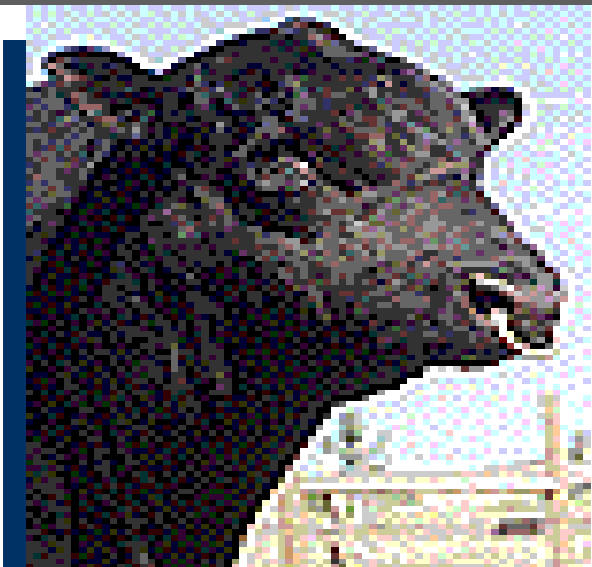


9ième
Journée Bovine
6 juin 2003
**« Le Bœuf toujours
en progression »**



Une présentation de:
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Pain Control in Cattle

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What is pain ?

- We generally talk about 2 major types of pain.
- Acute (physiological) pain is the sharp, immediate pain that you feel during an injury. This pain can be protective.
- Chronic (pathological) pain is the dull, aching pain that you feel after an injury. This type of pain has many adverse effects.



What are the adverse effects of pain?

- Pain produces a stress response. A stress response can have many negative effects on the animal.
- Welfare concerns.
- Economic concerns.



Impacts of a stress response

- Decreased resistance to infection.
- Decreased ability to heal from wounds or surgery.
- Decreased weight gain.
- Impact on reproductive hormones.



Economic effects of pain

- Decreased productivity.
- Consumers are interested in animal welfare.
- Appropriate pain control can be consumer driven.







Recognition of pain in cattle

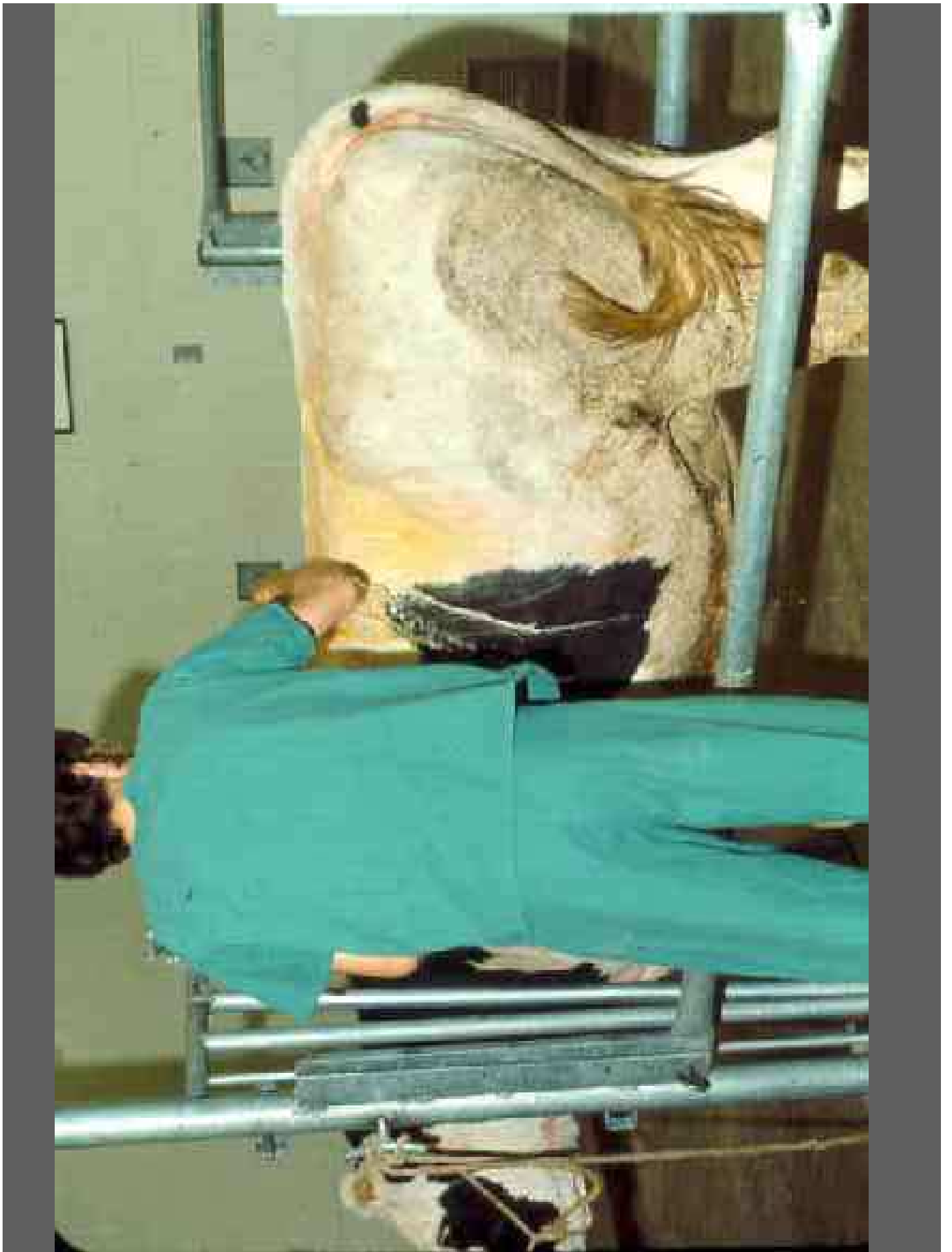
- Cattle tend to mask pathological pain very well.
- Outward signs of pain may not be beneficial for survival of prey species.



Recognition of pain in research

- Apply a known painful stimulus and look for an avoidance response.
- Take blood from animals and look for increased levels of stress hormones, particularly cortisol.
- Observe weight gain in animals that have underwent a painful procedure.





Recognition of pain on the farm

- Recognition of acute pain is not difficult.
- Avoidance or escape behavior.
- Kicking.
- Vocalization.



Recognition of chronic pain

- Chronic pain can be difficult to recognize in cattle.
- Animal may avoid the herd.
- Animal may appear dull and poorly groomed.
- Animal may have a “hunched up” appearance with abdominal pain.
- May notice decreased feed intake.

Recognition of pain

- If a procedure has produced acute pain, it will generally result in chronic pain.
- If you feel a procedure would be painful for yourself, it will generally be painful for the animal.

Common procedures that result in mild pain

- Injections: try to use needles with a small bore. Avoid reusing needles to ensure that they are sharp.
- Ear tagging.
- Hoof trimming.

Common procedures that can cause moderate to severe pain

- Castration.
- Branding.
- Dehorning.
- Dystocia.
- Surgical interventions.

Prevention and treatment of pain in cattle

- Consider treatment of acute pain and chronic pain.
- Local anesthesia can be used to prevent pain, it is used by producers in many countries, under veterinary supervision.
- Xylazine decreases pain and distress during surgery.
- Anafen is useful for the treatment of post operative and chronic pain.

Local anesthesia

- Lidocaine is most commonly used. It will last 1-2 hours.
- In many countries producers are trained how to use the drug, and work under veterinary supervision.



Local anesthesia

- Local anesthesia is used to block specific nerves or infiltrate the surgical site.
- Useful for dehorning and castration.



Xylazine

- Used for sedation and pain control.
- Used only by veterinarians.
- Has side effects that require close veterinary supervision.



Xylazine

- Used for sedation and pain control during surgery.
- Used for restraint.
- Epidural administration will produce pain control for castration in mature bulls.



Ketoprofen

- Potent antiinflammatory drug.
- Long duration Postoperative pain control.
- Obtained from veterinarians by prescription.



Ketoprofen

- Long duration of action.
- Can be used for postoperative pain control.
- Useful for any situation where analgesia is required.



Drug withdrawal times

- All of these drugs are approved for use in cattle.
- It is important to observe withdrawal times to ensure drugs do not enter the human food chain.
- Meat withdrawal times are: lidocaine-5days, xylazine-3days, anafen-1 day.

