

Economic Impact of the Equine Industry to Indiana

M. I. Garrett, Department of Agricultural Economics; C.M. Brady, Department of Youth Development and Agricultural Education; K. T. McNamara, Department of Agricultural Economics; and M. A. Russell, Department of Animal Sciences



The Indiana equine industry is an important component of the Indiana economy, but to measure its impact, information from the industry needed to be collected. The 2002 Indiana Equine Survey (<http://www.nass.usda.gov/in/equine/equine>) was designed to determine equine inventory and economic contribution, and identify health related issues for the Indiana equine operations. The survey was sponsored by the Indiana Horse Council (IHC), Indiana Horse Racing Commission, Indiana Livestock Promotion and Development Fund, Office of the Commissioner of Agriculture, Purdue University School of Veterinary Medicine, and the Indiana Agricultural Statistics Service (IASS).

Equine Industry Structure

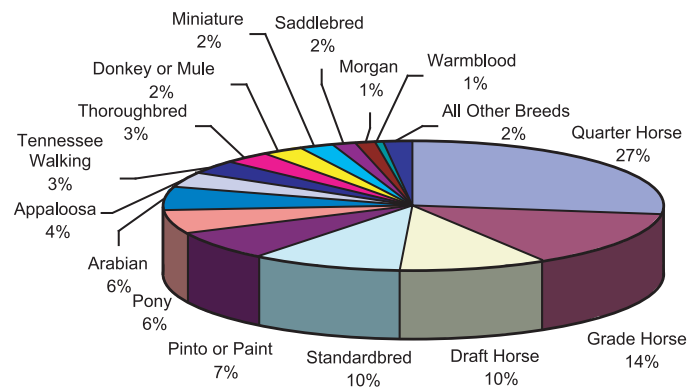
The industry consists of 160,000 equine on 34,000 operations. The term equine refers to horses, ponies, donkeys, and mules. Equine in Indiana serve a variety of needs and uses, including racing, showing, recreation, or work. Equine operations are diverse in terms of breed, use, and size.

Equine Breeds and Primary Use

Indiana Agricultural Statistics Service identified fifteen primary breed categories that were thought to most accurately represent the variety of breeds within Indiana. According to survey results, Quarter Horses represent the largest percent (27 percent) of the equine population in Indiana, with 43,700 head (Figure 1).

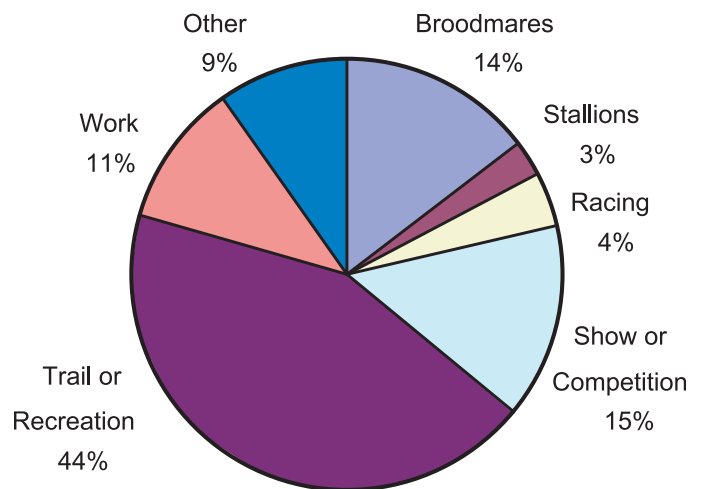
Equine were classified according to their primary use or function as a broodmare, stallion, racing, showing or competition, trail or recreation, work, or other (Figure 2).

Figure 1. Indiana Equine Inventory, by Breed, January 2002



Source: Indiana Agriculture Statistics Service, Indiana Equine Survey, January 2002

Figure 2. Indiana Equine Primary Use, January 2002

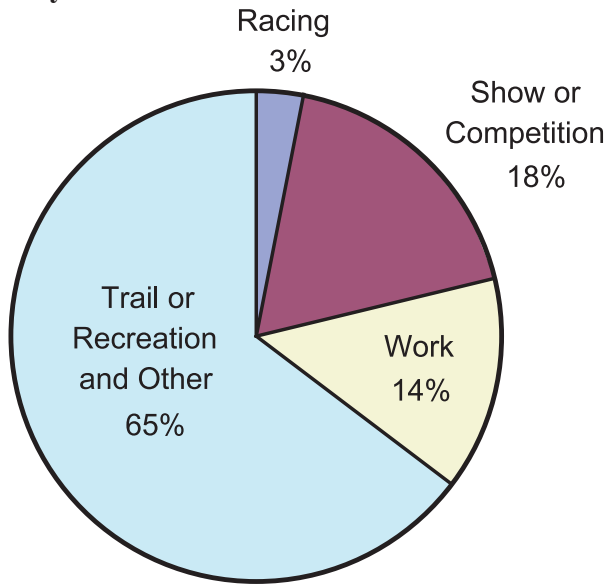


Source: Indiana Agriculture Statistics Service, Indiana Equine Survey, January 2002

Indiana Horse Operations

A horse or equine operation is identified as a farm or organization that has at least one resident horse. There are 34,000 equine operations in Indiana (Figure 3). Operations are classified into five main categories by equine primary use: Show or Competition, Work, Trail or Recreation and Other Use, and Racing.

Figure 3. Percent of Indiana Operations, by Type, January 2002



Total = 34,000 Operations

Source: Indiana Agriculture Statistics Service, Indiana Equine Survey, January 2002

Operations were subcategorized by size, the number of equine on the operation, into one of three categories:

- 1 - 4 Head: 66 percent of Indiana operations, representing 34 percent of the total equine population
- 5 - 14 Head: 29 percent of Indiana operations, representing 43 percent of the total equine population
- 15+ Head: 5 percent of Indiana operations, representing 23 percent of the total equine population

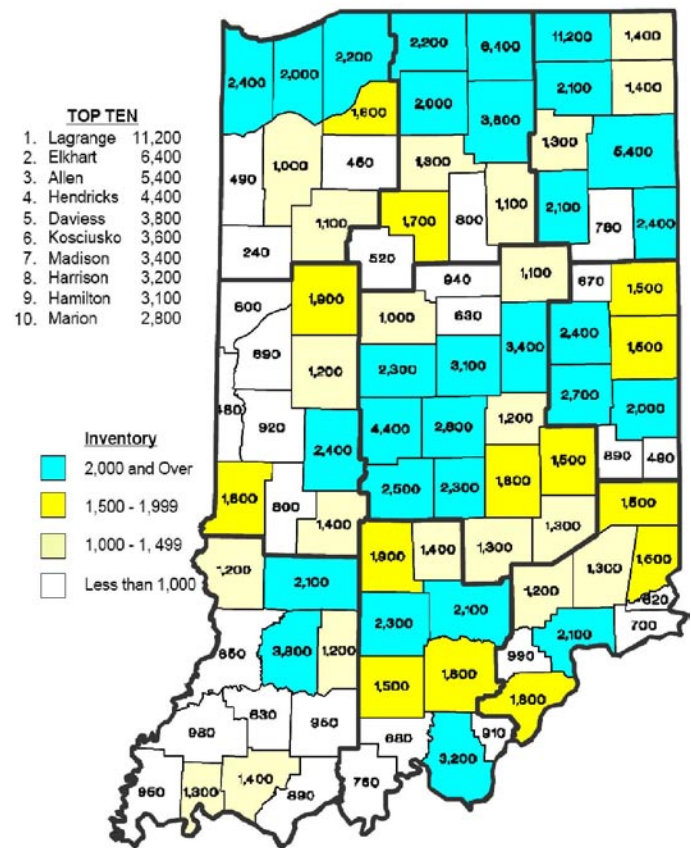
Population County Distribution

Lagrange County has the highest population of equine, with 11,200 head. Elkhart follows with 6,400 head. Figure 4 illustrates the population distribution by county.

Indiana Equine Operation Assets

The equine related assets held by an operation are reflective of the type of horse operation. Survey

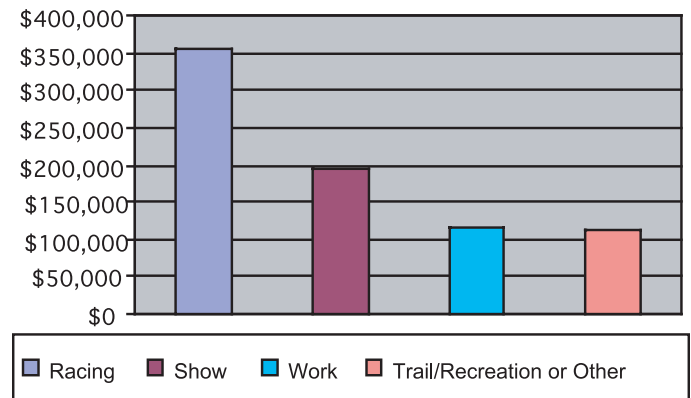
Figure 4. Indiana Equine, January 1, 2002



Source: Indiana Agriculture Statistics Service

respondents reported the assets that their operations consist of, as well as the estimated value of these assets. Racing operations reported having the most in equine related assets per operation (Figure 5). The total owner reported value of equine related assets, including operations with resident equine and owners with equine boarded elsewhere, was over \$4 billion.

Figure 5. Indiana Average Equine Related Assets per Operation, by Type of Operation, January 2002



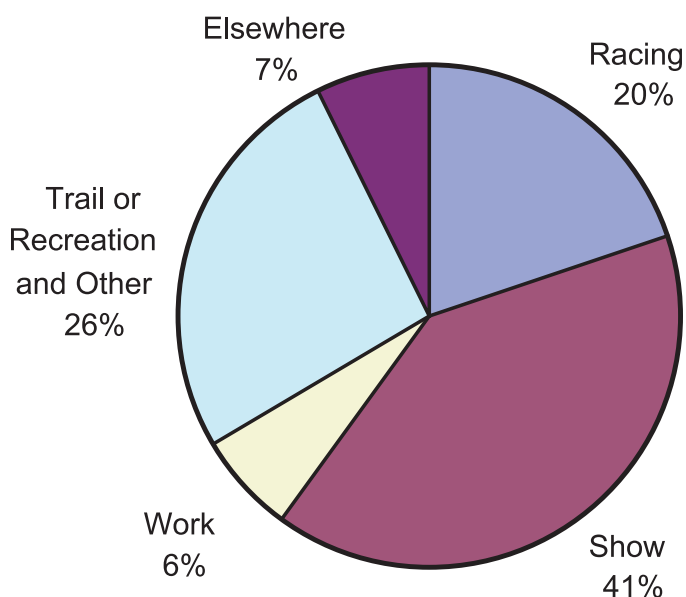
Source: Indiana Agriculture Statistics Service, Indiana Equine Survey, January 2002

Indiana Equine Operation Income

Survey respondents reported on their gross annual income from horses for the following categories for 2001: Purses and Prizes, Stud Fees, Equine Leasing/Rental, Lessons, Equine Sales, Boarding, Training, Therapeutic Riding and Driving, and Other. Twenty-four percent of operations reported income.

In 2001, equine operations reported a total of \$92 million gross income (Table 1). Eighty-nine percent of this income was earned within Indiana. Nearly half of the income earned by operations with resident equine was from equine sales and boarding. Owners with all equine boarded elsewhere earned most of their income from purses and prizes.

Figure 6. Indiana Horse Income, by Operation Type, January 2002



Source: Indiana Agriculture Statistics Service, Indiana Equine Survey, January 2002

Table 1. Total Income for Operations with Resident Equine and Owners with All Equine Boarded Elsewhere

Income Category	Income For Operations with Resident Equine	Income For Owners with All Equine Boarded	Total Income	Average Income per Operation with Resident Equine	Average Income per Operation with All Equine Boarded
Purses & Prizes	\$12,720,000	\$3,075,000	\$15,795,000	\$4,097	\$3,958
Stud Fees	\$2,126,000	\$237,000	\$2,363,000	\$1,857	\$5,925
Equine Leasing/Rental	\$130,000	\$359,000	\$489,000	\$765	\$6,648
Lessons	\$7,196,000	\$62,000	\$7,258,000	\$6,953	\$463
Equine Sales	\$20,102,000	\$918,000	\$21,020,000	\$5,044	\$3,614
Boarding	\$25,695,000	\$128,000	\$25,823,000	\$13,595	\$2,370
Training	\$7,538,000	\$1,845,000	\$9,383,000	\$6,361	\$12,551
Therapeutic riding/driving	\$2,095,000	\$0	\$2,095,000	\$32,231	\$0
Other	\$7,730,000	\$8,000	\$7,738,000	\$25,767	\$615
Total Income	\$85,332,000	\$6,632,000	\$91,964,000	\$10,356	\$5,629
Income From Out of State	\$7,083,000	\$2,590,000	\$9,673,000	\$5,644	\$10,197
Indiana Income	\$78,249,000	\$4,042,000	\$82,291,000	\$9,496	\$596

Source: Indiana Agriculture Statistics Service, Indiana Equine Survey, January 2002

Expenses

Total general expenditures equaled \$282,929,000 in 2001 (Table 2). General expenses are those expenses incurred on a daily basis. For example supplies, services, fees and labor are general expenses. Over 93 percent of general expenses were incurred within Indiana. Boarding and Training Fees were the largest general expense. The second largest general expense was hay. Ninety-six percent of hay expenses were incurred by operations with resident equine.

Capital expenses are purchases that are not common occurrences, such as purchase of equine or land for equine purposes. Total capital expenses came to \$265,652,000 in 2001 (Table 2). Capital expenses included purchase of equine, equine land purchases, and equine buildings and equipment purchases. Most capital expenses, 62 percent, were equine building and equipment related. Operations with resident equine incurred 90 percent of the total capital expenses. Indiana equine operations reported expenses in excess of \$548 million in 2001.

Table 2. Total Expenses for Operations with Resident Equine and Owners with All Equine Boarded Elsewhere: Indiana, 2001

Expense Category	Expense For Operations with Resident Equine	Expenses for Owners with All Equine Boarded	Total Expense	Average Expense per Operation with Resident Equine	Average Expense per Operation with All Equine Boarded
General Expenses					
Concentrates	\$25,475,000	\$1,661,000	\$27,136,000	\$867	\$509
Hay	\$27,320,000	\$1,099,000	\$28,419,000	\$877	\$544
Health	\$23,856,000	\$4,047,000	\$27,903,000	\$752	\$672
Grooming equipment	\$17,179,000	\$3,832,000	\$21,011,000	\$639	\$738
Farrier/Hoof care	\$18,104,000	\$3,261,000	\$21,365,000	\$611	\$526
Payroll	\$17,099,000	\$337,000	\$17,436,000	\$14,309	\$13,480
Contract labor expenses	\$4,978,000	\$1,146,000	\$6,124,000	\$2,559	\$9,550
Value of non-cash items	\$2,223,000	\$7,000	\$2,230,000	\$4,194	\$127
Breeding fees	\$6,329,000	\$369,000	\$6,698,000	\$1,037	\$1,190
Maintenance & repair	\$26,114,000	\$953,000	\$27,067,000	\$1,141	\$977
Insurance premiums	\$6,079,000	\$826,000	\$6,905,000	\$552	\$423
Utilities	\$6,499,000	\$108,000	\$6,607,000	\$404	\$338
Fuels	\$6,565,000	\$676,000	\$7,241,000	\$489	\$501
Taxes	\$9,405,000	\$86,000	\$9,491,000	\$663	\$430
Interest	\$3,693,000	\$196,000	\$3,889,000	\$2,581	\$1,120
Rent/lease	\$4,588,000	\$1,070,000	\$5,658,000	\$2,521	\$1,597
Fees & payments	\$7,059,000	\$1,728,000	\$8,787,000	\$405	\$492
Shipping & travel	\$5,950,000	\$1,602,000	\$7,552,000	\$908	\$913
Boarding & training	\$7,507,000	\$23,376,000	\$30,883,000	\$1,203	\$4,513
Miscellaneous	\$3,047,000	\$461,000	\$3,508,000	\$335	\$278
Depreciation	\$6,909,000	\$110,000	\$7,019,000	\$4,486	\$2,000
Total General Expenses	\$235,978,000	\$46,951,000	\$282,929,000	\$6,941	\$6,930
Expenses Incurred Out of State	\$12,459,000	\$6,163,000	\$18,622,000	\$2,436	\$4,466
Indiana Expenses	\$223,519,000	\$40,788,000	\$264,307,000	\$6,574	\$6,020
Capital Expenses					
Purchase of Equine	\$31,252,000	\$10,999,000	\$42,251,000	\$3,632	\$6,214
Equine Land Purchases	\$59,552,000	\$0	\$59,552,000	\$68,846	\$0
Equine Buildings & Equipment	\$149,022,000	\$14,827,000	\$163,849,000	\$11,100	\$13,358
Total Capital Expenses	\$239,826,000	\$25,826,000	\$265,652,000	\$13,972	\$10,426
Total Expenses	\$475,804,000	\$72,777,000	\$548,581,000	\$13,994	\$10,742

Source: Indiana Agriculture Statistics Service, Indiana Equine Survey, January 2002

Hired Labor Expenditures

Many Indiana equine operations require hired labor to care for, breed, train, show, or work the horses. These employees are part of the Indiana economy. Hired labor expenditures sustain employment and consequently positively impact the Indiana economy.

The 34,000 equine operations in Indiana employ a total of 4,890 hired workers. The operations with resident equine and owners with equine boarded elsewhere together employ a total of 4,960 workers. These workers are categorized as:

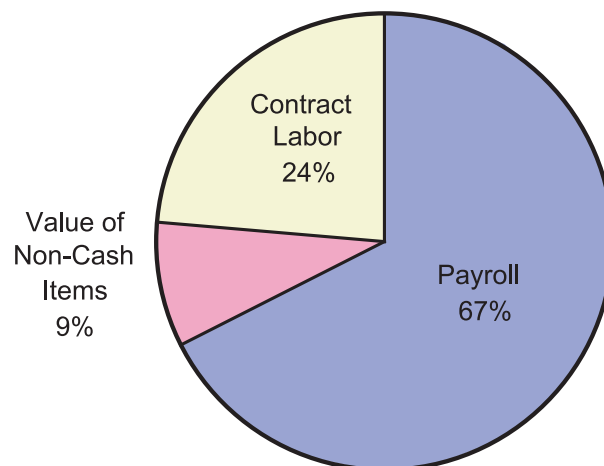
- Full-Time: 1,123 employees (23 percent of workforce) on operations with resident equine
- Seasonal: 830 employees (17 percent of workforce) on all operation types
- Part-Time: 3,005 employees (60 percent of workforce) on all operation types

Equine operations' hired labor expenditures totaled over \$25 million dollars in 2001. Hired labor expenses include: Payroll, Value of Non-Cash Items, and Contract Labor Expenses. Payroll expenses account for 67 percent of the total labor expenditures with over \$17 million being spent per year (Figure 7).

Operations with resident equine pay the majority, 94 percent, of the hired labor expenses. Labor expense by operation type were:

- Racing operations: 13 percent of total labor expenditure for all operations
- Show/Competition operations: 46 percent of total labor expenditure for all operations
- Work operations: 6 percent of total labor expenditure for all operations
- Trail or recreation and other operations: 29 percent of total labor expenditure for all operations
- Owners with equine boarded elsewhere: 6 percent of total labor expenditure for all operations

Figure 7. Labor Expenditures



Total Labor Expenditure = \$25,790,000

Source: Indiana Agriculture Statistics Service, Indiana Equine Survey, January 2002

operations: 6 percent of total labor expenditure for all operations

- Trail or recreation and other operations: 29 percent of total labor expenditure for all operations
- Owners with equine boarded elsewhere: 6 percent of total labor expenditure for all operations

The composition of expenses varies by the size of farm and number of horses on the farm. Before breaking down the operations by size, we first examine the expenditures by operation type. Table 3 shows that operating expenditures represent the largest portion of expenses for operations reporting expenses. Trail or Recreation and Other operations spent the most in 2001. Work operations reported the lowest expenditures.

Table 3. Total Expenditures by Operation Type, Indiana, January 2002

Expense Category	Operations with Resident Equine					Owners with Equine Boarded Elsewhere	Total
	Racing Operations	Show or Competition Operations	Work Operations	Trail or Recreation & Other Operations	All Operations		
Total Operating Expenditures	\$27,395,000	\$88,349,000	\$17,291,000	\$102,943,000	\$235,978,000	\$46,951,000	\$282,929,000
Equine Purchase	\$3,864,000	\$12,935,000	\$2,924,000	\$11,529,000	\$31,252,000	\$10,999,000	\$42,251,000
Equine Related Real Estate Purchase	\$284,000	\$31,718,000	\$1,619,000	\$25,931,000	\$59,552,000	\$0	\$59,552,000
Equine Bldgs or Equip. Purchase	\$6,971,000	\$67,855,000	\$4,533,000	\$69,663,000	\$149,022,000	\$14,827,000	\$163,849,000
Total Expenses	\$38,514,000	\$200,857,000	\$26,367,000	\$210,066,000	\$475,804,000	\$72,777,000	\$548,581,000

Source: Indiana Agriculture Statistics Service, Indiana Equine Survey, January 2002

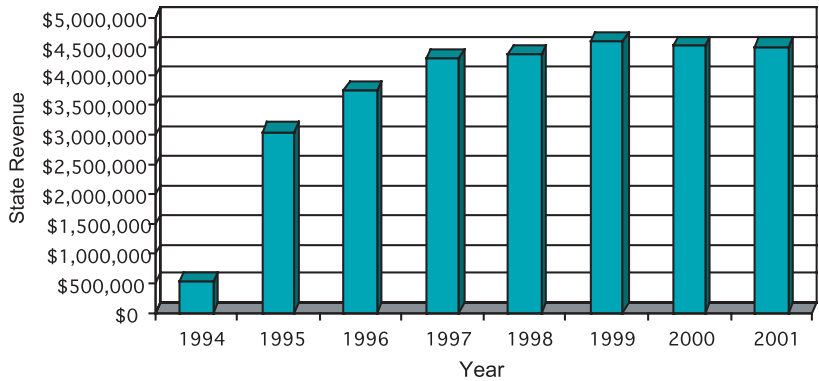
The Indiana Pari-Mutuel Industry

Indiana’s first pari-mutuel horse racing track opened in 1994 at Anderson, Indiana, and began its eleventh season in the spring of 2004. Although state regulated pari-mutuel racing has been around since 1870 in the United States, this industry is young in Indiana (The History of Thoroughbred Racing in America). The Indiana industry has been able to draw from a growing horse population of Standardbreds, Thoroughbreds and Quarter Horses in the state and increased investments in the industry to support race track activities. The race track also attracts non-Indiana horses to participate in race activity. The Indiana Horse Racing Commission, through its Breed Development Advisory Committees, has used development funds to supplement purses for Indiana sired, owned or bred horses. These activities support growth in Indiana’s horse industry and encourage competition with race tracks in other states.

State Revenue Associated with Pari-Mutuel Racing

Hoosier Park and Indiana Downs operations pay taxes to Indiana and local governments. Total Indiana State tax payments associated with pari-mutuel equine racing was \$4,495,423 in 2001 (Table 4). This is an increase from \$516,067 in 1994, the first year of operation (Indiana Horse Racing Commission Annual Reports 1994 to 2001) (Figure 8). Payments made to Indiana State government include: pari-mutuel taxes, occupational licenses (until 1995), fines and civil penalties paid, track reimbursements for officials, track permit and license fees, and admission taxes.

Figure 8. State Revenues from the Pari-mutuel Industry



Source: Indiana Horse Racing Commission’s Annual Report, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002.

Table 4. State Revenues from Pari-mutuel Racing

(Direct State Revenues Collected in Accordance with the Pari-mutuel Statute IC 4-31)

Year	Pari-Mutuel Tax	Track Reimbursement For Officials	Occupational License Fees ¹	Admission Tax	Fines and Civil Penalties Paid	Track Permit & License Fees	Total State Revenues	As a Share of State Total Revenue
1994	\$403,528	\$10,400	\$49,955	\$31,501	\$10,400	\$20,683	\$516,067	0.050%
1995	\$2,629,308	\$170,552	\$130,325	\$91,104	\$25,635	\$8,000	\$3,054,924	0.027%
1996	\$3,528,988	\$159,512	N/A	\$38,109	\$14,925	\$8,000	\$3,749,534	0.032%
1997	\$4,048,176	\$189,201	N/A	\$32,373	\$27,375	\$8,000	\$4,305,125	0.030%
1998	\$4,096,088	\$227,347	N/A	\$26,179	\$21,950	\$8,000	\$4,379,564	0.029%
1999	\$4,273,460	\$244,703	N/A	\$23,506	\$49,875	\$8,000	\$4,599,544	0.028%
2000	\$4,190,658	\$283,294	N/A	\$19,158	\$12,275	\$8,000	\$4,513,385	0.027%
2001	\$4,116,927	\$325,362	N/A	\$16,484	\$23,650	\$13,000	\$4,495,423	0.026%

¹ Occupational licenses were eliminated after 1995.

Source: Indiana Horse Racing Commission’s Annual Report, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002.

Source: Indiana Legislative Services Agency, Indiana Handbook of Taxes, Revenues, and Appropriations, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001.

Pari-mutuel taxes account for the largest share of horse industry payments to the Indiana State government. Pari-mutuel taxes increased steadily from 1994 to 1999 both in terms of dollars and in the percent of that total that the state received from pari-mutuel equine racing. Since 1999 they have slightly declined in terms of dollars. In 1994, pari-mutuel taxes amounted to \$403,578 and accounted for 78 percent of that year's state revenue from pari-mutuel racing industry. In 2001, pari-mutuel tax payments were \$4,116,927, 92 percent of 2001's state revenue from pari-mutuel racing.

Indiana Equine Industry Economic Impacts on the Indiana State Economy

Equine operations breed, train, recreational ride, raise, and race horses, all activities which result in economic activity. Equine operations pay fees, employ labor, and purchase feed, veterinarian services, and other goods and services to support their horse enterprises. This initial, or direct, economic activity stimulates spending in the economy as horse industry suppliers make purchases to support their businesses. Additionally, households that earn income from horse operations or their suppliers spend money in the economy creating impacts. Multipliers from an input-output model were used to estimate the economic impacts associated with spending to support horse operation activities.

Equine Operation Income and Employment Impacts, Spending and Labor

The horse operation spending, the direct impact, stimulates additional spending in the economy as suppliers make purchases to supply horse operations, and retail and consumer service firms make purchases to service household spending income earned from equine operations. The direct impacts and the additional spending combined are the total impacts. Total output, income, and employment impacts associated with all equine operations in Indiana are estimated to be \$197 million in total income and 8,861 jobs. These amounts represent the spending by the horse

Table 5. Total Spending Impacts

	Income Impact	Jobs	Annual Salary
Agriculture	\$23,555,697	1,899	\$12,403
Construction	\$94,838,197	3,333	\$28,453
Transportation/Utilities	\$10,105,199	323	\$31,333
Retail	\$28,823,867	1,569	\$18,368
Services	\$32,447,079	1,497	\$21,668
Public Administration	\$7,696,985	239	\$32,190
Totals	\$197,467,025	8,861	-----

industry (direct impacts) plus the indirect and induced impacts. The annual salary earned per industry associated with these impacts is seen in Table 5 above.

Indiana equine operations have an estimated annual payroll of \$22,077,000. Households earning this money use it to purchase household goods and services. Household spending of income earned in the horse industry stimulates a total impact of \$9,763,021 in personal income and 361 jobs (Table 6).

Table 6. Total Labor Impacts

	Income Impact	Jobs
Agriculture	\$29,899	6
Mining	\$16,075	0
Construction	\$191,325	5
Manufacturing	\$1,701,654	34
Transportation/Utilities	\$884,121	21
Wholesale	\$520,314	12
Retail	\$2,067,461	125
Services	\$3,657,893	137
Public Administration	\$694,279	21
Totals	\$9,763,021	361

Adding the impacts associated with the horse operation spending and the impacts associated with household spending of income earned from horse operations, the estimated annual impacts associated with the equine industry are \$207,230,046 in total income and 9,221 jobs (Table 7).

Table 7. Annual Economic Impacts Associated with Equine Operations

	Income Impact	Jobs
Operation Spending Impacts	\$197,467,025	8,861
Labor Household Spending Impacts	\$9,763,021	361
Total Impacts	\$207,230,046	9,221

Summary

The equine industry in Indiana has a very real impact on the economy. The more than 34,000 operations house 160,000 horses, generate 9,221 jobs, and generate more than \$207 million in economic impact in the state. In 2001, there were more equine operations in Indiana than any other livestock species (NASS, 2001). The \$580 million dollar value of equine in Indiana was equivalent to 58 percent of the total value (\$989.9 million) of all other livestock in Indiana. This industry is a thriving part of the Indiana economic landscape, and has potential to continue to grow.

For more detailed information:

Complete survey results:

<http://www.nass.usda.gov/in/>

Primary use categories:

<http://www.nass.usda.gov/in/equine/primaryuse.pdf>

Operation categories:

<http://www.nass.usda.gov/in/equine/opertype.pdf>

This study was funded by the following organizations:

- Indiana Horse Council, Inc.
- Office of the Commissioner of Agriculture, Indiana Livestock Development and Promotion Fund
- Indiana Horse Racing Commission
- Purdue University Vet School