

A photograph of a large buck with impressive, multi-tined antlers. The buck is shown in profile, facing left, standing in a grassy field with trees in the background. The text is overlaid on the lower half of the image.

Economic Impact of the Michigan Deer Farming Industry

Prepared for:

United Deer Farmers of Michigan

www.udfom.com

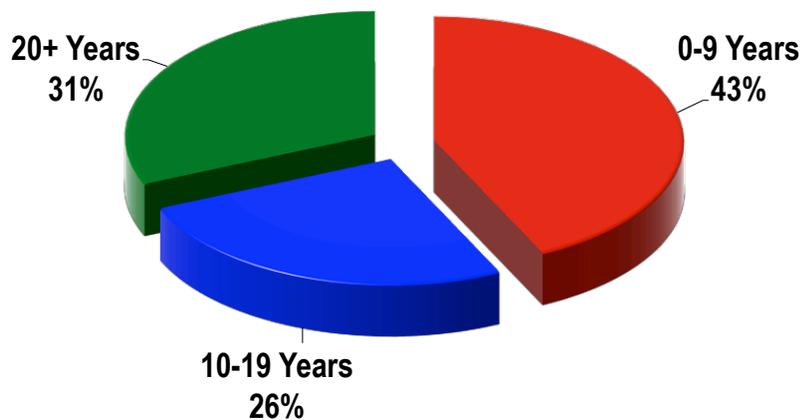
Shepstone Management Company, Inc.

ECONOMIC IMPACT OF MICHIGAN DEER INDUSTRY

A Growing Agricultural Niche Industry

Michigan deer farms represent a growing niche agricultural sector. The Michigan Department of Natural Resources (DNR) reports there were 355 deer and elk farms in Michigan as of 2016, including 307 in the business of earning income from these farms. Surveys conducted for this study indicate **fully 43% of Michigan's deer farms have been created in the last decade**, illustrating the strength of the industry as a unique branch of the agriculture industry.

Michigan Deer Farms Years in Business



The cervidae species include both white-tailed deer and elk species found in Michigan. State deer and elk 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 agricultural tourism features, making them important attractions.

The deer farm industry has been strong in Europe and places such as New Zealand and Canada for many years. It is now an important U.S. agricultural industry. Michigan DNR data compared to U.S. Census data for other states, in fact, ranks Michigan third for the number of deer and elk farms. Michigan DNR data indicates there are 171 fully Class IV facilities licensed to market animals and another 136 Class III ranches otherwise in the business of deer farming. These include commercial deer farms ranging from one to 5,300 acres in size.

There are deer farms in at least 76 of 83 counties throughout Michigan, including numerous facilities in urban locations such as Genesee, Ingham, Kent, Washtenaw and Wayne Counties and where farmland preservation is a priority for maintaining character.

The typical deer farm in Michigan is a family farm averaging 205 acres in size that has been in business 13.9 years and grosses \$168,200 per year in sales, providing employment for 1.7 full-time workers and 2.7 part-time employees. These farmers also have invested an average of \$265,500 each in capital for land, buildings, equipment, fencing and breeding stock to support their operations over the last five years, a total investment of \$89.7 million in Michigan agriculture.

An Industry Leader

- 22,100+ deer/elk on farms in Michigan
- 355 deer/elk farms in Michigan in 2016
- No. 3 in nation for deer/elk farms

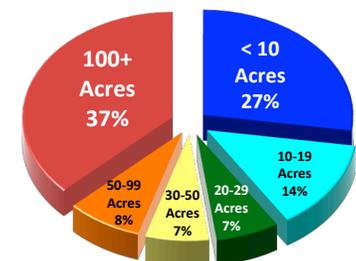
Farms by State



NOTE: Farm numbers are deer and elk farms combined from 2012 Ag Census and Michigan DNR data in the case of the State of Michigan

- Michigan has 5% of deer and elk farms in the United States
- Deer/elk farms located in 76 counties in State of Michigan
- \$265,500 of new capital per deer farm invested over last 5 years
- \$89.7 million total investment in 5 yrs.
- Average sales of \$168,200/year

Michigan Deer Farms Acres of Land



- Deer farms average 205 acres in size
- 27% of deer farms under 10 acres
- 37% of deer farms over 100 acres
- Typical farm in business 13.9 years
- 4.4 employees per deer/elk farm

ECONOMIC IMPACT OF MICHIGAN DEER INDUSTRY

Deer Farms Abound

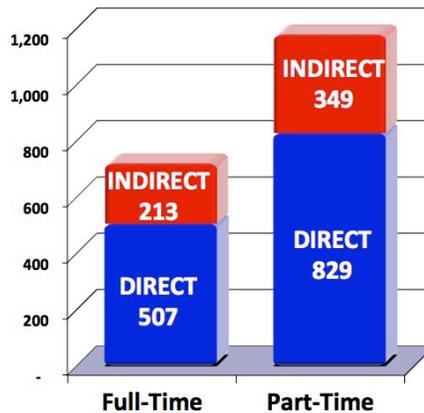
Deer and elk farms are found throughout Michigan. State records indicate deer and elk farms are found in 76 counties. The top counties as of 2016, according to Michigan DNR statistics, are as follows:

Michigan Deer & Elk Farms Top Counties		
Rank	County	Farms
1	Newaygo	16
2	Genesee	13
2	Mecosta	13
2	Otsego	13
5	Montcalm	12
6	Muskegon	10
6	Gladwin	10
6	Kent	10
6	Osceola	10
10	Clare	9
10	Lenawee	9
10	Monroe	9
10	St. Clair	9

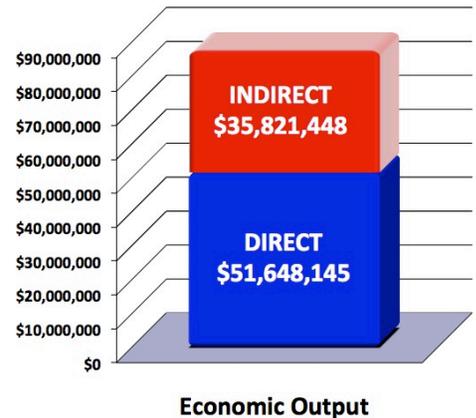
Deer Farming Growing the Agricultural Economy

The relatively young Michigan deer farm industry already makes major contributions to the state agricultural economy. Surveys made for this study indicate they represent a \$87.5 million industry at a minimum. There are an estimated \$51.6 million in direct sales and another \$35.8 million of added indirect output from multiplier effects of these sales rippling through the economy. The 1.69 multiplier is based on a Michigan State University study (*The Economic Impact of Michigan's Food and Agriculture System*). It is specific to miscellaneous livestock such as deer and consistent with other agricultural economic impact studies.

Michigan Employment Impact



Michigan Economic Impact



Michigan Counties with Deer/Elk Farms



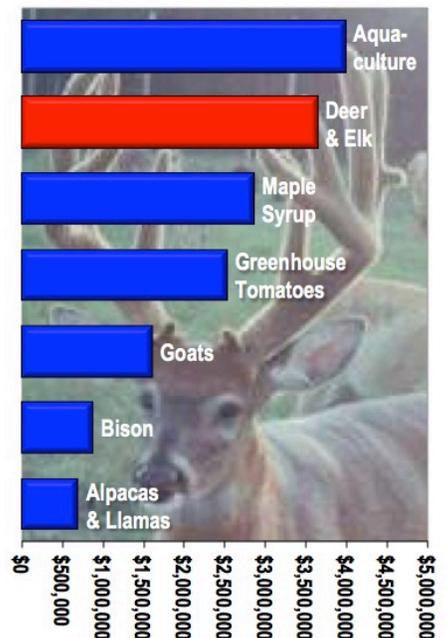
Minimum of 1,898 jobs and \$87.5 million of output

Miscellaneous livestock farms also generate an employment multiplier of 1.42. Applying this multiplier to employment data provided by Michigan deer and elk farmers (an average of 1.7 full-time and 2.7 part-time jobs per farm) indicates they generate 1,898 jobs for Michigan residents, 720 full-time and 1,178 part-time.

Deer farming is already a significant part of the agricultural economy of Michigan. Surveys of Michigan deer and elk farmers conducted during this study indicate direct annual sales of \$51.6 million but even the very low estimates of deer farm livestock sales in the 2012 Census exceed those for other specialty Michigan farm sectors (e.g., alpaca/llamas, bison, goats, greenhouse tomatoes and maple syrup), as the chart to the right illustrates.

Deer farming has, importantly, the potential to grow bigger as evidenced by the more recent surveys conducted. They indicate an industry that is also bigger than the horse industry, Christmas trees and sheep in Michigan.

Deer Farm Industry Compared with Other Ag Specialties



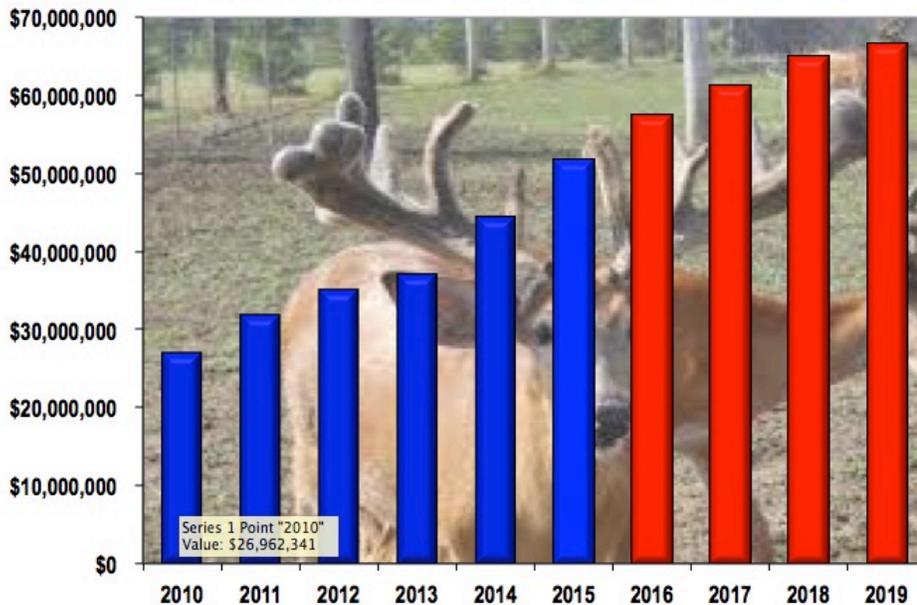
Deer/Elk Farm Stock	
White-tailed Deer	19,044
Elk	1,603
Fallow Deer	739
Red Deer	416
Sika Deer	187
Reindeer	98
Muntjac Deer	17
Total Deer/Elk	22,104

ECONOMIC IMPACT OF MICHIGAN DEER INDUSTRY

An Industry with Potential to Grow Further

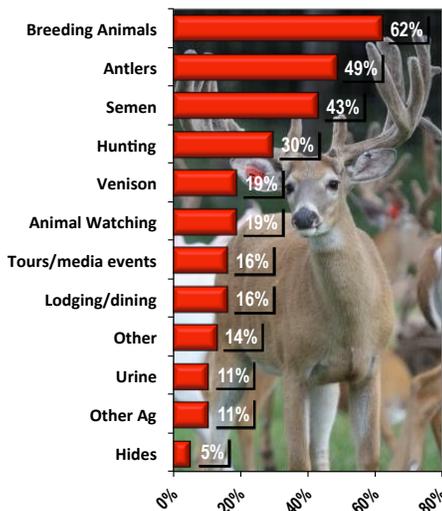
Surveys of producers conducted for this study indicate Michigan deer and elk farms expect to reach \$66.6 million in direct sales by 2019. This is up from \$27.0 million in 2010, a gain of fully 147%, an average of 10.5% per year (14.0% per year through 2015). This is without considering additional growth likely to come from new farmers entering the industry.

Estimated and Projected Deer Farm Sales



The growth taking place is a factor of several industry trends, beginning with the diversity of animals, enterprises and products involved. Michigan deer farms turn out a broad array of products and services, ranging from venison (some 20% of Michigan deer farmers offer it, for example, as indicated in the chart below) to deer watching and lodging and/or dining.

Deer Farm Offerings



Hunting, breeding stock and other specialties and services are, of course, also among the items offered. The diversity of products sold is also illustrated by the chart to the top right.

Preserve hunting generates 54.9% of sales. Sales of urine (an attractant) accounted for 19.7%, bucks represented 11.6% and other items (including antlers, deer urine, venison meat and deer watching) amounted to 13.8%.

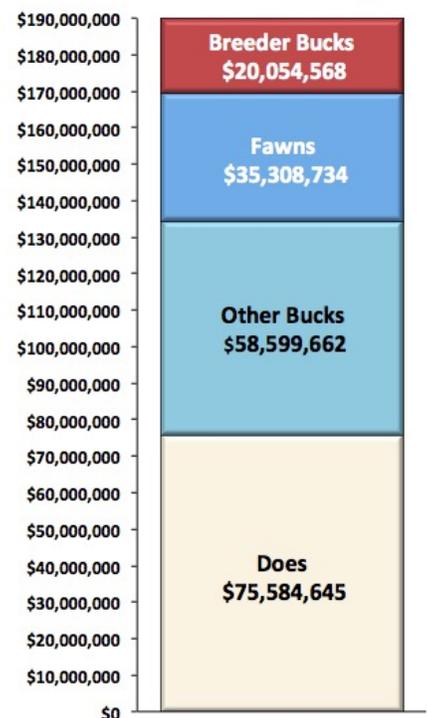
The typical Michigan deer farm is a small agricultural business, often a family farm, with four-fifths producing less than \$100,000 in annual sales; an average of \$168,235. The industry provides niche opportunities for Michigan landowners to gross high returns from relatively small acreage, keeping land in farm use and maintaining rural character throughout the State.

Deer Farm Sales by Product



Michigan deer and elk farmers have over \$189 million invested in animal stock inventories

Deer Farm Inventory



ECONOMIC IMPACT OF MICHIGAN DEER INDUSTRY

Niche Opportunities

Deer and elk farming within the State of Michigan offers numerous opportunities for income from niche specialty products and services. These products include:

- **Venison.** This meat is low in calories, fat and cholesterol with good nutritive value. Various outlets throughout the state market the product to both consumers and restaurants.



Venison Loin

Source: [Michigan Venison Company](http://MichiganVenisonCompany.com)

- **Velvet Antler.** Deer antlers, as they first appear annually and rapidly grow, are covered by velvet-like hair. This velvet (or pre-calcified antler) is frequently used in the practice of Chinese medicine. It is a unique tissue with characteristics thought by some to contribute to cell growth and provide some anti-inflammatory benefits. Velvet antler has also been used as a remedy for canine arthritis and as a supplement.



- **Attractants.** Michigan deer farmers also market deer urine and associated attractants and scents made with it to produce an estimated \$10 million in sales in this specialty category alone.



Deer Farms Spend Money in Michigan

Michigan 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 Michigan rural character.

Michigan Deer Farm Spending, 2015

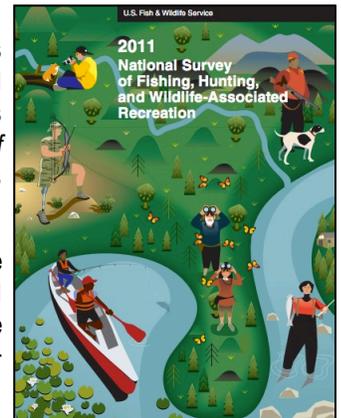


Deer farms spent, within the State of Michigan, an estimated \$8.0 million in 2015 on labor (including payments to owners). Another \$7.2 million was spent on animal feedstuffs and \$6.1 million per year was expended on animal stock for re-sale. Marketing and distribution expenses were \$4.7 million and another \$2.5 million went for retail goods for re-sale.

Altogether, Michigan deer farms spent an estimated \$40.6 million on operations, 95.4% of it within the State. Few sectors of the economy produce such high intra-state spending. Total operating expenses per farm averaged \$132,400. 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 Michiganders. These enterprises also support hunting, which the 2011 *National Survey of Fishing, Hunting, and Wildlife-Associated Recreation* estimates accounted for \$2.4 billion of spending in Michigan.

There was another \$1.2 billion spent in Michigan on wildlife watching, a growing market for deer farmers. This included \$416.5 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 MICHIGAN DEER INDUSTRY

Michigan Deer Farms Invest in Michigan

Michigan deer farms are also investing capital in Michigan and preserving its farmland. Altogether, these farms spent an estimated \$81.5 million on capital items over the last five years and expect to spend another \$50.3 million over the next five years.

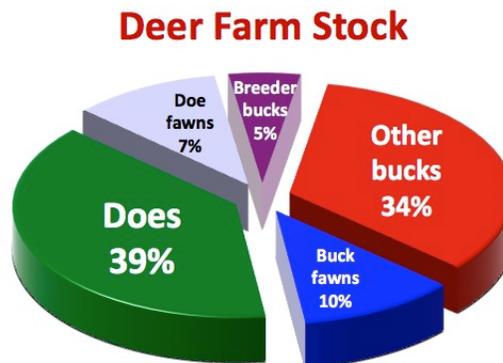
Total capital investments in Michigan for 2010 through 2014 included \$37.6 million on animal stock, \$12.8 million on land, \$13.1 million on equipment, \$10.8 million on buildings and \$6.4 million on fencing. State deer and elk farms expect to invest an average of \$50,348 per year of new capital over the next five years, indicating a commitment to the industry and realizing its potential to become a dominant specialty agricultural sector.

Michigan Deer Farm Capital Spending Last Five Years (2010-2014)



This steady investment over several years has made deer and elk farming a recognized Michigan agricultural sector now large enough to enjoy its own category in the USDA Census of Agriculture. The spread of the industry across 76 Michigan counties indicates it is particularly well-suited to the state and can potentially grow much larger.

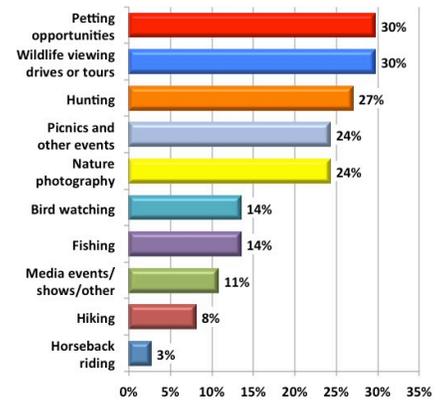
The inventory of breeding and other stock held by Michigan deer farmers consists of 3% breeder bucks (the most valuable animals, generally worth from \$3,000 to \$30,000 with a median value of \$10,000). Other bucks account for 34% of the stock (median value of \$5,000). Doe animals represent some 39%, with a median value of \$3,000. Fawns (buck and doe) amount to 17% of the stock with median livestock values of \$1,800 to \$1,100, respectively.



Deer Farm Tourism

Michigan deer farmers are agricultural tourism attractions. Some 29.7% provide wildlife viewing drives or tours and petting opportunities. Some 27.0% of deer farmers offer hunting and another 24.3% provide nature photography and event/picnic opportunities.

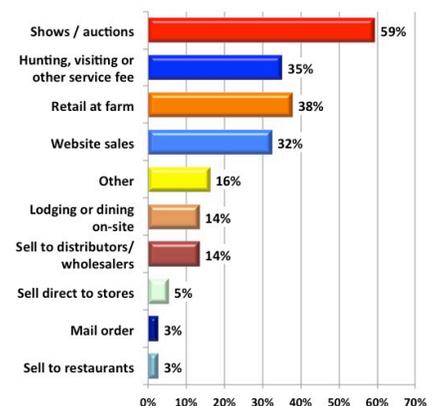
Deer Farm Recreation/Tourism



Nearly a quarter of Michigan deer farms conduct educational programs and roughly 15% each make their facilities available for events conducted by farm or wildlife organizations, youth events and certified testing programs.

Michigan deer and elk farmers also offer an excellent marketing model for all of specialty agriculture, one heavily oriented toward use of direct marketing techniques, as the following chart shows:

Deer Farm Methods of Marketing

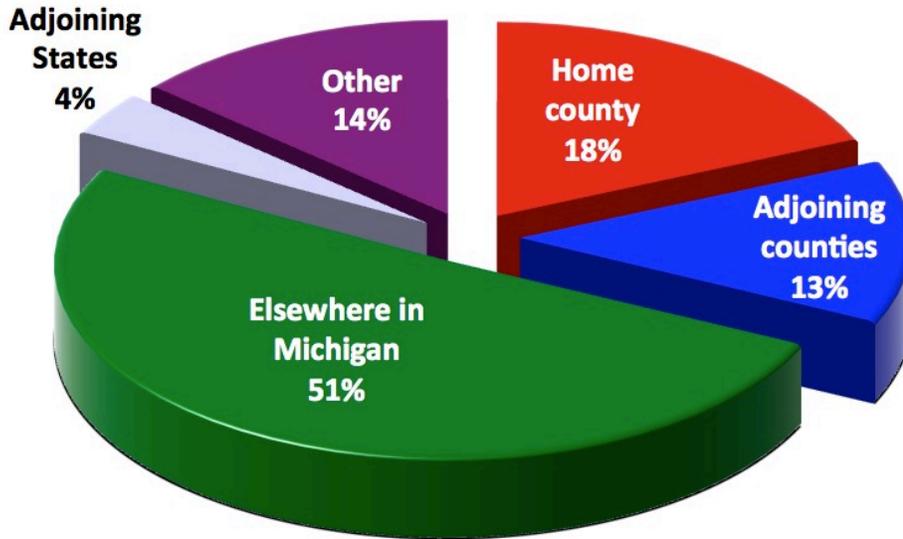


ECONOMIC IMPACT OF MICHIGAN DEER INDUSTRY

Business for Michigan

Michigan deer and elk farmers attract customers and visitors from across the State and nation, as the following chart demonstrates. Some 18% of customers come from other states or countries, while 82% came from Michigan.

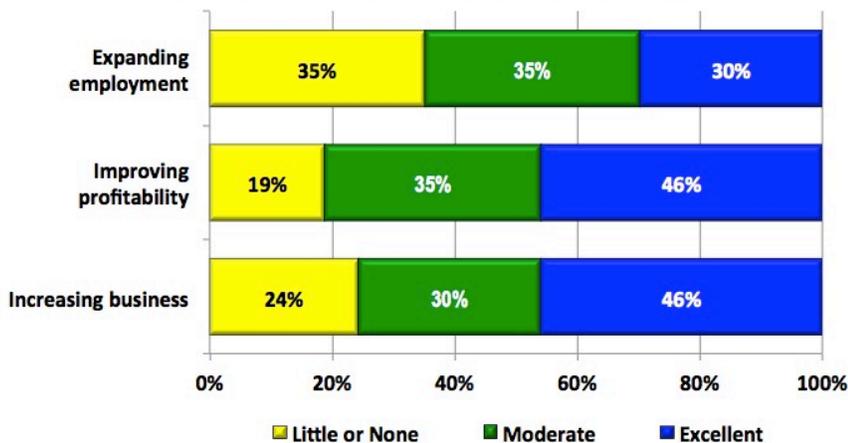
Sources of Customers



Future Prospects for Deer Farmers

Michigan deer and elk farmers see a bright future ahead for the industry and their own farms. Some 81.1% of those farmers assessing their future business potential thought the

Farmers' Views of Future Prospects

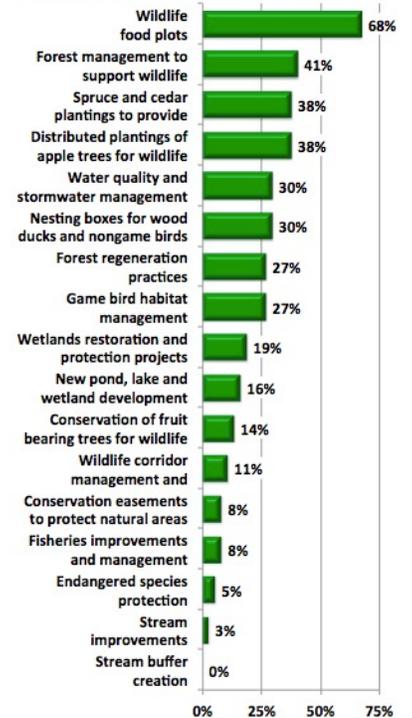


prospects for improving profitability were moderate to excellent, 75.7% felt the same regarding the potential for increasing their volume of business and some 64.9% had similar expectations for expanding employment at their facilities.

Deer Farms Conserve Michigan's Land

Deer farm wildlife and land conservation activities supports wildlife and preserves open space with its attendant benefits, as the following chart illustrates.

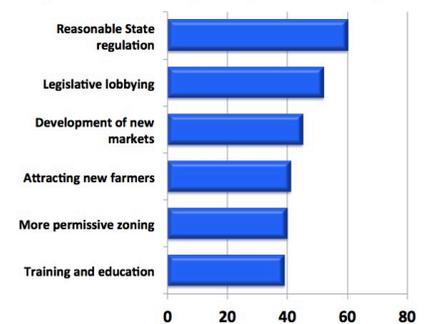
Conservation Measures



Deer Farmer Needs

Deer farmers rank the following factors as keys to the success of their farm enterprises:

Keys to Future Success (Ranked By Importance)



ECONOMIC IMPACT OF MICHIGAN DEER & ELK FARMS

The Key Facts:

Some 355 deer & elk farms with 43% of farms created less than 10 years ago

Michigan ranks No. 3 among the states in deer farms

Over 22,100 deer raised on Michigan deer farms

Deer farms found in 76 of 83 Michigan Counties

Average deer farm has invested \$265,500 in Michigan

Deer farming is a \$87.5 million industry in Michigan

Deer farming generates 1,898 jobs for Michiganans

Typical deer farm generates \$168,200 of sales per year

Deer farm sales have grown by 14% per year

Michigan deer farms invested over \$37 million of capital in breeding and other deer animal stock in 5 years

Family Farms
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