NADeFA's Cervid Livestock Foundation exists to serve the deer industry through educational, charitable and scientific purposes relating to deer farming and ranching and the use of deer products. The Cervid Livestock Foundation seeks to influence industry trends and assure a healthy and expanding industry.

The Cervid Livestock Foundation's mission is to facilitate public education about the agricultural and economic value of raising deer.

### Mission

*educate the public on the value and benefits of deer and deer products*

*disseminate information relating to the care and breeding of cervid species*

*conducting programs to support the education of deer farmers/ranchers about the deer industry and venison consumption*

*promoting expansion of the North American industry*

### Current Initiatives

*expanded educational activities*

  *deer farming seminar*
  *journal support*

*public awareness and marketing of deer products*

  *venison cooking competition*
  *venison marketing brochure*
  *deer farming white papers*

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The North American Deer Farmers Association's Cervid Livestock Foundation was founded in March 1993 and is organized exclusively for the educational, charitable and scientific purposes related to deer farming and ranching and the supporting industry. The Cervid Livestock Foundation is a 501(c)3 organization. FEIN 52-1812256.

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# Table of Contents

- Editor’s Note .................. 2
- Axis Deer ..................... 3
- Fallow Deer ................... 5
- Red Deer ...................... 7
- General Information ........... 9
- Sika Deer ...................... 15
- Wapiti (Elk) ................... 17
- Whitetail Deer ................. 19
- NADeFA Application ........... 21
You hold in your hands the equivalent of Deer Farming and Ranching 101, an introduction to raising deer in North America. Whether you are at the beginning of your deer farming journey or at its peak, this piece will educate, advise and/or re-acquaint you with the fundamentals of this agri-industry. But don’t stop here: this volume is meant purely as a springboard to your venture.

If you are a veteran deer farmer or rancher, add this publication to your marketing tool belt: use this publication to promote your operation. The pages describing the type of deer you own tear out easily, and can be used to educate and promote your farm or ranch, and species.

If you are scarcely establishing your deer farm or ranch, the basics follow. A section is devoted to each of the main deer species raised in North America, and the “General Information” section covers everything from designing your operation to bringing your deer back to your farm or ranch.

This publication is the first step in your journey. Connecting with others in the industry, reading all available material and joining your national association to stay abreast on issues and influence the industry yourself are some of the essentials of its continuation. We at the national office look forward to interacting with you!

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A special thanks to those who have made this publication possible.
This work is truly the effort of many. Thanks to each one of you!

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Farming & Ranching Deer in North America
2
**Axis Deer**

**History**
The axis deer can be traced to the foothills of the Indian Himalayas and island of Sri Lanka (Ceylon). Their original habitat was open country at lower elevations in forested regions. They have been introduced onto other continents and are a favorite of zoological gardens around the world. Free ranging populations exist in the continental United States, Hawaii, and Australia. Axis deer were introduced into Texas in 1932. Texas has by far the largest population of axis deer in the United States.

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**Species Specifics**

**General**
Axis deer have striking reddish-brown coats marked by white spots arranged in undisciplined rows along their sides. They have a black dorsal stripe and a white bib on their neck, white inner legs, stomach, and undertail. Male heights range from 29 to 39.5 inches. Mature weight is from 145 pounds to 250 pounds. Males have darker facial markings with a more pronounced "scowling" expression the older they get. Female axis stand 26 to 33 inches and weigh from 90 to 150 pounds.

Axis bucks can be in hard horn any time of the year. They grow and shed antlers on their own clock so in one herd there may be a newly shed buck, a hard horn buck and a buck in velvet.

Usual antlers are 22 to 27 inches, with trophies ranging from 30 to 36 inches. Axis have a typical antler structure of three points on each side consisting of a main beam, one secondary point halfway up the beam, and a brow tine. However, four points on a side are not uncommon.
It is thought that axis deer are not cold tolerant. In Texas, they have adapted from their Indian average temperatures of 70 degrees to the varied temperatures of Texas.

During stressful times, good animal condition and heavy situational feeding have made the difference between high death loss and virtually none.

Axis deer appear incapable of putting on intra-muscular fat and are very efficient grazers.

They produce lean meat with 0.2% fat or less, and therefore are legally "fat free."

**Nutrition/Health**
The primary diet of axis deer is grass, and they will graze on new weeds and forbs. When grass is not in sufficient quantity, they may browse. Axis graze successfully on native Texas grasses such as curly-mesquite, indian-grass, sideoats grama, big and little bluestem. They do well on improved grasses, such as Klein. Seasonally, they do well on winter wheat.

Browse species include live oak and hackberry. Mast includes acorns and mushrooms.

In a ranced situation, axis deer are disease resistant and do not require inoculations or worming.

Texas fleas and ticks appear to be species-specific and do not bother axis. Axis can get tuberculosis but cases are extremely rare and, in the only documented case found in axis deer, was present in a Hawaiian dairy cattle herd where the axis fed.

**Reproduction**
Axis deer have a high fertility rate and can breed year round, usually based on their birth date. A primary harvester of excess animals in the Texas Hill Country reports that they have never harvested an axis female that was not pregnant, lactating or both.

Gestation is approximately 7.5 months (210-238 days). In Texas, fawning peaks in January-April and October-November. Researchers report that males in velvet antler can breed. Eight to twelve month old females can breed but the first fawning is usually at 23 months of age or later.

It is generally believed that axis does are capable of producing four fawns in three years and are productive to at least age 15. Multiple births are extremely rare but have been reported in zoos and wild populations.

One axis buck can service ten to forty females, maybe more. As the excess and older breeder bucks provide good trophy income, there is no reason to skimp on buck availability.

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*Thanks to contributing author Nancy Green, Comanche Spring Ranch, Inc., Eden, TX*

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**FALLOW DEER**

**History**
Fallow deer are one of the popular exotic species raised in North America. Their domesticated history extends back to the 9th century B.C., when the Phoenicians domesticated them for quality venison. For centuries, the Europeans raised them for food, and today fallow deer continue to yield fine table venison. Their recent farming history can be traced to German farmers who sought an alternative and more profitable land use. Josef Kerckerinck, NADeFA’s founder, was the first to farm fallow deer commercially for venison in North America. He established his farm in New York in 1979, and fallow deer farming quickly spread throughout the Northeast, and today all throughout North America.

**SPECIES SPECIFICS**

**General**
The most distinctive feature of the fallow deer is the male’s antlers. Broad, flat, palmated antlers grace each buck’s head. They resemble a hand with widespread fingers pointing backwards.

The coloring of fallow deer varies between white and black, following four main patterns: white, menil (a light brown coat with bright white spots), common or ginger (rich brown with white speckles on their back and flanks, and a black stripe), and black.

Fallow deer are comprised of two subspecies: Mesopotamian and European. The most obvious differences between the two are body size and antler shape. The Mesopotamian fallow deer are larger than their European companions, and their antlers spread out at the base, while the European fallow have their palmation near the top.
Nutrition/Health
Fallow deer harbor a natural resistance to disease and parasites, including yersiniosis, lung worm, and chronic wasting disease. They also are not very susceptible to copper deficiency. It is nonetheless very important to check the health status and the history of the deer before they are bought.

Efficient converters of forage to meat, fallow deer are grazers consuming an unusually wide range of grasses, legumes, and broadleaf weeds.

They thrive on any pasture that would support cattle, sheep, goats, horses, antelope, and camellids. In New Zealand it is not unusual to see fallow deer grazing among other species as a means of weed control.

Reproduction
Fallow deer follow the patterns of their cervid counterparts in reproduction stages; however they do not cross with any other specie and they rarely birth twins.

Fallow deer have seasonal synchronization of birth, body growth, activity cycles and growth stasis corresponding to feed quantity, quality and availability. For example, maximum nutritional demands for females occurs during lactation.

Gestation for fallow deer averages 234 days plus or minus 6 days. The precise timing of breeding and birthing ensures that maximal lactational demands coincide with the most lush and plentiful growth of forage (May, June, and July in the northern hemisphere).

The ratio of breeding bucks to does should conservatively be one to twenty. On the average, does fawn until they are about fifteen years old.

With fallow deer the common European subspecies is often crossed with the larger Mesopotamian fallow deer and pheno-menal increases in growth rates result.

Through the use of Mesopotamian bucks, the deer farmer can market

The summer is the time for fawning and lactation, and the time of maximum weight gain for yearlings.

For mature bucks, it is the time for antler growth and regaining of body condition and fat reserves which were depleted during the previous autumn rut and winter.

Fallow deer herd structure determines their social organization: adult does, yearlings and fawns make up one herd, while adult buck form smaller herds.

Special thanks to contributors, Cleve Tedford, Male Face Farms, Tellico Plains, TN; Jill Wood, Bryarwood Ranch, Wimberley TX; JoAnn Logan, Honey Hill Farm, Edmond, OK
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Farming & Ranching Deer in North America
RED DEER

History
The origin of the red deer can be traced to western China where four different sub-species developed. The French, Persians and Romans practiced deer husbandry as early as the first century B.C., and France and England documented the mushrooming of the red deer population during that time period. Faming red deer for the production of velvet has been popular in China, Russia, and other eastern countries for 2,000 years.

New Zealand revived interest in deer farming about 25 years ago when the wild red deer increased in number until they were considered pests. Since then, New Zealand has been very successful in improving genetics in breeding stock, producing and exporting venison and velvet and promoting hunting.

SPECIES SPECIFICS

General
The general color of all sub-species of the European red deer is a rich reddish brown in summer turning to a greyish brown in winter.

The rump patch is a lighter brown and there may be a dark dorsal stripe. Red deer calves are spotted at birth, but these fade away after a few months. Prior to the rut, stags develop a mane as the neck swells.

Red deer hinds weigh about 175 pounds. Red deer tolerate all ranges of weather and have a low susceptibility to disease. They have a high fertility rate and calve easily. They are calm herd animals and easy to transport.

Since red deer are efficient converters of pasture to protein, with proper management they can be raised on marginal land and still yield high quality venison, velvet and by-products.
**Nutrition/Health**
Although red deer enjoy browsing, they are also grazers and do excellently on native and improved pastures. They prefer legumes like alfalfa and clover, but they thrive on a variety of grasses.

Unlike cattle, red deer can graze on alfalfa with little risk of bloat. In the winter they do well on rye, oats, corn silage and wheat. Red deer are gentle on pasture and can be stocked at a ratio of four to seven deer per acre.

are susceptible to yersiniosis. Although red deer are disease resistant, it is extremely important to check the history and health status of the deer before they are bought.

**Reproduction**
Red deer have seasonal synchronization of birth, body growth, activity cycles and growth stasis corresponding to feed quantity, quality and availability. For example, maximum nutritional demands for females occurs during lactation. The birth and lactation, and the time of maximum weight gain for yearlings. For the mature stags, it is the time for antler growth and regaining of body condition and fat reserves which were depleted during the previous autumn rut and winter.

Red deer are single birth mammals (twins are very rare), giving birth after a gestation of approximately 234 days, beginning in early May through the summer.

Red deer hinds can begin reproducing at 16 months; stags are ready to mate at 24 to 30 months of age. The rut, or male mating peak, begins in mid-September or early October, depending on the region and climate. Stags can reproduce for 14-20 years with a conception rate close to 90% or better.

The ratio of stags to hinds depends on the age of the stag. Generally a two-year-old stag can breed up to twenty hinds, a three-year-old up to thirty, a four-year-old up to forty, and mature sires can cover as many as fifty or more dams. However, a sire should not be introduced to too many females or his velvet development will suffer.

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*Special thanks to contributing author Marïda Favïs del Core, Blackjack Ranch, Giddings, TX*

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GENERAL DEER INFORMATION

Starting a deer farm or ranch requires energy, innovation and much time spent in research. Once you have considered your options and decided what is right for you, visit established operations and talk to other deer owners who are raising the type of deer you are interested in. This first step will save you much time later and will enable you to network information critical to starting off on the right foot. You will also be able to begin formulating your business plan and marketing techniques at this time. Some steps to building a sound operation follow:

Know the Regulations
Find out what local and regional agencies regulate ownership, transportation, propagation and sales of the deer species you’re interested in and their products. (Some states and provinces do not allow private ownership of certain deer; others require a license or fee to maintain your permit.) Check with your state or provincial Game Management Agency and Department of Agriculture and even your township for regulations and ordinances that apply to your operation.

Startup Capital
Check with your state or provincial representatives, senators and other officials about the possibility of grants and loans available for small business development, alternative agriculture or family farms. Your local department of agriculture may also be a source of information for monies set aside for alternative farming programs.

Plan
Evaluate and determine what niche of the industry you wish to pursue.

Before buying one fence post, roll of fence, and especially stock, it is important to plan, evaluate, re-plan and re-evaluate. Don’t be afraid to ask questions. The best sources you have are those who are already in the industry. Contact them! You need not make the same mistakes that others have made. Plan for the overall development of your farm site. Then, prioritize the sequential development of the site.

Farm Layout
Again, careful planning is essential for a successful operation. Design your range, pens, food plots, breeding areas and handling facilities in advance. It is best to incorporate plans for future expansion at this time. Since deer adapt well to most terrain, acreage suitable for deer farming may be relatively inexpensive. On one prime acre of land, you may accommodate...
2-3 adult whitetail deer, 7-10 adult fallow deer, 4-7 adult red deer, 7-8 axis deer and 1-2 elk.

However, keeping the number of animals per acre to a minimum reduces stress on the animals. You may find it will be more cost-effective in the long run to spread your animals out, in order to maintain the plant densities that will keep a pasture healthy and able to regenerate the following spring.

In developing the farm site, an important factor is a steady and reliable source of clean water. Fresh water is essential to any deer’s diet. It is also beneficial to try to use the deer’s naturally occurring travel routes and special use areas. These paths can help to create an overall plan regarding runways for movement of stock, breeding paddocks, fawning areas and a centrally located handling facility to which stock can reasonably be moved from your special use areas.

Fencing
Choose hi-tensile fence designed specifically for deer or game. Small squares (or rectangles) in the fencing near ground level will accomplish much in the way of predator control year-round and help contain inquisitive youngsters in the spring.

An outer covering of shade cloth, plastic or wooden snow fence or other visual barrier is a valuable tool in further securing your livestock. Corner and end posts are usually of greater diameter than line posts. Use quality gates for perimeter fence openings, including a pedestrian walk-through. Eight foot fence is normally adequate for containing most species of farmed deer; however, check with your state for special regulations that may apply.

Building Pens
Fence installation revolves around the posts that support it. Use high quality posts (spaced closely enough to support the weight of the fence without sagging) and galvanized fence staples to secure...
fencing. Work the fence from center to ends, creating a rubber band-like tension. This will reduce injury to livestock that come into contact with the fence.

The performance of your fence depends on the proper construction of the braces you build to support it. Seek out the experts and heed their advice when building your fence. Cutting corners here can lead to disaster.

Gateways should provide access suitable for passage of all necessary equipment. Plan for shelters, feeders and water facilities. It is wise to consider food and water dispensation from outside the pen for personal safety during the rut season. Build so that animals can be moved from one area or paddock to another without much handling or darting. Handling facilities often work best located centrally, and designed specifically for your site. Tie everything together with fence corners and gate entries built to withstand any storm. Build gate sills and overheads for exterior fences with a mind to support gates for ease of opening in any weather. Also, consider height of overheads to allow vehicles for heavy construction, plow snow and deliver bulk feed.

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**Nutrition**

Protein, energy, vitamins and minerals are important to the deer diet. Just as with traditional livestock, the breeder should consider soil samples and the nutritional value of the deer's diet to complete it with the right minerals. As far as proteins and energy are concerned, the owner should supplement feed if the pasture does not supply enough nutrients. Nutritional requirements of deer should be considered on a seasonal basis since they change based on gestation, lactation, antler growth and the available nutrients on your farm.

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**Feeding program**

Good nutrition is required to maximize conception rates and improve weaning percentages. Weather permitting, deer will receive most of their nutrients from good pasture. However, during the colder months, dry matter will need to be added. There are many compound pelleted feeds on the market today which will sustain your herd along with browse, grasses and legumes. Custom formulas for your feeding program may also be set up through your local feed mill, nutritionist and/or universities with particular interest in ruminant nutrition.

Protein is an important part of the deer diet and should be supplemented when forage is low in protein. Protein pellets may be mixed with corn for quick energy and feeding during cold periods. Deer will eat good quality alfalfa hay whenever supplemental feeding is necessary.

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Farming & Ranching Deer in North America

11
Although the animals may have plenty of natural feed available going into winter, it is a good plan to begin supplemental feeding on a seasonal schedule. Even if one simply puts out a bit of corn, the animals need to become trained to feed annually. When winter storms come and cover available grass, it will be too late to educate the animals about the feed trough. During winter storms, it is advisable to feed them two times a day, adding more corn. Corn gives quick energy and the feeding gets the animals up and moving around. These measures help survival during inclement weather.

**Herd Structure**
A deer’s social structure is based on the herd. Females and their young create one herd, while adult males form their own. They may remain separate for most of the year, mixing only during breeding season, or the rut.

**Handling**
Whether large or small, every deer operation should have some form of handling facility. This facility will possibly include runways, mazes, drop or squeeze chutes, and will require an enclosure adequate for holding in preparation for transport, observation during health testing periods or quarantine. Those who do not build handling facilities must be prepared and trained to tranquilize their deer. Those who are not properly trained, must be prepared to accept the potential mortality associated with darting deer.

If you establish a rotational grazing system, deer will rotate from pasture to pasture and can be led to the working chute with four-wheelers, a feeding truck, or even a bucket of feed. Depending on the breeders’ budget and, most of all, their goals, the working facilities can be as simple as a cattle facility with 8’ fences or as complex as completely enclosed buildings designed specifically for deer. If the breeder only needs a facility to vaccinate and accredit their animals, a simple layout and cattle chute is often effective. However, if they plan to cut velvet or develop a genetics program with...
artificial insemination or ET, a more complex facility is recommended to manage the deer.

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**Health Care Program**

For many, a difficult aspect of deer farming is finding a deer-oriented veterinarian. Since deer farming as a commercial industry is relatively new, many vets have had little or no training in the care of farm-raised deer. If deer farmers make good use of the information and literature available, they can easily assist any large animal veterinarian in dealing with the health care issues that arise.

Work closely with your vet to keep abreast of necessary testing, deworming practices and emergency procedures should your deer become ill or injured. Once again, a little extra time spent studying available printed material about the health and diseases of deer can be valuable. The *North American Deer Farmer* features a veterinary column in every issue with valuable information worth passing along to your veterinarian.

Weigh the cost of one animal lost against the price of a farm call and you will see there is no way to rationalize not having a health care program in place prior to purchasing stock.

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**Buying Stock**

Purchasing stock is one of the last (but certainly not least) steps in beginning your operation. Ideally the genetic and health history of the deer you are buying should be readily available. Buying only from reputable, established deer farmers will reduce disappointments and disagreement as time goes on.

All required health certification is customarily the responsibility of the seller, however, all details of the transaction should be in writing to protect both parties. Closed herds from known deer operations ensure health status; records of genetics are a value to the buyer. Be sure to attain the records on genetics and animal health. Also, be aware when transporting deer, capture and drugs will cause the deer stress.

**Bucks/Stags** - Be sure of the animal’s age and fertility. Has the buck or stag already sired fawns/calves? If so, how many does/hinds has he normally serviced during the rut? Are shed or cut antlers available for viewing and will they be part of the sales transaction?

**Does/Hinds** - Age and genetic background are critical factors if you are planning to breed does or hinds for future generations. If purchased as ‘bred’, is this deer guaranteed to be impregnated or merely exposed to a herd sire during the rut.
season? Was she exposed in a single sire or multi-sire setting? What is her birthing history? Be as selective of your does/hinds as you will be with the sires that will service them.

**Fawns/Calves** - Nothing is more precious (or fragile) than a fawn or calf! Are you planning on bottle-feeding? If so, determine at what age you wish the fawn or calf to be pulled from the mother. Bottle-feeding is a 24-hour, 7-days-a-week commitment, and the life of the fawn or calf is never guaranteed. Confirm that the farm you are buying from has a health program for bottle-raised babies when they hit the ground. If dam-raised, when will you be taking possession of the fawn or calf? Will there be extra charges for the time during which the fawn or calf is being maintained until weaning?

**Transportation**
The final phase of beginning your operation will be the safe transport of livestock from the point of origin to your destination. A cattle trailer will serve well for most trips, and an enclosed trailer with plenty of ventilation will serve as better transport for longer journeys. Moving deer must be done with calmness, care, quiet, and common sense in a properly planned and constructed facility. If you push too hard, you and your animals will suffer. If you sense that things are beginning to unravel for you or your deer, stop!

Non-accredited herds will need to be tested for tuberculosis and brucellosis if they are transported across state lines. Chemical immobilization may be required in some cases. Safe capture and transportation should be done by trained personnel under the direction of a licensed veterinarian. If necessary, discuss with the seller what steps he or she will take to ensure safe transport. If at all possible, speak directly to the person who will be doing the immobilization, if necessary, and the person actually doing the transport. Will the cost of immobilization and transport be the buyer’s or seller’s responsibility? If something goes wrong and the animal is injured or dies, what obligation do you have at that time? Make sure all arrangements for transportation and responsibility are in writing.

Insurance is available from some livestock insurers. Check with your seller, other deer farmers or NADeFA for suggestions.

<table>
<thead>
<tr>
<th>What’s It Called?</th>
<th>Species</th>
<th>Male</th>
<th>Female</th>
<th>Young</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fallow</td>
<td>Buck</td>
<td>Doe</td>
<td>Fawn</td>
<td></td>
</tr>
<tr>
<td>Red Deer</td>
<td>Stag</td>
<td>Hind</td>
<td>Calf</td>
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<td>Reindeer/Elk</td>
<td>Bull</td>
<td>Cow</td>
<td>Calf</td>
<td></td>
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<td>Doe</td>
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Once you have established your farm, you will need to stay abreast of information relative to the industry. Your success depends on dedication to your goals and your animals. Sharing what you have learned will help future generations of deer farmers. Your deer farm will present you with challenges and joys. As you learn about your farm and your animals, continue to interact with other deer farmers, learning from them, and allowing them to learn from you.

*Special thanks to contributors Brian Cahill, Marida Favia del Core, Nancy Green, Dr. Jerry Haigh, JoAnn Logan, Thelma Morgan, Pete Perdue, Cleve Tedford, Brad Thurston, and Jill Wood.*

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**SIKA DEER**

**History**
Sika deer were initially found in southern Siberia and the Japanese island of Hokkaido in the north along both mainland and island chains to southwestern China and Taiwan. They were located by western zoologists in the middle of the 19th century, when they found many (more than 70) subspecies, especially in the Asian continent. The Chinese chemists bred and cross-bred sika for centuries and used virtually every part of the animal. In Japan, however, herds ran free throughout the country. Those in the north had large body and antler size, while those in the southern region were smaller. The first sika were introduced in America to Maryland in 1916, and into Texas in 1939.

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**SPECIES SPECIFICS**

**General**
Sika deer tend to range in color from mahogany to black. They are rarely white with very few documented cases of white as opposed to albino. All colors carry a distinctive black dorsal stripe from the base of the skull to the tail.

Most animals have some degree of spotting with the mahogany color generally carrying white spots and the darker colors having either white or black spots or black flecking.

When alarmed, they will often display a distinctive flared rump much like the American elk. All sika are compact and dainty-legged with short, trim, wedge-shaped head and a boisterous disposition.

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*Farming & Ranching Deer in North America* 15
Sika stags have stout, upright antlers with an extra buttress up from the brow tine and a very thick wall. A forward-facing intermediate tine breaks the line to the top, which is usually forked. Occasionally, sika develop some palmation.

In the wild, sika prefer forest type vegetation and feed primarily at night. They are true ruminants and feed on plants, grasses, leaves, bark and off the ground. Like their red deer cousins, sika deer are susceptible to stress-related disease if poorly managed.

Females carry a pair of distinctive black bumps on the forehead. Antler length can range from 11 to 19 inches to better than 30 inches depending on the species. Stags also sport a very distinctive mane while in the rut. The average weight for an adult stag is 160-220 pounds.

Sika are sturdy animals and seem to do well in the north as well as the hot, dry southwest. Sika deer have a calm disposition, however, they are prone to biting when put in a trying situation.

**Reproduction**
Sika deer have seasonal synchronization of birth, body growth, activity cycles and growth stasis to correspond to feed quantity, quality and availability. For example, maximum nutritional demands for females occurs during lactation.

The precise timing of breeding and birthing insures that maximal lactational demands coincide with the most lush and plentiful growth of forage (May, June, and July). The summer is the time of fawning and lactation, and the time of maximum weight gain for the yearlings. For the mature stags, it is the time for antler growth and regaining of body condition and fat reserves which were depleted during the previous autumn rut and winter.

For sika deer, birthing usually occurs between May and August, with a gestation period from 222-262 days. Twinning is rare in sika deer.

The sika rut is often referred to as the “roar”. The rut generally starts in middle to late September with hinds beginning to cooperate in early October to as late as December. Stags must be separated during the roar as they become intolerant of each other and will cause great harm to other nearby males. One stag will service 15-20 hinds.

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*Special thanks to contributing author Brian Cahill, Sunset Ridge Preserve, Lakewood, PA*

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History
Documentation of domesticated elk in North America dates back to the mid-1800’s, with Oregon and Montana recording specifics of those who bred and raised elk behind fence. These writings include information on the farmers, the husbandry and the source of these elk. Many of the elk farmed between 1892 and 1967 were wapiti relocated from Yellowstone and Glacier National Parks. In the early 1900’s, interest in raising elk expanded from those attracted by hobby farming to those serious about domesticating elk as an alternative agriculture. During this same time, USDA published a Farmer’s Bulletin indicating correspondence with 16 elk producers in 14 states and recording management plans for wapiti. The author noted farming elk was a promising field for breeding for profit.

Species Specifics
General
North American elk, otherwise known by their Shawnee Indian name as wapiti, are considered by some taxonomists to be the same species as red deer. Their height reaches four to six feet, with antlers often towering a full five feet above. These are the largest and longest of all cervid antlers, exhibiting fewer points than red deer, but thicker and longer antlers with a throwback appearance during late velvet growth.

A bull elk will weigh 700 to 1100 pounds, while females reach only 500 to 700 pounds. The term wapiti is derived from the Indian name for the large white rump patch distinctive to this group.

Elk sport a light tan coat in the summer, with the legs, head and mane region a
deep chocolate brown. Their coat grows darker with grey covering the lower part of the body.

**Nutrition/Health**

Elk are intermediate browsers so they eat twigs and tree branches. In the wild they will feed on aspen tree bark for its high copper content. Grasses and legumes will be sufficient during the summer months, but as pasture quality decreases quality hay and supplemental feeding may be necessary.

causing bloating and foundering, and possibly death.

Elk are hardy animals and disease resistant. Those diseases that do affect elk are much like those found in cattle. A program to control parasites and disease is a necessity.

The parasites that will most affect your herd are worms, lice, ticks and liver flukes. Tests for elk currently include tuberculosis, brucellosis, anaplasmosis, and bluetongue. A typical test statement when purchasing elk will help to guard against this disease in your herd.

**Reproduction**

Elk can crossbreed with sika and red deer. Breeding begins in September and can last into February or March if the hinds do not conceive. Most 18-month-old cows are capable of breeding if they are at least 430 pounds.

After 247 days or just over 8 months of gestation, cows will give birth, usually to a single calf. They are spotted at birth, and then lose these spots after three months.

Like all cervid males, elk become aggressive during the rut. Their belligerence has destroyed fences and harmed many people, so it is important to be cautious. Bulls are capable of breeding at two years of age, but should be three years old for best success. Elk become quite vocal during this time, and their calling, or bugling, can be heard at long distances. Males will herd together a harem of several cows for breeding, running off younger, smaller bulls. Bulls can service 20 to 40 cows.

Elk need twice as many calories in the summer as they do the winter to achieve the best velvet weights and calving percentages. Be aware though that a diet consisting of only grain will be harmful to elk, required for interstate movement is called a “4-way test”, and includes anaplasmosis and bluetongue. Chronic Wasting Disease (CWD) is also a concern for elk; although there is no live animal test yet, obtaining a signed CWD-free herd

Special thanks to reviewers, Dr. Jerry Haigh, BVMS, Msc, FRCVS, Department of Herd Medicine & Theriogenology, Western College of Veterinary Medicine, Saskatoon, Canada; Pete Purdue, Beaverhorn Elk Ranch, Vilas, NC

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**History**

While whitetail deer farming as a commercial venture has a relatively short history, records of whitetail deer farming have been found in the United States dating back to the turn of the century. At that time, whitetail deer populations were dangerously low due to mass habitat devastation and widespread hunting. In an effort to replenish the whitetail population, wildlife managers and interested farmers and ranchers began to restore whitetail deer habitats and implement population management programs. Today, whitetail deer management has grown considerably, with deer operations focused on producing quality animals.

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### Species Specifics

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<th><strong>General</strong></th>
<th><strong>Nutrition/Health</strong></th>
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<td>The whitetail deer’s long white tail, raised erect when alarmed, is its most distinctive feature. Its metatarsal gland below the hock on the outside of the hind leg is one inch long, which is somewhat shorter than its cousins the mule deer and the blacktail deer.</td>
<td>Whitetails are browsers, therefore they may be maintained on marginal land unsuitable for cattle, sheep and horses. They require little more than natural cover, browse, graze and nutritional supplements along with adequate water supply. Minerals and proteins are important in the deer diet;</td>
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Whitetail fawns are spotted at birth. As adults, their color varies from a summer reddish-brown to a winter gray. An adult whitetail buck can weigh anywhere from 200-400 pounds, depending on the area of North America.
soil sampling and pasture management are fundamental tools for deer management. If the pasture does not supply enough nutrients, the farmer should supplement feed with trace minerals if needed.

Whitetail deer need hay, grain, vitamins and minerals during the winter to meet nutritional requirements. Supplemental feeding is also necessary during hot weather when pastures are growing slowly and during late summer in preparation for the rut.

Whitetail deer are hardy animals, but are vulnerable to diseases that afflict other cervids. They are also susceptible to Epizootic hemorrhagic disease, chronic wasting disease, bluetongue and anaplasmosis. Sheep should not be raised side by side with whitetail deer as they are carriers of bluetongue.

**Reproduction**

Whitetail deer follow the patterns of their cervid counterparts in reproduction stages. Unlike red and fallow deer though, twins are a regularity. They have seasonal synchronization of birth, body growth, activity cycles and growth stasis corresponding to feed quantity, quality and availability. For example, maximum nutritional demands for females occurs during lactation. The precise timing of breeding and birthing ensures that maximal lactational demands coincide with the most lush and plentiful growth of forage (May, June and July).

Summer is the time of fawning and lactation, and the time of maximum weight gain for the yearlings. For the mature bucks, it is the time for antler growth and regaining of body condition and fat reserves depleted during the previous autumn rut and winter.

Whitetail does have been known to live up to twenty years, producing fawns almost every year after two years of age. Does can be bred at one and a half years of age and up. The average productive life of a doe is ten years. The current production practice is to replace bucks after five years of breeding. The ratio of bucks to breeding does should be one to ten.

Some whitetail breeders are currently using cutting edge technology such as artificial insemination, in-vitro fertilization, and selective breeding in their breeding program. This is also an excellent opportunity to learn new techniques such as chemical immobilization of deer, handling and transport. From a commercial standpoint, the whitetail segment of the deer industry is still in its early stages with potential for successful business ventures in all aspects, large or small.

_Special thanks to contributors Thelma Morgan, Birchwood Whitetail Deer Farm, Union City, PA; Brad Thurston, Luke’s Run, Spencer, IN_

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NORTH AMERICAN DEER FARMERS ASSOCIATION
MEMBERSHIP APPLICATION

Membership Name ____________________________
Farm or Firm Name ____________________________
Address ____________________________
City __________ State __________ ZIP __________

Business Phone __________ Home Phone __________ FAX __________

☐ I would like to be connected with an experienced NADeFA member

MEMBERSHIP DUES
Dues are collected on an annual cycle, beginning May 1 of the current year. Those joining after January 1 will receive a prorated rebate at the time of renewal. (SEE BELOW FOR EXPLANATION OF MEMBERSHIP TYPES)

ANNUAL DUES
Active Member $195
Active less than 25 deer $75
Active Patron Member $500
Practitioner Member $35
Associate Member $75
Affiliate Member $150
Additional Active $50
Additional Affiliate $50
Student Member $35

TOTAL DUE ____________________________

INFORMATION FOR ASSOCIATION CENSUS
At present, I am operating a Deer Farm or Ranch [ ] yes [ ] no
and I have the following numbers of animals:

Fallow Deer ____________________________
White Tail ____________________________
Red Deer ____________________________
Siika ____________________________
Axis ____________________________
Beardmore ____________________________

Number of animals in herd are accounted annually, on or before November 1.

Who introduced you to NADeFA?

VALIDATION
I hereby make this application for membership in the NORTH AMERICAN DEER FARMERS ASSOCIATION (NADeFA) agreeing to conform to the Code of Ethics and bylaws governing the Association and certifying that I have accurately and correctly rendered the number of animals on my farm.

Signature ____________________________

Date ____________________________

For NADeFA Office Use Only

Dues Rec'd ____________________________
Check# ____________________________
Mbrship# ____________________________
Conf'd ____________________________

NADeFA MEMBERSHIP CATEGORIES
Any individual, firm, partnership, corporation or association interested in deer farming may apply for membership as specified in the bylaws of the organization. Members may attend all activities sponsored by the Association and receive the Association publications and membership list. Membership dues are billed on an annual basis.

• ACTIVE MEMBERS (voting) Dues for active members are $195.00
  An active member is actively engaged in the husbandry of deer for commercial sales of venison or the breeding of stock to support such operations. Active Members can hold office, vote on all matters brought before the Association, and are entitled to use the Association logo and statement of active membership in the Association in advertising, in letterhead, business cards, packaging, etc. A small Farm rate of $75 will be extended to Active members with 25 or less animals or less.

  To determine the number of animals on your farm/ranch for NADeFA census purposes, count animals on or before May 1st (before birthing). Farm or ranches that have an annual membership may apply for additional individual membership for $50 a year each, unless the individual owns stock separately and qualifies under the above schedule.

• ACTIVE PATRON MEMBERS (voting) Dues for Active Patron Members are $500 per year
  Active Patron Members voluntarily choose to pay a higher dues rate in support of the Association and the deer industry. Patron Members can hold office, vote on all matters brought before the Association, receive the newsletter and membership list and are entitled to use the Association logo and statement of active membership in the Association in advertising, in letterhead, business cards, packaging, etc. In recognition of their additional support, they receive additional exposure throughout the year in NADeFa publications and at Association events.

• ASSOCIATE MEMBERS (non-voting) Dues for associate members are $75.00
  An Associate Member is an active interest in deer farming but does not own deer. Associate Members do not vote and cannot hold office in the Association.

• AFFILIATE MEMBERS (non-voting) Dues for Affiliate Members are $150.00
  An Affiliate Member is an individual, firm, organization, association or government agency that has related interests in deer farming or who is in the supply of goods or services to the deer farming industry. Affiliate Members do not vote and cannot hold office in the Association. Affiliate member companies may apply for additional Affiliate Memberships for $50 a year each, for sales personnel or distributors.

• PRACTITIONER MEMBERS (non-voting) Dues are $25 per year
  A Practitioner member is a veterinarian who works with an established deer farm or who has interests in farmed deer from the veterinary perspective, but does not own deer OR is an individual employed by an educational or research institution or government agency with an active interest in or support of deer farming. Practitioner members do not vote and cannot hold office in the Association.

• STUDENT MEMBERS (non-voting) Dues are $25 per year
  A student member is under 18 years of age or is a student at a college or university with an interest in deer farming, but does not own deer. A copy of student photo identification card or certificates must accompany application.

• BRANCHES Geographic Branches are formed to aid in the dissemination of information and activity at the grass roots level and to strengthen NADeFA at the local level. Members of NADeFA may choose to join their Branch and Branch dues, if any, are in addition to NADeFA national dues. Branch memberships are dependent on NADeFA membership. (One cannot join a Branch without joining NADeFA)

• SPECIES COUNCILS Each active member is automatically assigned to a Species Council based on the species of deer declared on the membership form census. Species Councils address species-specific issues and provide an additional forum for the exchange of information and advancement of the deer industry.

FOR ADDITIONAL INFORMATION, CALL 301-459-7708 [ph] 301-459-7864 [fax]