

The Economic Impact of New York State Deer & Elk Farms



"Homer" ~ Highest Scoring Hard Antler Elk Bull in the World.
SCI score of 601-5/8 inches at 4 years old.
A proud resident of New York State.

Prepared for:
**New York
Deer & Elk Farmers
Association**
www.nydefa.org

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Prepared by:
Shepstone Management Company



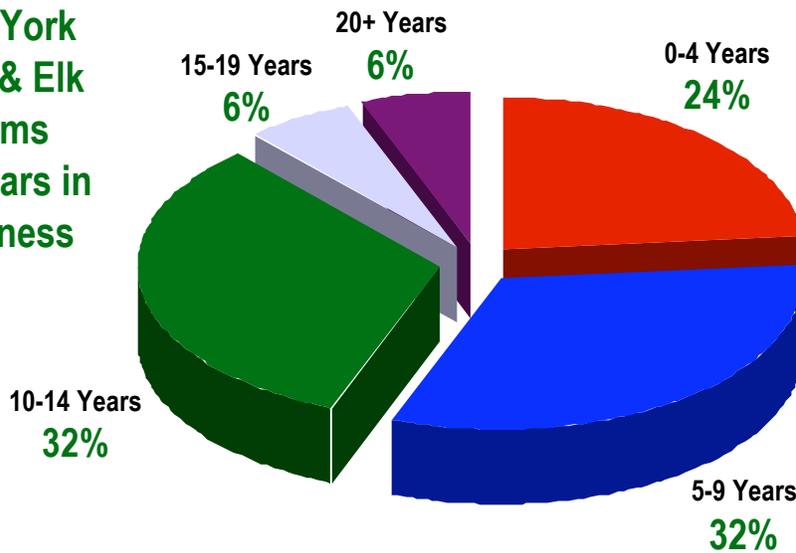
Another proud resident of New York State.
SCI score 316 inches at 4 years old.

*New York ...A Powerhouse in the Cervid Industry
Home to some of the "Best in the World"*

ECONOMIC IMPACT OF NEW YORK DEER & ELK FARMS

A Fast Growing Agricultural Niche Industry

New York Deer & Elk Farms By Years in Business



New York's deer and elk farms constitute a burgeoning element of New York State's rapidly growing niche agricultural sector. They represent a rapidly growing niche industry that accounted for 211 farms in the 2002 Census of Agriculture (latest official data available from USDA). The New York State Department of Agriculture and Markets reported there were 564 entities raising deer and elk as of 2005. Surveys conducted for this study, moreover, indicate **fully 56% of New York State's deer and elk farms have been created since 1998**, illustrating the strength of the industry as a new branch of the niche agricultural sector.

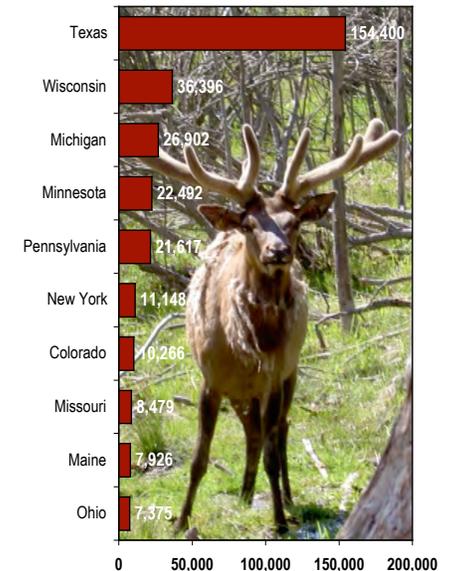
The cervidae species include elk, fallow deer, mule deer, red deer, reindeer, sika deer and white-tailed deer, among other sub-classifications. New York deer and elk farmers raise these other cervids and exotic animals (i.e., bison, boar, rams) for use in breeding, meat production, animal watching, private hunting and other commercial activities. This diversity of species serves to create year-round visitation to deer and elk preserves. Specialty products such as antlers, deer urine and hides are also being sold commercially. Some deer and elk farms also offer lodging, nature photography shoots and other visitor services, making them important tourist attractions.

The deer and elk 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., New York State being among the top ten states by every measure of the industry. Indeed, Census of Agriculture data from 2002 indicates that New York ranked No. 6 in total deer and elk kept on farms (11,148) and No. 7 in total commercial deer and elk sales (2,610). It ranked No. 9 in total deer and elk farms and No. 10 in the number of commercial deer and elk farms. There are deer or elk farms in 45 of 62 counties throughout New York State, including numerous facilities in locations such as Columbia, Dutchess and Suffolk Counties where farmland preservation is a priority due to suburban growth. The average deer and elk farm occupies and, therefore protects, 282 acres of land – open space valuable to all New Yorkers.

NEW YORK AMONG TOP 10 STATES

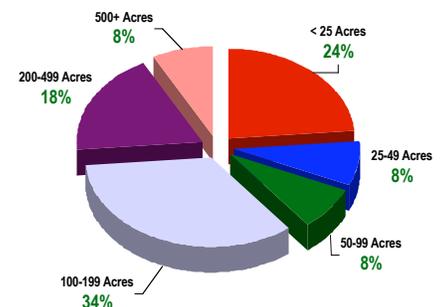
- No. 6 in total deer and elk kept
- No. 7 in deer and elk sold
- No. 9 in total deer and elk farms
- No. 10 in commercial deer & elk farms

Deer & Elk Kept by State in 2002



- 11,148 deer and elk kept in 2002
- 211 deer and elk farms in 2002
- 66 commercial farms in 2002
- 2,610 deer and elk sold in 2002
- NY has 5% of U.S. commercial farms
- Deer & elk farms in 45 of 62 counties

New York Deer & Elk Farms By Acres of Land



- Deer & elk farms average 282 acres in preserved open space per farm
- 32% of farms under 50 acres
- 60% of farms over 100 acres

ECONOMIC IMPACT OF NEW YORK DEER & ELK FARMS

DEER FARMS ABOUND WITHIN NY

Deer and elk farms are found throughout New York State. The 2002 Census of Agriculture found deer or elk farms in 42 New York State counties. More recent data gathered in the course of this study indicates such farms are now located in three more New York State counties. Combining information from these sources indicates the top producing counties were as follows:

New York State Deer & Elk Farms Top 10 Counties		
Rank	County	Farms
1	Oswego	14
2	St. Lawrence	11
3	Cattaraugus	10
4	Chautauqua	10
5	Delaware	10
6	Erie	10
7	Jefferson	10
8	Lewis	9
9	Cortland	8
10	Wayne	8

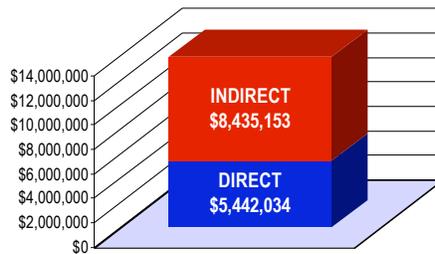


The New York State Department of Agriculture and Markets indicates there as many as 564 deer and elk farms throughout the State.

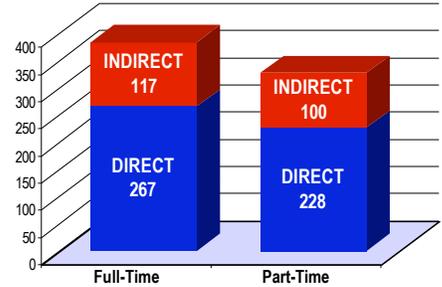
Growing New York's Agricultural Economy

New York State's deer and elk farms constitute a young industry, but one already contributing in a major way to the State's niche agricultural economy. Surveys of farmers conducted for this study indicate they represent a \$14 million industry at a minimum. There are an estimated \$5.4 million in direct sales and another \$8.4 million of added output from multiplier effects of these sales rippling through the economy. The 2.55 multiplier is based on a 1998 Center for Rural Pennsylvania study (*Economic Values and Impacts of Sport Fishing, Hunting and Trapping Activities in Pennsylvania*) and is consistent with other agricultural economic impact studies.

Deer & Elk Farm Economic Output



Deer & Elk Farm Employment

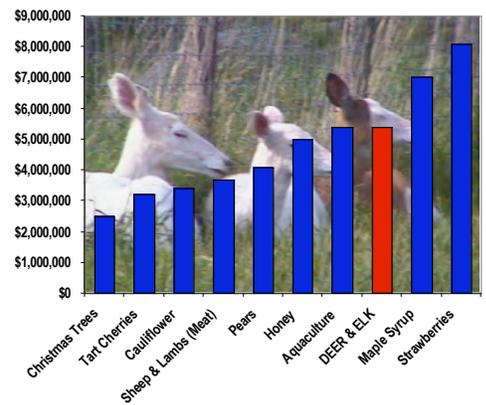


\$14 million of output and 712 jobs

Another study, done by Cornell University in 2001 and titled *Agricultural-Based Economic Development: Trends and Prospects for New York*, provides insights on the indirect effects of agricultural industries on employment. It indicates agriculture, forestry and fisheries service industries generate an employment multiplier of 1.44 or roughly one new job in the overall economy for every two created in the industry. Applying this conservative multiplier to employment data provided by New York deer and elk farmers (an average of 3.18 full-time and 2.71 part-time jobs per farm) indicates these farms generate approximately 712 jobs in total for residents, 384 of these being full-time plus another 328 part-time workers.

Deer and elk farming is already a major element of the niche agricultural economy of New York State. Its \$5.4 million of direct farm receipts compare very well with other farm sectors for which New York State agriculture is well known (e.g., Christmas trees, meat lambs and sheep), as the chart illustrates. It has, more importantly, the potential to grow by a large amount, still being a relatively new player on the agricultural scene with a rapid growth pattern. It is a niche farm sector with a particularly bright future.

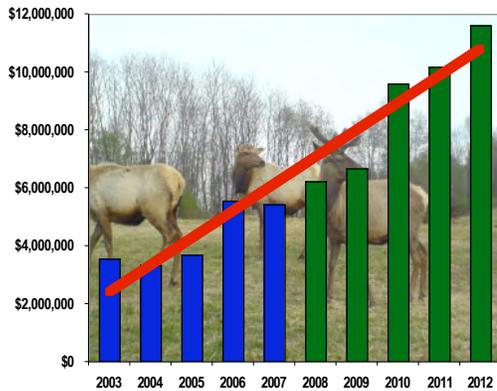
Deer & Elk Farm Industry Compared with Other Agricultural Specialties



ECONOMIC IMPACT OF NEW YORK DEER & ELK FARMS

An Industry with Potential to Grow Further

Estimated and Projected New York State Deer & Elk Farm Sales



Surveys of producers conducted for this study indicate New York State's deer and elk farms expect to reach \$11.6 million in sales by 2012. This is up from \$3.6 million in 2003, a gain of fully 225% or 14% per year on a compound basis. This steady growth is without considering the additional growth likely to come from new farmers steadily entering the industry.

The rapid growth taking place is a factor of several industry trends, beginning with the diversity of animals, enterprises and

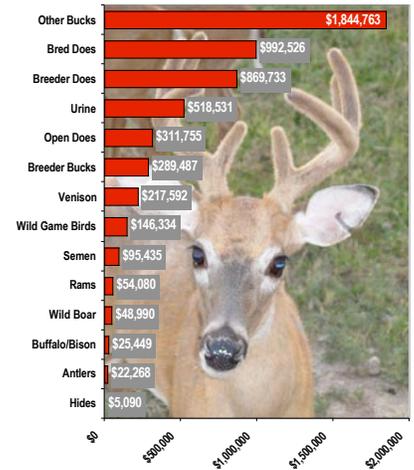
products involved. New York State's deer and elk farms turn out a broad array of products and services, ranging from venison meat to deer watching. Hunting, breeding stock and other specialties and tourism services are among the items offered. Most farms and preserves provide multiple products and services, 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 and elk animal stock is the primary product with breeder does accounting for 16.0% of sales and breeder bucks representing 16.0%. Other bucks are the largest category with 33.9% of sales. Bred does account for 18.2% and open does 5.7%. Other animal stock (boars, rams, bison and wild game birds) constitute 5.1% of sales and offer significant potential for growth. These other species also serve to diversify the industry and create year-round tourism business for New York.

Deer urine is also a major product. Marketed as a deer attractant to hunters and others, it represents an estimated \$518,500 in sales and 9.5% of all deer and elk farm sales. Venison meat is a significant product within New York State. It accounts for \$217,600 in sales, some 4.0% of total sales. Still another product is deer and elk antler, velvet antler being used heavily in traditional Chinese medicine. Antlers also have craft and trophy uses. Other significant products and services include, hides, semen, deer watching and associated lodging and dining services. Altogether, these non-animal miscellaneous products and services are responsible for an estimated \$858,900 in sales, 15.8% of all New York State deer and elk farm sales.

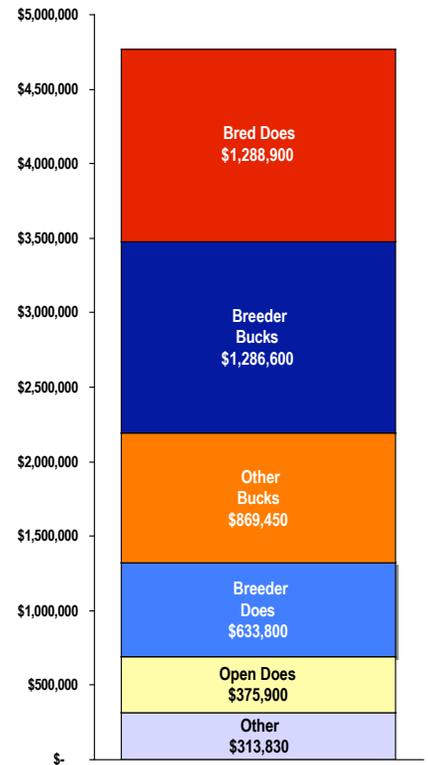
The typical New York State deer and elk farm is a small agricultural business, often a family farm, generating an average of \$65,096 in annual sales in 2007. Nevertheless, the industry includes several farms with more than \$200,000 per years in sales. It provides niche agricultural opportunities for many landowners to gross good returns from relatively small acreage, keeping smaller farm properties in agricultural use.

Deer & Elk Farm Sales by Product



New York State commercial deer and elk farmers have over \$4.8 million invested in animal stock inventories

Deer & Elk Farm Inventory by Value



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DEER FARMING OPPORTUNITIES

The State, because it is home to New York City and some of the nation's finest restaurants, provides an excellent opportunity to market venison. This is a very healthy meat product as the following data supplied by the USDA National Nutrient Database indicates.

Nutritive Value of Meats (100 Grams)				
Meat	Fat (g)	Cholesterol (mg)	Calories (kcal)	Protein (g)
Venison	2.38	79	150	30.2
Turkey	2.63	98	150	29.6
Chicken	7.78	84	197	29.8
Salmon	8.13	71	182	25.4
Pork	9.44	85	211	29.5
Lamb	9.73	95	216	30.0
Beef	11.43	90	248	33.8

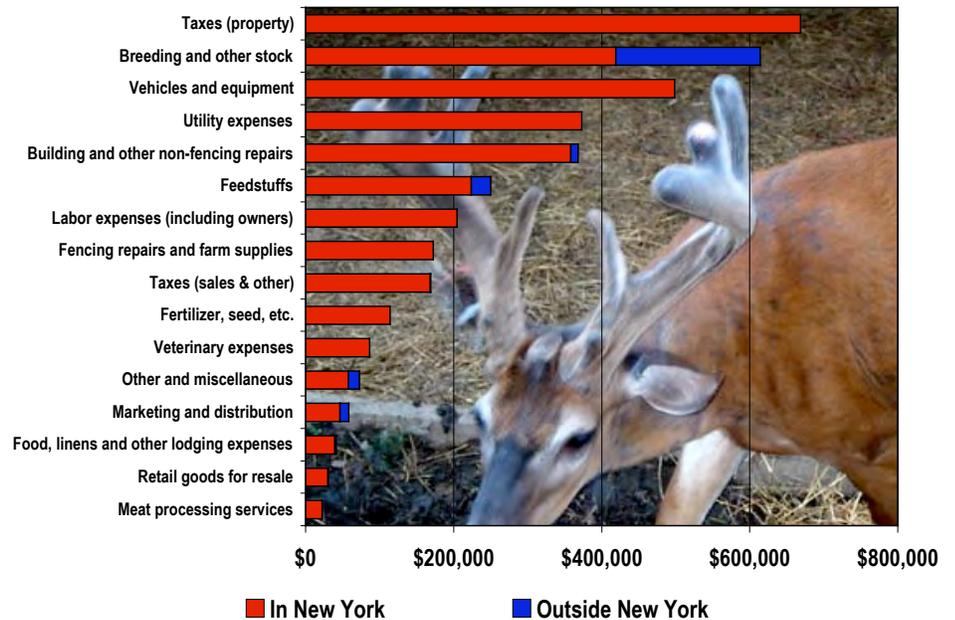
Venison offers very low fat, cholesterol and calories, while also providing good protein. Very few meats furnish the combined nutritive value venison affords.

Venison is also important in American and fusion cuisines. Many of the highest rated restaurants in the New York City metro area have included venison on their dinner menus. The famous 21 Club, for example, offers *New York State Venison with Gratin of Fall Squash and Roasted Chestnuts*, while the *Gramercy Tavern* serves *Venison with Onion Marmalade*. The *Saddle River Inn* (New Jersey) menu also includes *New York State Venison Medallions*, while *Applewood* in Brooklyn offers *Grilled New York State Venison*. The *D'Artagnan* (well-known fine-dining restaurant supplier) catalog also includes *New York Venison Strip Steak*. These listings and menus, among many others, indicate opportunities exist to attract additional venison business through New York State branding.

Deer & Elk Farms Spend Heavily in New York

New York's deer and elk farms put their money back into the State, providing economic development opportunities for rural areas as well as many small family farming opportunities for more suburban or exurban areas where open space preservation is critical.

NYS Deer & Elk Farm Spending in 2007



Deer and elk farms spend an estimated \$1.5 million per year on real estate taxes, this being the largest expense item for most farms. Another \$1.4 million is spent annually on stock and \$1.1 million per year is expended on vehicles and equipment. Utility expenses for 2007 were \$825,000 while building related expenses were \$814,000. Feeding of captive deer and elk requires still another \$553,000 of annual expenditures of which \$495,000 is spent within the State. Labor expenses are \$452,000 per year. Among other expenses, deer and elk farms spend funds on fencing, sales taxes, veterinary bills, marketing and meat processing. Altogether, New York's deer and elk farms spend \$8.3 million annually on operations, 93% of it within the State, indicating a total economic impact of \$21 million, given the 2.55 multiplier discussed earlier. This does not include major capital spending.

The high rate of intrastate spending is one reason deer and elk farming enjoys a high economic multiplier. Deer and elk farms are family farms and small businesses that foster economic gains for all New Yorkers by recirculating money spent within the industry. They also indirectly support hunting, which the 2006 *National Survey of Fishing, Hunting, and Wildlife-Associated Recreation* estimated was responsible for \$715,707,000 of expenditures in New York. Significantly, there was another \$1.6 billion spent in the State on wildlife watching, one of the growing markets for deer and elk farmers. Deer and elk preserves are also providing new opportunities for wildlife watching by diversifying their animal stocks to include bison, boar and rams.

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Deer Farms Invest in New York State

New York State's deer and elk farms not only spend heavily on operational expenses, but also are investing in New York and protecting its land. Altogether, these farms spent an estimated \$166.9 million on capital items over the last five years and expect to spend another \$27.6 million this year. Total investments in New York State for the period 2003 through 2007 included \$86.7 million on land, \$57.1 million on buildings, \$10.8 million on animal stock, \$6.2 million on fencing and \$6.0 million on equipment. The State's deer and elk farms expect to invest an average of \$18,700 per year of new capital on their enterprises over the next five years, indicating the growing strength of the industry throughout the State and its potential to become a dominant niche agricultural feature.

**New York Deer & Elk Farm Capital Spending
Last Five Years (2003 – 2007)**



This steady investment over a period of several years is what has led to deer and elk farming becoming a recognized niche agricultural sector now large enough to now enjoy its own category in the USDA Census of Agriculture. The spread of the industry across 45 counties across the State indicates it is particularly well-suited to New York's geography (especially within Upstate New York where new economic development is critical) and has the potential to grow much larger. Moreover, the capital investments made in farm infrastructure have now positioned the industry to expand its offerings of products and services to include additional species such as exotics and wild game birds along with more ancillary services such as nature photography offerings and lodging. This targets the tourism industry on which Upstate New York's economy increasingly depends. Tourism sales, or visitor expenditures in New York State, grew 9% in 2005 following a 10% expansion in tourism sales in 2004, according to *Oxford Economics*. Some 10% of the tourism sales were recreation related, a category that includes many of New York's deer and elk farms, which offer animal watching, hunting, lodging, dining, nature photography, hiking and other recreational activities as part of their business enterprises.

DEER & ELK FARM TOURISM

New York deer and elk farmers are major tourism generators for the State made famous by the *I Love NY* campaign. Deer and elk farmers use a variety of modern sales techniques, offering a model for all of agriculture. They are leaders in direct sales, retailing of products and services at the farm being the most common method of sales and nearly one-third of farmers using this approach. Another 17% rely upon shows and auctions to sell products and services, while 16% use the Internet to sell worldwide.



Deer and elk farmers also involved directly in several specific tourism activities. Some 20% offer hunting on their land, 18% provide nature photography opportunities, 15% offer hiking and horseback riding trails, 14% provide fishing, 12% offer bird watching and



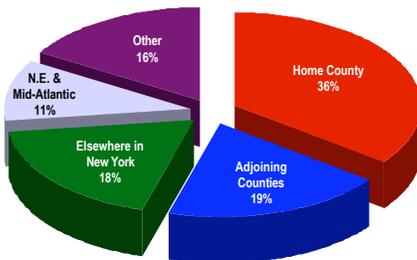
12% conduct wildlife viewing tours. Several farms also offer these services to youth groups and schools and make their facilities available for seminars and other tours.

ECONOMIC IMPACT OF NEW YORK DEER & ELK FARMS

BRINGING BUSINESS TO NEW YORK

New York State's deer and elk farmers attract customers and visitors from across the State and nation, as the following chart demonstrates. Fully 27% of customers come from other states or countries. Still, 72% come from within New York State, indicating deer and elk farms are an integral part of the State agricultural economy.

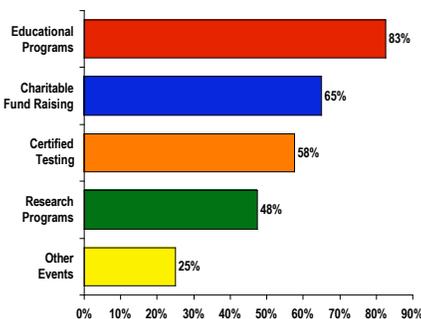
Sources of Customers



EDUCATION AND RESEARCH

New York State's deer and elk farms are education and research laboratories for the State's agricultural and hunting industries.

Education/Research Activities

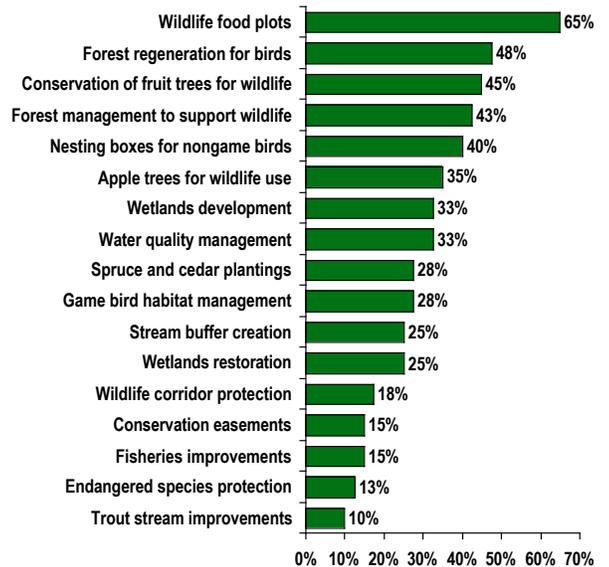


New York deer and elk farms conduct numerous education, research and fund raising activities. These involve over 13,000 participants annually. Educational programs include scouting, 4-H and school events. Research involves several universities (e.g., Cornell). Fund raising activities includes *Hunters for the Hungry* and many others.

Deer & Elk Farms Conserve New York's Land

New York's deer and elk farmers are good land stewards and conserve the State's invaluable open spaces. Wildlife and land conservation activities on these farms and preserves assure New York State continues to support wildlife and remains as open space with all its attendant benefits. Deer and elk farmers provide wildlife food plots (65%), engage in forest regeneration practices to create upland game bird habitat (48%), develop new wetlands and areas of water for wildlife (33%), establish stream buffers (25%), protect wildlife corridors (18%), put open space under land conservation easements (15%) and engage in stream improvement activities in support of fisheries (15%).

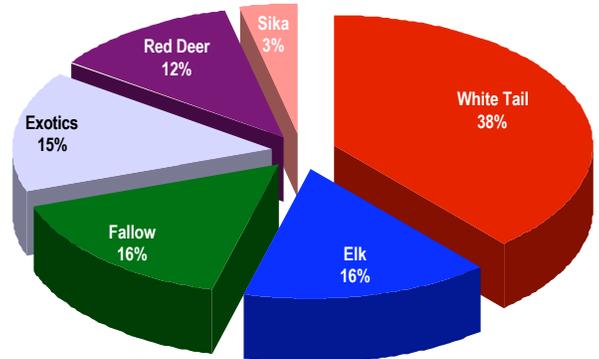
Conservation Activities



Many Species, Many Benefits

New York's deer and elk 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*). Taxonomically, American elk are red deer. The red deer listed above represent hybrid and Eurasian deer types. These many species help create the niche value of the deer farm industry. The white-tailed deer is also the mainstay of the State's hunting industry. Deer farms help to sustain interest in hunting by offering additional opportunities to so on private lands throughout the year. The variety of species (including exotics such as bison, boar and rams) also support wildlife watching away from home.

Major Species



The Key Facts:

Over 200 commercial deer & elk farms and over 500 altogether with 58% of commercial farms created less than 10 years ago

New York ranks No. 6 among the states in deer & elk kept

New York ranks No. 7 among the states for deer and elk sold

Deer or elk farms found in 45 of 62 New York Counties

Average deer or elk farm protects 282 acres of open space

Deer & elk farming is a \$14-21 million industry in New York

Deer farming generates over 700 jobs for New Yorkers

Typical deer or elk farm generates \$65,000 of sales per year

Deer & elk farm sales are growing by 17% per year

New York deer & elk farms invested \$167 million of new capital in the State over the last 5 years

The deer & elk industry is now a major agricultural niche larger than meat lambs, aquaculture or Christmas trees



For more information:

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