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Tammy Stevenson

Iowa State University

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An Overview of Elk Ranching

Tammy Stevenson

More and more traditional farmers are becoming involved in some not-so-traditional livestock enterprises. This move has been encouraged by low livestock prices and high feed costs. Many of these farmers who previously raised beef and dairy cattle are now raising elk (wapiti) and are making more money doing it. Elk are currently being raised for several reasons, including velvet antler, meat products, and breeding stock. The transition from cattle to elk is made easier because many of the character traits of elk are the same as cattle, except elk are a little more extreme.

Economics of Elk Ranching

One main attractive factor to raising elk is the economics. Feeding is generally much more efficient in elk than in cattle. They are predominately grazers that do very well on upland grasses and legumes. A supplement of grain is beneficial to keep the animals accustomed to being fed and allow daily observation for herd health. Three elk cows will consume the same amount of feed as one beef cow, and three elk need the same amount of land as one beef cow. This allows for greater stocking density that translates into greater profit per acre. The major investment in getting into the elk industry is fencing and purchasing initial breeding stock. Mature cows will sell for $8,000 to $15,000 depending on the bull to which they are bred. Mature bulls will range from $5,000 to $10,000. Although this seems like a major investment for breeding stock, six-month old calves will sell for $3,000 to $5,000 depending on sex and genetics. If calves are kept until they are yearlings, they will usually bring a minimum of $5,000. Unlike beef bulls that lose value as they age, a seven or eight year-old bull will still bring a high price for his velvet producing ability. As a herd grows, selling animals for meat is a viable option. Elk meat is very low in fat and cholesterol and will bring a premium in the proper markets.

One major difference between raising beef cattle and elk is the value of the bulls. Bull herds are maintained for breeding purposes as well as velveting. Each year in the early spring, bulls will cast their hard antler and begin a new growth of antler called velvet antler. Velvet antler is allowed to grow for 65 to 80 days, depending on calcification levels, before being harvested. The best time to harvest velvet for a premium is when the brow tine begins to calcify and point. To remove the antler, animals are given a nerve block using a local anesthetic and the entire antler is removed above the pedicle. Usually there is some regrowth of the antler, but it is minimal. This regrowth will calcify and be cast again in the spring to start the cycle over. After the antler is removed it is considered a meat product. It is identified for record purposes, turned upside down, covered with plastic wrap on the open end, and is then frozen. Velvet antler is generally sold into an Asian market, but the North American market is rapidly expanding. A mature bull on the proper diet will produce between 20 and 40 pounds of velvet antler. Over the past 15 years velvet prices

Tammy Stevenson is a second-year veterinary student at the Iowa State University College of Veterinary Medicine. She has worked with elk at the Deer Tracks Farm near Cedar Falls, Iowa.
have ranged between $35 and $110 per pound, averaging $70 in recent years. Velvet antler is used as a daily homeopathic medicine marketed for relieving arthritis, muscle pain, insomnia, high blood pressure, and general malaise, in addition to a variety of other ailments. In the Orient it has been used for thousands of years as preventative medicine. Velvet preparations tested in a variety of lab animals have experimentally stimulated growth rates, reduced blood pressure, lowered blood cholesterol, hastened recovery from anemia, liver damage, and trauma, and retarded aging.

Handling Considerations

Wapiti should still be considered wild animals, and special handling facilities and methods should be used. A minimum eight foot woven wire, high tensile fence is needed. The wire should be flush with the ground to keep predators out, and the bottom rows of wire should be closely spaced to keep calves from attempting to jump through. A system of runways works best to move animals. The simplest method to move animals from pasture to pasture is opening the gates and leaving them open overnight. The animals’ natural curiosity will move them to the new pasture with minimal stress. It is best to have the breeding herd in a pasture where they can stay throughout the entire calving season to avoid leaving calves behind in a move. If animals are going to be moved into a building, mesh netting on the fence aids in the moving process and keeps animals from attempting to jump through the fence.

Proper handling facilities make weaning, velveting, and any veterinary procedures simple and safe. Eight foot walls should be the minimum height, and a series of gates and alleyways should be used to move animals. Elk move best if there is a slight curve in runways and alleyways. An ideal handling facility is equipped with a lift chute with scales and a catwalk system from which to work animals. When working elk, they should be separated and not overcrowded. Overcrowding will result in fighting and injuries. Elk have three defense mechanisms: flight, fight, and hide. If animals are pushed to the hiding stage they become impossible to move and work with.

Animals also work easier with a minimum of people and with handlers to which they are accustomed. A properly designed facility will allow movement of animals into the facility as a group, separation once inside, and release to an outside holding facility after treatment. This minimizes stress and allows the animal to recover quicker from whatever treatment is being done. A blindfold is a useful tool to use when an animal is in the chute. Once an animal is raised with the lift chute, blindfolding has a calming effect and minimizes unnecessary stress. This allows almost any procedure to be completed safely for the animal and handler.

Reproduction and Calving

Elk are seasonal breeders that enter the rut in August and generally breed through October. Animals will continue to breed into the winter months if allowed, but this is very hard on a bull and is not recommended. Bulls are usually maintained in a separate bachelor herd when not in rut. Yearling bulls are called spikers because they do not have much branching in their first set of antlers, and they are usually kept separate from the mature bulls to allow maximum weight gain. They can be used as breeder bulls beginning at two years of age. They develop antlers as spikers and velvet antler can be harvested the first year. Cows (hinds) age at puberty is correlated with weight. At about 70% of the adult weight, hinds will enter their first estrus.

Bulls become very aggressive during the breeding season and will challenge any other male in the area, including handlers. It is
recommended that once a bull is put in with the breeding herd, the entire herd be left alone for maximum breeding success. Ideally the bachelor herd is far away from the breeding herd to minimize challenges between the breeder bull and the bachelor herd. Bulls should be three years old for maximum breeding success. During the rut, bulls will not eat a lot and will usually lose conditioning. Proper diet is very important during the summer to maintain a healthy breeding bull during the rut.

Calves are born in May or June and will weigh about 35-40 pounds. A cow preparing to calve will walk the fence and separate herself from the rest of the herd. Usually cows will only have one calf, but twinning sometimes occurs. Calving problems are rare in elk. Most dystocias are associated with a cow that has been overfed and allowed to get fat. Calves are born with a spotted coat that turns a shade of brown by six months of age. The first week of a calf's life is spent hiding. They will spend most of the day laying in tall grass and will only get up to nurse. This provides an opportune time to tag and sex calves as they will generally not get up and run. A very useful tool in this procedure is to cover the calf's head up with a dark blanket or coat. Since they are in the dark, they feel like they are hiding and will not attempt to get up and run. Approximately one week after birth, calves will run when approached. One caution when tagging calves is to be aware of where the cows are at all times. If they feel a calf is threatened, they will do anything to protect it, including 'boxing' you or your vehicle. During calving season, walking into a calving field is not recommended. Driving paths should be mowed in a calving pasture before calving begins so new calves are not run over during this first week of life. Calves are weaned in the fall and should be started on a grain diet before weaning. Creep feeding is generally recommended. Special creep feeder designs are needed to keep curious dams out of the creep feed.

**Infectious Diseases and Herd Health**

Elk are hardy livestock with natural immunity to most diseases. Elk can contract many bovine diseases and are susceptible to many bacterial diseases such as tuberculosis, necrobacillosis, clostridial diseases, Johnne's disease, leptospirosis, and yersiniosis. Tuberculosis testing using the cervical skin test is a requirement before selling any animal. This testing must be done by a state certified veterinarian. If any sale involves interstate importation, individual state regulations should be investigated and followed. Clostridial vaccines, brucellosis vaccines, and an anthelmintic program should be implemented in a basic herd health program.

**Conclusion**

Elk can be a profitable and fun investment for anyone. The industry is rapidly growing and encouraging new members. Veterinarians who understand the biology of elk as well as behavioral considerations are needed in the industry. Elk ranchers are turning to veterinarians for consultation in nutritional needs as well as routine herd health. Artificial insemination, pregnancy checking, and embryo transfer are becoming more accepted in the elk industry and veterinarians experienced in these areas are sought-after individuals. The exotic livestock industry is a new area for many people and provides new challenges to look forward to every day.  

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