

I. Accompanying Letter:

Calf Disbudding Practices of UK Farmers / Veterinarians

Please read the following information carefully.

Study: Calf disbudding practices in the UK



Description: You are invited to participate in a research study, conducted by a final year veterinary student from the Royal Veterinary College. The purpose of this study is to ascertain the practices of UK veterinarians and farmers for calf disbudding and their opinions on pain relief options for this procedure.

You are asked to fill in a questionnaire that asks questions about your background, your protocol for disbudding calves, your opinions on the severity of pain induced by this procedure and your views on the use of pain relief medications.

Your participation is voluntary and you have the right to discontinue participation at any time. You have the right to refuse to answer particular questions. The information that you provide will remain confidential and your identity will remain anonymous in all published and written data resulting from the study. This project is not in any way affiliated with any pharmaceutical companies and your information will not be passed on to any third parties. Data collected from this project will be used for a student project and may be published in a scientific journal.

This project has been reviewed and approved by the Royal Veterinary College Research & Ethics Board and is being funded by a scholarship from the Universities Federation for Animal Welfare (UFAW).

Time Involvement: Your participation should take no more than 10 minutes.

If you have questions at any time about the study, you may contact the researcher by email: XXXX

Thank you in advance for your participation,

II. Veterinarian Survey:

Part 1

1. Gender:

- a. Male
- b. Female

2. Which Veterinary school did you attend?

- a. Department of Veterinary Medicine, University of Cambridge
- b. Royal (Dick) School of Veterinary Studies, University of Edinburgh
- c. Royal Veterinary College, University of London
- d. School of Veterinary Medicine and Science, University of Nottingham
- e. School of Veterinary Medicine, University College Dublin
- f. School of Veterinary Medicine, University of Glasgow
- g. School of Veterinary Science, University of Bristol
- h. School of Veterinary Science, University of Liverpool
- i. Other; please specify, including country if outside of UK: _____

3. Year of graduation: _____

4. In which UK region do you practice?

- Scotland
- Wales
- Northern Ireland
- North England
- Midlands
- South-East England
- South-West England

5. Please state the amount of **your** time spent working in **CATTLE** practice:
_____ %

6. Have you undertaken any further training in relation to **CATTLE PRACTICE** specifically since graduating? (eg.

residencies/diplomas/RCVS certs/CPD etc.)

- a. Yes, please specify:

- _____
- b. No

Part 2

7. Where have you gained **MOST** of your knowledge on recognising and treating pain in adult cattle and calves? Please select **ONE** option:

- a. Experience in practice/'self-education'
- b. Fellow veterinary surgeons
- c. Undergraduate training at veterinary school
- d. Continuing Professional Development (CPD) courses
- e. Papers/Journals/Articles
- f. Commercial literature/Data sheets

- g. Other, please specify: _____
8. Would you consider that your knowledge about pain and analgesia in cattle is adequate?
- Yes
- No

Part 3

*For the purpose of this survey, **disbudding** means removing the horn buds in calves, before any horn material can be seen.*

9. Do you disbud calves?

- Yes – Please continue to **Part 4**
- No. *If you answered ‘No’ to Q9 then this is the end of the survey. Thank you for participating. Please leave any comments in the space below: _____*

Part 4

10. On average, how many farms do you attend annually to disbud calves? _____

11. On average, at what age do you disbud calves at?

- At 1 week old or younger
- 1 - 4 weeks old
- 4 - 8 weeks old
- Older than 8 weeks old

12. What method of disbudding do you use most often? *(Please answer further Questions in relation to the method used by yourself.)*

- Blow torch and hot iron
- Electronic cauteriser
- Gas-powered cauteriser
- Chemical/Caustic cream
- Mechanical ‘scoop’ disbudding
- Introduced polled genetics into the herd
- Other; please specify: _____

13. Please state all medications that you routinely give/advise your farming clientele to give, for disbudding calves: _____

14. Approximately what % of your farming clientele use/allow you to use NSAIDs when disbudding calves? _____%

Part 5

*The following questions are based on your experiences and apply to the method that you use for disbudding. For Questions 15, 16 & 17, please select the number that you feel is most appropriate to estimate the pain severity using a 10-point scale, where **0** = **no pain at all** and **10** = **worst pain imaginable**.*

15. In your opinion, how severe would the pain be during the procedure if disbudding was carried out and **NO** pain relief drugs were given **at all** (including a local

anaesthetic)?

0 1 2 3 4 5 6 7 8 9 10

16. In your opinion, how severe would the pain be during the procedure if disbudding was carried out and a **local anaesthetic** was given?

0 1 2 3 4 5 6 7 8 9 10

17. In your opinion, how severe would the pain be following the procedure if a **local anaesthetic** and a **non-steroidal anti-inflammatory drug** had been given beforehand?

0 1 2 3 4 5 6 7 8 9 10

18. In your opinion, for how long after the procedure do calves feel pain associated with disbudding for?

- Calves do not feel pain after the procedure
- Within minutes
- Less than 6 hours
- Less than 12 hours
- Less than 24 hours
- More than 24 hours

Part 6

A number of studies suggest that the use of an anti-inflammatory drug for the procedure reduces post-disbudding pain in calves for days, reducing stress and potentially helping to maintain growth rates. (Stafford & Mellor, 2005)

19. After reading this claim, would you prefer that your client's calves routinely received an NSAID for disbudding?

- Yes
- No
- Maybe
- I already use anti-inflammatory drugs for calves at disbudding

20. When considering whether to use Non-Steroidal Anti-Inflammatory Drugs in calves, how important do you rate the following factors?

	Not Important	Slightly Important	Fairly Important	Quite Important	Very Important
a.Potential side-effects	A	B	C	D	E
b. Cost	A	B	C	D	E

c. Availability of product support	A	B	C	D	E
d. Relationship with company representative	A	B	C	D	E
e. Anti-inflammatory effects	A	B	C	D	E
f. Anti-toxic effects	A	B	C	D	E
g. Analgesic potency/calf welfare	A	B	C	D	E
h. Duration of analgesia	A	B	C	D	E
i. Ease of administration eg. route	A	B	C	D	E
j. Dose volume	A	B	C	D	E
k. Licensing for food-producing animals/legislation	A	B	C	D	E
l. Practice purchasing policy/product availability	A	B	C	D	E
m. Time to onset of activity	A	B	C	D	E
n. Withdrawal period	A	B	C	D	E

21. Which one of the following NSAIDs is licensed in the European Union for the treatment of calves at disbudding?

- Carprofen
- Flunixin meglumine
- Ketoprofen
- Meloxicam
- Meclofenamic acid
- Naproxen
- Phenylbutazone
- Tolfenamic Acid
- I don't know

Part 7

22. Do you think that Veterinary surgeons discuss pain control with farmers enough?

- Yes
- No

23. Have you ever discussed the use of NSAIDs for **disbudding** calves with your farming clientele?

- Yes
- No

24. Do you think that farmers would like calves to receive pain relief with an NSAID following the disbudding procedure?

- Yes
- No
- Some

25. When considering the use of NSAIDs in calves from a **farmer's perspective**, how important do you think that **he/she** would rate the following factors?

	Not Important	Slightly Important	Fairly Important	Quite Important	Very Important
a. Potential side effects	A	B	C	D	E
b. Cost and labour	A	B	C	D	E
c. Availability of product support	A	B	C	D	E
d. Withdrawal period	A	B	C	D	E
e. Ease of administration eg. route	A	B	C	D	E
f. Veterinary recommendations	A	B	C	D	E
g. Product availability	A	B	C	D	E
h. Licensing /Legislation	A	B	C	D	E
i. Analgesic potency/Calf welfare	A	B	C	D	E
j. Availability of product support	A	B	C	D	E
k. Duration of analgesia	A	B	C	D	E
l. Time to onset of activity	A	B	C	D	E

26. What price do you think that farmers would find acceptable to pay for an NSAID in order to provide pain relief for their calves in the days following the disbudding procedure? *Prices are based on dosage per calf.*

- <£1
- £1-2
- £2-3
- £4-5
- £5-10
- >£10
- I don't think that farmers would be willing to pay for the drug

27. Do you think the use of NSAIDs in calves when disbudding should be made compulsory (in addition to a local anaesthetic)?

- Yes
- No

Thank you for taking the time to participate in this survey.

Please leave any comments in the space below. If you would like to receive a summary of the report, please leave your email address here. This will not affect your anonymity.

III. Farmer Survey:

Part 1

1. Gender:

- Male
- Female

2. How long have you been involved in the farming industry?

- Less than 5 years
- 5-10 years
- 11-20 years
- 21-30 years
- 41-50 years
- More than 50 years

3. In which UK region do you farm in?

- Scotland
- Wales
- Northern Ireland
- North England
- Midlands
- South-East England
- South-West England

4. How would you describe your role on the farm?

- Owner
- Tenant
- Manager
- Herdsperson
- Temporary/Relief staff
- Other; please specify _____

5. Are cattle the main enterprise on your farm?

- Yes
- No

6. What is the **main** purpose of the cattle in your enterprise?

Please select only one option.

- Milk production
- Heifer rearing
- Suckler Herd
- Store cattle
- Bull beef
- Small holding

7. How many heads of cattle are there on the farm? _____

Part 2

8. Please list the names of any **pain relief drugs** that you are aware of that can be used to

treat cattle: _____

Part 3 - For the purpose of this survey, 'disbudding' means 'removing the horn buds in calves, before any horn material can be seen'.

9. Are calves disbudded on your farm?

- Yes – Please continue to **Part 4**
- No - Please state why: _____ *If you answered 'No' to Q9 then this is the end of the survey. Thank you for participating. Please leave any comments in the space below: _____*

Part 4

10. What is your **MAIN** reason for disbudding?

Please select all that apply:

- Farm personnel safety & ease of handling cattle
- To prevent injury to other cattle
- To prevent financial losses associated with carcass damage and trimming
- To take cattle to market/ better market prices
- Aesthetics/appearance of cattle
- Part of the Herd Health Plan/ Farm Assurance Scheme
- Other; please specify: _____

11. On average, at what age are calves disbudded on your holding?

- At 1 week old or younger
- 1 - 4 weeks old
- 4 - 8 weeks old
- Older than 8 weeks old

12. Who carries out the procedure?

- Farm personnel (including yourself)
- Your veterinary surgeon
- A contractor

13. What method of disbudding do you use?

Please select all that apply.

- Blow torch and hot iron
- Electronic cauteriser
- Gas-powered cauteriser
- Chemical/Caustic paste
- Mechanical 'scoop' disbudding
- Introduced polled genetics into the herd
- Other; please specify: _____

14. Please state all medications that you routinely give to calves for the disbudding procedure: _____

Part 5 - The following questions are based on your experiences and apply to the method that you use for disbudding.

- **Local anaesthetic** - an injectable drug that blocks the nerve, pain cannot be felt in the specific area ie. the horn bud, it does not affect consciousness and lasts for around 1-3 hours.
- **Anti-inflammatory drug** - a form of pain-relief that reduces pain, fever and inflammation, examples from human medicine include aspirin and ibuprofen and in animal medicine examples include Metacam® or Meloxidyl®, flunixin and ketoprofen, they can last from hours to days.

For the following questions, please select the number that you feel is most appropriate to estimate the pain severity using a 10-point scale, where **0 = no pain at all** and **10 = worst pain imaginable**.

15. In your opinion, how severe would the pain be during the procedure if disbudding was carried out and **NO** pain relief drugs were given **at all** (including a local anaesthetic)?

0 1 2 3 4 5 6 7 8 9 10

16. In your opinion, how severe would the pain be during the procedure if disbudding was carried out and a **local anaesthetic** was given?

0 1 2 3 4 5 6 7 8 9 10

17. In your opinion, how severe would the pain be following the procedure if a **local anaesthetic** and an **anti-inflammatory drug** had been given beforehand?

0 1 2 3 4 5 6 7 8 9 10

18. In your opinion, for how long after the procedure do calves feel pain associated with disbudding for?

- Calves do not feel pain after the procedure
- Within minutes
- Less than 6 hours
- Less than 12 hours
- Less than 24 hours
- More than 24 hours

Part 6

19. Where have you gained most of your knowledge about disbudding?

Please select only one option.

- Method traditionally used/passed down through generations/from a fellow farmer
- Formal training course
- Your veterinary surgeon
- Farming journal/magazine/books
- Farmers meetings

Other; please specify: _____

20. Would you consider your knowledge on pain relief options for disbudding to be adequate?

- Yes
 No

21. Do you think that Veterinary surgeons discuss pain relief options for cattle with farmers enough?

- Yes
 No

22. Have you ever discussed the use of **anti-inflammatory drugs** as pain-relief for **disbudding** with your Veterinary surgeon?

- Yes
 No

Part 7

A number of studies suggest that the use of an anti-inflammatory drug for the procedure reduces post-disbudding pain in calves for days, reducing stress and potentially helping to maintain growth rates. (Stafford & Mellor, 2005)

23. After reading this claim, would you prefer for your calves to routinely receive an anti-inflammatory drug for disbudding?

- Yes
 No
 Maybe
 I already use anti-inflammatory drugs for my calves at disbudding

24. When considering whether to use anti-inflammatory drugs in calves, how important do you rate the following factors?

	Not Important	Slightly Important	Fairly Important	Quite Important	Very Important
a. Cost and labour	A	B	C	D	E
b. Veterinary recommendations	A	B	C	D	E
c. Product availability	A	B	C	D	E
d. Withdrawal period	A	B	C	D	E
e. Ease of administration eg. route	A	B	C	D	E
f. Potential side effects	A	B	C	D	E
g. Licensing /Legislation	A	B	C	D	E
h. Analgesic potency/Calf	A	B	C	D	E

welfare					
i. Availability of product support	A	B	C	D	E
j. Duration of pain relief	A	B	C	D	E
k. Time to onset of activity	A	B	C	D	E

25. What would you consider to be an acceptable cost for an **anti-inflammatory drug** in order to provide pain relief for your calves in the days **following** the disbudding procedure? (*Prices are based on dosage per calf.*)

- <£1
- £1-2
- £2-3
- £4-5
- £5-10
- >£10
- I would not be willing to pay for the drug.

26. If you were considering introducing **anti-inflammatory drugs** into your pain relief protocol for disbudding calves, where would you go to get information from?

- Your veterinary surgeon
- Farmers meetings/ Fellow farmers
- Drug company representative
- Professional farm management advisor
- The Internet/Information leaflets /Articles in farming magazines or journals

Thank you for taking the time to participate in this survey.

Please leave any comments in the space below. If you would like to receive a summary of the report, please leave your email address here. This will not affect your anonymity.