



ALABAMA EQUINE INDUSTRY: INVENTORY, IMPACTS, AND PROSPECTS



BULLETIN 662 JUNE 2006
ALABAMA AGRICULTURAL
EXPERIMENT STATION
AUBURN UNIVERSITY
RICHARD GUTHRIE, DIRECTOR
AUBURN UNIVERSITY, ALABAMA

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Research supported in part by a grant from the Alabama Horse Council (AHC). The AHC works to enact fair and effective regulation affecting horse use, improve state equestrian facilities, increase public understanding of horses and horse use, and enhance the contribution of horses to the quality of life in Alabama.

We thank Joe Spivey for his vision and energy in support of the Alabama horse industry.

First Printing 3K, June 2006

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ALABAMA EQUINE INDUSTRY: INVENTORY, IMPACTS, AND PROSPECTS

K. WHITING, J. J. MOLNAR, AND C. A. MCCALL

INTRODUCTION

Horses are an integral part of Alabama life. Horse production, training, and events create major contributions to the Alabama economy. Every county has horse farms, organizations, and some schedule of equine activities. Breeding, sales, recreation, showing, and other endeavors are manifold sources of income, employment, and leisure consumption in Alabama. The various segments of the horse industry are associated with many diverse clusters of institutions, professions, and activities for equine health, maintenance, and promotion. Each horse breed and type of event has unique organizational arrangements for registration, competition, and recognition.

Little is documented about the aggregate importance of the horse industry in Alabama and the nature of the barriers and constraints that presently inhibit its continued growth and expansion. Statistical information generally is not available because horses are not considered a food or fiber commodity. The data at hand are fragmented, irregularly updated, and available from disparate sources.

Studies of the horse industry in other locales often focus on a specific segment or aspect of the industry. Knapp (13) and Knapp and Barchers (14) profiled the Virginia Horse Center's economic impact. Benito, Camaraota, and Sundin (7) profiled the equestrian industry in Sonoma, California. Beattie, Teegerstrom, Mortensen, and Monke (6) assessed the impact of pleasure horses, horse shows, and racing on Arizona's economy. Broader studies include Gordon's (10) work on Australian equine impacts, the Henley Centre (11) assessment of United Kingdom equine impacts, and Smith's (18) profile of the horse industry in New Hampshire. Each takes a quite different approach to characterizing impact, but all share the present study's focus on outlays for horse keeping and participation in shows and competitions.

Whiting is a graduate research assistant and Molnar is a professor in the Auburn University Department of Agricultural Economics and Rural Sociology. McCall is a professor in the Department of Animal Sciences.

The Alabama Context

Several factors inhibit the study of Alabama equine activities (8). Following the decline in numbers of horses on farms in the 1950s, detailed enumeration of this class of livestock by the Agricultural Statistics Service was discontinued. The Census of Agriculture does continue to report the number of horses on farms every five years but does not include pleasure horses or equines for other purposes on nonfarm residences. Horses in locations other than commercial farms are not enumerated by any agency. Some of the national breed associations maintain accurate records and facilitate the registration of young horses; others are rendered less useful by double-registries and fee structures that discourage registration of every foal. Animal health authorities collect some information on an occasional basis for disease management purposes.

Yet, several different segments of the Alabama horse industry can be identified. At the core of the horse industry are the farms and private individuals who breed, train, and stable horses. The many livestock arenas located across the State make Alabama a favorable environment for rodeos, horse shows, and other competitions. Given the several State and National parks in Alabama, trail riding is an increasingly popular activity. Year-round pastures and other climate-related advantages favor the horse industry in Alabama.

A number of agricultural endeavors are tied directly to horse production and maintenance. Alabama farmers raise and sell corn, clover, hay, and other feed crops consumed by equine. Bedding straw and wood shavings also are agricultural commodities regularly used by horse owners. Because horses represent high-value individual animals, veterinary services, health care products, and farrier services are vital to their maintenance and well-being. Horse activities create demand for clothing, tack, and other accouterments necessary for participation in shows, events, and competitions, as well as basic items needed for recreational riding. Trainers find employment teaching young people, preparing horses for competition, and working with adult riders seeking a higher level of capability. These endeavors are profit-generating endeavors for individuals and firms that account for a substantial economic impact.

Horses are a significant source of tourism and recreational spending. Many horse activities are spectator sports. Knapp and Barchers (14) and Knapp (13) examined the economic impact of the Virginia Horse Center, a large facility that supports equine events. The facility experienced a 20 percent increase in animal-use days over a four-year period. Area hotels supported a new 2 percent lodging tax to support the Horse Center's operations and maintenance, recognizing the drawing power of the facility for their businesses.

In Alabama, there are several large facilities resembling some aspects of the Virginia Horse Center. Like the Horse Center, these facilities stimulate local economies with revenue obtained from horse show participants. Most single events tend to draw only a small number of onlookers, but there are many such events in nearly every corner of the State. Many attract participants from other counties and from outside Alabama, while a smaller number of events occurring annually tend to draw large spectator crowds.

Some types of equine activities are relatively capital-intensive; that is, they require more and higher-valued horses, equipment, and other types of investment. For example, polo and professional showing require relatively high levels of expenditure, tending to draw small numbers of participants and spectators from upper-income segments of the population. Most Alabama equine activities require lower value animals, however, and are less capital intensive. These activities include trail riding, pleasure use, and participation in local shows.

The prospects for the horse industry in Alabama are dependent on several factors. Alabama land costs and climates are favorable for animal production. Several agricultural 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 greater Birmingham. Show arenas are located statewide in diverse locales. A large number of events, shows, and other horse-related activities take place throughout the State at various times.

Objectives

This report provides an overview of the Alabama horse industry and its organization, and an assessment of its socioeconomic impact. The study addresses (1) the structure of the horse industry in Alabama; (2) the meaning of horse ownership, maintenance, and use for the Alabama economy; and (3) the overall implications and prospects of the industry for Alabama agriculture and the State. It endeavors to demonstrate the relative importance of horses and horse-related activities as a component of the Alabama economy.

METHOD

Data Sources

The study integrates several data sources. First, we used a telephone survey of 879 Alabama households to determine the number of households that owned equine. Second, we conducted an Internet survey of 130 knowledgeable individuals involved in the horse industry to assess spending patterns for horse care and maintenance. Third, we conducted telephone and personal interviews with more than 30 individuals involved in the various other aspects of the horse industry. These individuals included horse owners, breeders, trainers, event organizers, store owners, and suppliers. Finally, we observed a number of events, shows, and other activities, conducting informal interviews with officials, owners, trainers, and other participants.

Population Estimates. Estimates of horse numbers were requested from national breed associations and the American Horse Council. This information then was supplemented and modified through reviews by veterinarians, breeders, and other knowledgeable individuals. We used published census reports for past years and the published estimates made by government agencies to estimate the number of horses in Alabama in 2005.

Equine Spending. To profile spending associated with the horse industry in the State, average annual expenditures for economical, moderate expense, and high

expense equine were derived from an Internet survey. The Internet survey assessed spending patterns for horse care and maintenance. We recruited 130 knowledgeable individuals to complete the survey and, in turn, asked them to make referrals to others with expertise to complete the review of spending estimates.

We asked respondents to assess average expenses for 16 types of expenses related to equine care and maintenance. We used published reports and knowledgeable informants to arrive at an initial set of estimates. Respondents reviewed each dollar amount, noted whether it was acceptably accurate or whether they felt another number was more appropriate. Participants in the Internet survey were given the opportunity to choose one or more levels of care and maintenance about which they were knowledgeable and to assess relative costs for a horse maintained at those levels.

The level of care and maintenance depends on the use of the animal and its value. The economical horse is one used for light, noncompetitive riding and has a low market value. The moderate level horse is one used for a small amount of showing, competition, or breeding. Training and bloodline increase the cost of such animals to the point that the horse merits greater expense to protect the initial investment. The high-expense horse is one used for advanced showing, competition, or breeding, referred to by Gordon (10) as a "business horse." The high-expense horse requires the most care and maintenance. Interviews with suppliers of various goods and services, as well as horse owners and breeders, were used to arrive at these estimates.

Event Impacts. A series of major events and activities that regularly involve 100 or more participating horses in Alabama were identified. The extent of tourism and spectator activity associated with these events was obtained from interviews, documents, and Internet materials. The staff of national and state horse-related organizations, as well as knowledgeable individuals involved in showing, polo, dressage, rodeo, and other activities, also provided much information.

Aggregate Impacts

The expenditure profiles and horse population estimates were used to compute the total direct expenditures for horse use, ownership, and maintenance. These expenditure estimates were used to portray the relative importance of equine keeping and use for the Alabama economy. We endeavored to estimate animal-related, business-related, and event-related types of expenditures. The breeding industry in Alabama is relatively small and often combined with other personal and business purposes; therefore, we did not assess this aspect of the industry separately. Thus, the approach taken was to combine the cost of keeping the horse with other expenses for using the horse.

Also presented are impact estimates for a selected set of major Alabama equine shows and competitions. The cost of the associations that organize events was not directly assessed but was captured through the dues and entry fees paid by horse owners as discussed by Gordon (10).

The analysis begins with equine population estimates. An overview of the major horse associations as well as the most popular horse breeds and their related organizations in Alabama is provided. Some of the larger events and uses for horses in Alabama are detailed. An assessment of the economic contributions of the various

components of the horse industry in Alabama is provided. Estimates of spending and employment impacts of the horse industry in Alabama are portrayed also.

POPULATION ESTIMATES

Number of Horse-Ownning Households

A telephone survey of 879 Alabama households in fall 2005 was commissioned. Of the responding households, 4.9 percent reported owning, leasing, or renting a horse or horses. (The 95 percent confidence interval for this estimate is 3.45 to 6.35 percent.) The U.S. Census Bureau estimated that Alabama had 1.8 million households in 2005. This suggests that about 89 thousand households have equine. The number of horse-owning respondents was too small for further assessment by breed or use, but the survey results do verify previous estimates of the number of Alabama horse-owning households (8).

Number of Alabama Equine

In 2002, the Census of Agriculture showed that there were 3.64 million horses and ponies and 105,358 mules, burros, and donkeys located on farms in the United States. However, the total number of equine includes those on farms and those on nonfarm locations. In 1999, the USDA estimated national equine numbers on farm and nonfarm locations to be 5.32 million head of horses. The study asserted that 39.1 percent of those total animals were located on nonfarm locations. It is not possible to obtain an exact number of equine located in nonfarm locations, so a similar ratio of farm and nonfarm horses for Alabama was assumed in 2005. An estimate of the number of equine using other published estimates and registration data was derived. There are an estimated 186,871 equine within Alabama (Table 1).

Breed registrations alone are not a sufficient basis for an equine population estimate. Many recreational use horses are not registered with any breed association. Some animals may be double registered, meaning that an animal may have entered in the records of more than one breed association. For example, most Racking Horses are eligible for registration as both Racking Horses and as Tennessee Walking Horses. The double registry of animals causes inflation in the actual number of animals within Alabama. The number of grade (i.e., unregistered) animals is estimated to be at least equal to the total of all registered animals.

The number of other horses in Alabama includes other breeds not listed in Table 1 and all of the animals that are unregistered in Alabama. The estimated number is a residual of animals not claimed by breed association registrations—72,771 unregistered horses—and reflects what is known about the great number of animals used only for trail riding and pleasure. Table 2 summarizes the information from previous counts and estimates that were used to project the current total number of Alabama equine.

There have been many changes and improvements in the horse industry in Alabama and some setbacks as well. New arenas and show facilities around the state increase opportunities for horse owners to compete in shows and events. Rails to Trails and other programs are increasing the number of opportunities for organized trail rides and other outdoor recreational activities involving horses. The Birmingham

racecourse opened with much fanfare and expectation, but low attendance and other considerations induced its management to shift to other forms of entertainment. Table 3 identifies some key events in the development of the horse industry in Alabama.

HORSE ASSOCIATIONS

Organizations and associations provide the framework for owners, riders, horses, and spectators to come together. The Alabama Horse Council is an overarching organization that endeavors to bring together the diverse corners of the industry. Otherwise, Alabama equine associations are a large collection of breed and activity-focused groups that generally have diverse interests and goals. This fragmentation and diversity is both a major strength and liability for the Alabama horse industry.

The major components of Alabama's horse industry are identified in the following sections. Figure 1 illustrates the hierarchical relationships between several of the major national, state, sub-state, and county-level organizations and events that involve horses in Alabama.

In Alabama, breed, activity, and locality organize the horse industry. Lo-

TABLE 1. ESTIMATED NUMBER AND TYPE OF EQUINE BY BREED IN ALABAMA, 2005

Breed	Number
Quarter Horse	49,688
Tennessee Walking Horse	13,268
Racking Horse	22,000*
Appaloosa	6,761*
Thoroughbred	6,500*
Arabian	3,355
Half-Arabian	945
Paint	875
Saddlebred	1,450*
Pony of the Americas	1,664*
Morgan	479
Paso Fino	440*
Mules, Burros, and Donkeys	3,625
Draft Horses	500*
Warmbloods	500*
Ponies	1,500*
Miniature Horses	300*
Pinto	250*
Other Breeds and Unregistered Animals	72,771*
Total Equine	186,871

*Estimate; others are association reports.

TABLE 2. ESTIMATED NUMBER OF FARM AND NONFARM EQUINE IN ALABAMA, 2006

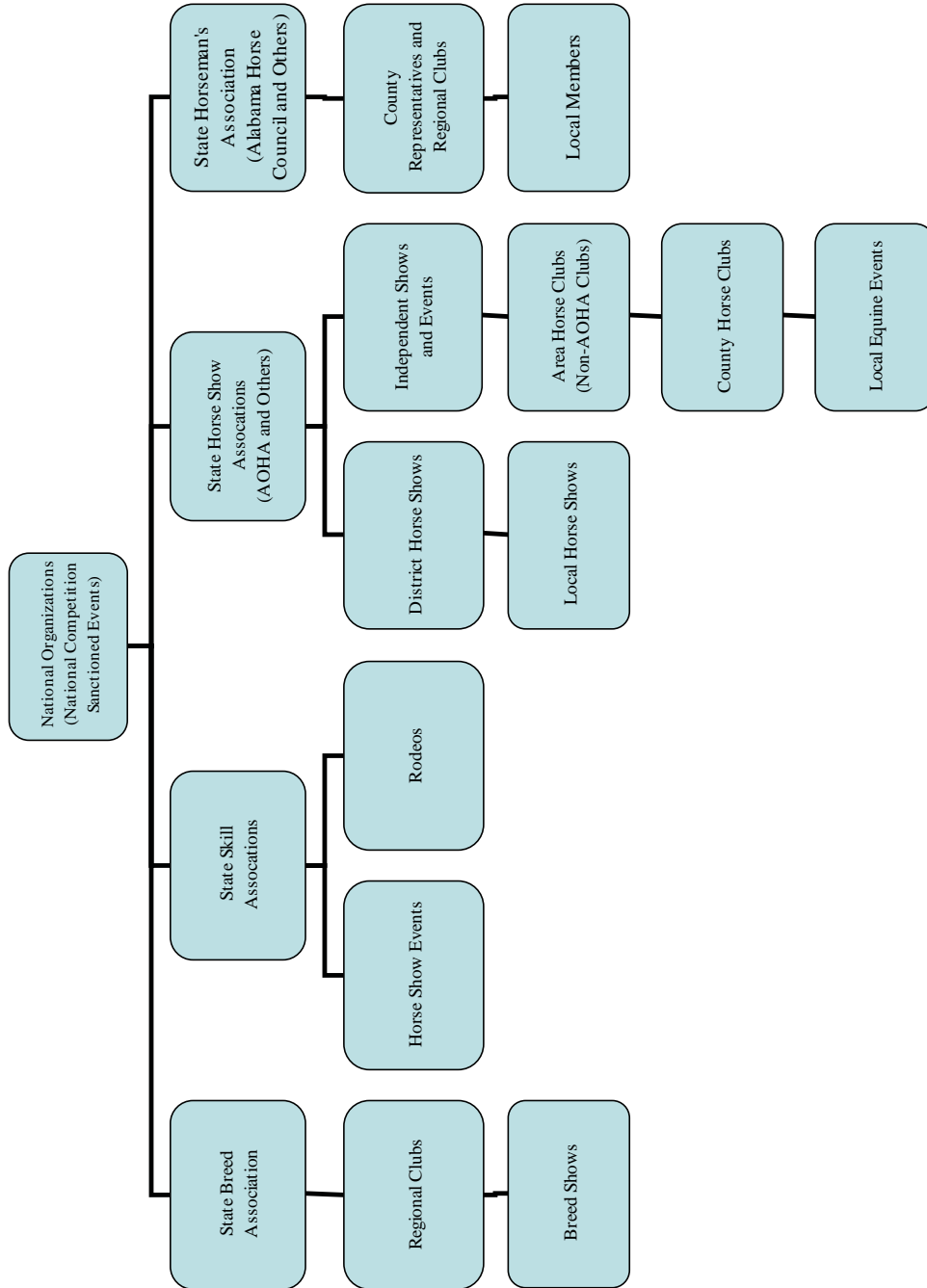
	Farm	Nonfarm	Total
1997	54,000	76,000	130,000
2002	65,949	92,817	158,766*
2006	77,623	109,248	186,871*

*Counts projected from Agricultural Census data.

TABLE 3. MILESTONES IN THE DEVELOPMENT OF THE ALABAMA HORSE INDUSTRY

Milestone	Date
Auburn University College of Veterinary Medicine founded	1892
Tuskegee University School of Veterinary Medicine founded	1945
Alabama Quarter Horse Association formed	1957
First Southeastern Livestock Exposition Championship Rodeo	1958
Racking Horse Breeder's Association of America formed	1971
First 4-H State Horse Show held	1972
Birmingham Race Track opens	1987
Alabama Open Horseman's Association formed	1988
Alabama Horse Council formed	1995
Birmingham Race Track ends live racing	1997
Alabama State 4-H Show exceeds 300 participants	2004

Figure 1. Organizational chart of Alabama's horse industry, 2005.



cality-based organizations usually are open to more than one breed of horse. Breed specific organizations are limited to the promotion of one particular breed of horse. Many horse owners, however, belong to a combination of organizations, usually supporting a particular horse activity as well as organizations promoting specific horse breeds.

It also should be noted that there are no State organizations for some of the breeds and many of the activities detailed in this report. Many activities have no State-based group; these participants tend to belong to regional affiliates of the national organizations.

Alabama Horse Council

The Alabama Horse Council is an organization that impartially represents all segments of Alabama's horse industry. Weekend pleasure riders, horse breeders, trainers, farriers, veterinarians, feed dealers, and equine equipment dealers have common interests in horses, their promotion and welfare, and the success of the horse industry. Regardless of the breed, riding discipline, or segment of the horse industry, the Alabama Horse Council seeks to unite equestrians to protect horses and the horse industry. The organization is chartered to enact fair and effective regulation affecting horse use, improve state equestrian facilities, increase public understanding of horses and their uses, and enhance the contribution of horses to the quality of life in Alabama.

Its 16-member board meets four to eight times a year. It organizes educational events throughout the year, promotes communication between the industry and outside interests, monitors legislative decisions affecting the horse industry, and provides a forum to develop strategies to advance Alabama's horse industry. It organizes an annual Horse Fair which has grown from a one-day event to a two-day activity offering educational seminars; riding and training clinics; opportunities for various breeds, riding disciplines, and stallion owners to promote their horses; demonstrations on horse care and use; a trade show with approximately 70 vendors; and an equine entertainment show.

Alabama Open Horseman Association

The Alabama Open Horseman Association (AOHA) is a nonprofit organization formed in 1988 to recognize State champions for various horse show events. The AOHA is a central grassroots equine show organization in Alabama. AOHA is comprised of 16 independent regional saddle club associations located throughout the State of Alabama and some parts of the four neighboring states. These multi-county associations, which are listed in Table 4, are composed of local equestrian clubs.

The AOHA affiliates and other local equestrian clubs sponsor shows for sub-state 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 annual State Championship Horse Show determine State Champion horses.

The goal of AOHA is the promotion and sponsorship of the Alabama State Championship Horse Show, held each Labor Day weekend, and development and support of youth who show and compete within the AOHA. The State Championship Show continues to be one of the largest horse shows east of the Mississippi River.

Contestants qualify by successful participation throughout the year in the shows of the local AOHA associations. Only the top horses from those associations may register to enter the championship show. An association's affiliate saddle clubs host point shows to qualify members for the AOHA State Show. For example, one association requires that each member attends eight shows and be ranked within the top 15 to qualify for the State event.

Classes are open to all breeds of horse and pony for youth and adults. Local shows may be sponsored independently or may be affiliated with local or State equestrian associations. An estimated 72 AOHA-affiliated saddle clubs are in Alabama. These various clubs are responsible for at least 256 open shows a year, in addition to any fun or benefit shows they might hold. Table 4 shows the AOHA saddle clubs within Alabama, the number of horse shows hosted, and the approximate number of saddle club members.

The culmination of the season for the open shows is the State Championship show that usually is held in September. Winners at this show hold the title State Champion for the year. In 2004, there were 2,459 entries for the three-day AOHA show held in Montgomery. Of those entries, approximately 80 percent were Alabama horses.

Saddle Clubs

Saddle clubs are locality-based equestrian associations. These grassroots organizations are the primary connections most Alabama equestrians have to others sharing their interest in horses. Regional associations and their member saddle clubs sponsor many horse shows and other horse-related events each year.

Table 4 lists Alabama saddle club associations that are members of the AOHA, their membership, and the total number of shows sponsored by each association and

TABLE 4. ALABAMA OPEN HORSEMAN'S ASSOCIATION (AOHA) SADDLE CLUB ASSOCIATIONS, NUMBER OF SHOWS, AND ESTIMATED MEMBERSHIP, 2005

Association	Clubs	Shows	Members
North Alabama Saddle Club Association	9	26	350-400
Tennessee Valley Saddle Club Association	3	16-20	300-450
Tri-State Association	3	15-20	250
East Alabama Horse Association	6	18	360
Northwest Alabama Horse Association	4	15-18	250-300
Gulf Central Association	5	25	300
West Alabama Horseman's Association	7	17	N/A
State Line Horseman's Association	3	17	350
North Central Horse Association	4	18-20	300-400
Shoals Area Horseman's Association	4	18	200
Alabama Tennessee Borderline Horse Association	3	22	N/A
Mid-State Horseman's Association	5	20	200
Emerald Coast Horse Association	5	36	150
Centerline Open Horseman Association	3	12-15	100
South Alabama Horseman Association	3	28	240
Wiregrass Open Horseman Association	5	29	N/A
Total	72	256	2,150

its constituent saddle clubs. This list is by no means all-inclusive. There are clubs and associations across the State too numerous to mention in this report.

Many local groups scattered throughout Alabama are not affiliated with any other horse association; nevertheless, these groups still meet regularly, have established memberships, and sponsor open shows and other special events.

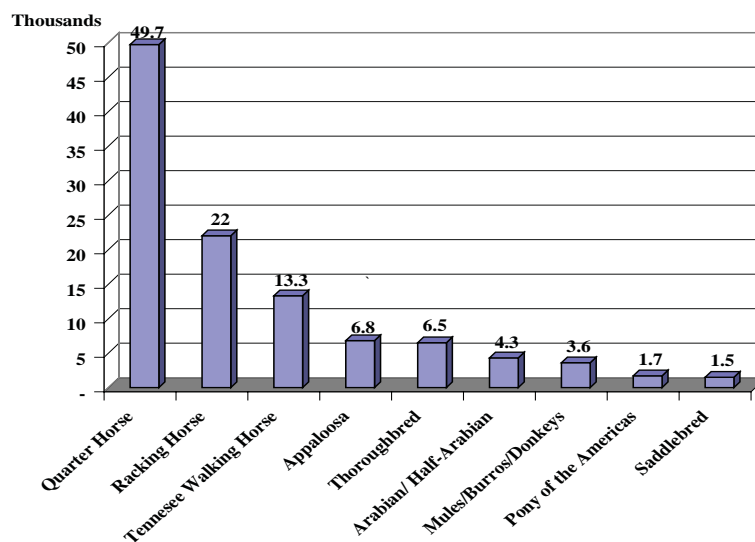
MAJOR ALABAMA HORSE BREEDS

The Alabama horse industry is best understood as a loosely connected aggregate of breeds and related associations that supports an annual cycle of competitions and recognition. Most of the associations have connections to regional or national breed organizations that register animals, sanction events, and organize championship competitions. Breeds represent the major divisions in communication and association among horse owners in Alabama.

In general, a breed is a relatively homogeneous group within a species that has developed certain distinguishing traits such as color, appearance, or performance. Horse breeds are defined individually by some combination of conformation, utilization, temperament, and color.

The diversity of breeds is an important attribute of the State's horse industry, as is a corresponding diversity of events and activities. For the horse owner, a breed defines a reference group for information sharing, a potential market for sales or breeding services, and a context for display and use of a valued possession. The top three breeds in Alabama are American Quarter Horses, Tennessee Walking Horses, and Racking Horses. These animals are popular in Alabama because of their adaptability for trail riding and showing. These three associations host the largest breed-focused horse shows in Alabama. Figure 2 illustrates the relative proportions of the State's major breeds in terms of the number of registrations reported by each breed association.

Figure 2. Number of registered horses by breed in Alabama, 2005.



Each breed's background is important in understanding its present applications and popularity. Several breeds have had a long history of use in Alabama. For each breed, a short history explaining its original use and present significance in Alabama is given.

American Quarter Horse. The American Quarter Horse Association is the largest and fastest growing breed association in the United States and is Alabama's most popular breed. Quarter Horses originated in colonial Virginia, where they were used for light work, riding, and racing. Quarter Horses later gained fame in the South-western grasslands for their ability to work cattle. In Alabama, Quarter Horses are the traditional choice for all manner of western activities. They excel at barrel racing, bull dogging, roping, team penning, rodeo events, reining, cutting, and many more activities. Quarter Horses are growing in popularity as dressage and hunter/jumper mounts and are great mounts for trail riding, pleasure riding, and showing. There were 49,688 Alabama horses registered to the American Quarter Horse Association in 2003.

Shows are the major driving force behind Alabama's Quarter Horse industry. In 2005, the American Quarter Horse Association (AQHA) sanctioned 13 Quarter Horse shows in Alabama. Due to the large number of animals, as well as the variety and frequency of events, Quarter Horses involve a larger number of Alabamians than any other breed.

The Alabama Quarter Horse Association (ALQHA) is a statewide organization formed in 1957 for promoting Quarter Horses in Alabama. ALQHA is the only Quarter Horse organization in Alabama recognized by the AQHA. AQHA-approved shows usually are two- or three-day competitions involving about 100 horses per show. "Futurity" shows, involving young animals and higher prize monies, may have up to 500 entries competing each day. The Alabama Quarter Horse Association sponsors the Alabama futurity in September and an open show in June. Other shows throughout the year are held at the facilities in Montgomery, Andalusia, and Decatur. The ALQHA's main focus is organizing AQHA-sanctioned shows for its Alabama membership.

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. The shows offer a variety of classes based on the riders' age and experience, and also the age and ability of the horse. Qualifying to enter top state, regional, national, and world events depends on points accumulated through participation in AQHA-approved shows. Over the past few years, Alabama has produced several champion Quarter Horses. The value of such achievements is capitalized into the breeding fees and offspring of the horse, as well as the fee levels of the trainers.

Palominos are a color variety of Quarter Horses (as well as many other breeds). Not a major factor in Alabama by themselves, Palominos nevertheless provide significant income to Alabama through their specialty shows. Since primary participation in Palomino shows in Alabama is by Quarter Horses (although other breeds also may compete), the shows add to the economic impact of Quarter Horses in Alabama. Approximate dates and show sites for Palomino shows include May, October, and November in Montgomery. The shows average from 45 to 80 horses each.

The Alabama Stallion Owners Association (ASOA) was formed to promote Quarter Horse stallions standing for stud service in Alabama. Other stallions, such as

Thoroughbreds, whose foals are eligible for registration in the AQHA, may join also. The ASOA sponsors shows throughout the year, as well as futurity shows in conjunction with AQHA shows.

Pony of the Americas. Known as a child's working pony, Pony of the Americas (POAs) is usually a stock type pony with Appaloosa markings. Ridden mostly by children, they usually are shown in halter and western-type classes. They are growing in popularity in the english-type classes because their flashy markings and their athletic abilities make them good jumpers. For a pony to be registered with the POA, it must be within the height requirements of no smaller than 46 inches and no larger than 56 inches.

Morgans. Morgans are small, powerful horses popular for showing and riding. They are particularly popular in North Alabama. They are used for a variety of different skill events and activities. Morgans are very popular in driving events.

Tennessee Walking Horse. The trademark of the Tennessee Walking Horse is its long, comfortable, rolling stride—the result of use as a plantation horse, walking the fields and crops of the landowners from dawn until dusk. Tennessee Walkers are popular for their “armchair” gait; it has been compared to sitting in a rocking chair. Tennessee Walkers show three gaits: a flat walk, a running walk, and the canter—the last being the most difficult for the horse and the rider. With their flashy, unique gaits, Tennessee Walking Horse shows are traditionally well attended by both spectators and participants in Alabama. The current largest show is the South Alabama Walking Horse Show held in Andalusia. In addition, there usually are many classes for Walking Horses at open shows. They usually are calm, gentle animals despite their fiery appearance in the show ring. Alabamians have long enjoyed ownership of this breed for both pleasure and show. There were 13,268 Tennessee Walking Horses registered in Alabama in 2004.

The Walking Horse Association of Alabama is the state affiliate for the Tennessee Walking Horse Breeders' and Exhibitors' Association, which is the National association.

Racking Horse. The Racking Horse breed is an offshoot of the Tennessee Walking Horse. The “rack” gait is similar to the running walk of Tennessee Walkers. Prior to 1971, horses with a natural rack were considered Tennessee Walkers. Nevertheless, in 1971, a group of Alabama equestrians formed the Racking Horse Breeders' Association of America to promote Racking Horses. Later the same year, the U.S. Department of Agriculture determined that the Racking Horse was an individual breed with a unique gait.

On October 5, 1975, the Racking Horse was designated and named the “Official State Horse for the State of Alabama” by the State Legislature. In Alabama, Racking Horses are popular as show and pleasure mounts. The Racking Horse studbook is not yet officially closed. This means that additional animals with the requisite conformation and ability still can be added to the genealogy. Many Racking Horses descend from Walking Horse lines. In 2004, there were 150,000 registered Racking Horses worldwide—22,000 in Alabama.

The Alabama Racking Horse Association (ARHA) was formed for the purpose of organizing and promoting Racking Horses in Alabama. The ARHA has more than

100 members and sponsors many shows each year. The parent organization for the breed is the Racking Horse Breeders' Association of America (RHBAA) in Decatur, Alabama. In addition to registration, the RHBAA promotes and regulates Racking Horse breeding, showing, publicity, and sales.

In 2005, there were four Racking Horse shows in Alabama sanctioned by the RHBAA. The RHBAA hosts the two largest shows, the Spring and World Celebrations. At the World Celebration, the current year's World-Class Champions and the Racking Horse World Grand Champion are chosen during a weeklong event in September. Since its inception as a one-day, 500-entry event in 1972, the World Celebration has grown to more than 80 classes with more than 690 horses in 2004. The Spring Celebration is a smaller multi-day event held in April.

McCurdy Horse. The McCurdy Plantation Horse Breed was developed by the McCurdy family of Lowndes County, Alabama, in the late 1800s and the early 1900s. They were plantation owners and needed well-gaited, durable horses to oversee and work the land. McCurdy Plantation Horses have a very calm, easy-going temperament that makes them unequaled as personal and family horses. The color gray is prevalent among the breed. They excel at many tasks such as trail riding, field trialing, and driving and working livestock. Although relatively small in number, the McCurdy Horse is a unique Alabama breed particularly popular in Central Alabama.

Appaloosa. Spanish horses that were brought to Mexico around the 1600s apparently formed the basis for the present-day Appaloosa. The Spanish horses and their descendants spread northward and by 1730 had been acquired by the Nez Perce Indian tribe in the Palouse country of the Northwest United States. The name Appaloosa is a variation of the Native American term for these horses, "Palouse Horse," named after a river in Idaho. Because of the animals' colorful markings and riding characteristics (endurance and surefootedness), the Nez Perce bred the Appaloosa for rugged mountain traveling.

In Alabama, Appaloosas are considered general-purpose riding horses that can be used for pleasure, rodeo, western and english showing, and racing. Owners attribute the popularity of the Appaloosa breed in Alabama to their coloring and disposition. The fact that the breed is available in different colors and patterns makes it very attractive to many of its owners. In 2004, there were 6,761 Appaloosas registered in Alabama.

Thoroughbred. The Thoroughbred was developed by crossing Arabian stallions with native English mares. In colonial America, raising and racing horses was centered in Virginia. The center of the Thoroughbred industry then moved to the bluegrass country of Kentucky and Tennessee. The breed has a long history in Alabama, as former President Andrew Jackson raced Thoroughbreds at a track by the Green Bottom Inn near Huntsville. In addition to an early history of racing in Alabama, Thoroughbreds have been popular for english riding, dressage, jumping, polo, hunting, and pleasure riding. In 2004, there were an estimated 6,500 Thoroughbreds located in Alabama.

Arabian. One of the oldest known breeds of horses, the Arabian gained distinction centuries ago as the close companion of desert-dwelling nomads. From its close association with humans, the Arabian horse developed a gentle disposition, intelligence, and obedience. A three-day Arabian show is held in March in Andalusia. Previously,

the show was held in Montgomery. An average of 150 horses are entered in the show, approximately 90 of those horses coming from Alabama. There are also other shows held throughout the year that sponsor Arabian classes. Spectators may number from 150 to 300 per show. Classes are varied, ranging from hunt seat to saddle seat to western.

The Arabian is a general-purpose light horse with a reputation for endurance. In Alabama, Arabians often are used for english-style activities, as well as for recreation. Owners attribute the popularity of Arabians in Alabama to the animal's beauty, versatility, and pleasing temperament. In 2004, there were 3,355 registered Arabians and 945 registered half-Arabians in Alabama.

There are two Arabian organizations in Alabama recognized by the parent organization, the International Arabian Horse Association. The Alabama Arabian Horse Association originates in Montevallo and sponsors the Annual Alabama Arabian Horse Show and the Alabama Arabian Stallion Showcase. The Tennessee Valley Arabian Horse Association located near the Tennessee-Alabama line is less show-oriented and participates in regular trail rides, parades, and other events.

Paints. Paints are known for their spotted markings. They are used in both english and western activities. The American Paint Horse Association is the second largest breed association in the United States (based on the number of foals registered per year). Paint horses are very similar to Quarter Horses in build, conformation, and use. The main way to differentiate between the two breeds is that Paints are known for their colorful coat patterns that require a minimum amount of white body markings for registration.

Saddlebred (American Saddlebred Horse). The background of the Saddlebred is somewhat similar to the Tennessee Walking Horse in that it was developed as a plantation horse. They are used primarily for three- and five-gaited classes, for fine harness, and for pleasure riding. The American Saddlebred Association sanctions at least one major show each year in Alabama. The American Saddlebred Association of Alabama is the state charter organization for the breed.

Paso Finos. Among the horses the Spanish brought to America, some were called "paso fino," which simply means, "fine pace." Paso Finos, a light horse breed, are known for the smoothness of their unique "paso" gait. Size and weight range from large pony to small horse.

Pintos. There are several different categories of Pintos: those that are of stock horse type, usually of Quarter Horse and Thoroughbred background; those of pleasure type, usually with Arabian blood; and those of saddle type, usually of American Saddlebred Horse background. The body markings are of white and another color; blue eyes are not uncommon.

Other Breeds. There are many other equine breeds not detailed here that can be found in Alabama, such as Warmbloods, draft horses, miniature horses, ponies, donkeys, and mules. Some are double registered in other breed associations such as Palominos, Spotted Saddle Horses, Buckskins, and others. Individually, these animal types often represent new points of growth and interest, as well as legacies of the past. No one of these breeds was considered present in sufficient numbers in Alabama for further analysis.

HORSE USES AND EVENTS

There is a wide diversity in the location and scale of horse activities in Alabama. Horse owners in Alabama can take their animals to a competition or activity nearly every weekend, or just to particular events held a few times each year. Spectators can choose among many diverse horse activities happening at the same time across the State.

The diversity of horse uses is an important component of Alabama's horse industry. The more activities that exist in Alabama, the greater the need is for horses that can perform the specific activities. As an activity grows in popularity, so does its impact on the Alabama economy. Larger numbers of horses draw bigger crowds, thereby increasing tourism and expenditures by outsiders and residents in a locality. The economic effect is carried throughout the community and State, as activities create demand for services, clothes, equipment, and facilities, as well as the production of horses. Across Alabama, many horses never compete in shows or participate in special activities. Casual horse ownership and use is a widespread and significant aspect of the horse industry in Alabama.

Horse events in Alabama can be divided into two broad classifications: general events and breed-specific events. In general events, many horses of different breeds may participate. Separate classes may be held for each breed at a show, or more than one breed may be able to perform the desired activity, as in jumping.

In breed-specific events, only the animals of one particular breed may participate. The fees for breed shows may be higher than for general events, and the animals are required to have credentials demonstrating that they are of the specified lineage.

It is noteworthy that many activities overlap. For example, a Quarter Horse owner may participate in the local open shows and in Quarter Horse shows. If the animal happens to be palomino-colored, they also may attend Palomino shows. A barrel racer may attend rodeos, open shows, and other events that feature barrel racing classes.

Horse Shows. Shows are competitions that award prizes based on conformation and performance of the horse or handler. Horses and their owners can accumulate points for participation and achievement that can lead to state, regional, national, and sometimes international recognition. Certified judges award place standings and points based on relevant criteria. Judging fees and travel expenses are paid from the show registration receipts. Shows encompassing larger geographic areas tend to organize around specific breeds and types of events, while local shows tend to include a variety of breeds and contestants. Participation is motivated in large measure by reasons of competition, sociability, and recreation. Local horse shows generally are less advanced and are less competitive than breed specific shows.

Shows provide an opportunity for horse owners, trainers, breeders, and riders to exhibit their animals and stimulate improvements in breeding stock and training procedures since winning horses and trainers command higher sale prices and fees. Additionally, shows provide spectator entertainment. Admission usually is not charged at local shows.

In addition to events sponsored by the United States Equestrian Federation (the overall horse-show governing body for the United States), shows are sponsored by

each breed association and many activity-based associations. Many horse clubs and organizations in Alabama also sponsor unsanctioned shows that provide opportunities for participation and recognition.

The numerous local shows and competitions are open to all breeds of horses at various small arenas throughout Alabama. Larger show arenas are located in Montgomery, Decatur, Huntsville, Dothan, Andalusia, Autaugaville, Fort Rucker, and Cullman.

Jumping/Hunting. Jumping events can take place at indoor or outdoor arenas. Jumping horses, or “jumpers,” can be of any breed. The horses are required to complete a course of jumps that should allow the contestant to show the animal’s abilities and training. The jumper’s score is computed according to the number of penalty faults it accumulates over the jumps.

Hunting horses, or “hunters,” also can be of any breed. Hunters are judged on performance, soundness, good manners, jumping style, and consistency. The fences must simulate obstacles found in the hunting field, such as post and rail, stonewall, white board fence, and hedge. The major state association for these activities is the Alabama Hunter Jumper Association, which hosts many shows during the season at various locations throughout the State. In addition, many small local schooling shows for hunters and jumpers occur across the State. These shows usually feature a combination of jumping and equitation (riding skill) classes, and some may include dressage.

The three-day event requires extensive training. A different phase is held each day, although in Alabama they often are combined into two days (combined training). The dressage test consists of a series of movements designed to show the animal’s fitness, suppleness, and obedience and typically is performed on the first day. The cross-country test held on the second day requires the horse and rider follow a course of obstacles through pastures and woods within a set time period. Stadium jumping requires completion of a course of obstacles within an arena and takes place on the third day.

There are two major three-day events held annually in Alabama, one in the spring and the other in the fall. Both are at Fort Rucker. There is also a combined training show held in Tuscaloosa at The Rise facility. The United States Equestrian Federation recognizes each of these events. They involve substantial registration fees and often attract riders from outside the State. Local, unsanctioned events are held on farms and arenas throughout the year.

The major breeds used for all of the hunting and jumping events are primarily Thoroughbreds and Warmbloods, but Quarter Horses and other breeds are growing in popularity in this sport.

Dressage. Dressage is an english skill activity that emphasizes harmonious training of the horse and rider. In dressage competitions, horses perform a set series of movements which are judged on accuracy of the pattern; obedience, suppleness, and gait quality of the horse; and the rider’s abilities to influence the horse. Dressage patterns are available for horses of all levels of training: beginner walk-trot to Olympic-level competition. There are three dressage clubs located in Alabama that are recognized by the national organization, the United States Dressage Federation. These clubs host shows, clinics, and other educational events regularly throughout Alabama.

Foxhunting. Foxhunting adheres to strict rules of protocol that were established in the 1900s. Drag hunts usually are held in Alabama: instead of chasing a live animal, the pursuers and hounds follow a previously laid out trail of fox scent through woods and fields. In Alabama, Thoroughbreds are the traditional choices for foxhunting. However, Quarter Horses are gaining in popularity, as well as Warmbloods, Appaloosas, Paints, and Pintos. These events have been popular in Alabama for some time, and continue to garner new support across the State.

Private hunt clubs based in Huntsville, south Alabama, and Columbus, Georgia (about 30 miles from the Alabama State line), organize circuits of hunts in the fall on various private farms around the State. Some hunt clubs provide horses to visiting riders and support recreational and other uses of horses, typically Thoroughbreds, outside the fall hunt seasons.

Hunting usually is not a spectator activity and generally is treated as a sport and social event for the individuals involved. Hunts represent a use of horses and reason for keeping them, but do not have an appreciable economic impact in Alabama. The impacts are portrayed here in terms of associated travel, tourism, and expenses associated with horse ownership. The economic impact is captured largely by the individual horse ownership and maintenance costs.

Rodeos. Rodeo comes from the Spanish word for *roundup*. Today there are six standard rodeo events: bareback bronc riding, saddle bronc riding, bull riding, steer wrestling (bull dogging), tie down roping, and barrel racing. Contestants compete for prizes such as cash, trophies, saddles, belt buckles, or points. Rodeo events are divided into two categories: rough stock events and timed events. Rough stock events include bareback riding, saddle bronc riding, and bull riding. Timed events include tie down roping, team roping, steer wrestling, barrel racing, and goat tying. Contestants in timed events provide their own horses. In Alabama, Quarter Horses are the traditional choice for timed events in rodeo, but other breeds of stock-horse type also can be found. About 12 Alabama farms operate as stock contractors, providing broncs, bulls, and steers for the competitions.

Participants in rodeos sanctioned by national rodeo organizations compete for the chance to enter the final rodeos of the respective associations. The top rodeo organizations that involve Alabamians (or are held at Alabama facilities) are the International Professional Rodeo Association (IPRA), the Professional Rodeo Cowboys Association (PRCA), and the Professional Cowboys Association (PCA). The IPRA operates in 39 states and four Canadian provinces while sanctioning a number of rodeos across Alabama over the course of a year. As the name implies, PRCA rodeos attract high caliber riders to events with large cash prizes. One is held annually at Garrett Coliseum. PCA rodeos are found most frequently in Alabama, as the headquarters for the organization association is in Robertsdale, Baldwin County. Several larger organizations sanction or organize rodeos in Alabama but will not be discussed further here. Founded in 1966, the nonprofit Tri-State Rodeo Association focuses on a three-state area: Louisiana, Mississippi, and Alabama. It also organizes events in other states in the region.

The Alabama High School Rodeo Association (AHSRA) and the Alabama Junior Rodeo Association (AJRA) are significant youth-oriented nonprofit associations.

The AHSRA organizes approximately 18 rodeos in Alabama and the AJRA organizes approximately 15, mainly in the Montgomery area and to the south. Approximately 130 high school students in grades 9 through 12 compete in the AHSRA rodeos and approximately 80 kindergarten through eighth graders compete in the AJRA rodeos and in youth divisions of the other associations. Cash prizes at events and recognitions at the regional and national level motivate young people attracted to this sport. Of the 37 AHSRA seniors graduating in spring 2005, 11 received college scholarships.

In conjunction with the AHSRA, Auburn University offers the James David Smith scholarship for a graduating rodeo participant. The University of West Alabama Rodeo Complex was completed in the fall of 1996. In 1998, the arena was named the Don C. Hines Rodeo Complex in honor of a former UWA president and professional rodeo cowboy who was instrumental in bringing the rodeo team into being. In 2002, Troy University initiated an intercollegiate rodeo program that attracted students from several states and began team competition. Both schools offer rodeo scholarships for student athletes.

Table 5 lists a representative set of sanctioned rodeos held in Alabama in 2005. Alabama also hosted more than 30 PCA rodeos in 2005. Most rodeos attract out-of-state participants and some of the large events span multiple days involving motel stays and stall rentals. Prize monies are not a component of economic impact of an event because they represent transfers from entry fees paid by participants to other participants, but they are important indicators of the relative importance of the event in terms of the number and kind of riders and spectators it is expected to attract.

Many smaller local rodeos take place across the State during the spring and summer months. These rodeos, which usually are not included in the IPRA, PCA, 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. The prize monies are not insignificant, as suggested by the listing in Table 6.

Local rodeos usually attract 30 to 60 contestants. The event is typically held during a Friday and Saturday evening at an arena with spectator stands. Rodeos often are significant events for small communities. They provide a focus for community life, a fund-raising opportunity for civic groups, and a boost for local merchants. Because rodeos are such popular events for spectators, revenue can be generated through admission fees, food, and novelties sales. In addition to advertising, these revenues form the business model for rodeo events.

Skill Events. Cutting, tie down roping, team roping, team penning, reining, barrel racing, and pole bending—all skills that demonstrate the horses' agility—also can be considered traditional skill events. A number of national, regional, and state associations have each of these events as their specialized focus. Such competitions test abilities of a horse and rider in skill akin to work on a traditional ranching operation.

Skill events are very popular in Alabama. For example, the cutting horse event developed out of a need to separate an individual animal from a herd of cattle with minimal disturbance. In this event, the horse and rider select a single cow out of a herd and attempt to prevent the animal from returning to the herd. Several Alabamians have recently held leadership roles in the National Cutting Horse Association.

Skill events often are held in conjunction with rodeo and horse show events. Owners of such horses often compete in both shows and rodeos, and pay membership dues to more than one association. Quarter Horses and other stock-type breeds excel at traditional skills events. In Alabama, they are the horse of choice for these activities.

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. Other skill event associations, such as the reining and cutting associations, have both a state-level and national-level organization. Barrel racing, team roping, and team penning are traditional skill events which are particularly popular in Alabama.

Barrel Racing. Barrel racing features a horse and rider running a cloverleaf pattern around three barrels set in a triangular arrangement. The horse and rider completing the pattern in the fastest time wins the event. They are permitted to touch the barrels but not to knock them over. Knocking a barrel over adds a 5 second penalty to the time.

TABLE 5. NUMBER OF RODEOS BY SANCTIONING ASSOCIATION IN ALABAMA, 2005

Association	Number of rodeos
International Professional Rodeo Association (IPRA)	7
Professional Cowboy Association (PCA)	33
Professional Rodeo Cowboys Association (PRCA)	2
Alabama High School Rodeo Association	18
Alabama Junior Rodeo Association	15
Southern Professional Bull Riders (SPBR)	1
Other Nonsanctioned Rodeos	12
Total	88

TABLE 6. LOCATIONS AND TOTAL PRIZE MONIES OF PCA-SANCTIONED RODEOS IN ALABAMA, 2005

Location	Prize money (\$)	Location	Prize money (\$)
Andalusia	13,700	Jemison	18,685
Athens	45,820	LaFayette	21,250
Auburn	N/A	Luverne	15,050
Brookwood	12,080	Marion	5,200
Chelsea	8,958	Oneota	16,800
Clayton	10,620	Ozark	13,350
Columbiana	22,150	Pelham	11,700
Dothan	13,950	Rainsville	7,295
Fayetteville	N/A	Robertsdale	14,250
Foley	13,600	Saginaw	13,450
Gadsden	9,750	Selma	12,190
Greensboro	15,900	Stewart-Havana	15,330
Harpersville	12,000	Troy	17,400
Jackson	8,150	Tuscumbia	11,600
		Total Prize Money	380,228

The 2005 National Barrel Horse Association (NBHA) Alabama State Championship in Andalusia had more than 400 entries. The NBHA requirements for a sanctioned event specify that at least 80 percent of entry fees (at least 70 percent if the show has \$1,000 or more added money) are to be awarded as prizes and ensure that winners in all NBHA classes and divisions will get prize money.

Team Roping. In team roping, teams of two riders rope a steer and bring it to a momentary standstill. One rider ropes the steer's head and the other ropes both hind legs. All of the action in a team-roping run usually occurs in a time span under 15 seconds (sometimes even less than five). The team that performs in the shortest time wins the event.

Team Penning. In team penning, a group of cattle are driven away from a larger herd into an enclosure by a group of horses and riders. Teams compete by time for cash prizes. The Alabama Team Penning Association, located in Enterprise, is one organization promoting and organizing these events.

Reining. Reining is a traditional skills event that is found at many horse shows and even at events specific to reining horses. To perform in reining, a horse and rider team must perform a designated pattern that includes many complex maneuvers such as sliding stops, spins, rollbacks, circles, and lead changes. The competitor is judged on preciseness and adherence to the pattern as well as the overall performance. Reining is often described as the western version of dressage. The National Reining Horse Association is the national governing body for all reining horse competition. In Alabama there is no state-based reining horse association; however, in the southeast there is the Dixie Reining Horse Association, which covers several states.

Cutting. Cutting is a competition that is designed to test the horse and rider team's ability to separate a single cow from the herd while demonstrating their cattle handling skills. The horse and rider must enter a herd of cattle, select one from the group, separate that animal from the rest of the herd, and keep the animal from returning to the herd. The National Cutting Horse Association is the national governing body for all cutting horse competitions. In Alabama many shows are sanctioned by the Heart of Dixie Cutting Horse Association

Trail Riding. Trail riding is not a rodeo event, but is instead an activity that involves a broad range of riders in casual pleasure rides as well as more taxing events. Organized trail riding activities include competitive and endurance events. Competitive trail riding takes all of the horses over an identical course in a natural setting in the same length of time. Horses are judged mainly on soundness, physical condition, and manners.

In contrast to competitive trail riding, the endurance ride is primarily a long-distance (50 to 100 miles) race. Awards are given for order of finish and physical condition upon finishing. Although Arabians excel in endurance rides, no special type or breed of horse is necessary or favored, as long as the animal is well conditioned and calm. Some trail riders enjoy the competition, while others seek the social aspects or the Alabama scenery. Various clubs often hold group trail rides across Alabama.

The Alabama Trail Ride Council (ATRC) assists in building and maintaining horse trail systems throughout the State on public lands for families, competitors, groups, and clubs. Many members compete in trail riding and endurance. Trail rid-

ing for pleasure is the mainstay of recreational horses across the State. Managing recreational trail riding on public lands is sometimes a controversial issue due to the environmental impact horse traffic can have on ecologically sensitive areas.

Polo. Polo may be defined as a form of field hockey played on horseback. Teams of four riders vie to place the ball in the opposing team's goal across a grass field 300 yards long by 160 yards wide. A polo match consists of six seven-minute periods. Because horses usually gallop continuously during a period, most players use numerous horses during a match.

There four polo clubs in Alabama. The Point Clear Club (Baldwin County) was organized in the 1970s and continues to host active program of events. A new field features weekly competition in the summer, regular visits by international competitors, and a strong local spectator following for the sport. Clubs in Gurley (Madison County), Rogersville (Lauderdale County), and Birmingham meet on a regular basis. Polo mounts are typically Thoroughbreds, Quarter Horses, or crosses between the two breeds.

Polo season is split in Alabama: the spring season includes April, May, and June, while the fall season covers September, October, and November. Games take place every weekend of the seasons.

Therapeutic Riding. Therapeutic riding, or hippotherapy, is equine use designed for physically, mentally, or emotionally challenged riders. The riding helps the rider build muscle, balance, posture, self esteem, and life skills. There are several therapeutic riding organizations in the State. Locations of these facilities include Birmingham, Talladega, Chatom, Opelika, and Montgomery. These organizations typically are nonprofit businesses that rely on volunteers, fees, donations, and favorable tax laws to remain financially viable. These organizations are sanctioned under the North American Riding for the Handicapped Association (NARHA). The Marion Green-Henry Special Equestrian Program, at the Alabama Institute for the Deaf and Blind, in Talladega is one of the largest hippotherapy programs in the world.

4-H Clubs. The State 4-H Horse Show is an organized part of the 4-H youth program. Horse-oriented clubs are an important source of education and social activity for youth involved with horse showing. The State 4-H show usually is held in mid-July in Montgomery. In 2005, there were 315 youth participating from 31 different counties. There were 2,000 total entries; these entries included horse/rider entries and educational contest entries.

Educational contests include public speaking, demonstrations, horse judging, quiz bowl, hippology (equine knowledge), and artistic events. All of these lead participants to learn more about horses. The first day is spent in educational contests such as judging and hippology. On the second day, english riding classes, public speaking, and demonstrations are held. The third day is for timed events, roping classes, dressage, western trail, western riding, walk/trot classes, artistic contests, and a quiz bowl.

The remaining western classes are held on the fourth day. High point awards are given for the educational contests, roping, and junior and senior hunt seat, saddle seat, western, and timed event winners. Winners then are eligible for the Southern Regional 4-H Horse Championships. In 2005, the Southern Regional 4-H Horse Champion-

ships were held in Montgomery. The Southern Region is comprised of 13 southern states each of which are allowed to bring 42 rider/horse participants and additional educational participants.

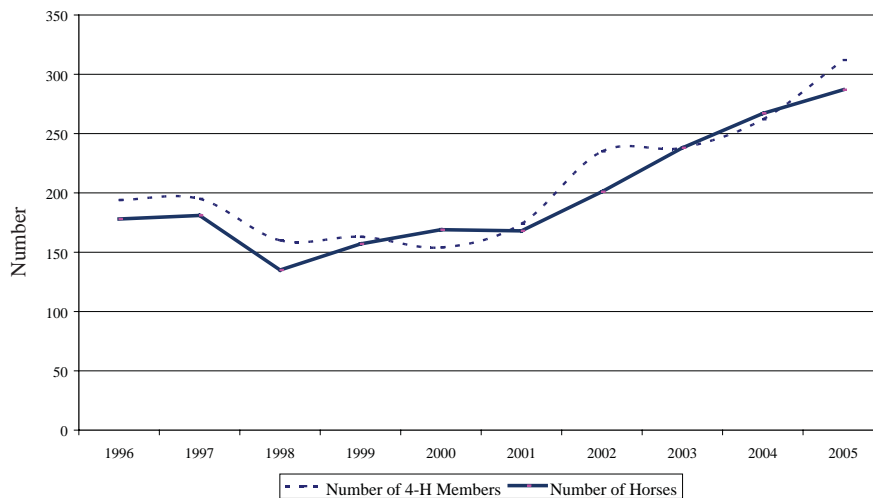
Figure 3 illustrates trends in youth participation in the Alabama State 4-H show over a ten-year period. Both the number of horses and the number of young people have been increasing steadily over the decade. Not every Alabama county sends young people to the State show, but the number of counties participating has risen steadily from 28 to 32 over the period. Counties vary in the level of emphasis given to equine in their 4-H programs, but it seems that there is growing interest among young people. County extension staffs are responding.

Equestrian Teams. College-level club and varsity teams compete in fall and spring using horses supplied by the host school. Judson College and Wallace State participate in the Intercollegiate Horse Show Association. Founded in 1995, Auburn University's varsity equestrian team was the 2006 Varsity Equestrian Championships national champion.

Additional Horse Uses. Across the State, individuals keep horses for uses other than those discussed above. For example, horses pull carts, carriages, and show wagons at various gaits. Ponies or small horses may be kept for children, or for participation in leadline show classes, where child and adult typically dress alike, and the adult leads the animal and child rider. Horses may be used for parades and costume classes. Local clubs often hold "fun" or "benefit" shows, where the proceeds go to help worthy causes. Miniature horses are bred and kept for their novelty, the attention they draw at local shows, and for specialized competitions that feature these animals.

Field trials for hunting dogs mount dog owners on horses and mules to follow the dogs as they work the fields. The breeds most commonly used for field trials are the gaited breeds. Some cattlemen will keep donkeys with cows because the donkeys

Figure 3. Trends in Alabama State 4-H Show annual participation, number of horses and number of 4-H members, 1996-2005.



will attack coyotes and wild dogs. Working equine still have a place in the Alabama forest industry. Some custom thinning and harvesting operators use mules to snake logs through standing trees or ecologically sensitive areas.

Working equine also are found in larger cities in the mounted police departments. These horses most often are used in situations where large crowds are gathered to assist officers in moving through the crowds more easily. Horses used in mounted units are specially trained to remain calm in crowds and loud areas. Two of the departments in Alabama are found in Mobile and in Birmingham.

In addition to barrel racing and pole bending, shows and traditional skills events may sponsor quadrangles, and various other races, such as stake, arena, flag, and keyhole races. Breed-specific classes sometimes are featured. At open shows, "flat shod" classes may be held for Racking Horses and other gaited breeds that are not wearing padded horse shoes. "Color" classes may be held at Palomino shows, where the animal with the best color is chosen as winner. "Halter" classes are held at most types of horse shows. In these classes, the horse's conformation and breed characteristics are judged based from the specific breed's ideals.

Whatever the activity, it requires a great deal of time, effort, and organization to schedule, coordinate, and support the occasions that bring horse owners and their animals together. Although some event judges are paid, and some other officials and organizers are compensated on a more or less nominal basis, the foundation of the horse sector is the voluntary leadership and energies of participating individuals.

ECONOMIC IMPACT OF THE HORSE INDUSTRY

This study estimates several components of the direct economic impact of the horse industry in Alabama. First, the direct expenses associated with care and maintenance of horses used for showing, racing, and recreation were considered. Certain expenses associated with equipment and transportation also were included. Second, the impact of showing and racing horses in terms of breeding, maintenance, transportation, and training, as well as the associated tourism impacts, are discussed. The final section summarizes the economic impacts of Alabama's horse industry.

The data in Tables 7 through 13 show detailed estimates of the expenses incurred with horse ownership. The tables are divided into three types of horses based on the value of the animal. There are high, moderate, and economical levels of horse care and maintenance. The three levels of horses are determined by the value of the animal and its use. The economical level includes horses that are lower in value and generally are used for pleasure purposes only. The moderate level horses are those used for light to moderate showing, competition, or as breeding stock. These horses are also of a moderate value. High-value horses generally are used for regional or national showing and competition. High-value animals support 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. Nevertheless, substantial impacts are associated with ordinary horse ownership and maintenance, consequences not to be viewed lightly given the many horses owned throughout the State.

An Internet survey of knowledgeable individuals in Alabama was used to develop these estimates. We invited a broad set of horse owners and association officials to review an initial set of estimated costs. They either accepted the initial value or provided a better number. Each cost presented here represents the median value of the knowledgeable experts' estimates.

The estimates were developed through interviews with horse owners, breeders, trainers, suppliers, and purchasers of the various goods and services. Knowledgeable individuals familiar with horse ownership and maintenance reviewed subsequent expense estimates. The respondents were asked to answer the survey section that reflected the level of horse with which they were most familiar.

Although actual expenditures vary widely from one owner to another, the expenditure estimates for each item in each table 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 owners of economical horses. 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 former estimate—the median or middle score—is utilized in the tables. Therefore, some outlay estimates may seem high from the perspective of the ordinary horse owner. Others may seem low from the experience of the owner of intensively managed, high-value animals.

It also should be noted that not all horse owners incur every expense listed in the tables. 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. Thus, the tables should not be viewed as an operating budget for horse ownership but as an estimate of median per-horse expenditures.

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

Components of Economic Impact

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 veterinary services, medications, insurance, feed, and bedding on a regular basis. Some owners also pay to board their animal at someone else's facility. 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. The median and range for these expenses are shown in Table 7.

The difference in expenses incurred among the three levels varies widely, especially in the case of veterinary fees and insurance premiums. Some expenditures, such as veterinary fees, are best estimated on an annual basis, while others such as feed costs are determined more easily on a monthly basis. Each of the expenses is

TABLE 7. MEDIAN AND RANGE OF EXPENDITURE ESTIMATES FOR HORSE CARE BY THREE LEVELS OF CARE AND MAINTENANCE EXPENSE, ALABAMA INDUSTRY EXPERT SURVEY, 2005

Item	—Level of Care and Maintenance Expense—		
	Economical \$	Moderate \$	High \$
Veterinary Fees (annual)			
Median	100	300	1,000
Range	50-800	100-1,200	250-2,500
Equine Pharmaceuticals (annual)			
Median	100	260	500
Range	75-500	90-600	100-1,500
Equine Insurance (annual)			
Median	175	350	1,500
Range	150-200	10-1,200	100-3,150
Feed (monthly)			
Median	45	80	100
Range	45-150	40-400	55-450
Bedding (monthly)			
Median	30	60	85
Range	30-45	5-100	15-300
Equine Boarding (monthly)			
Median	120	300	400
Range	50-500	100-450	100-2,100
(Number of Responses)	(25)	(27)	(35)
Annualized Total Expenditures	2,715	6,190	10,020

noted as annual or monthly in tables 7 through 14. The annual expenses are totals for the year; the monthly are an average per month. Monthly expenses are multiplied by 12 to give the total amount spent per year on this expense. For example, the feed amount is multiplied by 12 to get the total amount spent on feed per year. The total amount of expenditures is reflected in the annualized sum of median expenditures. The expenditures found in Tables 7 through 14 are all reported in this manner.

The first expense item, veterinary fees, includes routine veterinary services such as vaccinations, deworming, and equine dental care. As the level of competition and use of an animal increases so does the need for preventative and maintenance veterinary services. However, the cost of surgery and other major medical expenses not incurred on a regular basis is not included. Equine insurance is the premium that the owner pays to insure their animal. Most policies cover major medical and death. Most horses that are insured are average and high-value animals.

Appearance. Table 8 shows the amounts spent on the horse's appearance. These expenses may include the farrier, grooming supplies, tack, and even apparel. The farrier category includes the cost of shoeing and hoof trimming. Horses used mainly for light work or that live outside in a pasture may just be trimmed occasionally or are shod only on front feet. The hooves require more protection with more riding, so horses used more often will require shoes on all four hooves. Many of the high value horses require special or corrective shoeing to improve or enhance soundness and gaits. Grooming and supplies reflect expenditures for items such as brushes, currycombs, fly spray, and coat conditioners.

TABLE 8. MEDIAN AND RANGE OF EXPENDITURE ESTIMATES FOR HORSE APPEARANCE BY THREE LEVELS OF CARE AND MAINTENANCE EXPENSE, ALABAMA INDUSTRY EXPERT SURVEY, 2005

Item	—Level of Care and Maintenance Expense—		
	Economical \$	Moderate \$	High \$
Farrier (annual)			
Median	250	500	900
Range	50-6,000	120-1,000	400-1,875
Grooming and Supplies (annual)			
Median	100	200	200
Range	10-300	20-400	100-1,000
Tack (annual)			
Median	100	200	500
Range	50-500	50-1,000	150-4,500
Apparel (annual)			
Median	300	600	1,500
Range	30-350	60-800	500-5,000
(Number of Responses)	(25)	(27)	(34)
Annualized Total Expenditures	750	1,500	3,100

Tack expenditures include the cost and maintenance of saddles, bridles, and related accouterments. This category also includes equestrian apparel. Tack is an expense that requires a great deal of initial outlay but lasts for a long period. The widest range of expenses is shown in the farrier costs, tack, and apparel. Horses in the highest level require much more money spent yearly on new tack and clothing.

Training. Horses (especially young ones) require training. Many people send their animals to a professional trainer to teach the horse basic riding and performance discipline. Some people, especially beginners and novice riders, also find it beneficial to take riding lessons from professionals as well.

Table 9 shows the training and lesson fees that are incurred by the three levels of horse care. High-expense horses often are kept in training facilities, and to perform at the highest competitive level the rider often takes many more lessons than the average rider.

TABLE 9. MEDIAN AND RANGE OF EXPENDITURE ESTIMATES FOR HORSE AND RIDER TRAINING BY THREE LEVELS OF CARE AND MAINTENANCE EXPENSE, ALABAMA INDUSTRY EXPERT SURVEY, 2005

Item	—Level of Care and Maintenance Expense—		
	Economical \$	Moderate \$	High \$
Horse Training Fees (annual)			
Median	150	250	750
Range	50-600	250-3,000	400-8,100
Rider Lessons (monthly)			
Median	40	150	250
Range	30-200	20-500	50-2,500
(Number of Responses)	(25)	(27)	(34)
Annualized Total Expenditures	630	2,050	3,750

Breeding. Although not fully reflected in the data, the long-term impacts of horses in Alabama are associated centrally with the breeding industry. The breeding industry is built primarily on speculation, but it can be self-supporting if it is associated with a viable training and sales program. The breeding industry is a source of impacts on agriculture and land use in Alabama. Breeders invest in farmland, equipment, and facilities in a manner that would not be economically justified by food animal or crop production.

Breeding fees, which typically are paid by the mare's owner, are the costs of having a mare bred to a selected stallion. As Table 10 suggests, these fees range from \$150 to \$3,500 or more depending on the quality of the stallion and specialized care necessary to ensure pregnancy. Other expenses associated with the breeding side of the industry are the amount spent to publicize a stallion's services and costs for appraisals of market value. Stallion fees and other expenditures associated with horse reproduction are included here. Horses can generate substantial returns for their owners through fees associated with the services of superior stallions and sales of offspring of high-quality mares. Larger stables often have specialized employees who coordinate breeding activities.

Travel and Lodging. Travel and lodging are the expenses of traveling to and from horse shows, horse sales, races, hunts, recreational rides, and polo matches. These expenses are the cost of meals, fuel, and overnight lodging. These costs, shown in Table 11, also include association fees, dues, and entry fees.

Barn. Table 12 shows the expenses involved in horse barn ownership. These items include property taxes, maintenance, repairs, equipment, utilities, labor, and property insurance. Utility expenditures include the cost of electricity, water, heating 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 expenditure category depreciation is composed of the depreciation expenses associated with horse-related buildings, machinery, and vehicles.

TABLE 10. MEDIAN AND RANGE OF EXPENDITURE ESTIMATES FOR HORSE BREEDING BY THREE LEVELS OF CARE AND MAINTENANCE EXPENSE, ALABAMA INDUSTRY EXPERT SURVEY, 2005

Item	—Level of Care and Maintenance Expense—		
	Economical \$	Moderate \$	High \$
Appraisal (annual)			
Median	300	600	1,500
Range	30-350	60-800	500-5,000
Breeding Fees (annual)			
Median	150	750	2000
Range	150-2,000	500-2,000	1,000-3,500
Publicity (annual)			
Median	75	300	600
Range	75-100	30-300	600-5,000
(Number of Responses)	(25)	(27)	(34)
Annualized Total Expenditures	525	1,650	4,100

TABLE 11. MEDIAN AND RANGE OF EXPENDITURE ESTIMATES FOR HORSE TRAVEL BY THREE LEVELS OF CARE AND MAINTENANCE EXPENSE, ALABAMA INDUSTRY EXPERT SURVEY, 2005

Item	—Level of Care and Maintenance Expense—		
	Economical \$	Moderate \$	High \$
Travel and Lodging (annual)			
Median	150	300	2,000
Range	150-1,000	300-5,000	1,000-10,000
Entry Fees (annual)			
Median	100	500	1000
Range	10-700	2,000-4,500	500-5,000
Association Dues (annual)			
Median	75	150	250
Range	25-150	0-250	25-400
(Number of Responses)	(25)	(27)	(34)
Annualized Total Expenditures	325	950	3,250

TABLE 12. MEDIAN AND RANGE OF EXPENDITURE ESTIMATES FOR HORSE BARN BY THREE LEVELS OF CARE AND MAINTENANCE EXPENSE, ALABAMA INDUSTRY EXPERT SURVEY, 2005

Item	—Level of Care and Maintenance Expense—		
	Economical \$	Moderate \$	High \$
Property Tax (annual)			
Median	60	60	60
Range	60-600	20-600	60-1,500
Maintenance and Repairs (annual)			
Median	300	300	800
Range	300-3,000	40-3,500	800-5,000
Equipment Rental (monthly)			
Median	25	250	250
Range	5-3,000	5-3,000	
Depreciation (annual)			
Median	100	100	100
Range	100-1,000	100-1,000	100-5,000
Utilities (monthly)			
Median	30	60	100
Range	30-200	5-160	15-3,000
Labor (monthly)			
Median	20	400	2,500
Range	20-200	200-400	140-11,500
Property Insurance (annual)			
Median	2,100	2,500	3,000
Range	300-2,100	500-2,500	1,200-5,000
(Number of Responses)	(25)	(27)	(34)
Annualized Total Expenditures	1,780	9,480	35,760

Maintenance and repairs represent the sum of expenses incurred in the upkeep of buildings, facilities, and vehicles. Property and equipment rental is an estimate of the cost of renting pastures, facilities, machinery, and vehicles. The employed labor

category includes wages paid to both full and part-time employees involved in horse-related work such as stallion managers, grooms, exercise riders, clerical workers, and others who clean stalls and provide routine horse care.

Facilities. Table 13 shows the expenditure estimates for equine facilities. Expenditures for these capital investments include the barn, tractor, truck, trailer, and fencing installation. For example, one expense for the truck would be the monthly payment.

Table 14 combines all of the annualized sums of median expenditures from all of the expenditure estimates tables (Tables 7 through 13). This table also gives a grand total annualized expense for all three of the care and maintenance levels.

TABLE 13. MEDIAN AND RANGE OF EXPENDITURE ESTIMATES FOR EQUINE FACILITIES BY THREE LEVELS OF CARE AND MAINTENANCE EXPENSE, ALABAMA INDUSTRY EXPERT SURVEY, 2005

Item	—Level of Care and Maintenance Expense—		
	Economical \$	Moderate \$	High \$
Barn (annual)			
Median	100	100	200
Range	100-1,000	100-10,000	200-2,500
Tractor and Implements (monthly)			
Median	45	45	100
Range	45-150	45-1,000	100-1,100
Trailer (monthly)			
Median	45	200	250
Range	45-250	20-2,500	25-1,250
Truck (monthly)			
Median	50	250	350
Range	30-900	25-2,500	350-1,350
Install Fencing (monthly)			
Median	200	400	500
Range	200-500	100-1,400	100-5,000
(Number of Responses)	(25)	(27)	(34)
Annualized Total Expenditures	1,980	6,440	9,100

TABLE 14. MEDIAN ANNUALIZED ESTIMATES FOR MAJOR CATEGORIES OF EQUINE EXPENDITURE BY THREE LEVELS OF CARE AND MAINTENANCE EXPENSE, ALABAMA INDUSTRY EXPERT SURVEY, 2005

Item	—Level of Care and Maintenance Expense—		
	Economical \$	Moderate \$	High \$
Equine Facilities	1,980	6,440	9,100
Barns	1,780	9,480	35,760
Travel	325	950	3,250
Breeding	525	1,650	4,100
Training	630	2,050	3,750
Appearance	750	1,500	3,100
Care	2,715	6,190	10,020
Annualized Total Expenditures	8,705	28,260	69,080

Major Shows and Events Expenditures

Table 15 provides estimated direct expenditures made at a series of major equine events and circuits in Alabama. We endeavored to identify events that had at least 100 entries for multiple days or 200 entries for a single day. The events and circuits are ordered in increasing level of direct economic impact.

For example, the Hunter-Jumper Medal Finals, held in Montgomery, report 100 entries and the event is three days in duration. It is estimated that each entry is \$25, that \$10,500 is spent on various fees and spectator admissions, and that trainers are paid in aggregate about \$3,375. An estimated \$11,200 was attributed to lodging costs to this event and an estimated \$13,500 in meals was purchased in Montgomery by participants and spectators. In turn, an estimated \$3,000 is spent on local purchases of miscellaneous items for personal and equine use. Finally, \$7,500 in gas costs was attributed to the event over and above vehicle costs captured in the horse care and maintenance expenses. A total spending impact of about \$51 thousand was estimated for this event.

Rodeos, dressage, schooling shows, open shows, and other events produce significant benefits to the hosting localities. Barta, Trzebiatowski, and Woods (5) provide an analysis of the economic impact of an Oklahoma fairground, for example. Traveling owners and horses require additional housing expenses. Some spectators travel long distances to view the activities. These exhibitors and spectators also generate income for the local economy with their demand for admission, food, gas, and lodging.

Following a similar line of reasoning and assumption, the Shelby County Heart of Dixie Horse Show in Columbiana had \$56 thousand in direct impacts. The Alabama All-Arabian event held at the recently constructed arena in Andalusia is estimated to have a direct impact of \$77 thousand.

Following the same logic, the Alabama Charity Championship Horse Show features Saddlebred horses with an estimated impact of \$81 thousand. The Fort Rucker Horse Trials in South Alabama had an estimated impact of \$107 thousand. The Southeast Livestock Exhibition Rodeo is the largest single rodeo event in Alabama. The large spectator and participant impact of this event was estimated to be \$128 thousand.

The Mid-South Saddlebred Show, held in Priceville, has around 300 participating horses in three days of events. Its impact is estimated to be about \$150 thousand; important impacts for the small town of Priceville near the larger Decatur metropolitan area. In South Alabama, Andalusia hosts the Alabama State National Barrel Horse Association Championship that has a similar level of impact. The several larger Walking Horse shows have notable levels of impact.

The Alabama Team Roping Championship is held in Montgomery and has an estimated impact of \$194 thousand. Numerous smaller team roping competitions are held regularly throughout the state, and the impact of these smaller team roping events is not included in Table 15.

The Decatur (Priceville Arena) area, in particular, benefits from economic activity generated by the two large Racking Horse shows held there each year since 1971. The Spring Celebration is held each May. The winners of each division in the Racking Horse Spring Celebration are the State Champions for that year. The Racking

TABLE 15. ESTIMATED DIRECT EXPENDITURES FROM MAJOR ALABAMA HORSE SHOWS AND CIRCUITS, 2005

Item	Entries	Event days	Entry fees	Other fees*	Trainer fees	Lodging	Meals	Local purchases	Fuel	Total
Hunter-Jumper Medal Finals, Montgomery	98	3	2,450	10,290	3,308	11,025	13,230	2,940	7,350	50,593
Shelby County Heart of Dixie Horse Show, Columbiana	236	1	5,900	8,260	2,655	8,850	5,900	2,360	17,700	51,625
Alabama All-Arabian, Andalusia	150	3	3,750	15,750	5,063	16,875	20,250	4,500	11,250	77,438
Alabama Charity Championship Horse Show, Decatur	125	4	3,125	17,500	5,625	18,750	22,500	5,000	9,375	81,875
Fort Rucker Horse Trials	172	3	23,220	18,060	5,805	19,350	23,220	5,160	12,900	107,715
Southeast Livestock Exposition Rodeo, Montgomery	340	2	8,500	23,800	7,650	25,500	30,600	6,800	25,500	128,350
Mid-South Spring Premier Saddlebred Show, Decatur	300	3	7,500	31,500	10,125	33,750	40,500	9,000	22,500	154,875
Alabama State NBHA Championship, Andalusia	414	2	10,350	28,980	9,315	31,050	37,260	8,280	31,050	156,285
Walking Horse Circuit	782	1	19,550	27,370	8,798	29,325	35,190	7,820	58,650	186,703
Alabama Championship Team Roping, Montgomery	376	3	9,400	39,480	12,690	42,300	50,760	11,280	28,200	194,110
Racking Horse Spring Celebration, Decatur	500	4	32,500	70,000	22,500	75,000	90,000	20,000	37,500	347,500
Walking Horse Jubilee, Decatur	816	3	20,400	85,680	27,540	91,800	110,160	24,480	61,200	421,260
AQHA Circuit	975	3	24,375	102,375	32,906	109,688	131,625	29,250	73,125	503,344
88 Rodeos	3,784	1	94,600	132,440	—	141,900	94,600	37,840	283,800	785,180
AOHA State Show, Montgomery	2,459	3	61,475	258,195	—	276,638	331,965	73,770	184,425	1,186,468
State 4-H Show, Montgomery	2,000	5	5,500	350,000	—	375,000	450,000	100,000	150,000	1,430,500
256 Other Local Shows Circuit	7,680	1	192,000	192,000	—	288,000	192,000	76,800	576,000	1,516,800
Racking Horse World Celebration, Decatur	2,000	9	130,000	630,000	202,500	675,000	810,000	180,000	150,000	2,777,500
Total										10,158,119

* Other fees include stall, admission, parking, and program fees.

Horse World Celebration is held in September, and its winners are awarded the title of World Grand Champion. The World Celebration attracts spectators and participants from all over the nation. In addition to the on-site expenditures, the Spring and World Celebrations generate a substantial amount of tourism income to the Decatur area. This economic activity results from spectators and participants who come to Decatur from out of town or out of state and rent motel rooms and purchase meals and other goods during the shows. The Racking Horse Spring Celebration has a smaller number of horses and fewer days than its counterpart World Celebration. Nevertheless, this single event brings approximately \$347 thousand in impacts to the Decatur economy.

The AQHA sponsors an annual cycle of local and regional shows. The impacts of these events were estimated to be approximately \$503 thousand.

Rodeos also have a significant impact on Alabama's economy. This impact is concentrated in the communities that host the rodeos. As shown in previous tables, Alabama hosted about 88 rodeos that were identified by this study in 2005. These included 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 because there are typically many more spectators than contestants. Rodeo spectators generate economic activity through admission fees, concessions, and souvenirs. The direct impact of 88 rodeos in Alabama was estimated to be \$785 thousand.

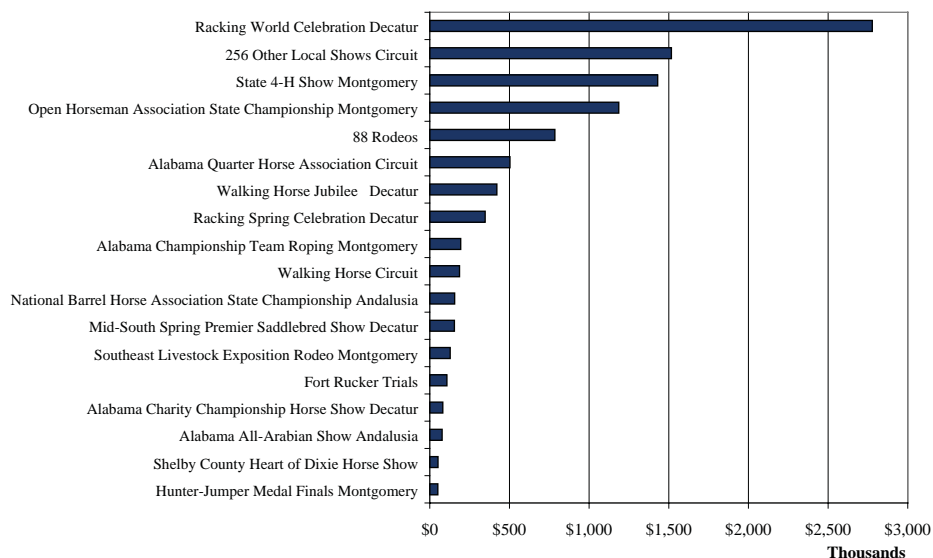
The AOHA Alabama State Championship Horse Show became the official state event in May of 1988. The idea for a statewide horse show was the dream of a man named Don Witt. The first horse show was held in W. O. Crawford Arena in Montgomery in September 1988 with 994 entries over a two-day period. In 2005, the show had grown to three days with more than 2,400 entries. Given the number of entries, the length of the show, and the spectators this event draws, the direct impact of this event was estimated to be more than \$1.1 million.

Throughout the year, there may be as many as 256 AOHA shows, though some are held in neighboring states. In addition, there are other local shows of various sizes and breadth of participation. These include local Saddle Club shows, breed events, and skill activities not otherwise counted in our inventory of major events in Alabama. A projected estimate of more than 6,000 participants in these single-day events with few overnight stays, limited use of trainers, and few specialized local purchases accounts for about \$1.5 million in economic impact, a set of stimuli to local economies that is broadly distributed across Alabama.

The second largest single impact estimate, however, is associated with the State 4-H show in Montgomery. Many parents and relatives of participating youth make overnight stays in Montgomery, shop, eat in local restaurants, and otherwise stimulate the area economy. There are more than 2,000 entries in this four-day show leading to an estimated direct impact of \$1.4 million.

A large set of event-related equine impacts is exerted by the nine-day World Celebration in Decatur. As many out-of-state participants travel to this event, its magnitude is even more important due to the external monies that serve to stimulate the Alabama economy. This extended event with high-value horses, expensive entry fees, and high professional trainer costs has an estimated impact of around \$2.8 million in Alabama. Overall, an aggregate direct impact of \$10.1 million spent annually at these major equine events in Alabama was determined. Using an income multiplier (see appendix), we estimate that travel and participation expenses in these major shows and

Figure 4. Direct impacts of major Alabama horse shows and circuits, 2005.



circuits comprises a \$29.5 million direct and indirect impact on the Alabama economy. Figure 4 summarizes these relative impacts.

Aggregate Impacts

To derive aggregate impacts of equine ownership and use, the number of equine by level of care and the animal's status in terms of the number of horses owned by a household were estimated. The cost of owning the second, the third, and subsequent animals is respectively less than for the first horse. Table 16 summarizes the number of equine in the State by the care level of the animal. There are three levels of care and maintenance for equine. There are economical, an estimated 90.0 percent of Alabama equine population, moderate, 9.9 percent of population, and high, only 0.1 percent of Alabama equine population.

Most horse owners own more than one horse. Care and maintenance costs for the first horse are more than for subsequent horses. Therefore, the horse population was divided into three categories, first horse, second horse, and third horse or greater, based on the number of horses one owner may possess. An estimated 25 percent of the total equine population for the State is single owned horses, 50 percent of the population is second horses, and the remaining 25 percent are third or subsequent horses.

In calculating impacts, we took into account that many owners had multiple animals and the marginal costs of additional equine would be significantly less than owning and maintaining the first horse. We estimated that the average marginal cost of owning and maintaining the second horse would be one-fourth the cost of owning the first horse. Subsequent horses would be on average one-tenth of owning the first horse, as fixed costs would not increase with additional animals, and variable costs increase at a diminishing rate. Thus, we assumed that one-fourth of the horse owners have one horse, half own two horses, and another one-fourth own three or more horses.

These are conservative assumptions that give greater confidence in the estimates and assertions we are able to make about the impact of the Alabama horse industry.

The estimates for the direct impacts of horse care and maintenance in Table 16 thus reflect adjustments for multiple horse ownership. The income flows also can be shown to generate additional economic activity encompassed by the term *income multiplier*. The estimated income multiplier for the horse industry is 1.9. This means that every \$1.00 transaction in the horse industry results in an additional \$1.90 of total economic activity. The procedure for calculating this multiplier is described in the appendix.

Based on the above estimates, the direct spending for equine in Alabama's economy in 2005 was more than \$800 million. The total impact on the economy, given indirect and induced multiplier effects, is approximately \$2.3 billion, about 1.2 percent of Alabama's \$139 billion Gross State Product in 2004. Figure 5 summarizes these aggregates, clearly showing the central significance of economical horses as a component of equine impact.

Table 16 shows the number of horses in each level and category. For example, in the economic care level, 25 percent of the horses are first horses or 42,046 horses. These counts are used in conjunction with the spending and cost estimates found in Tables 7 through 13 to estimate overall economic impacts.

Table 17 summarizes the estimated impacts of the horse industry on the Alabama economy. The first line of the table summarizes the impacts of the major horse shows and expenditures detailed in Table 15. The total direct impact includes the employ-

Figure 5. Direct and indirect impacts of equine for three levels of equine care and for major shows in Alabama, 2005.

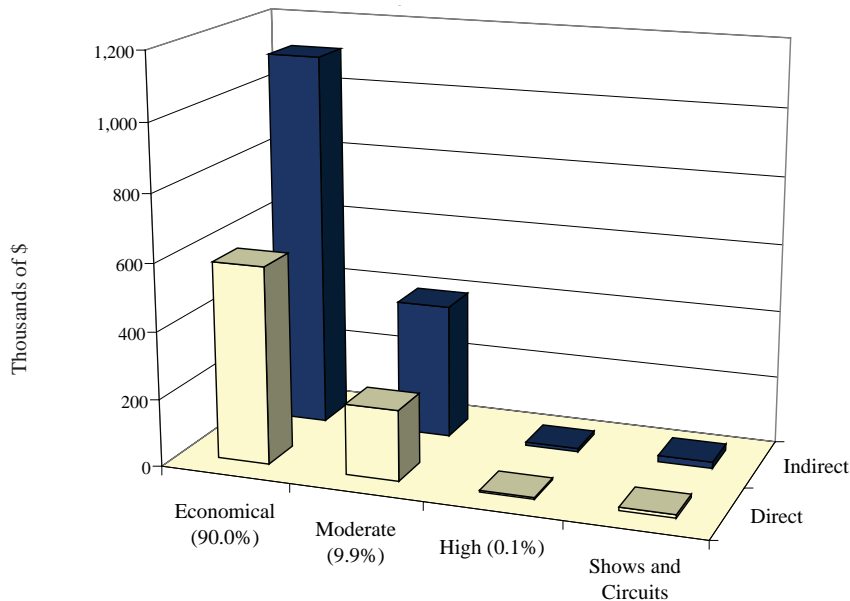


TABLE 16. ESTIMATED NUMBER OF ANIMALS BY CARE LEVEL AND OWNERSHIP ORDER, ALABAMA, 2005

Level of Care	First horse (25%) <i>100% cost</i>	Second horse (50%) <i>50% cost</i>	Third or more (25%) <i>10% cost</i>	Total
Economical (90.0% of Alabama equine)	42,046	84,092	42,046	168,184
Moderate (9.9%)	4,625	9,250	4,625	18,500
High (0.1%)	47	93	47	187
Total	46,718	93,436	46,718	186,871

ment expenditures, the business expenditures, and the horse owners' expenditures. The total direct impact of the major shows and circuits is estimated to exceed \$10.1 million, with indirect effects of \$19.3 million. The estimated overall impact of these selected major horse events in Alabama is \$29.5 million. To avoid double counting, we do not include the horse owner's event expenditures in calculating total impacts, as these expenses are captured, for the most part, in the earlier estimated outlays for travel and participation.

These numbers reflect the immediate injection of monetary flows—expenditures made during a wide array of events, shows, and rodeos and through the purchase of goods and services by horse owners and users. This estimate illustrates the significant consequences that horse events and associated tourism have for localities hosting the events, particularly for communities with facilities with frequent equine activities.

The horse care and maintenance impacts are estimated for three intensities of expenditure—economical, moderate, and high. We assumed that 90 percent of the Alabama horses were under economical regimes of care and maintenance, 9.9 percent under moderate levels of care and maintenance, and 0.1 percent were under high levels of expenditure.

Considering the available data and statistics, these estimates do not seem to exaggerate the economic impact of the horse industry on Alabama's economy. On the contrary, these estimates are conservative due to the exercise of caution in the assumptions and projections used to develop the calculations. In addition, certain exceptional expenses, such as equine surgery, are not included.

TABLE 17. DIRECT, INDIRECT, AND TOTAL ECONOMIC IMPACTS OF THE ALABAMA EQUINE INDUSTRY, 2005

Impact source	Direct	Indirect	Total
Expenditures from Major Shows and Circuits	10,158,119	19,300,426	29,458,544
Horse Care and Maintenance*			
Economical (90.0% of Alabama equine)	585,617,095	1,112,672,480	1,698,289,575
Moderate (9.9%)	209,126,858	397,341,031	606,467,889
High (0.1%)	1,320,245	2,508,466	3,828,711
Total**	801,227,824	1,522,332,866	2,323,560,691

*Assuming 25% of equine in each category are first horses with full impacts; half are second horses that have 25% costs; 25% are subsequent horses costing 10% of the first.

**Because care and maintenance expenses include travel and event participation costs, these outlays are not included in the total.

Impact on Employment

Total paid employment associated with horses includes show staff, trainers, other care and maintenance employees, and a variety of self-employed individuals that provide services to horses. Employment impacts may tend to the lower end of the range because owners and unpaid family members provide labor for the many single or small sets of animals held by recreational users. Many young people work part-time or seasonally. Some provide exchange labor for boarding, training, or equine access privileges. Total employment associated with horses includes show facility employees. Trainers, office staff on large farms and equine-related businesses, other care and maintenance employees, and a variety of self-employed individuals provide services to horses.

The increasing number of equine in Alabama has increased the demand for professionals serving the industry. Veterinarians, farriers, chiropractors, trainers, and other professionals are in increasing demand.

The employment associated with the breeding, raising, and care of horses is related to the intensity of their use. High care and maintenance animals require approximately one employee for every four to seven horses. Animals maintained for economical recreational uses employ approximately one individual for every 10 to 15 horses. Show animals require approximately one employee for 20 horses. Animals maintained for recreational and breeding use employ, on average, approximately one paid worker for every 100 horses. Thus, horse care and maintenance may be responsible for direct employment of between 288 and 465 people in Alabama. This number ranged between an estimated 1,000 and 2,000 full-time equivalent jobs in 2005 when part-time work is considered.

CONCLUSION

Horses make a significant contribution to the quality of life by adding to the diversity of recreational activities available in Alabama. Showing, recreational riding, and sales are important sources of both pleasure and income to many Alabama residents. The \$10 million of spending connected to the major equine events represents a notable component of tourism, one of the fast expanding sectors of the economy.

Horse farms use Alabama land for pastures, barns, and facilities that tend to improve the scenic, pastoral, and experiential consequences for residents and visitors. The land-use consequences of a large and viable horse industry are substantial.

Horses have a significant connection to the agricultural sector and the larger economy. About one in 20 Alabama households has some personal or familial connection to horse ownership, breeding, or riding. More people are involved with horses than is commonly recognized by the institutions that serve agriculture and the recreating public.

Demand for a number of agricultural commodities and horse-related services are influenced directly by horse production and maintenance. In 2005, approximately \$2.3 billion of the Alabama's \$139 billion total Gross State Product (GSP) was generated by the equine industry. The GSP for a state is a measure of economic activity parallel to the gross domestic product (GDP) for the nation. The multiplier process is a result

of this “chain of spending” whereby local purchases provide income to others that is spent repeatedly by others to give the total impact of the revenue generated by horse ownership and use (9).

Implications for Economic Development

The study identifies the portion of the overall Alabama economy that is connected to the use and keeping of horses. In doing so, it provides a set of estimates of what horse owners spend on behalf of their equine. Alabama farmers raise and sell corn, clover, grass hay, and other feed crops. Straw and wood shavings used for bedding also are farm-based commodities used for horse care. 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 accouterments.

Horse events are significant tourist attractions in Alabama. Horse activities are spectator-oriented sports that, perhaps more than many other animal-related activities, encourage broad participation. The events generate tourism resulting in significant economic impacts in areas hosting the activities. Horse shows are held nearly every weekend somewhere in Alabama.

The prospects for the horse industry in Alabama depend on several factors. Land costs and climate are favorable for 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. Several covered show arenas are located across Alabama.

Implications for Alabama Agriculture

Spending by horse owners, breeders, and trainers clearly helps to bolster the State’s economy. Although the overall State horse population may be small relative to cattle, for example, the impacts are magnified due to the high value of the animals and the correspondent connections to regional and national events.

Most training and breeding facilities are located in rural areas; thus, many direct economic impacts and attendant multiplier effects flow to communities needing economic stabilization. For example, the most concentrated set of impacts for Racking Horses are in North Alabama, because the major show facilities, the two largest Racking Horse shows, and the greatest concentrations of Racking Horses are located there. Data show that 4.9 percent of Alabama households own or lease at least one horse. In particular, the number of horse owners that live in the urban and suburban areas such as Birmingham, Mobile, Montgomery, and Huntsville continues to increase. This reflects advancing family incomes in these locales. More people are seeking and able to afford the expenses related to horse ownership for their own enjoyment and for their children. It also represents an expanding market for equine, equine experiences, and related services in surrounding locales.

The study centered its approach on the expenditures that horse owners make on behalf of their animals for maintenance and use. New estimates of the Alabama equine population were made, and assumptions about the proportion of equine at various use levels and the proportion of multiple horse owners were used to calculate aggregate impacts. The horse industry has a measurably significant role in Alabama's economy. The loss or diminution of the horse industry would represent significant opportunity costs in terms of the reduced employment, income, and tax revenue that otherwise would have been generated by horse breeding and ownership in general. The horse industry should not be neglected as a significant component of farming and agribusiness in Alabama. These effects are most apparent in rural areas where horse breeding, training, and showing often are important components of the local economies.

Horse keeping and use supports a variety of businesses and services that provide livelihoods and stimulate the rural economy. Equine owners buy land, build buildings, and otherwise enhance the rural landscape. Horse farms augment the visual character of rural Alabama and keep land in agriculture that might otherwise be devoted to passive forestry or neglect. Particularly in the outer rings of Alabama's metropolitan areas, horse owners stimulate the demand for land and housing development on small acreages sufficient for horse pastures and exercise.

Many individuals have made investments in farm and business improvements in expectation of a viable breeding and showing industry. Alabama is an ideal location for equine. With its mild climate, abundant land, low taxes, and low land costs it is prime territory for the equine industry. It is incumbent on lawmakers, financiers, and industry leaders to take the institutional steps necessary to realize the potential benefits of a thriving horse industry in Alabama.

APPENDIX

Calculation of Multipliers

Two multipliers, an income multiplier and an employment multiplier, were used in this study. An income multiplier is a number reflecting the extent to which an initial transaction stimulates subsequent transactions and leads to the total amount of business generated because of the transaction. For the equine industry, this would include the value of the initial transaction, business generated by suppliers of goods and services to the equine industry, purchase of consumer products by participants in the equine industry, and business generated by suppliers of consumer products to horse owners.

An employment multiplier shows the change in household employment throughout the economy that results from an employment change in any one industry. 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 several types of income 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. In a type II model, therefore, household incomes and employment increase as production in other sectors of the economy increases. As we focus on the household as the primary unit of horse care and use, the type II multipliers were used due to the unrealistic assumption underlying the type I multipliers.

The type II multipliers for Alabama equine were derived from results of an input-output model of Alabama's economy reported by Trenchi and Flick (19). 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 the direct and indirect effects. The direct effect is the proportion of the livestock industry's total purchases that were obtained from other industries. For example, the livestock industry purchased approximately 8 percent of its total purchases from other agricultural industries. The indirect effect is the total changes in income in a particular sector resulting from a one-dollar change in income in the livestock sector. Type II income multipliers are calculated by dividing the household direct and indirect effect coefficient by the direct effect for that item. In this case, $0.67865/0.23127 = 2.9344$; the relevant income multiplier for this study, therefore, is 2.9. We interpreted this coefficient to mean that each dollar spent on equine generates an additional \$1.90 in indirect spending as it ripples through the economy.

One Texas study utilized a factor of 2.0 to express the additional indirect expenditures in that state's economy generated by primary activity in horses. A Florida study 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 other studies (8).

Calculation of the employment multiplier is more complicated than the income multiplier and is beyond the scope of this study. Trenchi and Flick (19), however, estimate the type II employment multiplier for Alabama's livestock sector to be 1.74. We use that ratio for our estimates.

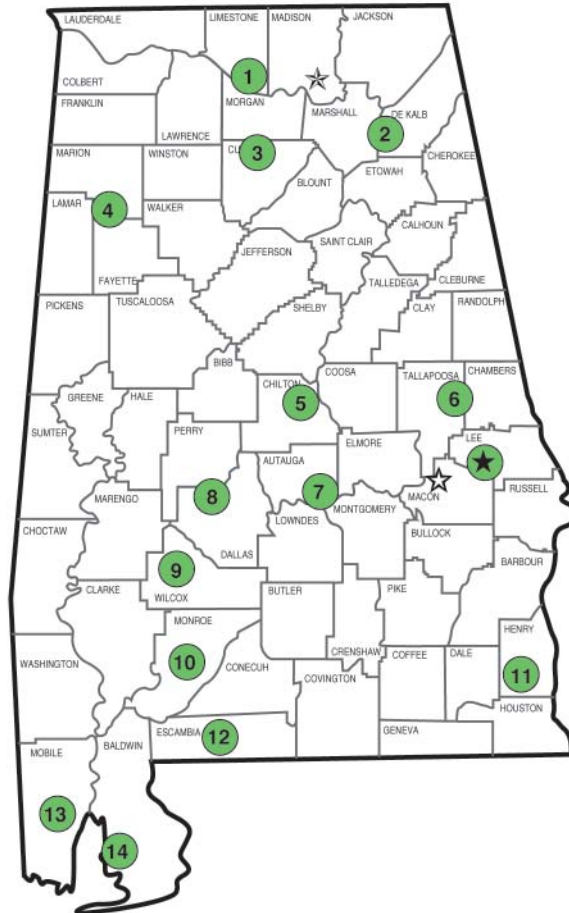
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Alabama's Agricultural Experiment Station AUBURN UNIVERSITY

With an agricultural research unit in every major soil area, Auburn University serves the needs of field crop, livestock, forestry, and horticultural producers in each region in Alabama. Every citizen of the state has a stake in this research program, since any advantage from new and more economical ways of producing and handling farm products directly benefits the consuming public.



Research Unit Identification

- ★ Main Agricultural Experiment Station, Auburn.
- ☆ Alabama A&M University.
- ☆ E. V. Smith Research Center, Shorter.

1. Tennessee Valley Research and Extension Center, Belle Mina.
2. Sand Mountain Research and Extension Center, Crossville.
3. North Alabama Horticulture Research Center, Cullman.
4. Upper Coastal Plain Agricultural Research Center, Winfield.
5. Chilton Research and Extension Center, Clanton.
6. Piedmont Substation, Camp Hill.
7. Prattville Agricultural Research Unit, Prattville.
8. Black Belt Research and Extension Center, Marion Junction.
9. Lower Coastal Plain Substation, Camden.
10. Monroeville Agricultural Research Unit, Monroeville.
11. Wiregrass Research and Extension Center, Headland.
12. Brewton Agricultural Research Unit, Brewton.
13. Ornamental Horticulture Research Center, Spring Hill.
14. Gulf Coast Research and Extension Center, Fairhope.