

Economic Impact of the Michigan Equine Industry, 2006

Summary

Animals and operations

- 155,000 equine animals housed in Michigan on June 1, 2007
 - 86,000 at private residences
 - 21,000 at breeding farms
 - 11,500 at boarding stables
- 35,000 equine operations in Michigan
 - 26,000 private residences
 - 1,600 breeding farms
 - 1,000 boarding stables
- \$4.35 billion in equine-related assets
 - \$280 million in equine
 - \$2.6 billion in land
 - \$743 million in facilities and fences

Acres to support equine facilities

- 1.8 million acres reported by equine operations
 - 440,000 of these acres are directly related to equine activities

Expenses and income

- \$460 million in annual expenses excluding labor in 2006
- Equine operations paid out \$25 million in wages and benefits in 2006
- \$150 million in annual income generated in 2006

Economic impact of the equine industry

- Total economic impact of \$1.069 billion annually

Introduction

Recognizing the size and complexity of the Michigan horse industry, a team of researchers from Michigan State University led an effort to analyze its economic impact. More than providing a census of animals and facilities, the research employed economic models to determine the direct and indirect impacts of the horse industry on the state's economy. The values were collected in the summer of 2007. Therefore, the number of animals and operations as well as asset values were as of June 1, 2007 while the income and expense values represented the last complete year (2006). The numbers reveal that the equine industry generated \$1.069 billion in annual economic impact for Michigan. These values do not include racetracks but do capture race horses.

Equine operations by primary activity

There were 155,000 equine animals housed on 35,000 operations as of June 1, 2007. Most of the operations were private residences which had an average of about three animals.

| Primary Activity | Operations | Inventory |
|-------------------------|-------------------|------------------|
| | <i>number</i> | <i>number</i> |
| Private Residence | 26,600 | 86,000 |
| Boarding Stable | 1,000 | 11,500 |
| Training Stable | 550 | 7,500 |
| Breeding Farm | 1,600 | 21,000 |
| Lesson Stable | 200 | 2,800 |
| Other Farm | 4,400 | 20,000 |
| Other | 650 | 6,200 |
| Total | 35,000 | 155,000 |

Operations by number of head

Most operations had less than 10 equine animals. Compared to 1991, when the past survey was completed, number of operations with 3-9 head grew by 44 percent.

| Size group | Operations | | Inventory | |
|--------------|---------------|---------------|----------------|----------------|
| | 1991 | 2007 | 1991 | 2007 |
| 1-2 head | 14,700 | 15,400 | 24,000 | 24,000 |
| 3-9 head | 11,500 | 16,600 | 54,000 | 76,000 |
| 10-29 head | 2,150 | 2,650 | 33,000 | 38,000 |
| 30+ head | 350 | 350 | 19,000 | 17,000 |
| Total | 28,700 | 35,000 | 130,000 | 155,000 |

Equine by primary use

The majority of equine animals were used for pleasure or were idle in 2007.

| Use | 2007 | 1991 |
|-------------------|----------------|----------------|
| | (head) | (head) |
| Pleasure, idle | 79,000 | 60,500 |
| Breeding | 21,000 | 19,000 |
| Racing | 5,700 | 16,000 |
| Work(draft) | 12,600 | 8,500 |
| Competition(show) | 19,400 | 18,000 |
| Trail riding | 17,300 | 8,000 |
| Total | 155,000 | 130,000 |

Top sources of income for equine operations and owners

Michigan operations generated \$150 million in income in 2006. Even though many equine operations are not intended to generate income, racing, boarding and training horses were the major sources of income. The other income category included income derived from, among other sources, stud fees, mare care, feed sales and equipment sales.

| Source | Income | % |
|----------------|---------------|--------------|
| | (\$ millions) | |
| Racing purses | 36.8 | 24.5 |
| Sale of equine | 32.1 | 21.4 |
| Boarding | 24.4 | 16.3 |
| Training | 18.4 | 12.3 |
| Lessons | 9.0 | 10.0 |
| Other income | 29.3 | 20.0 |
| Total | 150.0 | 100.0 |

These values are revisions to previous NASS estimates.

Annual expense categories for equine operations and owners

The top expenditure categories—excluding labor—were grain, hay, capital improvements (labor and materials for buildings, fencing, etc), property taxes, health related expenditures, boarding, training, hoof care, travel, and tack and clothing.

| Expense Type | Annual Expenses* | |
|-------------------------|-------------------------|--------------|
| | (\$ millions) | % |
| Grain and supplements | 59.1 | 12.8 |
| Hay | 44.3 | 9.6 |
| Capital improvements | 43.5 | 9.5 |
| Property taxes | 40.4 | 8.8 |
| Veterinary and medicine | 36.1 | 7.8 |
| Boarding | 28.5 | 6.2 |
| Training fees | 26.9 | 5.8 |
| Farrier | 26.1 | 5.7 |
| Travel | 20.8 | 4.5 |
| Tack and clothing | 18.9 | 4.1 |
| All other expenses | 115.4 | 25.1 |
| Total Expenses | 460.0 | 100.0 |

These values are revisions to previous NASS estimates.

*Excludes labor expenses.

Labor Expenses

While the vast majority of labor was unpaid, Michigan equine operations spent a total of \$20.7 million on wages and another \$4.5 million on benefits for labor in 2006.

Asset Value of the Michigan Equine Industry

The 35,000 equine operations in Michigan held assets valued at \$4.35 billion including \$280 million in horses and other equine animals, \$2.56 billion in land, and nearly \$743 million in facilities and fences. These assets include race horses but not race tracks.

| Asset Type | Asset Value (\$ millions) | % |
|---------------------------------|------------------------------|--------------|
| Equine animals | 280.2 | 6.4 |
| Land | 2,562.0 | 58.9 |
| Facilities (barns, fences, etc) | 742.6 | 17.1 |
| Fencing | 71.1 | 1.6 |
| Arenas and tracks | 42.2 | 1.0 |
| Tack and clothing | 70.0 | 1.6 |
| Tractors | 150.1 | 3.5 |
| Machinery/equipment | 61.4 | 1.4 |
| Trucks and trailers | 342.3 | 7.9 |
| Feed Inventory | 17.2 | 0.4 |
| Other supplies | 11.0 | 0.3 |
| Total | 4,350.0 | 100.0 |

These values are revisions to previous NASS estimates.

Summary of Annual Michigan Equine Expenditure Impacts

Expenditure impacts include all operations and owners. The total impact was \$1.069 billion in 2006. The impact was composed of two parts: (1) the direct dollars spent by the equine industry, and (2) the effect of those expenditures as they make their way through the state economy.

| | Direct* Annual Impact (\$ millions) | Indirect/Induced Impact (\$ millions) | Total (\$ millions) | Derived Multiplier** |
|--|---|---|------------------------|-------------------------|
| Total Operations and Owners | 703.9 | 364.7 | 1,068.6 | 1.52 |

* All dollar values measured in 2006 values.

** Ratio of total to direct.

Study authors

This report is the result of a joint effort of a research team at Michigan State University with funding from Michigan State University Extension and the Michigan Agricultural Experiment Station. Christopher A. Wolf is the principal investigator with respect to the economic analysis. Steve Miller contributed significantly to the execution of the impact assessment. Christine Skelly, Mary Rossano, and John Kaneene also had responsibility for the survey. The National Agricultural Statistics Service Michigan branch and, in particular, Marty Saffell were responsible for survey frame design and information collection.

Methodology

This study is based on an extensive survey of the Michigan equine industry conducted by the National Agricultural Statistics Service (NASS) of the United States Department of Agriculture. NASS mailed the survey to potential equine owners and had staff visit parcels of land representative of Michigan's geography. The data from the mail surveys and visits were combined to provide a statistically representative view of the number of operations, equine animals, and economic variables.

Expenditure and asset information was fed into IMPLAN, a computer model of the Michigan economy. This resulted in an estimate of the multiplier portion of the equine industry's impact on the Michigan economy.