

2007
Oldham County, Kentucky
Equine Survey

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**Equine Industry Survey
Oldham County Kentucky**

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Executive Summary

What is the economic impact of the equine industry in Oldham County? To answer this question, a county wide survey, sponsored by the Oldham County Equine Council and Oldham Ahead, was conducted to determine the number and value of horses, information about the farms they live on, asset values, and related expenses.

The principal findings of the study are:

- 3,186 equine are housed in Oldham County
 - Thoroughbreds represent 65% of the horses in the county
 - Estimated value of all horses is \$40.4 million
- There are 377 locations where equine are housed in Oldham County
- Survey responses showed the following services offered:
 - 68 respondents classified themselves as breeders of horses
 - 123 respondents are directly involved in showing and competition
 - 66 classified themselves as trainers
 - 66 said they board other peoples horses
 - 23 respondents give riding lessons
- Total economic impact is \$48.9 million annually
 - \$26.8 million is generated in revenue
 - Equine operations spend over \$32.7 million for operational costs
 - Over \$3.2 million is spent annually on the purchase of horses and equipment
 - 388 jobs are directly generated by equine operations
 - \$7.79 million paid out in direct equine labor costs
- Property taxes paid by equine owners and operations is over \$515,000
- 13,929 total acres are reported by equine operations
 - 10,910 of these acres are directly related to equine activities
 - Equine acres represent 22% of the county's 62,500 agriculture acres
 - Estimated value of equine land and capital is \$148 million

Introduction:

Survey Objective

The objective of the 2007 Oldham County Equine Survey was twofold, 1) to determine the inventory of equine in the county and 2) to determine the equine industry's economic impact on the local economy.

Survey Design

A survey questionnaire was developed by the Oldham County Equine Council and various equine industry representatives. The survey was designed to collect information on equine inventory and value as of December 31, 2006. Data for acres of operation, assets, expenditures, revenue, and employment were collected for the year of 2006.

Data Collection

An extensive list of names and addresses of equine owners and equine operations was built by contacting equine veterinarians, farriers, various breed associations, riding clubs, phone books, the internet, the county extension agent, feed and tack retailers, etc.

After removing names duplicated with the list frame, a total of 451 non-overlap respondents were contacted by way of a mailed survey. Survey questionnaires were mailed to all of the identified equine owners and equine operations. Follow-up phone calls and personal visits were made to a designated group of non-respondents in an effort to maximize response rates.

Survey Response

Both the list and area frame components of the survey had acceptable response rates over 20 percent. Of the 451 questionnaires mailed to the list frame respondents, a total of 122 positive responses were obtained. There were a total of 303 non-respondents, 11 returned for incorrect address or had moved, 10 people who reported that they had no equine, and 5 non-usable responses.

The responses were separated into six categories: Breeding Farms, Race Horse Training Centers, Boarding Stables, 15 Head and Up, 5 – 14 Head, and 1 – 4 Head. Of the three major categories, Breeding Farms, Thoroughbred Training Centers, and Boarding Stables, 95% of these professional operations were previously known and identified in the county. The operations that did not respond to the mailed survey were personally contacted in order to obtain their data. With the non-respondents of smaller farms and individual owners a multiplier of 4.5 was used in order to address owners that were known to have equine but did not respond to the mailed survey.

Data Evaluation

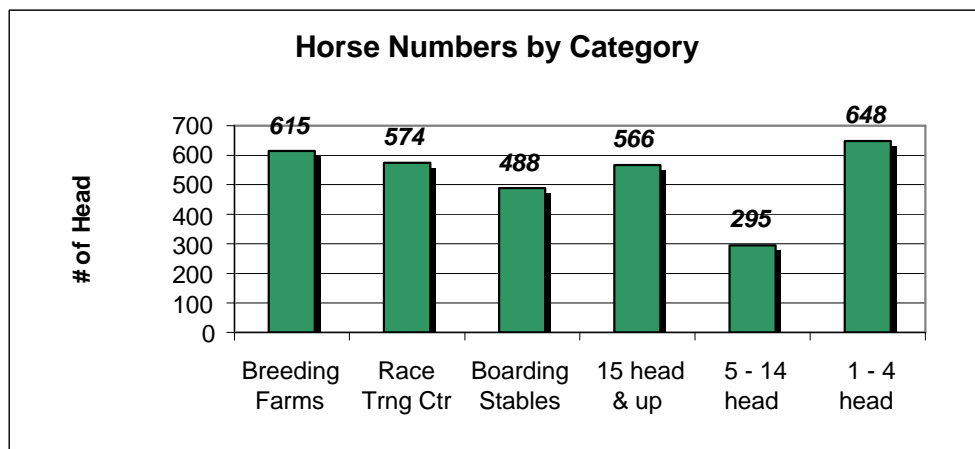
The final task was to quantify the economic impact of the equine industry. The direct impact is the principal impact of the equine industry on the economy and is the more visible part of the industry's impact. However, there is also an additional indirect impact or "multiplier effect" which occurs as money attracted to the county by the equine industry circulates further in the economy. The total impact of the equine industry is the sum of the direct impact and the "multiplier effect."

Equine Numbers

As of December 31, 2006, there were 3,186 equine housed in Oldham County. The term equine refers to horses, ponies, donkeys, mules and miniature horses. Table 1 shows the equine inventory as it relates to the six main categories:

- 1) Breeding Farms (615 horses) - the farms primary function is the breeding of broodmares to produce offspring for sale.
- 2) Training Centers (574 horses) – their primary function is training of Thoroughbreds for racing.
- 3) Boarding Stables (488 horses) – their primary use is the boarding and training of client horses along with giving riding lessons to clients.
- 4) 15 Head and Larger Operations (566 horses) – this is a combination of small boarding stables and broodmare farms. Typically they house under 40 horses at a time.
- 5) 5 to14 Head (295 horses) – this is the small owner operations that own their own horses for both sporting and pleasure.
- 6) 1 to 4 Head (648 horses) – this is strictly the single owners who have 1 – 4 horses for their own personal riding pleasure.

Table 1 – Number of Horses



Equine Operations by Primary Function

Each of the six primary categories were broken down as to how the equine are used. Of the 3,186 head of equine, 569 of them were used as broodmares for breeding, 28 head were stallions, 373 head were weanlings and yearlings, 753 were race horses in training, 609 head were used in show and competition, 567 head were pleasure horses, 73 head

were used as schooling horses at boarding stables, 144 head were retired, and 70 head were listed as other. See Table 2.

Table 2 - Category of Use

Category of Use	Breeding Farms	Race Training Ctr.	Boarding Stables	15 Hd & Up	5 – 14 Head	1 – 4 Head	Totals
Broodmares	305	4	34	141	58	27	569
Stallions	10	0	1	14	3	0	28
Weanlings & Yrlgs	197	4	26	96	27	23	373
Racing	64	564	5	72	18	32	753
Show/Competition	0	0	277	122	57	153	609
Pleasure	5	0	89	74	93	306	567
School	0	0	49	0	19	5	73
Retired	7	0	5	14	14	104	144
Other	27	2	2	33	6	0	70
Total Horses	615	574	488	566	295	648	3,186

Race horses represented the highest use at 23% of total equine (Figure 1), Show and Competition were next at 19%, Broodmares and Pleasure horses were both at 18%, Weanlings and Yearlings at 12%, with Retired, Schooling, Stallions, and Other making up the balance.

Figure 1 – Equine Primary Use

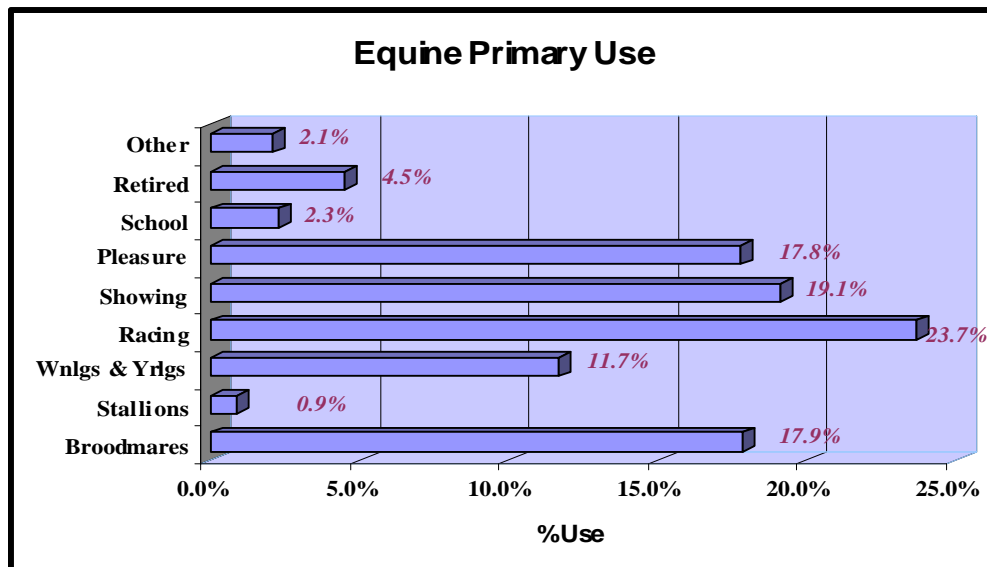


Table 3 - Breeds of Horses

Breeds

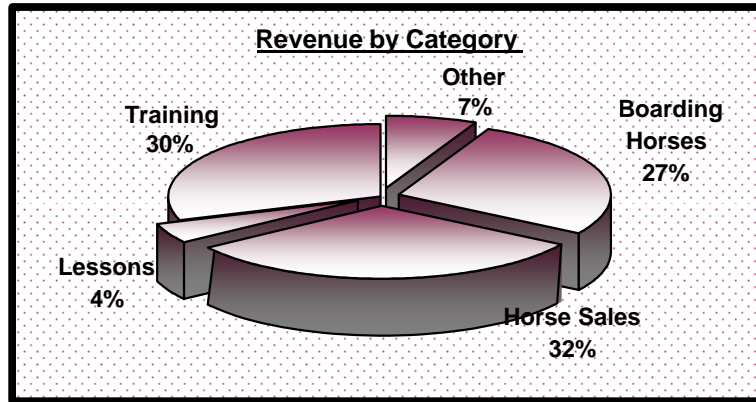
The survey questionnaire listed fifteen primary breed categories that were thought to most accurately represent the variety of breeds within Oldham County. According to survey results, Thoroughbreds represented the largest percent (65.1) of the equine population in the county, with 2,075 head (Table 3). From there it was a long drop to the next breed, the Quarter Horse. Quarter Horses accounted for 201 head (6.3%), with the American Saddlebred following at 170 head (5.3%), and Non-registered and Arabians in 4th and 5th place. The balance was spread over the remaining breeds.

Breeds	Number of Equine	%
Thoroughbred	2,075	65.1 %
Quarter Horse	201	6.3 %
American Saddlebred	170	5.3 %
Non-registered	142	4.5 %
Arabian	119	3.7 %
Other	111	3.5 %
Warmbloods	77	2.4 %
Tennessee Walking	66	2.1 %
Icelandic	53	1.7 %
Paint	50	1.6 %
Ponies	45	1.4 %
Appaloosa	35	1.1 %
Rocky Mountain	21	.7 %
Morgan	12	.4 %
Paso Fino	9	.3 %
Totals	3,186	

Top Revenue Sources

A large number of equine operations are profit seeking businesses that generate income. Thoroughbred breeding farms generate the largest number of dollars in income through horse sales (32%) with racing training centers second (30%). The next highest is commercial boarding operations (27%). The lesson category was listed as a separate income sector, however, lessons are predominately provided by professional boarding stables. The Other Category includes income from breeding, trail riding, non-racing competition and shows, hay sales and miscellaneous income segments. Figure 2 shows the breakdown by category of revenue.

Figure 2 - Revenue



Top Ten Expense Categories

Equine businesses and owners contribute over \$32.7 million to the Oldham County and Kentucky economies through expenditures. Expenditure dollars provide a key measure of the size of the equine industry and give a basis for the economic impact calculations.

The top ten Oldham County equine expenditures for all equine operations combined are shown in Table 4. Salaries and wages for hired labor accounted for the highest expense overall (\$7.79 million) making up 24 % of total expenditures. Breeding fees, primarily stud fees for broodmare operations, were next (\$4.77 million) representing 14.6 % of expenditures with veterinarian costs as the third highest (\$3.4 million) at 10.5 %. The remaining top ten categories were spread over feed and hay (\$2.5 million) at 7.6 %, insurance (\$1.9 million) at 5.9%, training (\$1.7 million) at 5.1 %, farrier (\$1.2 million) at 3.7 %, vanning/hauling (\$1.06 million) at 3.2 %, medicines and supplies (\$1.01 million) at 3.1 %, and boarding (\$.9 million) at 2.9 %.

Table 4 – Top Ten Expenses Categories

Clearly the operations that have the biggest outlay of funds are the commercial equine operations such as breeding farms, race training centers, boarding stables, and small boarding and breeding farms. They account for 87% of costs and house 70% of the equine numbers.

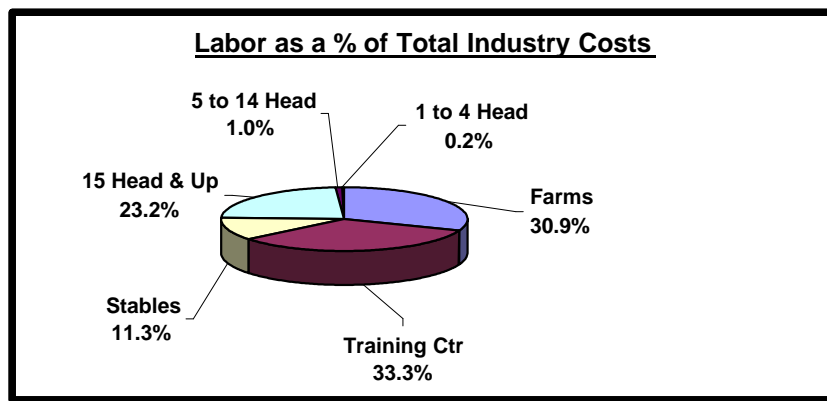
Top Ten Expense Categories	Dollars Spent (millions)	% of Total Expenses
Salaries and wages	\$ 7.79	24.0 %
Breeding fees	\$ 4.77	14.6 %
Veterinary	\$ 3.44	10.5 %
Feed and hay	\$ 2.47	7.6 %
Insurance	\$ 1.93	5.9 %
Training	\$ 1.66	5.1 %
Farrier	\$ 1.20	3.7 %
Vanning	\$ 1.06	3.2 %
Medicines and supplies	\$ 1.01	3.1 %
Boarding	\$.941	2.9 %

Hired Labor Expenditures

Equine operations are very labor intensive. Except for the small owner operations, hired labor is required to care for, breed, train, show, and work the horses. Thus the larger the horse operation the more labor intensive it is. On average, it requires one employee for every 4.6 to 8 horses depending on the type of operation as shown in Table 5.

As can be seen from Table 4, salary and wages is the largest expense category when looking at all operations combined. The equine operations that have the largest labor expenses are Breeding Farms, Training Centers, and the 15 and Up Category. (See Figure 3.)

Figure 3 – Labor



Hired labor make up 33.3% of the Training Centers costs. The Breeding Farms have the next highest labor expense of 30.9% of total costs and 15 and Up the 3rd highest at 23.2%. The commercial boarding stables can get by with fewer employees per horse housed partly because the clients that board their own horses at the stable perform some of the tasks involved with the care of their own horses.

Number of Workers and Payroll Costs – Table 5

The total number of hired laborers employed in Oldham County during 2006 was 388. These workers are categorized as:

- Full-Time: 317 employees on operations with resident equine
- Part-Time: 71 employees on all operation types

As noted earlier, equine operations' hired labor expenditures totaled over \$7.79 million dollars in 2006. Hired labor expenses include: payroll, contract labor expenses, and payroll taxes. Labor expense by operation type was:

- Breeding Farms: \$2.4 million representing 30.9 % of their farm's labor costs.
- Training Centers: \$2.59 million representing 33.3 % of their operations costs.
- Operations with 15 + head of horses: \$1.8 million representing 23.2 % of their labor costs.
- Boarding stables: \$881,000 representing 11.3 % of their labor costs.

Table 5 - Employees

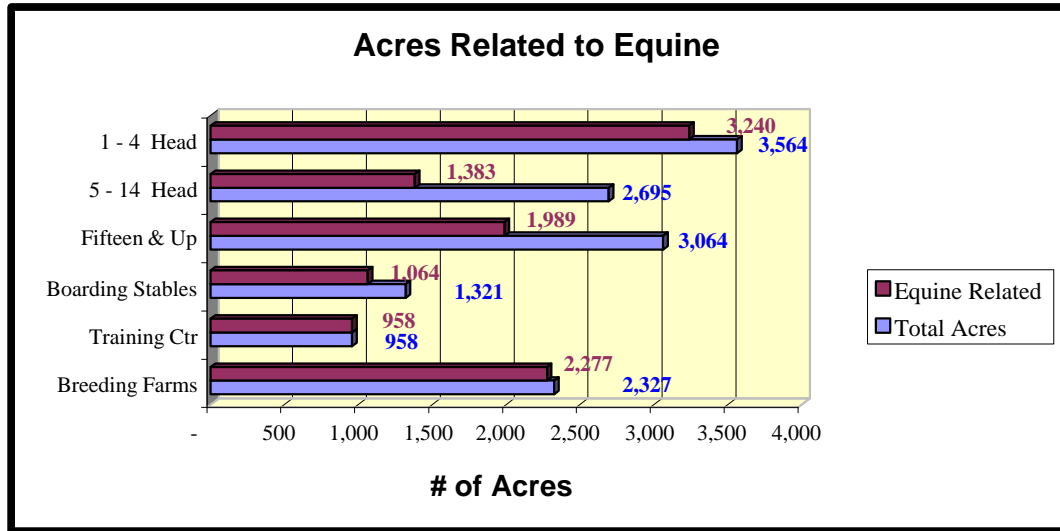
	Breeding Farms	Training Centers	Boarding Stables	15 Head & Up	5 – 14 Head	1 – 4 Head	Total
Total Wages Paid	\$2.41 Million	\$2.6 Million	\$881,000	\$1.81 Million	\$80,000	\$17,000	\$7.79 Million
- Employees -							
# of full time employees	80	124	40	70	2	1	317
Avg. hours per employee/ week	49	50	49	51	45	44	
# of part time employees	15	12	14.5	14	13	2	71
Avg p/t hours per employee/ week	19.5	18	17	16	17.5	8	
Avg. wage per full time worker	\$23,600	\$17,400	\$14,900	\$19,200	\$5,700	\$5,600	
Avg. # of horses per employee	7.7	4.6	12.2	8.0	N/A	N/A	

The balance of the \$7.79 million in labor costs are spread out over the smaller operations of 1 - 4 head and 5 – 14 head owners, with the 1 – 4 head having almost no labor costs. Individual horse owners in these categories tend to do their own farm work instead of hiring outside sources.

Acreage

There are 13,929 total acres associated with equine operations of which 10,910 acres are used to support equine. The commercial operations such as breeding farms and training centers utilize over 90% of their land for equine use. The 5-14 Head and 15 and Up categories tend to have more acreage available for other agricultural and recreational uses. The 1-4 Head owners, who usually own 5-15 acres, use most of their acreage to house and board their horses. Figure 4 reflects the acreage by the different categories.

Figure 4 – Equine Acres



Over half (52 percent) of Oldham County’s equine population is housed on 39% of equine acres. Eighty one percent of the equine operations are on 5-15 acre farms. As noted in Table 6 below, the average size Breeding Farm is 455 acres, Training Centers - 160 acres, Boarding Stables - 118 acres, 15 Head and Up - 111 acres, 5-14 Head - 42 acres, and 1-4 Head - 11 acres. The average acres per equine housed varies with the type or category of operation. Operations such as breeding farms will have more acres per horse than a thoroughbred training center because more pasture area is needed for broodmares, weanlings and yearlings than for horses stabled at training centers. Thus the average acres per horse for breeding farms is 3.7 acres compared to that of training centers of 1.7 acres. (Table 6 below shows the breakdown of acreage).

Table 6 – Farm Size

	Breeding Farms	Training Centers	Boarding Stables	15 Head and Up	5-14 Head	1-4 Head	Totals
Number of Operations	5	6	9	18	33	306	377
Equine Related Acres	2,277	958	1,064	1,989	1,383	3,240	10,910
Number of Equine	615	574	488	566	295	648	3,186
Avg. Farm Size (acres)	455	160	118	111	42	11	
Avg. # of acres/horse	3.7	1.7	2.2	3.5	4.7	5.0	

Asset Value of the Oldham County Equine Industry

There are 377 locations in Oldham County which house equine based on the survey results. These facilities serve over 750 owners. They hold assets valued at nearly \$188.4 million, including \$40.4 million in horses and other equine animals and \$148 million in land and buildings.

As stated earlier, there are 13,929 total acres associated with the equine operations in Oldham County. (See Table 7) The National Agricultural Statistics Service in their 2002 Ag Census reports there are 62,500 acres in Oldham County designated as agricultural land. The 13,929 acres that are associated with equine operations represents 22% of the total agricultural land in Oldham County.

Table 7 – Asset Values

Equine Category	Total Acres	Value Per Acre	Land & Capital (\$ Millions)	Equine Value (\$ Millions)	Total Value (\$ Millions)
Breeding Farms	2,327	\$19,403	\$ 45.1	\$ 13.1	\$ 58.2
Training Centers	958	\$25,282	\$ 24.2	\$ 10.0	\$ 34.2
Boarding Stables	1,321	\$14,930	\$ 19.7	\$ 4.3	\$ 24.0
15 Head & Up	3,064	\$8,783	\$ 26.9	\$ 10.5	\$ 37.4
5 – 14 Head	2,695	\$5,244	\$ 14.1	\$ 1.56	\$ 15.7
1 – 4 Head	3,564	\$5,052	\$ 18.0	\$.935	\$ 18.9
Totals	13,929		\$ 148.0	\$ 40.4	\$ 188.4

Economic Impact

Total Effects - The analysis results for economic value are shown in Table 8. The direct output effect of the equine industry in the county is \$39.3 million, of which \$4.8 million is value added. This translates into 388 jobs, with an annual total compensation for these workers of \$7.13 million per year (\$18,299 per worker, not including P/R tax).¹

¹ Appendix A overviews the method and defines the key terms used in this study.

Table 8 – Economic Contribution

	Direct Effect	Secondary Effect	Total Effect	Multiplier
Equine Industry Output (millions)	\$ 39.3	\$ 9.6	\$ 48.9	1.24
Value Added (millions)	\$ 4.8	\$ 1.4	\$ 6.2	1.30
Employment	388	66	454	1.17
Labor Income (million)	\$ 7.1	\$ 2.1	\$ 9.2	1.30
Per Worker Compensation	\$ 18,299	\$32,292	\$20,332	

Secondary effects are the spin-off or ripple effects of the equine industry. For example, equine related businesses purchase a variety of inputs and services; and the companies that produce these goods and services also need labor. Accordingly, the secondary effects also capture the impact of local spending by employees of both the equine-related businesses as well as supporting industries. It is estimated that these effects result in more than \$9.6 million in additional output, of which more than \$1.4 million is value-added. This translates into 66 additional jobs in the local economy, and more than \$2.1 million in employee compensation. In terms of multipliers, the employment multiplier is 1.17, suggesting that for every job in an equine-related business, an additional 0.17 jobs are supported in the local economy. The labor income multiplier is 1.30, suggesting an additional dollar in employee compensation in the equine industry supports 30 cents of wages and benefits in other Oldham County industries. Similar interpretations can be given to the output multiplier (1.24) and value-added multiplier (1.30).²

Overall, the direct and secondary contributions of the county's equine industry are estimated at more than \$ 48.9 million in output, of which \$6.2 million is value-added. This translates into 454 jobs that compensate Kentucky workers with \$9.2 million.

Conclusion

Together, the breeding, raising, training, showing, racing, riding and care of thousands of equine each year fills a large industry that when pulled together makes a huge contribution to the Oldham County economy. The equine industry is a leading part of the Oldham County, Kentucky agricultural sector as seen by the more than 377 operations housing 3,186 equine, situated on more than 10,000 acres. These operations generate 388

² Economic multipliers are used to translate the direct impact into the total impact; multiplying the direct impact by the multiplier gives an estimate of the additional economic activity generated by a change in output. To derive the multiplier, simply divide the total impact (direct plus secondary) by the direct impact.

jobs and have an economic impact of more than \$48.9 million of which \$6.2 million is value-added. The \$40.4 million dollar value of equine in Oldham County was equivalent to 21 percent of the total value (\$188.4 million) of all agricultural land, capital, and equine in the county.

The equine industry is a thriving part of the Oldham County economic landscape, and has potential to grow even larger.

Acknowledgements

The author would like to thank Mary Lowry, the Executive Director of Oldham County Equine Council, Doug Wampler of Oldham Ahead, and the Oldham County Cooperative Extension Agency for their help in gathering statistics, identifying equine owners and providing suggestions with the development of the survey.

Appendix A

Definitions

Multipliers - Input-output models are driven by final consumption/demand. Industries respond to meet demands directly or indirectly. Each industry that produces goods and services generates demand for other goods and services and so on. These ripple effects are described by multipliers. A multiplier examines how much spin off of economic activity is generated by or within an industry. For example, multipliers can describe how many total jobs in the economy are created when a new job is added in the industry. In this case, multipliers tell the number of jobs there are in the secondary as the result of an existing job in the equine industry. In general, input-output modelers describe two types of multiplier effects when examining the role of an industry in the state economy.

1. The direct effect is the contribution of the industry itself. It may represent the total revenue (output), employment or employee compensation. The value of the direct effect multiplier is always 1.
2. The indirect effects are effects of the industry on its suppliers. This multiplier captures the additional activity in businesses that provide inputs to the industry of interest.

Analysis - Input-output analysis is a means of examining the relationships within an economy both between businesses and between businesses and final consumers. It captures all monetary transactions for consumption in a given time period. The resulting mathematical formulae allow one to examine the effects of change in one or several economic activities on an entire economy.

Industry output is a single number in dollars for each industry. The dollars represent the value of an industry's total production. Another way to think about industry output is as the total revenue generated by an industry.

Employment is total wage and salary employees and self-employed jobs in a region. It includes both fulltime and part-time workers and is measured in total jobs.

Value Added - At the local level, value-added is equivalent to the concept of Gross Domestic Product in that it examines the unique contribution of an industry to the overall economy. In input-output analysis, value added consists of the following components:

1. *Employee compensation* which is wage and salary payments as well as benefits including health and life insurance, retirement payment, and any other non-cash compensation. It includes all income to workers paid by employers.
2. *Proprietary income* consists of payments received by self-employed individuals as income. This includes income received by private business owners, doctors, lawyers and so forth.

3. *Other property type income* consists of payments for interest, rent, royalties, dividends and profits. This includes payments to individuals in the form of rents received on property, royalties from contracts, and dividends paid by corporations. This also includes corporate profits earned by corporations.