

The Economic Impacts of Horse Racing and Breeding in Alberta

Submitted to

Alberta Horse Racing Industry Review Working Committee

By

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Executive Summary

Econometric Research Limited (ERL) was retained by The Alberta Horse Racing Industry Review Working Committee to identify the potential economic impacts of horse racing and breeding in Alberta.

The following key impact results were identified:

- The horse racing and breeding industry is an agricultural based industry that will also increase and diversify the tourism, entertainment and export economic base of Alberta.
- Wagering on horse racing in Alberta, which peaked in 1991 at \$230.9 million, declined to \$135.2 million in 2000. In nominal prices this decline represents 41.4%, whereas in constant 1992 dollars wagering declined by 48.2%. If wagering at live races were singled out, the decline in this activity would have been more pronounced.
- The horse racing industry in Alberta could and should be revitalised to play its role as a key node in the New Economy.
- Total expenditures by The Alberta Racing Corporation (ARC), tracks, and for the production of horses in both the breeding and racing phases exceeded \$111.1 million. These expenditures have sustained an income impact of \$133.9 million annually in Alberta. This supports an income multiplier of 1.20, which is higher than the 1.07 average industrial income multiplier of the province.
- Over 3,084 Albertans owe their permanent jobs to the horse racing and breeding industry in the province. In fact many more Albertans work in the industry on a part-time basis. It is estimated that 6,000 to 7,000 Albertans are engaged in the “equine side” of the industry on a paid or unpaid basis.
- All three levels of government realize revenues on the total industry expenditures. The Federal government realizes \$29.1 million, whereas the Provincial government realizes \$15.4 million. The remaining \$6.6 million goes to local governments in the province. Another \$1.1 million that goes to the Canadian Pari Mutuel Agency (CPMA) and \$7.3 million to the Alberta Racing Corporation (ARC) can be added to these revenues.
- A total of \$83.1 million in wages and salaries in Alberta is sustained annually by the total expenditures of the provincial horse racing and breeding industry.
- The effective average wage in the horse racing and breeding industry exceeds \$26,951 annually and is highest in the racing phase at \$30,552.
- The employment impacts of the horse racing and breeding industry in Alberta are diffused and cover almost the full spectrum of activities. Many of the jobs reflect the

strong linkages of horse racing and breeding with agriculture, the agricultural manufacturing sector, the agricultural services sector, and the rural economy.

- The links of this industry to the rural economy are substantive and complex. A significant horse breeding industry is needed to produce the horses for the racing phase. Thousands of acres of range lands and many workers are needed to care, train and groom the animals and maintain the farms where they reside. The gestation period of horses is over 11 months and horses do not race until they reach the age of two. This means that about three years of time and resources are spent on producing and training each horse before it ever reaches the track.
- Most of the veterinarians, blacksmiths, farriers, hay and grain suppliers, transportation workers, harness and saddle makers and many others who provide services and products needed to breed, maintain and train the horses are located in the rural parts of the province.
- Ultimately, many race horses fill the ranks of pleasure horses, jumpers, chuckwagon horses, and dressage animals, thus continuing the need for labour, feed and supplies.

Introduction

The horse racing industry in Alberta continues to be an agricultural based activity that has also increasingly become an integral part of the New Economy. Gone are the days when the industry was restricted to a narrow market or to a particular physical venue. The horse racing industry in Alberta is now a high-tech, export oriented industry that reaches far beyond any single location, generating new wealth for many rural communities, several other regions in Alberta and the Nation.

Horse racing in Alberta has a long and colourful history. It has always been considered a “sport” with all the positive connotations that this term has, despite the long and close association it had with gambling. No horse racing competition was ever deemed complete unless someone was willing to rise to the occasion “to sport a little on the race”, but the gambling aspects were dwarfed by the sport, pageantry and ceremonial nature of the activity. The horse racing industry stands in sharp contrast to other forms of gambling on account of its full integration within the economic fabric of the Province.

In its early history, horse racing was restricted to wealthy owners who competed in high stakes races. Not surprisingly this sport was then known as the “Sport of Kings”. The advent of the horse racing industry, the way we know it today, had to wait until the late 1920s and the early 1930s. Two events played a prominent role in the development of the industry, one was technological and the other economic.

The 1930s through the 1970s were the “golden” years of the horse racing industry. It was the only organised legal outlet for the vast majority of Albertan gamblers and horse racing enthusiasts. Horse racing provided entertainment, sport competition and raised revenue for farmers, governments, tracks and horsepeople. It was during this time that the wealthiest Canadian and American families owned and raced most of the horses lending to this industry a high profile and mystique. For years horse racing held a virtual monopoly over legalised gambling in Alberta, the rest of Canada and the United States.

By mid 1970s, new forms of gambling such as lotteries and casino gambling (charitable and otherwise) were being legalised by provinces all over the country. Horse racing lost its monopoly on legalised gambling and had to compete with other forms of gambling for the gaming dollar. This happened at a time when the industry had to also compete for the Canadian sport dollar with a large menu of organised sport events and other entertainment activities that did not exist before. The average age of the bettor at horse racing events increased and the industry proved unable to attract younger participants, especially females. These difficulties are also compounded by the fact that the industry is subject to a 5.4% Provincial tax and a 0.8% Federal tax when no similar taxes were applied to other gaming activities.

Wagering in Alberta, which peaked in 1991 at \$230.9 million, declined to \$135.2 million in 2000. In nominal prices this decline represents 41.4%, whereas in constant 1992 dollars wagering declined by 48.2%. If wagering at live races were singled out, the decline in this activity would have been more pronounced. The decline in overall

wagering has cost the province \$55.4 million annually in income, 1276 permanent jobs, more than \$6.4 million annually in tax revenues for the Provincial government and \$2.7 million annually for local governments in the Province.

The horse racing industry in general has reacted to these competitive pressures and the decline in its relative appeal. Streams of new innovations were introduced, off-track betting (OTB), simulcasting races from other tracks, teletheatres, Telephone Account Betting (TAB) and now slot machines, etc. Within this context, these innovations and the adoption of slot machines at racetracks are seen as part of the struggle of the horse racing industry to sustain its operations in the face of stiff competition from other gaming and entertainment activities and establishments. Unfortunately, some of these revenue streams can have a negative impact on live horse racing and breeding.

Several horseracing jurisdictions across North America have embraced these new developments in their effort to keep in step with the rising competition from other gaming alternatives. Alberta's horse racing industry has also risen to these challenges. The industry is developing a plan to revitalise the industry and optimise its benefits in the province at large and in supporting rural communities and residents who breed, feed, groom and train the horses.

Within this context, Econometric Research Limited (ERL) was retained by the Alberta Horse Racing Industry Review Working Committee to identify the economic impacts of horse racing and breeding on the province and its rural economy.

We begin with a general discussion of the methodology of impact analysis, followed by a brief description of our impact system. We then proceed with a detailed analysis of the impact results and end up with a conclusion that presents a summary of the results.

Economic Impact Analysis and Methodology

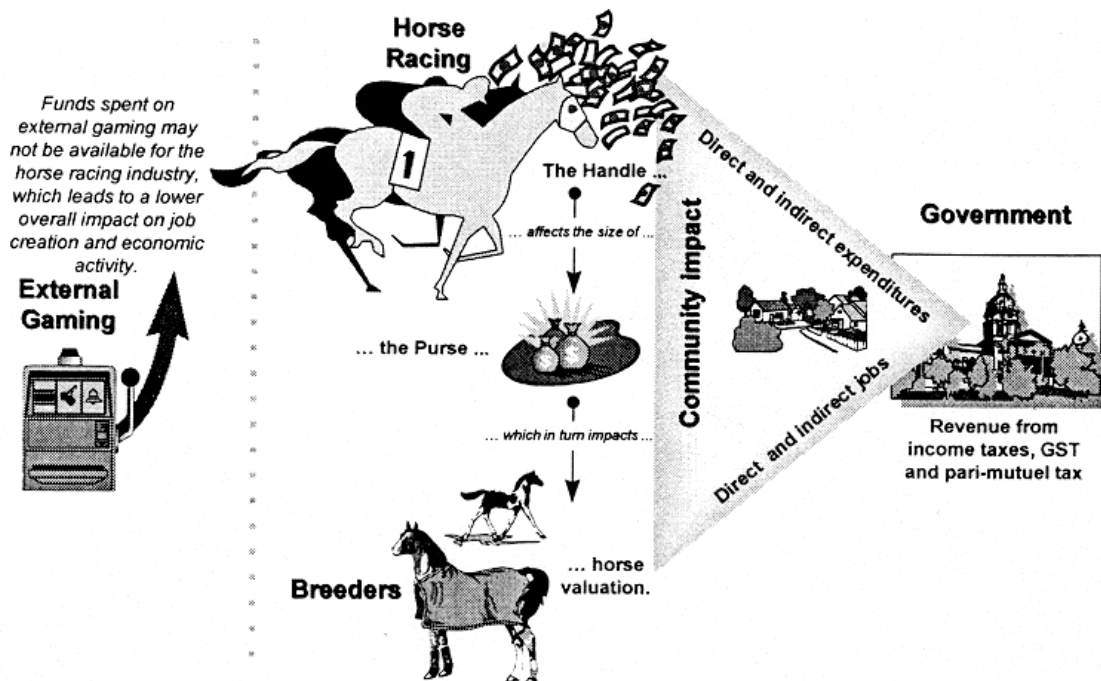
A dollar spent on horse racing or breeding circulates and re-circulates within the economy, multiplying the effects of the original expenditures on overall economic activity. This process is referred to as the economic ***multiplier effect***. It operates at several levels

- The initial expenditures of the track on wages and materials are generally referred to as the direct costs of operation and their effects are referred to as ***the initial (direct) effects***.
- Subsequent purchases by suppliers of materials and services to sustain the original and derivative expenditures are called ***the indirect effects***.
- The ***induced effects*** emerge when workers in the sectors stimulated by initial and indirect expenditures spend their additional incomes on consumer goods and services.

Wagering drives this industry. It is the total wager pool that determines the size of the purse and the race horse and race track owners' incomes. Higher incomes for the race horse owner create higher prices for younger horses. This increases the income of the breeder, which increases the value of the breeding stock, and the increase in the value of the breeding stock ultimately increases the wager and the virtuous circle continues. It is a well-known fact that for every horse at the racetrack there are almost three horses at the farm. It is also well known that the purses often cover only a fraction of the total cost of breeding and racing horses incurred by owners. Thus purses provide a low estimate of the actual connection a racetrack has with the rural/agricultural sector. All sectors of the economy benefit from the spin-offs created by the expenditures of the breeders and those associated with the racing activity (see Figure 1). These are not restricted to the original expenditures, they are multiplied as indirect and induced effects are taken into account.

Figure 1 below also depicts the nature and extent of the economic impact of the competition that horse racing is now facing from other gaming activities, and the likely impacts that this may have on the economy at large.

Figure 1 – The Impact of Horse Racing on the Economy



Source: Ernst & Young, Financial Feasibility Analysis of the Impact of Slot Machines

Some of the key terms and definitions are presented below to assist the reader in interpreting the results of the economic impact analysis:

Initial expenditures – This figure indicates the amount of expenditures directly made by the operators of the track, the ARC, and by breeders and race horse owners. It is these expenditures that typically drive the results.

Value Added (Gross Provincial Income) – This figure represents net output generated by the initial expenditures in the province. It is typically the sum of wages, rent, interest and profits in addition to indirect business taxes and depreciation minus subsidies.

Employment – This refers to the total person years (full-time equivalent jobs) generated by the track, the ARC and by farms, breeders and horse owners.

Taxes – Our impact system generates a large number of taxes (income taxes, GST, liquor and tobacco taxes, room tax, etc..) each of which is linked with the level of government receiving it. For example, the Federal government receives the proceeds from the GST tax, the Provincial government receives the tobacco and liquor tax and the Local government receives the property and business tax.

Imports – These represent the goods and services acquired from outside the province to sustain the activities of the facilities and the expenditures of their visitor. They essentially represent leakages from the province.

Multipliers – These are summary measures that represent the division of the total impacts (direct, indirect and induced) by the initial expenditures. For example, the income multiplier associated with incremental tourism expenditures is calculated by dividing the total income (value added) impact by the initial incremental tourism expenditures. The only exception is that of the employment multiplier where total employment is divided by direct employment in order to preserve the common units.

If the economy is operating at full employment, additional expenditures will most likely reflect themselves in higher prices and wages as additional workers are attracted to the site are drawn from other employment. Only if, the economy is operating with excess capacity, some unemployment and slack in critical sectors and there exists no apparent bottlenecks anywhere in the economy, is it possible to claim that the person-years associated with the activity expenditures represent additional or incremental employment. **These are precisely the conditions that have prevailed in the study areas, which allow us to claim that the economic impacts in this study are incremental impacts.**

Economic impact analysis is a useful mathematical tool capable of quantifying the patterns and magnitudes of interdependence among sectors and activities. It is predicated on two fundamental propositions.

- First, regardless of the inherent value of primary activities such as horse racing or entertainment, to the extent that they involve the use of scarce resources they generate economic consequences that can be measured and compared.
- Second, economic impacts are only partially captured by assessing direct expenditures. Inasmuch as the economy is a complex whole of interdependent and interacting activities, there are some significant indirect and induced impacts associated with each direct expenditure. These indirect and induced impacts are often larger than the direct impacts.

The Economic Impact Model

The impact model used here is a special application of a generic regional impact model (RIM: Alberta) developed by Econometric Research Limited. It is a unique model that captures the economic impact of tourism expenditures at the local level (municipalities, counties or economic regions), the provincial level (Alberta) and the national level. The model is based on a novel technology that integrates input-output analysis and location theory. The system has already been applied to the study of The Economic Impact of Tourism in Banff and Canmore, The Economic Impact of Casino Windsor, The Economic Impact of Horse Racing and Breeding in Ontario, and several proposed casinos and tourism projects in Alberta, British Columbia and Ontario.

The model utilises a large set of economic and technical databases for Alberta that are regularly published by Statistics Canada. A short list includes the inter-provincial input output tables, employment by sector, taxes by type of tax and the level of government collecting it, prices of products, energy used in physical and energy units, etc.

Cost of Production of Horses in the Racing and Breeding Phases

Although it is hard to estimate the precise number of the total Alberta race horse population by type and stage of development, we have estimated this total to amount to 6,124 horses in 1999. There are more thoroughbred than standardbred horses. The ratio in 1999 is about 2 to 1. About 37% of this total is in the active racing stage, 25% are mares and stallions, 15% are foals and 16% are yearlings and less than 2 years old (see Table 1 and Figure 2.) The total number of horses and the distribution between active and farm horses and between thoroughbred and standardbred is crucial for the determination of total annual cost of production and feeding.

Table 1
Alberta Race Horse Population in 1999

	Thoroughbred*	Standardbred**	TOTAL
Mares and Stallions	940	639	1,579
Foals	530	358	888
Yearlings & Non-Racing 2 Year Olds	630	326	956
Active Race Horses in 1999	1,500	800	2,300
B Circuit	401		401
Totals***	4,001	2,123	6,124

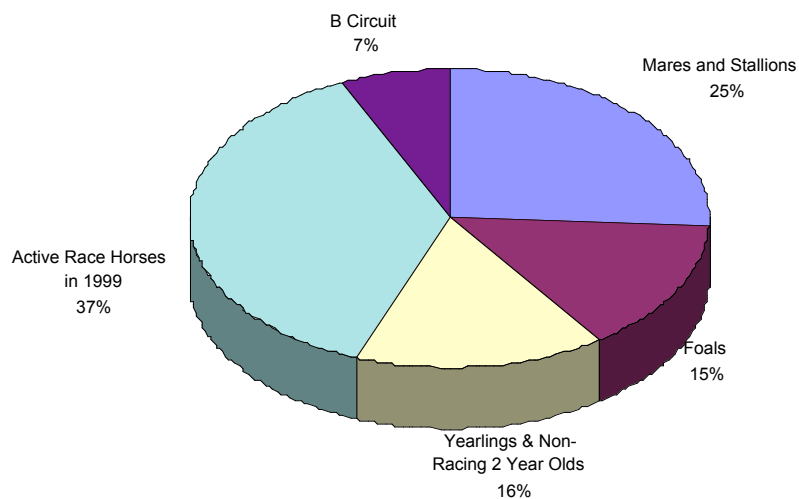
Source: Econometric Research Limited

*: Canadian Thoroughbred Horse Society, Alberta Division

** : Alberta Standardbred Horse Association

***: In addition to the horse numbers included in this table, Alberta has an estimated 421 Running Quarter Horses (215 Runners and 206 Breeding Stock - studs, mares, foals and yearlings); 70 Running Arabians (30 Runners and 40 Breeding Stock); 117 Running Coloured Horses (41 Runners and 76 Breeding Stock) and 124 additional Running Horses in Grande Prairie (not otherwise identified). Cost of production figures are not available for these horses and the economic benefits of these racing operations are not included in the analysis that follows. Also, an estimated 1200 thoroughbreds are active in Chuckwagon Racing. The cost of production of these horses is also not included in the economic benefit calculations.

Figure 2
Race Horse Population Breakdown in 1999



Average daily feed cost (feed, bedding and vitamins) were calculated based on a \$6.60 per day for thoroughbred racehorses and \$7.42 per day for standardbred horses. The cost of production includes the cost of keeping horses per day at the racetrack and/or on the farm. These costs comprise all variable and fixed costs such as labour, insurance, trucking, depreciation, etc. The details of these costs are in tables 2, 3, 4a, 4b, 5, 6a, 6b, 7a, 7b, 8a, 8b and 9. Figures 3, 4, 5, 6 and 7 display the same results graphically. The costs vary by the age of the horse, stage of development, type and class.

Table 2

Total Feed Cost and Production Costs

	Horses	Annual Feed Cost*	Annual Cost of Production**	Production Cost Per Horse
Active Race Horses				
Thoroughbred - A Circuit	1,500	\$3,615,000	\$34,710,000	\$23,140
Thoroughbred - B Circuit	401	\$966,410	\$5,417,510	\$13,510
Standardbred	800	\$2,168,000	\$17,140,000	\$21,425
Subtotal / Average	2,701	\$6,749,410	\$57,267,510	\$21,202
Breeding Phase Thoroughbred Horses				
Mares and Stallions	940		\$9,418,800	\$10,020
Foals	530		\$5,215,200	\$9,840
Yearling & non-racing 2 year olds	630		\$6,312,600	\$10,020
Subtotal / Average	2,100		\$20,946,600	\$9,975
Breeding Phase Standardbred Horses				
Mares and Stallions	639		\$5,568,885	\$8,715
Foals	358		\$2,792,400	\$7,800
Yearling & non-racing 2 year olds	326		\$2,841,090	\$8,715
Subtotal / Average	1,323		\$11,202,375	\$8,467
Breeding Phase Subtotal/Average	3,423		\$32,148,975	\$9,392
Total / Average	6,124	\$6,749,410	\$89,416,485	\$14,601

Source: Econometric Research Limited

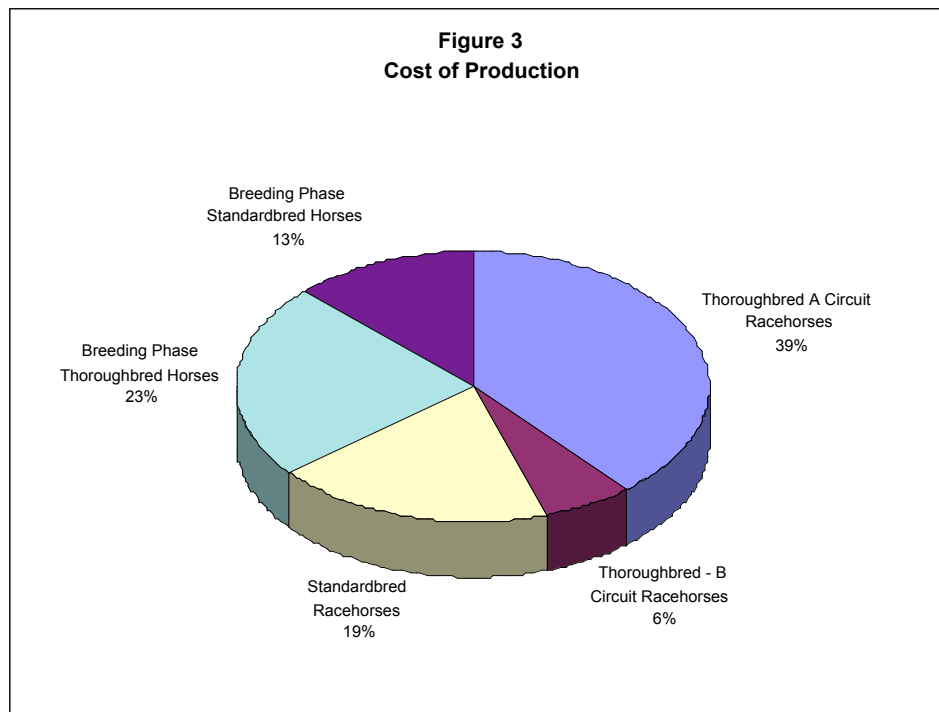
Notes:

*: Average daily feed cost - the cost of feed, bedding and vitamins .

Feed costs were calculated using \$6.60/Day for thoroughbred, and \$7.42/Day for standardbred horses.

**: Cost of production = the cost of keeping horses per day at the race track and/or the farm. It includes all variable and fixed costs eg. feed, labour, insurance, trucking, buildings and depreciation on buildings, equipment and horses. It was calculated using \$58.70/Day for Standardbred Racehorses, and \$63.40/Day for Thoroughbred A Circuit Racehorses and \$37.01/Day for B Circuit Racehorses (see tables 3, 4a and 4b).

There are significant differences in the cost of production of thoroughbred and standardbred horses by class. In Table 2, the cost of production of a thoroughbred horse in circuit A is over \$23,140 per year (Table 4a and Figure 5 present the full distribution of this cost). Alternatively, the cost of production of a thoroughbred horse in circuit B is significantly less at \$13,510 (Table 4b and Figure 6). Standardbred horses cost of production per horse per year is slightly less than the corresponding cost of a thoroughbred at \$21,425 (Table 3). Breeding costs are lower than the corresponding production costs during the racing phase for both standardbred and thoroughbred horses, which fact brings the average total cost of a horse in Alberta to \$14,601 per year.



The total cost of production of horses during the racing phase add up to over \$57.3 million (Table 5). Training costs are the largest single cost item during this phase with over \$16.5 million. Veterinary, feed and depreciation are also large cost items during this phase.

The cost of production during the breeding phase varies with the age of the horse and its stage of development. This explains the large set of tables (6a, 6b, 7a,7b, 8a and 8b) that are needed to present these significant variations in the costs of foals and mares and stallions.

Horse owners in Alberta spend a total of about \$32.2 million per year during the breeding phase. Boarding costs are the largest costs during this phase with about \$9.8 million. Wages and salaries are the second largest cost item in this phase with about \$5 million per year (Table 9 and Figure 7).

Table 3**Cost of Production - Standardbred Race Horses**

Item	Daily Cost	Percentage	Annual Cost	Cost Per Horse
Feed	5.00	8.52%	\$1,460,000	\$1,825
Vitamins	1.37	2.33%	\$400,000	\$500
Bedding	1.05	1.80%	\$308,000	\$385
Vet	8.63	14.70%	\$2,520,000	\$3,150
Training	18.73	31.90%	\$5,468,000	\$6,835
Groom	0.00	0.00%	\$0	\$0
Paddock Cost	1.64	2.80%	\$480,000	\$600
Equipment	1.37	2.33%	\$400,000	\$500
Transportation	2.05	3.50%	\$600,000	\$750
Shoeing	2.60	4.43%	\$760,000	\$950
Boarding	1.97	3.36%	\$576,000	\$720
Race Fees	0.00	0.00%	\$0	\$0
Stake Payments	0.68	1.17%	\$200,000	\$250
Legal	0.41	0.70%	\$120,000	\$150
Travel	1.37	2.33%	\$400,000	\$500
Misc.	1.37	2.33%	\$400,000	\$500
Interest	0.14	0.23%	\$40,000	\$50
Horse Insurance	0.77	1.31%	\$224,000	\$280
Communication	0.33	0.56%	\$96,000	\$120
Depreciation	5.48	9.33%	\$1,600,000	\$2,000
Linaments	1.22	2.08%	\$356,000	\$445
Jogger Rental	2.40	4.08%	\$700,000	\$875
Licenses	0.11	0.19%	\$32,000	\$40
Total	58.70	100.00%	\$17,140,000	\$21,425

Source: Econometric Research Limited and
Alberta Standardbred Horse Association

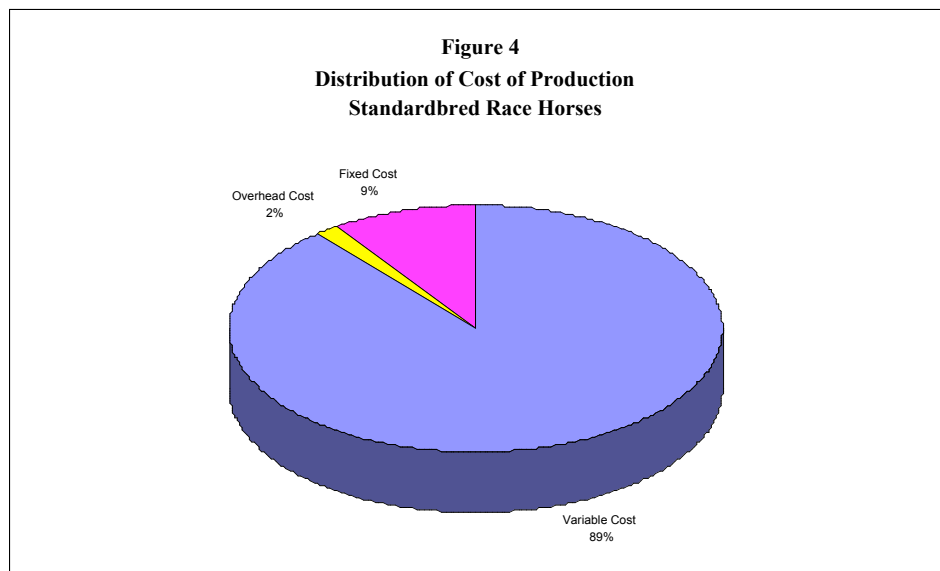


Table 4a

Cost of Production - Thoroughbred A Circuit Race Horses

Item	Daily Cost	Percentage	Annual Cost	Cost Per Horse
Feed	5.00	7.89%	\$2,737,500	\$1,825
Vitamins	0.55	0.86%	\$300,000	\$200
Bedding	1.05	1.66%	\$577,500	\$385
Vet	9.59	15.13%	\$5,250,000	\$3,500
Training	17.64	27.83%	\$9,660,000	\$6,440
Groom	0.55	0.86%	\$300,000	\$200
Paddock Cost	0.00	0.00%	\$0	\$0
Equipment	0.55	0.86%	\$300,000	\$200
Transportation	2.05	3.24%	\$1,125,000	\$750
Shoeing	2.63	4.15%	\$1,440,000	\$960
Boarding	3.45	5.45%	\$1,890,000	\$1,260
Race Fees	0.68	1.08%	\$375,000	\$250
Stake Payments	0.00	0.00%	\$0	\$0
Legal	0.82	1.30%	\$450,000	\$300
Travel	1.37	2.16%	\$750,000	\$500
Misc.	1.37	2.16%	\$750,000	\$500
Interest	0.41	0.65%	\$225,000	\$150
Horse Insurance	0.82	1.30%	\$450,000	\$300
Communication	0.33	0.52%	\$180,000	\$120
Depreciation	13.70	21.61%	\$7,500,000	\$5,000
Linaments	0.55	0.86%	\$300,000	\$200
Jogger Rental	0.00	0.00%	\$0	\$0
Licenses	0.27	0.43%	\$150,000	\$100
Total	63.40	100.00%	\$34,710,000	\$23,140

Source: Econometric Research Limited and
Canadian Thoroughbred Horse Society, Alberta Division

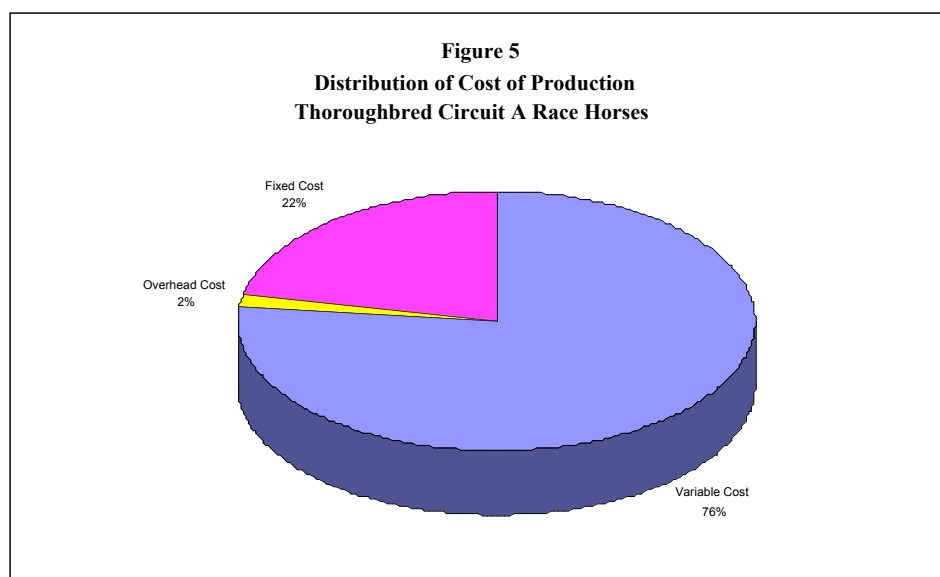


Table 4b

Cost of Production - B Circuit Thoroughbred Race Horses

Item	Daily Cost	Percentage	Annual Cost	Cost Per Horse
Feed	5.00	13.51%	\$731,825	\$1,825
Vitamins	0.55	1.48%	\$80,200	\$200
Bedding	1.05	2.85%	\$154,385	\$385
Vet	5.48	14.80%	\$802,000	\$2,000
Training	9.42	25.46%	\$1,379,440	\$3,440
Groom	0.55	1.48%	\$80,200	\$200
Paddock Cost	0.00	0.00%	\$0	\$0
Equipment	0.55	1.48%	\$80,200	\$200
Transportation	0.68	1.85%	\$100,250	\$250
Shoeing	2.63	7.11%	\$384,960	\$960
Boarding	2.96	7.99%	\$433,080	\$1,080
Race Fees	0.00	0.00%	\$0	\$0
Stake Payments	0.00	0.00%	\$0	\$0
Legal	0.82	2.22%	\$120,300	\$300
Travel	1.37	3.70%	\$200,500	\$500
Misc.	1.37	3.70%	\$200,500	\$500
Interest	0.41	1.11%	\$60,150	\$150
Horse Insurance	0.27	0.74%	\$40,100	\$100
Communication	0.33	0.89%	\$48,120	\$120
Depreciation	2.74	7.40%	\$401,000	\$1,000
Linaments	0.55	1.48%	\$80,200	\$200
Jogger Rental	0.00	0.00%	\$0	\$0
Licenses	0.27	0.74%	\$40,100	\$100
Total	37.01	100.00%	\$5,417,510	\$13,510

Source: Econometric Research Limited and
Canadian Thoroughbred Horse Society, Alberta Division

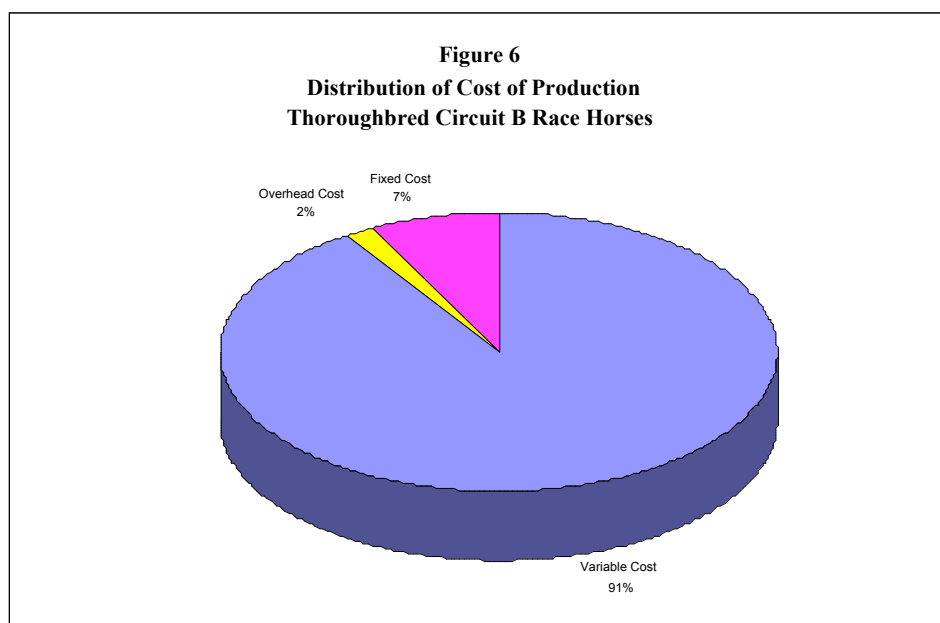


Table 5

Total Cost of Production - Racing Phase

Item	Annual Cost
Feed	\$4,929,325
Vitamins	\$780,200
Bedding	\$1,039,885
Vet	\$8,572,000
Training	\$16,507,440
Groom	\$380,200
Paddock Cost	\$480,000
Equipment	\$780,200
Transportation	\$1,825,250
Shoeing	\$2,584,960
Boarding	\$2,899,080
Race Fees	\$375,000
Stake Payments	\$200,000
Legal	\$690,300
Travel	\$1,350,500
Misc.	\$1,350,500
Interest	\$325,150
Horse Insurance	\$714,100
Communication	\$324,120
Depreciation	\$9,501,000
Linaments	\$736,200
Jogger Rental	\$700,000
Licenses	\$222,100
Total	\$57,267,510

Source: Econometric Research Limited

A number of interesting results are displayed in Table 5. These include:

- Expenditures on horses during the racing phase are large and involve a rich mix of services and products.
- A large number of these expenditures are made in the rural communities where horses are trained and prepared for the races.
- A good number of these expenditures involve manufacturing products, but the majority of the expenditures are on agriculture and services.

Table 6a

**Cost of Production - Breeding Phase
Thoroughbred Foals**

Item	Cost
Wages	\$578,609
Benefits	\$46,289
UI	\$30,859
Agents Fees	\$96,435
Sales Preparation	\$154,296
Sales Commissions	\$96,435
Advertising	\$135,009
Stud Fees	\$771,479
Nominations	\$96,435
Boarding	\$1,542,959
Professional Services	\$0
Vet Care	\$270,018
Farrier	\$46,289
Feed/Bedding	\$270,018
Vaning	\$38,574
Tack & Supplies	\$23,144
Telephone	\$0
Utilities	\$115,722
Office Equipment	\$23,144
Travel	\$38,574
Fertilizer	\$0
Gas & Oil	\$0
Repairs	\$0
Depreciation - Horse	\$192,870
Depreciation - Machinery	\$0
Automobile	\$0
Insurance - Horse	\$115,722
Insurance - Other	\$0
Interest	\$115,722
Licenses	\$0
Sales Tax	\$0
Property Taxes	\$38,574
Local Tax	\$0
Registration	\$146,581
Other	\$231,444
Total	\$5,215,200

Source: Econometric Research Limited and
Canadian Thoroughbred Horse Society, Alberta Division

Table 6b

**Cost of Production - Breeding Phase
Standardbred Foals**

Item	Cost
Wages	\$419,509
Benefits	\$44,159
UI	\$19,482
Agents Fees	\$0
Sales Preparation	\$16,884
Sales Commissions	\$97,409
Advertising	\$58,446
Stud Fees	\$324,698
Nominations	\$31,171
Boarding	\$424,705
Professional Services	\$32,470
Vet Care	\$85,720
Farrier	\$27,275
Feed/Bedding	\$133,775
Vaning	\$23,378
Tack & Supplies	\$18,183
Telephone	\$31,171
Utilities	\$98,708
Office Equipment	\$10,390
Travel	\$16,884
Fertilizer	\$15,585
Gas & Oil	\$10,390
Repairs	\$94,812
Depreciation - Horse	\$179,233
Depreciation - Machinery	\$140,269
Automobile	\$25,976
Insurance - Horse	\$76,629
Insurance - Other	\$31,171
Interest	\$102,604
Licenses	\$2,598
Sales Tax	\$55,848
Property Taxes	\$29,872
Local Tax	\$0
Registration	\$0
Other	\$112,995
Total	\$2,792,400

Source: Econometric Research Limited and
Alberta Standardbred Horse Association

There are major and significant differences among the cost of production in the breeding phase of thoroughbred and standardbred horses, and among foals, mares and stallions, and yearlings and non-racing two-year-olds.

- The cost of production of thoroughbred foals in the breeding phase is almost twice as large as the corresponding expenditures on standardbred foals, largely due to horse numbers.
- Boarding costs are the largest items of expenditures for both types of foals.

Table 7a

**Cost of Production - Breeding Phase
Thoroughbred Mares and Stallions**

Item	Cost
Wages	\$1,410,000
Benefits	\$112,800
UI	\$75,200
Agents Fees	\$0
Sales Preparation	\$0
Sales Commissions	\$0
Advertising	\$0
Stud Fees	\$0
Nominations	\$0
Boarding	\$3,760,000
Professional Services	\$0
Vet Care	\$658,000
Farrier	\$112,800
Feed/Bedding	\$658,000
Vaning	\$94,000
Tack & Supplies	\$56,400
Telephone	\$0
Utilities	\$282,000
Office Equipment	\$56,400
Travel	\$94,000
Fertilizer	\$0
Gas & Oil	\$0
Repairs	\$0
Depreciation - Horse	\$470,000
Depreciation - Machinery	\$0
Automobile	\$0
Insurance - Horse	\$282,000
Insurance - Other	\$0
Interest	\$282,000
Licenses	\$0
Sales Tax	\$0
Property Taxes	\$94,000
Local Tax	\$0
Registration	\$357,200
Other	\$564,000
Total	\$9,418,800

Source: Econometric Research Limited and
Canadian Thoroughbred Horse Society, Alberta Division

Table 7b

**Cost of Production - Breeding Phase
Standardbred Mares and Stallions**

Item	Cost
Wages	\$1,031,985
Benefits	\$108,630
UI	\$47,925
Agents Fees	\$0
Sales Preparation	\$0
Sales Commissions	\$0
Advertising	\$0
Stud Fees	\$0
Nominations	\$0
Boarding	\$1,044,765
Professional Services	\$79,875
Vet Care	\$210,870
Farrier	\$67,095
Feed/Bedding	\$329,085
Vaning	\$57,510
Tack & Supplies	\$44,730
Telephone	\$76,680
Utilities	\$242,820
Office Equipment	\$25,560
Travel	\$41,535
Fertilizer	\$38,340
Gas & Oil	\$25,560
Repairs	\$233,235
Depreciation - Horse	\$440,910
Depreciation - Machinery	\$345,060
Automobile	\$63,900
Insurance - Horse	\$188,505
Insurance - Other	\$76,680
Interest	\$252,405
Licenses	\$6,390
Sales Tax	\$137,385
Property Taxes	\$73,485
Local Tax	\$0
Registration	\$0
Other	\$277,965
Total	\$5,568,885

Source: Econometric Research Limited and
Alberta Standardbred Horse Association

- Expenditures on boarding and wages and salaries are almost 50% of the total expenditures on thoroughbred and standardbred mares and stallions in the breeding phase.

Table 8a

**Cost of Production - Breeding Phase
Thoroughbred Yearlings and Non-Racing 2 Year Olds**

Item	Cost
Wages	\$945,000
Benefits	\$75,600
UI	\$50,400
Agents Fees	\$0
Sales Preparation	\$0
Sales Commissions	\$0
Advertising	\$0
Stud Fees	\$0
Nominations	\$0
Boarding	\$2,520,000
Professional Services	\$0
Vet Care	\$441,000
Farrier	\$75,600
Feed/Bedding	\$441,000
Vaning	\$63,000
Tack & Supplies	\$37,800
Telephone	\$0
Utilities	\$189,000
Office Equipment	\$37,800
Travel	\$63,000
Fertilizer	\$0
Gas & Oil	\$0
Repairs	\$0
Depreciation - Horse	\$315,000
Depreciation - Machinery	\$0
Automobile	\$0
Insurance - Horse	\$189,000
Insurance - Other	\$0
Interest	\$189,000
Licenses	\$0
Sales Tax	\$0
Property Taxes	\$63,000
Local Tax	\$0
Registration	\$239,400
Other	\$378,000
Total	\$6,312,600

Source: Econometric Research Limited and
Canadian Thoroughbred Horse Society, Alberta Division

Table 8b

**Cost of Production - Breeding Phase
Standardbred Yearlings and Non-Racing 2 Year Olds**

Item	Cost
Wages	\$526,490
Benefits	\$55,420
UI	\$24,450
Agents Fees	\$0
Sales Preparation	\$0
Sales Commissions	\$0
Advertising	\$0
Stud Fees	\$0
Nominations	\$0
Boarding	\$533,010
Professional Services	\$40,750
Vet Care	\$107,580
Farrier	\$34,230
Feed/Bedding	\$167,890
Vaning	\$29,340
Tack & Supplies	\$22,820
Telephone	\$39,120
Utilities	\$123,880
Office Equipment	\$13,040
Travel	\$21,190
Fertilizer	\$19,560
Gas & Oil	\$13,040
Repairs	\$118,990
Depreciation - Horse	\$224,940
Depreciation - Machinery	\$176,040
Automobile	\$32,600
Insurance - Horse	\$96,170
Insurance - Other	\$39,120
Interest	\$128,770
Licenses	\$3,260
Sales Tax	\$70,090
Property Taxes	\$37,490
Local Tax	\$0
Registration	\$0
Other	\$141,810
Total	\$2,841,090

Source: Econometric Research Limited and
Alberta Standardbred Horse Association

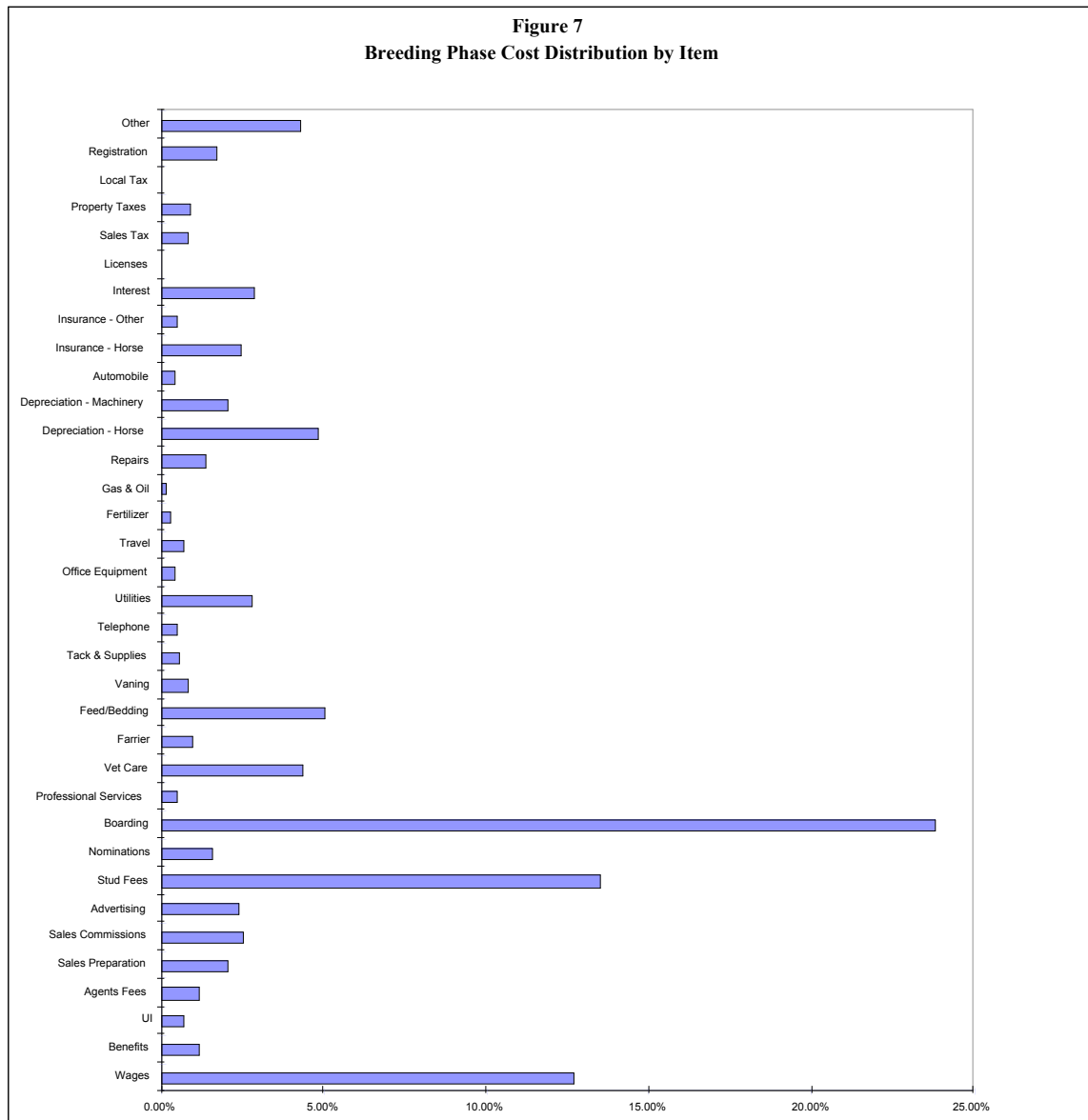
- The cost of production of thoroughbred yearlings and non-racing two-year-olds is 2.2 times larger than the corresponding cost of standardbred yearlings and non-racing two-year-olds, again, largely due to differential horse numbers.
- Again, boarding fees and wages and salaries make up more than half of the total cost of production for both types of horses.

Table 9
Cost of Production - Breeding Phase
Total

Item	Cost
Wages	\$4,911,594
Benefits	\$442,898
UI	\$248,316
Agents Fees	\$96,435
Sales Preparation	\$171,180
Sales Commissions	\$193,844
Advertising	\$193,454
Stud Fees	\$1,096,177
Nominations	\$127,606
Boarding	\$9,825,438
Professional Services	\$153,095
Vet Care	\$1,773,188
Farrier	\$363,288
Feed/Bedding	\$1,999,768
Vaning	\$305,802
Tack & Supplies	\$203,077
Telephone	\$146,971
Utilities	\$1,052,130
Office Equipment	\$166,335
Travel	\$275,183
Fertilizer	\$73,485
Gas & Oil	\$48,990
Repairs	\$447,037
Depreciation - Horse	\$1,822,953
Depreciation - Machinery	\$661,369
Automobile	\$122,476
Insurance - Horse	\$948,026
Insurance - Other	\$146,971
Interest	\$1,070,501
Licenses	\$12,248
Sales Tax	\$263,323
Property Taxes	\$336,421
Local Tax	\$0
Registration	\$743,181
Other	\$1,706,214
Total	\$32,148,975

Source: Econometric Research Limited

The products and services needed to sustain thoroughbred and standardbred foals, mares and stallions and yearlings and non-racing two-year-olds add up to a significant total. The rich mix of these requirements suggests that the horse breeding industry in Alberta impacts a diversified mix of sectors.



The Impact Results

The horse racing and breeding industry in Alberta is credited with \$111.1 million of expenditures in the year 2000 dollars. A total of \$21.7 million from the take-out is spent by the ARC and the tracks on operating expenditures (not including concessions, programs, and parking, see Figure 8). The largest expenditures of \$57.3 million are made in the racing phase. These expenditures include wages and benefits for labourers, agents fees, vet care, stud fees, utilities, property taxes, etc. Similar but lower expenditures of about \$32.2 million are made in the breeding phase.

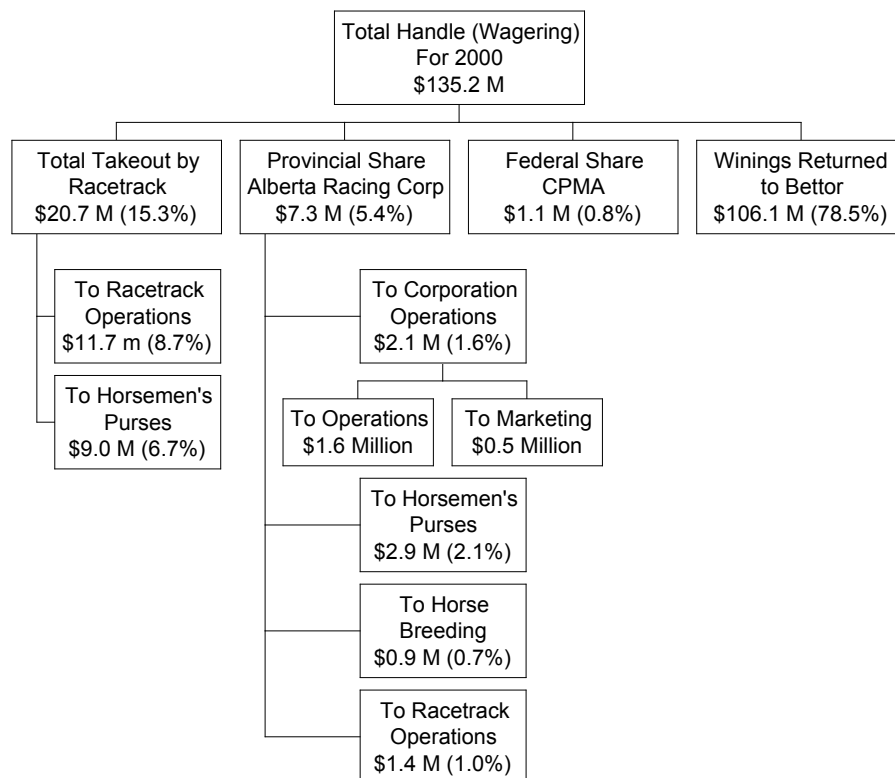
The annual operating expenditures of the tracks and the Alberta Racing Corporation are displayed in figures 8a and 8b. These expenditures are sustained by wagering and other gaming (slots) revenues.

The total handle includes the total Pari-Mutuel bet (handle) in the province of Alberta from both the “A” and “B” tracks as well as Simulcasting, Alberta Teletheatre Network and Off-track Betting Facilities.

The total take-out is that money retained by the track (15.3%), the Provincial share (5.4%), the Federal share (0.8%). This amounts to 21.5%. The remaining 78.5% is returned to the bettor as winnings in the year 2000 tracks’ share of the take-out amounted \$20.7 million.

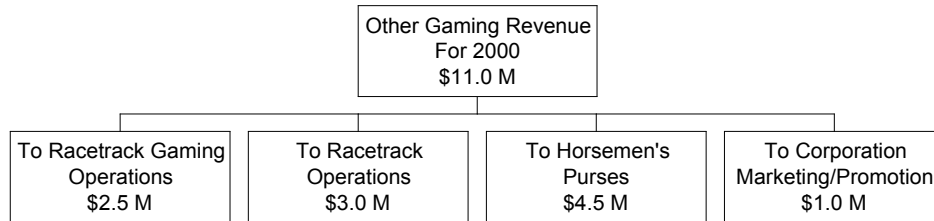
Racetrack operations include \$11.7 million that represents their share of the \$20.7 million take-out from the total handle. There is \$3 million from the alternative gaming revenue, and \$1.4 million flowing through the ARC from the Provincial share. To this is added \$2.5 million received by the track for gaming operations. There is another \$1.5 million that is spent on marketing from provincial and other gaming sources and \$1.6 million which is spent by the ARC on its other operations. These expenditures add up to \$21.7 million in the year 2000.

Figure 8a
Horse Racing in Alberta
Distribution of Wagering Revenue for the Year 2000



Source: The Alberta Racing Corporation

Figure 8b
Horse Racing in Alberta
Distribution of Other Gaming Revenue for the Year 2000



Source: The Alberta Racing Corporation

The total annual expenditures on operations of the tracks, Alberta Racing Corporation and breeding and racing horses sustain a total of \$133.9 million in value added (income) annually in Alberta. On a per dollar basis, every dollar of expenditure in this industry results in \$1.20 in wages, interest, rent and profits.

\$139.8 Million of Alberta's Income is Generated Annually by the Horse Racing and Breeding Industry

The highest income multiplier (1.25) is associated with track expenditures (see Table 10 and Figure 9). This multiplier compares rather favourably with the average industrial income multiplier of about 1.07 for the province. It exceeds other industrial multipliers because of both a relatively high proportion of labour intensive services in total track expenditures and the large local content of these expenditures. More significant perhaps is the employment impact of these expenditures. A total of 3,084 person years (full time equivalents) of employment are sustained by these expenditures. Direct and indirect plus induced employment split almost evenly. There are as many person years of employment outside the industry as there are within it and directly associated with its operations. It is estimated that between 6,000 and 7,000 Albertans are engaged in "equine side" on the industry on a paid or unpaid basis (Nichols study page iv # 16.)

3,084 Albertans Owe Their Permanent Full-time Jobs to the Horse Racing and Breeding Industry. There Are Many More Albertans Who Are Engaged In The Industry On A Part-Time Basis And Even Unpaid Basis

The highest employment multiplier (2.19) is that generated by the racing phase expenditures. Alternatively, the highest direct employment per million dollar of expenditure is associated with the track operating expenditures with a total of 19 full-time

equivalent jobs. When total employment is counted this total rises to 35 person years. These employment figures are indicative of a labour-intensive industry. Both, the direct and total employment figures compare well with other labour-intensive industries in Alberta. The effective annual wage is relatively low at the track at about \$22,966. This effective wage rises to \$30,552 for the racing phase expenditures, while the average in the industry stands at \$26,951. Actually the effective direct wage in the industry is higher than the effective total wage. This reflects the labour intensive character of the industry, the fact that a large number of people are involved on a part-time basis and that a good number of highly paid individuals (e.g., vets and trainers) are also employed directly by the industry.

The Effective Average Wage in the Horse Racing and Breeding Industry Exceeds \$26,951 Per Full Time Equivalent Job and is Highest During the Racing Phase at \$30,552.

The three levels of government are major recipients of income from this industry. Total tax revenues for all three levels of government are more than \$51.1 million. The lion's share goes to the federal government, but the provincial government also derives a large and comparable collection. On a per dollar basis of expenditure, the industry returns \$0.46 in taxes.

The Three Levels of Government Derive \$51.1 Million in Tax Revenues on the Impacts of Horse Racing and Breeding in Alberta.

Figures 8 and 9 provide a clear picture of the comparative efficiencies of these impacts by type of expenditure. It is clear that the racing phase makes the largest absolute contributions and the highest relative contributions in terms of gross output, income and employment.

The employment impacts of the horse racing and breeding industry in Alberta are diffused and cover almost the full spectrum of activities. Table 11 presents these impacts by industry. Naturally services sectors capture the largest share of the employment impacts, but it is equally true that both agriculture and manufacturing make respectable contributions. Actually, agricultural employment impacts are larger than manufacturing or those associated with utilities and communication (Figure 10). This is indicative of the of the strong linkages horse racing and breeding maintain with the rural economy.

The Employment Impacts of the Horse Racing and Breeding Industry in Alberta are Diffused and Cover Almost the Full Spectrum of Activities.

The links of this industry to the rural economy are substantive and complex. A significant horse breeding industry is needed to produce the horses for the racing phase. Thousands of acres of range lands and many workers are needed to care, train and groom the animals and maintain the farms where they reside. The gestation period of horses is over 11 months and horses do not race until they reach the age of two. This means that about three years of time and resources are spent on producing and training each horse before it ever reaches the track. It is equally true that most of the veterinarians, blacksmiths, farriers, hay and grain suppliers, transportation workers, harness and saddle makers and many others who provide services and products needed to breed, maintain and train the horses are located in the rural parts of the province. This is why the industry is a critical sector in the rural economy and represents a viable vehicle for connecting the urban entertainment sectors to the rural sectors of the province.

The Industry is A Critical Sector in the Rural Economy and Represents a Viable Vehicle for Connecting the Urban Entertainment Sectors to the Rural Sectors of the Province.

Table 10

Economic Impact Of Horse Racing and Breeding in Alberta

(In Thousands of 2000 Dollars)

	Operating Expenditures	Racing Phase	Breeding Phase	Total
Impacts				
<i>Initial Expenditures</i>	\$21,700	\$57,268	\$32,149	\$111,117
<i>Gross Output</i>				
Direct	\$21,700	\$57,268	\$32,149	\$111,117
Indirect & Induced	\$28,423	\$71,064	\$35,025	\$134,512
Total	\$50,123	\$128,332	\$67,174	\$245,629
Multiplier	2.31	2.24	2.09	2.21
<i>Value Added</i>				
Direct	\$12,308	\$32,313	\$18,879	\$63,500
Indirect & Induced	\$14,779	\$35,660	\$19,948	\$70,387
Total	\$27,087	\$67,973	\$38,827	\$133,887
Multiplier	1.25	1.19	1.21	1.20
<i>Employment (person yrs)</i>				
Direct	415	615	551	1,581
Indirect & Induced	355	732	416	1,503
Total	770	1,347	967	3,084
Multiplier	1.86	2.19	1.75	1.95
<i>Labour Income</i>				
Direct	\$9,309	\$21,659	\$13,551	\$44,519
Indirect & Induced	\$8,375	\$19,495	\$10,728	\$38,598
Total	\$17,684	\$41,154	\$24,279	\$83,117
<i>Taxes</i>				
Federal	\$7,068	\$13,615	\$8,417	\$29,100
Provincial	\$2,877	\$7,643	\$4,854	\$15,374
Local	\$1,198	\$3,116	\$2,315	\$6,629
Total	\$11,143	\$24,374	\$15,586	\$51,103
<i>Imports</i>				
From Other Provinces	\$3,462	\$8,810	\$5,125	\$17,397
From Other Countries	\$2,354	\$6,025	\$3,360	\$11,739
Total	\$5,816	\$14,835	\$8,485	\$29,136

Source: Econometric Research Limited

Figure 9
The Economic Impacts of the
Alberta Horse Racing and Breeding Industry

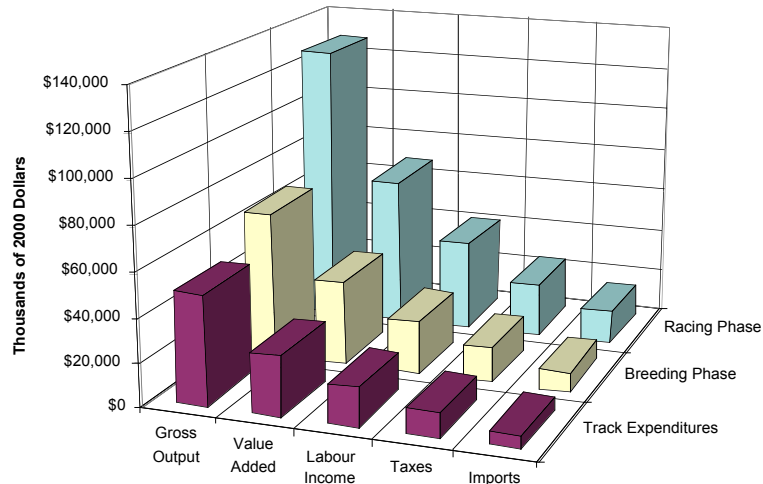


Figure 10
Employment Impacts of the
Alberta Horse Racing and Breeding Industry

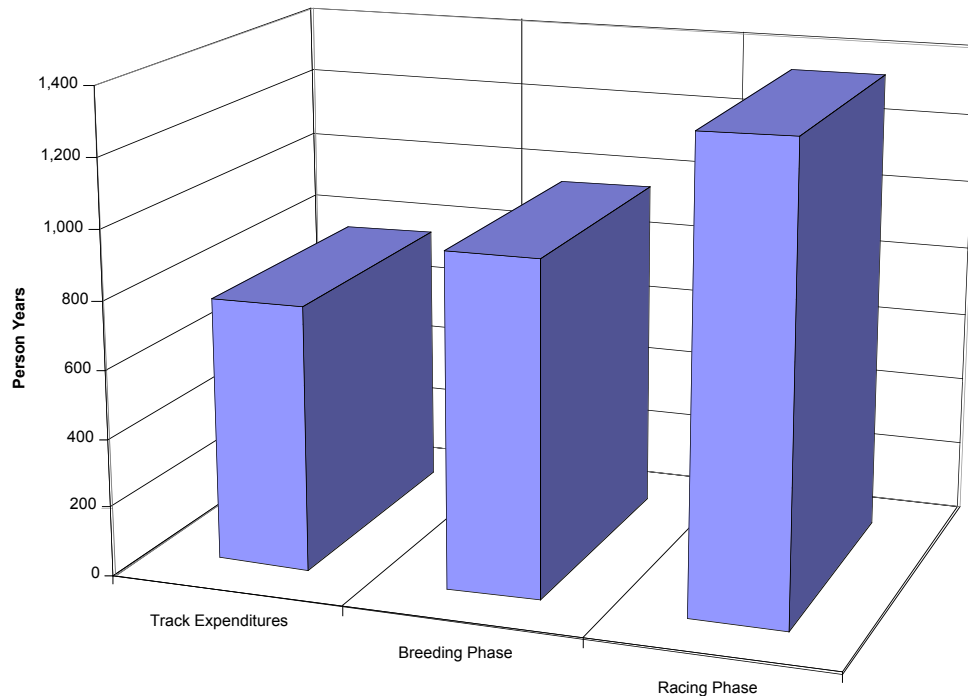


Table 11

Employment Impacts Of Horse Racing and Breeding in Alberta

Employment by Sector (Person Years)

Sectors	Operating Expenditures	Racing Phase	Breeding Phase	Total
Agriculture	9.1	110.4	64.5	184.0
Forestry	0.7	1.8	1.2	3.7
Fishing and Trapping	0.2	0.4	0.6	1.2
Mining	2.2	7.6	4.2	14.0
Primary Industries	12.2	120.2	70.5	202.9
Food and Beverages	2.6	8.2	6.6	17.4
Rubber and Plastic	0.7	1.9	1.1	3.7
Knitting and Clothing	0.5	4.6	1.2	6.3
Wood and Wood Products	2.8	6.5	3.6	12.9
Furniture and Fixtures	0.4	1.3	0.9	2.6
Paper and Paper Products	0.6	1.3	0.8	2.7
Printing and Publishing	2.8	5.4	2.7	10.9
Primary Metals	0.3	2.0	0.9	3.2
Metal Fabricating	1.5	19.7	6.2	27.4
Machinery and Equipment	0.8	4.5	4.9	10.2
Transportation Equipment	0.7	1.8	2.5	5.0
Electrical Products	0.7	1.8	1.3	3.8
Non-Metalic Minerals	0.4	1.0	0.7	2.1
Petroleum Products	0.1	0.5	0.3	0.9
Chemical Products	0.5	2.8	1.2	4.5
Misc. Manufacturing	1.1	6.1	5.3	12.5
Manufacturing Industries	16.5	69.4	40.2	126.1
Construction	2.4	5.3	2.6	10.3
Communication & Utilities	31.7	61.9	46.8	140.4
Transportation & Storage	19.5	69.4	29.4	118.3
Trade	109.1	122.3	68.0	299.4
Finance	18.8	69.1	34.4	122.3
Business Services	22.0	331.1	46.2	399.3
Education & Health Services	90.1	97.3	53.0	240.4
Accommodation & Meal Serv.	26.7	124.3	244.6	395.6
Travel & Entertainment	1.3	2.5	1.2	5.0
Other Services	397.9	222.1	105.3	725.3
Services	685.4	1,038.1	582.1	2,305.6
Other Employment	22.2	51.7	224.8	298.7
Total	770.4	1,346.6	967.0	3,084.0

Source: Econometric Research Limited

A good number of the jobs in the services and manufacturing sectors are also in the agricultural industry and/or in the rural economy. These are typically the farriers, trainers, transportation workers, hay and grain suppliers, harness and saddle makers, feed

manufacturers, etc. While most of these workers are directly involved in the horse breeding and racing industry, an equal number is involved indirectly in sustaining the operations of the industry. Again, a good number of them are in the rural areas of the province.

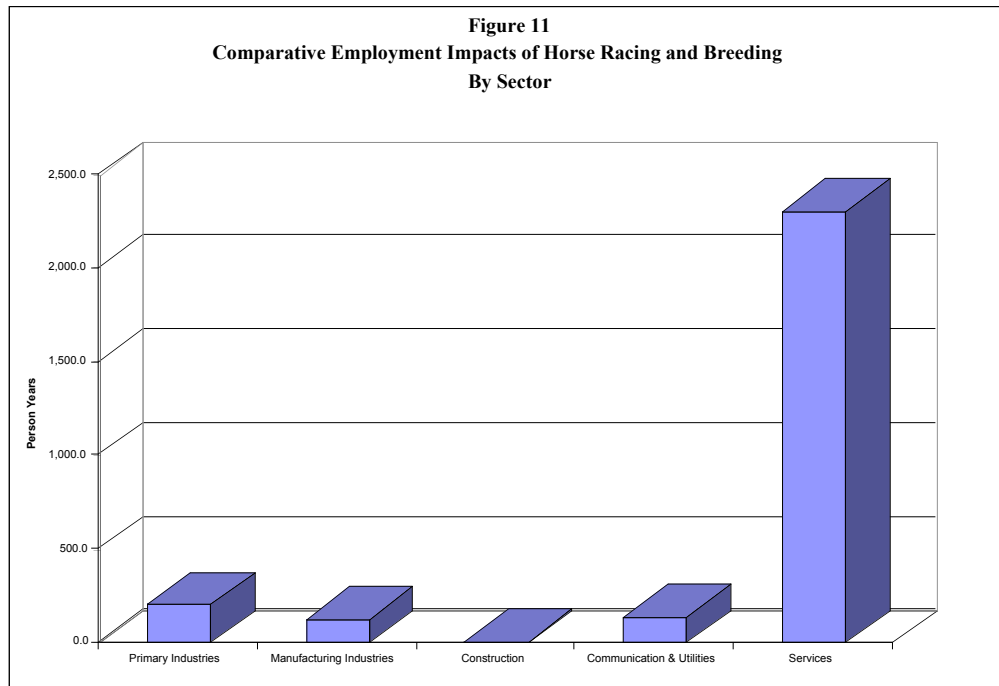


Table 12

Tax Impacts Of Horse Racing and Breeding in Alberta
Racing Phase
(In Thousands of 2000 Dollars)

	Federal	Provincial	Local	Total
Personal Income Tax	\$7,271	\$3,647		\$10,918
Indirect Business Tax		\$2,027		\$2,027
Goods & Services Tax	\$3,286			\$3,286
Corporate Profit Tax	\$1,182	\$831		\$2,013
Property & Business Tax			\$3,116	\$3,116
Tobacco & Liquor Tax		\$556		\$556
Room Tax		\$145		\$145
Employment Insurance	\$1,876			\$1,876
Workman's Compensation		\$437		\$437
Total	\$13,615	\$7,643	\$3,116	\$24,374

Source: Econometric Research Limited

Table 13**Tax Impacts Of Horse Racing and Breeding in Alberta****Breeding Phase**

(In Thousands of 2000 Dollars)

	Federal	Provincial	Local	Total
Personal Income Tax	\$4,272	\$2,142		\$6,414
Indirect Business Tax		\$1,212		\$1,212
Goods & Services Tax	\$2,199			\$2,199
Corporate Profit Tax	\$596	\$419		\$1,015
Property & Business Tax			\$2,315	\$2,315
Tobacco & Liquor Tax		\$333		\$333
Room Tax		\$492		\$492
Employment Insurance	\$1,350			\$1,350
Workman's Compensation		\$256		\$256
Total	\$8,417	\$4,854	\$2,315	\$15,586

Source: Econometric Research Limited

Table 14**Tax Impacts Of Horse Racing and Breeding in Alberta****Operations**

(In Thousands of 2000 Dollars)

	Federal	Provincial	Local	Total
Personal Income Tax	\$3,124	\$1,567		\$4,691
Indirect Business Tax		\$646		\$646
Goods & Services Tax	\$1,527			\$1,527
Corporate Profit Tax	\$511	\$359		\$870
Property & Business Tax			\$1,198	\$1,198
Tobacco & Liquor Tax		\$117		\$117
Room Tax		\$0		\$0
Employment Insurance	\$806			\$806
Workman's Compensation		\$188		\$188
Federal Share (CPMA)	\$1,100			\$1,100
Total	\$7,068	\$2,877	\$1,198	\$11,143

Source: Econometric Research Limited

Table 15

Tax Impacts Of Horse Racing and Breeding in Alberta

Total

(In Thousands of 2000 Dollars)

	Federal	Provincial	Local	Total
Personal Income Tax	\$14,667	\$7,356		\$22,023
Indirect Business Tax		\$3,885		\$3,885
Goods & Services Tax	\$7,012			\$7,012
Corporate Profit Tax	\$2,289	\$1,609		\$3,898
Property & Business Tax			\$6,629	\$6,629
Tobacco & Liquor Tax		\$1,006		\$1,006
Room Tax		\$637		\$637
Employment Insurance	\$4,032			\$4,032
Workman's Compensation		\$881		\$881
Federal Share (CPMA)	\$1,100			\$1,100
Total	\$29,100	\$15,374	\$6,629	\$51,103

Source: Econometric Research Limited

The total tax revenues in Table 15, do not include the 0.8 of one percent of the total handle that goes to the CPMA (about \$1.1 million) or the \$7.5 million (5.4% of the total handle) that goes to the provincial government. While indeed part of these revenues of the provincial government are put back into the industry, about \$2.1 million (1.6%) is used to finance the operations of the provincial Alberta Racing Corporation.

Limitations

The following outlines salient limitations imposed on the approach and findings of this analysis.

- An effort has been made to ensure that the estimates in the Report are made in a conservative manner to avoid overstating the results. For example, the cost of track operations are based on track revenue from gaming and do not include costs/revenues from concessions, programs, parking, etc. Data on these items was not readily available, and the impact analysis does not incorporate the impacts of these expenditures.
- Benefits are not always easily expressed in monetary terms. For example, social benefits from horse racing are not easily measured. In these cases we have endeavoured to demonstrate the nature and extent of benefits realized in the province of Alberta through other narrative means.

- Due to fiscal constraints, this research program did not administer surveys to patrons and industry operators to determine spending patterns and activities. Data was collected from various sources and from industry participants but was not verified directly by ERL.
- Since the impact results are based on data sets compiled from a variety of sources, they are not strictly statistically reliable and are therefore subject to a margin of error.
- The model used is a simulation model and, as such, it creates a theoretical picture of the future of the provincial economy, it does so on the basis of a series of assumptions, which may or may not hold true over time.
- The number of horses may be overstated because we did not take into account the effects of deaths and injuries on the existing stock, but we also understate the total number of horses as we have excluded a number of horses as per footnote 3 under Table 1.
- There is a problem with treating depreciation as an expenditure item when it is only a non-cash accounting entry.

Conclusion

Against the declining economic base in rural Alberta, horse racing and breeding assume a critical function in shoring both the rural economy of Alberta and diversifying its income sources. The impact results indicate a relatively high level of efficiency in the creation of jobs per dollar of expenditure and very large return to all levels of government. All the multipliers reported here are relatively high and compare rather favourably with other tourism or even industrial multipliers.

The following key impact results were identified:

- The horse racing and breeding industry is an agricultural based industry that will also increase and diversify the tourism, entertainment and export economic base of Alberta.
- Wagering on horse racing in Alberta, which peaked in 1991 at \$230.9 million, declined to \$135.2 million in 2000. In nominal prices this decline represents 41.4%, whereas in constant 1992 dollars wagering declined by 48.2%. If wagering at live races were singled out, the decline in this activity would have been more pronounced.
- The horse racing industry in Alberta could and should be revitalised to play its role as a key node in the New Economy.
- Total expenditures by The Alberta Racing Corporation (ARC), tracks, and for the production of horses in both the breeding and racing phases exceeded \$111.1 million.

These expenditures have sustained an income impact of \$133.9 million annually in Alberta. This supports an income multiplier of 1.20, which is higher than the 1.07 average industrial income multiplier of the province.

- Over 3,084 Albertans owe their permanent jobs to the horse racing and breeding industry in the province. In fact many more Albertans work in the industry on a part-time basis. It is estimated that 6,000 to 7,000 Albertans are engaged in the “equine side” of the industry on a paid or unpaid basis.
- All three levels of government realize revenues on the total industry expenditures. The Federal government realizes \$29.1 million, whereas the Provincial government realizes \$15.4 million. The remaining \$6.6 million goes to local governments in the province. Another \$1.1 million that goes to the Canadian Pari Mutuel Agency (CPMA) and \$7.3 million to the Alberta Racing Corporation (ARC) can be added to these revenues.
- A total of \$83.1 million in wages and salaries in Alberta is sustained annually by the total expenditures of the provincial horse racing and breeding industry.
- The effective average wage in the horse racing and breeding industry exceeds \$26,951 annually and is highest in the racing phase at \$30,552.
- The employment impacts of the horse racing and breeding industry in Alberta are diffused and cover almost the full spectrum of activities. Many of the jobs reflect the strong linkages of horse racing and breeding with agriculture, the agricultural manufacturing sector, the agricultural services sector, and the rural economy.
- The links of this industry to the rural economy are substantive and complex. A significant horse breeding industry is needed to produce the horses for the racing phase. Thousands of acres of range lands and many workers are needed to care, train and groom the animals and maintain the farms where they reside. The gestation period of horses is over 11 months and horses do not race until they reach the age of two. This means that about three years of time and resources are spent on producing and training each horse before it ever reaches the track.
- Most of the veterinarians, blacksmiths, farriers, hay and grain suppliers, transportation workers, harness and saddle makers and many others who provide services and products needed to breed, maintain and train the horses are located in the rural parts of the province.
- Ultimately, many race horses fill the ranks of pleasure horses, jumpers, chuckwagon horses, and dressage animals, thus continuing the need for labour, feed and supplies.

This is why the industry is a critical sector in the rural economy and represents a viable vehicle for connecting the urban entertainment sectors to the rural sectors of the

province. It is also an important node in the New Economy as the industry adopts and uses the most sophisticated components of the software and hardware of the high-tech industry. Its revitalisation will contribute to the provincial economy and most importantly to the rural regions of the province.

Glossary of Terms

Pari-mutuel	refers to the legal wagering on the outcome of a horse race.
Simulcast	refers to the telecasting of live audio and visual signals of horse races received from an authorized racing facility.
Take-out	refers to the commission that is deducted from the pari-mutuel pools and is shared by the track operator, the horse people and government.
Teletheatre	refers to a licensed facility that broadcasts simulcast racing events for viewing and wagering.
Win	refers to a bet on a horse to finish in first place.
Value Added	is a measure of net output within the economy. It avoids double counting of products sold during the accounting period, by including only the final value of goods and services. For example, if a farmer sells wheat to a mill, which in turn sells its flour to a bakery, the total value of bread sold by the bakery includes the value of wheat and flour, while the value of the flour sold by the mill includes the value of wheat sales. In this process, the value of wheat sales are included three times, first as wheat, second as flour, and third as bread. Only the value of bread is considered as value added, because this amount removes the double counting of flour and the triple counting of wheat. Value added for the provincial economy as a whole is equal to gross provincial income (GPI). It can be calculated by adding wages, interest, rent, and profits. Alternatively, it can also be computed as a difference between total revenue and total cost of purchased inputs needed to sustain these sales. Notice that value added is used to calculate the value of final products. It sums the net contribution to output at each stage of production.
Gross Output	is the total value of goods and services sold by business to sustain a given operation. Direct sales include all the value of goods and services bought for on site operations. Total sales include all the value of goods and services needed to sustain the activity. Although it involves multiple double counting (unlike value added), the gross output measure is a good indicator, because it portrays the expected gross revenues to all business sectors within the economy. It is also used for calculating sales taxes and many other economic variables.
Labour Income	is the total bill of wages and salaries, which represents the compensation of labour. It also includes benefits. The difference between total income and labour income provides a measure of

property income. In this way, the ratio of the labour income to total income and the ratio of labour income to property income are good indicators of the state of distribution of income in the economy. These ratios are also good measures of labour use intensity in the economy.

Employment is a measure expressed in terms of person years (PYs). In addition to the direct PYs, it captures the indirect and induced jobs associated with a given activity. In some cases, direct employment may not be an important socio-economic element of a given operation. The multiplier effects, revealed through the indirect and induced impacts, could have more significant policy implications

Multipliers are unitless measures, derived by adding direct and indirect as well as induced effects (i.e., total effect) and dividing the total thus derived by the original expenditure (or gross revenue). For example, the income multiplier associated with a given activity is equal to income divided by the initial expenditure. Only the employment multiplier is calculated differently. It is computed by dividing total employment effect in person years (PYs) (= direct + indirect + induced) by only direct employment. This is necessary, because of the fact that dividing total PY by dollars value of gross revenues (total initial expenditure) would not yield a unitless measure, as a multiplier is supposed to be.