Whole Animal Utilization Report

Commissioned by: Alberta White-tail & Mule Deer Association

Funding Support: Diversified Livestock Fund of Alberta

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Table of Contents

Foreword

This project was commissioned by the Alberta White-tail and Mule Deer Association with funding support from the Diversified Livestock Fund of Alberta.

The purpose of this project was to determine the ability to utilize (for commercial purposes) the parts of domestic deer which are currently being disposed of as offal. Utilization versus disposal of these parts will allow the profitability of the producer to increase; thereby creating a greater incentive to slaughter and cull animals for improved returns.

By developing venison markets for the industry there will be substantial gains to all segments of the industry. Creation of a base market pricing grid will allow the other sectors of the industry to feasibly maintain or increase their marketability and profitability. Breeding stock and genetic quality will increase, creating an increased market for breeding quality animals, semen and embryo sales. Minimum standards for harvest bucks will increase, allowing for greater overall returns. Furthermore, the ability for industry to make use of slaughter numbers for disease monitoring and surveillance will allow for the decrease or elimination of current stringent on farm testing standards. In turn, additional knowledge of disease prevalence should ease rigorous export protocols, again allowing for greater trade and profitability.

This report has allowed the organization to gather pertinent information about parallel industries, potential markets, potential product uses, and prospective values for co products. The next steps to finalizing this project are to take the knowledge gathered and begin compositional analysis to determine if white-tail and mule deer product contain similar characteristics to compete against the New Zealand and Australian imports of venison. More importantly, however, is to simultaneously position the industry for growth and stability.

Further research, negotiations and project planning will need to take place in order to fully realize the potential of co product utilization. As results are gathered from future research the industry may need to re-evaluate their path, but the objectives will remain the same.

Summary

In the past, the Alberta deer industry focused on increasing the producer base and provincial inventories, providing forums for information exchange and attempting to expand the market for harvest stock into Alberta. These objectives worked well for the industry in the short-term but long-term have failed miserably. Little work has been done on the development of a meat or co-product industry, thereby creating a huge void when Chronic Wasting Disease and subsequent volatile export markets shut down.

Realization of the need for a base meat and co-product market has become forefront and the industry needs to work quickly in order to stabilize and sustain current producer base and inventory numbers. Market recovery is critical but not as essential as the development of the base market for venison. By developing this market, the base prices will be set and will dictate the pricing for harvest buck sales, breeding stock sales, and semen sales. Producers will have more options for their product and will not be forced to sell below the cost of production.

With the current cost associated with processing versus meat yield and competitive pricing from traditional meat, the need to develop markets to value-add the animal became apparent. In developing the meat industry in conjunction with co-products the opportunity to capitalize on additional sources of revenue becomes very advantageous to all parties from producers to processors.

When developing these markets it is apparent that measures need to be implemented to ensure quality control and assurance in order to satisfy current consumer demands and also to be able to capitalize on premium pricing. Many industries have made the fatal mistake of thinking that standards do not need to be set and have lost customers from bad products. Once a consumer is dissatisfied, it is very difficult to win them back. The deer industry needs to be extremely cautious of this trend and make all possible efforts to extend a consistent and quality product.

The concept of having two entities; one for marketing and the other for education and representation of the membership is vital to the survival of the industry. Clearly there has been little in the way of support from the private sector and minimal success at developing a venison market. By having the producers own the entities there is additional ownership in the organization and its future. These actions are desperately needed to re-establish and re-acquaint producers with the goals and visions of the Association.

Ownership of the marketing entity will ensure that the needed research and product development standards will be established as this will be a tangible link to higher pricing and increased market stability.

While volunteer organizations are wonderful in many aspects the truth lies in time management. There are simply not enough volunteer hours to carry out projects and plan strategies that will be beneficial in the long-term to the industry. It must be stressed that quality people must be hired to carry out the management and implementation of the strategies which will follow. In order for the organization to stay focused and progress forward there must be someone on staff to perform the duties of a CEO or equivalent.

While there are many obstacles to overcome, they are achievable and each overcome hurdle will advance the domestic deer farming industry in Alberta. The long term benefits of a clear and concise plan with logical and lucrative outcomes will be the foundation of a strong and stable domestic deer industry.

History

The Alberta domestic cervid farming industry began in the late 1970's when Alberta Fish and Wildlife allowed the capture of wild deer and elk, for display purposes, to be housed on farms under a zoo permit. Animals were allowed to be displayed to the general public and traded with other zoo permit holders around North America. Producers were not allowed the freedom to slaughter the animals for meat or to utilize any of their parts until 1987, when antler harvesting was first sanctioned due to increased pressure from the producer community. The elk industry at that point exploded with many new producers entering the picture due to the high prices which velvet antler commanded. Rapid expansion of the industry soon made Fish and Wildlife realize they did not have the resources, the expertise or the tools to handle the influx of producers entering the industry. Fish & Wildlife then approached Alberta Agriculture to aid them in the endeavour of tracking and managing the animal inventory. In 1990, after the cooperative efforts of both departments the Livestock Industry Diversification Act (LIDA) was ratified and an opportunity was born.

Established in 1985 the Alberta Game Growers Association represented both the elk and deer industry. The organization underwent several identity and objective changes over the years and finally in 1997, the Alberta White-tail & Mule Deer Association was formed to represent the specific interests of the whitetail and mule deer farmers across Alberta. The main focus of the organization was to expand the producer base and their mission was easily accomplished. Along with industry, the Alberta government touted the diversified livestock industry as an avenue of choice for new producers, investors, or expanding farmers. Diversification was going to secure Alberta's agricultural future and government wanted the public to know that they supported this new initiative. Government support led to further promotion of the industry and the industry grew to over 200 farms by 2000. Breeding animals became scarce due to the flood of new producers and prices skyrocketed to incredible highs. Does rose from $1500 per animal to over $12,000.00, while breeding bucks with reputable antler genetics rose to over $15,000 per animal.

The primary market for animals from 1991 to 2003 was breeding stock with some movement of animals into the United States harvest market. Since Alberta has never allowed cervid harvest preserves (CHPs), the industry was forced to rely on export to access this market. Extremely high prices received for breeding stock and harvest stock deemed the meat industry unworkable. Trying to access animals to begin development on a base market was impossible. The following chart outlines industry inventory patterns and includes information on export numbers.

Year	Deer Inventory					Number of Exports			Number of slaughter		
		Males		Females							
	Total	<12 mo.	>12 mo.	<12 mo.	>12 mo.	Total	Males	Females	Total	Males	Females
1997	3819	615	1056	576	1572	22	11	11			
1998	5108	923	1322	847	2016	135	71	64			
1999	6731	1202	1589	1229	2711	305	285	20	0	0	0
2000	8734	1610	2069	1472	3583	374	346	28	1	0	1
2001	11434	1944	3014	1892	4584	604	510	94	21	15	6
2002	12645	1831	4067	1628	5119	303	267	36	521	140	381
2003	12041		5665		6376	30	30	0	477	69	308

(Source Alberta Agriculture)

It is quite clear that the export numbers dropped significantly and consequently slaughter numbers increased in 2002. This was a direct reaction to the discovery of Chronic Wasting Disease (CWD) in a farmed elk in May and two farmed deer in the fall of 2002 in Alberta. Many of the US states imposed strict regulations and requirements for cervids being imported from a province with known occurrences of CWD. This was the first in a long line of blows for the industry and the first realization of the huge dependence on export markets and the critical surveillance issues for CWD.

Saskatchewan (the only province in western Canada to allow CHP's) closed their border as well, adding further stress to an already struggling industry. With limited access to market harvest bucks, the industry quickly fell into a state of hopelessness and despair.

Although the AWMDA spent countless hours lobbying for support from government for cervid harvesting preserve legalization within Alberta, when the final count came in the idea was rejected. Many of the Members of Legislature (MLA) supported the initiative but were outnumbered in the final vote. The Alberta deer industry once again felt the effects of this loss and of the negativity, due to misinformation, surrounding the industry.

In May 2003, the first case of Bovine Spongiform Encephalopathy (BSE) was discovered in Alberta and the United States immediately closed their border to all ruminants and ruminant products. This left the Alberta deer industry with no export markets and therefore no market to cervid harvest preserves. Many producers abandoned the industry and a large number of animals were euthanized.

Downsizing of the industry was inevitable with no existing or developed meat or co- product market for producers to fall back on and even if there had been; the glut of beef due to the closed U.S. border was overwhelming the processing capacity in Alberta. Processors, now inundated with product, saw this as an opportunity to increase prices, especially of the "less desired" species that required more work and additional facilities to process. To even attempt to begin a meat and co-product market at this juncture would have surely been a futile effort at best.

Today's scenario

The Alberta deer industry, led by the AWMDA, has embarked on the road to recovery. Plans have been developed to aid the industry to become a complete industry and to be able to rely more on domestic and international markets with less volatility. New markets are being investigated and the intention is to stabilize and eventually secure the markets and needs for the industry. The focus of the Association will still remain with the primary market of trophy stock but other options must be explored and developed in order to protect the industry against future market volatility.

Alberta government in cooperation with the industry has implemented an Alberta Import Protocol for North America. This demonstrates to the rest of the industry's North American counterparts that Alberta is open for business and that the risks associated with potential movement of foreign disease can be addressed and mitigated. Despite the political mindset that plagues domestic cervid farming, the AWMDA along with the Alberta government have addressed the concerns of the stakeholders and ensured that all manageable risks have been mitigated. In addition, Alberta has negotiated successfully for the opening of the Saskatchewan border for import of live animals under protocol. Movement of animals to Ontario was appearing promising for export of harvest animals, until recently when the Ontario rewrote legislation to prohibit all harvesting behind fence. Quebec is the only eastern province that allows the harvesting of animals on-farm, which does not appear to be at risk at this point in time. Importation to Quebec is currently not exceedingly restrictive; however a national CWD strategy is underway which may negatively impact this movement.

The Alberta White-tail & Mule Deer Association has mandated the development of a meat and co product market and is determined to follow the process through. This study is part of that process and will outline much of the work that needs to follow. By developing a meat market and having additional animals slaughtered will allow Alberta producers the opportunity to possess larger inventories and hopefully be able to renegotiate the needs and requirements surrounding many of the import protocols. By increasing processing of animals the industry will be able to eventually extend the time frame set out in the current TB testing protocols. As well, industry will be able to have a market for cull animals which will in turn make farms much more profitable, thereby stabilizing the industry when export markets become volatile or inaccessible. Much will be learned in this process about management, nutrition, herd health and genetic capabilities. Additionally evidence of freedom from or prevalence of CWD can be established and aid mitigation and removal of restrictions surrounding the disease.

At this point in time, a few individual producers have tried to market meat products and have faced extreme hurdles and obstacles. Proper processing, affordable processing, product pricing and a host of other complications plague their efforts. It is the Associations' hope to learn from these experiences and to draw from the knowledge of these producers to aid the industry in overcoming these hindrances.

The deer industry has lost a great deal of producers in the past few years. It is the AWMDA's intention to build a solid industry in which producers are able to weather the storms of today's political climate and to remain profitable while doing so. Once stability is attained the industry will have the foundation on which to rebuild the producer base and grow our markets as the inventories increase.

The Venison Industry around the World

New Zealand

Over the past 35 years, New Zealand has become the world's largest exporter of deer products and remains the strongest competitor and trendsetter on the global market. With a current cervid population of 1.7 million animals on 5000 farms (June 30, 2004), New Zealand possesses over half of the worlds' farmed deer population. The majority of the animals in New Zealand are red deer (approximately 85%) originating from the feral population, which had been introduced in the mid-late 19th century. Due to their uncontrolled growth and impact on the environment, capture and domestication was encouraged thereby turning a pest into an export earner. Contributing species include elk that were imported from Russia and North America, and several strains of domestic and semi-domestic fallow deer are also being farm raised in New Zealand.

Although, the farmed red deer originate from the wild population in New Zealand, the practice of deer farming is still seen and conducted as an agricultural operation similar to that of cattle and sheep.

The red deer population sustains the industry in numbers and has adapted well to the farming situation. Fallow deer, although smaller in numbers, has developed a niche specialty market for specialty cuts and is promoted as a superior product. As well, due to fallow deer being physically of smaller stature the meat is marketed as more of a delicacy.

New Zealand has been extremely proactive and very aggressive in their quest to be the largest and most sought after venison producers. As well, the industry was grown and established before North American or Australian industries became organized. This has allowed NZ producers to focus and develop the industry while their inventory expanded. In turn, the New Zealand government has been very helpful and supportive of the industry since inception. The government has financially supported many of the initiatives such as quality control and assurance. This has allowed the industry to tap into markets ahead of many other countries and through development of a quality product has allowed them to secure their global market position.

The New Zealand industry has taken a very effective stance to the development of their industry in that all the work, research and development of their products is owned by the industry. New Zealand producers literally own all the rights to the information regarding their industry, which allows them the luxury of discerning which information is released.

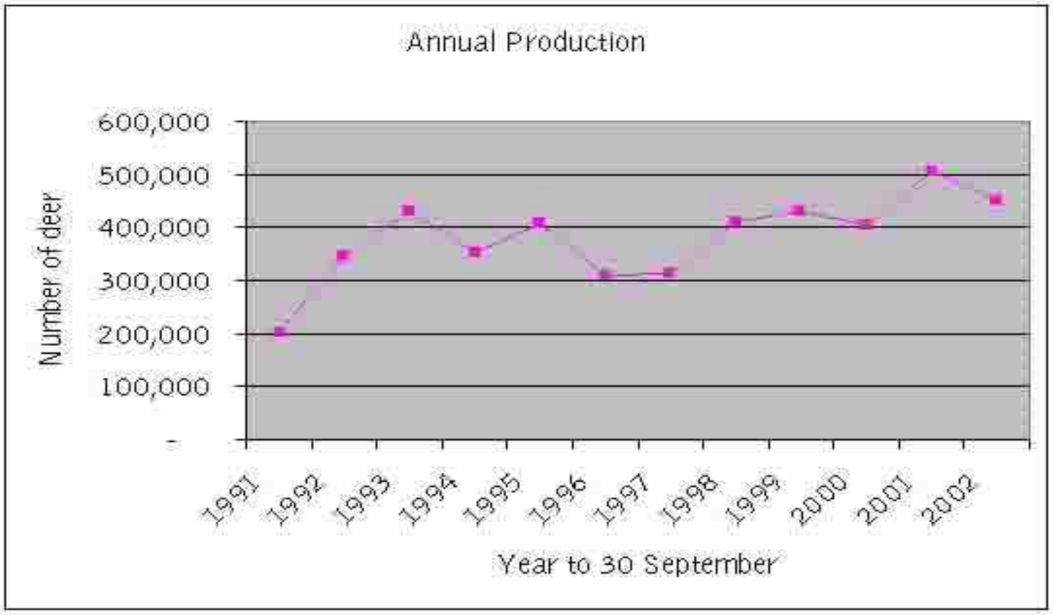
New Zealand has imposed levies on velvet antler sales and meat sales to support their industry organization and to supplement government dollars for research. Conversely, the levies allow for an exemption if the prices on velvet antler fall below certain preset levels. The levies set for 2004 were $3.50 per kg or $.50 per kg for fallow deer and no levy is payable on velvet with a purchase price of less that $15.00 per kg. Furthermore, there is a fee to become a member of the various industry associations, which allows producers to remain informed and up to date on current issues and trends, thereby serving as a marketing tool. The organizations in New Zealand appear from this vantage point to be extremely well organized and market focused. It appears that industry has been very hands-on with their approach to the export markets and it has paid off for them.

Meat products in New Zealand are marketed under the trademark name of Cervena. The Cervena name is derived from the Latin term “cervidae” meaning deer and “venison” which once meant hunting but now is known as the general term for deer meat. In order to be sold under the Cervena trademark name the animals must been entirely grass fed and only given steroids and antibiotics when absolutely necessary. All Cervena deer are three years or younger to ensure quality. The Cervena appellation is applied only to the saddle and leg cuts.

The New Zealand industry relies heavily on their export sales to Europe, Asia and North America. Recent programs to increase export volumes have targeted North America. Now only representing about 9% of export sales, North America has the potential of utilize much more product. Focussed efforts are continuing on venison, velvet antler and co-product sales.

Generally tails, pizzles, hides, sinew and blood are all collected by processors and sold into Hong Kong in their raw state to be processed. In some circumstances there are companies and producers within New Zealand who are processing and marketing the product directly out of New Zealand. Information on processing techniques and standards is attached in Appendix A

Below are graphs taken from the New Zealand Deer Industry website that demonstrates the strengths of the New Zealand industry



More than 90 percent of the New Zealand deer industry's products are exported. Check out the current and historical export information from the industry's database. Export statistics are provided by Statistics New Zealand.

Volume of Total Deer Industry Exports

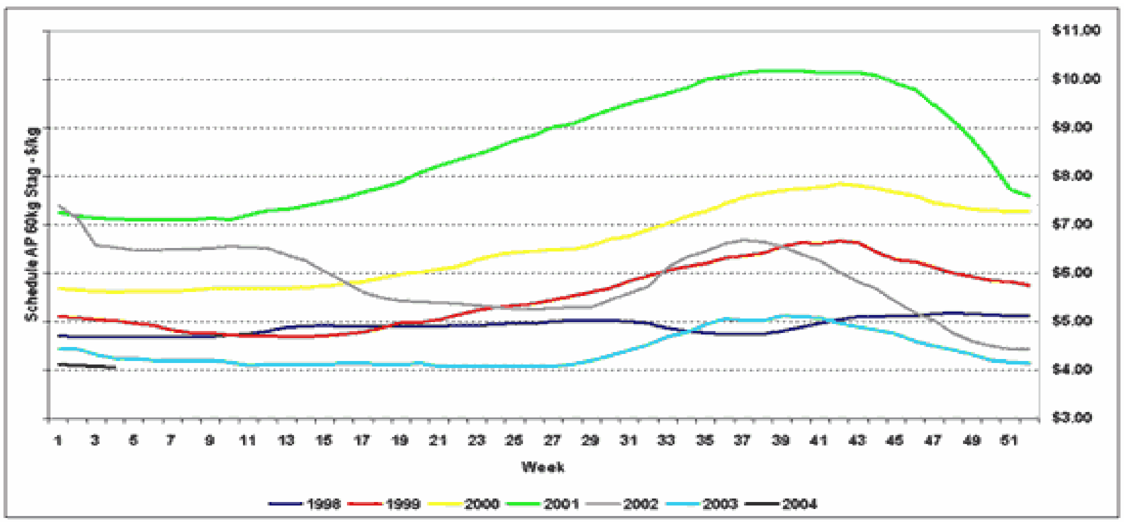
November Years	2000	2001	2002	2003	2004 Provisional
Venison (Kg)	14,539,110	18,368,898	15,979,593	18,838,607	23,678,795
Velvet (Kg)	137,106	193,570	195,587	167,429	245,603
Hides (Num)	296,376	338,491	413,328	341,658	403,867
Co-Products (Kg)	1,911,311	915,203	745,881	473,730	1,711,566
Leather (Sq Metre)	102,259	115,301	107,987	82,090	176,723
Live Exports (Num)	50	47	54	244	44

Value of Total Deer Exports

November Years	2000	2001	2002	2003	2004 Provisional
Venison	$162,949,210	$256,259,742	$188,337,406	$160,079,737	$188,440,091
Velvet	$41,356,131	$32,335,006	$34,559,810	$28,497,779	$29,516,337
Hides	$7,275,593	$8,115,791	$10,132,157	$8,905,980	$9,739,922
Co-Products	$14,253,173	$11,731,418	$8,717,285	$9,487,282	$6,522,534
Leather	$5,718,508	$7,010,489	$6,481,741	$5,078,262	$9,527,799
Live Exports	$54,265	$53,100	$26,595	$305,254	$36,000
TOTAL	$231,606,880	$315,505,546	$248,254,994	$212,354,294	$243,782,683

Venison Schedule Price Graph

The graph below shows the 60 kg stag schedule price over recent years.



The industry organizations in New Zealand appear strong and dedicated to helping producers to market product. There are several entities that have varying responsibility to the industry in various capacities.

Deer Industry New Zealand (DINZ)
DINZ is responsible for industry promotion, quality assurance, research programs and market access. This organization represents producers and processors on a national and international basis. Membership to the organization is mandatory and levies are collected on meat sales and velvet antler sales.

New Zealand Deer Farmers Association (NZDFA)
NZDFA provides membership to producers on a voluntary basis. Members receive representation to the DINZ as well as a host of other benefits such as the opportunity to participate in velvet antler competitions, receipt of branch newsletters, opportunity to participate in branch discussions etc. It appears that the political role of the NZDFA has lessened with the establishment of the DINZ.

New Zealand Deer Industry Association (NZDIA)
NZDIA provides voluntary membership to venison processors and exporters. It acts in association with the Velvet Processors Association in appointing exporter representatives to the DINZ, to ensure that one Board member has specific velvet experience.

Cervena Trust
Established in 1999, this entity owns and manages the Cervena appellation on behalf of the industry. This organization does not sell product but rather grant licenses and franchises.

Velvet Antler Research New Zealand (VARNZ)
This body is a joint venture between the deer industry and AgResearch. The objectives are to carry out research on velvet antler and to control and manage the results of that research for the benefit of the industry.

DEEResearch
Funded jointly by the industry and government, this organization's duties are to carry out research to benefit the deer industry in New Zealand as a whole. Research priorities cover the areas that are not covered by the VARNZ sector. The research therefore belongs to the industry and is managed in such a way as to promote expansion and further the industry.

National Velvetting Standards Body (NVSB)
The NVSB administers the training and certification program for the removal of velvet as per the guidelines in the Code of Practice.

New Zealand Velvet Antler Branch
Constituted in 1984, this special interest branch works to serve members in order to enhance and expand the veterinary support and service role to the deer industry. It works closely with the industry at both NZDFA branch and national levels on research, animal welfare and quality assurance activities. As well it nominates two veterinarians to the NVSB

New Zealand Velvet Processors Association
NZVPA is a society that represents the interests of velvet antler processors and exporters. It undertakes lobbying on behalf of members to government, offshore interests and groups that affect the velvet processing and exporting interests.

It appears that New Zealand producers have covered their bases when it comes to aiding the industry to take product from start to finish. The system appears to represent all aspects of the industry, through the various organizations. As well, strength in numbers is always an asset with today's political climate.

Australia

Although the Australian deer industry was established around the same time, the Australian deer industry has developed more slowly than New Zealand and is the second most competitive entity in the export market for deer products. At least 85% of all venison produced in Australia is exported, principally to Europe, while 90% of all velvet antler produced is exported, unprocessed to Asia.

As of 2002, the Australian overall herd consists of about 200,000 animals with fallow making up approximately 34% of the total population with the remainder being red deer (39%) rusa (15%), elk (7%), and chital (4%).

Levies have also been added to the structure of the Australian industry thereby allowing them access to capital that otherwise would not have been available. The government in cooperation with the industry has funded research into product development and livestock management, which has allowed producers to fast track their industry, and begin competing with New Zealand export and the Cervena name.

The DIAA or Deer Industry Association of Australia represents the Australian deer industry, which includes producers, processors and marketers. In turn the DIAA has developed a product development company known as Deer Industry Projects and Developments Pty Ltd (trades as the Deer Industry Company or DIC). The DIC works with the industry to determine research needs and areas of product development geared towards product development and marketability. This includes on-farm management, livestock nutritional needs, disease issues and other production orientated needs. As well, this entity undertakes project work to assist the industry to fulfill its goals as described in the Industry five-year plan or as otherwise instructed by the DIAA. Funding for this organization comes from levies placed on products, membership to the DIAA and from government sources.

The industry has also started another company called the Australian Deer Horn and Co Products Pty Inc. (ADH&CP). This corporation is responsible for the collection, grading and marketing of the majority of antler products and co products in Australia. The firm handles product in all forms including raw and processed. They have the ability to have product processed and packaged at the buyers' request if the pricing permits. This avenue has been very successful for the industry in that control of product throughout the country can be maintained by the industry, thereby allowing the opportunity to attract more serious and stable buyers. Currently the industry offers the following co-products: velvet, hard antler, tails, pizzles, sinews, and tendons.

While the industry in general has been reluctant to embrace quality control and assurance standards there has been a visible pay off to those producers and processors who have. Increased prices and product support have been the offsetting factors for the additional costs and increased labour involved.

Several downturns have plagued the industry over the past 5 years including severe drought, which decreased herd numbers drastically, and the value of the Asian dollar dropping. Both factors have weighted heavily on the industry but it appears the industry is heading back to a profitable status.

Actual industry values, venison pricing and export numbers were not able to be sourced.

United States

Exact numbers are difficult to track in the United States, although 2003 data suggests about 550,000 deer and 50,000 elk are currently being domestically raised. Deer species include whitetail, mule, axis, fallow and red deer with a few sika as well. The majority of the whitetail and mule deer are raised for harvesting purposes in the US and that is the mainstay of that sector of the industry. Over 144 billion dollars are spent annually in the US hunt market with close to 1/12th coming directly from Texas. Granted not all hunt dollars are spent on harvest preserves but they are a significant contributor. Meat and co product production rarely enters the picture with the demand for quality harvest stock being the driving force. Income from harvest stock far exceeds what the market could bear to support venison production. Some sika, red deer and fallow are being raised for venison but that is simply because the demand from the harvest sector is not as strong for these species.

The United States is becoming a strong target for many of the venison importing countries as this is a large untapped market with very little internal competition as no supply side venison management is currently challenging efforts.

Industry representation consists of various local state associations and also two national entities; NADEFA or North American Deer Farmers Association represents all the various species being raised in the US, while NAEBA or North American Elk Breeders Association represents solely the elk producers. All organizations are voluntary membership and none collect levies or check-offs.

Canada

Exact numbers across Canada can only be estimated as each province regulates the industry within its borders. Regulations vary greatly from province to province with the western provinces being much more stringent. 2004 estimates suggest cervid population to be around 170,000 animals on 2300 farms. 2005 estimates suggest the whitetail population to be around 21,447 animals on 410 farms across Canada, with 5 provinces holding domestic inventories. Mule deer numbers are more difficult to track due to the smaller population size and are generally combined with other species totals.

The current structure of the Canadian industry is comprised of provincial species associations, which in turn can voluntarily belong to a national association. Unfortunately at this time the national association has recently collapsed. While a new organization is underway, apathy throughout the industry makes this an even more challenging endeavour.

Meat and co product market development in Canada has been extremely slow. Limited quantities of venison are being sold in the eastern provinces and the western provinces have only just begun to delve into this market. Red deer in the east and elk in the west have formed co-ops to aid the industry in marketing venison. Most meat sales are geared to white tablecloth restaurants and some product is now reaching Europe due to the valuable tracking system much of the Canadian cervid industry enjoys. Only since the falling of velvet prices due to the Korean and US bans on imported product from Canada has the meat industry even hit the radar screen.

There have been some producers attempting farm gate sales but this type of practice has proven to be difficult and very time consuming with little overall profit being realized. As well, farm gate sales do not lead to long-term viability for overall industry stability. Much of the quality control and assurance that needs to be developed has not been accomplished and venison sales are extremely difficult to track or record. This method does not lead to price stability but rather allows the consumer the pricing advantage.

Co product development other than velvet antler has virtually been non-existent. Most individuals who are trying to market meat and also trying to establish markets for hides, but with hunter harvested wild hides going to the tanneries, prices for domestic hides are minimal.

Slaughter numbers from across Canada for 2002 indicate a total value for cervid meat production in Canada to be $6.2 million. Export is difficult to track due to incomplete numbers kept by the Canadian Food Inspection Agency and the various codes which venison falls under for export. However, there were approximately 60,000 kilograms of deer meat (mainly red deer or hybrids) exported to the United Stated from 2001 to 2003 and 27,000 kilograms of elk meat from 2002 to 2003.

In Alberta the slaughter numbers as of November 30, 2005 are outlined in the chart below:

White-Tailed Deer Totals	Federal	Provincial	AB Totals
2000	0	6	6
2001	0	3	3
2002	0	394	394
2003	0	398	398
2004	0	150	152
2005	0	73	73

Mule Deer Totals	Federal	Provincial	AB Totals
2000	0	6	6
2001	0	0	0
2002	0	23	23
2003	0	54	54
2004	0	0	0
2005	0	12	12

(Courtesy of Alberta Agriculture November 30/05)

The Alberta Association Position

The *vision* of the Alberta White-tail & Mule Deer Association is to:
Develop a profitable and environmentally friendly sustainable deer industry that contributes positively to the economy and the people of Alberta

The *mission* of the Association is to:
Facilitate the development of the industry in its entirety and inspire confidence in the future of the industry from all key stakeholders while promoting responsible and humane production of whitetail and mule deer in Alberta.

The Alberta White-tail & Mule Deer Association has undergone incredible changes with their vision and mission to help the industry sustain long-term. The new attitude of the Directors and many of the members is to expand all markets and to work towards eliminating the vulnerability of the industry to volatile export markets.

With the change in thinking alone, the ability for the deer industry in Alberta to thrive and prosper reaches new heights. By embracing workable measures into food safety assurance, producers are sure to be rewarded financially. Breaking into the venison market and aggressively pursuing domestic markets for products will be a hard road but the marketplace itself will appreciate and compensate the extra effort.

This report was the first step into discovering where Alberta stands in the world marketplace, where parallel industries have struggled and succeed or failed, and where Alberta needs to begin their aggressive campaign to truly rebuild and restructure domestic deer farming to withstand, ensure and succeed in overcoming volatile export markets.

Clearly there is an understanding of the severity that complacency has brought and clearly the desire for the private community to understand and invest into deer farming has not established favourable results. Therefore, it is up to the industry organization, in order to survive, to take a hard-line approach to tacking the issues head on and with great enthusiasm and vigour. The AWMDA needs to become the leaders of the industry and turn deer farming in Alberta from hobby to business. Encouragingly, this appears to be the attitude from the current Board of Directors and many of the active members.

Venison & Co Product Markets

Venison markets tend to be established on a geographical or cultural basis. North American markets view game meat as peasants' food largely due to the traditional methods in which venison is harvested. Much of the venison that has been sampled in North America originated from wild hunted stock and, depending on the hunter and their processing knowledge, may leave an unfavourable taste in many palettes. Animals hunted in the wild tend to be in rut, chased for a period of time and very often poorly handled throughout processing. All factors which contribute to an unfavourable experience.

Alternately the European consumer views venison as a food of royalty, and venison is traditionally served on holidays and celebratory occasions. Venison is a much appreciated and revered alternative to traditional red meats. As well, much of the Asian culture is keenly accustomed to venison although there tends to be negativity towards undomesticated venison. Much of the meat utilized in Europe and Asia is imported from New Zealand and Australia, with a small amount emerging from feral stock, thereby creating the same negative images as North Americans possess.

Numbers reported in 2001 from Canada Census suggest that imports of domestic venison ran at 54,963 kg, or 120,918 lbs or 60.5 tons of deer meat valued at 1,057,820.00 (CDN). These imports went to four provinces at the following rates:

- 45% - British Columbia – (approx 24733 kg: $76,116.99)
- 36% - Ontario (approx 19786 kg: $380,093.59)
- 17% - Alberta (approx 9,343 kg: $179,866.42)
- 2% - Quebec ((approx 1,099 kg: $$21,160.76)

Considering these numbers are from 2001 and the trend for healthier eating has increased, the potential for development of domestic markets are vast.

Co Products of Deer

Health supplements
Traditional Asian treatments rely on the sourcing of natural products to heal the body. Western medicine is currently starting to delve into the uses of natural products to aid the healing of their patients. Research continues to demonstrate that the benefits of some products are scientifically supported. Both avenues, scientific and traditional, pose identifiable opportunities for market success.

Deer Velvet
Composition: Contains calcium, phosphorous, magnesium, zinc, iron, selenium, and potassium. Amino acids including glycine, alanine, araline and glutamic. Also includes, collagen, pantocrin, chondroitin, sulphate, nerotropic properties, myotropic properties, mannoamine, fatty acids, and glycosamineoglycan.
Forms: Dried whole, sliced, ground powder and capsules
Benefits: Stimulates the immune system, promotes growth, improves blood pressure and condition, improves athletic performance, has anti-inflammatory properties, protects against osteoporosis, reduces the negative effects of stress, reduces the side-effects of cancer.

Deer Blood
Composition: High in iron, zinc, manganese, selenium, and copper
Form: Dried powder or capsules
Benefits: Anaemia, lethargy, baldness, menstrual disorders, low blood pressure, blood supplement, treat lower back pain, insomnia, lung diseases, palpitation, improves hair, teeth and skin complexion, and improves physical and mental well being.

Hard Antler
Composition: High in calcium and phosphorous with trace amounts of magnesium, sodium, potassium, barium, iron, aluminium, zinc, strontium and manganese
Form: Ground powder or capsules
Benefits: Natural source of calcium, healthy teeth and bones, growth, preventative for osteoporosis.

Deer Tails
Composition: High in calcium,
Forms: Dried whole, ground powder, and capsules.
Benefits: Stress reduction, joint and nervous disorders, improves immune system, increases metabolism, improves balance, aids in balancing hormones, lowers cholesterol levels, relief of back pain and arthritic pain, improves circulation, aids in the prevention of blocked blood vessels, improves growth of “T” cells, controls growth of tumours, acne treatment, tinnitus, used as a treatment on asthma, and heart disease, improves function of adrenal glands thus enhancing or improving sexual performance.

Deer Liver
Composition: Rich in vitamins and mineral content.
Forms: Unable to acquire information
Benefits: Helps prevent senility, aids in recovery after seizure or stroke, helps dandruff and tinea versicolor.

Deer Sinews
Composition: High in nitrogen, calcium and phosphorus, contains some of the same mineral values as velvet, low in fat.
Forms: Dried whole, ground powder and capsules.
Benefits: Used in the treatment of arthritis, joint damage, and overall health, aids in healing joint and muscular disorders and muscular pain, improves circulation of hands and legs, strengthens bones and tendons.

Deer Pizzles & Testes
Composition: High in protein with traces of several minerals.
Forms: Dried whole, ground powder and capsules.
Benefits: Beneficial in stimulating the male sexual drive and overall vigour, contains minerals which can be used by our bodies in circulatory systems – especially the kidneys, increases sperm count.

Deer Heart
Composition: Unable to acquire information
Forms: Unable to acquire information
Benefits: Slows the aging process, reduces stress, thrombosis, embolism, treatment of frostbite, and aids poor circulation.

Deer Heart, Liver and Kidneys, Placenta, and Foetus
Although there is much reference to these products, very little actual data on composition or benefits are listed. One reference to a Chinese Medicine Journal states that eating the corresponding part of a deer will help the patient i.e. consuming the heart will aid the healing of the heart. Market potential for these products is unconfirmed and information is scarce.

Deer Meat or Venison
It is interesting to note that venison or the meat of the deer is listed as a health supplement to increase energy and prepare the body for winter; therefore the meat should be consumed in autumn. Additional information states that deer meat should be used for the following medical conditions; adjust the blood and pulse rate, treatment for weakness and thinness and for lack of milk after pregnancy.

Arts & Crafts
Deer antler, skull plates, dewclaws and toes, hides and de-boned tails (hair) are all utilized in various forms for art and crafts. As well, hunters, fishermen, and outdoor enthusiast all contribute to the market for the above mentioned products.

Deer Urine and Scent Glands
Used by hunters as an attractant for deer during hunting or to cover human scent.

Value of Meat and Co products

Due to the lack of market infrastructure, quality, and consistency standards; the pricing for venison and co products correlates directly to comparative pricing structures dictated by traditional red meats. The Alberta deer industry must find avenues to build market infrastructure and to promote the many attributes of venison and co products.

However, both New Zealand and Australia are experiencing downturns in pricing due to the lower Asian dollar, droughts and supply side management issues. Markets have not been developed to further support their ever expanding industry and this has created a flood of product on the market. This, along with much recent political influence and public support for internally grown product has shaken the venison demand to some extent.

Timing for introduction of a Canadian or Alberta made product would be strongly supported by many segments including food service providers and the general public. Because timing is so critical in the introduction of new products it is crucial the industry work quickly.

Below is a chart demonstrating the value of co products for Australian cervids in 2001.

Item	Red Deer	Fallow Deer	Rusa Deer
Tails ($ ea)	10.00 (8.14 CDN)		1.00 (0.83 CDN)
Pizzles ($/kg)	8.00 (6.50 CDN)	8.00 (6.50 CDN)	8.00 (6.50 CDN)
Sinews ($/kg)	8.00(6.50 CDN)	4.50 (3.66 CDN)	4.50(3.66 CDN)
Blood ($/L)	3.00 (2.44 CDN)	3.00 (2.44 CDN)	3.00 (2.44 CDN)
Heart ($/kg)	3.00 (2.44 CDN)	3.00 (2.44 CDN)	3.00 (2.44CDN)
Liver ($/kg)		2.00(1.66 CDN)	
Kidney ($/kg)		7.00(5.81 CDN)	

(CDN) based on exchange rate of .83 CDN= 1.00 NZD)
Source: Australian Velvet Antler and Deer Co Products, Developing domestic markets: Part A by Chris Tuckwell for RIRDC

Naturally more work will have to be undertaken to determine values for our North American whitetail and mule deer species. The chart below outlines some rough estimates using information gathered by the Pennsylvania State University of the breakdown of raw product and was extracted from and article featured in Deer & Deer Hunting, October 1999t

	Buck	Doe	Fawn
Live weight	160 lbs	140 lbs	100 lbs
Hot carcass weight	88 lbs	77 lbs	55 lbs
Ideal boneless yield	58 lbs	51 lbs	36 lbs
Hide Factor	14 lbs	11 lbs	7 lbs
Blood Factor	8 lbs	7 lbs	6 lbs
Bone Factor	20 lbs	18 lbs	14 lbs

The following chart was sourced from data previously collected by the AWMDA in a report titled The Costs of Producing Venison: The Processors Point of View.
Average processing costs (provincial)

	Buck (88lbs)		Doe (77 lbs)		Fawn (55 lbs)	
Kill Fee Av.	60.00	100.00	60.00	100.00	60.00	100.00
Avg cutting fees	44.00	44.00	42.35	42.35	30.25	30.25
Offal disposal	30.00	30.00	30.00	30.00	30.00	30.00
Producer payment @ 2.00/lb	176.00	176.00	154.00	154.00	110.00	110.00
Cost of saleable meat	310.00	350.00	286.35	326.35	230.25	270.25
Breakeven Average	5.34	6.03	5.61	6.39	6.39	7.51

Several trials for meat yields and quality were conducted at the Lacombe Research Facility over a three-year period and utilizing 68 cull animals from various herds across the province. Recommendations suggest pre-slaughter management strategies to reduce stress as well as post mortem carcass management to achieve tender and quality product.

Live weights ranged from 38.0 to 86.0 kg with carcasses yields averaging 57.3% of final (shrunk) live weight. Initial trials demonstrated that farm raised whitetail deer produce carcasses with very high proportions of lean meat with traditional pre-slaughter management and chilling times producing very tough product.

More studies will need to be conducted which examine various feed regimens, seasonal effects, stress etc to ensure a quality product is being delivered to consumers.

The following tables are sourced from the trails conducted at the Lacombe Research facility lead by Wayne M. Robertson, Allan L. Schaefer, Andre Fortin and Stan Landry

Primal cut portions (g/100g) of whitetail deer carcasses (n=33)

Primal Cut	Mean	Stderr	Minimum	Maximum
Hind quarter				
Round	31.26	0.31	27.23	33.70
Sirloin butt	7.71	0.10	6.98	9.17
Shortloin	8.72	0.11	7.46	10.09
Flank	2.79	0.07	2.21	3.73
Front quarter				
Chuck	30.52	0.29	27.50	36.54
Rib	8.08	0.11	6.96	9.22
Brisket	2.20	0.10	0.99	3.58
Shank	4.09	0.07	3.41	5.01
Plate	4.62	0.13	3.04	6.36

Weights* of body components and viscera of whitetail deer carcasses (n=32)
*Proportion of plant weight (g/100g)

Component	Mean	Stderr	Minimum	Maximum
Hide	7.86	.015	5.95	9.28
Head	3.84	0.06	3.19	4.58
Feet	2.61	0.04	2.15	3.12
Liver	1.68	0.03	1.36	2.08
Heart	0.79	0.02	0.60	1.12
Spleen	0.23	0.01	0.12	0.34
Lungs & Trachea	1.6	0.05	1.24	2.09
Reproductive Tract	0.63	0.05	0.17	1.26
Full Stomach	9.90	0.35	5.62	14.06
Full Intestines	6.41	0.28	2.85	8.91

Below is another chart on the breakdown of cut yields from a processing company in Michigan.
Source: www.best-venison .com (Conversion rates are based on 1US dollar = 1.15 CDN dollars)

Venison Carcass Yield Per 100#			
Dressed Weight	122	.	
Carcass Weight (82%)	100	.	.
Description	Pounds per CWT (Yield %)	Avg. Price per Pound	Total Retail Value
Front Shoulder & Neck Cuts			
Mock Tenders	0.96	(10.24) 8.83	(9.83) 8.48
Top Blade Steaks	0.92	(10.24) 8.83	(9.44) 8.14
Shoulder (Arm) Steaks	2.04	(10.24) 8.83	(20.87) 18.01
Bnls Neck Roast	2.76	(10.24) 8.83	(28.29) 24.41
Bnls Chuck Roast	2.53	(10.24) 8.83	(25.88) 22.33
Loin Cuts			
Bnls Rib Roast	1.67	(14.51) 12.52	(24.19) 20.87
Loin Chops	4.20	(18.32) 15.81	(76.90) 66.34
Top Sirloin Steaks	1.45	(14.44) 12.46	(20.96) 18.08
Tenderloin	1.08	(26.43) 22.80	(28.50) 24.59
Round Cuts			
Sirloin Tip Steak	4.73	(13.53) 11.67	(63.93) 55.15
Top Round Steak	3.84	(13.77) 11.88	(45.66) 45.66
Eye of Round Steak	1.29	(13.31) 11.48	(17.23) 14.86
Bottom Round Steak	2.53	(13.31) 11.48	(33.66) 29.04
Miscellaneous Cuts			
Stew Meat	2.25	(6.43) 5.55	(12.51) 12.51
Ground Venison	43.18	(5.74) 4.95	(247.74) 213.72
.			
Total Boneless Edible Yield	75.43	.	.
Bones & Waste	24.57	.	.
.			
Total:	100	.	(674.72) 582.18

Retail Price Farm Raised Venison						
Front Shoulder & Neck Cuts	Average price per pound	1	2	3	4	5
Mock Tenders	(10.24)8.83	(15.07)13.00	(10.43)9.00	(9.27)8.00	(7.71)6.65	(8.69)7.50
Top Blade Steaks	(10.24)8.83	(15.07)13.00	(10.43)9.00	(9.27)8.00	(7.71)6.65	(8.69)7.50
Shoulder (Arm) Steaks	(10.24)8.83	(15.07)13.00	(10.43)9.00	(9.27)8.00	(7.71)6.65	(8.69)7.50
Bnls Neck Roast	(10.24)8.83	(15.07)13.00	(10.43)9.00	(9.27)8.00	(7.71)6.65	(8.69)7.50
Bnls Chuck Roast	(10.24)8.83	(15.07)13.00	(10.43)9.00	(9.27)8.00	(7.71)6.65	(8.69)7.50
Loin Cuts						
Bnls Rib Roast	(14.51)12.52	(16.23)14.00	(11.12)9.60	(9.27)8.00	(23.18)20.00	(12.75)11.00
Bnls Loin Chops	(18.32)15.81	(16.23)14.00	(12.17)10.50	(17.39)15.00	(23.84)20.57	(22.02)19.00
Bnls Top Sirloin Steaks	(14.44)12.46	(16.23)14.00	(11.01)9.50	(15.07)13.00	(15.42)13.30	(14.49)12.50
Tenderloin	(26.43)22.80	(16.23)19.00	(23.18)20.00	(17.39)15.00	(46.36)40.00	(23.18)20.00
Round Cuts						
Sirloin Tip Steak	(13.53)11.67	(15.07)13.00	(11.01)9.50	(15.07)13.00	(13.37)11.88	(12.69)10.95
Top Round Steak	(13.37)11.88	(15.07)13.00	(11.01)9.50	(15.07)13.00	(13.37)11.88	(13.91)12.00
Eye of Round Steak	(13.31)11.48	(15.07)13.00	(11.01)9.50	(15.07)13.00	(13.37)11.88	(11.59)10.00
Bottom Round Steak	(13.31)11.48	(15.07)13.00	(11.01)9.50	(15.07)13.00	(13.37)11.88	(11.59)10.00
Miscellaneous Cuts						
Stew Meat	(6.43)5.55	(5.22)4.50	(4.64)4.00	(6.95)6.00	(7.82)6.75	(7.53)6.50
Ground Venison	(5.74)4.95	(5.22)4.50	(3.48)3.00	(6.38)5.50	(7.82)6.75	(5.80)5.00
-						
Average price per pound:	(12.73)10.98					

The same processor has posted on his internet site the above chart and sourced the information from 5 different companies which sell venison on the internet. The table explains the potential value of a farm-raised venison carcass. (Conversion rate of 1 US dollar = 1.15 CDN dollars)

Table shows pricing based on NZ and US market averages from three internet companies and current sources of buyers within Canada. Prices are retail with the exception of skulls, capes and hard antler.

Product	Preparation	Pricing
Deer Pizzle	Whole or ground (uncapsulated)	.88 per gram
Deer pizzle	Capsules	.48 per capsule
Deer Tails	Whole	1.52 per gram average
Deer Tails	Capsules	.48 per capsule
Deer Sinew	Whole	.12 per gram
Deer Blood	Capsules	.37 per capsule
Deer Blood Wine	N/A	N/A
Deer Calcium	Capsules	.18 per capsule
Deer placenta	N/A	N/A
Deer foetus	N/A	N/A
Internal organs	N/A	N/A
Deer dew claws	Cleaned	.50 each
Deer tails (outside hair)		5.80 per tail
Deer toes		1.00 each
Deer skulls		25.00 each
Deer full cape		125.00 each
Deer capes	20” neck minimum	25.00 each
Hard Antler	Small shed & velvet cut	$1.00 - $7.00/lb

Opportunities

The largest opportunity is the Association’s willingness to forge ahead and to begin to tackle the issues head on. With the hiring of an Executive Director who is familiar with the industry, the ability to have continuity and consistency has greatly increased. The Board has realized the position of the Alberta deer industry in global measures and has begun to align themselves with the new thinking. Work has commenced to devise a 5 year business plan to bring the industry in line with international market standards. Many of the challenges will still need to be ironed out but are surmountable.

The opportunities available to market venison and co-products are substantial. The majority of the animal can be utilized and markets are established largely due to the efforts of New Zealand and Australia.

One of the most intriguing opportunities lies along the western border of Alberta and has been dubbed the Rocky Mountain corridor. The Rocky Mountain corridor is world renowned for adventure, breathtaking beauty and wildlife galore. It is in these mountains that lies the phenomenal potential to capture the true value of venison. Thanks to the ongoing promotional efforts of some of Alberta’s finest dining establishments, Rocky Mountain cuisine has been adopted to include venison. Tourists for all over the world come to experience all that this area has to offer. Much of the tourism stems largely from Europe and Asia, countries which are accustomed to venison and venison products.

Statistics from Alberta Economic Development suggest that 2.7 million person visits were made to the Rockies in 2003 and generated $888 million in consumer spending. Seventy percent of overseas person visits to Alberta were to the region. Pleasure was the most common reason (73%) for the visit. Of the overnight trips, $178 million was spent on food and beverages. If the industry becomes aggressive with the quality and consistency of their product and promotes the nutritional benefits of venison while bringing in the adventuresome and natural perception of venison, the venture is sure to be a success.

The neighbouring province of Saskatchewan has a provincial inventory similar to that of Alberta's. If protocols can be negotiated to allow Saskatchewan deer into Alberta for provincial slaughter the market can grow even more quickly.

Opportunities	Strategies	Expected Outcomes
Canadian Rocky Mountain corridor	Work with chefs and dining establishments to implement a seasonal menu featuring venison. Structure demand to correlate to supply Ensure quality product is sold in order to secure the premium pricing afforded by the establishments in this area. Prepare information packages on preparation, nutritional qualities etc for circulation to chefs and their clientele Introduce organ meat preparation to cater to European and Asian clientele who are already accustomed to product i.e. liver pate, kidney, heart etc. Work with specialty stores to offer co products and value added meat selections such as smoked meat and jerky. Investigate Asian and European cuisine and traditions and develop products around same	Slow and controlled growth with premium pricing paid for product. Additional uses for organ meat etc that is more difficult to market. Utilization of secondary cuts through custom value-added product such as sausage and jerky Familiarity of cultures to outline specifications for products development
Pet food	Cultivate relationships with pet food manufacturers to include venison and possibly other co products as health supplements Research if lesser quality product, organ meat and offal could be utilized through pet food manufacturing	Utilization of potentially lesser quality or older animals. Utilize co products, organ meats, and offal

Back to Beginnings	Develop promotional efforts which highlight that venison was the traditional meat of pioneers and forefathers. Must also demonstrate healthy attributes and naturally raised product.	Re-acquaintance of consumers to former diet staple. Establish attributes to health conscious consumer along with naturally raised product.
Demand already exists	Develop promotional efforts to supplement the already existing demand for imported venison with Alberta-grown product	Allows industry steady and controlled growth versus facing supply side issues.
Government support	Utilize the current trend to support new and existing product development and value-added product development funds and initiatives	Improved quality, knowledge and assurance for consistent product Allows industry more stability and additional market access. Stabilizes growth and allows for expansion.
Saskatchewan Inventory	Develop protocol to allow domestic deer from Saskatchewan to enter Alberta for provincial slaughter	Larger inventory of animals Increased market share ability
Dedicated producer base remains	Draw on the forward thinking and strength of remaining producers who are fully committed to the industry	Positive and encouraging network for new producers, Board, and consumers Leadership of the industry in developing new markets
No negative images	By building the industry from the ground up with high QA & QC standards, the set backs suffered by many industries will not affect the Alberta deer industry	Positive experiences for all food professionals and consumers.
Ability to utilize much of the animal	Develop products which allow for the consuming or utilization of the entire animal	Increased profitability Increased marketability
Experience	Gather information from producers and examine parallel industries to determine pitfalls and successes	Ability to move forward more quickly.

Challenges and Strategies

It is very comprehendible to overcome the many challenges and obstacles facing the Alberta deer industry in relation to market development for meat and co products. A focused a gradual effort to uphold the current producer base and progressively introduce and gain new support from investment into the industry by new producers and the processing and marketing community is essential.

While compiling research for this project, it became apparent that many of the challenges that faced the industry across Canada 15 years ago are still present today. Producers themselves and their respective industry organizations have done little to address or eliminate these challenges due to the lucrative nature of the markets during the early years and lack of funding and overall support from industry and some government levels. Fortunately many of these hindrances are being alleviated and support from both industry and government is forthcoming.

Of major intrigue were the studies conducted for the Australian deer industry in 2000 to 2003. Interestingly, the Australian deer industry has been undergoing many of the same challenges that the Canadian industry has. In reviewing these studies it became very apparent where the Alberta deer industry needs to focus its efforts in addressing market challenges to develop a strong and stable meat and co product industry and how to effectively sustain and grow this industry so that producers see an immediate and sustainable profit. This in turn gives producers the confidence that if animals need to be dispersed due to industry or on-farm mishap; the avenues are available. Demonstrating potential profit and controlled growth patterns will encourage new players in the industry such as producers, processors, marketers and consumers. Increasing the number of interested parties will allow the overall industry to grow and will accommodate increased potential for additional market development.

In relation to the development of a venison and co-product market for the Alberta deer industry there are obvious challenges, however there is significant opportunity to diminish or eliminate those challenges with carefully instrumented strategies.

Challenges	Strategies	Expected Outcomes
Industry needs to be recognized as an agricultural entity to allow for expansion and increased market access	Increase communication and awareness of the industry as agriculture versus captive wildlife Increase development and sales of consumable products Increase negotiations with trading partners on the basis of an agricultural commodity Work with governments (provincial, federal and international) to acknowledge farm-raised product as an agricultural commodity Lobby to be regulated as an agricultural commodity much the same as traditional livestock Continue to inform government and other regulators of our markets and the diversity of products marketed i.e. not just meat. Lobby against having anti-game farming activists as stakeholders in market ventures.	Increased market access to jurisdictions outside Alberta Decrease in unnecessary regulation Recognition of new and value-added markets and non-traditional market avenues. Decreased impact of anti-game farm activists Gradual acceptance from general public that industry is an agricultural commodity

Challenges	Strategies	Expected Outcomes
Lack of support for primary market legalization in Alberta	Continue to promote deer products and deer farming as part of agriculture. Continue educational efforts regarding the deer industry and its markets Increase awareness of profit losses of producers due to lack of access to markets. Promote the use of harvest preserves as an education tool and tourism market. Lobby to utilize co products from on-farm slaughter i.e. hides, skulls, etc. Develop strategies to work with organizations who support the implementation of CHPs to help spread the message	Increased awareness and recognition of industry and its markets. Increased opportunity to expand the harvest industry and the number of animals which can be accessed. Less reliance on volatile export markets Expansion of opportunities for youth education in relation to hunting, safety, animal welfare and wildlife population control Stabilize the industry and allow for increased profitability and increased tourism revenue for Alberta Increased testing and surveillance within Alberta due to animal end destination in Alberta

Challenges	Strategies	Expected Outcomes
Lack of support for Association from producers: members do not see value in belonging.	Devise a business plan and market strategy to demonstrate to producers the vision of the AWMDA for the future of the deer industry Develop marketing avenues for producers and continue to negotiate market access issues and regulation issues which impede trade. Create and implement stronger communications plan with the membership, general public and governments. Demonstrate the need for industry input into government policy for betterment of the industry. Develop database of information for members to access and to share personal experiences. Encourage members to become more active and maintain ownership of the Association Initiate more opportunities such as a marketing entity that will alleviate the need for every producer to market their own products. Liaison with producers to learn what they want, what they need and where efforts could be most effective. Create more avenues in which members can share information and more events where members can interact.	Increased support for the Association. Increased confidence in the industry and better understanding of industry needs Strength in numbers – increased membership Increased revenue for the Association to effectively carry out the wishes and needs of the industry and the members

Challenges	Strategies	Expected Outcomes
Lack of production information	Survey producers to determine where members feel more research needs to occur. Gather database of easily accessible information for producers Create information packages for all stages of production – introductory to experienced Host workshops to relay information to producers	Decreased production costs, better management practices, increased profitability. Increased value in products when managed more effectively. Better nutrition and genetic gains for animals Increased profitability for the industry.
Lack of producer understanding of consumer demands	Gather and distribute information in relation to deer products and other livestock products and quality assurance measures and make available to producers Gather information on trade requirements domestically and internationally. Share information with producers. Gather information on successful livestock products or brands such as Cervena and share information with producers.	Demonstrates the need for quality control and assurance programs and measures. Demonstrates the potential for increased profitability and consumer confidence.

Challenges	Strategies	Expected Outcomes
Regulations too onerous	Work with government to combine current legislation to alleviate unnecessary paperwork. Work with government to combine a producer handbook on regulations in an easy to follow and easy to understand format. Include regulation information in production workshops Develop communications to ensure producers are aware of the marketing advantages that become accessible when diligent paperwork is completed. Work with governments to ensure recognition of producers input.	Increased producer acceptance of need for information gathering. Increased compliance due to knowledge and understanding Increased compliance allows for increased trading ability Increased confidence in the industry
No infrastructure	In the absence of private enterprise involvement, the Association must find ways to pick up the slack i.e. sales, marketing, promotion, negotiation with processors etc.	Increased growth and confidence in the industry. Increased awareness of the industry and its products. Increased stability in pricing, product consistency and quality and producer profit. Increased uniformity from farm to farm. Development of additional markets and marketing opportunities.

Challenges	Strategies	Expected Outcomes
Decreasing herd inventory decreases opportunity to access many markets	Develop niche markets that allow for steady and sustainable growth of the inventory. Develop venison and co-product niche markets targeted at the Asian and European cultures i.e. Rocky Mountain corridor Work with governments to develop protocols which will allow Alberta to draw from other jurisdiction inventories. Develop information packages which clearly explain the industry, the vision of the Association, and the regulations surrounding deer production	Stabilizes industry and increases confidence in the future of deer farming which in turn will allow for the expansion and increase of provincial herd numbers. Increased profitability and sustainability Allows industry markets to grow slowly and controlled Increase supply side management issues Increase the knowledge base for new producers entering the industry to ensure “buy-in” of industry goals
Lack of processing capacity	Work with processors and encourage them to buy into the industry and its vision. Develop initiatives to encourage processors to accommodate deer slaughter Work with government to make regulations more in-line with other livestock species. Liaison with processors to ensure they understand the industry and its market potential	Increased and strengthened processing capacity
Lack of processor knowledge on handling deer and carcasses	Develop training courses, manuals and videos on methods of handling for least amount of stress etc. Develop meat cutting charts which include both North American cutting techniques as well as European techniques. Increase research on all aspects of processing	More consistent product Less stress on animals, less injury, more humane. Increases desirableness of product Increased consumer satisfaction

Challenges	Strategies	Expected Outcomes
Slaughter pricing too high	Work with processors to understand profit margins of industry Devise a strategy to deal with offal disposal in cost effective manner	Increased profitability and value of venison industry Increased support from producers to pursue venison production
CWD testing	Encourage government to continue to support testing of slaughter until markets are developed and stable. Negotiate with government for more efficient testing turnaround times. Work with processors to ensure slaughter capacity is not jeopardized by lack of holding facilities.	Increased consumer confidence. Increased market access Increased opportunity for fresh meat sales. Increased ability to market co-products.
Lack of grading/classification systems/ quality assurance	Research feeding programs and techniques to determine effect of nutrition on venison and co-product production Work with government to develop body condition scoring and carcass classification systems. Develop criteria in which to base quality assurance measures. Continue to work with government and tracking of inventory etc Develop and host workshops and information on benefits of QA programs and increased export market access. Inform producers of increased profit potential	Increased consumer satisfaction and confidence Increase market opportunities Increased ability for profit Increase export market access Establish ability to compete with brands such as Cervena
Co product efficacy testing	Develop research programs to determine efficacy of co-products	Increased marketability and potential profitability Increased consumer acceptance and buy in Increased potential for profit.

Challenges	Strategies	Expected Outcomes
Meat yield	Research nutrition and other factors to determine most desirable characteristics for venison production and best cutting methods Develop value-added products which utilize other meats such as pork, salmon etc to manage shortage in supply of venison	Increased potential for profit Increased meat yield on venison production animals Increased ability to expand product for markets
Lack of readily accessible marketing	Develop marketing entity which is Association owned and set standards to ensure quality and consistency	Increase marketability Increase exposure of products Control supply side management issues when working cooperatively Allows for profits to be reinvested back into industry research and promotion Increase ability to market all products and set standards Allows for producers to get back to production and creates an additional avenue for marketing
Food Professionals	Review surveys completed over past few years to determine quality and consistency the chefs require. Build product to suit needs of food professionals. Prepare information packages for chefs and purchasers. Develop recipe ideas, preparation information and workshops to familiarize with product Prepare information for restaurant clientele Focus on high end restaurant professionals for prime cuts.	Increase demand for venison products Recover premium prices from primary cuts and introduce secondary cuts Increase awareness of product availability. Increase support for “Alberta-grown” product

Challenges	Strategies	Expected Outcomes
Consumers	Prepare information packages for consumers that includes nutritional information, preparation information, easy recipe suggestions, and product safety information Develop specialty preparations that can be sold in easy to prepare selections Develop information on co-product uses and benefits as well as efficacy ratings Develop "Back to Beginnings" promotion to create a realization that venison was the mainstay of our forefathers	Increase exposure and familiarity to product Creation of consumer friendly, convenient product Decrease bad experiences and chance of bad experience through improper handling Increase acceptance of product
Specialty retail stores & health food stores	Work with retailers to develop products which are desirable and marketable to their clientele. Focus on specialty stores for already prepared selections such as sausage, jerky etc. Create promotional material to accompany product to teach consumers of the benefits and create awareness	Increase marketability and profit potential of secondary cuts and co products

Recommendations

By addressing the challenges of supply side management, quality control and assurance, and consistency issues, the timing for introduction of Alberta-grown venison is ideal. Many chefs are now exploring the advantages of promoting regional cuisine of which venison is a perfect fit. Promoting opportunities to grow this concept through projects such as Dine Alberta will allow the industry to capitalize on the unique nature and characteristics of domestically raised venison. Utilization of organ meat for pates, and delicacies such as kidney, liver and heart which are enjoyed in many European and Asian countries will bolster the value and utilization of a carcass.

Programs and educational material must be developed to allure all sectors of the supply side chain to understand and accept the requirement for quality in all stages from production to processing. Continued research must be a priority to constantly improve the product and become a market leader and to ensure successful competition with New Zealand and Australian product. It cannot be stressed enough that quality, consistent product will be significantly easier to market. Alternately poor or inconsistent product will bring a quick and guaranteed end to the venison industry.

Development of a buyer oriented marketing entity will afford producers the luxury of not having to market their animals and will allow industry to fulfil its commitment to consumer satisfaction. Development of a strong and stable base market the industry will be confident to expand their operations and will potentially allow the negotiation for slaughter to be considered as part of surveillance efforts for disease monitoring and surveillance.

Through the marketing entity industry will move towards the opportunity to accumulate co products and will allow the industry to begin to capitalize on the revenues from these products. Many of the buyers who are interested in co products are looking for large amounts and are willing to pay decent dollars. Taking this concept even farther will be the eventual ability for the marketing entity to negotiate processing to further value-add the product; allowing ever greater returns and exposure.

Profit and stability are the main factors that will be examined by new producers, investors, and private enterprise. With the development of a market for venison animals, the industry will initiate new dollars and more expertise into domestic deer ranching. Support for new and interested producers and accurate information availability will be key to growing the industry and attracting producers and investors who understand the industry, the risks, and the opportunities. Ensured knowledge of new producers will bring stability, ingenuity and creativity to explore new and untapped market potential.

With continued growth the industry will become more recognized with the general public and will be more widely accepted as an agricultural entity. Once the mindset begins to change, the ability to negotiate to re-align the industry with more traditional agricultural practices will become easier and more palatable to government.

Alignment of the industry with traditional livestock policies will afford the industry the opportunity to grow and flourish. The ramifications of volatile export market closures will become less devastating and prospects for overcoming access issues should increase.

The Alberta White-tail & Mule Deer Association must compile a comprehensive strategy and tactical plan in order to ensure objectives are met and that the producers of Alberta are informed through effective and consistent communication. The Directors must ensure the plan is carried forward with consistency by making certain that new Directors are committed to the same objectives and informed of the goals of the organization.

These strategies must address not only the risks but also capitalize on the opportunities and advantages. Strong leadership within the Association is critical and deviation from the intended plan could be disastrous. The domestic deer industry has incredible potential and the ability to catapult Alberta's agriculture industry to new and previous thought unattainable levels.

No matter how careful and well thought out these plans and strategies are or how beneficial they could become, the one factor that will bring demise to the entire project is lack of funding to hire the necessary people to perform and carry out the work. A quality person or persons who understands the industry and has the time to work on and be responsible for the completion of the plan is critical. Volunteer organizations are wonderful for overseeing projects, but the actual labour intensity of these strategies is overwhelming to a volunteer group. Provisions must be found to be able to hire the necessary resource people to carry out the wishes of the Board and to ensure that there is continuity and that the vision remains focused and shared among the stakeholders.

The Alberta deer industry is certain to not only recover but prosper once the products and markets are developed to secure the baseline segment of the industry. The roadmap has been draw, now the building must begin.

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