

PRAIRIE MEADOWS

**Economic Impact
Of The
Horse Racing Industry**

1999

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Overview of Results

This short report is a study of the economic impacts of several elements of horse production in Iowa. Part 1 of this report estimates the economic impact associated with owners involved with horses at least partially as a business in Iowa. In Part 2 of this report we detail the enterprise economic impacts of Prairie Meadows Live Racing facilities, tourism impacts associated with the attraction of Prairie Meadows, and we profile the impacts of purse payments to Iowa horse owners.

The several tables in this report detail the total economic impacts of the various dimensions of horse production and horse racing in Iowa. The following table lists the amount of producer sales and employment directly and indirectly attributable to Iowa's horse industry.

Estimated Direct and Indirect Gross Sales and Employment in Iowa Horse and Horse-Racing Industries, 1999.

Activity	Gross Sales (\$Millions)	Total Employment
Horse Racing and Breeding (Table 5)	\$ 228.9	2,698
Prairie Meadows Live Racing (Table 6)	18.3	474
Tourism (horse racing only) (Table 7)	5.37	89
TOTAL	\$ 252.57	3,261

On an annual basis, horse racing and breeding, along with horse-racing tourism, account for \$252.57 million in direct and indirect sales and 3,261 total jobs in Iowa. Some other relevant statistics from the report include:

- Investment: In 1999, total horse and horse-related facilities investment by Iowa horse producers were valued at \$270.922 million.
- Impacts: The horse industry supports 1,055 direct jobs and accounts for 2,698 total jobs in the Iowa economy.
- Impacts: Live racing at Prairie Meadows supports 216 direct jobs and 474 total jobs during the live racing season.
- Tourism: Live racing at Prairie Meadows stimulates an additional \$5.37 million in tourism and indirect spending in the Des Moines area annually.
- Purses: Purses paid to Iowa owners are important sources of income. They represent 38 percent of horse production related incomes by Iowa horse owners and racers. For each million dollars in purses paid to Iowa owners, 30 jobs are created or supported in the horse industry and a total of 70 jobs are created or supported in the state's overall economy.

The Economic Importance of the Iowa Horse Industry, 1999

The Iowa horse industry is a major agriculturally related industry in the state supporting traditional agriculture with purchases of hay and feed grain supplies. Horse owners generate considerable economic impacts, as well, through their investments in facilities, equipment, and supplies that support their professional and recreational uses of horses. Since the Iowa horse industry was last surveyed and studied in 1996, the number and quality of horses in Iowa has continued to increase, as has the level of investment supporting these horses. This report uses an update of the 1996 horse owner survey that was completed in September 2000 to compare how the industry has changed and to estimate its current importance to the Iowa economy.

As in the previous report, our study focuses on estimating the economic impact associated with professional owners who are involved with horses, at least partially, as a business, and from which their horse enterprises generate income from sources such as breeding or racing. Information on characteristics and investments of this segment of the Iowa horse industry is based on a survey of horse owners conducted during the summer of 1996 and again in summer 2000. Our report summarizes these surveys on horse related investments, revenues, and expenditures as they relate to overall economic impact in Iowa. This base information is then used to investigate linkages to the rest of the Iowa economy and overall annual economic importance of the horse industry.

Method

The primary source of information on the Iowa horse was obtained from a survey of horse owners conducted by Central Surveys Inc. of Shenandoah Iowa in August 1996 and repeated in August and September 2000. Supplemental information was obtained from horse surveys conducted in 1986 and 1990 by the Iowa Department of Agriculture and Land

Stewardship (IDALS). The target population for their surveys was horse owners, horse breeders, stable owners, and trainers involved in the equine industry. The sampling frame for the survey consists mainly owners of racehorses registered with IDALS and supplemental lists of names from several horse breed associations. The 1996 and 2000 surveys collected primary data on characteristics of horse owners, their investment in facilities and animals, annual expenditures and income flows associated with their participation in the horse industry.

A second vital piece of information necessary to assessing the economic importance of the Iowa horse industry is a reliable estimate of the number of horses and owners in the state. Currently, horses associated with the racing industry are required to be registered with the IDALS. In addition to the racehorses, there are many serious show horses in Iowa whose owners compete for prizes and premium breeding fees. These owners were also in the targeted population of horse owners for this survey. Our impact analysis also targets these two categories of owners with their higher quality animals with higher levels of investment.

Besides these professional horse owners, there are many thousands of recreational horses throughout the state requiring feed and other investments, but not at the scale of spending associated with horses in the racing industry. Because these horses and their owners are dispersed throughout the state and many do not belong to any associations, it is not economically feasible to identify and enumerate all these recreational horse owners.

Although we will not be including this purely recreational segment in our study of the horse industry, their numbers suggest that we are using conservative estimates for the total value of the Iowa horse industry.

In previous studies we estimated populations of 8,300 horses in 1995 and 9,050 in 1997 based on information from IDALS. The 2000 survey indicated a sizeable increase in the

number of brood mares owned in Iowa (Table 1). This continued growth in the number and quality of brood mares in Iowa is confirmed by Morris Boswell, manager of the race horse and greyhound program at IDALS. He identifies the current count of registered mares, yearlings and foals at 12,500.

Table 1. Horses Owned by Respondents of Survey, 1995, 1999.

	Number Responding		Horses Per Owner		Horses Owned by Respondents	
	1995	1999	1995	1999	1995	1999
Breeding Stallions	65	84	1.6	1.5	106	126
Breeding Mares	192	226	4.5	5.8	856	1,311
Racing	139	163	3.5	3.9	488	636
Teasers	11	7	1.4	1.6	15	11
Race Horses in Training	77	104	2.14	2.3	165	239
Weanlings	119	168	3.1	3.9	369	655
Yearlings	240	267	2.6	3.2	624	854

Estimated Total Horses in State					8,300	12,500
Estimated Total Horse Owners					1,224	1,450

Source: "Economic Impact Study, Iowa Equine Industry," 2000, Question 12.

Although the 2000 survey focused on racehorses, the population of horse owners surveyed includes other breeds of horses and other professional horse activities. The discussion portion of the 2000 Central Survey Inc. report indicated a sampling frame of 800 owners from which names were drawn for subsequent telephone interviews. This sampling frame provides a minimum estimate for the number of horse owners in Iowa. In the 1996 study, our discussion with horse industry people and IDALS suggested there were 1224 professional horse owners in Iowa. The increasing horse population and the higher averages of horses per owner suggests the population of our targeted horse owners had increased to 1334 by 1997. Using a similar procedure and after discussions with horse industry people, we estimate that the number of horse owners in this target population has increased to approximately 1,450 owners in 1999.

This estimate of 1,450 horse owners in the state allows us to develop a profile of the aggregate value of economic activity generated and supported by the Iowa horse industry. The 2000 survey collected information on the average investment per owner in horses and horse facilities in 1999 that is reported in Table 2. The overall current average investment per horse owner is \$186,586, compared to \$110,923 in 1995 for an increase of \$75,663. Statewide this suggests an aggregate value of the Iowa horse industry of \$270.9 million, a substantial increase from the \$125.6 million in 1995. The average value of horse investment per survey respondent was \$65,793, compared to \$26,940 in 1995. Investments in structures and equipment for horses averaged \$70,840 in 1999 compared to \$58,636 per respondent in 1995. These values for equipment and structures aggregate to statewide totals of \$102.86 million in 1999, an increase of \$45.8million from the \$57 million in 1995.

Table 2. Average and Total Investment in Horses and Horse-Related Facilities by Iowa Horse Industry, 1995 and 1999.

	Investment		Per		Total for All Owners	
	Per Horse (\$)		Respondent		(\$1,000)	
	1995	1999	1995	1999	1995	1999
Equipment	3,347	3,562	26,443	24,166	27,781	35,089
Structures	3,521	6,880	32,193	46,674	29,224	67,770
Land	4,316	11,113	42,831	75,394	35,824	109,472
Horses	3,459	9,698	26,940	65,793	28,715	95,531
Feed/Supply	487	1,177	4,150	7,988	4,042	11,598
Total	15,130	27,506	110,923	186,586	125,586	270,922

Source: "Economic Impact Study, Iowa Equine Industry," 1996 and 2000.

Reflecting the business aspects of the horse racing industry, many of the Iowa horse owners reported sizeable income streams from their involvement in the horse industry. In 1995 owners reported that revenues from commercial and professional horse-related activities were \$17.54 million. By 1999, this amount had grown to \$50.13 million. In 1999, the largest

sources of income from horse industry activities were from prize winnings, \$26.4 million, and sale of horses, \$9.3 million of revenue. The purse winnings included all sources, measuring more than racing at Prairie Meadows. Based on the reported payout of \$5.653 million of the 1999 Prairie Meadows purses to Iowa owners compared to \$1.51 million in 1995, an estimated 83.9 percent of the prize winnings were from out-of-state sources in 1999 compared to an estimated 70 percent from out-of-state sources in 1995. These high percentages indicate that Iowa horses are competitive in out-state venues.

Table 3. Sources of Income, 1995 and 1999 by Iowa Horse Industry Owners.

	Percent Reporting		Average Revenue (\$)		State Total (\$1,000)	
	<u>1995</u>	<u>1999</u>	<u>1995</u>	<u>1999</u>	<u>1995</u>	<u>1999</u>
Purses and Prizes	46	47.4	13,224	38,392	7,445	26,386
Sales of Equine > 2 years	38	40.7	9,348	11,674	4,347	5,412
Sales of Yearling	20	26	4,511	10,338	1,105	3,897
Boarding Horses	15	19.2	6,784	9,003	1,245	2,506
Stud Fees	14	16.6	2,074	3,976	354	957
Other Equine Services	13	13.7	10,585	31,303	1,684	6,218
Training	9	11.5	10,195	19,439	1,121	3,240
Stud Fees, Out of State	6	10.7	2,357	5,153	172	799
Farrier	3	6.3	982	7,396	36	675
Riding Lessons	3	2.2	798	1,229	29	39
Total			\$19,994	\$47,053	\$17,538	\$50,129

Source: "Economic Impact Study, Iowa Equine Industry, 2000. Central Surveys, Inc. Table 20.

Since the horse industry also involves a significant recreational dimension for owners, it is not surprising that the average annual level of expenditure on horse-related activities exceeds the average income flow from horse-related activities. In other words, owning horses is largely a consumption activity. Based on the 1996 and 2000 surveys, the annual expenditure per horse owner in 1995 averaged \$33,147 compared to an average income of \$19,994 per owner for those reporting any income. In 1999, these figures are average

expenses of \$66,966 per owner compared to average revenues of \$47,053 per owner for those reporting income in the horse survey. Aggregating expenditures to a statewide total based on the 2000 survey yields an estimated \$97.1 million total annual expenditure by Iowa horse owners (Table 4). The largest expense category was wages and training fees, averaging \$17,769 per owner, up from the \$8,550 per owner in 1990 and \$10,463 per owner in 1995. Purchases of agriculturally related supplies were also a major expense item. The 1996 survey reported average expenditure on hay, feed, and bedding of \$4,734 per owner, or \$5.8 million on a statewide basis. For 1999 we estimate the costs for this category as \$9,873 per owner, or \$14.3 million on a statewide basis, an increase of \$8.5 million from the 1995 totals.

Economic Impacts

The \$97.1 million of statewide expenditures obtained from aggregating the survey results becomes our basis for measuring the economic activity directly and indirectly associated with the Iowa horse industry. In addition to these agriculturally based and horse industry related expenditures, income earned by workers in these activities is spent on consumer services and main street businesses, thereby stimulating other sectors in the state's economy. The purchase of goods and services beyond the horse industry is part of the multiplier effect. An economic multiplier is referred to as the ratio of total direct and secondary spending to the initial direct effect. To identify and estimate these multiplier effects, an Input-Output model is configured for the state of Iowa and applied to this question of economic impacts. An I-O model is basically a general accounting system that details the transactions taking place among industries, businesses and consumers in an economy. These purchases and sales are adjusted for in state vs. out-of-state sources and then summed to arrive at estimates of total impacts arising from the direct effects of a policy scenario or an

economic event or activity. The I-O model used in this study is based on the IMPLAN system developed

Table 4. Average Annual Expenditures: Money Spent Annually Caring for and Maintaining Horses per Horseowner.

	1995	1999
Wages	\$10,463	\$17,769
Hay, Feed, Bedding	4,734	9,873
Vet Fees and Medicine	1,934	4,058
Farrier	816	1,536
Licenses	134	155
Taxes on Land	1,106	1,596
Nomination Fees	1,561	1,910
Commissions	1,746	5,606
Boarding of Horses	2,427	4,993
Tack & Stable Supplies	991	1,773
Insurance	772	1,393
Advertising	365	815
Vanning & Transportation	2,990	4,032
Miscellaneous	3,108	11,457
Average Total Expenditure	\$33,147	\$66,966
Estimated Horse Owners	1,224	1,450
Estimated Total Expenditures	\$40,571,000	\$97,100,000

Source: "Economic Impact Study, Iowa Equine Industry," 1996 and 2000.

initially by the U.S. Forest Service, but which has been extensively revised and improved to assess industrial and commercial sector activities in the U.S. economy and its sub-regions.

The basic scenario in this analysis looks at the overall importance and annual contribution of the horse industry to the Iowa economy based on the estimated levels of expenditures and horse investments identified in the 2000 survey. This approach is similar to quantifying the economic impact of removing the horse industry from the state. The resulting analysis incorporates the full range of linkages to the horse industry including input purchases

to multiplier effects associated with consumer related purchases by persons employed in the horse industry.

The results of the I-O analysis are presented in Table 5. The \$97.1 million of

Table 5. The Economic Impacts of the Horse Industry in Iowa, 1999.

	Producer Sales (\$1000)	Employment Compensation (\$1000)	Total Income (\$1,000)	Value Added (\$1,000)	Jobs
Horse Industry	97,100	11,651	25,644	26,926	1,055
Agriculture	32,006	1,663	10,911	11,156	490
Construction	5,357	1,101	2,019	2,047	53
Manufacturing	45,821	6,242	8,613	8,815	185
Transp, Comm & Utilities	9,296	2,774	4,948	5,448	91
Trade	11,427	5,898	7,823	9,324	363
Finance, Ins & Real Estate	13,485	1,996	5,905	7,732	104
Services	13,469	5,549	8,335	8,554	346
Government	913	411	656	656	11
TOTAL	228,879	37,290	74,858	80,662	2,698

expenditures detailed in Table 4 are used as the direct input to the I-O model, which then estimates the value of linkages to the rest of the Iowa economy. Based on estimates of output to worker ratios and wage levels contained in the I-O model, 1,055 jobs and \$ 25.6 million of total income are identified as the direct impacts. This \$97.1 million of direct total expenditures detailed in the first row of Table 4 is linked to \$131.8 million of additional spending in the rest of the Iowa economy. Overall, an estimated \$229 million of gross sales or output in the economy is directly or indirectly related to the Iowa horse industry for an output multiplier of 2.35 (\$229/\$97.1). Other indicators of impacts associated with the horse industry include 2,698 jobs, \$74.8 million of wage, salary and proprietor's income, and \$80.6 million of value added to the Iowa economy. These 1999 indicators are an increase over the 1,326 jobs, \$36.7 million of income, \$39.6 million of value added, and \$112.32 million of

sales identified in the 1997 and are the result of higher levels of per owner spending identified in the 2000 survey. These estimates of resources used in the Iowa horse industry are consistent with the survey results on number of workers employed and inputs purchased.

II. The Economic Impact of Live Horse Racing at Prairie Meadows

An additional component of the horse industry in Iowa is found at the Prairie Meadows Race Track in Altoona, Iowa. Seasonal racing at the track is one revenue source for the Iowa horse industry. As indicated in Table 1, 60 percent of the respondents to the survey in 2000 indicated that they had racing horses, and 16.6 percent of the horses owned by the respondents were racing horses. Were the track not in existence, the viability of this component of the Iowa horse industry would decline. According to Table 3, 52.6 percent of the survey respondents' revenues came from purses and prizes. Although not all purse and prize income comes from Prairie Meadows, the facility does represent an important revenue source for a significant portion of the Iowa horse industry. This section examines changes in racetrack revenues and impacts since 1997.

The economic impacts of Prairie Meadows horse racing activities are limited to the live racing—simulcast activities exist at the track as well, but are excluded from our analysis. According to Prairie Meadows officials, 66 workers with \$916,176 in wages are employed specifically to accommodate live racing. Additional demand for facility concessions and gaming activities from live racing attendees indirectly support approximately 150 additional workers at the Prairie Meadows facility. Totally, these 216 workers received about \$3.0 million in wages and salaries in 1999. These totals are similar to the employment and income levels in 1997 and are consistent with the small increase of 1,594 patrons between 1997 and 1999. Total income generated directly and indirectly by racetrack employees amounts to

\$4.79 million, and total value added, which included indirect taxes paid to state and local governments amounted to about \$6.9 million.

Total economic impacts associated with live racing are presented in Table 6. Live racing, along with the indirect and induced economic activity stimulated by live racing generated \$9.0 million in total incomes, and \$11.9 million in total value added. A total of 474 total seasonal jobs were also stimulated compared to a total of 471 jobs in 1997. The vast preponderance of these jobs are in the service and trade industries. The associated multiplier for jobs is 2.35, which means that for each direct job involved in live racing, there are an additional 1.35 jobs generated in other sectors. The income multiplier of 2.12 means that each dollar earned by live racing workers, there is \$1.12 earned elsewhere in the local economy. The additional workers added by the track since 1995 has resulted in \$1.9 million of higher income, \$2.8 million of higher value added, and 74 higher total job numbers since the 1996 study.

Table 6. The Economic Impacts of Horse Racing in Iowa, 1999.

	Producer Sales	Employment Compensation	Total Income	Value Added	Jobs
Live Horse Racing	7,230,000	2,191,200	3,495,862	5,053,420	216
Ag & Ag Services	135,882	13,669	46,323	48,441	2.5
Construction	468,470	96,318	176,562	184,259	4.3
Manufacturing	1,943,229	214,279	365,275	382,974	6.6
Transp, Comm & Utilities	712,605	185,042	379,324	438,447	5.1
Trade	2,303,936	1,177,208	1,577,290	1,905,885	78.2
Finance, Ins & Real Estate	2,483,179	296,169	1,068,234	1,423,814	12.2
Services	2,855,395	889,013	1,767,015	2,346,546	146.9
Government	168,754	80,244	121,252	124,749	<u>1.9</u>
TOTAL	18,301,450	5,142,545	8,996,580	11,907,616	473.7

III Tourism Impacts

Horse racing at Prairie Meadows is a major tourism attraction in Central Iowa; drawing a substantial numbers of visitors from the surrounding regions as well as being a major entertainment activity for Des Moines area residents. With an expansion of the live racing season to 98 days since 1997, and to 104 days in 1999, track attendance on race days has increased. This section estimates Prairie Meadows' impacts to tourism-related sectors of the Central Iowa economy.

Total attendance on the 104 race days at Prairie Meadows in 1999 was 1,148,397 or a daily average of 11,042. In contrast, attendance on non-racing days totaled 2,168,917 patrons, or a daily average of 8,310 visitors. The incremental attendance on race days of 2,732 visitors is credited to the presence of the live racing option on those days. Over the 104 days of the 1999 racing season, the incremental attendance implies a total seasonal attendance of 284,128 visitors compared to an increment of 282,534 patrons in 1997 season.

As tourists, many of the visitors to Prairie Meadows Live Racing purchase other area goods and services, which generate an economic impact. The level of spending on tourism related activities is driven by racetrack attendance and an estimate of per capita spending by these attendees. The base data on the spending pattern by racetrack visitors is derived from an earlier survey of racing participants adjusted to 1999 dollars. The survey collected information on visitor spending for several major categories of tourism and hospitality spending which are summarized in Table 7.

Table 7. Projected Tourism Related Purchases by Visitors to Prairie Meadows

Spending Category	Direct Spending (\$Millions)	Total Direct and Secondary (\$Millions)
Transportation	\$2.081	\$3.530
Lodging	\$0.250	\$0.425
Restaurants	\$0.806	\$1.289
Other Retail	\$0.077	\$0.123
Total	\$3.214	\$5.367

The steady growth of track visitors results in a substantial tourism contribution from the Prairie Meadows facility. An estimated \$3.214 million in retail and service purchases are made in the area. The greatest amounts of spending are for transportation and restaurant services, followed by lodging and all other retail spending. The tourism impacts represent the normal spending by out-of-town visitors to the facility. Nearly all visiting parties will require gasoline and meals, and a smaller fraction of visitors will require lodging.

Purse Impacts

Winnings by competitors represent an important source of income for the owners of racehorses in Iowa. To an extent, the purses paid by Prairie Meadows Live Racing represent a demand for racing horses. Accordingly, the purses help to support the state racehorse industry and its affiliated services, which in turn stimulate additional spending and impacts in the remainder of the state economy. As Iowa horses become more competitive, they can expect greater shares of total purses paid, which in turn helps to stimulate jobs in the total economy. Table 8 displays the distribution of purses and supplements to Iowa versus out of state owners. The total payout to Iowa and out-of-state owners is increasing. In the long run, the larger purses will lead to a continued improvement in the quality of horses in Iowa.

Table 8. Purse and Supplemental Distribution: Iowa Owners vs. Out-of-State Owners

	1999	1997	1996	1995
	(\$000)	(\$000)	(\$000)	(\$000)
Iowa Owners	5,653	4,561	2,281*	1,511*
Out-of-State Owners	8,278	5,621	2,405*	1,498*
Total Purse & Supplements	13,931	10182	4,686	3,009

* Includes Horsemen's Fees for Stakes Races

Table 9 presents the impact of the purses paid by Prairie Meadow Live Racing. Line 1 of the table lists the direct impacts per million dollars of purse payments. These are the expected direct impacts on the expected expansion of horse industry activities in the state by horse owners. Line 2 lists the total impacts per million dollars of purse payments. These include the expected direct, indirect, and induced impacts of stimulating the horse industry. Line 3 and 4 list the direct and total estimated impacts, respectively, of purses paid in 1995. The 1995 impacts are presented in lines 5 and 6, the 1997 are in lines 7 and 8 and 1999 are in line 9 and 10. The \$5.653 million in purses paid to Iowa owners in 1999 stimulated 398 direct and indirect jobs in the industry and \$4.384 million in total wages and salaries.

Table 9. Purse Impacts of Live Racing.

	Purse	Employment Compensation	Proprietors' Income	Value Added	Jobs
Per \$ Million of Purse - Direct	\$1,000,000	\$365,477	\$485,568	\$682,215	29.9
Per \$ Million of Purse - Total	\$2,514,279	\$775,563	\$1,249,790	\$1,607,830	70.4
Impacts					
1995 Purse of \$1.511 Million - Direct	\$1,511,000	\$552,236	\$733,694	\$1,030,827	45.2
1995 Purse of \$1.511 Million - Total	\$3,799,076	\$1,171,875	\$1,888,433	\$2,429,431	106.4
1996 Purse of \$2.281 Million -Direct	\$2,281,000	\$833,654	\$1,107,582	\$1,556,132	68.2
1996 Purse of \$2.281 Million -Total	\$5,735,072	\$1,769,058	\$2,850,771	\$3,667,460	160.5
1997 Purse of \$4.561 Million - Direct	\$4,561,000	\$1,666,940	\$2,214,662	\$3,111,582	136.4
1997 Purse of \$4.561 Million - Total	\$11,466,354	\$3,537,342	\$5,700,292	\$7,333,312	321.1
1999 Purse of \$5.653 Million - Direct	\$5,653,241	\$2,066,041	\$2,744,915	\$3,856,561	169
1999 Purse of \$5.653 Million - Total	\$14,211,642	\$4,384,250	\$7,065,062	\$9,089,063	398

The values in Table 9 are an alternative representation of the value of purse payments in support of the Iowa horse industry. They are already included within the direct and total

impacts listed in Table 5 and are not to be added to any of the previous totals. These numbers are listed here only to illustrate the value of purse payments relative to impacts generated by the horse industry and in the remainder of the state economy.

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