

A photograph of a large buck with impressive antlers standing in a grassy field. In the background, there are green trees and a rainbow arching across a blue sky. The scene is bright and natural.

# Economic Impact of the Ohio Deer Farming Industry

Prepared for:

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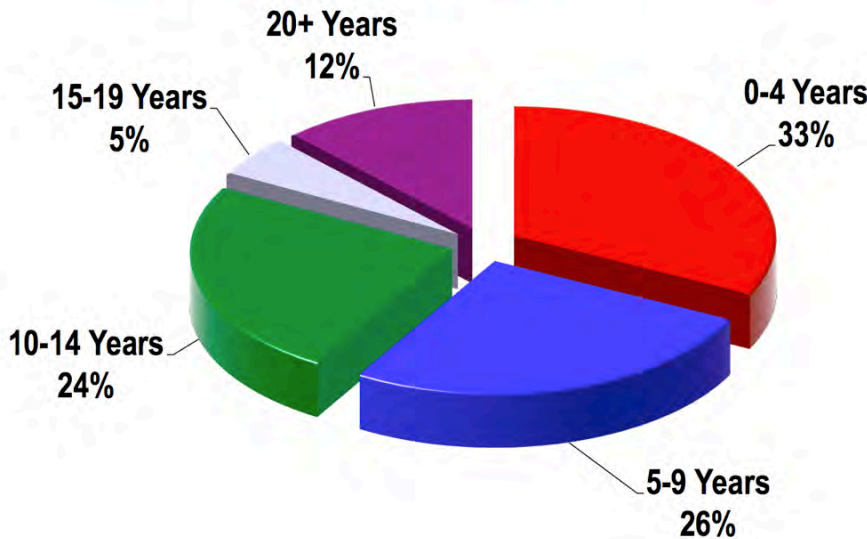


# ECONOMIC IMPACT OF OHIO DEER FARMING INDUSTRY

## A Rapidly Growing Agricultural Industry

Ohio's deer farms constitute a rapidly growing agricultural sector. The State of Ohio reports there were 695 entities with permits to raise deer as of 2009. Surveys conducted for this study, moreover, indicate **fully 59% of Ohio's deer farms have been created since 1999**, illustrating the strength of the industry as a new and important branch of the agriculture industry.

### Ohio Deer Farms by Years in Business



The cervidae species include white-tailed deer (adopted as the Ohio state animal in 1988), elk, fallow deer, mule deer, red deer and sika deer, among other sub-classifications. Ohio deer farmers raise these cervids for use in breeding, venison meat production, animal watching, private hunting and other commercial activities. Specialty products such as antlers, deer urine and semen are also being sold commercially, along with trophy bucks for hunting preserves. Some deer farms also offer lodging, nature photography shoots and other visitor services, making them important tourist attractions.

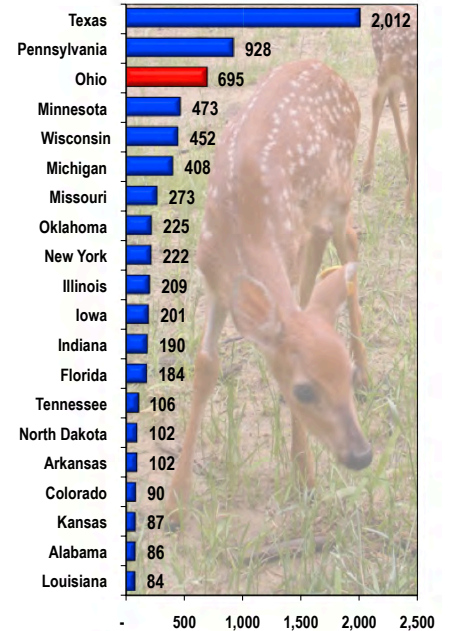
The deer farm industry has been strong in Europe and places such as New Zealand and Canada for many years. It is now growing throughout the U.S., Ohio being among the top ten states by every measure of the industry. Indeed, a comparison of current Ohio Department of Natural Resources data with Census of Agriculture statistics from 2007 indicates Ohio now ranks No. 3 in total deer and elk farms in the U.S.. These include no less than 440 commercial deer farms throughout the State of Ohio which range from 5 to 390 animals each in size.

There are deer farms in at least 82 of 88 counties throughout Ohio, including numerous facilities in urban locations such as Cuyahoga, Franklin and Montgomery Counties where farmland preservation is a priority. There are commercial deer farms with at least 5 deer in no less than 71 counties. The typical deer farm in Ohio is a family farm averaging 29.2 acres in size that has been in business 9.3 years and grosses \$71,391 per year in sales, providing employment for one full-time worker and 1.4 part-time employees. These farmers also have invested an average of \$186,547 each in capital for land, buildings, equipment, fencing and breeding stock to support their operations, a tremendous investment in Ohio agriculture.

## Ohio – Industry Leader

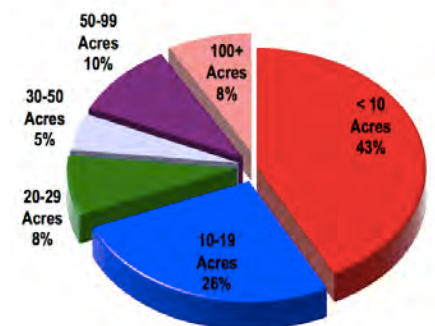
- 15,084 deer kept on farms in Ohio
- 695 deer farms in Ohio in 2009
- 440 commercial deer farms in 2009

### Farms by State



- 14,209 deer kept on commercial farms with farms of up to 390 deer in size
- State of Ohio has 9% of commercial deer farms within the U.S. in 2009
- Deer farms located within 82 of 88 Ohio counties as of 2009

### Ohio Deer Farms by Acres of Land



- Deer farms average 29.2 acres in size
- 82% of deer farms under 50 acres
- 8% of deer farms over 100 acres

# ECONOMIC IMPACT OF OHIO DEER FARMING INDUSTRY

## Deer Farms Abundant

Deer farms are found throughout Ohio. State records and this study indicate deer farms are found in 82 counties. The top counties in 2009 were as follows:

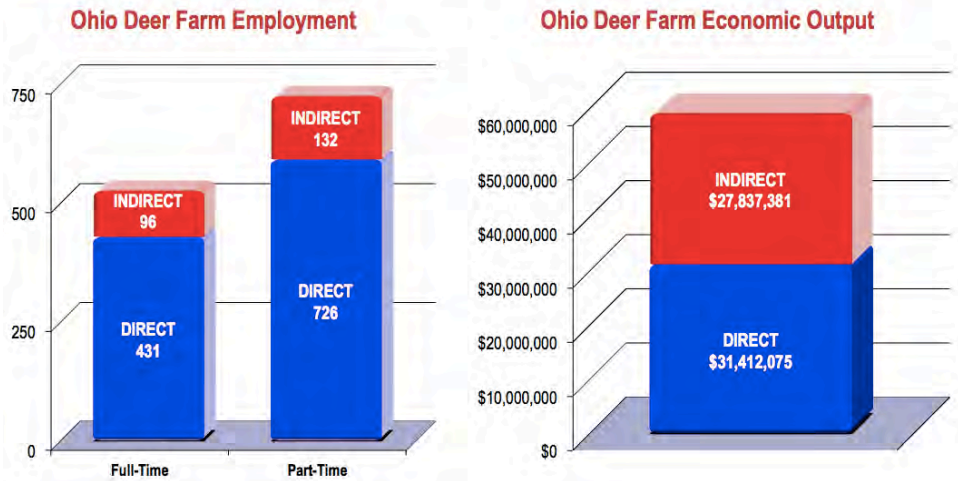
State of Ohio Deer Farms Top Counties		
Rank	County	Farms
1	Holmes	93
2	Wayne	63
3	Stark	26
4	Tuscarawas	24
5	Geauga	23
6	Coshocton	22
6	Trumbull	22
8	Columbiana	20
9	Ashland	16
9	Logan	16
11	Ashtabula	14
12	Jefferson	13
12	Mahoning	13
14	Adams	12
14	Fairfield	12
14	Guernsey	12
14	Knox	12
14	Lucas	12
19	Harrison	11
20	Brown	10
20	Carroll	10
20	Muskingum	10



■ Ohio Counties with Deer Farms

## Deer Farming Growing the Agricultural Economy

Ohio's young deer farm industry, already makes major contributions to the State agricultural economy. Surveys made for this study indicate they represent a \$59.2 million industry at a minimum. There are an estimated \$31.4 million in direct sales and another \$27.8 million of added indirect output from multiplier effects of these sales rippling through the economy. The 1.89 multiplier is based on Ohio State University's *OHFOOD: An Ohio Food Industries Input-Output Model*. It is specific to miscellaneous livestock such as deer and consistent with other agricultural economic impact studies. As an agricultural industry, deer farmers adhere to all health and transportation rules and regulations as required by the USDA and Ohio Department of Agriculture.



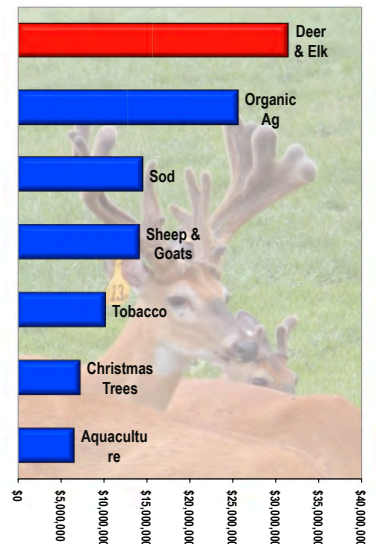
### Minimum of \$59.2 million of output and 1,254 jobs

This same study indicates miscellaneous livestock farms generate an employment multiplier of 1.22 or roughly one new job in the overall economy for every five created in the industry. Applying this very conservative multiplier to employment data provided by Ohio deer and elk farmers (an average of 0.98 full-time and 1.35 part-time jobs per farm) indicates these farms generate approximately 1,254 jobs in total for Ohio residents, 527 of these being full-time plus another 726 part-time workers.

Ohio deer farmers also added an estimated \$17.2 million in value to the livestock they purchased in 2008. The valued added multiplier, according to the *OHFOOD* study, is 2.62, meaning deer farms added a total of \$45.0 million of value to the state product.

Deer and elk farming is already a major element of the agricultural economy of Ohio. Its \$31.4 million of direct farm receipts compares well with sales reported in the 2007 Ag Census for other specialty Ohio farm sectors (e.g., Christmas trees, sheep and goats, organic agriculture), as the chart illustrates. Deer farming has, more importantly, the potential to grow much bigger.

Deer Farm Industry Compared with Other Agricultural Specialties



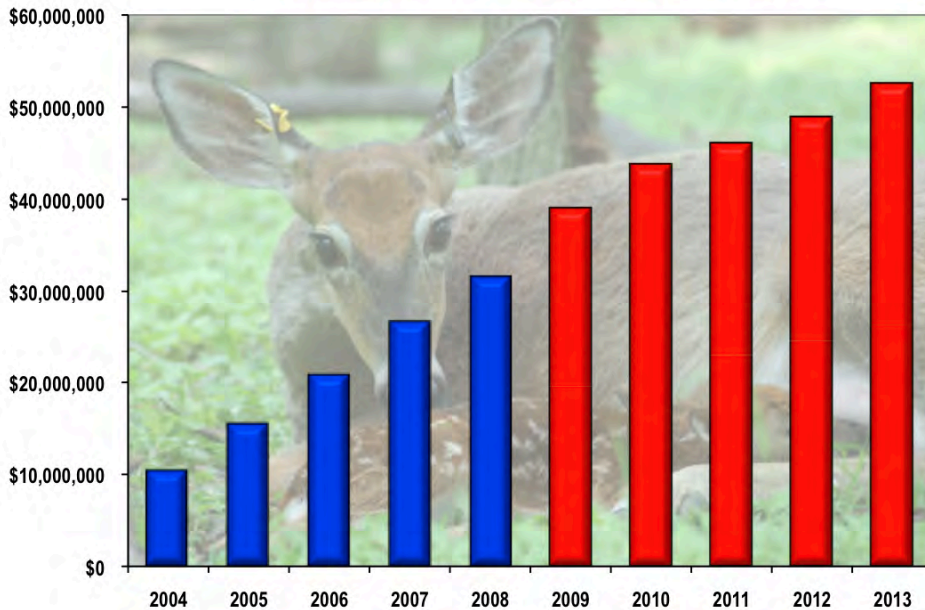


# ECONOMIC IMPACT OF OHIO DEER FARMING INDUSTRY

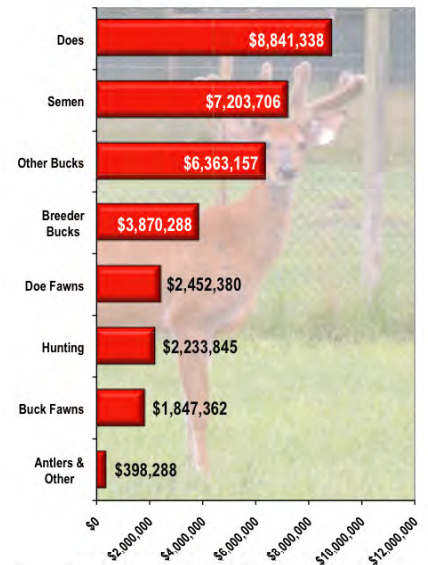
## An Industry with Potential to Grow Further

Surveys of producers conducted for this study indicate Ohio's deer and elk farms expect to reach \$52.4 million in direct sales by 2013. This is up from \$10.3 million in 2004, a gain of fully 406% or 19.8% per year on a compound basis (32.0% per year through 2008). This is without considering additional growth likely to come from new farmers steadily entering the industry.

**Estimated and Projected Deer Farm Sales**



**Deer Farm Sales by Product**



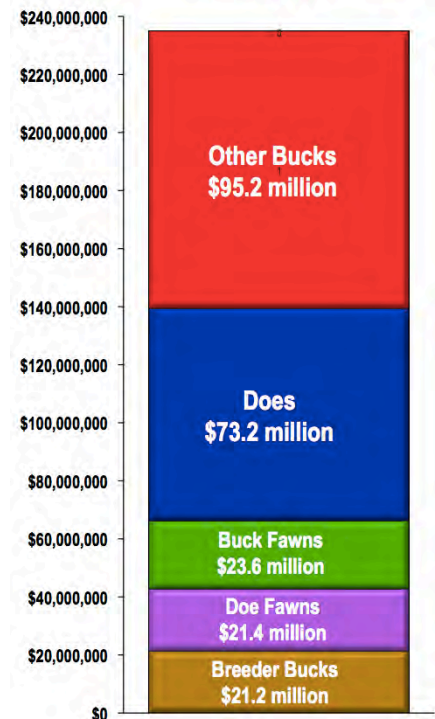
**Ohio deer farmers have nearly \$235 million invested in animal stock inventories**

The rapid growth taking place is a factor of several industry trends, beginning with the diversity of animals, enterprises and products involved. Ohio's deer farms turn out a broad array of products and services, ranging from venison meat to deer watching. Hunting, breeding stock and other specialties and tourism services are among the items offered. Most farms and preserves provide multiple products and services, although there is also a great deal of industry specialization, with some farms concentrating on genetics, others on tourism-related activities and still others on the livestock products.

This diversity is illustrated by the charts to the right. Deer animal stock is the primary product. Does account for 26.6% of sales and breeder bucks represent 11.7%. Other bucks (including "trophy bucks") amount to 19.2% of sales. Doe fawns account for 7.4% and buck fawns 5.6%. Semen amounts to 21.7% of total sales. Preserve hunting generates 6.7%. Other products and services offered include deer antlers, deer urine (an attractant), venison meat and deer watching. Altogether, these miscellaneous products and services are responsible for an estimated \$398,000 in sales, 1.2% of all Ohio deer farm sales.

The typical Ohio deer farm is a small agricultural business, often a family farm, generating an average of \$71,391 in annual sales in 2008. Nevertheless, 16.3% of Ohio deer farmers generate more than \$100,000 per years in sales and 7.0% produce more than \$300,000 annually in sales. The industry provides special agricultural opportunities for many Ohio landowners to gross high returns from relatively small acreage, keeping smaller farm properties in agricultural use and maintaining the rural character throughout the State.

**Deer Farm Inventory by Value**



# ECONOMIC IMPACT OF OHIO DEER FARMING INDUSTRY

## Special Opportunities

Deer farming in Ohio offers numerous opportunities for income from specialty products and services. These include:

- **Venison.** This meat is very low in fat, cholesterol and calories, yet provides good nutritive value. Venison has become important in upscale American and fusion cuisines. Cleveland's *Bistro on Lincoln Park* restaurant, for example, offers *Venison Bolognese* and many other fine dining restaurants now include venison items on their menus.



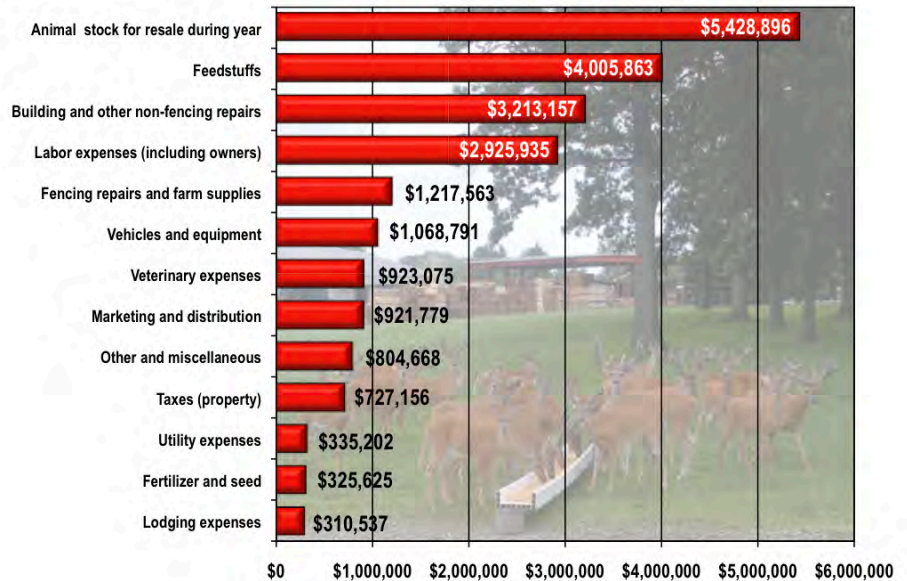
**Venison with Pecan Sauce**  
Source: Ohio DNR

- **Velvet Antler.** Deer antlers, as they first appear annually and rapidly grow, are covered by velvet-like hair. Velvet antler (pre-calcified antler) is used in Chinese medicine. It is unique tissue with pharmacodynamic properties that are thought by many to contribute to cell growth and offer anti-inflammatory benefits. Velvet antler has also been used as a remedy for canine arthritis and as a supplement.
- **Agritourism.** Deer farms offer unique tourism potential. One-third of deer farms surveyed offer some form of animal watching, 7.1% open their facilities to photo tours and 3.0% provide lodging or dining. Other forms of outdoor recreation made available by Ohio Deer farms include hiking, fishing, picnicking, as well as preserve hunting.

## Deer Farms Spend Heavily in Ohio

Ohio's deer farms spend heavily within the State, stimulating the economy and providing many business opportunities within rural areas while supporting small family farming. Deer farms often provide a supplementary source of income for landowners who maintain Ohio's rural character.

### Ohio Deer Farm Spending, 2008



Deer farms spent, within the State of Ohio, an estimated \$5.4 million in 2008 on animal stock for resale, this being the largest expense item for most farmers. Another \$4.0 million was spent on animal feedstuffs and \$3.2 million per year was expended on building and non-fencing repairs. Labor expenses (including payments to owners) were \$2.9 million. Fencing repairs and farm supplies accounted for \$1.2 million while vehicle and equipment expenses totaled approximately \$1.1 million. Veterinary needs represented still another \$923,000 of annual expenditures. Property taxes were \$727,000 per year.

Altogether, Ohio's deer farms spent an estimated \$25.3 million on operations, 87.7% of it within the State. Few sectors of the economy produce such high intra-state spending. Total operating expenses per farm averaged \$55,998. These numbers do not include major capital spending (see page 5 for these figures).

This intrastate spending is one reason deer farming enjoys a high economic multiplier. Deer farms are small businesses that benefit all Ohioans. These enterprises also support hunting, which the 2006 *National Survey of Fishing, Hunting, and Wildlife-Associated Recreation* estimates accounted for \$841.5 million of spending in Ohio. Significantly, there was another \$1.2 billion spent in Ohio on wildlife watching, one of the growing markets for deer farmers. This included \$207.3 million of trip-related expenditures. Deer farms are providing residents and visitors numerous opportunities for wildlife watching trips, which are a major source of tourism.



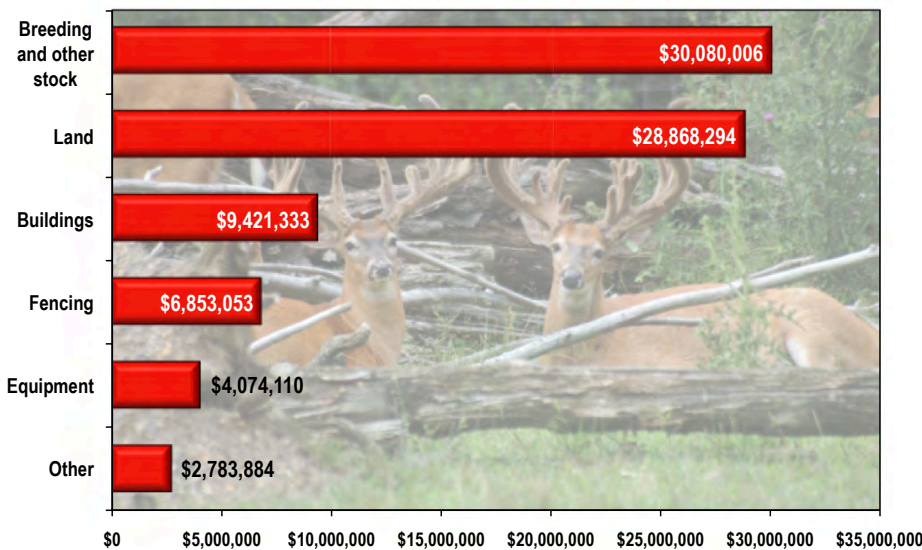


# ECONOMIC IMPACT OF OHIO DEER FARMING INDUSTRY

## Ohio Deer Farms Invest in Ohio

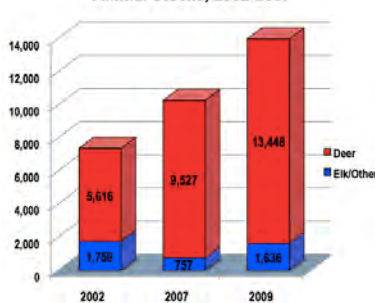
Ohio deer farms not only spend heavily on operational expenses, but also are investing in Ohio and preserving its farmland. Altogether, these farms spent an estimated \$82.1 million on capital items over the last five years and expect to spend another \$44.5 million over the next five years. Total capital investments in Ohio for the period 2004 through 2008 included \$30.1 million on animal stock, \$28.9 million on land, \$9.4 million on buildings, \$6.9 million on fencing and \$4.1 million on equipment. The State's deer and elk farms expect to invest an average of \$20,210 per year of new capital on their existing enterprises, indicating their commitment to the industry and realizing its potential to become a dominant specialty agricultural sector.

**Ohio Deer Farm Capital Spending Last Five Years (2004-2008)**



This steady investment over several years has made deer farming a recognized agricultural sector now large enough to enjoy its own category in the USDA Census of Agriculture. Inventories of stock grew by 39.4% in just five years. The spread of the industry across 82 counties today indicates it is particularly well-suited to Ohio and has potential to grow much larger. There has been significant growth since the 2007 Census of Agriculture was completed and identified deer or elk farms in 67 counties. Moreover, 24.2% of farms say they were not included in the Census. Indeed, 15 additional counties now appear on the State permit list and stocks have swelled. Some 93% of counties now have farms.

**Animal Stocks, 2002-2007**

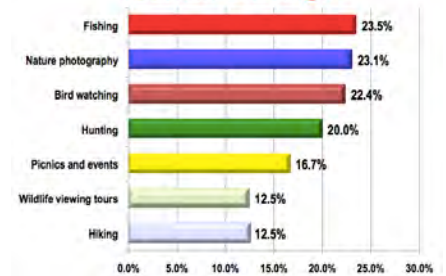


Future tourism potential is particularly strong. Tourism generated \$38 billion for the Ohio in 2007, according to the *Longwoods International Study* for the Ohio Department of Development. This was up 6% over 2006. The State had 172.3 million visits. Some 13% of these trips, and 14% of the marketable day trips, were outdoor recreation related, a category that includes Ohio's deer farms, which offer animal watching, hunting, lodging, dining, nature photography, hiking and other recreation.

## Deer Farm Tourism

Ohio deer farmers are special agricultural tourism attractions. Some 20.0% offer hunting on their land, 23.5% provide fishing and 22.4% provide for bird watching. Some 23.1% provide various nature photography opportunities, 12.5% offer hiking and the same number conduct wildlife viewing tours, while 16.7% provide for picnics and other events on their farms.

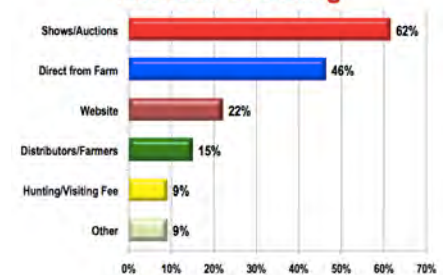
**Tourism Offerings**



Nearly one-third of Ohio deer farms also offer these services to youth groups and schools and make their facilities available for research, training, testing, events, seminars, other educational programs and various tours.

Ohio deer farmers use a variety of modern sales techniques, offering a model for all of specialty agriculture. They are, indeed, leaders in agricultural marketing. Shows and auctions are used by 62% of deer farmers to market their products and services while 16% sell direct from their farms, 22% use the Internet to sell and 15% sell to distributors, preserves and other deer farmers.

**Methods of Selling**

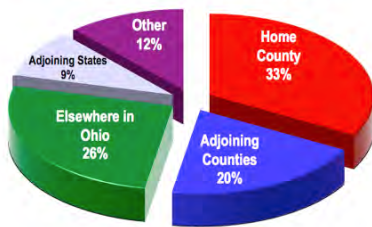


# ECONOMIC IMPACT OF OHIO DEER & ELK FARMS

## Business for Ohio

Ohio's deer and elk farmers attract customers and visitors from across the State and nation, as the following chart demonstrates. Some 21% of customers come from other states or countries. Still, 79% come from within Ohio, indicating deer and elk farms are an integral part of the State agricultural economy.

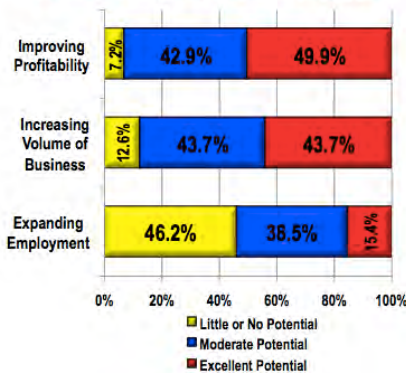
Sources of Customers



## Future Prospects

Ohio's deer farmers see a bright future ahead for the industry and their own farms.

Farmers' Views of Future Prospects

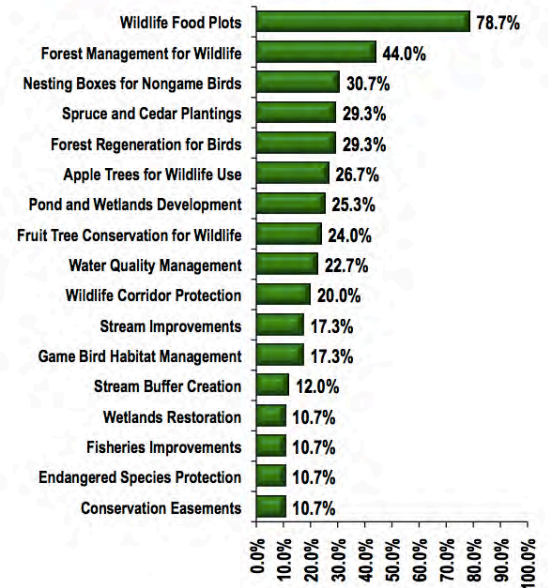


Some 92.8% of those farmers assessing their future business potential thought the prospects for improving profitability were moderate to excellent and 87.4% felt the same regarding the potential for increasing their volume of business. A majority also foresaw moderate to excellent potential for expanding employment. Many cite the importance of family farm business opportunities to their way of life.

## Deer & Elk Farms Conserve Ohio's Land

Ohio's deer farmers are good land stewards and help preserve the State's invaluable rural character. Deer and elk farm wildlife and land conservation activities assure Ohio continues to support wildlife and remains as open space with all its attendant benefits. Deer farmers surveyed indicated they provide wildlife food plots (78.7%), implement forest management practices for wildlife (44.0%) and erect nesting boxes for non-game birds (30.7%). Their other activities in support of wildlife spruce and cedar plantings, forest regeneration practices, planting of apple trees and conservation of other fruit trees, pond and wetland development, wildlife corridor protection and stream improvements.

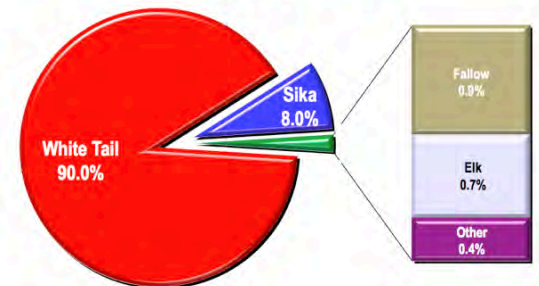
Conservation Activities



## Many Species, Many Benefits

Ohio's deer farms keep multiple species of cervids and other animals. Most cervids fall into two sub-families; the *cervinae* and the *odocoileus*. The *cervinae* includes red deer or elk (*cervus elaphus*), sika deer (*cervus nippon*) and fallow deer (*dama dama*). The *odocoileus* includes not only the white-tailed deer (*odocoileus virginianus*), but also the mule deer (*odocoileus hemionus*).

Major Species



Although the State's deer farmers keep some of all these species, it is the white-tailed deer that is the mainstay of both the Ohio deer farm and hunting industries. It is literally a symbol of Ohio and support of the species by deer farmers also supports the State. Deer farms help to sustain interest in hunting by offering additional opportunities to so on private lands throughout the year. The variety of species also support wildlife watching away from home.

**"Deer farming is the most exciting and profitable non-conventional farming opportunity of our time."**

**Ohio Deer Farmer**



# ECONOMIC IMPACT OF OHIO DEER & ELK FARMS

## The Key Facts:



*Nearly 700 deer & elk farms with 59% commercial farms created less than 10 years ago*

*Ohio ranks No. 3 among the states in commercial deer farms*

*Over 15,000 deer raised on Ohio deer farms*

*Deer farms found in 82 of 88 Ohio Counties*

*Average deer farm has invested \$186,547 in Ohio*

*Deer farming is a \$59.2 million industry in Ohio*

*Deer farming generates over 1,250 jobs for Ohioans*

*Typical deer farm generates \$71,391 of sales per year*

*Deer farm sales have grown by 32.0% per year*

*Ohio deer farms have invested \$235 million of capital in breeding and other deer animal stock*

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