



# Texas Equine Industry Study

*How Horses Affect the Texas Economy*





Photo Credit: Eleanor Green

## Background

Beginning in the fall of 2015, the Texas Department of Agriculture supported a study conducted by the Texas A&M Equine Initiative and Texas A&M AgriLife Research to assess the economic impact of the Texas equine industry. This study was also supported by Mr. Bobby Cox and other industry leaders.

The purpose of the study was to gather information about respondents' horses and facilities, demographics, participation in the industry, horse-related expenditures and economic impacts. Results of this study will be used by industry representa-

tives, the Texas Department of Agriculture and other policy makers to respond to current needs of the state's horse owners and related businesses.

Studies by other researchers in 1998 and 2005 found that Texas was home to more horses than any other U.S. state and that the horse industry was an important contributor to the state's economy.

The current study reflects changes within the industry and the statewide economy over the past 10 to 20 years.

## Executive Summary



Texas ranked **highest among all states** in the U.S. in total number of horses in 2015.

In 2015, Texas was **home to over 840,000 horses**.

The total **statewide economic output** of the Texas equine industry is **\$5.9 billion**.

The Texas equine industry contributes **\$3.3 billion to the Texas gross domestic product** (GDP).

The Texas horse industry is responsible for **\$2.1 billion in Texas labor income**.

Texas horses support **52,000 jobs** statewide.

**Recreational riding/ownership** leads the industry with **\$1.9 billion in revenues**.

**Horse racing** contributed **\$733 million in business revenues** in 2015.

**Horse racing** led to a total economic output of **\$1.4 billion** and contributed **\$945 million to the Texas GDP**.

Texas **horse racing** supported **\$689 million** in labor income and **11,450 jobs in Texas** in 2015.





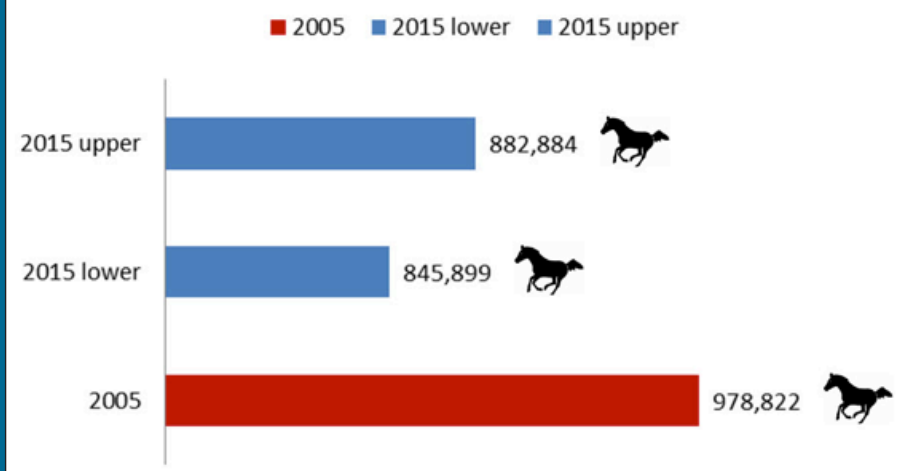
Photo Credit: Eleanor Green

## Horses by the Numbers

While survey respondents indicated a very small (0.4%) decline in horse ownership between 2005 and 2015, a sample of breed association registries showed a larger decline of 13.6% on average. Association memberships were down an even steeper 18.7%. Similarly, the U.S. Census of Agriculture recorded a 9.8% decline in horse inventories between 2007 and 2012, the latest available census. Relatively steady horse ownership among survey respondents is likely a result of current horse owners being more likely to participate in the survey than former horse owners. It is also possible that extremely avid horse enthusiasts, who were unlikely to give up their horses, were more likely to respond.

Deloitte estimated 2005 Texas horse numbers at 978,800. Using the average registry decline of 13.6%, the 2015 horse population was estimated at 845,900, a decline of 132,900 horses in a 10-year period. Using the smaller USDA contraction rate of 9.8%, the 2015 horse population could be estimated at 882,900, providing a population range (Figure 4).

### Texas Horse Numbers, 2005 and 2015



Right: Figure 4. Estimated Texas horse population (includes Texas-owned horses located in and outside the state), 2005 and 2015.

Source: Running Horse Silhouette Image from PublicDomainPictures.net

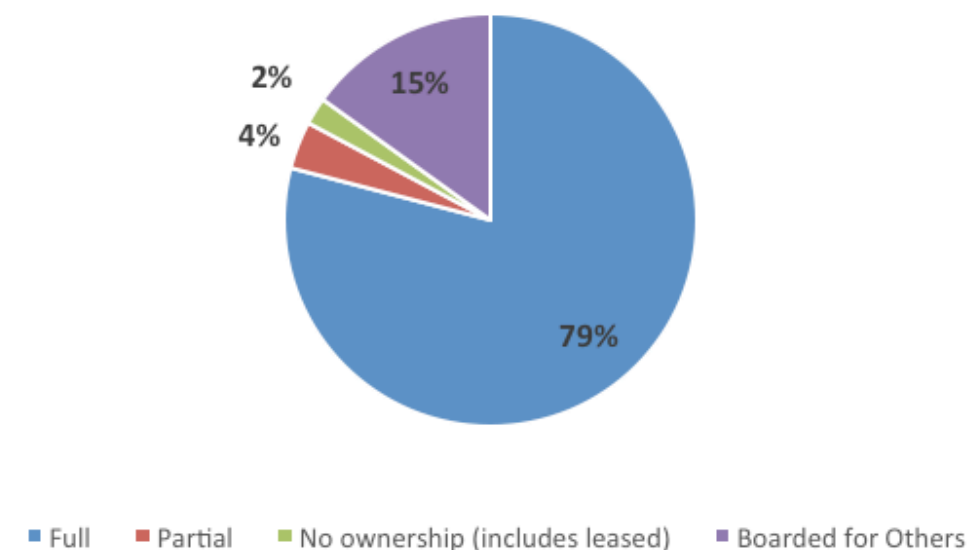
Link: <http://www.publicdomainpictures.net/view-image>

## Horse Ownership

Most respondents had full ownership of their horses (79.1%) (Figure 5). Less than five percent (3.7%) of horses were products of partial ownership, and only 2.1% were not owned by the respondent (e.g., leased). Fifteen percent of horses were maintained/boarded for others. Among respondents, full ownership increased by 2.9% between 2005 and

2015 and partial ownership increased by 7.2%. The number of horses not owned by respondents or boarded for others decreased by 23.6% and 12.9%, respectively, over the same period. Partially owned horses were more likely to be located outside the state (Figure 6).

### Respondents' Horses by Ownership Status



Left: Figure 5. Respondents' horses by ownership status.

Below: Figure 6. Locations of respondents' horses by ownership status.

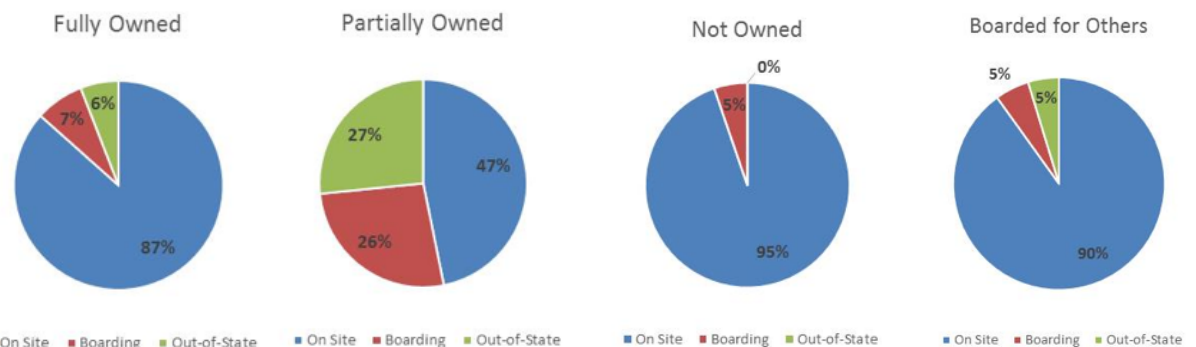






Photo Credit: Eleanor Green

# Locations of Texas Horses

Most of the survey respondents' 15,137 horses (93.6%) were located in Texas (Figure 1). The vast majority were maintained/boarded at the respondents' residences, farms, or other places of business, while 7.8% were boarded elsewhere within the state and 6.4% were lodged outside the state. Only 4.2% were boarded out of state in 2005.

Most Texas horses maintained out of state are located in Louisiana and Oklahoma, but respondents' horses also reside in several other U.S. states as well as the countries of Canada and Dubai. Figure 2 displays the distribution of respondents' horses in Texas, Louisiana, and Oklahoma.

Respondents' horses were most likely to be found within populated metropolitan corridors, and several counties had no survey respondents (Figure 2). The 2012 Census of Agriculture tabulated a somewhat different distribution of horses on Texas farms (Figure 3).

Only 396,000 horses are found on farms, but this metric does provide a different perspective on the Texas horse ownership and distribution, which is notably difficult to measure precisely because horses are owned by a wide array of businesses and there is no requirement to register horses with any entity in the state.

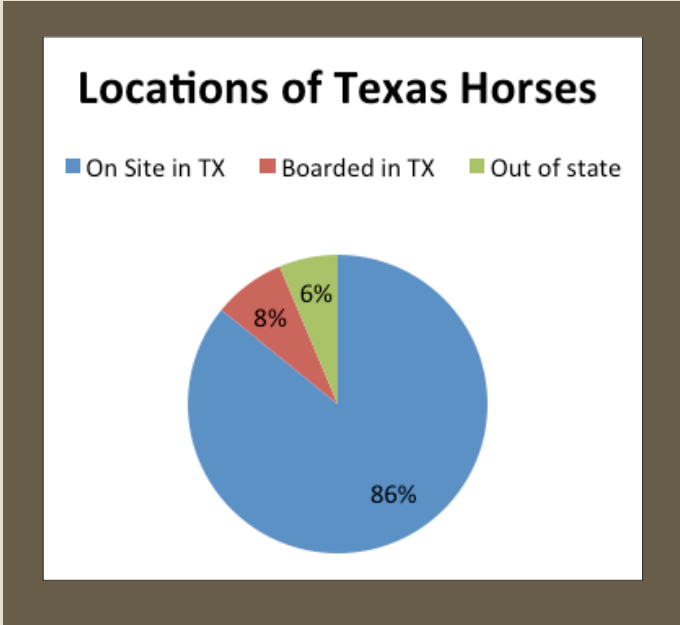
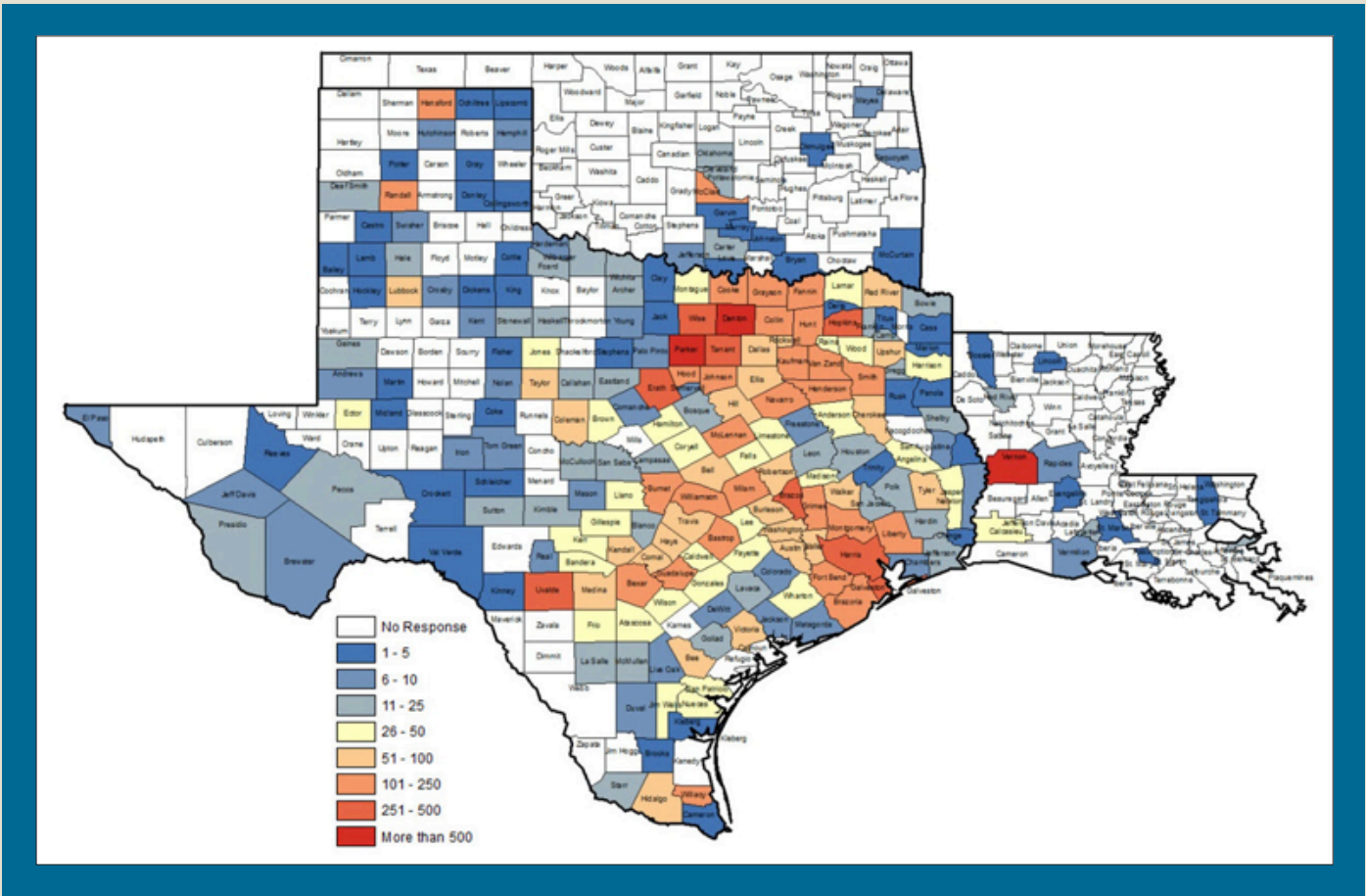


Figure 1. Locations of respondents' horses.



Above: Figure 2. Locations of respondents' horses within Texas, Louisiana, and Oklahoma.

Right: Figure 3. Locations of Texas horses located on farms based on 2012 Census of Agriculture data.

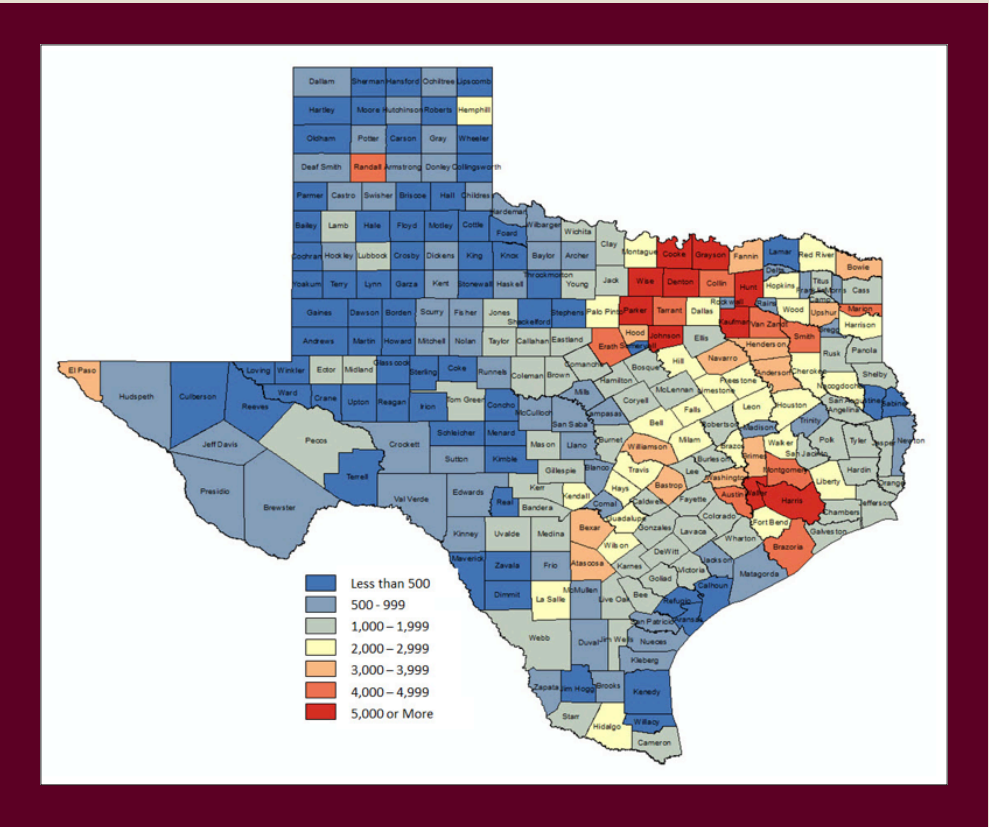






Photo Credit: Anna Morrison

### Youth Involvement

Only twenty-eight percent of respondents had at least one family member younger than age 18 who was involved with horses (Figure 7).

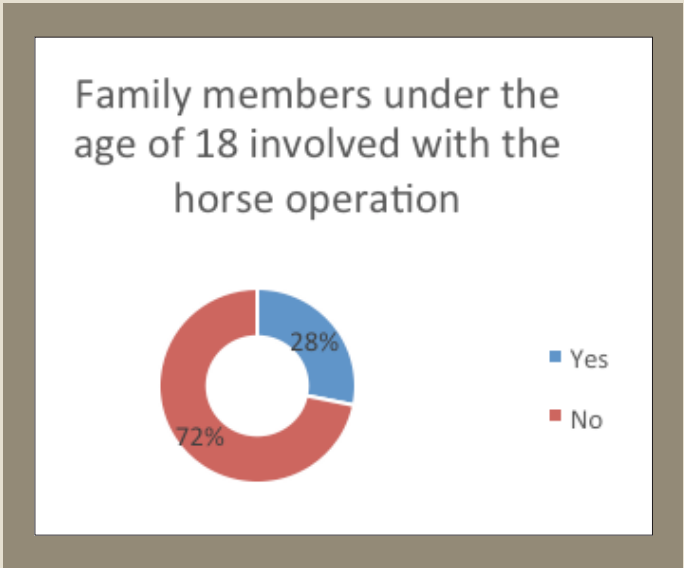
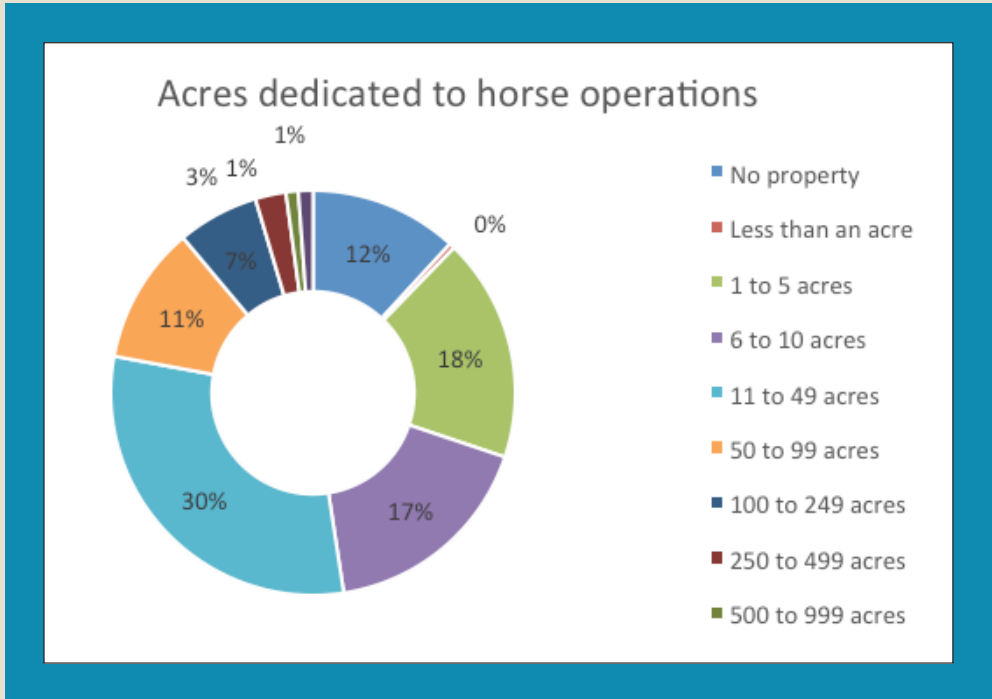


Figure 7. Share of respondents with a family member under age 18 involved with horses.

### Land Use

More than a third of respondents housed their horses on 10 acres or less. Almost

a third had 11 to 49 acres dedicated to their horses (Figure 8). Twenty-two percent had at least 50 acres, and 12 percent did not have land for their horses. Almost 30 percent of respondents valued the land used in their horse operation between \$100,000 and \$250,000.



Left: Figure 8. Acres dedicated to respondents' horses.

### Horse Use

Respondents differed somewhat from the expected general population regarding primary use of their animals (Figure 1 and Figure 2). Data were reweighted using survey data and information from the Deloitte study to extrapolate expected use/purpose across the entire population to estimate revenues and economic impacts.

40.3% of respondents with a farm or ranch reported using horses on their farm/ranch operation.

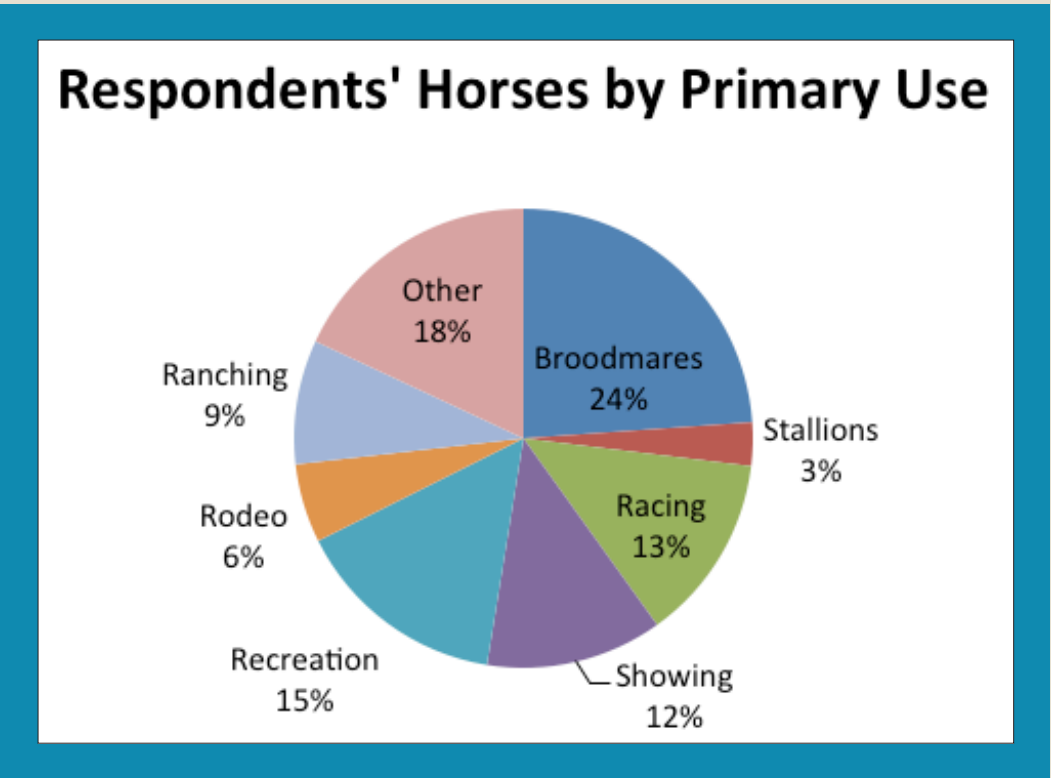


Figure 1. Primary uses of horses as reported by survey respondents.

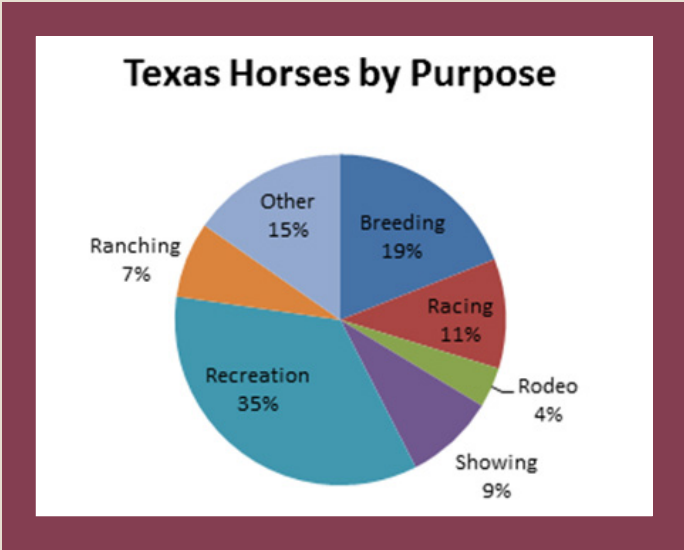


Figure 2. Estimated primary uses/purposes of horses for the general Texas horse population.



Photo Credit: Kate Bradley





Photo Credit: Eleanor Green

## Horse Economic Impact

Table 2 reports Texas revenues by business category for relevant business types. Other businesses, including training, boarding, and education were deemed to be expenses for both other businesses and recreational riders. Thus, including their revenues in the study would result in double counting economic impacts.

The economic impacts of individuals who own horses for non-business purposes are difficult to measure. Individuals’ horse-related expenditures were surveyed to determine economic impact. Ownership and travel-related expenses are reported separately in Table 3 (right). Among all non-business horses owned for recreation and other purposes, these expenses totaled \$1.9 billion.

Type	Revenues
Breeding and Sales	\$696,203,400
Racing	\$733,390,800
Showing	\$86,030,100
Rodeo	\$32,090,400

Table 2. Revenues by Business Type, 2015.

Horse Ownership Expenses	Average Expense per Horse
Feed	\$790.01
Supplements	\$95.65
Bedding and grooming supplies	\$103.28
Tack, equipment and all other services-Amount Spent in 2015	\$185.94
Clothing	\$71.39
Maintenance of owned facilities	\$428.37
Boarding	\$347.78
Training	\$309.41
Horse leasing	\$5.86
Rider education/lessons	\$69.63
Clinics/seminars	\$35.03
Shoeing/farrier	\$252.63
Veterinary services, including pharmaceuticals	\$326.02
Other	\$65.53
<b>Total Horse Ownership Expenses</b>	<b>\$3,086.54</b>

Horse-related Travel Expenses (Amount spent in Texas)	
Access fees (entrance fees, stall rent, parking fees, etc.)	\$179.56
Restaurants and bars	\$164.47
Private auto expenses (gas, rental, repairs, etc.)	\$276.25
Lodging expenses (hotel, campgrounds, hook-ups, etc.)	\$144.54
Retail shopping (clothing, groceries, gifts, other merchandise, etc.)	\$87.30
Other entertainment (concert, movies, etc.)	\$12.50
Miscellaneous travel expenses	\$44.74
<b>Total Travel Expenses</b>	<b>\$909.35</b>

<b>Total Expenses (Ownership &amp; Travel)</b>	<b>\$3,995.90</b>
--	-------------------

Table 3. Average Expenses for Personally-Owned horses



Photo Credit: L.A. Waters Quarter Horses



Horse Economic Impact  
(Continued)

Table 4 reports economic contributions of the horse industry by category. *Direct Effect* includes individuals’ horse-related expenditures and equine business revenues. This direct spending is multiplied as money circulates through the economy. *Indirect & Induced Effect* reflects the multiplied effect as businesses purchase along their supply chains, as well as the household expenditures of employees of both horse-related businesses and all indirectly affected businesses. *Total Effect* is the sum of direct, indirect and induced effects.

*Output* measures overall economic activity or gross sales. Output includes Value

Added, which measures the return to local resources or the contribution to GDP, and Labor Income, which reflects the effects of wages and profits on the incomes of households in the region. *Employees* reflects a job count and does not distinguish between full-time and part-time workers.

In this case, the original \$3.5 billion economic contribution of the Texas equine industry leads to a total statewide economic output of \$5.9 billion, including a \$3.3 billion contribution to the state’s gross domestic product (GDP) and \$2.1 billion in labor income, as well as 52,000 full- and part-time jobs.

Below and Right: Table 4. Economic contribution of the horse industry by category.

Total Equine Industry

Impact Type	Output	Employees
Direct Effect	\$3,491,894,700	35,803.10
Indirect & Induced Effect	\$2,445,331,000	16,236.50
Total Effect	\$5,937,225,700	52,039.60

Recreation/Other

Impact Type	Output	Employees
Direct Effect	\$733,390,800	6,722.40
Indirect & Induced Effect	\$649,197,700	4728.40
Total Effect	\$1,382,588,500	11,450.80

Breeding & Sales

Impact Type	Output	Employees
Direct Effect	\$86,030,100	828.50
Indirect & Induced Effect	\$108,338,200	942.70
Total Effect	\$194,368,300	1,771.20

Rodeo

Impact Type	Output	Employees
Direct Effect	\$1,944,179,900	16,750.00
Indirect & Induced Effect	\$1,333,221,400	8121.40
Total Effect	\$3,277,401,400	24,871.40

Racing

Impact Type	Output	Employees
Direct Effect	\$696,203,400	11,193.20
Indirect & Induced Effect	\$314,162,100	2092.40
Total Effect	\$1,010,365,500	13,285.60

Showing

Impact Type	Output	Employees
Direct Effect	\$32,090,400	309.00
Indirect & Induced Effect	\$40,411,600	351.60
Total Effect	\$72,502,000	660.60

# Economic Impact Analysis

The direct value of industry sales or employment is an important measure of an industry’s strength. However, an industry’s sales or employment figures alone fail to capture the full economic contribution of an industry or an event. When a business makes a sale to a final consumer, a portion of production expenses are paid to the business’ local suppliers and wages are paid to employees. Business owners and employees also spend part of their profits and wages in the local economy—eating at local restaurants and buying groceries, clothing and movie tickets. As money circulates through the local economy, it multiplies the original direct expenditure to a larger total economic output.

Economic impact analysis (or economic contribution analysis) is based on the idea that a dollar spent in a region stimulates additional economic activity, or multiplies as it circulates through the economy. This multiplier effect recognizes that the total effect on output, employment, personal income, and government revenue in the region is greater than the initial dollar spent. For example, a tourist’s expenditure at a souvenir shop contributes not only to that business, but to its suppliers, its suppliers’ suppliers, each of their employees’ incomes, and tax revenues. Of course, some of the original expenditure leaks out of the regional economy. For example, as inventory is imported from other regions, employees commute from other regions, and businesses and households pay state and federal taxes. The portion of the money that remains in the local economy throughout these transactions constitutes the net economic gain. Larger regions contain more economic linkages, which is why large cities and multi-county regions generally have larger multipliers than do small towns or single counties.

Multipliers are calculated based on the purchasing patterns of industries and institutions in the regional economy. Each industry and region combination has a unique

spending pattern and a unique multiplier. Multipliers include three components. The direct effect on the economy is the initial economic activity measured—for example, the tourist’s expenditure at the gift shop or total annual cotton crop losses due to a severe drought. The direct effect results in two types of secondary effects. The indirect effect results from the purchase of inputs among local industries. The induced effect results from the expenditure of institutions such as households and governments benefitting from increased activity among local businesses.

Four types of multiplier effects are generally reported in impact analyses. Output or sales multipliers measure the effect of direct

## Texas Department of Agriculture

The Texas Legislature established the Texas Department of Agriculture (TDA) in 1907. The agency’s key objectives are to promote production agriculture, consumer protection, economic development and healthy living. The agriculture commissioner oversees the agency and is elected every four years. The current commissioner, Sid Miller, was elected in 2014.

TDA is a diversified state agency that provides value-added services through our regulatory and marketing and initiatives. TDA is headquartered in Austin and has five regional service offices, two sub-offices, three laboratories and five livestock export facilities.

### Mission:

TDA’s mission is to partner with all Texans to make Texas the nation’s leader in agriculture, fortify our economy, empower rural communities, promote healthy lifestyles, and cultivate winning strategies for rural, suburban and urban Texas through exceptional service and the common threads of agriculture in our daily lives.

spending (or loss) on overall economic activity in the region. The output multiplier provides the largest economic impact value, and therefore is reported in many studies; however, the output multiplier says nothing about how the event affects the welfare of households or the profitability of businesses.

The value-added multiplier is a more appropriate measure of regional welfare. The value-added multiplier measures the event’s contribution to regional gross domestic product (GDP). It is the value added to the regional economy or the return to local resources used in the production of the event.

The labor income or personal income multiplier measures the effect of the event on the incomes of households in the region, and is appropriate for discerning the benefit of an event to a region’s residents. Labor income is a component of value added, which is part of output, so these figures cannot be summed.

The employment multiplier measures the effect of the event on regional employment. Calculation of the employment multiplier assumes that existing employees are fully occupied and does not distinguish between full-time and part-time workers.



Photo Credit: Eleanor Green

# Texas A&M AgriLife Research

Texas A&M AgriLife Research is the state’s premier research agency in agriculture, natural resources, and the life sciences. We conduct hundreds of projects spanning many scientific disciplines to deliver life-sustaining and industry-changing impacts to citizens throughout Texas and around the world.

A member of The Texas A&M University System, AgriLife Research collaborates with the Texas A&M University College of Agriculture and Life Sciences, the Texas A&M AgriLife Extension Service, and many others to help fulfill the A&M System’s land-grant mission of teaching, research, extension, and service.

## Texas A&M Equine Initiative

The purpose of the Equine Initiative at Texas A&M is to collaboratively utilize our expertise to build an equine program that will graduate the industry’s future leaders and generate research and veterinary medical care that will improve the industry and the care and welfare of the horse. Texas A&M is building complete and modern facilities, from which to teach, train students and conduct research. Further, Texas A&M will be connected to the entire industry through extensive outreach activities.

The Equine Initiative, which is supported jointly by the Colleges of Agriculture & Life Sciences and Veterinary Medicine & Biomedical Sciences, has developed four major imperatives. In each of these areas, the focus will be to enhance and improve upon Texas A&M’s existing strengths in order to facilitate the completion the vision of the Equine Initiative. The four imperatives are curriculum enhancement, outreach & engagement expansion, facility





*Photo Credit: CVM Communications*

## Study Information

Additional information regarding the study, including complete survey results and information regarding the science of economic impact analysis, can be obtained by contacting the Texas A&M Equine Initiative offices.

**Jim Heird, Ph.D.**  
*Glenn Blodgett Equine Chair, Executive Professor & Coordinator*  
[jimheird@tamu.edu](mailto:jimheird@tamu.edu)

**Anna Morrison, Ph.D.**  
*Instructional Assistant Professor & Assistant Coordinator*  
[annamorrison@tamu.edu](mailto:annamorrison@tamu.edu)

Texas A&M Equine Initiative  
 3240 F&B Road  
 2255 TAMU • College Station, TX 77843-2255  
 Tel. 979.845.6098 • Fax 979.862.1534 • [equine.tamu.edu](http://equine.tamu.edu)

**Rebekka Dudensing, Ph.D.**  
*Assistant Professor & Extension Economist*  
*Community Economic Development*  
[rmdudensing@tamu.edu](mailto:rmdudensing@tamu.edu)

**Alicia Copeland**  
*Masters Students*  
*Department of Agricultural Economics*

Texas A&M AgriLife Extension Service  
 600 John Kimbrough Blvd., Suite 321  
 2124 TAMU • College Station, TX 77843-2124  
 Tel. 979.845.1719 • Fax. 979.845.7444



**EQUINE INITIATIVE**  
 TEXAS A&M UNIVERSITY



**TEXAS A&M**  
**AGRI LIFE**  
**EXTENSION**