



# Deer & Elk Farmers'

## Digest Newsletter



VOL. 6, NO. 2 MARCH - APRIL 2005

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## MANAGEMENT OF DOES:

### INCREASING MILK PRODUCTION AND NEWBORN GROWTH



There are great variations in the quality and quantity of the milk produced by different does. Under normal circumstances, older animals tend to produce more milk. However, the nutrition of the mother during gestation (pregnancy) and lactation has a significant effect on the quantity of milk produced that will affect the growth of the fawns.

Why feed your doe a feed ration that is designed to grow antlers on the buck? After all, the mother is supplying the boost (her milk) that the buck fawn will need to get him started in the right direction of growing his large antlers. If he starts out undernourished as a fawn, he may never live up to his genetic potential.

Here are some feeding and doe management tips that may come in handy and

help you get your fawns off on the right path to reach their genetic potential.

### DOE NUTRITION AND MILK PRODUCTION

Milk production increases sharply after the birth of the newborn and reaches its peak between 3 and 8 weeks. In most females, milk production has significantly decreased by 8-10 weeks. Mothers that have limited feed intake during their first 2-4 weeks of lactation never reach their potential lactation peak and consequently produce less than their genetic potential throughout lactation. These mothers also tend to have a more rapid decline in milk production and do not lactate for as long. Realize that

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## ABOUT THE DIGEST

The *Deer & Elk Farmers' Digest* is a bi-monthly newsletter published for those interested in breeding and raising deer, elk and reindeer.

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Copies of the *Digest* are also available electronically and in print from the Library of Canada.

ISSN 1499-1349 (print)

ISSN 1499-1357 (electronic)

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Printed in Canada by PageMaster.ca

## EDITOR'S DESK



This second issue of our new-look *Deer & Elk Farmers' Digest* is again jam-packed with useful and interesting information.

Our lead article is about how to best manage your deer does for best milk production and newborn growth. John Swank provides a wealth of proven and practical tips on nutrition, lactation and general care of pregnant females.

Gary Nelson, President of the North American Deer Farmers' Association (NADeFA) gives us a fair and balanced

update on the Chronic Wasting Disease (CWD) that was recently discovered in several deer in New York State.

Dan Marsh, a lawyer and Executive Director of the Michigan Deer and Elk Producers, tells us why and how we must counter false information about CWD being put forward by opponents of game farming.

With the velvet antler harvesting season quickly coming upon us, readers will be interested in a new technique for drug-free antler removal that has been developed and is now available.

To maximize the size of your antler harvest, and to make the process as efficient as possible, Bruce Friedel gives some useful tips on velvet growing, training your elk, handling elk and harvesting the antler.

Finally, Ian Thorleifson and Dr. Terry Church tell us how to treat our elk so that we get the most flavourful and tasty meat out of them.

I hope you enjoy our *Digest* newsletter. I always welcome comments, suggestions and contributions.

Russell Sawchuk, Editor

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The *Digest* is also available in print format (ISSN 1499-1349). A \$6 per issue fee (\$36 per year payable to Steppingstones Partnership, Inc.) is charged to cover postage, paper, and handling costs. Subscriptions and back issues of the *Digest* can be ordered from the Editor.



many newborns are solely dependent on the mother's milk for the first 3 weeks.

It is not until 3 and 4 weeks after birth that the newborn begins to supplement its diet by aggressively consuming forage and/or consuming significant amounts of hay and creep feed. Inadequate milk production during this critical time leads to poor growing newborns.

To measure if a doe is being adequately fed during gestation and lactation, monitor her body condition. A doe that has to maintain a high level of production will lose body condition if adequate nutrition is not provided. Because of this, it is important to ensure the doe receives a balanced diet, high in nutrition, and is fed the proper quantity during gestation and lactation.

The producer must also ensure that all animals have equal access to supplemental feeds and quality roughage. Mothers that have recently given birth are unlikely to go over to the supplemental feeding area. Because of this, the intervals between supplemental feedings for the herd should not be too long.

In general, the group should be fed at least daily. Where the roughage in the pasture or pen is limited, it may be advisable to provide the does with some supplemental hay (alfalfa, alfalfa-grass mix, other legumes and mixed grasses) until the pasture or pen has enough nutritional substance and bulk.

### **OTHER HANDICAPS TO FAWN GROWTH**

When worm (internal parasite) burdens are high, worm egg output increases. This contaminates the pastures, pens, and fawning areas used by other animals. Some health experts have found that during the fawning season, the mother has decreased immunity. This makes her more susceptible to parasitic infections. If a doe becomes infected with a significant worm burden, the growth of the fawn will be adversely affected. If this situation is not corrected by

birth, these worm burdens in the mother and eventually the newborn can severely reduce growth and production rates.

De-worming does 2-4 weeks prior to the fawning season can control this condition. De-worming does and then moving them to a safe pasture will prevent the rise in production of worm eggs after fawning. If the does are not moved after this dose, additional doses are required at 3-week intervals throughout fawning season. The final dose should be given 2-4 weeks after the last fawn is born. A de-wormer at weaning should also be given to the fawns.

A deficiency in vitamin B12 in the fawn will retard growth rates. Vitamin B12 is made in the rumen from dietary cobalt. A doe that consumes cobalt in her diet can produce the vitamin B12 and pass it along to her newborn in the milk. However, some areas of the United States are considered cobalt deficient. These areas include the Northeast, Midwest, around the Great Lakes, and Florida. Because of this, it is critical that does in these areas be properly supplemented with cobalt

### **MAXIMIZING FAWN GROWTH RATE**

For the first 3 weeks, fawns growth will reflect the mother's milk production. After the first 3 weeks, however, growth will also reflect the pasture/pen available for browsing. Therefore, when planning the fawning season, make sure to have the best pasture/pen forages available no later than 3 weeks after the first doe gives birth.

### **FEEDING DOES BEFORE, DURING AND AFTER PREGNANCY**

Factors determining the nutritional needs of the breeding doe:

1. What is her age, body size, and body condition?
2. What amount of confinement versus extensive browsing will she experience?

*To measure if a doe is being adequately fed during gestation and lactation, monitor her body condition.*



**Management of Does: Increasing Milk Production and Newborn Growth**  
(continued)

3. What is her stage of production (maintenance, pregnancy, lactation, etc.)?
4. If pregnant, what trimester of pregnancy is she in, and how many fetuses is she carrying?
5. If lactating, how many fawns is she nursing?
6. What is the quality of available feedstuffs, and in what form will they be fed?
7. What is the health status of the doe? Has she been de-wormed and vaccinated?

Animals that are growing, pregnant, lactating or have a high activity level may have a 25-75% increase in nutritional needs.

#### **LIFE-CYCLE FEEDING OF THE DOE**

Successful small ruminant production depends on proper management of the "biological cycle" or the "life-cycle" of the herd to maintain production stability and good herd health. The nutritional requirements of the doe correspond to her biological cycle. A thorough understanding of the cycle will allow producers to develop a sound feeding management program.

Feeding programs must be managed to coincide with the mother's biological needs. The biological or life cycle of the doe is well defined and centers around the average lengths of gestation and lactation.

#### **THE FIRST 15 WEEKS OF GESTATION**

This period is the time when the pregnant doe has the smallest increase in her energy and protein demands. However, very little is known about the effects of serious under-nutrition on such things as failure of implantation of the fertilized egg or early death of the growing embryo during this stage.

Maintaining the proper body condition is essential during this period. Excessive

body condition at this time means that it is more difficult to satisfy the mother's feed requirement at late pregnancy, and it may lead to problems at fawning time due difficult births.

Some studies indicate that excessive fatness or body condition will lead to the production of small newborns. On the other hand, because the pregnant doe is less able deal with periods of feed shortages that occur through the winter, they need to be fed a quality ration and maintain an optimal body condition. The condition of the doe during this time is largely determined by her condition prior to mating.

#### **THE LAST 6-8 WEEKS OF GESTATION**

This is the critical period, and it is during this time that the foundation of good health is laid in both the mother and the newborn. Poor feeding at this time can lead to the following:

1. Low birth weights.
2. Low fat reserves in newborns, leading to more losses after birth.
3. Shortened gestation period.
4. Does are slower to come into lactation (milk) and produce less milk during their lactation.

It is during this time that the unborn fetus experiences most of its growth. This growth increases the space that the uterus occupies and restricts the space available for the rumen and intestines in the abdomen of the doe. This means that the doe may not be able to eat large quantities of a bulky feed during the latter stages of gestation.

Instead they require some density (less long stem roughage) in their diet, and/or energy supplementation. A doe that is excessively fat during this time will also lack sufficient room in the abdomen for adequate feed intake.

The last 6 weeks of gestation are very important for mothers with twins/triplets,



and the last 4 weeks are important for mothers with single fetuses. If sufficient energy (carbohydrates and fats) levels are not present in the diet, the doe must increase her feed intake and/or draw on her body reserves (body condition).

As mentioned earlier, most does are unable to increase their intake of a low-quality feed to a level necessary to provide sufficient energy for her and the fetus(es). These mothers will begin to draw on their own body protein (tissue) to make up the deficiencies. These animals will become malnourished unless a high quality, high energy feed is made available.

It is important to realize that under-nutrition in the doe in late pregnancy is somewhat relative. A diet providing just enough energy for the doe in medium condition will be in excess for the doe in fat condition.

Also, a diet just adequate for a doe carrying only one fetus is completely inadequate for a doe bearing twins or triplets. In assessing the status of a pregnant doe, it is important to realize that body condition means more than body weight. Further, the most important indication of the nutritional state of the doe is whether condition is being gained or lost.

### **NUTRITION DURING LACTATION**

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Generally, the more productive does in a herd will require increased levels of energy during their lactation period in order to meet the increased demand of nursing multiple offspring. Most nutritionists tend to agree that no matter how much extra supplemental feed given to a lactating doe, it will still lose body weight.

### **NUTRITION AT WEANING**

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To minimize udder problems in does, milk flow must be reduced by immediate and drastic limitation of both feed and water for a brief period.

Suggested steps for drying up does include the following:

1. Take does completely off feed and water 12 hours before weaning the fawns, but allow fawns continued access to creep feed.
2. Wean the fawns early in the morning. Move the does completely away from the fawns to a dry corral of poor quality pasture or pen without water.
3. After 24 hours without water or feed, give the does water once in the morning. Give them light feed of poor quality roughage such as straw or low quality grass hay, or continue on poor quality pasture or range.
4. Continue the does on once-per-day watering and a restricted quantity of low quality feed or pasture for approximately 1 week.

*The more productive does in a herd will require increased levels of energy during their lactation period in order to meet the increased demand of nursing multiple offspring.*

### **NUTRITION DURING THE POST-WEANING PERIOD**

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During this phase of a mother's biological cycle, her nutrient requirements are at their lowest point. Therefore, the main concern is to feed the doe enough to maintain her body weight.

### **NUTRITION JUST PRIOR TO BREEDING**

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**Flushing:** A nutritional management practice often used in sheep/goat production is called flushing. It can increase the number of eggs that are ovulated. Flushing is accomplished by placing animals that are in fair to poor condition on an increased plane of nutrition for 2 to 3 weeks prior to the start of the breeding season.

Giving additional feed to animals already in good or fat condition does not usually result in the desired flushing response. Unlike adult animals, yearling replacements do not generally respond to the nutritional flush.

Methods of flushing vary, depending



## Management of Does: Increasing Milk Production and Newborn Growth

(continued)

upon local and regional conditions and the herd under consideration. If the animals are on average or poor pasture prior to the breeding season, changing them to an excellent feed ration and good pasture 2 to 3 weeks prior to turning in the males will usually provide the desired response. Some studies indicate that "flushing" deer will reward the same affect.

**Feeding Replacements:** The level of feeding from birth to first fawning will influence the lifetime reproductive potential of the doe. As long as excessive fat is not put on, a higher level of nutrition from birth to first fawning is beneficial.

Larger does as yearlings will have a higher lifetime potential for multiple ovulations (multiple births). Breeding does to produce their first fawn at 12-14 months of age has become a popular practice with farm herd operations, but does require improved feeding practices over those normally implemented for replacements.

### SUMMARY

1. Maintain proper body condition on does during gestation.
2. Provide adequate feed during lactation.
3. Make sure mothers are not deprived of feed during lactation – feed supplements regularly.
4. Monitor the internal parasite load in does before the fawning season.
5. Plan ahead – have the best pastures or pen ready at least 3 weeks from the initial starting day of fawning.

Do not forget, a doe's milk is over 85% water. Without an adequate supply of clean drinking water, all of the information presented above is irrelevant.

*By John Swank of Stoneycreek Whitetails in Pennsylvania, USA.*



### CARING FOR REINDEER CALVES

When the calf is born and the mother does not have any colostrums or milk, give the calf 100 cc of Plasma (one time only). Then given 1cc of Poly Flex 2 times a day for 2 weeks.

If a calf develops stiff joints, we give one or more shots of Bo-se (1/2 cc).

If eyes cloud over, we use Triopti-P (tube form) administered under eye lid three times a day until it is cleared up. If it does not clear up in a few days, your vet may need to give a shot in the eye to clear it up.

We take the temperature once a day, especially if the calf stops eating. If the temperature starts going up, we give Banamine 1 time (administered by weight). Don't give too much as it can cause ulcers. We try and catch temperature before it gets too high, so we can bring it down quickly.

If the calve shows any sign of infection such as a lump on the navel, we give antibiotics immediately (even if temperature is normal).

When in doubt, contact your vet.

*By Santa's Hitchin' Post, reprinted from the March/April 2005 issue of the ROBA Review.*



## CHRONIC WASTING DISEASE IN NEW YORK

As we have all heard, CWD was found in Oneida County, New York. CWD was confirmed on 2 different farms, the first farm owned by John Palmer and the second by Martin Proper.

The first positive was a 6-year-old whitetail deer doe that was harvested for a fireman's benefit dinner. In talking to John, he said, "I picked out the fattest, healthiest looking doe I had."

Most people have been led to believe that CWD-positive deer exhibit signs of poor health, but the deer farming industry has found this to be untrue. The vast majority of those animals that have tested positive have shown little, if any signs of sickness.

The herd was depopulated only days after the first positive was found. On a Tuesday morning, sharpshooters came in and after 6 hours had put down the remaining 18 deer. Samples were collected and sent in for analysis.

Friday the results were back; 3 more positives were found for CWD. These 3 deer all came from New York State's Rehabilitation Program. John Palmer acquired these deer from New York's wild population through conservation officers.

John Palmer's herd started when he purchased a few deer from Ohio in 1994. Later, he added other deer from a New York source. Seven years ago John started rehabilitating fawns. John said he took in 1-14 fawns per year from all over New York. John had the responsibility of determining whether the fawn could be released back into the wild or had to stay forever in a pen in his privately owned herd. He also relocated some of these fawns to other producers. This is how Martin Proper came into the picture.

Martin Proper is the owner of the second positive herd. The animal that tested positive for CWD on his farm was a 4- or

5-year-old buck that died from pneumonia, another rehabilitated wild deer from New York. Martin received 2 deer from John Palmer's herd; one doe that was blind and one doe born with only 3 feet. They had bred and had produced some offspring. The aforementioned buck killed one of these does during last year's rut. He was not tested because it happened before their CWD Program was up and running. The rest of Martin's herd was put down and samples analyzed. No other positives were found.

There were 5 positives found in these 2 herds; 4 were deer taken from the wild [as rehabilitated fawns]. It is unclear to John where the very first doe originated, but he felt it could have originated from the wild as well.

Taking deer from the wild is not condoned by the cervid industry and is strongly discouraged; nonetheless, it did happen with the deer in this situation.

A statement released by the New York State Department of Environmental Conservation (DEC) on April 5, 2005 announced plans to conduct intensive monitoring of the wild deer population surrounding both farms to determine whether CWD has spread to the wild herds.

The NYS DEC has already directed blame towards the farmed deer industry for bringing CWD into New York, even though there is a clear history of the DEC taking deer out of the wild and placing them into John Palmer's herd for rehabilitation. The question should be, "Where did the wild deer of New York get CWD?"

Adding to the questions, without any answers, John is a taxidermist and has taken work from all over North America. He mentioned receiving work from the following states and Canadian province: Saskatchewan, Montana, Idaho, Illinois, Kansas, Colorado and Wyoming.

*Taking deer from the wild is not condoned by the cervid industry and is strongly discouraged.*



## Chronic Wasting Disease in New York

(continued)

When looking at where CWD has been found in the wild, many of these locations appear on that list.

In a study released by Beth Williams and Mike Miller, they noted that [a deer] was just as likely to contract CWD from a live infected deer as it was to be housed in a pen with a dead positive carcass.

Did one or more of the many dead animals brought into John's taxidermy studio have CWD? John stated that he kept the rehabilitation fawns in the same garage where he did much of his taxidermy work. It was common practice for John to sweep up his shop and deposit the salt and chemicals along the deer fence as a weed retardant.

The industry has always said that movement of CWD-positive carcasses would move CWD much faster and farther than moving live animals. Is the New York situation just that? Is there a need to regulate movement of CWD-positive carcasses?

There are many points that come to the forefront from the situation in New York:

- The detection of CWD in New York clearly shows that the monitoring system is working. These programs are set up to identify herds at risk.
- This event highlights the need for surveillance. Without the state monitoring/surveillance programs, these positive deer would not be detected. The more herds on these programs, the lower the risk.
- In the face of CWD, the best defense is herd monitoring/surveillance. What better way to get participation than to recognize those who have already participated in these programs and allow for continued movement for their herds that have met the needed criteria? The event in New York has in no way compromised the health status of any herd that has been enrolled in a CWD monitoring/surveillance program.

- CWD conjures up many questions that remain unanswered. There is a continued need for the government agencies involved and the industry to work together to resolve some of those questions.
- As previously seen in discoveries of CWD, including this New York case, all too often the producer is portrayed as a villain. There is no one who wants this "disease" to be found on their property. When CWD is found, the industry expects the producers to be treated fairly and with respect. The finger-pointing and intimidation tactics are not needed to resolve the issues involved with CWD and private ownership of deer in the United States.

Deer farmers are fathers, mothers, sons, and daughters. They have served this country in the armed forces. Deer farmers come from all walks of life; doctors, lawyers, carpenters, plumbers, and housekeepers.

The one thing they all have in common is the passion they have for their deer. Let us work together to resolve the issues that CWD brings to the forefront across this great country of ours.

*Gary Nelson is the President and acting director of the NADeFA (North America Deer Farmer's Association) and personally interviewed the owner of the deer that was found to have CWD in NY.*







## FIGHTING CHRONIC WASTING DISEASE LIES

**W**e have heard that a project leader on CWD for the US National Wildlife Service in Madison Wisconsin has made a statement in a Vermont Paper that there is irrefutable evidence that the captive industry has moved CWD across the landscape. As a result, he is supposedly meeting with officials out east to set up regulations. Obviously he would like to see deer farms shut down.

There are some things he is not telling you about that movement. Apparently, man moved the disease across state lines, in hunter-harvested carcasses. This is the first documented case that demonstrates that infected hunter harvested carcasses moved across state lines have actually infected wild deer herds. State Wildlife Biologists, like Michigan's, have gone on record in presentations to legislative committees and wildlife commissions that there is no risk, or if any risk it is negligible, that CWD can be spread through hunter harvest carcasses.

This documented case has very broad implications that the industry should be concerned about.

This is an opportunity for the industry to provide ANSWERS to legislators concerning this issue. It is time NOW to change state law for single agency authority for the regulation of your state deer farming industry to the agency authorized to deal with animal health issues – your state department of agriculture.

The issue has priority and should get the attention of everyone. Instead of blaming everyone else for inappropriately blaming the industry, the process of changing to the Department of Agriculture provides an opportunity to tell our story – that we have been a part of the hunter heritage since T. Roosevelt whose administration supported deer and elk farming, to explain our businesses, preserve family farms and open spaces, that we get productive value from

marginal land, that we have not spread CWD – wildlife agencies have – that CWD is NOT diminishing wild herds, that CWD does not hurt humans, that we do not want sick deer in or NEAR our operations because it diminishes our investment AND erodes public confidence in the industry as well as hunting. The list can go on and on.

We need to get to those organizations that will listen, educate them and help them understand the responsibilities they have when they speak publicly about CWD.

You cannot waste time on organizations that have inflamed the issue of CWD in your state. They will be busy trying to regain the lost credibility they are suffering due to overstating the negative implications of CWD in the public (scaring hunters) and with the legislators and agency people. They have “boxed in” the wildlife agency and the legislators with their leadership on the issue. Some states have really overreacted to CWD while others have kept their head about it.

Many of those organizations were calling for ZERO tolerance for interstate deer transportation and were able to get state wildlife agencies and legislators to react with laws and regulations (importation bans). Well, what are they going to say now? No movement of hunter harvested carcasses? **THE INDUSTRY SHOULD NOT SUPPORT THAT CONCEPT!**

We need to carefully consider the long-term effects of any actions we take or support. In the case of restricting carcasses, trophies or other animal parts, the implications to conservation and hunting are enormous and can affect conservation around the world. We must put CWD and other diseases of wildlife into proper and clear perspective. Wild cervidae populations are NOT diminishing as a result of CWD or any other disease brought in from carcasses (that we know of).

*Some states have really overreacted to CWD, while others have kept their heads about it.*



## Fighting CWD Lies (continued)

Until there is evidence of harm to the environment, we should not react. If we do react because of public fear (generated by anti-hunter, anti-meat activists and supported by industry enemies), we are opening the floodgates to all types of anti-industry, anti-agriculture, anti-hunting propaganda seeking to further constrict industry and hunting.

This will hurt hunting and wild population management, thus increasing the likelihood of disease that could affect those populations. Plus, public opinion needs to remain high towards deer and elk to maintain a flow of dollars to the farmers and operators.

More importantly, international conservation programs that have used hunting to manage wild populations will be at risk – an inability to bring home the trophy may stop African and Asian hunting safaris. Also, those successful programs that encourage local conservation of animals by allowing the European hunter to expend fees to come there to hunt may be at risk and further encourage local unregulated hunting.

If there are no fees coming from the hunters, then the locals may take it upon themselves to hunt the animals in spite of regulations (because there will be less money to support real enforcement). We must continue to be responsible in spite of the lies, manipulations, and inflammatory statements made by special interest groups that have not thought through the animal health issues like we have.

You will be challenged about the NY issue. Here are the facts:

- The deer farmer in NY has been rehabilitating 7-15 deer per year under the state's Wildlife Agency regulations for the last 10 or so years. Some of these have been kept or sold and some have been released into the wild. There are no records of where they came from or where they were released, and they were not tagged.

- He also bought deer from a farm in Ohio 7 years ago but that farmer died and the deer were either dispersed or released.
- The 3 positive deer were rehabilitated deer that he kept in his taxidermy studio when they were fawns so they were exposed to all sorts of material from all over the country. Actually the origin of one of the 3 is unknown. In addition he would sweep the floor every day and spread the sweepings around the deer pens for weed suppression.
- He also gave some deer to the second farm however the only positive deer in that herd was one taken from the wild! This is the first documented case of CWD transmission across state lines via carcasses. He did everything wrong simply through ignorance.

We may have to address gut piles left in the woods during hunting seasons. We may find that attempting to depopulate actually increases the spread of CWD if we leave soft tasty infected parts in the woods.

When the US National Wildlife Service representative from Wisconsin makes the statement there is irrefutable evidence that the captive industry has moved CWD across the landscape, he is wrong! Movement of hunter-harvested carcasses carried the disease from the area surrounding the wildlife research center where spread of the disease began.

It is obvious that because of the implications surrounding the problem of hunter harvested carcasses causing CWD in the wild, he is looking for a scapegoat – and not the truth. Maybe he is recognizing that CWD is not so bad, if he does not care about telling the truth? The industry must be organized and informed and cannot let this misstatement gather steam and become the message that will soon turn into policy and then laws and regulations.

*continued page 11*



## DRUG-FREE ANTLER REMOVAL

Velvet antler from elk and deer is a popular nutraceutical recognized worldwide for healing, arthritis relief and other health benefits. Antler can now be harvested drug-free and humanely with a sleek new device manufactured in the United States.

The genius of the velvet antler bander is that it uses the firm pressure of a taut rubber band to create a natural anesthetic. Once the animal is restrained, the instrument is used to loop a band tightly around the base of each pedicle, dulling any sensation, usually within four minutes. The antlers, which are normally shed in the wild and regrow naturally every year, can then be safely and painlessly removed.

An international team of experts spent the last three years designing and field-testing the product.

"It's on the market for the first time ever and allows us to harvest elk and deer velvet antler humanely without the use of chemicals that could potentially be left in the velvet," says Mike Callicrate, owner of No-Bull Enterprises, St. Francis, Kansas. His business holds a worldwide patent on the invention.

The product offers many positive

benefits, says Dr. Terry Church, veterinarian and manager of the Canadian Rocky Mountain Ranch in Calgary. Dr. Church was the project co-ordinator charged with evaluating the compression technique.

"When the industry started out, and people did not have good handling facilities, often the animals were restrained using immobilizing drugs," he says. "The downside is that the blood supply to the antlers could contain these chemicals prior to harvest." Locally injected deadening agents such as Lidocaine could also potentially leave traces.

"What we wanted was a drug-free, humane and painless method of removing the antler," he explains. "The compression analgesic approach is an alternative to fulfill those criteria and enhance food safety, while at the same time improving animal welfare. It is a very farmer-friendly approach. The device takes very little training to use, and provides the anesthetic and tourniquet all in one step."

On this ranch, Dr. Church, who raises 450 elk and 120 reindeer, uses the compression method to remove all antlers. This allows his company to market its velvet antler capsules as all-natural and drug-free.

In clinical studies, velvet antler has been shown to relieve the symptoms of arthritis, improve athletic performance, speed up healing and increase testosterone levels. Active substances gleaned from the antlers also contribute to energy enhancement, strong immunity and anti-aging effects. These unique properties are attributed to the exceptionally rapid nerve and blood vessel development that occurs in growing antlers. More recently, velvet antler has been shown to alleviate symptoms of arthritis and senility in dogs.

For more information on the Velvet Antler Bander, call No-Bull Enterprises at 1-800-858-5974 or visit their website at [www.nobull.net](http://www.nobull.net).

*The genius of the velvet antler bander is that it uses the firm pressure of a taut rubber band to create a natural anesthetic.*

### Fighting CWD Lies (continued)

Please, take this opportunity and organize your state association, inform them about being speaking responsibly about CWD and explore the possibility of making legislative changes. Again, I believe Michigan's law and regulations provide a model for the state deer and elk organization to begin a discussion on what is appropriate for your state.

*By Daniel Marsh, a lawyer and Executive Director of the Michigan Deer and Elk Farmers Association.*

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## VELVETING TIPS

With the advent of companies such as Norelkco, hopefully elk farmers can soon look forward to making money again from sales of their velvet antler. Here are some suggestions on managing your velvet antler production.

### VELVET GROWING

1. *Genetics* – it costs just as much to maintain a bull with poor velvet antler yields as it does for an exceptional producing bull elk. Keep two-year olds that produce 20 lbs or more, 30 lb three-year olds, 40 lb four-year olds and so on. All under performers should be sold for meat. With today's affordable prices for quality breeding stock, producers should upgrade their genetics for maximum velvet production.
2. *Flip females fast* – hoard heifer calves and cull cows for genetic improvement. A heifer calf will eat 40 cents a day or \$80 for the winter (4 lb grain x .05/lb) + (5 lb hay x .04/lb). Cows eat 15 lbs/day x .03/lb = 45 cents/day or \$90/winter.
3. *Don't stunt spikers* – feed 6 lbs of oats each day for each spiker from 10-11 months of age until 22 months of age (May 1 to the following April 1). The approximate cost will be \$.30 per day times 333 days - \$100.
4. *Fly control* – tag bulls with 1 Bovaid ear tag. Use 2 on breeding bulls. Some producers have had success in keeping away flies and ticks by mixing garlic into the elk feed.
5. *Managing "mobs" separately* – divide individual age groups for winter/spring feeding and improved pasture rotations, e.g., spikers, twos, threes, etc. or spikers, commercial velveters, hard antler bulls, breeding bulls, etc. Feed 8 lbs of grain a

day to each bull for 100 days if your don't have great pasture. This will cost you about \$40 per bull.

6. *Bunk and feeders space* – allow adequate space at the feeders for your bulls. A good guideline is 3 feet of bunk space for each slick bull, 4.5 feet for each velvet bull, and 6 feet for hard antler bulls. If using tombstone hay feeders, allow 20 lbs per day per bull for hay.
7. *Pasture stocking rate* – a good guideline is to have 3 velvet bulls per acre, 2 hard antlered bulls per acre or 5 slick bulls per acre of pasture. The animals should be rotated between paddocks every 30 to 40 days.
8. *Records* – days of growth is calculated by counting the days from button drop date to velvet cutting date. Accurate records let you assess contemporary age group performance. Make your culling decisions at two years of age!
9. *Post velvetting* – peak pre-rut body condition influences next season's antler growth. The cheapest feed pile is the fat on their butt or brisket. Work with seasonal cycles.
10. *Culling* – send to slaughter two-year bulls cutting under 10 lbs of velvet; three-year olds cutting under 15 lbs and four-year olds with under 20 lbs. Don't forget to make meat from their mothers and full sibling sisters.

### SEND YOUR ELK TO SCHOOL

1. *Imprint* – imprint calves and feed (grain/treats/mineral) cow-calf pairs in July and August.
2. *Train* – handle cow-calf pairs two to



three times together through the handling facility to deworm/vaccinate/tag calves or to program, synchronize and AI elk cows. This gets the animals used to the handling facility.

3. *Baby sit* – provide bottle-fed cows to baby sit calves during the winter. Run 2 to 3 older animals with groups of spikers.

4. *Hand feed* – pail feed grain/concentrates during second winter and during velvet growth. This makes the animals get used to people.

5. *Manage mobs* – keep individual ages or classes (velvet or trophy bulls) together to reducing the bullying on the playground (pastures).

## HANDLING

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1. *Facilities* – use properly designed handling facilities:

- Avoid all 90 degree corners in pressure points.
- Paddock layout should have proper gate placement, width and location.
- Alleyway should be narrow and curved, lined with sighter boards in pressure points.
- Catch and sorting pens should be octagonal made out of horizontal planks, porous (3 ½ inch gaps) and 10 feet tall. Keep elk moving, not thinking!
- Lanes should be curved into the barn.
- Western style elk handling facility has paired sweeps and rounded corners.

2. *Pursuit* – muster elk with common feeding equipment (quad / truck) as they will see it business as usual. Speed can cause stress and may even kill the animals.

3. *No vertical boards* – avoid using vertical board construction for sort pens.

4. *Respect personal space* – in the facilities avoid the use of stock prods, rattle paddles, flags, tarps, ladders and strangers. Use hockey stick to increase an elk's personal space.

5. *Restraint* – use a hydraulic elk squeeze with one moving wall, well padded, double hugger bars with non-skid rubber. Avoid halters, chin straps, etc. Elk quit struggling when they feel restrained. Monitor the animal's breathing.

## HARVESTING

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1. *Harvest weather* – never cut bulls when the temperature is over 25 degrees C (80 F). Evening is by far the best time as it is cooler, calmer, part of the elk's normal rest cycle and with fewer flies.

2. *Lunar cycles* – monitor the full moon phases to cut down on the "loonies." Bulls bleed noticeably less after a full moon and they handle better.

3. *Records* – use your velvet records to help you make cutting decisions. Button drop to cutting is 60 days for 7 lb bulls, 66 days for 14 lbs, 72 days for 22 lbs, 74 days for 28 lbs, 78 days for 34 lbs, and 82-84 days for 40 lbs depending on beam and subspecies. Last year's notes on days growth and calcification will be invaluable. Cutting early means more bleeding. Monitor antler regrowth.

4. *Muster in mobs* – handle elk in groups of 6 to 8. Pen them individually inside the barn for one hour so they can calm down (cut 8 per night if you have 8 inside pens).

5. *Organization* – be ready and use teamwork. Wrap cotton tape on each tag and record bull's number. Work with 4 to 5 neighbours to help each other velvet. This

*Evening is the best time to cut velvet antler. It is cooler, calmer and part of the elk's normal rest cycle with fewer flies.*



is a good learning and mentoring process, and helps keep handling time to a minimum!

6. *Stockmanship* – maintain a quiet environment, used subdued lighting in the barn, and respect the fight or flight nature of elk. Learn where the balance spot is on an elk (withers where a saddle pommel sits).

7. *Cleanliness* – wash squeeze, saws and tourniquets between each bull with a warm water / Vircon solution to disinfect. Wash blood and dirt off antler after cutting, and affix tags immediately. Recline antler 30 to 45 degrees after cutting to prevent blood pooling.

8. *Equipment* – use good saws such as 14 teeth/inch Task, Stanley or Wyoming II reciprocating saws. Use 3/8 inch thick walled tubing for tourniquets. Do not wrap the ends of the antler. Use Boroform for fly control.

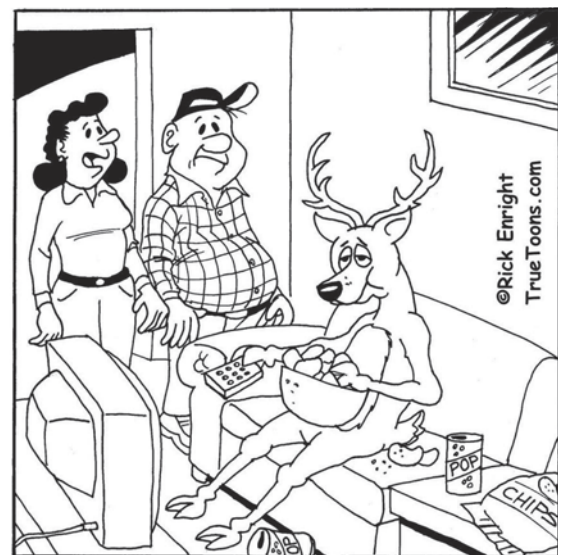
9. *Reward* – give your bulls a special food/snack treat after the process. They will then associate the experience with some positive, rather than just negative experiences.

10. *Sort "slicks"* – sort newly harvested bulls into a separate paddock (first night), and then as "lawnmowers" to harvest all coarse pasture aftermath for the rest of the summer.

11. *Freeze fast* – freeze velvet immediately after cutting (no more than 1 hour) in a walk in freezer set at -28 degrees C. Another option is to turn your small chest freezers down as low as possible and only freeze a set or two at a time to ensure a fast freeze. Freeze your antlers in a reclined position (at an angle where the blood just stays in the antler). Use foam padding to prevent flat spots.

12. *Vacuum pack* – blast freeze and vacuum pack antlers individually in food grade plastic bags to prevent serious sublimation (shrinkage). Use 60 – 80 lb bags to vacuum pack 4-5 commercial antlers for long term storage (greater than a week).

*Prepared from a presentation made by Bruce Friedel at the 2005 Alberta Elk Convention.*



"I told you it was a bad idea to bottle-raise a buck!"



## TASTY VENISON

European markets for venison and other cervid (deer family) meats have traditionally been strong and sophisticated. Germany alone annually consumes hundreds of thousands of tonnes of meat from various breeds of cervids.

New Zealand has created a very efficient system combining wild harvest, farm production, processing and transport to serve those European markets as well as other opportunities in Asia and North America.

Here in Canada, hunters have provided limited opportunities to sample elk meat, but these have not always provided the best quality of product. This background has provided a stiff challenge for Canadian elk farmers – learn how to raise and market the finest farm-raised elk meat.

Through experience and much transfer of knowledge from New Zealand and elsewhere, elk producers are developing the required expertise, genetics, processing and marketing systems.

Elk is a medium textured, rich tasting and tender meat, which has very little intra-muscular fat (marbling). Fat is deposited outside of and around the muscle tissue, allowing easy trimming and removal.

Here's some of what those producers have learned:

1. Regardless of age or gender, the best animals to process for meat are animals that have recently gone through a rapid growth phase - an improvement in body condition with an increase in body fat. With that fact in mind, a producer can calculate which elk would be best at various times of the year.

If any elk is “put on feed”, which does not necessarily mean straight grain, but must mean adequate quantities and quality of highly palatable and digestible food, for a month or two, it will be a prime candidate for meat. It is better if the elk is somewhat down in condition at the start

of the feeding period, to maximize deposition of new tissue during the weight gain period. This type of management can make elk cows tender and tasty at any time of year, although they are naturally more likely to put on weight from June through to December.

Top-quality meat can be produced from cows up to about eight years of age – much older than for most other types of livestock. Bulls naturally put on weight from late winter until the rut starts in September. After that date, they become very focused on concerns other than food, and begin rapidly losing weight. Consequently, the best time period for processing bulls is in late spring and summer, a more restricted time period than for females. The optimum age for processing bulls is also more restricted – generally they must be two to six years of age to yield prime meat.

2. Young elk gain weight rapidly until they are at least eighteen months old, if feed and management are good. Anytime up to that age is perfect, but calves under a year of age are very tender, mild in flavour, and quite veal-like – a very desirable product for some consumers, but not flavourful enough for others.

In order to successfully market them to the restaurant trade, they must be processed using “venison” styles of cuts, which is different from the North American “steak” style of cutting. Calves are also more nervous and flighty and must be handled very carefully or they can have a fairly high incidence of blood splash in the muscles.

3. Much has been made of the stress that precedes processing and its impact on meat quality. There is no doubt that the less stress, the better, but the key to minimizing negative impacts on meat quality is excellent management, including optimum body condition and calm, quiet and efficient handling.

*Top-quality meat can be produced from elk cows up to about eight years of age – much older than other types of livestock.*



## Tasty Venison (continued)

4. The animals going for processing are sorted into one group at least a week before the processing date so that they are presocialized and not fighting for dominance during loading and transportation.

5. Time in the trailer and holding area is minimized. There is absolutely no benefit to meat quality from an overnight stand in holding pens or standing in a trailer or pens waiting to move to the knocking area.

6. Animals are never overcrowded during hauling. If elk are loaded to the point that they feel "packed in" and cannot stand comfortably, they mill and jostle around in the trailer, which increases their stress levels. One telltale sign that they were overcrowded is if they have rub or raw patches on their rumps on each side of the tail.

7. Processing plants are designed to have adequate facilities for unloading elk and handling them so that they are not further stressed or "on the fight" prior to processing.

8. Plant employees must be familiar with and able to handle elk properly, without any roughness, to reduce stress and bruising. A proper handling shield is essential if the elk do not adequately "flow" through the facility.

9. The best method of stunning has proven to be a captive bolt gun on the end of a handle (like an axe handle) about 3 feet long with a trigger at the handle end. These knock elk with a minimum of fuss and distress.

10. The rate of cooling applied to the carcass significantly affects tenderness. Problems have been identified with the meat industry standard, which is to use blast chilling to reduce carcass temperatures to close to 1 degree C as soon as possible. This causes cold shortening of the muscle fibres and reduces tenderness. The optimal

cooling method is to hold hanging carcasses at 6 C for 24 hours and then lower it to normal cooler temperatures. Aging of lean carcasses such as elk is best done in heavy-duty vacuum packaged bags.

11. This approach will overcome some of the negative impacts on tenderness mentioned above. Elk is optimally aged in primal cuts in such bags between 10 and 14 days at normal cooler temperatures. As a carcass, it is hard to go much past 7 days in the cooler without unacceptable moisture loss and loss of carcass weight. Elk carcasses cannot be handled in the same manner as beef, because they do not have the fat cover that beef generally does.

The key point that the most successful elk producers stress is that they do not produce just pounds or kilos – they aim to produce a high-quality, tender and tasty product that consumers will be keen to take home to their families.

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*Dr. Terry Church, DVM is manager of Canadian Rocky Mountain farms near Calgary, Alberta. Contact tchurch@telusplanet.net or (403) 256-1350.*







## EVENTS CALENDAR

Here is a list of upcoming events of interest to deer, elk, and reindeer farmers. We have expanded these listings to include events that offer marketing opportunities for the industry.

**San Diego Spring Veterinary Conference** will be held on **May 21 to 22, 2005** at the Red Lion Hanalai Hotel, San Diego, CA. For more information, call 619-640-9583.

**Quality Deer Management Association** will hold its 5th Annual National Convention on **June 2-5, 2005** at the Embassy Suites Hotel Airport/Convention Center in Charleston, South Carolina. Learn the latest about whitetail deer from the best biologists, researchers and hunters. In addition to the Whitetail Expo, you can check out the latest whitetail management gear and sporting equipment. For tickets and more information, call 800-209-3337.

**California Veterinary Medical Association** annual conference will be held on **June 24-26, 2005** at the Anaheim Marriott Hotel. For information, visit <http://www.cvma.net>.

**Summer International Fancy Food & Confection Show** will be held in New York on **July 10-12, 2005**. This is one of the most important annual expositions for gourmet and specialty foods. The show draws representatives from every segment of the retail and food services industries – retailers, restaurateurs, brokers, wholesalers, importers and other distributors of gourmet, specialty and ethnic foods.

**Canadian Veterinary Medical Association** will hold their annual convention in Victoria, BC on **July 13 to 16, 2005**. For more information, visit <http://canadianveterinarians.net>

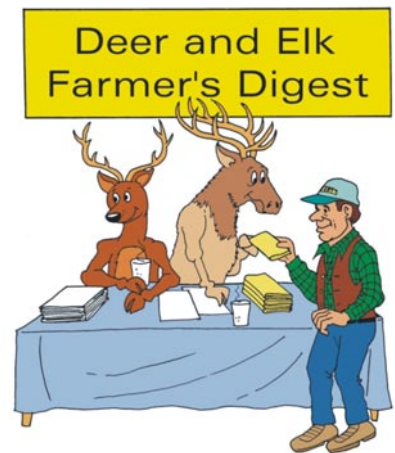
**American Veterinary Medical Association** is holding its 142 annual convention on **July 16 to 20, 2005** in Minneapolis, MN. It is being held in conjunction with the 28th World Veterinary Congress. For more information, please visit <http://avmaconvention.org>

**Minnesota Elk Breeders Association** will hold the summer meeting at the Jackpot Junction Casino Hotel in Morton MN on **July 21, 2005**. The meeting will be held during the North Central Antler Competition and attendance at this event is free. Visit <http://www.mneba.org>

**North American Elk Breeders Association (NAEBA)** will hold their annual convention and international antler competition on **July 22-23, 2005** at Jackpot Junction Casino Hotel, Morton, Minnesota. For more information, visit <http://www.naelk.org> or e-mail [info@naelk.org](mailto:info@naelk.org)

**Texas Deer Association** will hold their 7th Annual Convention on **August 25-27, 2005** at the Westin La Cantera in San Antonio Texas. See <http://www.texasdeerassociation.com>

**Whitetail Deer Farmers of Ohio** will have their fall meeting and picnic on **August 27, 2005**. For information and location, contact Steve Laughlin at [sklisret@earthlink.net](mailto:sklisret@earthlink.net).





**Events Calendar**  
(continued)

**Florida Veterinary Medical Association** will hold their annual conference on **September 8 to 11, 2005** at the Wyndham Palace Resort in Orlando, FL. For more information, visit <http://www.fvma.com>

**American Holistic Veterinary Medical Association 20th Annual Conference** will be held on **September 17-20, 2005** at the Ogden Eccles Conference Center, Ogden, Utah. Phone 410-569-0795 or visit <http://www.ahvama.org>

**CanWest Veterinary Conference** will be held at the Fairmont Banff Springs Hotel, Banff, Alberta, Canada on **October 15-18, 2005**. Visit <http://www.avma.ab.ca> or <http://www.bcvma.org>.

**Illinois State Veterinary Medical Association 123 Annual Convention** will be held **November 4-6, 2005** at the Crowne Plaza in Springfield, Illinois, USA. For more information, contact Ann at 800-942-4246 or e-mail [ann@ISVMA.org](mailto:ann@ISVMA.org)

**Minnesota Elk Breeders Association 2006 Annual Conference** will take place at the Holiday Inn & Conference Center in Willmar on **January 14, 2006**. An "Open Forum" is tentatively scheduled for the evening of January 13. For more information, see <http://www.mneba.org>

**Iowa Elk Breeder's Association Annual Conference** will be held on Saturday, **January 16, 2006** at Jester Park Lodge, Granger, Iowa. For more information, contact Peni Tussey at [tusseyelk@yahoo.com](mailto:tusseyelk@yahoo.com).

The **Wisconsin Commercial Deer & Elk Farmers Association** will hold their 14th Annual Convention on **February 24-25, 2006**, at the Hotel Meda in WI Rapids, Wisconsin. For more information, contact WCDEFA at <http://www.wcdefa.org> or 608-583-7219.

**Global Pet Expo**, one of the world's largest pet products trade shows, will be held at the San Diego Convention Center, San Diego, California on **March 23 to 25, 2006**. For more information see <http://www.globalpetexpo.org>

**Natural Products Expo West** will be held in Anaheim, California on **March 23 to 26, 2006**. Last year, more than 2,500 exhibitors and 36,000 attendees from 86 countries to part in the show. More than 13,000 retailers and buyers participated. For more information, go to <http://www.expowest.com>

**SupplyExpo** will be held in Anaheim, CA on **March 24-26, 2006**. SupplyExpo is the leading suppliers' tradeshow for quality, new ingredients in the functional food and beverage, supplement and nutraceutical, and personal care and cosmeceutical markets. For more information, contact <http://www.expowest.com>

**American Veterinary Medical Association** is holding its 143 annual convention on **July 15 to 19, 2006** in Honolulu, Hawaii. For more, visit <http://avmaconvention.org>

**Reindeer Breeders and Owners Association (ROBA)** will hold their 2006 Annual Membership meeting at the Moon Deer Ranch in Parker Colorado in July of 2006. For more information, visit <http://www.reindeer.ws>



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