

Velvet Antler Removal

A Training Course for Producers

March 2008



Prepared for the Alberta Elk Commission and the Alberta
Veterinary Medical Association

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Why am I taking this Training Course?

- **First and most important, because I care about my animals**
- **Training, skill and knowledge are all essential to ensure humane and efficient antler removal.**
- **Our industry, and all livestock industries, are watched closely and criticized quickly by welfare and “rights” groups.**
- **Access to markets can be limited by consumer response to animal welfare concerns.**



AEC is a member of AFAC

- **The Alberta Elk Commission (AEC) is a member and supporter of AFAC – the Alberta Farm Animal Care Association**
- **AFAC , the AEC and all elk producers are committed to responsible animal care, with these goals recognized:**
 - **promote responsible, humane animal care;**
 - **engage in discussion with the public;**
 - **monitor and participate in issues and legislation, and**
 - **encourage animal care research.**



The AVMA supports this Training Course

- **The Alberta Veterinary Medical Association (AVMA) has assisted in development and agreed to support this Velvet Antler Removal Course (VARC)**
- **AVMA is highly regarded – their knowledge and assistance is essential**
- **Completion of the VARC and adherence to the guidelines and regulations allows us to continue harvesting our own antler.**



Components of the VARC

- **The presentation you are watching is based on the “Guidebook for Velvet Antler Production”.**
- **The Guidebook provides much more background plus antler production information.**
- **Producers should also be familiar with all requirements of the Livestock Industry Diversification Act and other applicable legislation.**



Requirements for obtaining a VARC Certificate

- 1. Producers must establish a valid veterinarian-client-patient relationship and work in cooperation with their veterinarian. This requires that the vet has sufficient knowledge of the elk herd to make informed decisions.**
- 2. Producers must read, understand and agree to follow the guidelines of the Code of Practice for Farmed Cervids.**
- 3. With 1. and 2. accomplished and completion of the VARC, a producer is issued a Certificate good for five years, allowing harvest from that producer's own elk.**

**Goal of the VARC is to ensure
we are harvesting
high quality Velvet Antler –
Effectively
Safely
Humanely**



Producing High Quality Velvet Antler requires High Quality Management –

- ✓ **Carefully selected and developed Genetics**
- ✓ **Excellent and carefully planned Nutrition throughout the life of the bull**
- ✓ **Smooth and stress free Facilities and Handling techniques**

**Read your Guidebooks
and work with successful
antler producers**





Key Requirements for Velvet Antler Removal

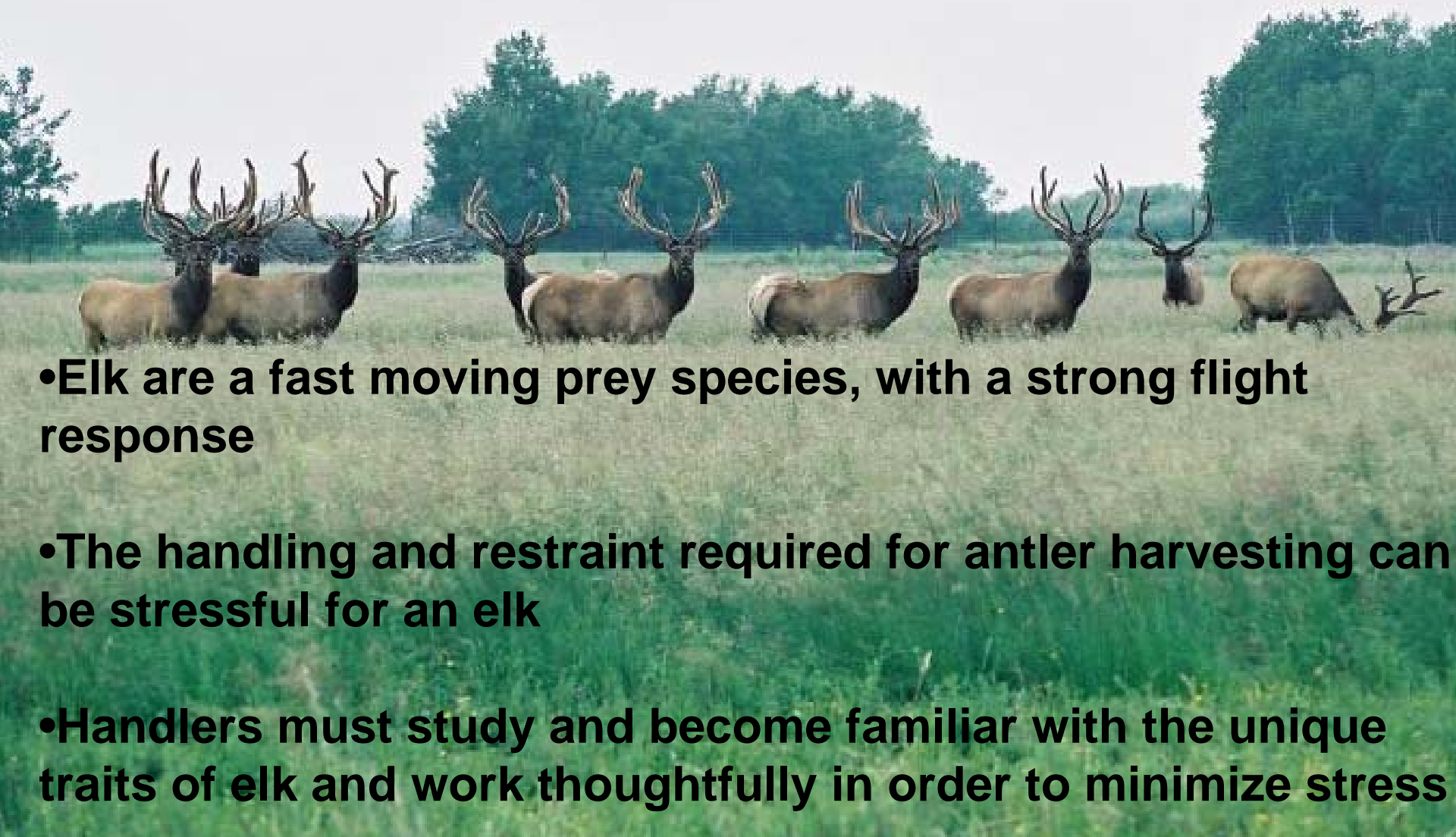
- **Use physical or chemical restraint to prevent injury when removing antlers;**
- **Use an injection of local anesthetic to anesthetize the antler, and**
- **Whole body electro-immobilization techniques must not be used.**



Key Requirements for Hard Antler Removal

- **Minimize stress and discomfort**
- **Use physical restraint or adequate sedation to prevent injury when removing antlers;**
- **Whole body electro-immobilization techniques must not be used.**

Understand the Nature and Behaviour of Elk

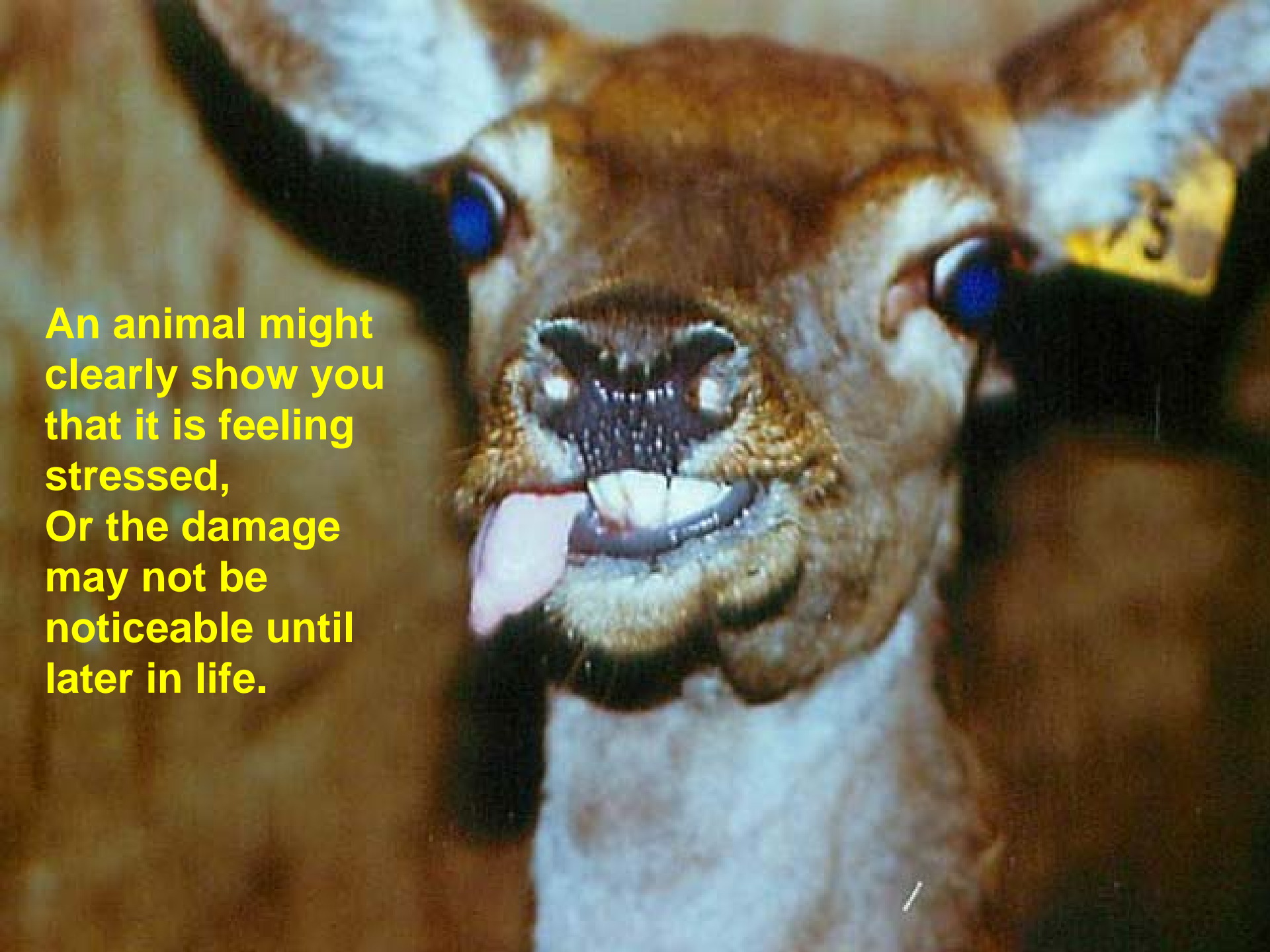


- Elk are a fast moving prey species, with a strong flight response
- The handling and restraint required for antler harvesting can be stressful for an elk
- Handlers must study and become familiar with the unique traits of elk and work thoughtfully in order to minimize stress

Understanding Stress

- **Physical stress results from discomfort**
 - cold, heat or most powerfully from **Pain**
- **The most powerful emotional stressor is Fear**
- **Prolonged or repeated stress will cause physical damage – “myopathy” that can be permanent or fatal.**

**An animal might
clearly show you
that it is feeling
stressed,
Or the damage
may not be
noticeable until
later in life.**



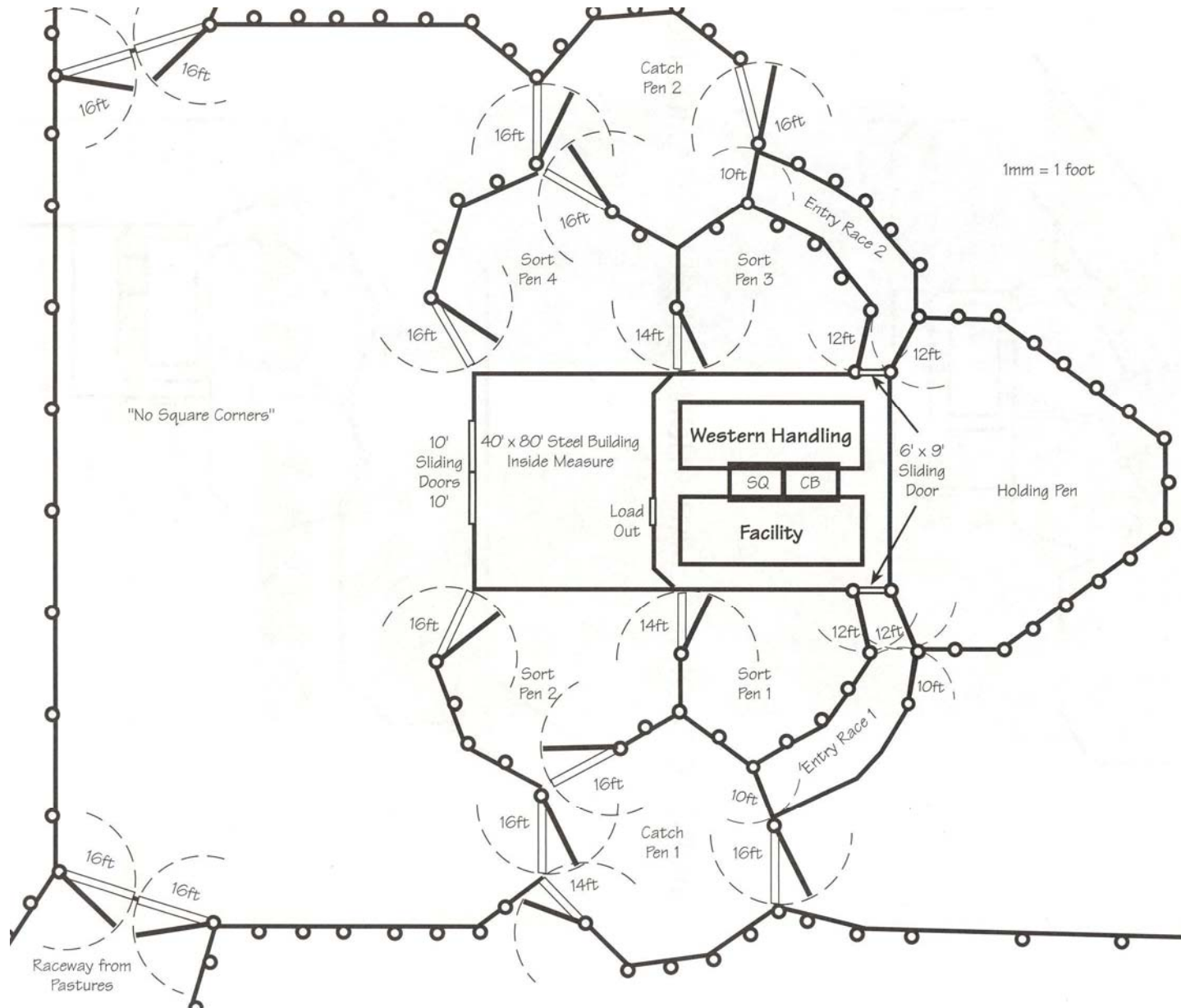
Stressors encountered during velvet antler removal may include:

- **Random and unusual noises, odors, and sights;**
- **Presence of strangers;**
- **Physical exertion from handling;**
- **Overcrowding, or confining dominant animals with subordinates;**
- **Isolation for an extended time;**
- **Prolonged or inappropriate physical restraint;**
- **Hot and humid conditions, or**
- **Pain inflicted during velveting procedure.**

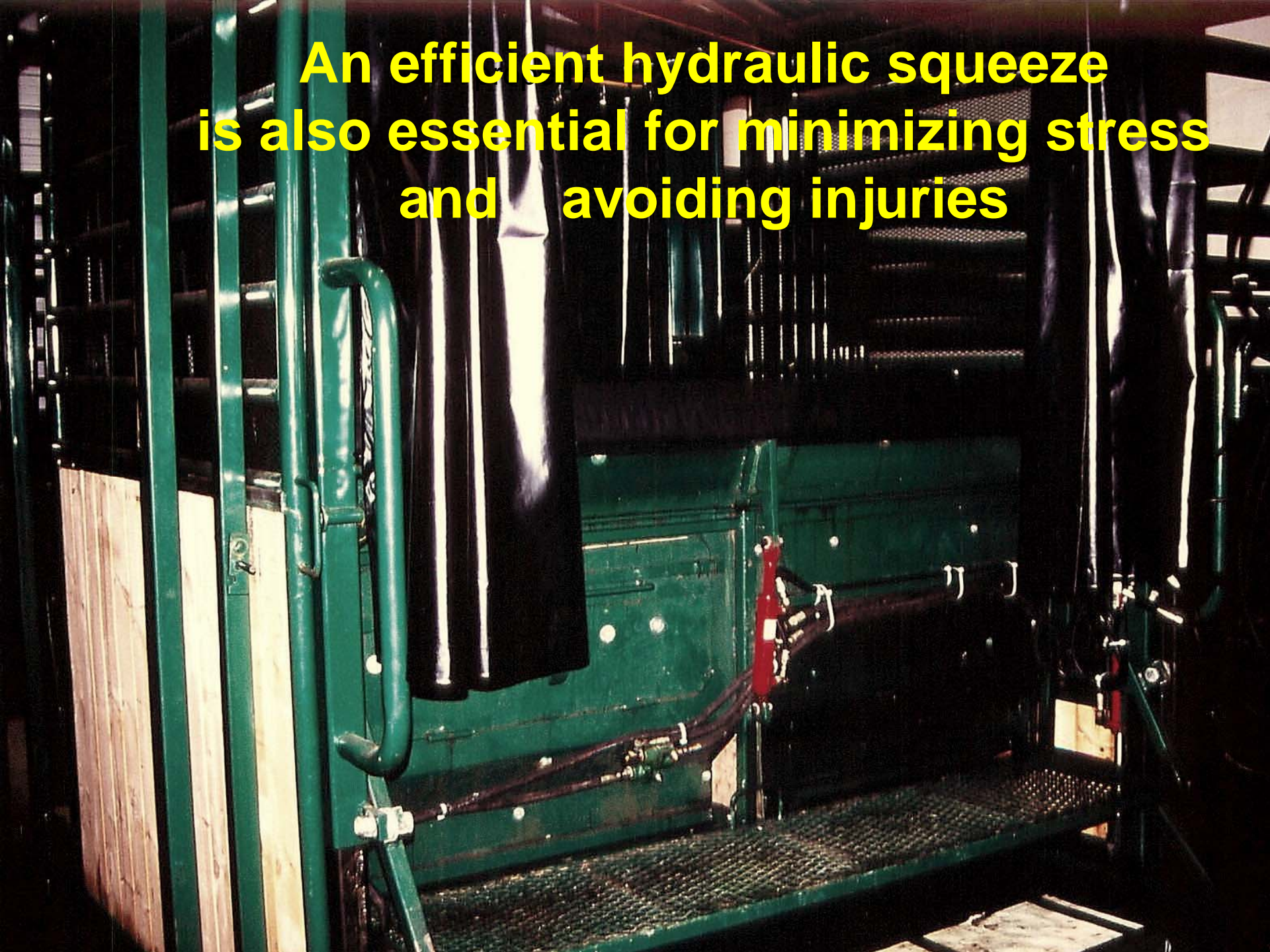
Signs of stress in elk include:

- Restlessness, pacing the fence;
- Increased aggression;
- Flighty, nervous behavior when handled;
- Posture changes - head carried high;
- Open mouth breathing, panting;
- Tongue lolling and grinding teeth;
- Excessive salivation (drooling);
- Head tremors, body trembling;
- Wide preorbital glands, and
- Increased vocalization.

Properly designed and constructed facilities are essential for minimal- stress handling



**An efficient hydraulic squeeze
is also essential for minimizing stress
and avoiding injuries**





✓ A sturdy halter may assist in restraining the head

- ✓ Practice your control of the squeeze so that restraint is quick and effective.
- ✓ Apply a minimum amount of pressure. Breathing should be relaxed and regular;
- ✓ Blindfold the elk to reduce random visual stimulation.
- ✓ Work quietly - no unnecessary noise such as loud voices or slamming doors.



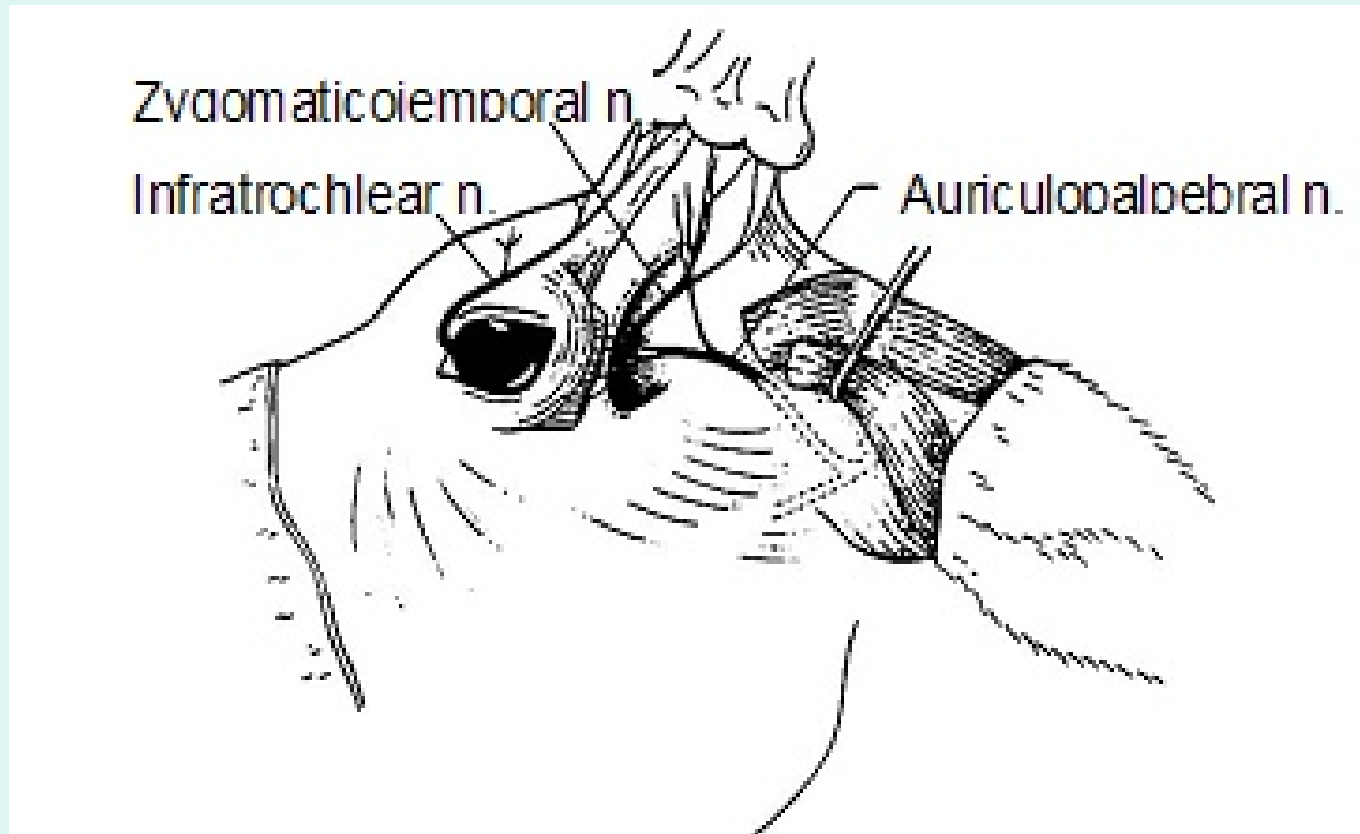
Chemical Restraint

- **With adequate physical means of restraint, chemical sedation or tranquilizers are not necessary**
- **The priorities are:**
 - **to minimize stress, mainly by minimizing fear and pain**
 - **to harvest clean and high quality velvet antler**

Minimizing Pain

- Research has shown that injection of local anesthetic around the base of the antler is effective in minimizing pain associated with velvet antler harvesting.
- Lidocaine is the most effective available local anesthetic in terms of reducing stress responses to antler removal.

Nerves surrounding antler base



It is not essential to remember names or locations of nerves -
only how to properly apply anesthetic

A “Ring Block” is the most effective method of applying anesthetic

- Your veterinarian will train you to effectively perform a Ring Block
- This method requires several injections applied as a series of overlapping lines of local anesthetic under the skin at the base circling the entire pedicle.

Applying a Ring Block

- To make a line, insert a one and one half inch long, 18-gauge needle on a syringe of lidocaine under the skin of the skull where it joins the pedicle.
- Inject the anesthetic solution as you slowly pull the needle out.
- There should be a 1 ½ inch line of anesthetic deposited under the skin.
- Repeat this procedure, overlapping the lines slightly, until the pedicle has been completely encircled.
- Research has shown that the volume of lidocaine needed is 1.20 ml per cm of pedicle.
- The diameter of elk pedicles varies from 10 to 30 cm.

Effect of the Anesthetic

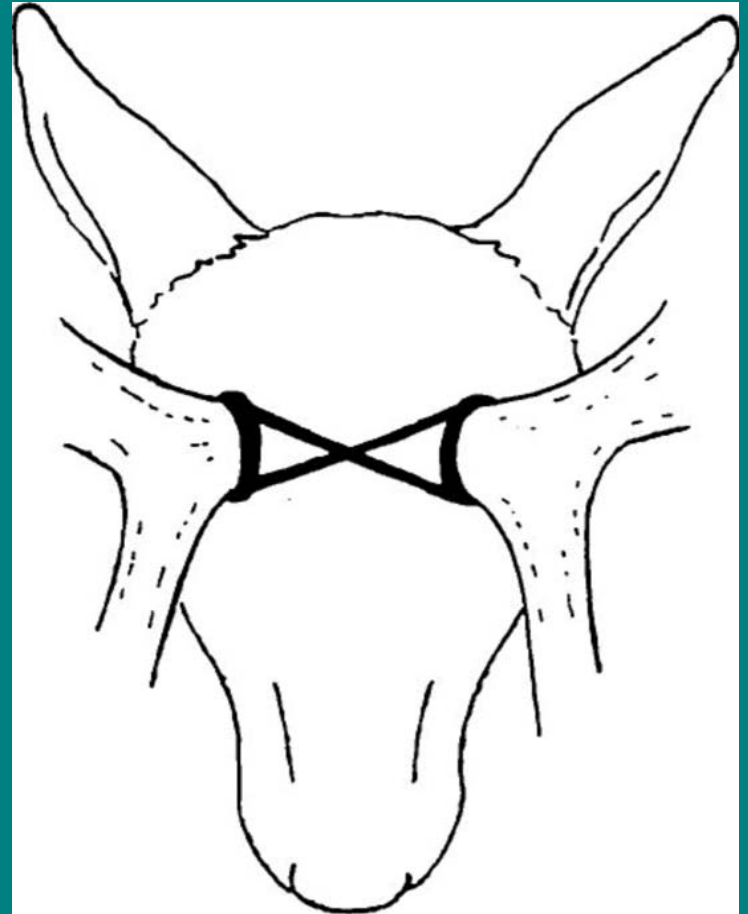
- The desired effect of the lidocaine anesthetic is analgesia – numbness and suppression of painful sensations
- Test for analgesia 1 minutes after completing the injections
- Test by
 - Squeezing or flicking velvet antler;
 - Fine needle prick around the base of the antler;
 - or
 - A small initial saw cut.

Other Methods of Anesthesia

- Electro-immobilization is considered to be unacceptable from an animal welfare perspective.
- Compression anesthesia has been found less effective than Lidocaine
- More research is needed to determine if compression can provide adequate anesthesia.
- Compression is currently not an acceptable technique.

Velvet Antler Removal Techniques

- Once the elk is physically restrained and anesthetic has taken effect,
 - 1) Apply a “figure 8” tourniquet around the base of the pedicles.



Velvet Antler Removal Techniques

- 2) Cut through the velvet and skin 2 cm. above the coronet and all the way around the antler using a clean, disinfected, sharp cutting instrument
- 3) Use a sharp, disinfected saw with coarse teeth (6 to 10 per inch) to cut quickly and cleanly through the antler 2 cm above the coronet.

Velvet Antler Removal Techniques

- 4) Remove the halter, remove the tourniquet and the blindfold, and release the elk as quickly as possible
- 5) Release the velvetted bull into a familiar, large and quiet area where he can resume normal and non- stressful activities
- 6) Watch for abnormal behaviour

Velvet Antler Removal Techniques

- Abnormal behaviour rarely occurs after velveting.
- The best monitoring technique is to watch for Normal Behaviour, including:
 - Grazing and cud chewing;
 - Normal body movements and walking, and
 - Normal flight response when approached.

After removal, handle velvet antlers like fresh meat products:

- **Preserve as much blood inside the antler as possible**
- **Apply an antler tag for identification**
- **Put in freezer as soon as possible**
- **Lay antler in freezer on its flat side, with the cut end slightly elevated**



Walk in freezers with blast chillers
work well for initial cooling



**Keep antler in plastic bags
in chest freezers
to reduce moisture loss
before sale.**



Preparing for Antler Sales

- **All antler must be tagged with official unique tags and the tag numbers recorded**
- **A Canadian Antler Export Declaration must be signed by your herd vet in order for you to sell antler to buyers if they intend to export that antler out of Canada.**



**This brings us to the end of the VARC Training Course Presentation
Be sure to study your Guidebook for more information.**

A Guidebook for Velvet Antler Production

The Alberta Velvet Antler Removal Certification Program



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