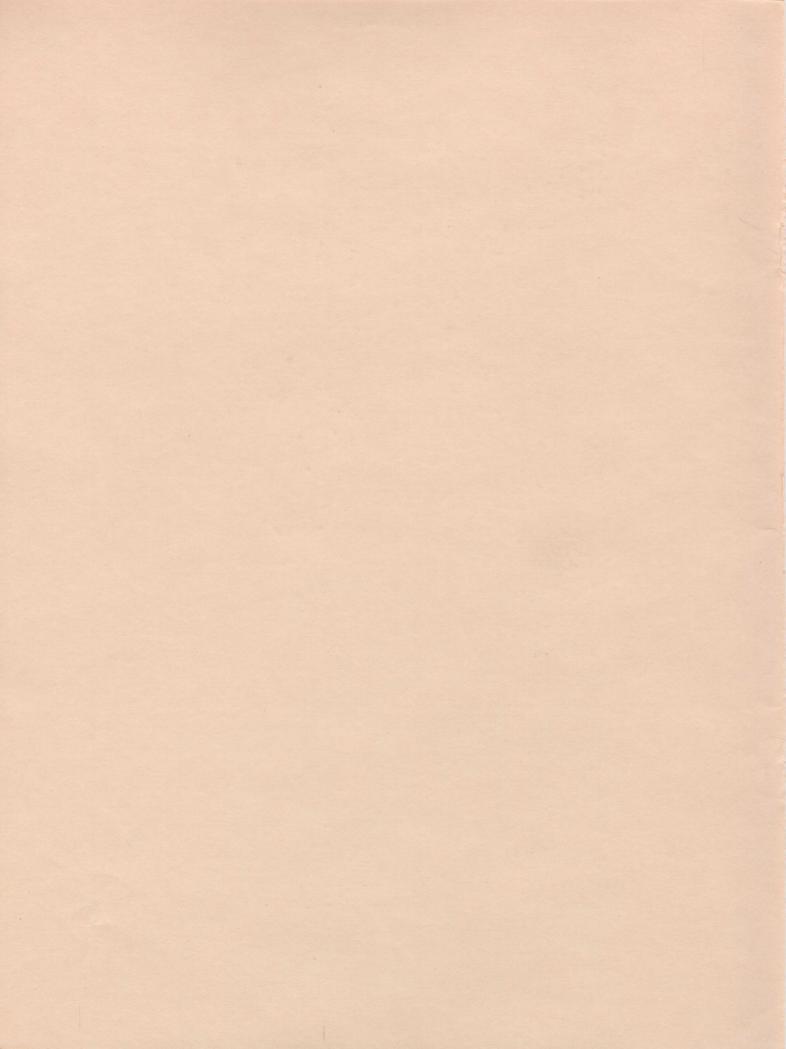
ORGANIZATION, IMPACTS, AND PROSPECTS FOR ADVANCEMENT AND PROMOTION OF BREEDING AND RAISING OF QUARTER Horses IN ALABAMA

AGRICULTURAL ECONOMICS SERIES NO. 41
DEPARTMENT OF AGRICULTURAL ECONOMICS AND RURAL SOCIOLOGY
ALABAMA AGRIUCLUTRUAL EXPERIMENT STATION
AUBURN UNIVERSITY AUBURN, ALABAMA
LOWELL T. FROBISH, DIRECTOR
DECEMBER 1991



ORGANIZATION, IMPACTS, AND PROSPECTS FOR ADVANCEMENT AND PROMOTION OF BREEDING AND RAISING OF QUARTER HORSES IN ALABAMA*

DECEMBER 1991

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*REPORT SUBMITTED IN FULFILLMENT OF RESEARCH AGREEMENTS WITH
THE AMERICAN QUARTER HORSE ASSOCIATION
THE BIRMINGHAM RACING COMMISSION AND
THE ALABAMA HORSEMEN'S RACING ASSOCIATION

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ABSTRACT

Quarter Horse production, training, and related activities make major contributions to Alabama's economy. This study provides an assessment of the socioeconomic impact of the Quarter Horse industry in Alabama. Our estimates and overview of the industry are based on telephone and personal interviews with Quarter Horse breeders, trainers, and owners. We consulted previous literature on the subject and also obtained information from knowledgeable Quarter Horse veterinarians, trainers, show participants, and others involved in the industry.

In 1989 the American Quarter Horse Association (AQHA) had 34,543 Quarter Horses registered in Alabama. Approximately 4,500 of these are used for showing; 300 are used for racing; and the remainder are used for farm and ranch uses, rodeos, breeding stock, and recreation. Our estimates indicate that, on the average, show horses require about \$11,005 annually per horse for care, maintenance, and other horse-related expenses; racing Quarter Horses require about \$15,390 annually; and other Quarter Horses require about \$3,140 annually. Based on these figures, total expenditures by Quarter Horse owners for horse care and maintenance had about \$147.5 million in direct impacts to the State's economy.

In 1989 Alabama hosted 86 AQHA approved shows. Additionally, more than 220 local shows were identified statewide. Tourism associated with rodeos contributed an estimated \$4.2 million to the State's economy in 1989.

Based on the above estimates, the direct impact of the Quarter Horse industry on Alabama's economy in 1989 was approximately \$151.7 million. The total impact on the economy, given an income multiplier of 2.9, was over \$439 million.

EXECUTIVE SUMMARY

BACKGROUND

Economic activity generated by Quarter Horse production, training, and events makes a significant contribution to Alabama's economy. Shows, breeding, sales, racing, recreation, and other group endeavors are manifold sources of income, employment, and leisure consumption in the State.

Several spheres of activity can be identified within the Alabama Quarter Horse industry. A number of farms breed, train, and stable Quarter Horses. Show and pleasure horses are bred and maintained at stables located throughout the State. In 1989, 86 horse shows in Alabama were approved by the AQHA.

Quarter Horse racing took place at the Birmingham Race Course from June 30, 1990, until the following Labor Day. There were two races per day, five days per week with an average of eight horses per race. During this period there were approximately 300 Quarter Horses stabled at the Birmingham Race Course. Most of these horses were from Texas and Oklahoma, with the balance coming from throughout the Southern United States. Racing Commission records indicate that, on the average, there were 75 Alabama Quarter Horses stabled at the track.

The Birmingham Race Course is one area of potential development for the Quarter Horse industry in the State. A racetrack with good annual Quarter Horse meets would have a positive influence on Alabama's Quarter Horse industry by increasing the demand for well trained and well bred horses for racing. Without regular racing, Quarter Horses will remain a notable breed in the State, but the vigor and dynamism which could be infused into the industry would be lost.

PURPOSE

The American Quarter Horse Association requested an assessment of the socioeconomic impact of the Quarter Horse industry in Alabama. We were asked to examine: (1) the organization and structure of the Quarter Horse industry in Alabama; (2) the farm-level implications of Quarter Horse breeding, ownership, and maintenance; (3) the impacts of Quarter Horse racing on Alabama's economy; and (4) the overall implications and prospects of the industry for Alabama agriculture and the State's economy.

METHODOLOGY

Our review consisted of telephone and personal interviews with over 60 persons involved in the Quarter Horse industry. Owners, breeders, trainers, veterinarians, and officials of Quarter Horse related organizations were interviewed. Staff at the Birmingham Racing Commission provided data relating to Quarter Horse racing at the Birmingham Race Course. Areas of concentration of Alabama's Quarter Horse population were determined through a survey of Alabama Cooperative Extension Service County Agent-Coordinators.

To analyze the impacts of the Quarter Horse industry on the State, we first developed profiles of average annual expenditures for show horses, racing Quarter Horses, and Quarter Horses kept for other purposes. These data were collected through interviews with suppliers of various goods and services, as well as with horse owners, trainers, and breeders. The aggregate impact of the horse industry on the State's economy was estimated using income and employment multipliers derived from an input-output model of Alabama's livestock industry.

We conducted our review between February 1991 and October 1991 in accordance with generally accepted standards and procedures used in previous impact studies conducted in other states. All estimates provided in this report should be regarded as such since they reflect certain assumptions about levels of horse-related expenditures that are not otherwise available.

PRINCIPAL FINDINGS

Of the 34,543 registered Quarter Horses in Alabama in 1989, approximately 4,500 are show horses, 300 are used for racing, and the remaining 29,743 are used for various other activities including recreation and breeding. The survey of County Agent-Coordinators indicates that Quarter Horses are concentrated in Cullman, Washington, Mobile, Blount, Jackson, and Lauderdale counties.

Our estimates indicate that recreational Quarter Horses require about \$3,140 annually per horse for care, maintenance, and other horse-related expenditures. The owners of the estimated 29,743 Quarter Horses that are neither raced nor shown, therefore, contributed about \$93.4 million to Alabama's economy through horse-related expenditures.

The annual per-horse expense of keeping a show horse in training is approximately \$11,005. Thus, owners of these horses generated over \$49.5 million in direct impacts to the State's economy through care, maintenance, and training expenditures.

Our estimates indicate that racing Quarter Horses require approximately \$15,390 per horse per year for care and maintenance. The 300 racing Alabama Quarter Horses, therefore, generated approximately \$4.6 million in primary economic activity in 1989.

An additional impact of the Quarter Horse industry is tourism resulting from rodeo attendance. We estimated that there were 381,476 spectators at Alabama rodeos in 1989, who spent an average \$11 per person on rodeo-related expenses. This results in approximately \$4.2 million in economic activity.

Another component of the Quarter Horse industry's economic impact is tourism resulting from travel to horse shows. We assumed that, on average, each of the 4,500 show horses in the State participated in 18 away-from-home events in Alabama during 1989 and their owners spent an average of \$1,475 on travel and other related expenses. This \$1,475 expenditure is composed of the costs of fuel, food, and lodging for the persons traveling with the horse, and stall fees and registration fees for the horse. Based on this estimate, show horses accounted for a tourism impact of about \$6.6 million in 1989.

Based on the above estimates, the direct impact of the Quarter Horse industry on Alabama's economy in 1989 was more than \$151.7 million. The total impact on the economy, given an estimated income multiplier of 2.9, was over \$439 million.

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Chapter 1 Introduction

Background

History of the Breed. All modern breeds of saddle horses, including the American Quarter Horse, are descendants of Oriental horses, such as the Arabians (from the Middle East), Barbs (from the Barbary states of North Africa), and Turks (from Turkey). These breeds are referred to as "hot bloods" to distinguish them from draft breeds, such as Percherons and Belgians, which are referred to as "cold bloods." The Oriental breeds are generally small horses averaging 13 to 16 hands high (one hand equals four inches) and weighing around 1,000 pounds. Draft breeds, in contrast, are large animals which stand 16 to 20 hands high and usually weigh in excess of 1,400 pounds.

Hot bloods were initially brought into Europe when the Moors invaded Spain in the eighth century. Returning Crusaders also brought Oriental horses into Europe during the eleventh through the fourteenth centuries. Hot bloods were subsequently brought to America by the early explorers and missionaries. Cortez is credited with bringing the first horses to the New World with his arrival at Veracruz, Mexico, in 1519.

By the middle of the 1600's the Spaniards had established over 70 missions, eight towns, and two large cattle and horse ranches in the New World. These settlements and ranches were the source of the Southeastern Indians' first horses. Two Southeastern tribes, the Cherokee and the Chickasaw, soon developed a reputation among the English colonies as noteworthy horse breeders.

During this period the English colonists began to develop a fondness for short horse races which usually covered a quarter of a mile or less and which, consequently, became known as "quarter races." Compared to races over several miles at the English horse tracks, races over these distances were more practical for the colonists. Given the popularity of short races, colonial breeders began to select horses that showed superior sprinting ability.

Most of the better sprinters came from Cherokee or Chickasaw mares bred to English racing stallions. These horses, which were ancestors of the modern Quarter Horse, became known as "quarter running horses." Although Quarter Horses have been selectively bred for centuries, registry of the American Quarter Horse was established in 1940 by identifying the parental lines. Years of selective breeding have resulted in the breed recognized today as the American Quarter Horse.

Alabama's Quarter Horse Industry. Quarter Horse production, training, and events make major contributions to Alabama's economy. Showing, breeding, sales, racing, recreation, and other activities are manifold sources of income, employment, and leisure consumption in the State. The various segments of the Quarter Horse industry are associated with diverse clusters of associations, professions, and activities.

Little is known about the aggregate importance of the Quarter Horse industry in the State and the nature of the barriers and constraints that presently effect its continued growth and expansion. Statistical information is not generally available and little significant research has been conducted because horses are not considered a food or fiber commodity.

Several different segments of the Alabama Quarter Horse industry, however, can be identified. Although only a relatively small number of races featured Quarter Horses, racing took place at the Birmingham Race Course during 1990. Show and recreational horses are bred and maintained at stables located throughout the State. Quarter Horses are also used in polo competitions held by clubs located in Baldwin, Madison, and Shelby counties.

Demand for a number of agricultural commodities and horse-related services is directly influenced by Quarter Horse production and maintenance. Alabama farmers raise and sell oats, corn, clover, alfalfa, grass hay, and other feed crops. Bedding straw and wood shavings also are agricultural commodities used by horsemen. Quarter Horse owners demand a significant amount of veterinary services and health care products to assure their animals' health and well-being. Horse shows and competitions create demand for clothing, tack, and other accounterments.

Many Quarter Horse activities are spectator sports which generate tourism and significant economic impacts in areas hosting the activities. Horse shows are held nearly every weekend somewhere in the State. Pursuits such as polo require relatively high levels of expenditure and tend to draw participants and spectators from upper-income segments of the population. Other activities, such as showing and racing, have a broader public following.

The prospects for the Quarter Horse industry in Alabama depend on several factors. Land costs and climate are favorable to animal production. Long growing seasons coupled with plenty of rainfall allow production of ample forage. The climate is also favorable to recreational riding and showing without the need for enclosed arenas or special equipment during most of the year. Alabama agricultural universities and veterinary schools provide educational services and institutional support for horse breeding and maintenance. Two privately owned state-of-the-art equine surgical facilities are located in the Birmingham area. A modern

racetrack also is available in the State's largest city. Several covered show arenas are located across Alabama. As will be detailed later, a large number of shows, rodeos, and other Quarter Horse related activities take place throughout the State.

Industry Actors

The major components of Alabama's Quarter Horse industry are identified in the following sections. Figure 1 illustrates the hierarchical relationships among several of the major national, state, substate, and county-level organizations and events that involve Quarter Horses in Alabama.

American Quarter Horse Association. The American Quarter Horse Association (AQHA) is the official breed registry for the Quarter Horse. The AQHA was formed in 1940 in Fort Worth, Texas. At the end of its first year, the AQHA had 40 members and 556 registered horses. In 1989, AQHA membership totaled 265,448, with over 2.5 million horses registered in the United States. and over 170,000 horses registered in foreign countries. These totals make the AQHA the largest breed registry in the world. In addition to registration, the AQHA promotes and regulates Quarter Horse breeding, showing, publicity, sales, and racing.

Alabama Quarter Horse Association. The Alabama Quarter Horse Association (ALQHA) is a statewide organization formed in 1957 for the purpose of promoting Quarter Horses in Alabama. Its first meeting was held in Marion, Alabama, with 25 members attending. ALQHA is the only Quarter Horse organization in Alabama recognized by the AQHA.

The ALQHA currently has 250 regular members, 75 amateur members, and 35 junior members. A member is classified as an amateur if he or she has never received compensation for showing, judging, or training a horse. The junior classification is reserved for those 18 years old and younger.

ALQHA sponsors two shows: the Alabama futurity in September, and an open show in June. The Alabama futurity typically attracts about 400 horses.

Alabama Open Horseman Association. The Alabama Open Horseman Association (AOHA) is a nonprofit organization formed in 1988 for the purpose of identifying State champions for various horse show events. The AOHA is composed of 13 substate regional saddle club associations. These multi-county associations, which are listed in table 1, are composed of local horseman's clubs.

Figure 1. Quarter Horse Associations and Relationships in Alabama.

Table 1. AOHA Saddle Club Associations, Number of Shows, and Estimated Membership, 1989

Association	Number of clubs	Shows	Membership
North Alabama Saddle Club Association	13	39	1200
Tennessee Valley Association	4	16	300
Tri-State Association	8	16	450
East Alabama Horse Association	7	22	650
North West Alabama Saddle Club Association	25	30	500
Gulf Central Association	1	9	115
Central Alabama Saddle Club Association	6	22	235
West Alabama Horseman's Association	8	20	130
South Central Horseman Association	8	11	250
State Line Horse Association	4	12	315
North Central Horse Association	7	28	1500
Shoals Area Horseman's Association	8	10	175

Local horseman's clubs sponsor shows for substate regional association members. Members can accumulate points at local shows that allow them to compete at the State Championship Horse Show sponsored by the AOHA. The Alabama legislature has passed a resolution stating that the results of the State Championship Horse Show determine State Champion horses.

Saddle Club Associations. Saddle club associations are an important component of Alabama's horse industry. Associations and their member saddle clubs sponsor many horse shows and other horse-related events each year. Table 1 lists Alabama saddle club associations that are members of the AOHA, their membership, and the total number of shows sponsored by each association and its constituent saddle clubs. Table 1 should not be viewed as a complete list of Alabama saddle clubs. There are many horseman's organizations scattered throughout Alabama that are not members of AOHA.

Rodeo and Other Event Associations. Many Alabama rodeos are local events that are not recognized by any rodeo organization. There are three national organizations, however, which grant approval for Alabama rodeos. These are: the Professional Rodeo Cowboy's Association (PRCA), the International Professional Rodeo Association (IPRA), and the American Cowboy Association (ACA).

Many other competitions which primarily exhibit traditional ranching skills take place throughout Alabama. Many of these events are recognized by national, State, or regional associations, such as the National Cutting Horse Association.

Birmingham Race Course. The Birmingham Race Course is located 10 miles east of Birmingham. Constructed in 1985, the \$80 million facility consists of a seven-level grandstand and clubhouse which accommodate 20,000 spectators. The track is a one-mile dirt oval. Stables for 1,200 horses are available, along with dormitories and cafeteria facilities for those employed to work with the horses.

The original style and orientation of the facility did not match the local market for horse racing. Initially targeted to primarily upper-class clientele, arrangements were not particularly friendly to working and middle-class people (as reflected in its former name - Birmingham Turf Club). High admission and parking fees discouraged many patrons with modest incomes from attending or returning. As a result, poor attendance and the resulting small betting pool undermined the viability of the operation. The last day of live racing was Labor Day, 1990.

The Birmingham Race Course is a potential asset for the Quarter Horse industry in the State, even though Quarter Horse showing and training are currently the industry's major focal points. A racetrack with a good annual meet could result in expanded Quarter Horse breeding. Recent developments in the management of the Birmingham Race Course, however, do not provide the extended horizon of predictable activity that would be needed to ensure the steady expansion of Quarter Horse racing.

The race course's present management plans to combine dog and horse racing. Current law, however, requires a referendum to approve dog racing in Birmingham. Voters did not approve dog racing at the Birmingham Race Course in a referendum held in August, 1991. It is legally possible that another referendum could be held in 1992. The probability of this is uncertain. Meanwhile, simulcast horse racing and telecasting of other sporting events continue at the track.

Delaware North Companies, Inc. Delaware North is a diversified holding company with subsidiaries engaged in a wide range of activities, many connected to sports and horse racing. The Buffalo, New York, organization manages concessions for various sports, airports, and other facilities across the country. It currently operates a series of dog tracks in various locales. Delaware North managed the Birmingham Race Course during the 1989 and 1990 live racing seasons. Delaware North subsequently withdrew from the race course at the end of 1990.

Milton McGregor. Milton McGregor presently operates a dog track in Macon county and has assumed management of the Birmingham Race Course with the intention introducing dog racing. The present plan calls for a combination of dog and horse racing for the first two years of the track's operation. Subsequent horse racing would be at Mr. McGregor's discretion. At this point, Mr. McGregor has not submitted a plan for live horse racing. Sale of the Birmingham Race Course to his company is pending at this writing.

Objectives, Scope, and Methodology

The AQHA requested an assessment of the socioeconomic impact of the Quarter Horse industry in Alabama. We were asked to examine: (1) the organization and structure of the Quarter Horse industry in Alabama; (2) the farm-level implications of Quarter Horse breeding, ownership, and maintenance; (3) the impacts of Quarter Horses on Alabama's economy; and (4) the overall implications and prospects of the industry for Alabama agriculture and the State's economy.

This review consisted of telephone and personal interviews with more than 60 Quarter Horse breeders, trainers, and owners. Birmingham Racing Commission staff provided information on Quarter Horse races at the Birmingham Race Course. We also attended Quarter Horse events and interviewed trainers and participants throughout the State.

County-level estimates of Quarter Horse populations from Alabama Cooperative Extension Service County Agent-Coordinators were used to determine the areas where Quarter Horses are concentrated. We supplemented and modified this information through reviews by knowledgeable veterinarians, breeders, and others involved in the industry.

To analyze the impacts of the Quarter Horse industry on the State, we first developed profiles of average annual expenditures for show horses, race horses, and Quarter Horses kept for other purposes. Interviews with suppliers of various goods and services, as well as horse owners and breeders, were used to develop these estimates.

We identified a series of events and activities that involve Quarter Horses in Alabama and estimated the extent of tourism and spectator activity associated with these events. We also contacted national and state horse-related organizations as well as knowledgeable individuals involved in showing, rodeo, polo, and other Ouarter Horse activities.

To estimate the aggregate impact of the Quarter Horse industry in the State, we used income and employment multipliers derived from an input-output model of Alabama's economy developed by Trenchi and Flick (9). This multiplier reflects the total effect on aggregate household income and aggregate employment resulting from expenditures associated with Quarter Horse activity.

We conducted our study between February 1990 and October 1991 in accordance with generally accepted standards and procedures used in previous impact studies conducted in other states. All estimates provided in this report should be regarded as such since they reflect certain assumptions about levels of horse-related expenditures that are not otherwise available.

Chapter 2 Number, Location, and Applications of Quarter Horses

Quarter Horse Numbers

As shown in table 2, Quarter Horses are the most numerous breed in Alabama. AQHA records for 1989 indicate a total of 34,543 Quarter Horses registered in Alabama. The majority of these are utilized for show and recreational purposes. Additional animals are utilized as breeding stock to produce horses for these activities.

This study estimated that there were approximately 4,500 show horses in Alabama in 1989. Table 3 details the estimated number and kind of Quarter Horses in the State. Quarter Horses often serve more than one purpose so the major descriptive categories tend to overlap. Many horses used primarily for recreation, for example, also may be utilized as breeding stock.

Most Alabama Quarter Horses are used for recreation and purposes other than racing or showing (table 3). These other uses of Quarter Horses include polo, fox hunting, rodeo, and traditional skills events.

A small number of Alabama Quarter Horses are used as race horses. This study estimated the presence of approximately 300 racing Quarter Horses in Alabama (table 3). Racing Quarter Horses are defined as those that are owned by Alabama residents and are raced on tracks outside Alabama, since there are no recognized tracks in Alabama, or are in training for racing.

Figure 2 shows the relative distribution of Quarter Horses across Alabama counties. Cullman, Washington, Randolph, Blount, Jackson, Mobile, and Lauderdale counties all have large Quarter Horse populations.

Commercial horse stables and training facilities are found in nearly every Alabama county. Stables provide housing, exercise, and care facilities for the many Quarter Horses whose owners do not have land or buildings for horses. Commercial stables employ approximately one person for every 10 to 15 horses. Certain farms specialize in Quarter Horse breeding and others maintain significant numbers of Quarter Horses for crossbreeding purposes.

Ouarter Horse Applications

Shows. Horse shows are events in which a horse's performance in various activities is compared to the performances of other horses of similar breeding and training. Shows provide an opportunity for horse owners, trainers, breeders, and riders to exhibit their animals. Shows stimulate improvements in breeding

Table 2. Estimated Number of Horses by Breed, Alabama, 1989

Breed	Number
Quarter Horse	34,543
Tennessee Walker	15,617
Appaloosa	9,289
Thoroughbred	3,300 ¹
Arabian	2,271
Half-Arabian	1,097
Paint	1,014
Saddlebred	732
Pony of the Americas	572
Morgan	303
Paso Fino	220
Pinto	108
Other Breeds	2,644

Sources: National Equine Marketing Association, AQHA

stock and training procedures since winning horses and trainers command higher sale prices and fees. Additionally, shows provide spectator entertainment.

Quarter Horse showing is the major driving force behind Alabama's Quarter Horse industry. In 1989 there were 86 Quarter Horse shows in Alabama that were approved by the AQHA. This makes Alabama third in the nation in total number of AQHA-approved Quarter Horse shows. Due to the large number of animals, as well as the extreme variety and frequency of events, Quarter Horses involve a larger number of Alabamians than any other breed.

¹Adjusted to include an estimated number of unregistered animals.

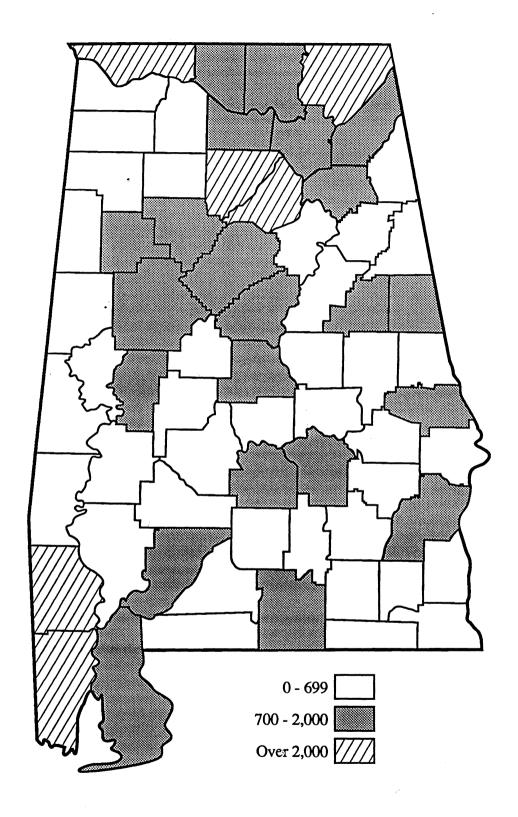


Figure 2. Estimated Quarter horses in Alabama counties, 1989.

Table 3. Estimated Number and Type of Quarter Horses, Alabama, 1989

Туре	Number
Show horses	4,500
Racing horses	300
Recreation, breeding, & other	29,743
Total Quarter Horses	34,543

Sources: Activity Participants, Association Records, Farm Operators, National Equine Marketing Association

AQHA-approved shows are Quarter Horse events in which the show management has applied for and received approval from the AQHA to hold the event. AQHA-approved shows generally have more entries, a higher caliber of horses and riders, higher entry fees, and higher operating costs than local shows or open shows (shows that are open to any breed).

AQHA-approved shows are usually two or three day competitions involving approximately 100 horses per show. Some of these shows are classified as "futurities" which involve more young horses and higher prize monies than regular shows. Futurity shows may have up to 500 entries competing each day. Not all show entries and owners are from Alabama, and, as a result, these shows generate a substantial amount of out-of-state tourism income to the communities hosting the events.

AQHA regulations require the show management to obtain the services of an approved judge. An AQHA-approved judge may not contract to judge a show that is within the state where he or she is a resident or within 150 miles of his or her residence. Minimum pay for an approved judge is expenses plus \$200 per day for a day of nine hours or less. Additionally, the judge must be paid \$50 per hour for any time exceeding nine hours in a single day.

Results of approved shows are entered in AQHA records and competition points are awarded to horses which place sufficiently high in these shows. Horses accumulating enough show points throughout the year qualify to compete in the World Championship Quarter Horse show. They also are eligible to compete for various

other awards and titles from the AQHA. Thus, Quarter Horse owners who wish to participate in top state, regional, national, and world events must accumulate points through participation in AQHA-approved shows.

Quarter Horse shows usually offer different categories of competition based on the horseman's age and experience. Any AQHA member may participate in an "open" class regardless of their age or horse experience. AQHA members under 18 years of age can compete in "youth" classes. Adult AQHA members who do not receive any compensation for working with horses or riders can compete in "amateur" events. AQHA shows may offer some or all of these categories to competitors. Figure 3 is an example of a Quarter Horse show program.

In addition to categories based on the horseman's age and experience, there are many other classes based on the horse's abilities and age. In halter classes, horses are judged on their conformation, movement, and how closely the horse resembles the breed standard. Performance classes judge the horse's ability to perform in different activities. Some examples of performance events are western pleasure; hunting and jumping events; roping, cutting, and other events involving moving and handling cattle; and western riding and reining events which evaluate the horse's athletic ability and responsiveness to the rider. Barrel racing, pole bending, and other timed events measure the horse's speed and agility. Driving events demonstrate the horse's ability to pull a cart at various gaits.

Horses which are successful in AQHA competition can accumulate points which count toward state and national titles. Over the past few years, Alabama has produced several National High Point Champion Quarter Horses. In the youth category these include: the All-Around Champion in 1983, the Showmanship at Halter Champion in 1983, the Western Pleasure Champion in 1983, the Western Riding Champion in 1986, the Cutting Champion in 1970, the Pole Bending Champion in 1985, and the Western Horsemanship Champion in 1983. In the amateur category, Alabama has produced National High Point Champions in the following years and categories: 1984 Western Pleasure, 1982 Reining, 1985 Western Riding, 1979 Trail, and 1987 Halter Mare. Alabama also produced three National High Point Honor Roll Quarter Horses in 1990.

Quarter Horses also compete in numerous local shows and competitions open to all breeds of horses at various arenas throughout Alabama. The larger show arenas are located in Arab, Decatur, Muscle Shoals, Dothan, Montgomery, and Cullman. Numerous smaller show facilities are located throughout the State.



W.O. CRAWFORD ARENA, MONTGOMERY, ALABAMA

SEPTEMBER 6 JUDGE ROY DONN

SEPTEMBER 7 JUDGE BILL FRENCH

SEPTEMBER 8 JUDGE CECIL HURLEY

Junior Weanling Colts *** Senior Weanling Colts *** 1991 Stallions Yearling Futurity Colts 1990 Stallions 1989 Stallions 1988 Stallions Aged Stallions Grand & Reserve Stallions Non-Pro Weanling Stallion Futurity *** Junior Amateur Stallions Senior Amateur Stallions Grand & Reserve Amateur Stallions Junior Weanling Fillies *** Senior Weanling Fillies *** 1991 Mares Yearling Filly Futurity *** 1990 Mares 1989 Mares 1988 Mares Aged Mares Grand & Reserve Mares Non-Pro Weanling Filly Futurity *** Junior Amateur Mares Senior Amateur Mares Grand & Reserve Amateur Mares Yearling Gelding Futurity *** 1990 Geldings 1989 Geldings 1988 Geldings Aged Geldings Grand & Reserve Geldings Junior Amateur Geldings Senior Amateur Geldings Grand & Reserve Amateur Geldings Novice Amateur Showmanship Amateur Showmanship Youth Mares Youth Geldings Novice Youth Showmanship Showmanship 13 & Under Showmanship 14-18 All Age Pleasure Driving Amateur Pleasure Driving

BREAK

All Age Hunter Under Saddle Amateur Hunter Under Saddle Youth Hunter Under Saddle Amateur Hunt Seat Equitation Youth Hunt Seat Equitation All Age Hunter Hack Amateur Hunter Hack Youth Hunter Hack

BREAK

2 Yr. Old Snaffle Bit Futurity

Novice Amateur Western Pleasure Novice Youth Western Pleasure 3 Yr. Old Snaffle Bit Futurity Amateur Western Pleasure Western Pleasure 13 & Under 2 Yr. Old Walk Trot Snaffle Bit Western Pleasure 14-18 2 Yr. Old AQHA Snaffle Bit Novice Youth Horsemanship Youth Horsemanship 13 & Under Youth Horsemanship 14-18 2 & 3 Yr. Old Non-Pro Snaffle Bit Junior Western Pleasure Novice Amateur Horsemanship Amateur Horsemanship 2 Yr. Old Alabama Owned Snaffle Bit Senior Western Pleasure 3 & 4 Yr. Old Alabama Owned Snaffle Bit Amateur Trail Youth Trail All Age Trail Amateur Western Riding Youth Western Riding All Age Western Riding Amateur Reining Youth Reining All Age Reining Amateur Barrel Race Junior Barrel Race Youth Barrel Race Senior Barrel Race Amateur Pole Bending Youth Pole Bending All Age Pole Bending Youth Stake Race

> *** These Classes are Held Saturday ONLY Judges are: Roy Dunn & Cecil Hurley

ENTRY FEES:

Halter & Performance: \$10.00 + \$1.00 Office Charge per class Amateur: \$8.00 or \$40.00 all day + \$1.00 Office Charge per class

Amateur Novice: \$5.00 + \$1.00 Office Charge per class Youth: \$6.00 or \$30.00 all day + \$1.00 Office Charge per class Youth Novice: \$4.00 + \$1.00 Office Charge per class

STARTING TIME: 8:00 A.M.

Quarter Horses are also used for dressage, jumping, and other exacting forms of horsemanship. These events often attract riders from outside the State. Many involve substantial registration fees and prizes. Numerous small schooling shows and competitions occur around the State.

Rodeos. Rodeos typically consist of a series of events in which contestants compete for prizes and/or points. The prizes may be either cash or trophies such as saddles and belt buckles. Rodeo events are divided into two categories: roughstock events and timed events. Roughstock events include bareback riding, saddle bronco riding, and bull riding. Timed events include calf roping, team roping, steer wrestling, steer roping, and barrel racing. Contestants in the timed events must provide their own horses. Quarter Horses are typically chosen since they possess the size, quickness, and intelligence that make them particularly well suited for these applications.

Participants in rodeos that are sanctioned by the national rodeo organizations compete for the chance to enter the final rodeos of the respective associations. Eligibility for entry in the championship rodeos is based on the amount of prize money earned during the rodeo season. The cowboys with the most winnings earned from approved rodeos are eligible to enter the finals rodeos of their respective associations and compete for championship titles and large cash prizes.

Rodeos are classified as a Quarter Horse event for the purposes of this study because the majority of rodeo participants use Quarter Horses in the timed events. Table 4 lists Alabama rodeos which were recognized by the IPRA in 1989. It should be noted that Cullman was the site of a significant regional event, the IPRA 1989 Southeastern Finals Rodeo, that drew over 190 contestants.

Alabama also hosted three PRCA-approved rodeos in 1989. Table 5 lists these events, their duration, and their gross ticket sales.

Twenty-three Alabama rodeos were sanctioned by the ACA in 1990. The locations and total prize monies of these rodeos are listed in table 6.

Many smaller, local rodeos take place across the State during the spring and summer months. These rodeos, which are usually not included in the IPRA, ACA, or PRCA rodeo circuits, are sponsored by either local saddle clubs or other local service organizations, such as the Jaycees or the county sheriff's posse. Local rodeos, which usually attract participants from surrounding areas, are typically held during a Friday and Saturday evening in open arenas and draw 30 to 60 contestants.

Table 4. Locations, Duration, and Number of Contestants, Alabama Rodeos Recognized by the IPRA, 1989

Location	Duration (days)	Number of contestants	
Oneonta	2	214	
Huntsville	3	159	•
Dothan	2	168	
Russellville	2	116	
Cullman	2	193	
Athens	2	210	
Hartselle	2	118	
Cullman ¹	3	74	
Total		1,252	

Source: International Professional Rodeo Association ¹Southeastern Finals Rodeo.

Rodeos often are significant annual events for small communities, often providing a focus for community life, a fund raising opportunity for civic groups, and a boost for local merchants. A survey of county agents indicated that 35 of Alabama's 67 counties have rodeos each year. Table 7 shows the locations and estimated attendance of these rodeos.

Traditional Skills Events. Quarter horses are utilized extensively in events designed to exhibit traditional ranching skills. Examples include: calf roping and team roping contests; speed and agility contests, such as barrel racing and pole bending; cutting contests in which a single cow is separated and held away from a group of cattle; team penning contests where a group of cattle is driven away from a larger herd and penned; and reining contests which demonstrate the horse's handling ability and maneuverability.

Table 5. Locations, Duration, and Gross Ticket Sales, Alabama Rodeos Approved by the PRCA, 1989

Location	Duration (days)	Gross ticket sales(\$)
Birmingham .	3	46,252
Mobile	2	*
Montgomery	4	118,000

^{*}Data not available.

Many of these competitions overlap events in horse shows and rodeos. Many Quarter Horses competing in these activities also participate in shows and rodeos and their owners usually pay membership dues to more than one association. Participants in these events compete for cash prizes and recognition at the local, State, and national levels.

Traditional skills events are held periodically at various locations throughout the State. Many of these events are approved by organizations at the national, state, or substate level. Most skill event associations, such as the roping, barrel racing, and team penning associations, are at the substate level. Other skill event associations, such as the reining and cutting associations, have both a state-level and national-level organization.

Trail Riding. Quarter Horses are also used for recreational and competitive trail riding. Recreational rides range from small informal groups of friends enjoying their horses and the scenery to large, organized rides sponsored by saddle clubs. In formal competitive trail ride events, horse and rider travel a fixed distance within a fixed time period and are judged on soundness, physical condition, and the horse's manners. Endurance rides are primarily races which must be completed within a predetermined time limit. Awards are made to all horses which finish the ride, the first horse to finish the ride, and the horse that finishes in the best condition. Although Quarter horses are used in all these trail riding events, they excel at recreational riding activities due to their easy gaits and quiet disposition.

Table 6. Locations and Total Prize Monies, Alabama Rodeos Approved by the ACA, 1990

Location	Total prizes(\$)
Columbiana	11,765
Monroeville	5,540
Cullman	8,685
New Hope	8,650
Chatom	3,160
Jasper	11,015
Tuscumbia	6,270
Luverne	8,415
Clanton	7,425
Butler	3,755
Foley	6,830
Hartselle	5,360
Clayton	9,045
Reeltown	4,345
Stockton	7,445
Selma	5,325
Gadsden	5,485
Atmore	4,625
Rainsville	6,275
Mobile	6,415
Ariton	4,100
Robertsdale	4,310
Total	144,240

Table 7. Locations and Estimated Attendance of Rodeos by County, Alabama, 1989.

County	Number of rodeos	Estimated attendance
Baldwin	1	600
Barbour	2	800
Blount	1	7,500
Calhoun	2	25,000
Chambers	1	700
Chilton	1	700
Choctaw	1	250
Clay	1	1,200
Coffee	1	500
Covington	2	10,000
Crenshaw	1	1,500
Cullman	2	4,000
Dale	1	600
Dallas	1	700
DeKalb	8	4,000
Escambia	1	500
Etowah	1	1,500
Fayette	1	2,000
Franklin	2	7,000
Geneva	1	600
Jefferson	1	57,526 ¹
Lamar	1	1,000
Limestone	1	6,000
Madison	2	45,000
Mobile	2	7,500
Monroe	1	900
Montgomery	3	173,000
Morgan	1	3,000
Perry	3	2,400
Randolph	2	1,600
Shelby		3,500
Tuscaloosa	1 2	7,000
Walker	1	900
Washington	ī	1,000
Wilcox	2	1,500

¹Actual paid attendance.

Racing. Quarter Horse racing took place in Alabama at the Birmingham Race Course from June 30, 1990, through Labor Day of 1990. During this period there were two Quarter Horse races per day, five days per week, with an average of eight horses starting each race. Even though Quarter Horse races were not as numerous as Thoroughbred races at the Birmingham track, Quarter Horse races had a significant positive impact by expanding the racing program and attracting more horses, spectators, and bettors to the track.

Polo. Polo players use Quarter Horses and part Quarter Horses because of their sprinting speed and agility. Polo fields are found in Shelby, Madison, and Baldwin counties. Baldwin County polo has developed rapidly in recent years. A new field there features weekly competitions in the summer, regular visits by international competitors, and a strong local spectator following for the sport. Clubs in Madison and Shelby counties meet on a regular basis. Polo represents a small, but significant, application of Quarter Horses in the State.

Hunting. Fox hunts and similar group sports involve Quarter Horses in several areas of Alabama. Private associations based in Huntsville, Columbus, Georgia, and south Alabama organize circuits of hunts in the fall season on various private farms around the State. Some hunt clubs provide horses to visiting riders. They also support recreational and other uses of Quarter Horses outside the fall hunt seasons.

Hunting usually is not a spectator activity and is generally engaged in as a sport and social event for the individuals involved. Hunts represent a use of Quarter Horses and reason for keeping them, but do not in themselves have an extensive economic impact in the State. The impacts are portrayed here in terms of associated travel, tourism, and the expense of horse ownership.

Chapter 3 Economic Impact of the Quarter Horse Industry

This chapter estimates several components of the economic impact of the Quarter Horse industry in the State. First, we consider the expenses associated with care and maintenance of Quarter Horses used for showing, racing, and recreation. We also include certain expenses associated with equipment and transportation appropriate to each application.

Second, we discuss the impact of showing and racing Quarter Horses in terms of breeding, maintenance, transportation, and training, as well as the tourism impacts associated with visiting Quarter Horses, owners, and traveling spectators. The third section describes employment impacts including the estimated employment multiplier. The final section summarizes the economic impacts of Alabama's Quarter Horse industry.

Meaning of the Estimates

The data in table 8 identify estimated average annual perhorse expenses associated with Quarter Horse ownership in 1989. These data do not include horse purchases or sales, nor do they include capital expenditures. These figures were developed through interviews with suppliers and purchasers of the various goods and services. Subsequent estimates were reviewed by knowledgeable individuals familiar with Quarter Horse ownership and maintenance.

Although actual expenditures vary widely from one owner to another, the expenditure estimates for each item in table 8 are assumed to resemble a normal distribution around a central tendency or average. For many items, however, the actual pattern of outlays is highly skewed, i.e., a small number of owners of prize animals spend much greater amounts than the ordinary Quarter Horse owner. In this case, the modal (most frequent) expenditure may be quite different from the median (middle) or the average (arithmetic mean) level of expense. Given that the objective of the study is to estimate aggregate impacts, the latter estimate—the mean or average—is utilized in the tables. For the aforementioned reasons, some outlay estimates may seem high from the perspective of the ordinary Quarter Horse owner. Others may seem low from the experience of the owner of intensively managed, high value animals.

Table 8. Estimated Per-Horse Care and Maintenance Expenditures for Showing, Racing, and Recreational Quarter Horses, Alabama, 1989

Expenditure Category	<u>Estimated</u> Showing	average Racing	annual total Recreationa
	\$	\$	\$
Veterinary fees	300	400	150
Feed & bedding	800	700	550
Insurance premiums	700	600	100
Farrier	450	500	200
Grooming & supplies	200	175	100
Travel & lodging	1,200	1,200	150
Advertisement	1,000	1,000	O
Utilities	150	150	15
Property taxes	50	50	50
Depreciation	1,500	1,500	680
Maintenance & repairs	500	500	300
Boarding of equine	480	280	200
Breeding fees	30	0	50
Rental of property & equipment	50	50	25
Tack	1000	850	120
Professional fees	100	300	30
Registration fees	195	10	10
Training fees	1,500	4,000	50
Employed labor	700	3,025	. 300
Miscellaneous	100	100	60
Per horse total	11,005	15,390	3,140
Total impact (millions)	49.5	4.6	93.4
Total care and maintenance	(millions)	147.5	

It should also be noted that not all Quarter Horse owners incur every expense listed in table 8. For example, a person who owns a horse but keeps it at a boarding facility would incur boarding expenses but would have no horse-related property taxes. In other words, Table 8 should not be viewed as an operating budget for Quarter Horse ownership but as an estimate of mean per-horse expenditures.

Horse Care and Maintenance

Horse care and maintenance are central mechanisms by which the economic impacts of horse ownership are transmitted throughout the State. Owners purchase feed, materials, and services for horses on a regular basis. Their purchases represent demand for farm products, horse-related supplies, and the assistance of a variety of technicians and professionals.

Since Quarter Horse ownership is widespread throughout the State, the economic impacts are also diffuse. Where horse ownership and activity are concentrated, the economic impacts represent a more salient part of the local income structure. The significance of the secondary impacts of Quarter Horse activity also increases in these locales. Major Quarter Horse facilities that have frequent shows attracting out-of-state participants represent the most concentrated form of impact.

Quarter Horses regularly used for showing or racing are generally high-value animals and, as such, afford much greater levels of expenditures for health, nutrition, and other care. Such horses are usually better housed and more frequently transported than Quarter Horses used for breeding or recreation. These higher expenditure levels are reflected in table 8.

The first expenditure category, veterinary fees, includes routine veterinary services such as vaccinations, deworming, and equine dental care. It does not, however, include the cost of surgery or other major medical expenses not incurred on a regular basis. Feed and bedding expenses include the cost of hay, grain, feed additives, vitamin and mineral supplements, pasture maintenance, and straw and shavings used for bedding.

Insurance costs include premiums for horse liability, mortality, loss of use, surgery, and vehicle insurance. The farrier category includes the cost of shoeing and hoof trimming.

Grooming and supplies reflect expenditures for items such as brushes, currycombs, and coat conditioners. Travel and lodging are the expenses of traveling to and from horse shows, horse sales, and other horse activities, such as races, recreational rides, or polo meets. These expenses are the cost of meals, fuel, and overnight lodging. Advertisement is composed of expenditures

for advertising Quarter Horse stallions and breeding farms. Utility expenditures include the cost of electricity, water, heating of buildings, and horse-related telephone bills. Property taxes are the local and/or state tax liabilities for land and buildings used in horse breeding, ownership, and other horse activities, such as hunting.

The next expenditure category, depreciation, is composed of the annualized capital expenses associated with horse-related buildings, machinery, and vehicles. These estimates were derived assuming a useful life of 30 years for buildings and 10 years for machinery and vehicles. Maintenance and repairs represent the sum of expenses incurred in the upkeep of buildings, facilities, and vehicles.

The boarding of equine category includes payments to boarding farms and, in the case of race horses, facilities for rest and recuperation. Boarding fees for show horses also include an estimated \$100 annual expenditure for stall fees at horse shows.

Breeding fees, which are typically paid by the mare's owner, are the cost of having a mare bred to a selected stallion. These fees range from \$200 to \$1500 or more depending on the quality of the stallion. Breeding fees for race horses are zero in table 8 since mares that are actively engaged in this activity are usually not bred. Likewise, breeding fees for show horses are low on a per horse basis since few mares that are actively showing are bred. Most brood mares are not actively showing and, therefore, fall into the recreational category.

Rental of property and equipment is an estimate of the cost of renting pastures, facilities, machinery, and vehicles. Tack expenditures include the cost and maintenance of saddles, bridles, and related accouterments. This category also includes horsemen's wearing apparel.

The next expenditure category, professional fees, is composed of dues for membership in professional organizations and subscriptions to horse-related publications. Registration fees are charges for participating in shows, fees to register for racing, and fees to register and transfer ownership of Quarter Horses in AQHA records. For show horses this category includes an estimated \$175 annual expenditure for registration in shows. The estimate for this category is low for racing animals since there was no sanctioned Quarter Horse racing in Alabama in 1989.

Training fees are charges for horse training in the case of showing and racing Quarter Horses, and training for both the horse and rider in the case of recreational Quarter Horses. The next category, employed labor, includes wages paid to both full and part-time employees involved in horse-related work.

These employees would include stallion managers, grooms, exercise riders, clerical workers, and those who clean stalls and provide routine horse care. The miscellaneous category is composed of expenditures for horse transport services, dead stock services, and manure removal.

Showing Quarter Horses. Quarter Horse showing is a very important component of the horse industry and has a significant impact on Alabama's economy. For the purpose of this study, a show horse was defined as one that competes in 40 or more shows per year, with the majority of these shows receiving AQHA recognition. The estimated average annual cost of keeping a show horse is \$11,005. Thus, the estimated 4,500 Quarter Horses that were actively shown in 1989 generated over \$49 million in direct impacts to the State's economy.

Racing Quarter Horses. Quarter Horses used for racing require about \$15,390 per horse for care, maintenance, and other horse-related expenses (table 8). The higher level of expenditures on these animals, as compared to recreational horses, reflects the more intense level of care and maintenance required to keep a horse in racing condition. Based on this estimate, racing Quarter Horses generated over \$4 million in economic activity in 1989.

Recreational Quarter Horses. Quarter Horses used for purposes other than showing or racing require about \$3,140 annually per horse for care and maintenance (table 8). The expenditure levels for these animals reflect the lower intensity of care and maintenance associated with horses that are not actively showing or racing. Thus, owners of the estimated 29,743 recreational Quarter Horses incurred about \$93 million in expenses in 1989.

Impact of Quarter Horse Activities

Shows. Another component of the Quarter Horse industry's economic impact is tourism resulting from travel to horse shows. Quarter Horse shows produce significant benefits to the localities hosting these events. Horses from outside the local area require additional housing expenses, as do their accompanying owners. Some spectators travel long distances to view the activities.

We estimated that, on average, owners of each of the 4,500 active show horses in the State spent \$1,475 on travel and related expenses during horse shows in 1989. This \$1,475 is composed of a \$1200 expenditure for fuel, food, and lodging for the persons traveling with the horse, \$100 for stall fees, and \$175 for registration fees for the horse. Based on this estimate,

show horses accounted for a tourism impact of about \$6.6 million in 1989.

Rodeos. Rodeos also have a significant impact on Alabama's economy. This impact is concentrated in the communities which host the rodeos. As shown in table 7, Alabama hosted 56 rodeos in 1989. These include rodeos recognized by national associations as well as local rodeos.

Most of a rodeo's economic impact on the local economy is derived from the spectators since there are typically many more spectators than contestants. Rodeo spectators generate economic activity through admission fees, concessions, and souvenirs. We estimate that each spectator spends an average \$11 at a rodeo. The estimated 381,476 spectators at Alabama rodeos in 1989, therefore, generated approximately \$4.2 million of economic activity.

Racing. Quarter Horse racing took place at the Birmingham Race Course from June 30, 1990, until the following Labor Day. There were two Quarter Horse races each day during 56 racing days with an average of eight horses per race. During this period, there were, on average, 300 Quarter Horses stabled at the Birmingham Race Course. Most of these horses were from Texas and Oklahoma, with the balance coming from throughout the Southern United States. Racing Commission records indicate that on average there were 75 Alabama Quarter Horses stabled at the track.

The 225 out-of-state horses that were stabled at the track during the 1990 racing season (94 calendar days) represent a significant economic impact to the Birmingham area. This impact stems from food and lodging for personnel accompanying the horses, as well as services and supplies purchased for the horses in Alabama. We estimate that each of the out-of-state horses stabled in Birmingham induced an average \$90 of economic activity per day. The direct tourism impact of out-of-state racing Quarter Horses in Birmingham in 1990, therefore, was over \$1.9 million.

In addition to the impact of the out-of-state horses, Quarter Horse racing contributed to the overall effect the Birmingham Race Course had on Alabama's economy. This impact is summarized in table 9.

Although this study focused on the Quarter Horse industry in 1989, the 1990 racing season at the Birmingham Race Course was included to illustrate the potential impact of Quarter Horse racing on Alabama's economy. Even though there were relatively few Quarter Horse races in Birmingham in 1990, the total impact was substantial.

Table 9. Income and Impacts of the Birmingham Race Course, 1990.

Category	Amount(\$)
Parimutuel handle (wagers)	2,381,341
<u>Impacts</u>	
Winnings to bettors	2,150,395
Revenue to government	
Misc. revenue to Racing Commission	1,650
City & county payroll tax	5,000
City admissions tax	12,227
Other revenue to local government	47,626
Total revenue to government	66,503
Tourism impact from out-of-state horses	1,903,500
Total Race Course impacts	4,120,398

Source: Birmingham Racing Commission

Breeding. Stallion fees and other expenditures associated with horse reproduction are included here. Quarter Horses can generate substantial returns for their owners through fees associated with the services of superior stallions and mares. Larger stables often have specialized employees who coordinate breeding activities.

The Quarter Horse breeding industry is a central source of impacts on agriculture and land use in the State. Undertaking Quarter Horse breeding as a farm enterprise implies a longer investment horizon and commitment to the activity than simple horse ownership. Breeders often invest in farmland, equipment, and facilities in a manner that would not be economically justified by food animal or crop production. The presence of many high-value animals in a county supports the development and elaboration of a network of horse care and maintenance services. The resulting array of occupational niches provides full and part-time employment to a large number of people.

Table 8 shows the estimated per-horse expenditures for breeding fees. Breeding stock is listed under the recreational classification of Quarter Horses since mares that are actively

showing or racing are usually not bred. Based on this estimate, breeding fees accounted for more than \$1.4 million in economic activity in 1989.

Employment Impacts

Paid employment associated with Quarter Horse breeding, raising, and care is related to the intensity of the animals' use. Showing animals require approximately one employee for 20 horses. Race horses require approximately one employee per 12 horses. Animals maintained for recreational and breeding use employ, on average, approximately one individual for every 100 horses. Thus, Quarter Horse care and maintenance is responsible for direct employment of approximately 550 people in the State.

Total paid employment associated with Quarter Horses includes show staff, trainers, other care and maintenance employees, and a variety of self-employed individuals who provide services to horses. This number ranged between an estimated 1,000 and 1,800 full-time equivalent jobs in 1989.

Employment in the horse industry can be shown to generate additional employment in other industries. This concept is described by an employment multiplier. Trenchi and Flick (9) estimate the employment multiplier for Alabama's livestock industry to be 1.74. This means that for every job created in the livestock sector, there are a total of 1.74 jobs created throughout the economy. Based on the above estimates and given an employment multiplier of 1.74, the Quarter Horse industry induces total employment of between 2,697 and 4,089.

Summary of Economic Impacts

Based on the above estimates, which are summarized in table 10, the direct impact of the Quarter Horse industry on Alabama's economy in 1989 was more than \$151 million. This reflects the immediate injection of money into the economy through the purchase of goods and services by horsemen, spectators, and visitors to the State.

These income flows also can be shown to generate additional economic activity described by the concept of the income multiplier effect. The estimated income multiplier for Alabama's livestock industry is 2.9. This means that every \$1.00 transaction in the Quarter Horse industry results in \$2.90 of total economic activity. The procedure for calculating this multiplier is shown in Appendix I. The total impact on the economy, given an estimated income multiplier of 2.9, is approximately \$439.9 million.

One Texas study (5) utilized a factor of 2.0 to express the additional indirect impact on the State's economy generated by primary activity in horses. A Florida study (8) used what they called a conservative coefficient of 2.3. Other studies have employed multipliers as high as 3.1. Thus, the multiplier effect estimated here is consistent with coefficients utilized by similar analyses.

Table 10. Summary of Economic Impacts of Quarter Horse Activity, Alabama, 1989

Category	Amount (million \$)
Show impacts	49.5
Racing impacts	4.6
Recreational impacts	93.4
Tourism associated with rodeos	4.2
Direct impacts	151.7
Total impact given a multiplier of 2.9	439.9

Chapter 4 Policy Implications

Quarter Horses may be the breed closest to the heart and everyday life of the average Alabamian. More of the State's residents own this type of horse and participate in associated activities than any other. The breed also has a very dense structure of associations, shows, and competitive events that enhances its impact on the economy and quality of life in the State.

The direct effects of Quarter Horses on Alabama's economy exceeded \$151 million in 1989. These impacts are substantial. There are also other qualitative factors, with related economic implications, linked to the future of Quarter Horses and Quarter Horse showing in the State.

Horses and showing make a significant contribution to the quality of life by adding to the diversity of recreational activities available throughout the State. Horse shows are a source of excitement and diversion that augments the attractiveness of the State as a place to live and work. Horse farms use Alabama land for pastures, barns, and facilities that tend to improve the scenic, pastoral, and experiential effects the State has on residents and visitors. The land-use impacts of a large and viable Quarter Horse industry are substantial.

This study also shows the significant linkages Quarter Horses have to the agricultural sector and the larger economy. A significant proportion of the State's households have some personal or familial connection to the Quarter Horse industry. More people are involved with Quarter Horses than is commonly recognized by the institutions that serve agriculture and the recreating public.

Implications for Alabama Agriculture

According to a national study done by the accounting firm of Peat, Marwick, and Mitchell (4) for the American Horse Council, about 16 percent of agricultural and agribusiness gross economic product is due to the horse industry. This translates into jobs and demand for a variety of items from agribusiness suppliers.

The Alabama agricultural sector currently generates about 20 percent of the State's total gross product, about 15 percent of which is horse-related. About 25 percent of the latter category can be attributed to the Quarter Horse industry. It can be argued that about 0.75 percent of the Gross State Product can be attributed to Quarter Horses. Spending by Quarter Horse owners, breeders, and trainers clearly helps to bolster the State's economy.

As most training and breeding facilities are located in rural areas, many direct economic impacts and attendant multiplier effects flow to communities needing economic stabilization. The most concentrated set of impacts, however, is in north Alabama since that is where the major show facilities and greatest concentrations of Quarter Horses are.

We conclude that the Quarter Horse industry has a measurably significant role in the State's economy. The loss or diminution of the Quarter Horse industry would represent significant opportunity costs in terms of lost employment, income, and tax revenue that would otherwise have been generated by breeding, showing, and horse ownership in general. A reversal of the development of the industry also would represent waste of substantial taxpayer and private funds. Major expenditures were made for construction of the Birmingham racetrack and some local show facilities, as well as related public improvements such as roads and utilities.

Many individuals made investments in farm and business improvements in expectation of a viable breeding and racing industry. It is incumbent on lawmakers, financiers, and industry leaders to take the institutional steps necessary to realize the potential benefits of a thriving Quarter Horse industry in Alabama.

Recommendations

- 1. An Alabama Horse Advisory Council should be established to include representatives of all statewide and regional horse associations. Such a group should provide greater unity and coherence to Quarter Horse and other equine interests in Alabama. It would act as a mechanism for joint action to secure collective benefits for horse owners and activity participants.
- 2. One important outcome of the workings of the Horse Industry Advisory Council would be an enhanced partnership between horse owners and the Legislature that would be of significant benefit to the Quarter Horse industry. Significant issues to be addressed should include the implementation of the Federal Horse Protection Act, liability for horse owners, and the clarification of Equine Infectious Anemia testing requirements for horse buyers, sellers, and exhibitors.
- 3. The Horse Industry Advisory Council should develop and implement a common format among its component organizations for recording attendance and participation at equine events. These data would facilitate further studies of the impact that equine events have on Alabama's economy and agricultural sector.

- 4. The Horse Industry Advisory Council should develop a comprehensive set of regulations to ensure humane treatment of animals involved in Alabama horse events. These regulations would be designed to prevent future confrontations with animal rights groups and thereby preserve the integrity of Alabama's horse industry.
- 5. The Horse Industry Advisory Council should also publish an annual report detailing the status of Alabama's horse industry. This report would include a census of Alabama's horse population, enumeration of horse-related events and facilities, and an analysis of the horse industry's impact on Alabama's economy. These reports could be used to emphasize the importance and economic impacts of the Quarter Horse and other horse industries.
- 6. There is a need for a high-quality State show facility in Alabama. Present management arrangements at the Garrett Coliseum facility do not reflect well on State management. Leasing, contracting, privatization, and other management arrangements should be explored to ensure that visiting Quarter Horse owners encounter a well-groomed facility that is painted, repaired, and safe for owners and their horses. Increased attention must be paid to stall conditions, manure removal, and overall security on the State grounds.
- 7. The Birmingham Racing Commission, track management, and horsemen should develop better relationships with public agencies to obtain counsel and perspective on issues affecting the development of the industry. A more programmatic approach should be taken to marketing, managing, and developing racing and the Quarter Horse industry as an asset to agriculture, tourism, the State's economy, and the overall quality of life in Alabama.
- 8. Additional types of horse activities should be considered for programming into the annual calendar of the Birmingham Race Course. Between racing seasons, the track should be made available for major horse shows, as stalling is often a problem for two-day or longer shows. Additional Quarter Horse races, the introduction of other types of horse racing, and other innovations might contribute variety, broaden the attendance base, and contribute additional use-days for the facility. Changes along these lines would greatly expand the impact of the track on agriculture and the State's economy.
- 9. A full-time horse extension specialist should be appointed to work with the Quarter Horse and other breed industries and associations. Greater attention should be paid to organizational issues within the horse industry and ways that the horse industry can be used to facilitate economic development in the State.

10. State and federal agencies and the agricultural universities should collaborate to provide better statistical information about the number and kind of Quarter Horses in the State, the incidence of disease and other conditions, and the variety of events and activities that might be more generally publicized as a means for enhancing tourism in Alabama.

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REFERENCES

- (1) Barr, Duffy (ed.). 1989. Alabama Agricultural Statistics: 1989 Preliminary. Montgomery: USDA-National Agricultural Statistics Service and Alabama Department of Agriculture and Industries.
- (2) Curtis, Wayne C. and John E. Waldrop, Jr. 1971. Construction of an Input-Output Model for a Sub-State Region Through the Use of National Coefficients and Secondary Data Sources. Agricultural and Forestry Experiment Station Bulletin Number 61, Mississippi State University.
- (3) Hedgpeth, Don. 1990. They Rode Good Horses: The First Fifty Years of the American Quarter Horse Association. The American Quarter Horse Association. Trafton & Autry Printers, Inc. Amarillo, Texas.
- (4) Peat, Marwick, and Mitchell & Co. 1987. The Economic Impact of the U.S. Horse Industry. Report prepared for the American Horse Council. January, 1987.
- (5) Slottje, D.J. and K. Hayes 1989. An Analysis of the Economic Impact of Horse Showing on the State of Texas. Report prepared for the American Quarter Horse Showing Council, American Quarter Horse Association. Department of Economics, Southern Methodist University, Dallas, Texas.
- (6) Stallings, James L. and Warren A. Flick. 1985. Impact of Agricultural Exports on Alabama's Economy. Alabama Agricultural Experiment Station Circular Number 275, Auburn University.
- (7) Thalheimer Research Associates. 1988. The Economic Impact of the Quarter Horse and Quarter Horse Racetrack Industry and the Race Horse Breeding Industry on the State of Florida. Thalheimer Research Associates. Lexington, Kentucky
- (8) Thalheimer Research Associates. 1988. An Economic and Financial Analysis of the Florida Quarter Horse and Quarter Horse Racetrack Industry. Thalheimer Research Associates. Lexington, Kentucky
- (9) Trenchi, Peter, III and Warren A. Flick. 1982. An Input-Output Model of Alabama's Economy: Understanding Forestry's Role. Alabama Agricultural Experiment Station Bulletin Number 534, Auburn University.
- (10) U.S. Department of Commerce. 1984. The Detailed Input-Output Structure of the U.S. Economy: Volume I, The Use and Make of Commodities by Industries. U.S. Government Printing Office, Washington, D.C.

Calculation of Type II Multipliers

Two multipliers, an income multiplier and an employment multiplier, were used in this study. An income multiplier is a number by which an initial transaction is multiplied to estimate the total amount of business generated as a result of the transaction (5). For the Quarter Horse industry, this would include the value of the initial transaction, business generated by suppliers of goods and services to the Quarter Horse industry, purchase of consumer products by participants in the Quarter Horse industry, and business generated by suppliers of consumer products.

An employment multiplier shows the change in household employment throughout the economy that results from an employment change in any one industry (8). In other words, the addition of an employee in one industry will create demand for new employees throughout the economy due to the resultant change in final demand.

There are two types of multipliers. Type I multipliers are calculated based on the assumption that households are not affected by transactions in other sectors of the economy. Type II multipliers, on the other hand, treat households as a part of the industrial system (2). In a type II model, therefore, household incomes and employment increase as production in other sectors of the economy increases. The type II multipliers were used for the purposes of this study due to the unrealistic assumption underlying the type I multipliers.

The type II multipliers used in this study were estimated using an input-output model of Alabama's economy developed by Trenchi and Flick (8). This model is composed of matrices showing the economic effects of transactions and employment between all major sectors of the economy. The segments of the model that are relevant to the income multiplier used in this study are shown in table 11.

The direct effects column in table 11 shows the proportion of the livestock industry's total purchases that were obtained from the industry in the corresponding row. For example, the livestock industry purchased approximately 8 percent of its total purchases from other agricultural industries. The direct, indirect, and induced effects column shows the total changes in income in a particular sector resulting from a \$1.00 change in income in the livestock sector.

Type II income multipliers are calculated by dividing the household row entry in the direct, indirect, and induced effects

column by the household row entry in the direct effects column (2). In this case:

0.67865/0.23127 = 2.9344

The relevant income multiplier for this study, therefore, is 2.9.

Calculation of the employment multiplier is a bit more complicated than the income multiplier and is beyond the scope of this study. Trenchi and Flick (8), however, estimate the type II employment multiplier for Alabama's livestock sector to be 1.74.

Table 11. Livestock Column Vectors from the Trenchi and Flick Input-Output Model.

-	rect effects	Direct, indirect and induced	
Sector 1	on ivestock	effects on livestock	
Livestock	0.14836	1.18830	
Other agriculture	0.08334	0.10501	
Mining	0.00011	0.00925	
Construction	0.00636	0.02730	
Food & Kindred	0.00173	0.03171	
Textiles	0.00022	0.00124	
Apparel	0.0	0.00283	
Logging	0.00065	0.00200	
Sawmills	0.0	0.00125	
Millwork & plywood	0.0	0.00083	
Other wood products	0.00011	0.00284	
Furniture	0.0	0.00082	
Paper	0.00032	0.00399	
Chemical	0.00970	0.05012	
Rubber & plastics	0.00065	0.00366	
Primary metals	0.0	0.00324	
Fabricated metals	0.00216	0.00849	
Machinery Transportation	0.00032	0.00792	
Equipment	0.00011	0.00490	
Manufacturing	0.00194	0.02267	
Wholesale & retail	0.03170	0.18569	
Services	0.02480	0.15322	
Financial	0.01822	0.17963	
Transportation Communications &	0.01919	0.06140	
Utilities	0.00464	0.06629	
Households	0.23127	0.67865	

Source: Trenchi and Flick (9).

