

# Designing effective strategies for improving pain management at calving



**Pain management in farm animals is the direct responsibility of their immediate caretakers – whether that be stockpersons, farm managers or veterinarians. However, the strategies adopted by these people can vary, and as such, so can the level of care and pain relief livestock receive.**

With this in mind, this year's 13th annual Expert Forum on Farm Animal Well-Being – held in Edinburgh – brought together over 80 delegates from 17 countries to share their knowledge and research on the detection and reduction of pain in animals to improve animal well-being, based around the topic of reconnecting humans and food producing animals.

Following presentations of some of the most cutting-edge research, the afternoon session of the Forum saw delegates work together in an interactive workshop to delve deeper into the most effective strategies for improving pain management.

Though pain can be present at various times, due to several causes, throughout the cows' life cycle, the workshop focused on the pain associated with assisted calving.

Boehringer Ingelheim's Dr Sioned Timothy began by giving an overview of pain in the context of calving and the current use of analgesics in cattle at this time. "Pain is a very subjective experience – for both the animal and the person managing their care. There is also both pathological and physiological pain to consider."

A range of factors contribute to an individual cow's experience of calving, but it is thought that dystocia and intervention increases

that perceived pain, added Dr Timothy. "If we look at the work that has been done on the cumulative force where a calving aid is used, it is thought that this can apply force of 400-900kg to the cow. But there is a lot we can do to manage that.

"Literature on both farmer and vet attitudes suggest that there is really good recognition of the potential painfulness of calving, but that is not perhaps always reflected in practices on farm."

### The role of behavioural science

Helping farmers and veterinarians better understand and manage pain associated with assisted calving is something Boehringer Ingelheim has been focusing on in a project with Innovia Technology, which was launched in 2019.

The project has centred around using the principles of behavioural science to change veterinarian and farmer behaviours, ultimately in a bid to minimise the pain during partition where assistance is required. The end goal is to develop a behaviour change programme including a set of interventions that can be rolled out on a wider scale.

Dr Guen Bradbury and Dr Katie Morton from Innovia gave an insight into behavioural science and how it could be used in this situation. "Adopting an innovation, by definition, requires people to do something differently – to change their behaviour – and there are scientific ways we can approach changing behaviour.

"Behavioural science is the systematic study of how humans behave individually and with each other. It gives us an insight into how people react psychologically and respond behaviourally to interventions, environments and stimuli. It encompasses fields such as psychology, anthropology, sociology and behavioural economics."

The science says that for any behaviour to occur, the following factor must be considered:

- Capability – "Can I do it?"
- Opportunity – "Do I have an opportunity to do it?"
- Motivation – "Do I want to do it?"

Various barriers and interventions can modify these factors. An effective Behaviour Change Program will identify the most appropriate types of interventions that can help achieve the desired behaviour.

### Interactive approach

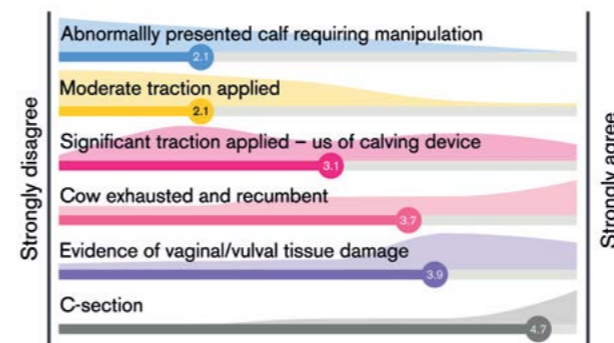
To kick start the interactive part of the workshop, and to get the creative thoughts following, delegates used the Menti software to generate some general thoughts on pain during assisted calving and the use of analgesics.

Despite the words 'pain', 'stressful' and 'risk' coming up as key terms associated with farmer feelings towards calving, 50% of the delegates reckoned that analgesia is provided to the dam in under 10% of cases – illustrating the disparity between the known issues surrounding the pain associated with assisted calving and what actions are actually taken on farm.

When analgesics are used, the majority of delegates said they believe this happens most often after calving, depending on the nature/level of assistance.

And in terms of what might motivate them to use analgesia around the time of calving, a faster return to normal behaviour, such as eating, came out on top, closely followed by a perception that analgesia can lead to reductions in post-calving complications.

### From a farmer point of view, the following scenario would prompt the use of analgesics



Delegates were then split into groups and given two questions each to discuss and formulate an answer to. They were advised to focus on cattle producers when drafting answers – i.e., how they would say this to a cattle producer.

Once the individual groups had formulated answers to their two questions, they were then paired with another group with an alternate

set of questions, to share, compare and refine their thoughts. A consolidated final answer to each question was then submitted.

Delegates were then asked to use the Menti software once again to vote on their preferred answer – with some results being closely matched and clear winners for other answers.

### The workshop questions

1. How would you convey what analgesics do?
2. What are the analgesics that can be used (in cattle, around calving)?
3. What are the benefits of analgesics?
4. What are the economic benefits of treating pain?
5. How would you justify the routine use of analgesics in on-farm calving protocols?
6. How would you explain that analgesics can have a positive impact on pain?
7. How would you explain that assisted calving is sufficiently painful to make it worth treating in dam/calf?
8. How would you explain that the end benefits of analgesic use outweigh the perceived costs?

### Outcomes

The answers provided for the question on how veterinarians justify the routine use of analgesics in on-farm calving protocols split delegates the most, with 72% of the audience preferring: "Routine use of analgesics should be included in on-farm calving protocols because a protocol that administers analgesics to the dam at the first intervention, and to the calf soon after birth, is the right thing to do."

The results also gave a valuable insight into how veterinarians could work to better explain to farmers that assisted calving is sufficiently painful to make it worth treating in dam/calf. The majority of delegates voted the following as the best proposal: "Pain associated with assisted calving is worth treating in dam/calf because the negative effects of untreated pain due to potential or actual tissue damage will lead to a significantly reduced productivity of the dam and overall reduced survival rates in calves."

### Further development

"The answers and insights gathered during the workshop session provide valuable information in Boehringer Ingelheim's quest to change the way pain during assisted calving is managed", concluded Dr Laurent Goby, Global Technical Service manager.

"The whole reason the Forum was created was to facilitate this valuable knowledge exchange, and by working together we believe it is possible to change the game for minimising pain in cattle overall."

For more information about this forum and past events, visit: [www.farmanimalwellbeing.com](http://www.farmanimalwellbeing.com)

