

Report On

THE TEXAS HORSE INDUSTRY

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THE TEXAS HORSE INDUSTRY

SUMMARY STATEMENTS

- ! Texas is home for over 1 million horses, representing approximately 15% of all horses nationwide.
- ! Texas **leads the nation** in number of registered
 - American Quarter Horses
 - American Paint Horses
 - Appaloosa Horses
 - American Miniature Horses
- Texas is second only to California in total
 - Arabian Horses
 - Thoroughbred Breeding Stallions
- ! 953,983 Texans are horse industry participants and there are 288,839 Texas horse owners. These owners each have an average of 3.7 horses.
- ! FTE employment across the Texas horse industry exceeds 43,000 people and compares with the Rubber Products, Agricultural Forestry & Fishery Services, Wood Products & Transportation Services Industries.
- ! The majority of participants associate with horses for “Quality of Life” reasons. There is significant crossover in use of horses for pleasure/recreation and showing/competition.
- ! Horseowners have \$13 billion invested in barns, towing vehicles, trailers, tack and related equipment and spend \$2.1 billion annually just to maintain their horses.
- ! In showing and racing alone, almost 300,000 owners, family members & volunteers spend \$3 billion per year attending competitive events with over 250,000 horses.
- ! Texas horses are valued at \$4.2 billion.
- ! Annual cash receipts for horses bought/sold exceeds \$354 million. Horse receipts are over 2 times greater than the combined total for hogs, sheep and lambs, and are 1.1 times the total receipts for Texas wheat.
- ! Total impact of the horse industry to Texas economy exceeds \$11 billion annually.

THE TEXAS HORSE INDUSTRY

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Texas is recognized as horse country by people throughout the nation and world who know about horses. Major breed associations which serve the global horse industry, such as the American Quarter Horse Association (AQHA) and the American Paint Horse Association (APHA), are headquartered in Texas. Other widely recognized horse industry groups, like the National Cutting Horse Association, are located here as well. In 1996, seven of the 40 National level horse shows held across the U.S. were held in Texas,^{1,2} more than any other state. The third largest AQHA show in the nation occurs annually in Texas during the Houston Livestock Show and Rodeo.³ Another major AQHA show listed in the top 20 is held during the Ft. Worth Livestock Show and Rodeo. The second largest APHA show in the country takes place in Nacogdoches, Texas.⁴ In fact, both AQHA and APHA approve more shows in Texas than in any other state. Texas is also home for five race tracks, three of which are very new Class I tracks. There are lots of horses in Texas, and many people utilize them for a variety of purposes. Unfortunately, people with limited exposure to agriculture and the horse industry may not recognize the role that horses play in the lives of Texas citizens. Furthermore, the impact of the horse industry on Texas is often perceived as insignificant by people who have little first hand knowledge of this industry that revolves around the use of horses. Thus, this study was conducted to quantify the size, scope and economic significance of this very important industry in Texas. The study is the culmination of in-state survey work and reviews of several other studies of the horse industry. The results reported herein are part of the Texas Horse Industry Quality Audit Initiative.

EQUINE POPULATION

There are apparently, approximately 1,066,800 equines in Texas.⁵ That population estimate is derived from a 1993 report that estimated the Texas equine population starting with hard data obtained from mandatory vaccination of horses in 1972 to avoid an epidemic of Venezuelan Equine Encephalomyelitis. The adjustments due to annual growth are based on data that include both registered and unregistered equines, thereby accounting for horses that are not likely represented in other, more recent estimates.²

Not all breeds are able to maintain current figures on new registrations and total horse count. However, the larger associations maintain a database of information, which permits a closer look at Texas horses and how this state compares with other states. Shown in Table 1 are data obtained from 12 breeds reflecting calendar year 1996, and the total estimate for both registered and unregistered horses in Texas.

Table 1. Texas horse population by breed or type.*

Breed/Type	No. of Horses
American Quarter Horse ³	449,579
American Paint Horse ⁴	39,488
Arabian (Pure & Half) ⁶	31,160
Appaloosa ⁷	31,115
Thoroughbred ⁸	18,932
American Miniature ⁹	8,000
Galiceno ¹⁰	5,000
Saddlebred ¹¹	2,403
Morgan ¹²	1,407
Standardbred ¹³	50
Clydesdale ¹⁴	50
Haflinger ¹⁵	26
Grade, Other Breeds, Donkeys & Mules ⁵	<u>479,590</u>
TOTAL	1,066,800 horses

* Numbers were not available from associations affiliated with Donkeys and Mules, Percheron, Belgian, Pony of America, Fox Trotter, Andalusian, Peruvian Paso and Hanovarian. Other Breeds not mentioned were either not contacted or failed to respond.

Texas leads the nation in number of registered American Quarter Horses, American Paint Horses, Appaloosas and American Miniature Horses and is second only to California in Arabians. In 1996, new registrations of American Quarter Horses were 2.25 times that of the second leading state, Oklahoma, and 3.25 times that of the third leading state, California. Texans registered 1.6 times more American Paints than California, the second leading state in total population of registered American Paint Horses. There are 1.35 times as many American Miniature Horses in Texas as in California and 2.75 times as many as in Florida. In the Thoroughbred (Tb) industry, only California stands more stallions, and 10% of the nation's Tb stallions stood in Texas for the 1995 year, breeding 7% of the mares bred across the United States. A total of 626 Tb stallions bred 4,070 mares in Texas, placing Texas second in the nation for Tb breeding.

There are few indications, if any, that the Texas horse population is not growing. For example, the AQHA reports 15,980 new Texas registrations in 1996, which is 2.3 times more than second-ranked Oklahoma. Furthermore, 1996 transfers of American Quarter Horse ownership to Texas were 1.4 times more than observed for the nearest contender, Oklahoma. Texas is among those 39 states with an increase in American Quarter Horses from 1995 to 1996. And while APHA records credit California with the most APHA memberships for 1995, the 1996 membership records indicate Texas is now the leading state for APHA membership.

Among the top 4 breeds listed in Table 1, Texas is home for 15.5% of those breeds' nationwide horse count. Since those 4 breeds make up 51% of the total estimated equines in Texas, it is logical to conclude that 15% of the nation's 6.9 million equines reside in Texas. Using

that figure provides an estimate of 1,035,000 equines, which is very similar to the previously mentioned population of 1,066,800 estimated from the horse industry within the state.

REASONS FOR HORSE OWNERSHIP AND USE

Horses are part of the social fabric of Texas. It has been common knowledge for years that they make important contributions to the livelihood and well-being of people. A recent eight county survey¹⁶ focused on some of the reasons why Texans own and use horses. A 34% response to the survey was achieved and 91% of respondents cite more than one reason for having horses. In fact, 61% list four or more reasons (see Table 2). Ownership and use of horses contributes to the quality of life for 63% of respondents.

Table 2. Reasons for ownership and use of horses by respondents in an eight county survey.¹⁶

<u>Reason</u>	<u>%</u>
Improved Quality of Life	63
Relaxation/Decreased Stress	61
Means of Physical Fitness	35
Enjoy Competition	74
Value for Children	50
Buy/Sell Business	26
Train for Profit	13
Breeding/Raising Foals	44
Other	9

Over half of all respondents identify quality of life, relaxation/stress management and competition as multiple reasons for their horse involvement.

Without exception, every respondent that identifies quality of life as a reason for owning horses further characterizes reasons for horse involvement. Of those identifying horse ownership and use as a quality of life issue, 79% also list competition, and 76% also list stress reduction/relaxation as reasons for owning horses. One-half identify physical fitness as a reason for horse ownership and use. Among those identifying quality of life, 62% indicate that horses are a useful vehicle for youth development. One-half of respondents associate breeding mares and raising foals with quality of life. In fact, a breakeven analysis study of Texas breeding farms suggests that many breeding operations are motivated by factors other than profit.¹⁷ Only 29% link the buying/selling business with quality of life, and even fewer (15%) associate training horses for profit with quality of life.

Across all respondents, 85% identify both an interest in competition and value for children, verifying the well known fact that youth like to compete with horses in a variety of activities. In the Texas 4-H horse program alone, 9,300 4-H horse project members actually ride

or use horses and other equines, and 10% of them qualify for and show in the State Finals in Abilene. Nationwide, 4 of the 15 largest AQHA youth shows are held in Texas³, and there are 2.4 times as many AQHA youth members in Texas as in California. Furthermore, 73% of all respondents identify both competition and relaxation/stress reduction.

All but one of the survey respondents who use horses for leisure riding are also involved in some type of competitive activity. This is consistent with the AHC report¹ that significant crossover exists between competitive and recreational or leisure horse involvement. According to the APHA's subscriber survey¹⁸, 74% show American Paint horses in competition, mostly as amateurs.

Of those people whose reasons for horse involvement include breeding mares and raising foals, 42% also identify buying/selling of horses as an area of industry involvement.¹⁶

The ownership, care, management and use of equines by survey respondents is characterized as 40% recreational, 15% recreation/business combined, 30% secondary business and 15% primary business. Results of that survey¹⁶, combined with AHC findings^{1,2} and an earlier population estimate study⁵ profile Texas owners by horse use or intended purpose as shown in Figure 1.

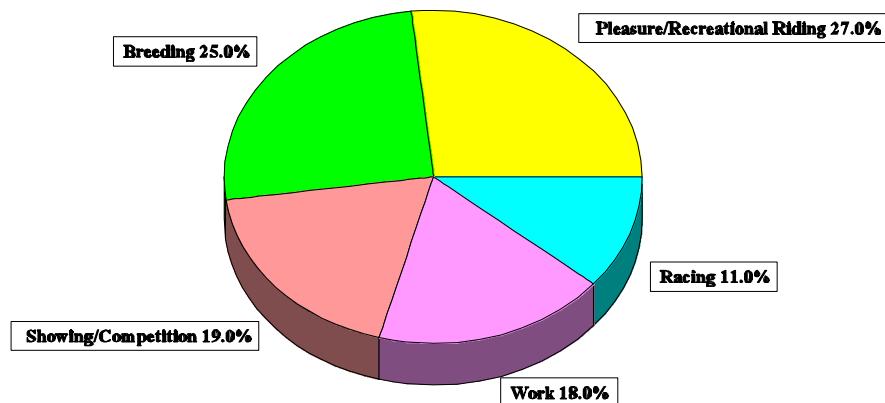


Figure 1. Use or Purpose of Texas Horses

In the eight county survey¹⁶, performance horses represent 16 different categories of activity or competitive use. A closer evaluation of riding horse owners indicates that 35% of performance horses are used for competitive, cattle-related events and ranch or feedlot work. In fact, there is significant crossover because all but three of respondents who use horses for ranch

or feedlot work are also involved in some type of competition. Almost 12% of horses are used for various hunter-type activities and 22% are involved in western show events or activities. Use of performance horses also includes leisure riding, endurance, competitive trail, driving and speed events. In Abilene, Texas alone, the Taylor County Expo Center¹⁹ hosts some 66 horse related activities annually that cover 165 days. With an estimated impact of \$20.2 million to the economy, those events serve horse people with cutting, roping, timed event, western show and english show horses. In Texas, as with the nation as a whole, the multiple use of horses across the recreation, competitive and work categories is evident.

According to the AHC¹, horseowners in the U.S. have an average of 3.50 horses. However, the AHC focus study on Texas² suggests that owners are equivalent to 27% of the total number of horses (3.7 per owner). Thus, with just over a million horses, Texas horse owners total 288,839. Median income for horseowner families across the U.S. is \$60,000 annually.¹ From another survey¹⁶, median income for Texas horse owning households is somewhat similar, \$68,500. Total annual income from any/all sources for responding horse owners is quite variable (Figure 2). However, 15% report annual incomes in the \$20-40,000 range, which is similar to previous figures from AQHA's member survey.²⁰ Total annual income in excess of \$100,000 is reported by 23% of respondents, compared to 21% reported for the nation by the AHC.¹

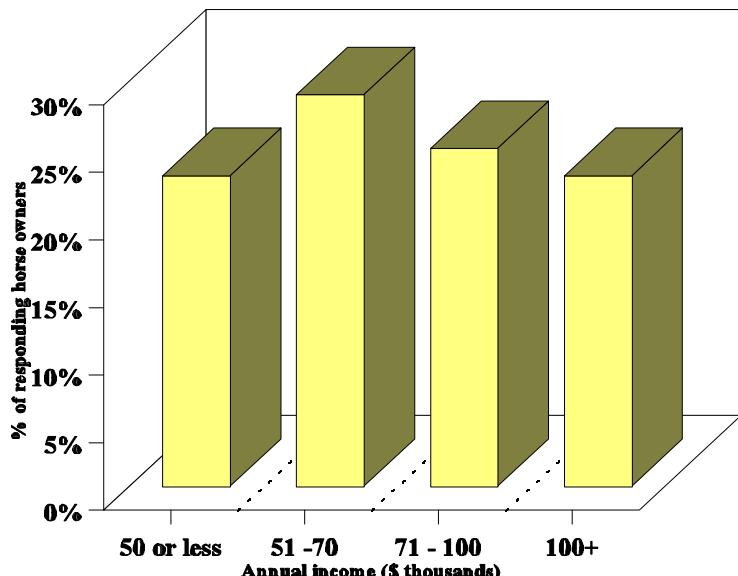


Figure 2. Total annual income from any/all sources by horse owning respondents in an eight county survey.¹⁶

Among respondents to a Texas Tb industry survey⁸, those with total income of \$49,000 or less equal 23.5%, almost identical to the eight county survey.¹⁶ Tb owners with income in the \$50,000 to \$99,000 range are lower than other horseowners in general, primarily due to a larger percentage (45.5%) reporting incomes of \$100,000 or more.

One-third of respondents representing multiple breeds indicate absolutely no contribution from horses to their total yearly income (Figure 3). Another one-third report that 10% or less of yearly income is derived from horse involvement.

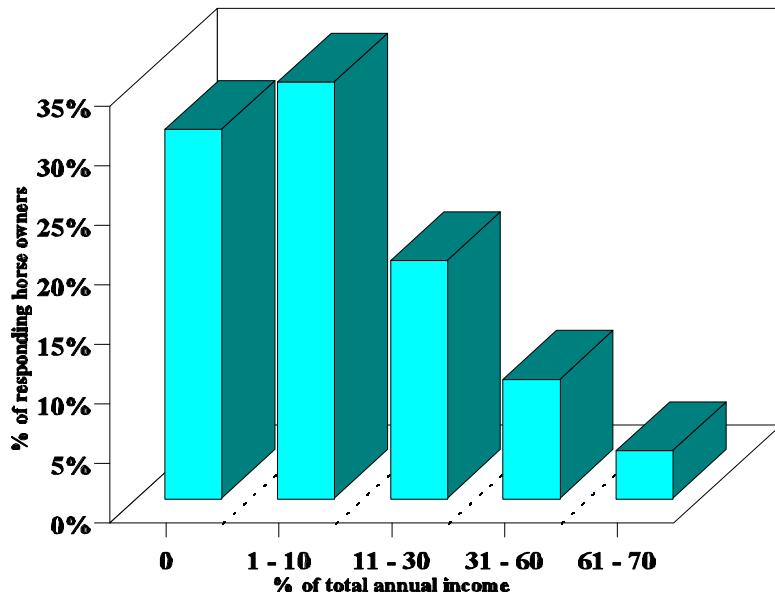


Figure 3. Percentage of total yearly income derived from horses by respondents to an eight county survey.¹⁶

INDUSTRY PARTICIPANTS

The AHC reports include nationwide participation¹ and statewide involvement² by horseowners, non-owner service providers and employees working for owners, service providers, racetracks and horse show groups, as well as family members and volunteers. Based on the internal estimate of the horse population, the AHC ratios indicate that 953,983 people in Texas fit the classification of a horse industry participant. This is expressed on a percentage basis by category of participation in Figure 4.

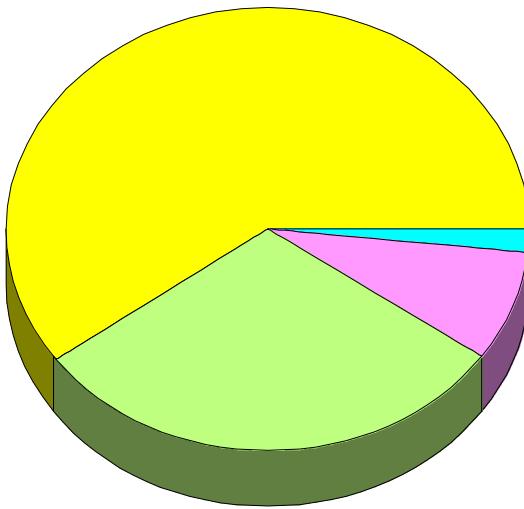


Figure 4. Participation in the Texas horse industry.

The adjusted estimates reflect calculations from data in the AHC report¹ and based on over a million horses.⁵ Percentages and additional explanation are in Appendix Table 1. The number of family members and volunteers may be a low estimate. It is based on 1.97 family members/volunteers per owner. However, AQHA³ and APHA⁴ report 3.0 and 2.5 members per household, respectively and those two breeds represent 46% of Texas horses. Either way, total participation in the horse industry basically reflects one participant of some kind for every horse in the state.

Based on percentages from the AHC survey² for participants in different areas of the Texas industry, 15% of participants take part in racing activities. Participation in showing and recreational horse use are similar, 40% and 38%, respectively.

Participants in the Texas horse industry include 79,597 employees that work full-time, part-time, contractual and seasonal. Using the AHC's¹ percentage (54.6%) for conversion of all employees to a full time equivalent (FTE), the Texas horse industry provides 43,459 direct FTE jobs. Employee numbers by area of horse industry involvement are shown in Table 3. Additional information is in Appendix Table 2.

Table 3. FTE Employment Distribution Across the Texas Horse Industry

<u>Employer</u>	<u>#FTE Jobs</u>
Horse Farms and Racehorse Owners	34,578
Boarding/Training (Race & Non-Race)	4,096
Shows	1,973
Race Tracks	2,812
Total FTE Employees	43,459

This likely underestimates the employment related directly to horse shows, simply because the two most popular breeds in Texas annually have more shows approved by the national offices

than any other state.^{3,4} Furthermore, the state's size and number of counties suggest a higher number of local, non-association approved shows than other states. Horse farms provide over half (52.6%) of all FTE equine-related jobs in Texas. Employment by boarding/training facilities for non-racing horses is essentially equal to that of similar facilities for race horses.

Nationwide, employment in the horse industry amounts to 77% of employment in the motion picture industry. It is 1.4 times higher than railroad transportation employment and 1.6 times the number of people in radio and television broadcasting.²

In Texas, the horse industry employs 64% as many people as the feedlot, range and ranch-fed cattle industry. Horse industry employees are 2.9 times greater than the total employed by the poultry/egg, sheep/lamb/goat and hog/pig/swine industries combined. The horse industry employs 94% as many people as the cotton, feed grain and food grain industries combined.²¹

Employment in the Texas horse industry does not even begin to compare with retail or wholesale trade, construction or oil mining industries.²¹ Furthermore, it employs less than half of those employed by industries such as industrial machinery, electrical equipment and banking. However, the total horse industry employee estimate compares with several other major industries as shown in Table 4.

Table 4. Similarities in employment by certain Texas industries.

Industry	# of Employees
Air Transportation	80,945
Utilities	60,549
Landscape & Horticultural Services	53,124
Rubber Products	47,694
Agricultural, Forestry, Fishery Services	46,079
Wood Products	44,675
Horse	43,459
Stone, Glass & Clay	40,389
Transportation Services	40,005
Scientific Instruments	38,883

According to calculations made from AHC data², every direct industry job generates an average of 2.39 indirect and induced jobs. Those jobs represent 70.5 % of all jobs and total 103,867. Indirect FTE jobs are created from spending by horse industry suppliers while induced FTE jobs are those that come about because of spending by direct industry employees. By adding direct, indirect and induced jobs, the horse industry impacts Texas employment by either providing or generating 147,326 jobs.

INVESTMENT BY HORSE OWNERS

Barns and Land

According to the Texas survey, 83% of horseowners have barns, while 11% board their horses, and the remaining 6% keep horses either on land without a barn or at somebody else's facility.¹⁶ Consequently, there are an estimated 239,000 barns in Texas that are associated with horse ownership and use of some kind. Reported ranges in barn values are in Table 5. Median barn value is \$13,000.

Table 5. Ranges in barn values by owners responding to an eight county survey.¹⁶

<u>% of Barn Owners</u>	<u>Range in Barn Values</u>	<u>Average by Group</u>
29%	\$500 - \$5,000	\$3,380
20%	5,500 - 10,000	9,300
16%	13,000 - 18,000	16,000
9%	20,000 - 25,000	22,750
16%	30,000 - 55,000	44,100
10%	55,000 - 500,000	237,000

Values of individual barns by survey respondents range from \$500 to \$500,000. The two most commonly reported values for horse-related barns are \$5,000 (11%) and \$10,000 (16%) for owners of barns. Of those people who have barns for their horses, the inventory value equals \$3,787 per horse. Thus, the total inventory value of horse barns and holding facilities in Texas is \$3.36 billion with an average barn value of \$14,012. In Texas, roughly 886,890 horses are owned by households that have barns of some type. Owners report spending 3% of barn value annually on repairs and maintenance.

Approximately 11% of owners board their horses at some facility for a fee¹⁶, meaning that about 117,348 horses are in boarding facilities. The remaining 6% of owners keep 64,000 horses on land without a barn or else at somebody's facility without a direct fee for boarding.

Texas horse owners keep horses on land that is owned and/or leased ranging from one acre to literally thousands of acres. Suburban horse keeping on small acreage is quite evident throughout the state, representing the use of horses for recreation, competition and even small breeding enterprises. However, there are numerous ranches in Texas that keep and breed large numbers of horses. For example, AQHA reports²⁹ that the Four Sixes (6666) Ranch keeps a remuda of 240 geldings for use in the management of 8,500 head of cattle. The W.T. Waggoner Estate, headquartered in Vernon, Texas runs 12,000 cows on over a half million acres with a remuda of 150 ranch geldings. With such variation in land holdings, it is difficult to assess the acreage devoted to horses. Many owners also have cattle, sheep and goats. For instance, among Thoroughbred owners alone, 54% also own cattle and 10% own sheep or goats.⁸ The multi-specie ownership often results in larger reported acreage than might be expected.

Trucks and Trailers

All but one of the respondents in the eight county survey report owning a towing vehicle and trailer.¹⁶ Average prices and end-of-year 1996 values, determined either by actual or estimated depreciation, are shown in Table 6.

Table 6. Average purchase prices and end-of-year values for towing vehicles and trailers reported by horse owners in an eight county survey.¹⁶

<u>Item</u>	<u>Average Purchase Price</u>	<u>Average End Of Year Value</u>
Towing Vehicle	\$22,948	\$18,037
Horse Trailer	<u>8,729</u>	<u>7,660</u>
Total	\$31,677	\$25,697

Original purchase prices of towing vehicles range from \$1,800 for a used pickup to \$42,000 for a new vehicle. Average price of \$22,948 is similar to \$21,646 reported in another survey.¹⁸ Initial purchase prices of trailers range from \$150 for a used trailer to \$45,000 for a new trailer. Average trailer price of \$8,729 is comparable to \$9,340 in other survey work.¹⁸

Using end-of-year 1996 values supplied by horse owners for vehicles and trailers, the total inventory value of towing vehicles and trailers in Texas is determined estimating that 98% of horse owners have such equipment.¹⁶ The inventory value of towing vehicles (pickups, trucks, suburbans, etc.) totals \$5,091,399,225. Obviously, not all of that inventory can be attributed entirely to the horse industry, because such vehicles often are used for multiple purposes. The inventory value for all Texas horse trailers is \$2,162,228,645. Combined inventory value is \$7,253,627,870.

Tack and Related Equipment

The average horse owning household has invested \$7,858 in saddles, bridles, halters, saddle pads, blankets/sheets, brushes, protective boots/leg wraps and chaps.¹⁶ It would be difficult to represent this on a per horse basis, because many items have been acquired over numerous years and several horses. Even so, without determining depreciated value, the new price inventory value of tack for all horse owning households is \$2,395,118,400. This translates into an average investment of \$2500 per horse industry participant. Furthermore, the average horse owning household spends \$1,518 annually on hats, boots and other horse related apparel.

Table 7 contains the overall inventory value of specific investments by horse owners in Texas. Prices or value for land, related equipment such as tractors and other equipment are not included.

Table 7. Statewide inventory value of selected investments by horse owners in an eight county survey.¹⁶

<u>Item</u>	<u>Value (in billion \$)</u>
Barns	3.4
Towing Vehicles	5.0
Horse Trailers	2.2
Tack & Related Equipment	<u>2.4</u>
Total	\$13.0

It is worthwhile to again mention that almost 39% of total inventory value is for towing vehicles that often serve purposes other than horse industry activities. However, such vehicles probably are purchased because of horse industry involvement and contribute to the quality of life perspective regarding horse ownership and use. Individual values suggest that horse owners spend money on barns according to the number of horses being kept. However, purchases for trucks and trailers do not appear to be very closely related to the number of horses kept. The variation that is evident in values for individual barns, trucks, trailers and tack appears consistent with the variation in annual income of horse owning households.

ANNUAL HORSE KEEPING COSTS

The process of simply maintaining horses generates significant economic activity. Average annual maintenance costs determined in the Texas survey¹⁶ are in Table 8.

Table 8. Average annual expenditures per horse for the 1996 calendar year by respondents of an eight county survey.¹⁶

<u>Expense Item</u>	<u>\$ Amount</u>	<u>Percent of Total</u>
Grain or concentrate	453	23
Hay or grazing	388	20
Hoof care	277	14
Preventative health care	163	8

Emergency health care	193	10
Stall bedding	146	7
Fly control	50	3
Facilities repairs	114	6
Miscellaneous	<u>179</u>	<u>9</u>
Total	\$1,963	100

The average cost of \$1,963 per year is almost identical to \$2,000 reported by the AHC.¹ Nutrition represents 43% of total annual cost and is typically the largest annual expenditure. Emergency and preventative health care combined represent 18% and ranks second, just above 14% for hoof care. Health care expenditures reported in Table 8. are within \$15 of medical-related expense reported for yearlings in earlier work.¹⁷ The ranking of expenditures was similar to results of a recent horse farm survey and a previous study.^{22, 23}

Many horses in Texas are kept by owners who spend only a fraction of the costs identified in the previous table. Without a doubt, there are horses kept on pasture year round, that are never stalled and bedded, seldom if ever receive hoof care and may or may not be on a health care schedule of any kind. Conversely, there are owners who spend up to 10 or 15 times the average annually for horses that are receiving intense, daily management in strict confinement and semi-confinement environments. Furthermore, it is logical to expect that some owners will spend more for some items than others, with the total combined cost of all items being similar.

When expressed statewide, the business of feeding horses is \$897,178,800 annually. Veterinary services and related health care products total \$379,780,800. Costs for keeping horses trimmed or shod translates into \$295,503,600 for all Texas horses. All totaled, the economic activity generated just to maintain horses in Texas is \$2.1 billion per year.

EXPENDITURES RELATED TO TRAVEL

Results of two major breed association reports^{3,4} show horse owning households have either 2.5 or 3.0 members per household. And the AHC reports^{1,2} indicate from 3.5 to 3.7 horses/owner. Therefore, it is not surprising that the average Texas traveler transports 2.5 horses on a typical trip.¹⁶ The average survey respondent claims 24 horse related trips per year averaging 238 miles and lasting 2.5 days with 1.21 overnight stays per trip. On average, there are 3 persons going on each trip. Annual daily expenditures while away from home are in Table 9. Of all respondents, 92% indicate that they travel with horses to a variety of competitions, activities and other horse-related gatherings.

Table 9. Average daily trip expenditures per horse owning household in an eight county survey.¹⁶

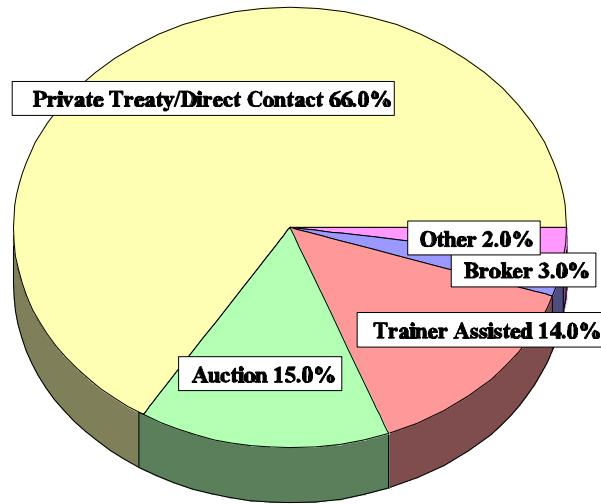
<u>Item</u>	<u>\$ Amount</u>	<u>Percent of total</u>
Entry fees	148.90	30
Motel	74.20	15
Stalling	66.00	13
Food	58.10	12
Fuel	46.10	9
Stall bedding	16.00	3
Dry cleaning	11.40	2
Other	<u>77.70</u>	<u>16</u>
Total	\$498.40	100

The 16% for other expenditures largely reflects unplanned expenses or special purchases such as repair, extra equipment, tack, clothing or entertainment. This prioritization of trip expenses reflects a ranking similar to other survey information gathered at a competitive equine event.²⁴

Figuring only activity associated with showing and racing, almost 100,000 horse owners along with almost 200,000 family members and volunteers spend \$3.0 billion per year and cover more than 550 million miles attending competitive events with almost a quarter of a million horses.

VALUE OF HORSES AND CASH RECEIPTS

The 1996 survey¹⁶ contains information on the purchase and sale of horses in 1994, 1995 and 1996. Of total respondents, 29% report no purchases of horses and 24% report no sales of horses during that time period. However, 19% indicate purchase of one horse and 52% report purchasing two or more horses. Interestingly enough, 52% list the sale of two or more head, while 24% report the sale of one horse in that three year period. This level of activity is supported by information from other sources as well. In the APHA's 1995 subscriber survey¹⁸, more than 50% report a horse purchase within the previous year. In 1996, the AQHA report³ shows that 61% of transfers involving Texas horses are ownership changes between Texas owners. Another 14.5% of transfers are to a Texas owner from out-of-state. Transactions take place using several marketing avenues as depicted in Figure 5.



horses by respondents to an eight county survey.¹⁶

Figure 5. Methods used for buying and selling

Similarity between typical purchase and sale prices of horses is previously documented in a survey conducted seven years ago.²⁰ That similarity is confirmed by recent survey information¹⁶ pointing to the fact that horses are bought and sold for many reasons other than attempted profit.

Individual prices for horses being purchased¹⁶ range from \$400 to \$50,000 and average \$5,249. Individual prices for horses sold range from \$450 to \$35,000 and average \$5,288. The overall average price for horses changing hands is \$5,268, very similar to the average value of \$5,661 for American Quarter Horses.³ These values differ only slightly from a per head value of \$5,195 from respondents to a Thoroughbred owner survey.⁸ It is interesting that values from those three sources vary by only \$466 per horse. Additionally, they are only slightly higher than an average value of \$4,600 reported in APHA's subscriber survey.¹⁸ These are among the figures used in determining values and cash receipts shown in Table 10. To arrive at an estimated value for grade horses and other breeds, an average of \$2,336 per head results from purchase/sale prices, excluding American Quarter Horses, in the eight county survey.¹⁶

Table 10. Values and percentages used to estimate total value and 1996 cash receipts for Texas horses.

Breed or Type	\$Value (per head)	Total \$ Value	% Transfers	Total Transfers	Cash Receipts
Quarter Horse	5,661	2,545,066,719	7.4	33,269	188,335,809
Paint	4,660	181,644,800	12.4	4,897	22,526,200
Arabian	5,268	164,150,880	7.8	2,430	12,801,240
Thoroughbred	5,195	98,351,740	7.4	1,401	7,278,195
Other Registered	5,268	253,132,668	7.4	3,556	18,733,008
Grade/Others	2,336	956,903,296	7.4	30,598	71,476,928
Slaughter	575	<u>38,009,800</u>		<u>66,104</u>	<u>38,009,800</u>
Totals		\$4,237,259,903		\$142,255	\$354,161,180

Percentage transfers for Quarter Horses in Texas, and for Paints and Arabians nationwide, range from 7.4 to 12.4%. Transfer of ownership percentage for Quarter Horses and Arabians are quite similar. The total cash receipts are calculated using the more conservative figure of 7.4% transfers for those horses on which exact activity information is unavailable.

The determination of cash receipts for horses is comparably more difficult than for other livestock simply because such a high percentage of horses sell via private treaty. According to the Texas survey, 13% of individual horse transactions are for \$1,000 or less and another 13% are for \$10,000 or more.¹⁶ In all, 11% of total cash receipts reflect only a one-time transfer of ownership for slaughter horses²⁵, when in fact such horses often sell two or more times in a short time frame. Furthermore, the average purchase/sale price of \$5,268 applied to some 6,000 head of horses does not reflect that percentage of those show/race horses changing ownership for a price exceeding \$50,000. Values for Thoroughbred horses are likely low, considering that slightly more recent sale averages for yearlings and two-year-olds in training are \$8,325 and \$15,558 per head, respectively.²⁶ Other recent indicators suggest that the average prices used to calculate horse value and cash receipts are quite conservative. For instance, the overall sale average for Paint horses at the 1997 World Championship Sale is \$9,634, an increase of 45% compared to the previous year.²⁷

For 1996, cash receipts involve the sale of 142,255 horses for well over a quarter of a billion dollars. Table 11 provides a comparison of receipts from sales of horses with other livestock.

Table 11. Cash receipts for 1996 by Livestock Commodity in Texas.²¹

Commodity	Cash Receipts (\$1,000's)
Cattle & Calves	5,331,297
Broilers	726,264
Horses	354,161
Hogs	93,663
Sheep & Lambs	75,501

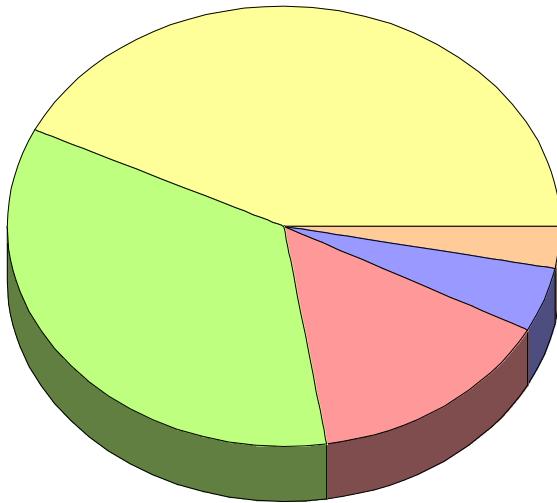
* All values except for horses, are from Texas Agricultural Statistics 1996.

Cash receipts estimated from sales of horses are 2.1 times the combined total for hogs, sheep and lambs.²¹ They represent 49% of total receipts for broilers. The Texas horse industry's cash receipts are 7% of the total for cattle and calves.²¹ Of the highly visible crop commodities, estimated cash receipts from sales of horses are 22% of the total for cotton lint and seed. Horse receipts rank below corn and sorghum but are 1.1 times total receipts for wheat in Texas. In Texas, estimated cash receipts from sales of American Quarter Horses alone are 2.0 times greater than for hogs, 2.5 times greater than sheep and lambs and 1.1 times greater than hog and sheep receipts combined.

ECONOMIC IMPACT OF TEXAS HORSE INDUSTRY

The AHC nationwide estimate¹ of the horse industry's impact on the Gross Domestic Product (GDP) provides methods for calculation of percentage contributions attributable to direct spending, indirect effects and induced effects (Appendix Table 3). Use of those data makes it possible to develop an overall estimate of the total statewide impact for Texas.

Total direct effects¹ represent 23% of overall economic impact and equal an estimated \$3.8 billion annually (Figure 6). Direct effects reflect the value of goods and services produced and represent purchases made directly by the horse industry. The two largest contributors to the direct impact¹ are purchases of feed, tack, etc. (18.3%) and boarding/training fees (18.2%). According to the AHC report², among racing, showing and recreation, the largest direct contribution to overall statewide impact comes from showing horses. However, the indirect and induced effects from racing are 3.19 times the direct effect, compared to 2.34 times for showing.²



**Figure 6. Estimated
direct, indirect and
induced contributions of horse industry to total statewide impact.**

Total indirect effects represent 35% of impact and are estimated to be \$5.8 billion annually in Texas. National figures put indirect effects at 2.32 times the direct impact from feed, tack, supplies, boarding, training, capital and overhead expenditures.¹ These indirect effects are reflective of purchases made by those who are industry suppliers, along with their suppliers.

Induced effects represent 43% of the total impact estimate and equal \$7.2 billion annually. Induced effects are 9.24 times the direct spending associated with employee pay and owner profit distribution. The induced effects represent spending that occurs by horse industry employees.¹

Nationwide, the AHC report² attributes a \$16,246 contribution per horse to the total economic impact on the Gross Domestic Product. Using the nationwide contribution per horse and basing that on over 1 million horses, the economic impact is \$17.3 billion. A closer look at the AHC's report on Texas² attributes a contribution of \$10,403 per Texas horse to the total impact of horses on the GDP. Using that statewide contribution per horse, the impact is estimated at \$11.1 billion. However, by crediting Texas with 15% of the nation's horses, as discussed previously, each horse contributes \$15,748 to total impact. Based on over a million horses, the total impact of the horse industry to Texas is \$16.8 billion. A more precise estimate of the economic impact of the horse industry in Texas is not possible without a highly detailed and costly statewide study. Nevertheless, based on all available data, it appears safe to conclude that the total economic impact of the Texas horse industry ranges from a conservative low of \$11.1 billion up to \$17.3 billion annually.

SUMMARY

The Texas horse industry is significant in the lives of people who keep, use and enjoy horses, and it makes a noticeable contribution to the economy of the state. Almost one million participants are involved in various aspects of an industry revolving around just over one million horses. Contributions that horses make to the quality of life for Texas citizens are well documented. The Texas horse industry generates or provides over 140,000 full-time-equivalent jobs, yet many people participate simply for the pleasure and recreational benefits obtained from involvement with horses.

Over a quarter of a million households have billions of dollars invested in horses and horse related equipment. Travel with Texas horses creates well over \$3 billion in travel related spending, and the enjoyment of competition has a bigger direct effect on the economic impact than racing alone, or on just the pure recreational use of horses. However, indirect and induced effects from racing make a comparably higher contribution to total impact.

Texas horses play many roles and many have multiple use for competition and recreational or leisure riding. The demand for horses is met, in part, by the use of over 200,000 horses for breeding purposes. Part of a strong Texas heritage exists yet today with the continuing use of horses for field work, ranch work and feedlot duties. And even though Texas has long been home for some well known race horses, this state's presence in the total racing industry continues to grow. Texas citizens at all socio-economic levels own horses at a wide variety of prices. It all adds up to an industry with a multi-billion dollar impact on the economy and significant impact on the lives of many Texas citizens.

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Appendix Table 1. Percentages of horse industry participants calculated from AHC data for the nation and for Texas and used to estimate statewide participants based on 1,066,800 horses.*

<u>Participants</u>	<u>Nationwide (%)</u>		<u>Texas (%)</u>
	<u>Of All Horses</u>	<u>Of All Participants</u>	<u>Of All Horses</u>
			<u>Of All Participants**</u>
Horse Owners	28.384	27.731	27.079
Service Providers	2.168	2.118	1.283
Employees of Owners	6.868	6.710	6.445
of service providers	.581	.568	.309
of racetracks	1.007	.984	.369
of shows	.520	.508	.339
Family Members & Volunteers	62.826	61.381	53.614
Total AHC Numbers for Horses and Participants	6,900,000	7,062,500	678,000
			606,300

* According to AHC, every Texas horse industry participant is associated with 1.118 head of horses. Based on 1,066,800 horses, that translates into 89.424%. Therefore, there are an estimated 953,983 Texas participants.

** Percentages multiplied by total participants produces numbers shown in figure 4.

*** Based on figures available through the Texas Racing Commission,²⁸ this percentage is low and would actually be .537% on a non-FTE basis.

Appendix Table 2. Percentage employment calculated from AHC data for various areas of the horse industry.

<u>Employment Source</u>	<u>% Nationwide</u>	<u>% Texas</u>
Horse Farms	52.585	NA
Boarding/Training (Race & Non-Race)	9.424	NA
Shows	2.806	4.541
Racetracks (plus Simulcast)	10.723**	4.936**
Racehorse Owners	24.461*	NA

* Based on 43,459 FTE jobs as shown in Table 3, this 24.461% equals 10,631 jobs provided by racehorse owners. This is quite similar to 10,253 jobs on record with the Texas Racing Commission²⁸ in October, 1997. In Table 3, jobs related to racehorse owners are included with jobs related to horse farms.

** These percentages appear to underestimate race track jobs. The Texas Racing Commission²⁸ lists 5,152 race track related employees, and that figure was used in Table 3.

Appendix Table 3. Percentage contributions of specific direct, indirect and induced effects calculated from AHC nationwide data, and the resulting impact of the horse industry on Texas (\$ are millions).

	<u>% of Total Direct</u>	<u>Direct Effect(\$)</u>	<u>Indirect & Induced Effects(\$)</u>	<u>% of Total Impact</u>	<u>Total Statewide Impact(\$)</u>
Horse Related Goods	18.3	697		4.14	
Horse Related Services	18.2	692		4.11	
Overhead	14.8	564		3.35	
Capital Expenditures	14.3	545		3.24	
<u>Total & Indirect</u>		2498	5805		8303
Employee Compensation	16.9	644		3.82	
Owner Profit Distribution	3.6	138		.82	
<u>Total + Induced</u>		782	7210		7992
Land and Taxes	13.7	<u>520</u>	<u>_____</u>	3.09	<u>520</u>
Totals		\$3800	\$13015		\$16,815

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of the **Equine Nutrition and Physiology Society** and presented at the 15th society meeting in May, 1997.

Eight County Extension Agents participated in phase 2: **Wes Allison** - Walker County, **Gary Antilley** - King County, **Robert Devin** - Randall County, **Jerry Jackson** - Wood County, **Greg Kaase** - Brazos County, **Earnest Kiker** - Midland County, **Robert Roark** - Andrews County and **Doug Shores** - Harris County. A survey was developed and then distributed to horse owners. With a 34% response, data was gathered on horse ownership and use representing 12 breeds of horses. Results were also published in the proceedings of the 15th Equine Nutrition and Physiology Society. Portions of that study were also published in the December, 1997 proceedings of the **43rd Annual American Association of Equine Practitioners Convention**.

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