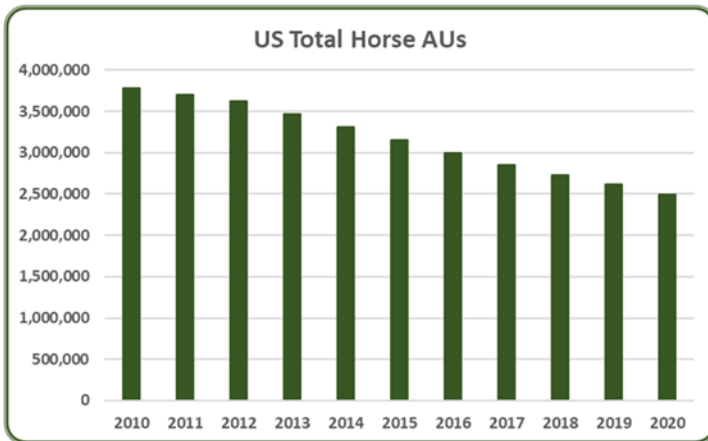
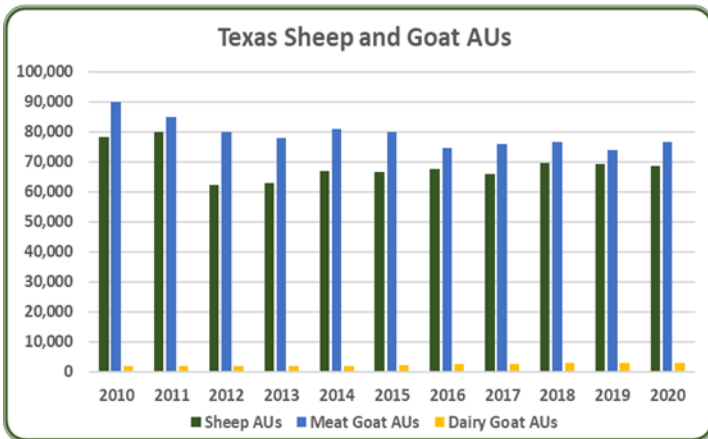
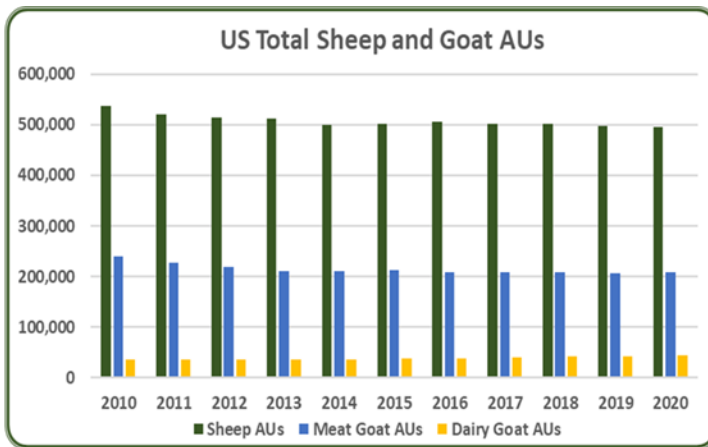
- From 2010 to 2020, hog AUs increased 19.72% (1.73 million AUs). Hogs make up 7.86% of all animal units within the United States. The decade average for Hog AUs is 9.54 million. In 2020, hog AUs were at 10.48 million, a 1.58% drop from the previous year.



- In 2020, Texas had 171,929 hog AUs, a 3.38% decrease from 2019 levels. Furthermore, hogs accounted for 1.17% of the total AUs (14.72 million) in Texas. From 2010 to 2020, the average number of hog AUs in Texas was 143,362. Hog AUs have increased by 72.45% since 2010.



- From 2010 to 2020, dairy cattle AUs averaged 20.2 million. In 2020, dairy cattle AUs decreased by 0.31% (62,277 AUs) from 2019– 37 states experienced a decrease in dairy cattle AUs. California, Wisconsin, and Idaho have, respectively, the highest number of dairy cattle AUs.
- In 2020, Texas had 1.25 million dairy cattle AUs, a 6.42% increase from 2019 levels. Furthermore, dairy cattle account for 8.47% of the total AUs (14.72 million) in Texas making it the third largest animal sector. From 2010 to 2020, the average number of dairy cattle AUs in Texas was 1.03 million. Dairy cattle AUs have increased by 37.30% since 2010.
- From 2010 to 2020, beef cattle AUs averaged 63.6 million. Over the past decade beef cattle AUs have increased by 5.23% with a slight decrease of 0.23% (157,142 AUs) from 2019 levels. Beef AUs have trended upward after a drought occurred in the middle of the ten-year period, increasing by 11.69% since 2014.
- In 2020, Texas had 10.63 million beef cattle AUs, a 1.60% increase from 2019 levels. The beef cattle sector is the largest animal sector in Texas accounting for 72.22% of the total AUs (14.72 million) in Texas. From 2010 to 2020, the average number of beef cattle AUs was 9.94 million. Beef cattle AUs have decreased by 1.38% since 2010. Among all 50 states Texas is ranked first in beef cattle AUs



- Sheep, meat goats, and dairy goats account for less than 0.56% of U.S. total AUs. Individually, dairy goat AUs increased by 22.52% over the decade; sheep AUs and meat goat AUs decreased by 7.79% and 12.52%, respectively. Combined, there was a 7.85% decrease in AUs – from 810,400 in 2010 to 746,750 in 2020.
- Ranked first among all 50 states for sheep, dairy goat, and meat goat AUs Texas had a combined 148,150 AUs, a 1.51% increase from 2019 levels. These account for 1.01% of the total AUs (14.72 million) in Texas. Individually, sheep and meat goat AUs decreased by 12.14% and 15.00%, respectively, while dairy goat AUs increased by 45.00% over the decade. Combined, there was a 12.98% decrease in AUs since 2010.
- Horses account for about 1.87% of U.S total AUs. From 2010 to 2020, horse AUs show a continuous downward trend – from 3,784,316 in 2010 to 2,495,844 in 2020, - overall a 34.05% decrease. In 2020, all 50 states experienced a decrease in horse AUs.
- In 2020, Texas had 289,856 horse AUs, a 4.52% decrease from 2019 levels. Horse AUs account for 1.97% of the total AUs (14.72 million) in Texas. The decade average number of horse AUs was 351,526. Horse AUs have experienced an overall decrease of 29.68% since 2010. Texas is ranked first in horse AUs among all 50 states.

## Texas Additional Information and Methodology

Animal agriculture is an important part of Texas’s current and future economic health. To quantify the connection between animal agriculture and local economies, the United Soybean Board commissioned [Decision Innovation Solutions](#), an economic research firm in Urbandale, Iowa, to conduct an in-depth analysis of several aspects of animal agriculture. This analysis includes the following components:

1. Economic impact of animal agriculture to local (state) economies during the 2010-2020 time period
2. Soybean meal usage by animal species during the 2019/20 soybean marketing year
3. Animal Unit (AU) trends from 2010-2020

Given the long-term presence of animal agriculture in Texas, of interest is the degree to which the industry impacts the Texas economy. Estimates of output, jobs, earnings, taxes paid, and multipliers for Texas animal agriculture are presented in this report. Methodology for this section of the report closely mirrors that followed in years’ past. Also presented are estimates of the change in how animal agriculture has impacted Texas’s economy over the last decade. Differences, to the extent they are present, are noted within the larger national report which accompanies this state report.

As with any industry across the economic spectrum, there are ebbs and flows in activity that have implications for other parts of the economy. Again, using the same 2010-2020 time period as with the economic impact section of this state report, the “Animal Unit Trends” seeks to quantify production changes in animal agriculture in Texas which have occurred. As shown in this state report, Texas has seen changes within its animal agriculture industry. Expectations are that animal agriculture will continue to evolve over the next decade.

Animal agriculture is the single largest user of soybean meal in Texas. Through in-depth conversations with many of the nation’s top nutritionists and researchers, “bottom up” estimates of soybean meal usage by animal type were determined. Using the input from these conversations and additional analysis performed by Decision Innovation Solutions, the quantity of soybean meal used during the 2019-20 soybean marketing year for up to sixteen specific animal species has been estimated.

Should readers have comments or questions regarding methodology, results and interpretation, please contact the authors at [info@decision-innovation.com](mailto:info@decision-innovation.com) or 515.639.2900.

## Texas Multipliers

Economic multipliers give a sense for how economic activity in a given industry is related to other industries in the same study area. To estimate the impact of animal agriculture on Texas’s economy, we applied RIMS II multipliers from the Department of Commerce, Bureau of Economic Analysis for cattle ranching and farming, dairy cattle and milk production, poultry and egg production, and other animal production (primarily hogs and pigs), where applicable.

Multipliers are generally stated in the form of “per million dollars” of output. As it relates to this analysis, multipliers are stated as the activity related to every million dollars of economic output in animal agriculture. Referring to the multipliers below, for every million dollars in output generated by the various segments of animal agriculture in Texas, \$1.86 to \$3.06 million in total economic activity, \$0.47 to \$0.67 in household wages and 17 to 20 additional jobs are generated in the economy at large.

|                     | Animal Type           | Output(\$) | Earnings (\$) | Employment (Jobs) |
|---------------------|-----------------------|------------|---------------|-------------------|
| RIMS II Multipliers | Cattle and Calves     | \$ 2.727   | \$ 0.596      | 20.1              |
|                     | Hogs, Pigs, and Other | \$ 1.863   | \$ 0.465      | 16.5              |
|                     | Poultry and Eggs      | \$ 3.061   | \$ 0.669      | 18.1              |
|                     | Dairy                 | \$ 2.784   | \$ 0.627      | 19.5              |

## Appendix

|                                      | 2010                               | 2011                | 2012                 | 2013                 | 2014                 | 2015                 | 2016                 | 2017                 | 2018                 | 2019                 | 2020                 |                      |
|--------------------------------------|------------------------------------|---------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| <b>Animal Units (AUs)</b>            | <b>Beef Cattle AUs</b>             | 10,777,713          | 10,579,612           | 10,053,206           | 9,435,330            | 8,768,953            | 9,253,341            | 9,494,645            | 9,772,837            | 10,150,670           | 10,462,059           | 10,629,309           |
|                                      | <b>Hog and Pig AUs</b>             | 99,698              | 129,677              | 128,510              | 106,426              | 133,544              | 133,449              | 147,309              | 170,396              | 178,094              | 177,953              | 171,929              |
|                                      | <b>Broiler AUs</b>                 | 1,959,900           | 1,891,500            | 1,807,800            | 1,830,300            | 1,775,400            | 1,826,100            | 1,888,500            | 1,953,600            | 1,960,500            | 2,025,000            | 2,107,500            |
|                                      | <b>Turkey AUs</b>                  | 64,489              | 65,737               | 75,221               | 68,395               | 70,298               | 68,915               | 68,915               | 42,313               | 40,395               | 36,319               | 29,127               |
|                                      | <b>Egg Layer AUs</b>               | 74,488              | 72,672               | 77,040               | 76,328               | 76,600               | 81,564               | 84,516               | 88,680               | 88,988               | 89,928               | 94,656               |
|                                      | <b>Dairy AUs</b>                   | 908,044             | 924,688              | 929,791              | 924,368              | 946,753              | 1,021,614            | 1,005,358            | 1,086,462            | 1,137,952            | 1,171,547            | 1,246,730            |
|                                      | <b>Total Animal Units</b>          | <b>14,466,777</b>   | <b>14,234,204</b>    | <b>13,611,634</b>    | <b>12,962,843</b>    | <b>12,283,523</b>    | <b>12,878,836</b>    | <b>13,161,775</b>    | <b>13,589,559</b>    | <b>14,023,049</b>    | <b>14,412,334</b>    | <b>14,717,258</b>    |
| <b>Value of Production (\$1,000)</b> | <b>Cattle and Calves (\$1,000)</b> | \$ 6,101,526        | \$ 8,076,312         | \$ 7,423,536         | \$ 7,536,504         | \$ 9,041,302         | \$ 9,236,773         | \$ 7,239,829         | \$ 7,507,961         | \$ 7,433,596         | \$ 7,189,016         | \$ 7,244,500         |
|                                      | <b>Hogs and Pigs (\$1,000)</b>     | \$ 75,023           | \$ 103,262           | \$ 266,045           | \$ 197,889           | \$ 238,528           | \$ 203,573           | \$ 181,757           | \$ 193,990           | \$ 218,325           | \$ 230,295           | \$ 200,505           |
|                                      | <b>Broilers (\$1,000)</b>          | \$ 1,757,083        | \$ 1,678,517         | \$ 1,747,550         | \$ 2,184,957         | \$ 2,261,860         | \$ 2,030,358         | \$ 1,835,520         | \$ 2,231,814         | \$ 2,374,520         | \$ 2,165,130         | \$ 1,692,323         |
|                                      | <b>Turkeys (\$1,000)</b>           | \$ 53,931           | \$ 59,984            | \$ 67,286            | \$ 53,277            | \$ 37,181            | \$ 39,958            | \$ 40,069            | \$ 25,848            | \$ 25,643            | \$ 32,001            | \$ 36,003            |
|                                      | <b>Eggs (\$1,000)</b>              | \$ 395,052          | \$ 421,982           | \$ 445,497           | \$ 470,982           | \$ 526,171           | \$ 729,032           | \$ 361,309           | \$ 395,521           | \$ 546,407           | \$ 370,840           | \$ 454,660           |
|                                      | <b>Milk (\$1,000)</b>              | \$ 1,509,588        | \$ 1,993,056         | \$ 1,794,452         | \$ 1,960,440         | \$ 2,536,260         | \$ 1,823,277         | \$ 1,852,956         | \$ 2,217,936         | \$ 2,173,340         | \$ 2,645,350         | \$ 2,758,566         |
|                                      | <b>Other</b>                       | \$ 105,178          | \$ 113,360           | \$ 116,401           | \$ 111,104           | \$ 116,257           | \$ 116,121           | \$ 116,861           | \$ 112,563           | \$ 113,249           | \$ 109,475           | \$ 106,478           |
|                                      | <b>Sheep and Lambs (\$1,000)</b>   | \$ 36,480           | \$ 37,995            | \$ 34,368            | \$ 31,623            | \$ 39,328            | \$ 41,744            | \$ 45,037            | \$ 43,291            | \$ 46,529            | \$ 45,307            | \$ 44,862            |
|                                      | <b>Aquaculture (\$1,000)</b>       | \$ 68,698           | \$ 75,365            | \$ 82,033            | \$ 79,481            | \$ 76,929            | \$ 74,376            | \$ 71,824            | \$ 69,272            | \$ 66,720            | \$ 64,168            | \$ 61,615            |
|                                      | <b>Total (\$1,000)</b>             | <b>\$ 9,997,381</b> | <b>\$ 12,446,473</b> | <b>\$ 11,860,767</b> | <b>\$ 12,515,154</b> | <b>\$ 14,757,559</b> | <b>\$ 14,179,092</b> | <b>\$ 11,628,302</b> | <b>\$ 12,685,633</b> | <b>\$ 12,885,080</b> | <b>\$ 12,742,106</b> | <b>\$ 12,493,034</b> |

| Ag Census Data Category  | Animal Type   | 2002       | 2007       | 2012       | 2017       |
|--|---|------------|------------|------------|------------|
| <b>Number of Farms by NAICS</b>  | <b>Beef cattle ranching and farming (112111)</b>                  | 127,974    | 124,992    | 127,726    | 135,749    |
|  | <b>Cattle feedlots (112112)</b>                                   | 5,035      | 2,229      | 898        | 282        |
|  | <b>Dairy cattle and milk production (11212)</b>                   | 1,221      | 1,027      | 656        | 429        |
|  | <b>Hog and pig farming (1122)</b>                                 | 1,760      | 1,732      | 1,184      | 1,350      |
|  | <b>Poultry and egg production (1123)</b>                          | 3,032      | 5,829      | 3,980      | 3,516      |
|  | <b>Sheep and goat farming (1124)</b>                              | 8,786      | 13,272     | 15,603     | 19,225     |
|  | <b>Animal aquaculture and other animal production (1125,1129)</b> | 23,378     | 28,622     | 26,587     | 27,434     |
| <b>Value of Sales (\$1,000)</b>  | <b>Cattle and Calves</b>  | 8,083,024  | 10,503,774 | 13,013,127 | 12,291,224 |
|  | <b>Hogs and Pigs</b>  | 128,231    | 237,504    | 239,358    | 163,381    |
|  | <b>Poultry and Eggs</b>   | 1,260,951  | 2,113,086  | 2,624,759  | 2,991,846  |
|  | <b>Milk*</b>  |            |            | 1,698,264  | 2,159,171  |
|  | <b>Aquaculture</b>  | 31,058     | 46,102     | 82,033     | 69,272     |
|  | <b>Other (calculated)</b>   | 223,026    | 289,592    | 201,944    | 354,840    |
|  | <b>Total</b>  | 10,402,993 | 14,435,499 | 17,859,485 | 18,029,734 |
| <b>Input Purchases</b>   | <b>Livestock and poultry purchased (Farms)</b>                    | 65,435     | 55,194     | 61,054     | 74,149     |
|  | <b>\$1,000</b>  | 4,524,369  | 6,017,794  | 6,860,573  | 5,855,780  |
|  | <b>Breeding livestock purchased (Farms)</b>                       | 43,559     | 36,667     | 39,929     | 50,143     |
|  | <b>\$1,000</b>  | 186,906    | 420,373    | 418,586    | 548,951    |
|  | <b>Other livestock and poultry purchased (Farms)</b>              | 30,388     | 25,541     | 29,879     | 35,229     |
|  | <b>\$1,000</b>  | 4,337,463  | 5,597,421  | 6,441,987  | 5,306,829  |
|  | <b>Feed purchased (Farms)</b>                                     | 167,033    | 158,144    | 185,019    | 197,956    |
| <b>\$1,000</b>   | 2,700,281   | 4,226,444  | 7,272,692  | 5,206,042  |            |
| <i>* Measurement of milk sales in 2002-2007 are not comparable to 2012-2017.</i> |   |            |            |            |            |



|                                | <u>Animal Type</u>    | <u>Output (\$1,000)</u> | <u>Earnings (\$1,000)</u> | <u>Employment (Jobs)</u> | <u>Income Taxes Paid (\$1,000)</u> |
|--------------------------------|-----------------------|-------------------------|---------------------------|--------------------------|------------------------------------|
| <b>2020 Animal Agriculture</b> | Cattle and Calves     | \$ 19,758,649           | \$ 4,315,549              | 145,667                  | \$ 871,741                         |
|                                | Hogs, Pigs, and Other | \$ 571,940              | \$ 142,808                | 5,059                    | \$ 28,847                          |
|                                | Poultry and Eggs      | \$ 6,682,774            | \$ 1,459,544              | 39,547                   | \$ 294,828                         |
|                                | Dairy                 | \$ 7,680,124            | \$ 1,728,517              | 53,775                   | \$ 349,161                         |
|                                | <b>Total</b>          | <b>\$ 34,693,487</b>    | <b>\$ 7,646,419</b>       | <b>244,047</b>           | <b>\$ 1,544,577</b>                |

|                                 |                       |                   |                   |              |                  |
|---------------------------------|-----------------------|-------------------|-------------------|--------------|------------------|
| <b>Change from 2010 to 2020</b> | Cattle and Calves     | \$ (19,151)       | \$ (4,183)        | (141)        | \$ (845)         |
|                                 | Hogs, Pigs, and Other | \$ 172,930        | \$ 43,179         | 1,530        | \$ 8,722         |
|                                 | Poultry and Eggs      | \$ (1,343,522)    | \$ (293,430)      | (7,951)      | \$ (59,273)      |
|                                 | Dairy                 | \$ 1,647,195      | \$ 370,724        | 11,533       | \$ 74,886        |
|                                 | <b>Total</b>          | <b>\$ 457,453</b> | <b>\$ 116,290</b> | <b>4,971</b> | <b>\$ 23,491</b> |

|                            | <u>Animal Type</u>    | <u>Output(\$)</u> | <u>Earnings (\$)</u> | <u>Employment (Jobs)</u> |
|----------------------------|-----------------------|-------------------|----------------------|--------------------------|
| <b>RIMS II Multipliers</b> | Cattle and Calves     | \$ 2.727          | \$ 0.596             | 20.1                     |
|                            | Hogs, Pigs, and Other | \$ 1.863          | \$ 0.465             | 16.5                     |
|                            | Poultry and Eggs      | \$ 3.061          | \$ 0.669             | 18.1                     |
|                            | Dairy                 | \$ 2.784          | \$ 0.627             | 19.5                     |

|                  |                                   |              |
|------------------|-----------------------------------|--------------|
| <b>Tax Rates</b> | Federal effective income tax rate | 14.0%        |
|                  | Federal Social Security tax rate  | 6.2%         |
|                  | State Effective Rate              | 0.0%         |
|                  | <b>Total</b>                      | <b>20.2%</b> |

Sources: 2002, 2007, 2012 and 2017 Census of Agriculture, USDA/NASS Survey Data, RIMS II Multipliers (U.S. Bureau of Economic Analysis), Tax-Rates.org & The Motley Fool.