

Elk Velvet Is Exported To Korea

LINDA WILLIAMS

Bedford Co. Correspondent
BEDFORD (Bedford Co.) — Carl and Carol Rowser were looking for something different. "Something that would get me away from being a truck mechanic," said Carl.

So they took a trip west and discovered elk.

American elk are members of the deer family, but unlike other deer, are raised primarily for their velvet antlers.

A mature elk can produce 12 or more pounds of velvet annually which sells for \$60 a pound. "A really good bull can produce more than 40 pounds," said Carl.

Velvet has been used as an ingredient in Asian medicines for thousands of years and, today, it is sold to firms that produce these medicines for various ethnic markets.

Elk are also raised for breeding stock, meat, and other by-products. "They use everything but the intestines," said Carl. "Almost as good as a pig. Most people don't realize elk even have two ivory teeth."

Carl and Carol bought their first elk from the king of elk farmers, Rush Johnson, president of the North America Elk Breeders Association.

It's an inexpensive undertaking. The Rowsers spent \$4,000 on their calves, \$6,500 on cows, and \$7,500 on a bull. "But you need

good stock to get started," Carl said.

The Rowsers had the ideal location for their new venture with a small farm bordering on their back door and a pleasant stream meandering through the lush green meadow.

"All it took was fencing," Carl said. "And it does take that. By state law, fences must be at least 10 feet high."

Elk convert pasture efficiently into protein and can be raised on marginal land. Labor requirements are minimal while the profit potential can be much greater than for a comparable beef cow-calf operation.

Today there are almost 32,000 elk on U.S. farms. The advantages of raising this breed include a high fertility rate and a long reproductive breed line.

They calve easily and wean their calves early.

Their calm dispositions make them easy to handle and transport.

"Nutrition is easy," said Carl. They eat mostly pasture, trees, and brush. Grasses should be varieties that will stand up under close cropping and constant trampling by hooves. The Rowsers add a food supplement which is especially prepared by Farm Bureau. Total food consumption is about 1/2 as much as a beef cow.

"Elk love the cold weather, which was a plus this year," said this former beef farmer, "but they also tolerate hot weather.

"All elk need exercise, and especially so when pregnant. Some farmers will put the water at one end of the pasture and food at the other just to make certain they have to move around.

"Our main change on this farm has been to add plenty of fencing," Carl said.

Velvet is gotten by extracting the entire antler — a tough job, made easier by specially designed "squeeze shoots." Carl said the entire antler is removed and stored in an upright position (because the blood is the important part) in the freezer.

Korean research at Invermay AgResearch and Kyung Hee University hospital in Korea indicates that the medical effects of velvet vary according to which part of the antler it comes from.

The top part contains growth hormones which are very effective for children and anemia.

The middle part prevents women's diseases and has a marked restorative and blood augmenting effect.

The lower part contains minerals which are very effective against bone disease and are helpful for old people.

Velvet is prepared for use by first drenching in alcohol for good color and rapid absorption.

The velvet is then sliced and dried before mixing with other herbal medicines.

"Our biggest concern is worms," Carl said. "Brain worm from the white tail deer is a large threat. Consequently we worm twice a year."

By law, elk brought into Pennsylvania that are more than six months old must test negative for brucellosis and bluetongue within 60 days of importation and must test negative for tuberculosis within 90 days of importation, according to recommended USDA protocol.



Elk on the Rowser farm. The animals attract many local spectators.



Carol Rowser, left, and a helper build fences for the elk on the Rowser farm.

Emergency Forages Fill Feeding Void

COLUMBUS, Ohio — Livestock producers facing a feed shortage because of winter-injured alfalfa stands or corn that was not planted in the wet spring have some forage options, said Mark Sulc, Ohio State University forage agronomist.

Summer annual grasses — forage sorghum, sudangrass, sorghum-sudangrass hybrids and pearl millet — grow quickly in the late spring and summer and can be planted up to July 1 in northern Ohio and July 15 in the south. The feed value of these grasses is not as good as alfalfa or corn silage, but when managed correctly they can provide good quality forage, Sulc said.

"Producers should choose which grass they plant based on how they plan to use it," Sulc said.

Forage sorghum is the best of the grasses for silage. Silage from forage sorghum is the closest nutritional feed substitute to corn silage, said Bill Weiss, dairy scientist at Ohio State University's Ohio Agricultural Research and Development Center. High-energy, low-protein forage sorghum silage has about 85 percent of corn silage's feed value.

Forage sorghum grows well in light-textured, shallow soils that tend to be dry and could outperform corn in these fields, Sulc said.

Sudangrass generally has thinner stems than sorghum-sudangrass and is the best option for making hay or grazing. However, the finer stems usually mean lower yields than the other summer annuals, Sulc said. Sudangrass hybrids usually bring a slightly higher yield than sudangrass as comparable stages of

growth.

Sorghum-sudangrass hybrids and pearl millet can be used as either silage or hay. Pearl millet tends to have smaller stems and be more leafy than sorghum-sudangrass. If used for grazing, these grasses should be planted thicker to encourage finer stems, Sulc said.

Sudangrass, sorghum-sudangrass, and pearl millet have about 40 percent less energy than corn, but are slightly higher in protein, Weiss said. Overall, they have about 70 percent of corn's feed value.

The advantage sudangrass, sorghum-sudangrass and pearl millet have over forage sorghum is that they regrow after cutting, Sulc said. It may be possible to get more than one harvest off of these grasses before frosts begin this fall.

Yields for these three grasses are 3 to 5 tons per acre after drying. This is less than alfalfa's 4 to 8 tons and corn silage's 7 to 9 tons, but not bad, Sulc said.

In a normal year, summer annual grasses can be harvested 45 to 60 days after planting, Sulc said. The time to harvest may be shortened by hotter weather or lengthened by cold temperatures.

Producers should remember to cut these grasses before heads appear or at about 4 feet tall, Sulc said. Forage quality declines rapidly once heads appear. Use a hay conditioner to mow and crush the stems to speed drying.

Second, forage sorghum, sorghum-sudangrass hybrids, and sudangrass are all in the sorghum family and produce prussic acid. Prussic acid is present in immature sorghum grasses and mature sorghum grasses after a frost,

drought, or other stressful conditions and is toxic to many animals.

All summer annual grasses have the potential for nitrate toxicity in livestock. To avoid prussic acid and nitrate toxicity, growers should wait to harvest summer annuals until after the grasses are 24 inches tall, Sulc said. After a frost, wait at least one week for plants to dry before grazing or cutting.

Finally, some herbicides should not be used on grasses fed to livestock. Livestock producers should check herbicide labels for details before applying them to summer-annuals, Weiss said.

Curriculum Changes To Benefit Next Generation

UNIVERSITY PARK (Centre Co.) — Penn State's Board of Trustees has approved changes in the Department of Agricultural and Biological Engineering's undergraduate program. They also approved changing the name of the undergraduate major and minor in agricultural engineering to agricultural and biological engineering.

"We will begin offering the new agricultural and biological engineering undergraduate curriculum starting in August 1996," said department head Dr. Dennis Buffington. "The revised curriculum is designed to give our stu-

dents the appropriate educational experiences to better prepare them for exciting careers in the next century."

Many students are surprised by the range of opportunities offered by agricultural and biological engineering. "It's a lot more than farm equipment," Buffington said. "Graduates are involved with engineering aspects of agricultural, food, and biological systems.

"Agricultural and biological engineers work in all areas that involve the production of food and biological materials, the processing systems for these materials, and natural resources conservation and management," he said.

"Our graduates tackle problems ranging from finding new ways to package and process food products, to designing better machinery and production systems and improving waste management techniques."

The core courses in the new curriculum will be biological systems, modeling methods for biological systems, transport process-

es for biological production, power and structural systems in agriculture, engineering properties of food and biological materials, and agricultural measurements and control systems.

Students in the new curriculum also will choose at least two of the four senior-level design courses: design of fluid power systems, design of wood structures, food and biological process engineering, and design hydrology and sedimentology. Each student also will complete a capstone design course entitled optimization of biological production and processing systems.

For more information about opportunities in agricultural and biological engineering, contact the Department of Agricultural and Biological Engineering, The Pennsylvania State University, 250 Agricultural Engineering Building, University Park, PA 16802, or visit the department's World Wide Web site on the Internet at <http://server.age.psu.edu/>.

MILK