

**Sonoma State University**

**THE ECONOMIC IMPACT OF EQUESTRIAN ACTIVITIES  
IN SONOMA COUNTY**

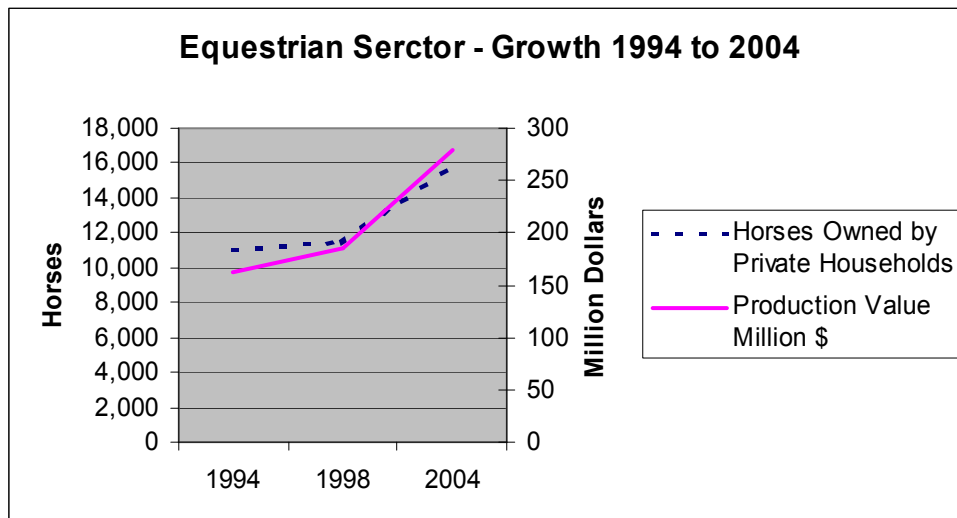
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This study was sponsored by the Sonoma County Horse Council

July 2005

## Executive Summary

With a total of 17,794 horses in Sonoma County in the year 2004, the equestrian sector of Sonoma has kept its vibrancy and its large impact on the County’s economy—the equestrian economy has grown faster than the overall economy of the County. At the same time, it has continued to sustain the green landscape of the County, and the traditional heritage of American culture.



Source: Sonoma Horse Study, 2004

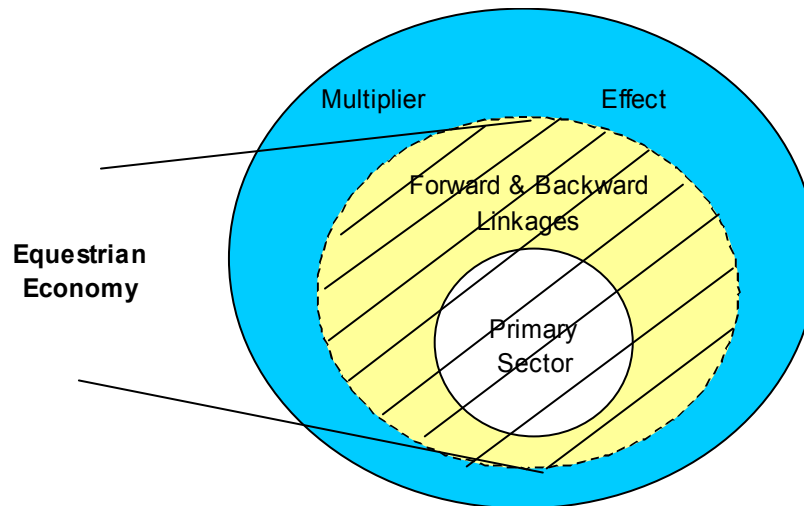
With a capital stock of more than one billion dollars (\$1.17 billion), the equestrian economy is generating a production value of more than a quarter of billion dollars (\$281 millions). When we add its multiplier effect on other sectors of the County economy, the equestrian sector impact on the County is getting closer to a half billion dollars (\$449 million).

Public policy and planning within the county, therefore, should continue to pay special attention to this sector. Together with the grape-wine sector, equestrian activities are means to sustain the green nature of the county, which is challenged by industrial and population growth. Equestrians’ contributions to the County’s economy, society and environment, are significant!

## THE ECONOMIC IMPACT OF EQUESTRIAN ACTIVITIES IN SONOMA COUNTY

With the sponsorship of the Sonoma County Horse Council, we have been studying the equestrian economy of Sonoma County since 1994.. This report is an update of a report presented in 1998. For comparability purposes, and to investigate the growth of this economy, we have used the same conceptual framework and methodology that we reported in 1998.

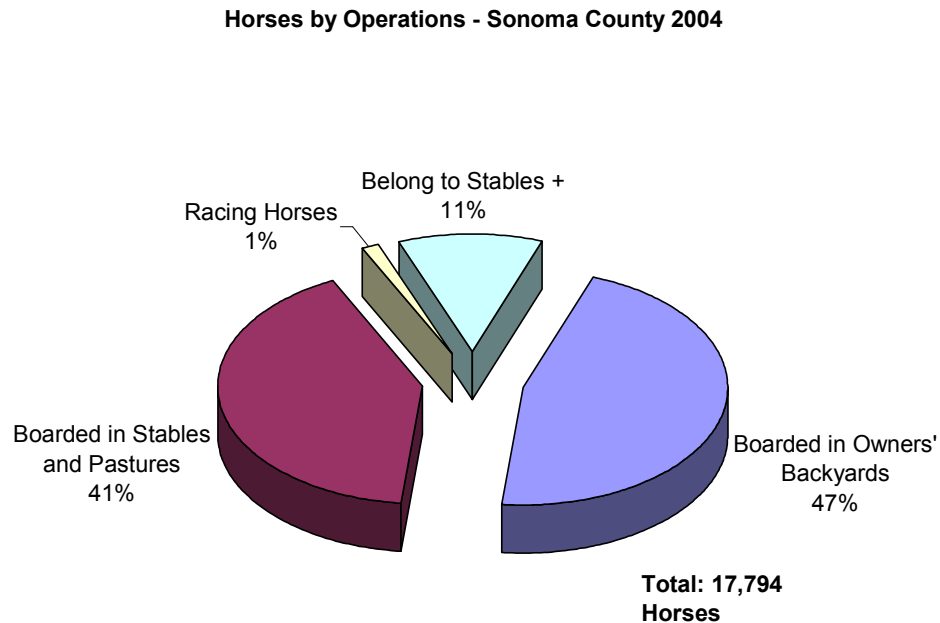
Figure 1



The equestrian economy of Sonoma County includes household and commercial operations, which we call the “equestrian primary activity”. In addition there other horse-related activities that support primary activities such as veterinarian services, and horse-shoers that we refer to as “backward linkages”. Furthermore, there are activities that depend on equestrians’ horseback riding and shows that we call “forward linkages”, for example show organizations and associations. The equestrian economy also has effects on other economic sectors of the County, such as agriculture, manufacturing, trade, finances, government, and so forth--it has a multiplier effect on the rest of the County economy. The production value of the equestrian economy plus its multiplier effect on

the rest of the County, measures the overall economic impact of its equestrian economy. See figure 1. This study provides an update of the economic impact for the year 2004.

**Figure 2**



Source: Sonoma Horse Study, 2004

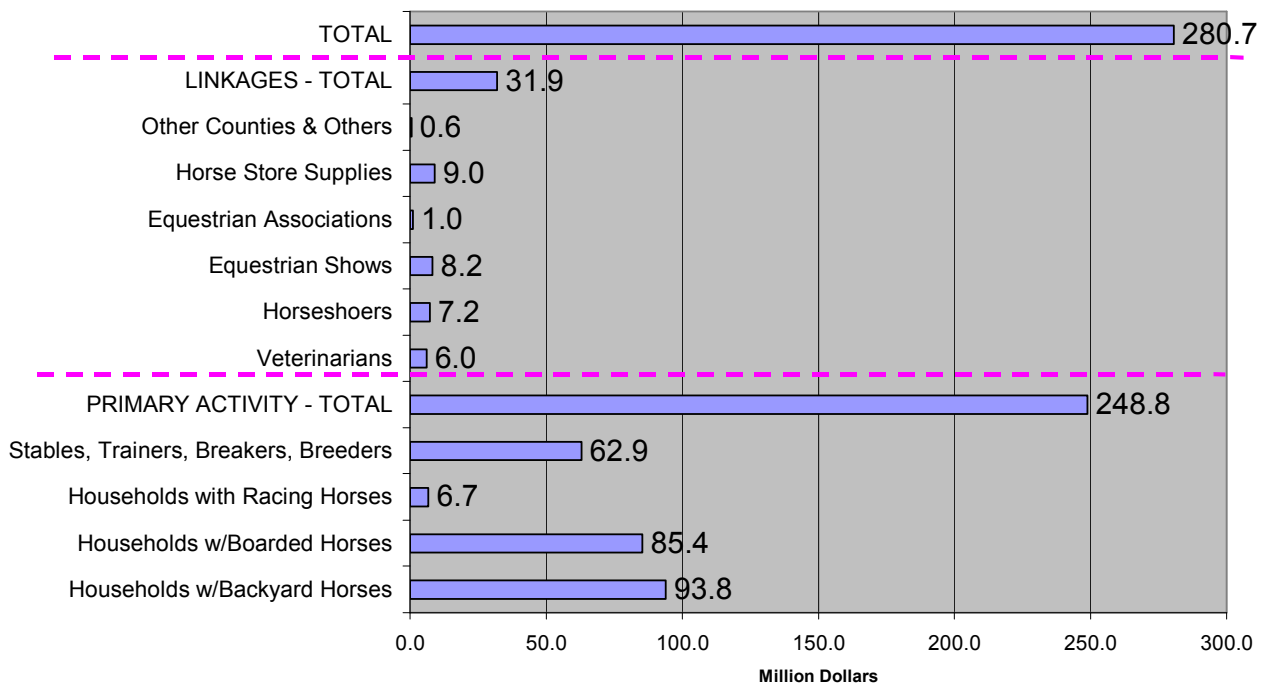
There were 17,794 horses in Sonoma County in the year 2004. Household operators owned 15,783 of these horses. Households included: households with backyard horses (8,202 horses), households with horses boarded in commercial stables and pastures (7,336 horses), and households with racing and high priced horses (245 horses). Commercial horse operations owned the other 2,012 horses. These operations include boarding stables, trainers, breeders, and horse renting operations.

**Production Value of the Sonoma Equestrian Sector**

The production value of the equestrian sector of Sonoma County in 2004 was 281 million dollars. See Figure 3. The primary equestrian sector generated 249 million dollars of this total, and activities that support, or benefit from, the primary sector generated the other 32 million dollars. The production value of the primary equestrian sector, in turn, was integrated by 179 million dollars produced by households for purposes of horseback riding and showing, by 6.7 million dollars produced by owners of racing horses, and by 63 million dollars produce by horse-related commercial operations.

**Figure 3**

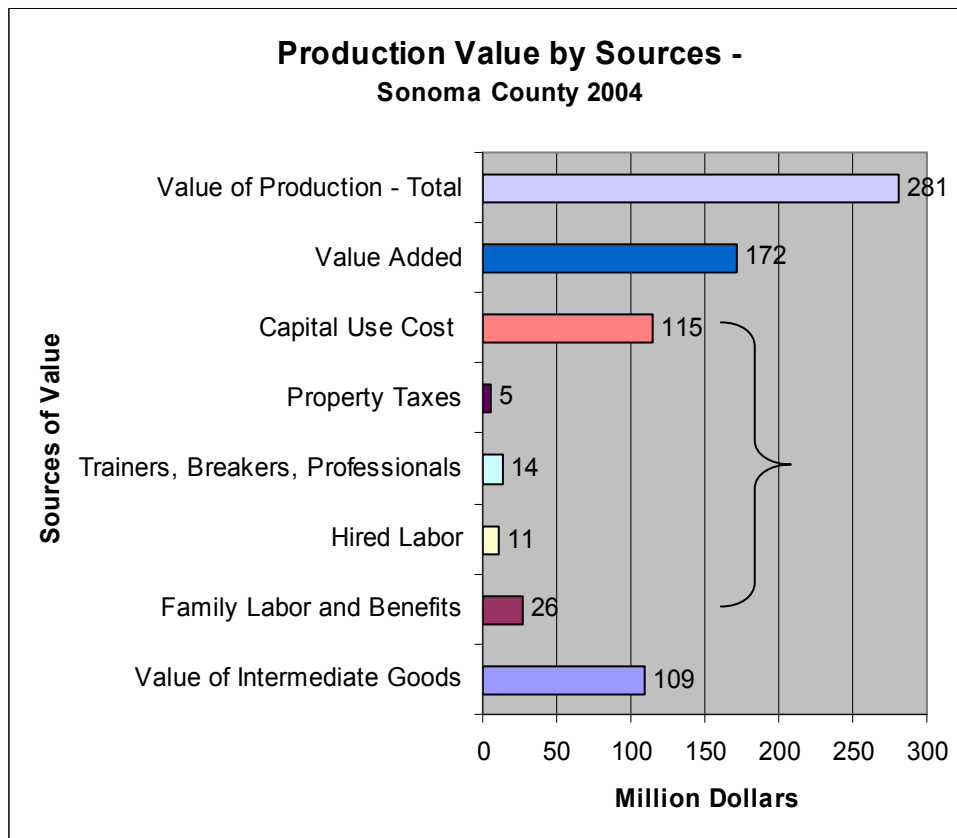
**Production Value by Activity  
of the Sonoma Equestrian Economy -2004**



Source: Sonoma Horse Study, 2004

Another view into the equestrian economy is the source of the production value -- how value is added. See Figure 4. Of the total production value, 109 million dollars corresponds to the value of intermediate goods, i.e. goods and services acquired from production sectors other than the equestrian one. Among these are feed and food supplements, pastures, utilities and so on. Another 172 million dollars is value added by the equestrian sector itself in the form of hired and family labor, used capital, government services to the sector, and entrepreneurship of household and commercial operators. That is, 61% of the production value of the equestrian economy is (value) added by its Sonoma County operators.

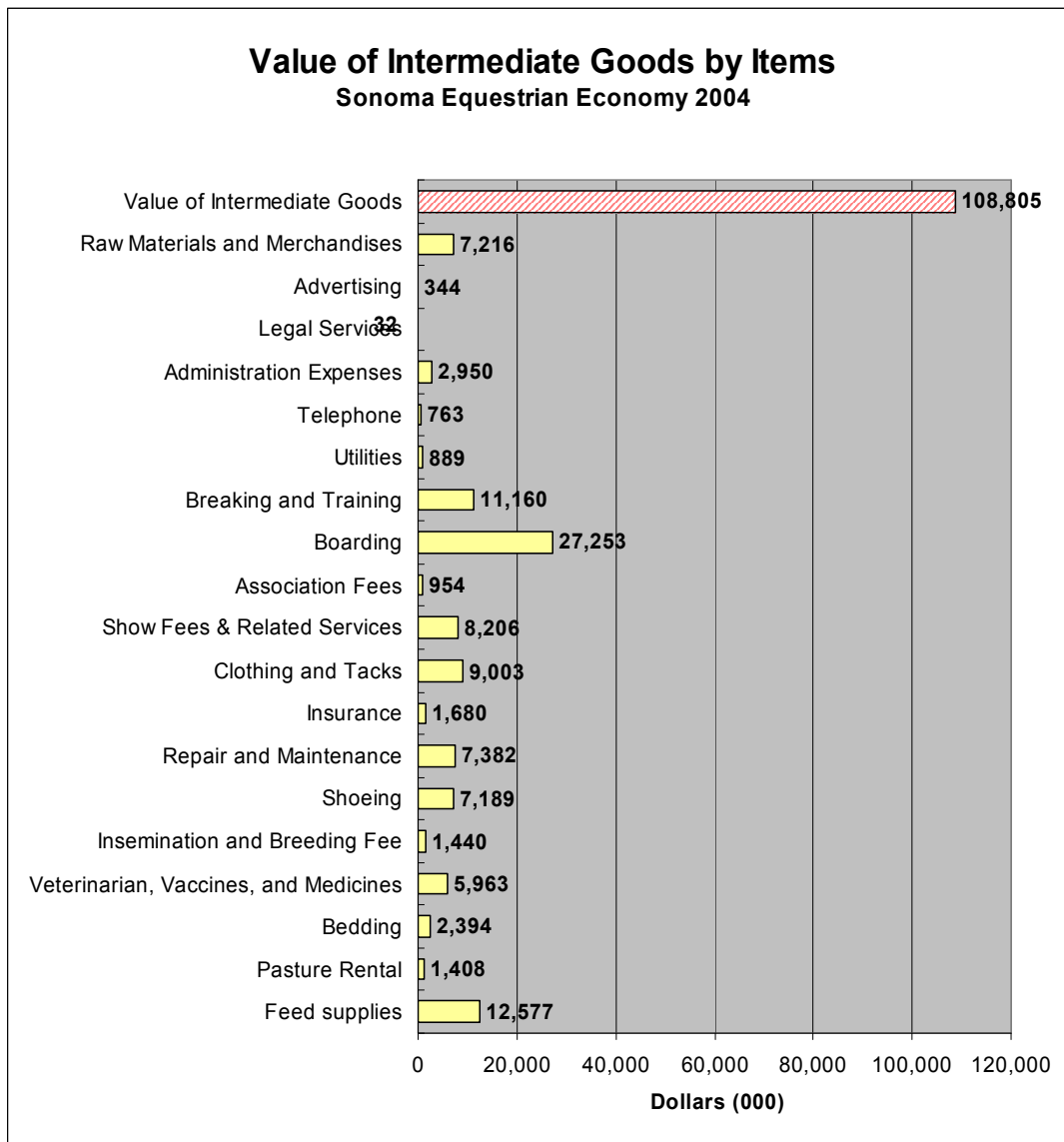
Figure 4



Source: Sonoma Horse Study, 2004

Notice the relative importance of capital services as value added by the equestrian economy: 115 million dollars per year, which is the annual depreciation and the interest of the total capital stock (the cost of using capital)

Figure 5



Source: Sonoma Horse Study, 2004

The items include the value of intermediate goods --those acquired from sectors other than the primary equestrian sector-- provide a measure of the markets that the equestrian sector supports. See figure 5.

Looking at the backward linkages, we can see that purchases of horse feed represent near 12.6 million dollars. Expenditures in clothing and tack amount to 9 million dollars, and expenditures in veterinarian services, vaccines and medicines represent near 6 million dollars<sup>1</sup>. Looking at forward linkages, we can see that equestrians spend 8 million dollars in shows and other horse events.

### **The Multiplier Effect of the Sonoma Equestrian Sector**

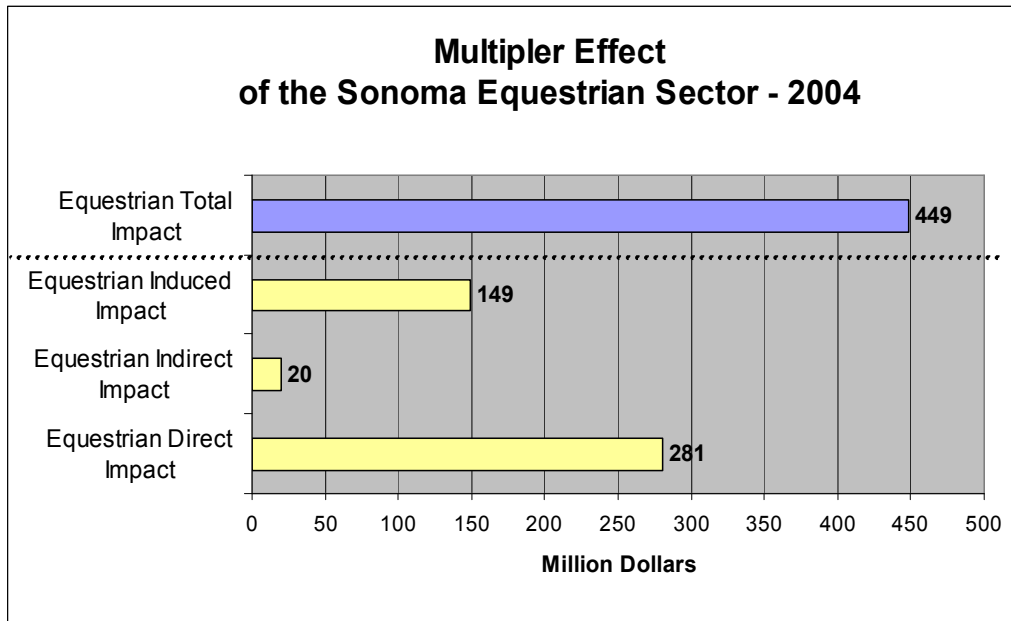
The production of the Sonoma equestrian sector generates demands for goods and services produced by other sectors. Multipliers measure these interactions. The multipliers break down the effects on economic activity into direct, indirect and induced components. **Direct effects** are changes within the equestrian sector. **Indirect effects** are changes in inter-industry purchases as they respond to the new demands of the directly affected industries. **Induced effects** are changes in spending from households as income and population increase or decrease due to the changes in production.

By using the above multipliers, we estimated the impact of the equestrian sector. See figure 6. When we considered the direct, indirect and induced effects, the equestrian sector's contribution to the County, in 2004, was close to half billion dollars: 449 million dollars of production value.

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<sup>1</sup> Includes those who provide adequate level of care and those who do not.

Figure 6



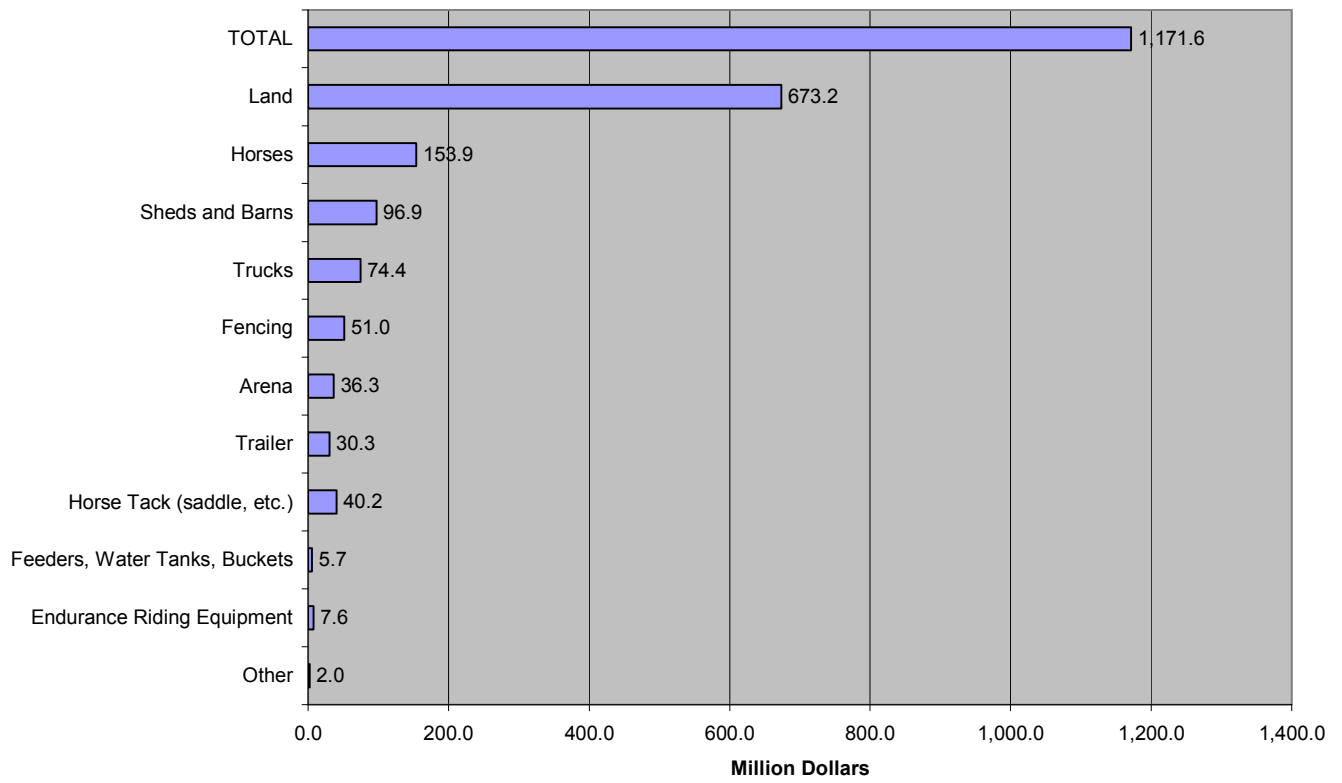
Source: Sonoma Horse Study, 2004

### Capital Stock Accumulated in the Equestrian Primary Sector

The above production value has been generated by a capital stock with value above one billion dollars (1.17 billion). See figure 7. The major capital items in the Sonoma equestrian primary sector are land, horses, and sheds and barns. The large importance of land is largely attributed to the high price of land in the county.

**Figure 7**

**Value of Equestrian Capital Stock  
Sonoma County 2004**



Source: Sonoma Horse Study, 2004

Each item of the capital stock has a working life of more than one year. In the estimation of the value added (see Figure 4), the capital component refers to the annual use of capital services in one year only. The yearly valued added by capital, also referred to as capital use cost, is estimated by adding the annual depreciation plus the annual capital interest (or opportunity cost of capital).

**Growth of the Equestrian Economy of Sonoma County**

The equestrian sector has continued to growth since the year 1994. Table 1 presents physical and economic indicators of such a process. The major physical indicator is the number of horses owned by private households (excluding commercial operations). The stock of horses has been growing at an annual rate of 3.87% from 1994 to 2004.

**Table 1**  
**Growth of the Equestrian Economy**  
**Sonoma County**

Year	Horses Owned by Private Households	GDP or Value Added Million \$	Production Value Million \$
1994	10,991	111	163
1998	11,433	124	185
2004	15,783	170	279

Sources: Economic Impact Studies for 1994, 1998 and 2004 by Sonoma State University

The production value of the equestrian economy, at current prices, has been growing at an annual rate of 5.64% during the same period. Considering that the annual rate of inflation<sup>2</sup>, within the same period was, 1.85%, the average yearly real growth of production of the equestrian sector has been 3.79%.

<sup>2</sup> For GDP Implicit Price Deflator, as reported in Economic Report of the President.

**REGIONAL ACCOUNTING APPENDIX**

**Table 1: The Equestrian Sector of Sonoma County  
Matrix of Production and Added Values - 2004 - Current Dollars**

Items	Households	Households	Households	Stables,	Veterinarians
	w/Backyard Horses	w/Boarded Horses	with Racing Horses	Trainers, Breakers,	
Feed supplies	5,859,862	1,722,375	215,600	4,779,416	
Pasture Rental	733,617	243,916	180,320	250,125	
Bedding	1,171,416	283,880	71,050	868,115	
Veterinarian, Vaccines, and Medicines	2,122,036	3,136,250	131,075	541,992	
Insemination and Breeding Fee	394,151	863,363	182,933	0	
Shoeing	3,350,730	3,023,301	77,420	737,778	
Repair and Maintenance	2,872,166	2,761,130	76,516	1,596,381	75,810
Insurance	417,336	723,960	52,920	411,765	74,117
Clothing and Tacks	3,657,058	4,828,479	66,150	451,766	
Show Fees & Related Services	5,142,637	1,725,390	29,400	758,984	
Association Fees	341,457	512,130	11,025	77,205	12,540
Boarding	1,604,083	25,648,646	0	0	
Breaking and Training	1,879,277	8,500,615	392,121	388,361	29,490
Utilities				750,208	
Telephone				404,028	176,890
Administration Expenses				1,893,280	12,635
Legal Services					31,588
Advertising					
Raw Materials and Merchandises					864,500
<b>Value of Intermediate Goods</b>	<b>29,545,827</b>	<b>53,973,435</b>	<b>1,486,530</b>	<b>13,909,404</b>	<b>1,277,570</b>
Family Labor and Benefits	12,381,393	6,038,670	653,201	4,984,375	
Hired Labor	347,671	633,078	147,000	3,353,125	684,000
Trainers, Breakers, Professionals	0	0		6,266,117	2,736,000
Property Taxes	2,618,124	0	173,350	2,394,072	
Capital Cost	48,935,085	24,734,176	4,191,928	31,990,419	1,265,144
<b>Value Added</b>	<b>64,282,273</b>	<b>31,405,924</b>	<b>5,165,479</b>	<b>48,988,108</b>	<b>4,685,144</b>
<b>Value of Production</b>	<b>93,828,100</b>	<b>85,379,360</b>	<b>6,652,009</b>	<b>62,897,512</b>	<b>5,962,713</b>

Sources: Sonoma County Horse Study 2004

**Table 1 (cont.): The Equestrian Sector of Sonoma County  
Matrix of Production and Added Values - 2004- Current Dollars (cont.)**

Horseshoers	Equestrian Shows	Equestrian Associations	Horse Store Supplies	Other Counties & Others	Total of Equestrian Sector	Items
				31,360	12,577,254	Feed supplies
					1,407,977	Pasture Rental
					2,394,461	Bedding
					5,962,713	Veterinarian, Vaccines, and Medicines
					1,440,447	Insemination and Breeding Fee
					7,189,229	Shoeing
					7,382,003	Repair and Maintenance
					1,680,098	Insurance
					9,003,452	Clothing and Tacks
			550,000		8,206,411	Show Fees & Related Services
					954,357	Association Fees
					27,252,730	Boarding
					11,160,373	Breaking and Training
		19,087	90,035		888,820	Utilities
	82,064	9,544	90,035		762,560	Telephone
	410,321	543,984	90,035		2,950,253	Administration Expenses
					31,588	Legal Services
	164,128		180,069		344,197	Advertising
1,797,307	1,805,410	47,718	2,701,036		7,215,971	Raw Materials and Merchandises
<b>1,797,307</b>	<b>2,461,923</b>	<b>620,332</b>	<b>3,151,208</b>	<b>581,360</b>	<b>108,804,897</b>	<b>Value of Intermediate Goods</b>
			2,430,932		26,488,570	Family Labor and Benefits
	4,103,206	286,307	1,800,690		11,355,078	Hired Labor
5,032,461					14,034,578	Trainers, Breakers, Professionals
	1,641,282	47,718	1,620,621		5,185,546	Property Taxes
359,461	<b>5,744,488</b>	<b>334,025</b>	<b>5,852,244</b>	<b>0</b>	114,785,834	Capital Cost
<b>5,391,922</b>	<b>8,206,411</b>	<b>954,357</b>	<b>9,003,452</b>	<b>581,360</b>	<b>171,849,606</b>	<b>Value Added</b>
<b>7,189,229</b>					<b>280,654,503</b>	<b>Value of Production</b>

**Table 2: Value of the Equestrian Capital Stock  
Sonoma County Total - 2004 - Million Current Dollars**

Capital Items	Backyard Horses	Boarded Horses: Stables+Pastures	Racing & High Price Horses	Stables, Trainers, Breakers +	Total
Horses	57.1	57.8	17.6	21.4	153.9
Land	349.1	0.0	27.7	296.4	673.2
Fencing	22.2	25.0	0.9	2.9	51.0
Sheds and Barns	41.3	20.1	2.0	33.5	96.9
Arena	16.1	8.0	0.4	11.8	36.3
Feeders, Water Tanks, Buckets	4.2	0.7	0.1	0.6	5.7
Truck	33.3	40.0	0.4	0.7	74.4
Trailer	13.1	14.2	0.0	3.0	30.3
Horse Tack (saddle, etc.)	10.9	26.5	0.1	2.8	40.2
Endurance Riding Equipment	2.3	3.4	0.0	1.9	7.6
Other	0.2	0.2	0.0	1.7	2.0
<b>Total</b>	<b>549.8</b>	<b>195.8</b>	<b>49.1</b>	<b>376.9</b>	<b>1,171.6</b>
Horses in Sonoma County	8,202	7,336	245	2,012	17,794
Land for Horses in Sonoma C. (acres)	12,754	0	427	8,791	22,182
Capital per horse (excluding horses) \$	60,070	18,820	128,824	176,678	52,850
Land per horse (acres/horse)	1.56	0.00	1.74	4.37	1.15

Sources: Sonoma County Study - 2004. Land and Capital per horse, in the case of Commercial operations, refer to their own horses