The Economic Impact of the Wisconsin Cervid Industry

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PREPARED FOR

Whitetails of Wisconsin (WOW)

Wisconsin Commercial Deer and Elk Farmers Association (WCDEFA)

Wisconsin Deer and Elk Farmers Foundation

Cervid Livestock Foundation

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A number of state officials and other experts provided background information, insight or feedback in preparation of this report and we would like to thank them for their time. Their inclusion here does not suggest any formal endorsement or sanctioning of this report, and any mistakes included in the report are solely the author's.

Dr. Richard Bourie, CWD Program Manager, Animal Health Division, Wisconsin Department of Agriculture, Trade and Consumer Protection; Benjamin Miller, Associate Dean, University of Wisconsin, College of Agricultural and Life Sciences; Scott Craven, Wildlife Biologist, University of Wisconsin-Extension; Peter Dunn, Wisconsin Department of Natural Resources.

Data on Wisconsin's deer and elk farms was gleaned primarily from two sources: (1) responses to surveys distributed to Wisconsin deer and elk farmers in the summer and fall of 2010 by John Keckhaver Government Relations and Analysis, LLC, and (2) the U.S. Census of Agriculture, conducted every five years—the most recent occurring in 2007. Specific farm information included in the report derives from the survey responses unless otherwise noted. Surveys were sent to over 600 cervid farming operations in the state and 125 responses were received—for a response rate of 21 percent.

A 2006 report by the Wisconsin Legislative Audit Bureau provided background information on Wisconsin's response to Chronic Wasting Disease. The full text of that report is available at http://www.legis.state.wi.us/ lab/reports/06-13full.pdf. Another useful reference was a 2007 study, Economic Impact of the United States Cervid Industry, conducted by the Agricultural and Food Policy Center at Texas A&M University, available at http://www.afpc.tamu.edu/pubs/ 2/480/rr-2007-04.pdf.

AUTHOR'S NOTE

Other than being retained to complete this evaluation, I have no affiliation with any of the organizations commissioning this report, nor with any cervid farming operations. It has been a pleasure examining the state of this niche agricultural contributor, however, and it is clear that the industry and those men and women engaged in cervid farming have proven resilient, weathering the serious storm of Chronic Wasting Disease over these past eight years. It is also clear that the industry has stabilized and that further growth appears on the horizon.

John Keckhaver

Executive Summary

Cervid farming in Wisconsin is an important agricultural niche industry valuable to local rural economies around the state. After contraction due to the discovery of Chronic Wasting Disease in the state's wild and farmed deer populations in 2002, the industry has now stabilized and is poised for future growth.

Wisconsin's Cervid Industry

- Wisconsin ranks fourth nationally both in the number of commercial deer and elk farms as well as the number of livestock sold.
- The first deer farm was licensed in Wisconsin in 1929 by the Department of Natural Resources.
- There were 604 total deer and elk farms in Wisconsin in 2009.
- The 2007 U.S. Census of Agriculture found Wisconsin had a total of 452 commercial deer and elk farms (defined as having over $1,000 in annual sales).
- Commercial deer farms are located in 60 of Wisconsin's 72 counties. Commercial elk farms are located in 55 counties. All but four Wisconsin counties contain a commercial deer or elk farm, most contain both.
- The average cervid operation in Wisconsin protects 69 acres of land.

Economic Impact

- Average sales reported by cervid farms in 2009 were $62,047.
- The Wisconsin commercial cervid industry boasts an estimated $28 million in annual statewide direct sales.
- The total economic output stemming from the cervid industry in the state is an estimated $71 million.
- 83 percent of all expenditures made by cervid farms in 2009 were paid to in-state suppliers.
- The cervid industry supports an estimated 1651 jobs in the state (608 full time and 1043 part time).

Future Growth

- Forty-three percent of Wisconsin cervid farmers expect to increase the number of cervids stocked on their farms in the near future.
- Twenty-six percent expect to increase the acreage used to support their cervid operations.
- Fifty-two percent of Wisconsin cervid farmers expected to increase their sales in 2010 over 2009 figures.

An Introduction to Cervid Farming

Cervid farming—perhaps a term you have not heard of—has been a part of Wisconsin's strong agricultural industry for decades. *Cervidae* include Elk, Fallow Deer, Mule Deer, Red Deer, Reindeer, Sika Deer and what Wisconsin residents are most familiar with, Whitetail Deer (Whitetails). Cervids are farmed for numerous purposes, including: venison production, deer and elk watching/tourism, breeding, and private hunting, as well as other commercial activities such as the production of velvet antlers and urine (a product sold to hunters as a deer attractant).

The first deer farm was licensed in Wisconsin in 1929 by the Department of Natural Resources. Since that time the industry has grown tremendously, with over 600 licensed deer and elk farms in Wisconsin in 2009. These range from small hobby operations with only a few animals to much larger commercial farms covering hundreds of acres and over 1,000 deer.

Farmers have been encouraged over the years to include cervids as a way to utilize marginal land that is not well suited for the farming of other animals or crops as well as to diversity their overall operations. Most cervid farms are small agricultural businesses. Over time demand for the wide variety of cervid-related products and services has transformed the practice into an important agricultural niche industry in the state—one that is particularly important in the state's rural communities.

Cervid Farming in Wisconsin

Widespread and Diverse

Commercial deer farms are located in 60 of Wisconsin's 72 counties according to the 2007 U.S. Census of Agriculture. Commercial elk farms, nearly as prevalent, are located in 55 counties. All but four Wisconsin counties contain a deer or elk farm—most contain both. The table below shows the Wisconsin counties with the most deer and elk farms, totaled. The average deer farm includes 187 deer. Those farming elk average 33. Overall, the average Wisconsin cervid farm contains 72 animals. The typical Wisconsin cervid farm has been in operation for 12 years.

Wisconsin Counties with Most Deer and Elk Farms, 2007

RANK	COUNTY
1	Taylor (23)
2	Marathon (21)
3	Manitowoc (19)
4	Vernon (17)
5	Clark (16)
6	Waupaca (15)
7-10	Brown, Marinette, St. Croix, Wood *Tied at 14 farms*

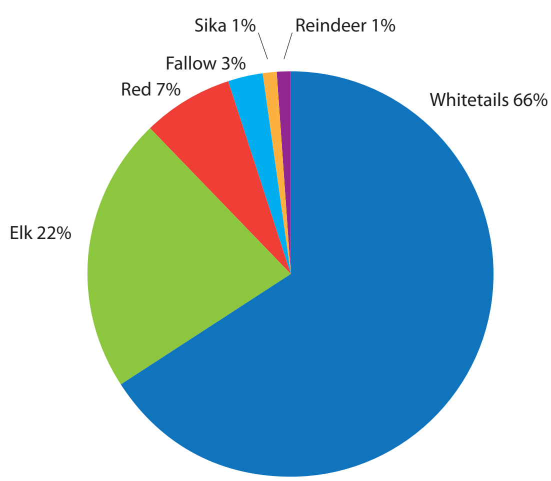
The map to the left indicates the widespread nature of registered deer and elk herds throughout the state. While there were 604 deer and elk farms in the state in 2009, not all of those are considered "commercial operations" (though they all incur costs associated with their operations, such as feed, maintenance, etc.). The latest figure we have for the number of commercial deer and elk farms in the state is the 2007 U.S. Census of Agriculture which listed Wisconsin as having a total of 452 commercial deer and elk farms.

In addition to the geographic spread of cervid farms throughout the state, a key feature of the industry is the diversity of the cervids farmed. As seen in the chart below, a wide range of cervids are farmed here, though Whitetails clearly dominate.

Deer Keeper Registration Locations

Source: Source: Dr. Richard Bourie, Wisconsin Department of Agriculture, Trade and Consumer Protection as presented at the Wisconsin Commercial Deer and Elk Farmers Association Annual Meeting on February 13, 2010.

WIsconsin Farmed Cervids by Type



The Industry's Economic and Employment Impact

Cervid farms provide a long list of products and services to consumers. For example, cervid meat products are used in restaurants around the state. Many deer hunters travel to Wisconsin every year to hunt in its 63 private hunting preserves which are stocked with animals from the state's cervid farms. Velvet antlers produced in Wisconsin are used for medicinal purposes throughout Asia as well as for craft and trophy purposes. Deer urine, widely used by hunters as a deer attractant, is sold by many cervid farms. Recently, several cervid farms have combined their deer and elk farming operations with lodging establishments and are creating a unique tourism experience for guests.

The table below lists the various services and products offered by commercial deer and elk farms and the percentage of the state's cervid farms that include each.

Cervid Product/Service	% of Farms
Antlers	60
Breeding Stock	56
Hunting	40
Deer/Elk Watching	38
Venison	38
Semen	24
Crafts/Hobby Products	24
Hides	19
Shooter Bucks	12
Urine	6
Lodging/Dining	6

Average 2009 sales for those farms reporting sales figures were $62,074. Extrapolating from the survey responses and the U.S. Census of Agriculture 2007 data on commercial farms in the state suggests the Wisconsin cervid industry boasts an estimated $28 million in annual statewide direct sales.

Those funds then have a "multiplier effect" on the economy because some of those dollars are then paid in wages, those wages are spent, taxes are paid, and so on.

A common cervid industry economic multiplier cited by numerous sources including the 2007 national report on cervid farming by researchers at Texas A&M University is 2.55. In other words, in addition to the direct economic impact of $28 million, the industry creates an additional economic impact of approximately $43.4 million, for a total economic output stemming from the industry of $71.4 million.

Cervid farmers purchase a variety of supplies. The table below shows the most common expenditures paid by cervid farms and the average amount paid annually for each. Importantly, 83 percent of all expenditures reported by cervid farms in 2009 were paid to in-state suppliers.

Expenditure	Average Amount Paid Per Farm Annually
Veterinary	$ 2,473
Marketing	2,751
Supplies	3,077
Equipment	6,732
Feed	13,053
Stock	20,551
Labor	21,682
Maintenance	23,427

Cervid farms also create jobs throughout the state. On average, each Wisconsin cervid farm supports .7 full time and 1.2 part time jobs. Statewide, the cervid industry directly supports 422 full time and 724 part time jobs. As with the economic impact detailed above, employment in one industry has positive impacts on the employment in different industries that supply it. The employment multiplier of 1.44 is cited in other cervid impact studies and we use it here to estimate the overall employment impact of the Wisconsin cervid industry. The result is that the cervid industry supports 608 full time and 1043 part time jobs throughout Wisconsin, for a total of 1651 jobs.

Protecting the Farm and Farmland

It may be a well-worn refrain, but the family farm remains an endangered species. Across the United States two acres of farmland are lost to development every minute. In Wisconsin alone, over 550,000 acres of farmland were lost between the 2002 and the 2007 U.S. Census of Agriculture. By diversifying their practices, farmers adding cervids to their operations can blunt the highs and lows associated with farming to some extent. Cervid farming also helps protect open lands that might not be suitable for other farming purposes and which would in some cases be sold and developed, further protecting the state's natural resources. The average cervid operation in Wisconsin protects 69 acres of farmland.

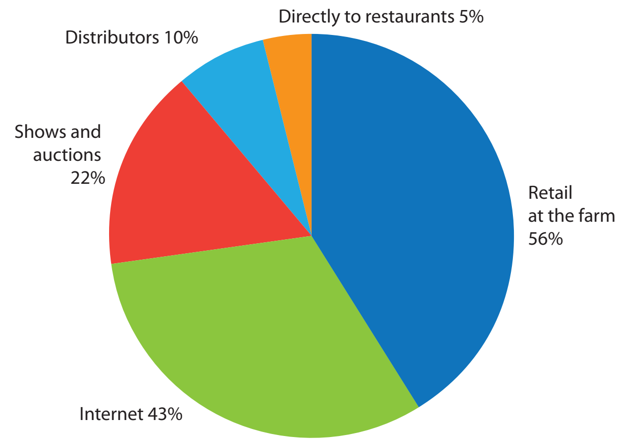
A National Leader in the Industry with More Growth on the Way

Wisconsin is a national leader in cervid farming, ranking fourth behind Texas, Pennsylvania, and Minnesota in the total number of commercial deer and elk farms in operation. Wisconsin also ranked fourth in the total number of deer and elk sold in 2007, behind Texas, Pennsylvania and Michigan.

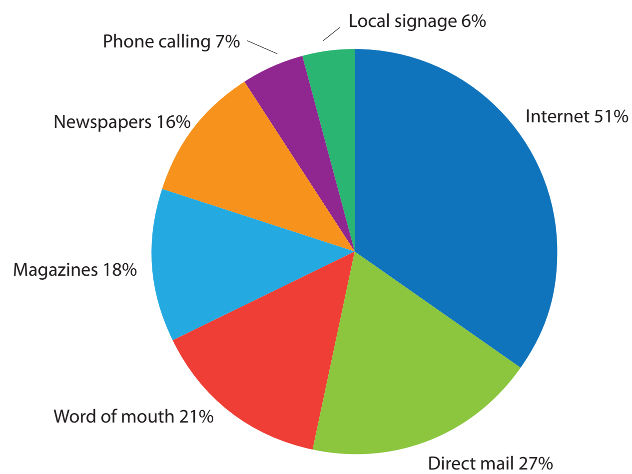
What's more, cervid farmers are optimistic about future growth. Forty-three percent expect to increase the number of cervids stocked on their farm in the near future. Twenty-six percent expect to increase the acreage used to support their cervid operations. And fifty-two percent of Wisconsin cervid farmers expect to increase their sales in 2010 over 2009 figures.

As technological advances make worldwide marketing more possible and affordable, even for small businesses, Wisconsin cervid farmers have an opportunity to reach new markets and increase sales. The charts below indicate the sales and marketing methods currently utilized by Wisconsin's cervid farmers.

Sales Methods, % of Farms



Marketing Methods, % of Farms



Weathering the Storm—Chronic Wasting Disease and What it Has Meant for Cervid Farming

From that first cervid farm in 1929, the industry has grown tremendously. By 1973 there were 365 licensed deer farms in Wisconsin and the number continued to grow, reaching 833 by 2004. But the growth of the industry has not gone unabated. The discovery of Chronic Wasting Disease (CWD) in Wisconsin's wild and farmed deer herds in 2002 dealt a significant blow to the practice, and a number of cervid farms went out of business during the mid-2000s. By 2008 the number had dropped to 624.

Wisconsin responded quickly to the discovery of CWD—a neurological disease fatal to deer and elk—in 2002. DATCP, which regulates farm-raised deer, adopted emergency rules early in 2002 that later became permanent. They required farm owners to register with the agency and to notify a veterinarian if any of their deer have symptoms of CWD. Also, CWD tests were to be performed on each farm-raised deer at least 16 months of age that dies or is killed, with the results reported to DATCP. Restrictions were also placed on which farm-raised deer can be imported into or sold within Wisconsin. Also, DATCP is now required to quarantine farms on which CWD infected deer have been found, and is authorized to condemn the herd and order the animals in question destroyed—a move that some have decried as too rash but which has clearly served to help consumers and regulators alike regain trust in the industry.

The Department of Natural Resources (DNR), responsible for attempting to limit the spread of CWD in wild or free-ranging deer also took an aggressive approach. They closely monitored areas statewide to determine the existence of the disease and then attempted to reduce the deer population in those areas which were considered CWD zones. Attempts to reduce the deer population have included longer deer hunting seasons, requiring hunters to shoot a doe before they shoot a buck, establishing bans on baiting and feeding in 26 counties, creating a number of incentives for hunters to shoot more deer, and finally, utilizing sharp-shooters to kill deer in CWD zones.

These various actions in response to CWD have been costly. To date, approximately $40 million has been spent on attempts to limit the spread of CWD in Wisconsin. According to a 2006 Legislative Audit Bureau examination, "Compared to other states in which CWD has been identified Wisconsin's approach has been aggressive, in part because of the large size and economic importance of the deer herd."

Actions taken by DATCP and the DNR have not always been appreciated by cervid farmers themselves. In fact, many farms surveyed for this report have gone out of business in the last couple of years in their words because of the increased cost and stress of the added regulations imposed by the DNR and DATCP since CWD was discovered. Despite these painful developments brought about by the discovery of CWD and a desire to contain it, it appears the industry as a whole has now stabilized. Greater understanding of CWD along with decisive action by state officials and farmers together has the cervid farming industry back on track. An indication of the stability of the industry is seen when examining the numbers of the various cervids farmed, from 2008 to 2009 as shown in the following chart.

Also, according to the U.S. Census of Agriculture, 2007, 23 percent more deer were sold by Wisconsin cervid farms in 2007 than were sold in 2002, another indication that the industry is rebounding.

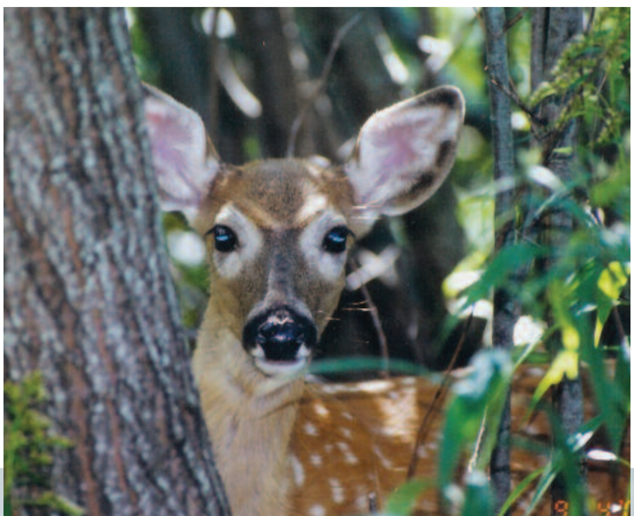
Cervids Registered in Wisconsin, 2008 and 2009

Cervid Species	2008	2009	% Change
White-tailed Deer	14,600	15,376	+5.3%
Elk	6,192	5,248	-15.2
Red Deer	1,510	1,727	+14.4
Fallow Deer	896	645	-28.0
Reindeer	157	162	+3.2
Sika Deer	236	259	+9.7
Other Species	66	56	-15.2

Source: Dr. Richard Bourie, Wisconsin Department of Agriculture, Trade and Consumer Protection.

Conclusion

While the discovery of CWD in 2002 dealt an economic blow to the cervid industry in Wisconsin, deer and elk farming has stabilized and remains an important niche contributor to the state's overall agricultural industry. The economic impact of the industry moving forward will depend on a number of factors, but several characteristics point to continued stabilization and growth, including: the diversity of the products and services supplied by these operations, the long history of cervid farming in the state, the national preeminence of Wisconsin's cervid farming industry, and the aggressive if costly attempts to limit the spread of CWD by state officials and farmers alike. ■



Whitetails of Wisconsin
Kaukauna, Wisconsin

Wisconsin Commercial Deer and Elk Farmers Association
Neillsville, Wisconsin

Cervid Livestock Foundation
Gilman, Wisconsin

Wisconsin Deer and Elk Farmers Foundation
Spring Green, Wisconsin

Additional information will be properly referred or provided upon request. The Wisconsin Cervid Industry is committed to answering any questions and providing additional information.

Thank you for your interest.

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