



National Animal Welfare Advisory Committee

Rodeo events – How do they impact the sentient animal?

Assessing the animal welfare impacts that rodeo events may have, through a five domains of animal welfare approach.

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1 Executive Summary

1.1 BACKGROUND, OBJECTIVES, AND APPROACH

Since 2014, when the current *Code of Welfare: Rodeos* was issued, there has been increased anti-rodeo lobbying. Hon. Meka Whaitiri, the Associate Minister of Agriculture, has asked the National Animal Welfare Advisory Committee (NAWAC) for opinions on several aspects of rodeos.

To address the matters that the Minister has raised, NAWAC assembled an expert panel (the panel) that utilised a Five Domains model approach to assess the impact of individual rodeo events on the welfare of the animals involved. A workshop with the panel was convened on 6 April 2018, after an initial survey was filled in by each participant. The panel's findings will contribute to the information considered by NAWAC, and help inform their advice to the Minister.

The panel considered the impact on the animal from the time it enters the chute prior to an event until it leaves the arena at the end of an event. The panel *did not* consider ethical, social or legal questions relating to rodeos. Nor did it consider chance or adverse events that may occur during the preparation of animals for an event or behavioural differences in animals before, during or after an event has ended.

While the panels "subjective scores" were evaluated, the process required that these scores be developed using scientific evidence and experience. Evidence included, but was not limited to, reports and publications circulated prior to the workshop, reports and publications read by panel members but uncirculated prior to the workshop, the knowledge and experience of members of the panel who had expertise in scientific assessment of animal-welfare impacts, experience in the monitoring of animal welfare at rodeo events and (for some) first-hand experience at rodeo events.

While outside the direct scope of the assessment, the panel's discussions also considered whether or not activities outside the arena may impact on the welfare of rodeo animals.

1.2 SUMMARY OF FINDINGS

1.2.1 Impact of Each Event

The table below qualitatively summarises both the rating scales and the conversation from the workshop. As the table shows, barrel riding was of least concern, whereas of most concern was:

- The **Steer Wrestling** event – due to the impact of lifting and dumping the steer. There was also concern over the suggestion that steers are maintained at a lower body condition over the course of a rodeo season. This helps to make dumping the steer more straightforward, but also can compromise the health and welfare of the animal.
- the **Rope and Tie** event – primarily due to the lassoing causing a sudden stop when the calf is moving quite quickly, potentially causing damage to the neck muscles.

Table 1: Summary of level of concern for each rodeo event

| Rating | Data and discussion provides evidence of... | Event assessed to lie within this band | Rationale |
|--------------------------|--|---|--|
| No concern | No concern around impact | None | N/a |
| Minor concerns | Some positive aspects as well as a few or limited negative aspects | Barrel racing | The experience during the event depends on the relationship with the rider and the training outside the arena. There can be some physiological stress on the horse, and severe bits used to stop the horse can also cause pain. Post event (48+ hours) injury rates are unknown. |
| Moderate concerns | More negative than positive aspects | Calf riding Bull / steer riding Bronc riding Team roping | These events have a variety of negative impacts, and do not appear to provide much if any positive experience for the animals. |
| Serious concerns | Substantial negative impacts. | Steer wrestling Rope and tie | These events regularly cause negative impacts, and potentially quite substantial impacts. |

Recommendations

In Summary, the discussions led to the following recommendations:

- Propose the formation of a forum in which rodeo event organisers, rodeo veterinarians and rodeo appointed animal welfare officers can meet periodically with, MPI and SPCA Animal Welfare Inspectors to provide professional development and improve practices and consistency. This recommendation follows the development of a similar group with the introduction of the Racing Integrity Unit.
- That the rodeo industry explore and introduce alternatives that could mitigate the risks inherent with the rodeo events, for example, using alternative and/or removing the use of some instruments.
- Monitoring and record keeping of all animals used during training activities for rodeo events.
- A review into the issue of steers purposefully being kept at low body condition, for the purpose of competing in the steer wrestling event.
- Commission research to assess the physical impact of an event on animals, including assessment of physiological markers of injury, at an interval of 48 to 72 hours following completion of the event.

2 Background, Objectives, Approach

2.1 BACKGROUND

Since the Code of Welfare: Rodeos was issued, there has been increased anti-rodeo lobbying. This has included, but not been limited to, extensive use of peaceful protest at rodeo events, mainstream media and social media. In response to these concerns, Hon. Meka Whaitiri, the Associate Minister of Agriculture who holds the animal welfare portfolio, has asked the National Animal Welfare Advisory Committee (NAWAC) for advice on several aspects of rodeos.

To address the matters that the Minister has raised, NAWAC had chosen to utilise a structured assessment process to evaluate the impact of rodeo events on the welfare of the animals involved. The structured assessment process involved the use of an expert panel to evaluate the animal-welfare impact of rodeo events using the Five Domains framework during a one day workshop. The five domains model considers both negative and positive impacts on an animal's physical/functional domains (nutrition, environment, health & behaviour). These impacts can then be subjectively assessed to determine how they may impact the animal's mental state (Mellor, 2017). The use of this framework was justified as it is consistent with the 2015 amendment to the *Animal Welfare Act 1999* that recognises that animals are sentient, thus requiring consideration of their capacity to have negative and positive experiences, and their emotional state.

The assessment focused on the seven rodeo events outlined in the *Code of Welfare: Rodeos* (<https://www.mpi.govt.nz/.../4810-rodeo-animal-welfare-code-of-welfare-2014>). These are: barrel racing, rope and tie, team roping, calf riding, bull and steer riding, saddleback & bareback bronc riding, and steer wrestling.

2.2 OBJECTIVES

The objective of this report is to provide a summary of the structured assessment process and to document the panel's discussions from the workshop. It is not intended to be an inclusive scientific literature review. In turn, this report will be considered by NAWAC at the May quarterly meeting, following which, the committee's advice to the Minister will be agreed upon.

2.3 APPROACH

The members of the panel were selected based on one or more of the following criteria:

- Expertise in scientific assessment of animal welfare impacts.
- First-hand experience of rodeo events.
- An ability to articulate the impacts of rodeo events on the animals from an animal welfare perspective.

The panel included the following personnel:

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- Dr Karin Schütz, MSc, PhD – NAWAC
- Dr Julie Wagner, BVSc - NAWAC
- Mr Grant Shackell, Dip Ag, Dip Field Technology, MSc – NAWAC and Chair of NAEAC
- Professor Graeme Doole, BAppSc, MAppEc, PhD - NAWAC

Before the workshop, each member of the panel completed a survey (Appendix A) to score the welfare impact, and provide justifications for these assessments, on the animals used in each of seven rodeo events. Several scores were available, indicating a graduation of severity (Table 1). These options provided broad capacity to describe the impacts of rodeo events on animal welfare. Each member of the panel could provide a single rating or a range.

The Panel agreed at the start of the day that it would limit its considerations to:

- A Five Domains-based assessment of each event.
- An assessment of the impact of an event on the animal's physical/functional domains.
- An assessment of the impact of an event on the animal's mental state.
- Accounting for how experience/training and other activities might influence the above.

Generally, it was acknowledged that animals are used in many ways in today's society. Therefore, it was agreed that the baseline for the assessment was that of a domesticated animal, not a wild one. The focus was on objective discussion, based around a subjective assessment process involving the measurement of impact across the adopted scales.

During the workshop discussion, the panel were provided with the opportunity to reflect on the scores and comments from the pre-survey, and again record their assessment based on the discussions. When discussing mental state, the scale was extended to also cover positive states. That is, it was defined from -5 (very negative impacts) to +5 (very positive impacts), thus broadening the capacity of the ordinal metric to describe welfare outcomes. During the workshop, the range of views around impact for each event and domain was explored and noted, rather than driving to consensus.

While "subjective scores" were evaluated, the integrity of the agreed process required that these scores were developed objectively using available scientific evidence as part of the assessment process. Evidence included, but was not limited to, the report that accompanies the current code of welfare for rodeos, scientific papers and additional information around rodeos that was circulated prior to the workshop, as well as additional scientific papers or information that individual members had read in preparation for the workshop. Some papers were discussed in detail on the day, and are provided in the reference section of this report. Please note that the references included at the end of this report are not inclusive of all scientific papers, articles or information read and considered by panel members in preparation for the workshop.

Members of the panel also contributed personal knowledge and experience in one or more of the following ways: scientific assessment of animal-welfare impacts, monitoring animal welfare at rodeo events or first-hand experience of rodeo events.

2.3.1 Scope of the assessment

The Panel *did* consider:

- The welfare impact on the animal from the time it enters the chute prior to an event until it leaves the arena at the end of an event.

The panel *did not* consider:

- Ethical questions relating to the use of animals for "entertainment".
- Social questions relating to perceived social benefits for rural communities.

- Questions relating to the ‘legality’ of rodeos requiring interpretation of the wording of the *Animal Welfare Act 1999*.
- Chance or adverse events that may occur during preparation of animals for an event or behavioural differences in animals during or after an event has ended.

While outside the direct scope of the assessment, the panel’s discussions did consider whether or not other activities of rodeo animals may have an impact on their welfare, for example:

- The welfare impact on the animal outside of scheduled rodeo events, e.g. preparation, training and transport etc.
- The significance of short-term negative welfare outcomes during a rodeo event, when weighed against the balance of the animal’s life as a whole, whether it be a pastoral animal, or an animal purposefully kept for, and provided to, rodeo events (contract animals).

Assumptions were made that gave parameters to the impact assessment, they were that:

- The animals are provided with an appropriate level of food, water and shelter. This is consistent with the minimum standards contained in the *Code of Welfare: Rodeos*, and any applicable minimum standards found in the species specific codes of welfare.
- Each event is carried out so as to adhere to the examples provided of appropriate indicators for the minimum standards outlined in *Part 6* of the *Code of Welfare: Rodeos*.

3 Event: Barrel Racing

3.1 INTRODUCTION

Barrel racing is an event where the riders guide their horses around three barrels in a cloverleaf pattern in the shortest time possible. Horses are required to move at speed and turn quickly and it is important that they are fit, healthy and appropriately trained to perform this event.

For the purposes of the impact assessment of barrel racing, the following assumptions were made:

- Inexperienced horses move much slower, but become acclimatised over time.
- Horses that are experienced barrel racers have been acclimatised to the physical demands of barrel racing.
- Horses show no signs of injury following the race.
- Horses do not fall during the race.
- Bits do not cause injury to the horse's mouth nor are they used with such force that they snap in the horse's mouth.
- Whips are not used in a manner to cause distress or injury.
- Spurs do not leave marks on the hide of the horses.

3.2 SUMMARY OF THE FIVE DOMAINS BASED RATINGS

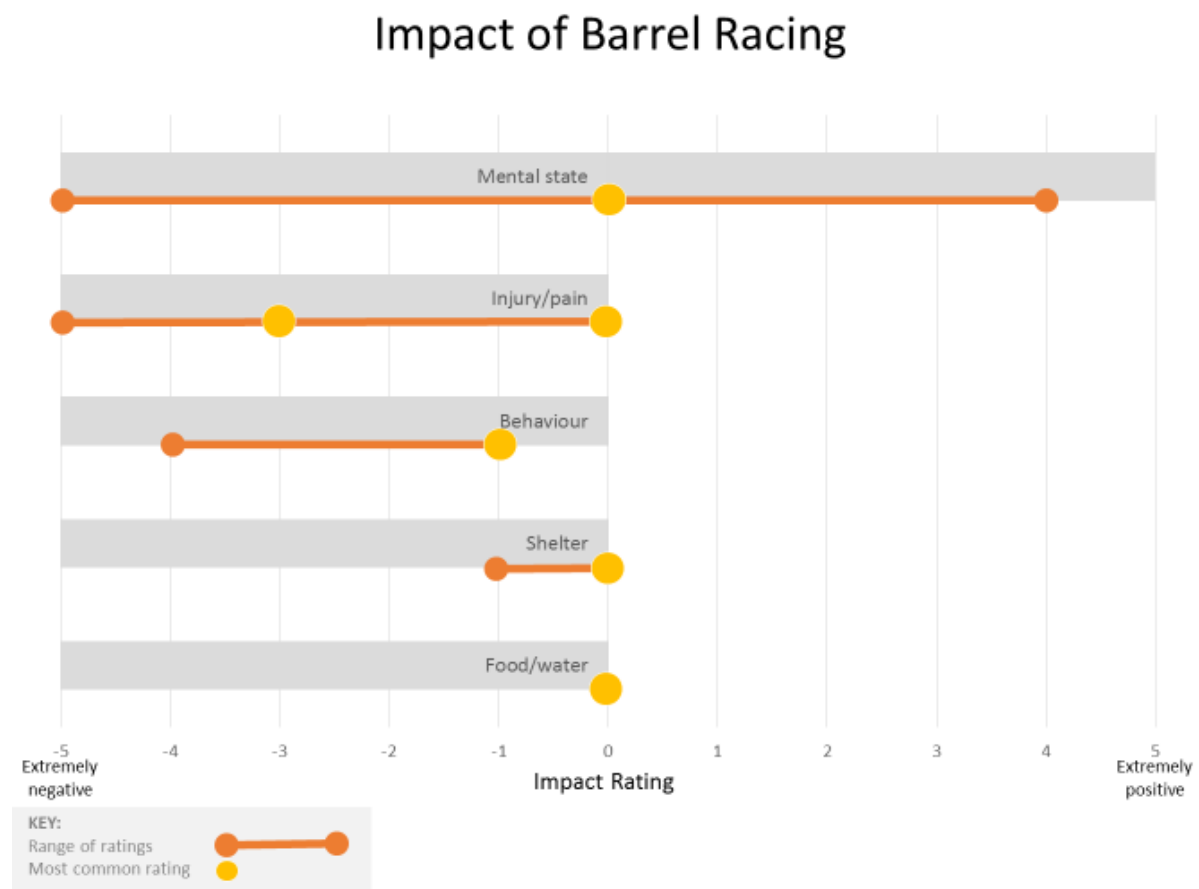


Figure 1: The panel's ratings of the impact of barrel racing

Note: There were two most common ratings for the item 'Injury/pain' and the two points reflect these ratings.

3.3 RATIONALE FOR DOMAIN RATINGS AND ADDITIONAL DISCUSSION

3.3.1 Food and Water

Due to the duration of the event itself, there are no significant restrictions to food or water.

3.3.2 Shelter

Due to the duration of the event itself, there are no significant impacts on the horse.

3.3.3 Injury / Pain

- Although the panel discussed that the event could cause pain, the risk of injury is thought to be low, and it is very unlikely that a catastrophic injury would occur during the event itself.

- The long term effects on the horses are less clear. In dog and horse racing, effects sustained after the event (e.g. noted three or four days following) are reported. It was agreed that barrel racing horses could be prone to developing chronic injuries later in life (e.g. arthritic joints).
- The use of severe bits can cause significant levels of pain, even if used as they were designed to (without snapping in the mouth). The excessive use of spurs and whips can cause pain that may last after the event. Spurs are also likely to cause bruising that may not be visible superficially. It was noted that not all riders use these instruments, leading to the question of their necessity.
- Variables such as the age of the horse, the fitness of the horse, the horse's competitive history, and the weight of the rider may contribute to the risk of chronic injury later in the horse's life.

3.3.4 Behaviour

- Horses used for barrel racing require significant pre-training, however, little is known of the training techniques. If a horse is positively motivated to participate in barrel racing, the event could provide a range of positive behavioural experiences, e.g. playing, bonding with the rider etc. On the contrary, the horse may experience the event negatively if it has been trained using negative reinforcement e.g. participating to avoid a negative input from the rider.

3.3.5 Mental State

- The event gives the opportunity to provide the horse with some positive experiences. For example, horses may experience a positive affective state from a rewarding interaction between the horse and rider, and also from completing the "task".
- The panel agreed that, whilst the event itself could provide positives to some individuals, it will still have a wide range of impacts on mental state due to a number of variables, including the individual horse's previous experience, and its personality etc. This variation is reflected in the range of scores recorded.
- How the animal is trained and how the horse responds to training would affect how the horse perceives the event on the day, e.g. the horse's affective state may depend on whether or not it had been trained with negative or positive reinforcement techniques.

3.4 OPTIONS

- When prioritised, barrel racing is the least area of concern.

- The panel discussed whether the use of whips and spurs is necessary for this event.
- There is a lack of knowledge around the training of the horses, and injury rates later in life. Gaining further insight into these areas would be beneficial.

3.5 RECOMMENDATIONS

- Discuss with industry the necessity of using curb bits, spurs and whips during this event, and to determine whether there are alternatives that could be used instead.
- Increase monitoring and record keeping of horses undergoing training for barrel racing.
- Commission research into injury rates in the post-event period, and of longer term consequences of injury (e.g. arthritic joints in ex-barrel racing horses).

4 Event: Rope and Tie

4.1 INTRODUCTION

In the rope and tie event, a calf is released from the chute which then triggers the release of the horse and rider after a short delay. The rider is required to rope the calf in the arena and bring it to a stop, dismount, put the roped calf on the ground and tie three of the calves' legs using a pigging string. While the rider is on the ground, a well-trained horse will effectively maintain the tension on the rope. The rider must then remount the horse and the calf must remain tied and immobilised for six seconds for the 'tie' to be considered successful. As soon as the time is recorded, the calf is released by the arena attendants. If a successful tie is not achieved within 30 seconds, the attempt is abandoned.

For the purposes of the impact assessment of the Rope & Tie event, the following assumptions were made:

- The calf is roped and does not escape.
- The rope and the reins are adjusted in a manner that will prevent the horse from dragging the calf.
- The calf is not dragged or thrown so that it rotates 180°, landing on the broad of its back (busted).
- Calves show no signs of rope burns.
- The calf exits the arena alert and uninjured.

4.2 SUMMARY OF DOMAIN RATINGS

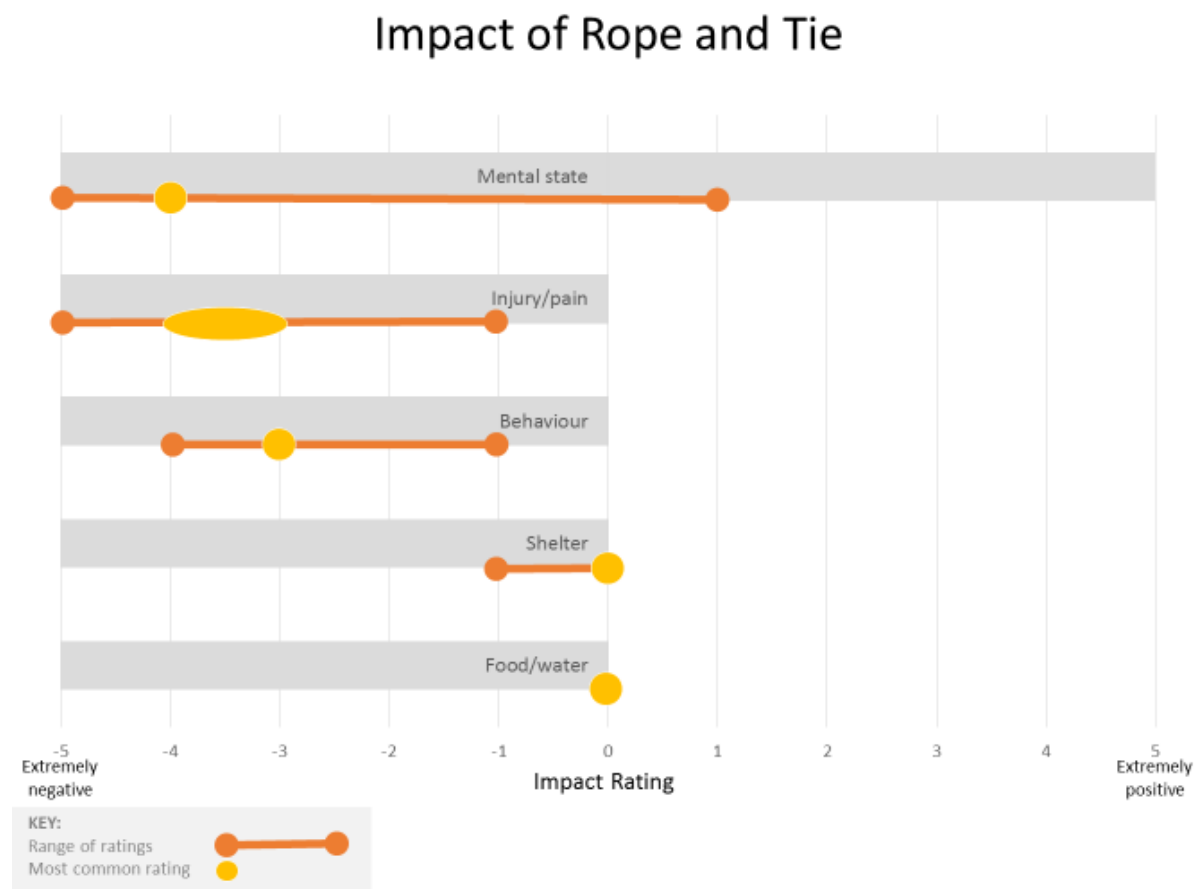


Figure 2: The panel's ratings of the impact of rope & tie.

Note: An oval has been used to show where there was more than one common response.

4.3 RATIONALE FOR DOMAIN RATINGS AND ADDITIONAL DISCUSSION

4.3.1 Food & Water

Due to the duration of the event itself, there are no significant restrictions to food or water.

4.3.2 Shelter

Due to the duration of the event itself, there are no significant impacts on the calf.

4.3.3 Injury/Pain

- There is an assumption that some pain persists after the event. High impact scores relate to young animals being used and those animals being brought to ground.

- Specific causes of potential pain/discomfort discussed were:
 - Lassoing calves around the neck and coming to a stop from a high speed.
 - The flank grab to throw calf onto the ground, the throw itself, and the immobilisation of the leg.
 - The pigging string that ties the legs was agreed to impose some level of discomfort.
 - The horse maintaining tension on the lasso post-capture.
- The above can lead to the potential for:
 - Significant inflammation around the neck.
 - Severe winding due to pressure on the trachea.
 - Musculoskeletal injuries (which may not be visible due to hair coat and particularly on dark skin).
 - Bruising.
- The panel agreed that neck pain and injury from lassoing was the key issue. Almost all agreed that neck pain is likely for every successfully roped calf, due to the sudden stop after a successful catch.
- Once caught, and if the horse takes up too much tension on the rope, which is tied in a slip knot around the neck, could cause further neck pain and further potential for injury.
- Unless acute injuries occur, only visible external injuries are picked up on the day. There was a suggestion that some animals receive extensive bruising, and some experience pain and soreness for a few days (likened to playing rugby but for a much shorter duration), especially when an incorrect technique is used.
- Anecdotally, there is no visual evidence of pain in the holding pens after each calf leaves the arena. Because it is difficult to physically see injuries immediately after events (peak inflammation is at around 48 hours following injury), there is a possibility of injuries becoming more obvious two or more days after the rodeo. There is currently limited science or observations on this.

4.3.4 Behaviour

- It was agreed that the rope and tie event offers no opportunities for the calf to express any positive behaviours.
- Calves used for rope and tie are less likely to be contract stock but it was agreed there would be varying degrees of experience in the event depending on how many rodeo events they had been used in. Initially it was thought that the more naïve animals

would be more sensitive to the event, however it was made aware to the panel that a recent study suggests that experienced calves still exhibit a heightened physiological stress response (Sinclair *et.al.* 2016).

4.3.5 Mental State

- There is the potential that calves experience significant negative mental states resulting from the physical impacts and behavioural restrictions of the event, particularly given their young age and inexperience overall. Some panel members felt that this negative mental state was not expected to persist, while others felt there was significant distress, potentially outlasting the event.
- Calves could experience social isolation in the chute and while running in the arena, and this could be stressful as calves are used to being with cohorts. It was suggested that there is about an average of two minutes when a calf is lined up to go into the chute, in addition to the time in the arena.

4.4 OPTIONS

- It was mentioned that some rodeos have modified the rope and tie event with breakaway roping, where the calf keeps running and is not stopped.
- The panel discussed an alternative event involving a ribbon on the tail of the calf that the competitors need to pull off.
- Another alternative of using a bungee rope to reduce the impact on the neck from being lassoed at speed.
- However, it was acknowledged that there is no current evidence to suggest the above alternatives reduce the negative impacts the event has on the animals.

4.5 RECOMMENDATIONS

- Recommend the implementation of methods and instruments that may have less of a negative impact upon the calves e.g. bungee ropes / breakaway ropes.
- Commission further research into investigating the type and severity of damage to the necks of the calves arising from this event. For example, the following approaches could be discussed for assessing damage post-event:

- Examining the bruising on the necks of light coloured calves (after shaving).
 - Inflammation profile studies.
 - Invasive post mortem studies.
- Depending on the results of the above research, develop modifications for, or, the replacement of the rope and tie event with alternatives that have a lesser impact on the welfare of the calves.

5 Event: Team Roping

5.1 INTRODUCTION

Team roping involves two ropers, the header and the heeler, both on horseback. The header will rope the steer around both horns, the head and one horn, or the neck, and the heeler then ropes the steer around the hind legs. For polled calves, head gear with false horns can be strapped on to their head. The time recorded is that after the steer is stopped and there is no slack in both the header and heeler's ropes. The rope is slackened immediately upon completion of the event.

For the purposes of the impact assessment of the Team Roping event, the following assumptions were made:

- Steers are roped, both by the header and heeler, and do not escape.
- Steers used are experienced in team roping events.
- Steers are roped both around the horns and the hind legs and do not escape.
- Horns of cattle suffer no damage resulting from the rope.

5.2 SUMMARY OF DOMAIN RATINGS

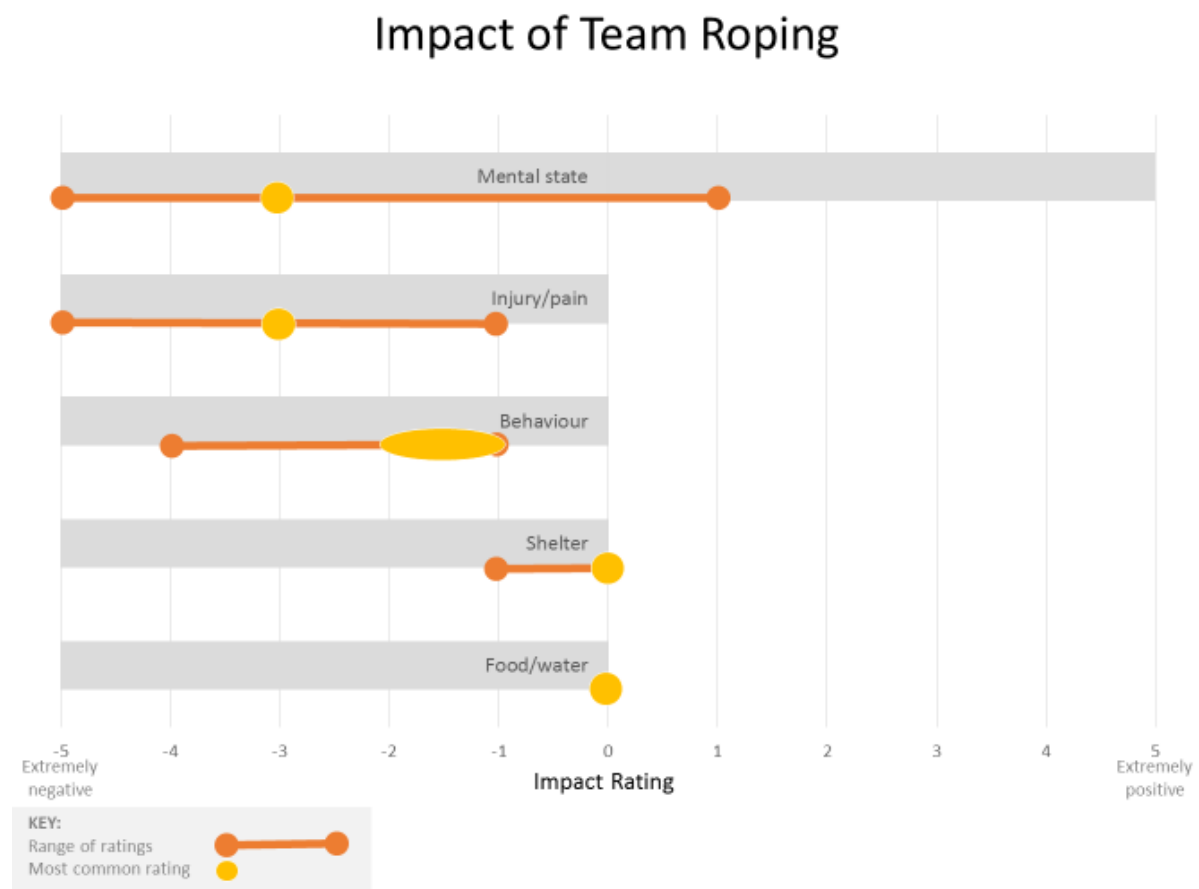


Figure 3: The panel's ratings of the impact of team roping.

Note: An oval has been used to show where there was more than one common response.

5.3 RATIONALE FOR DOMAIN RATINGS AND ADDITIONAL DISCUSSION

5.3.1 Food and Water

Due to the duration of the event itself, there are no significant restrictions to food or water.

5.3.2 Shelter

Due to the duration of the event itself, there are no significant impacts on the steer.

5.3.3 Injury/Pain

- Overall, the likelihood of pain and injury during the event is minimal as the animals used are frequently handled and

habitualised to the event. It was noted that anecdotally, there has been no visual evidence of pain in the holding pens after each calf leaves the arena. However, there is no evidence to determine if there is any muscle inflammation that persists after the event (e.g. 48+ hours post event).

- The panel discussed the difficulty of measuring the kinetic energy of bigger animals, but agreed that visually the deceleration is not as abrupt as what occurs in the rope and tie event. Some animals may receive some bruising, and some may experience pain and soreness for a few days after. During the event, the cowboys move with the steers, rather than pulling them to a stop (as in calf roping).
- The panel agreed that if injury was to occur, it would likely be partial tears to ligaments and hip luxation. There is also potential for rope burning to the ears and the back leg. Whilst ligament damage would cause lameness, this may not be visible during the rodeo event.
- Polled calves may be affected by discomfort felt from the head gear.

5.3.4 Behaviour

- It was agreed that some flight or fight response is expressed due to the animal being pursued, as well as it being stopped and restrained. However, roping cattle are well accustomed to the event to the point of learned evasion, i.e. often they stall and won't run. It is unknown whether this is a result of perceived helplessness or a learned response to frequent handling.
- Different calves will produce different coping mechanisms, active or passive, as seen in humans. Handlers assess the calves and potentially discontinue using those that don't perform well or become overly stressed.

5.3.5 Mental State

- There is likely no opportunity for positive experiences, but the degree of the negative experience may depend on whether the individual has been habituated or sensitised to the event. It was suggested that the event does not have as much a negative impact as the rope and tie event.
- Two riders may present a perception of more 'potential predators' in the ring on horseback, rather than just one rider as is used in the rope and tie event. This difference may heighten the negative impacts associated with a predator evasion response.
- Sensitised animals would experience a greater negative impact than those that are habituated and would likely not be picked for future rodeos.

5.4 OPTIONS

- The panel discussed whether breakaway ropes could replace the traditional ropes used in this event.

5.5 RECOMMENDATIONS

- Increase monitoring and record keeping of animals undergoing training for team roping.
- Commission research into alternative equipment that would aim to reduce the impact that the event has on the animal, e.g. breakaway ropes.

6 Event: Calf Riding

6.1 INTRODUCTION

The calf riding event is designed to enable younger and lighter competitors to participate in rodeo. The weight restrictions on the riders are designed to ensure that the animals involved in these events are not placed under undue stress, but animals also need to be fit, healthy and have no defects. The rider must remain mounted for 8 seconds to record a score.

For the purposes of the impact assessment of the calf riding event, the following assumptions were made:

- Calves and riders meet weight requirements stated in the code.
- The calf does not buckle under the weight of the rider at any point.
- The calf is immediately removed from the arena following the completion of the ride using the least amount of force possible.
- The calf exits the arena alert and uninjured.

6.2 SUMMARY OF DOMAIN RATINGS

Impact of Calf Riding

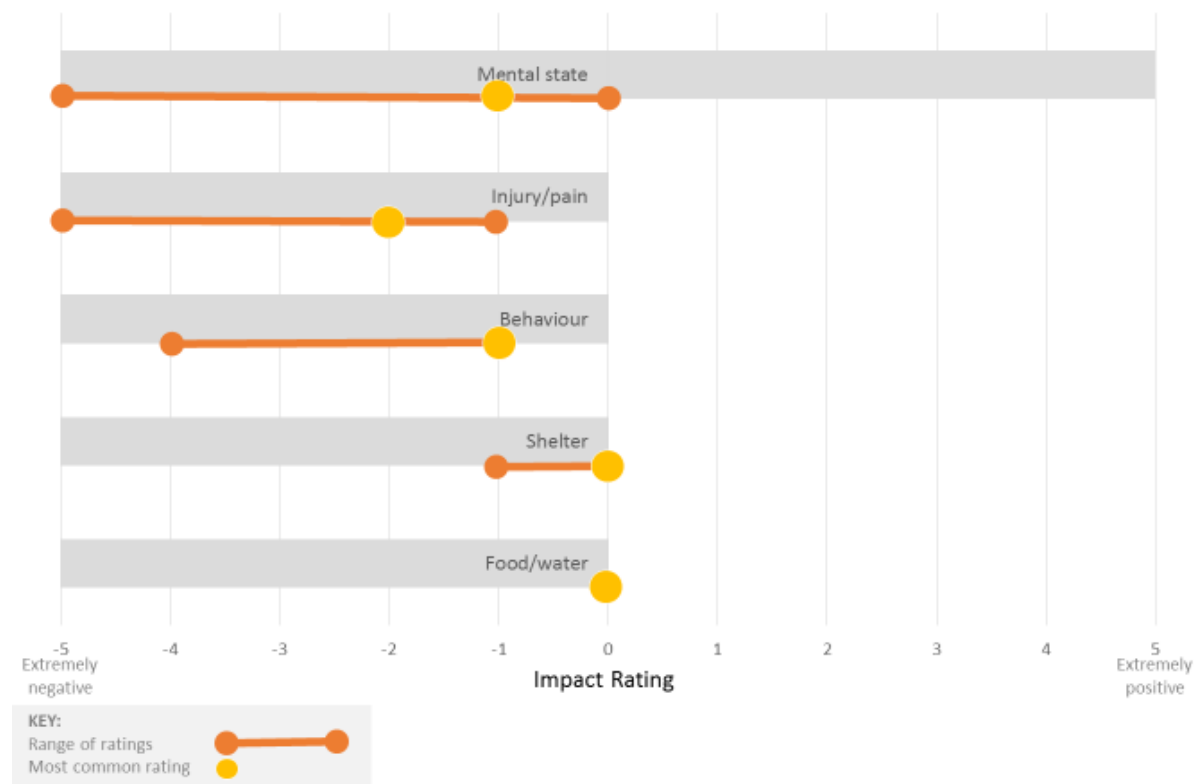


Figure 4: The panel's ratings of the impact of calf riding.

6.3 RATIONALE FOR DOMAIN RATINGS AND ADDITIONAL DISCUSSION

6.3.1 Food and Water

Due to the duration of the event itself, there are no significant restrictions to food or water.

6.3.2 Shelter

Due to the duration of the event itself, there are no significant impacts on the calf.

6.3.3 Behaviour

While there is a variability in responses, the calves generally exhibit a short-lived flight response, and the presence of the rider may be perceived as a predator.

6.3.4 Injury & Pain

- There is likely to be discomfort or irritation from the flank strap (if used), and the chest rope. It was discussed that if a flank strap was used incorrectly (e.g. strapped too tight), it would immobilise the calf.
- The presence of the rider may inflict some discomfort, and there may be potential for musculoskeletal injuries if the calf stumbles.
- There may be moderate pain under these standard conditions, but it is not expected to persist after the event. Anecdotally, there has been no visual evidence of pain in the holding pens after each calf leaves the arena. However, there is no evidence available in New Zealand to determine if any muscle inflammation persists after the event.

6.3.5 Mental State

- The impact scores reflected in the graph relate to young, naïve animals being used for this event and thus the potential for the animal to undergo a significant negative experiences. However, this negative experience is not expected to persist at termination of the event.

6.4 OPTIONS

- Because of the relatively low risk and short duration of any impact, the discussions regarding options did not go into much depth.
- It was noted that the New Zealand Rodeo Cowboys Association (NZRCA) have already put a voluntary ban on the use of spurs in this event.

6.5 RECOMMENDATIONS

- Increase monitoring and record keeping of the animals used, including reporting injury rates 48 hours post-event.

7 Event: Bull and Steer Riding

7.1 INTRODUCTION

This event involves a bull or steer being released into the arena where it will buck to dislodge the rider from its back. The animal is fitted with a front ‘bull rope’ which wraps around its body and which the rider holds onto to maintain his seating. This bull rope needs to be a quick release type of rope that will fall away from the animal as soon as the rider is displaced or dismounts. The animal is also fitted with a flank strap to encourage bucking.

Both the rider’s actions during the ride and the bull’s bucking are scored. Bulls which do not buck effectively are retired from competition.

In order to record a score, the rider must stay mounted for 8 seconds.

There are three different divisions of bull and steer riding:

1. Steer rides – Most belong to a farmer local to the event and are usually naïve.
2. 2nd Division Bulls – Usually naïve.
3. Open bull ride – Contract bulls that are purpose-bred, trained and habituated for rodeos.

For the purposes of the impact assessment of the bull and steer riding event, the following assumptions were made:

- Bulls used in the open bull division are experienced in riding events and have had prior exposure to the equipment used.
- Steers and second division bulls are relatively naïve to this event.
- The bull rope quickly falls away once the rider is thrown or dismounts.
- Bulls and steers are able to move freely whilst in the arena.
- Skin is not wrinkled as a result of the flank strap being too tight.
- Bulls and steers are directed calmly and efficiently from the arena following the completion of the ride.

7.2 SUMMARY OF DOMAIN RATINGS

The following table shows separate ‘most common rating’ score for the open bull riding, 2nd division bull riding, and steer riding. The range of ratings (indicated by the orange lines) were the same for all three divisions.

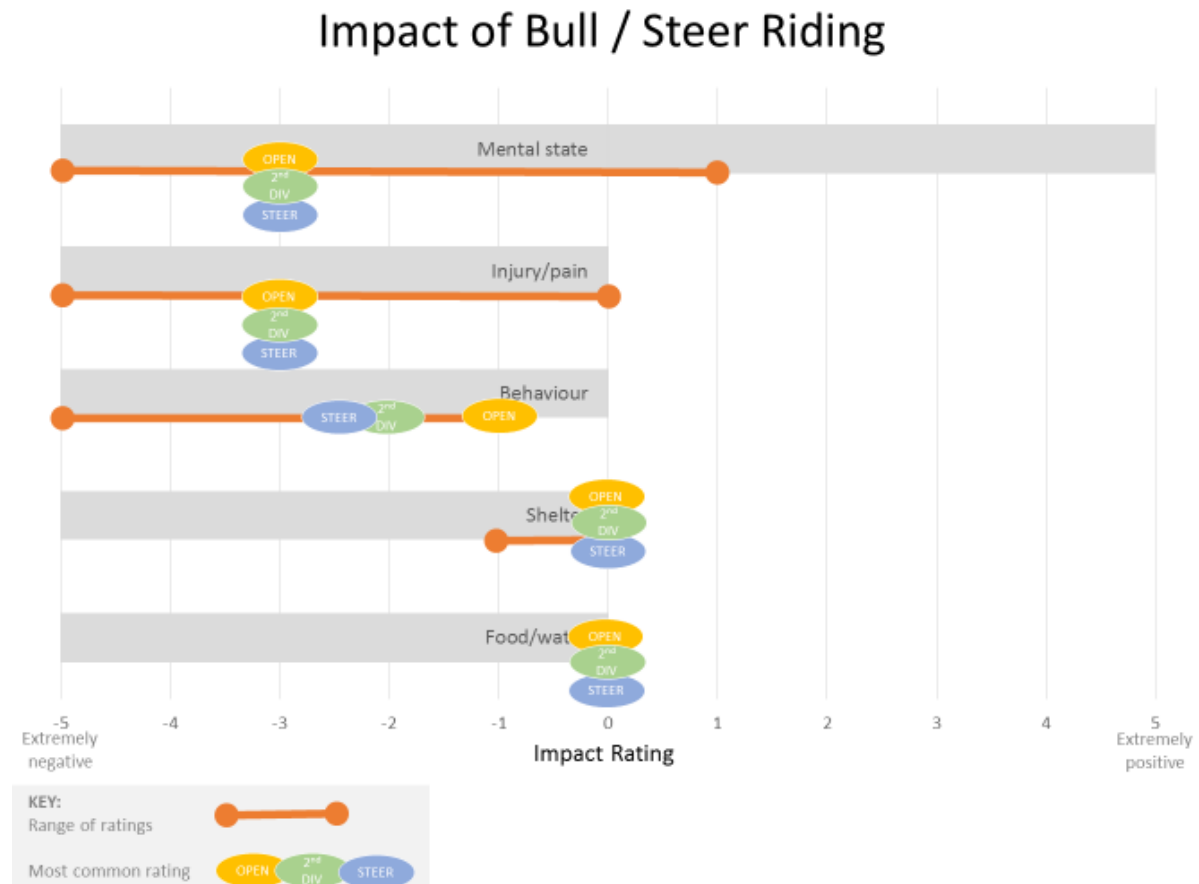


Figure 5: The panel's ratings of the impact of bull/steer riding.

7.3 RATIONALE FOR DOMAIN RATINGS AND ADDITIONAL DISCUSSION

7.3.1 Food and Water

Due to the duration of the event itself, there are no significant restrictions to food or water.

7.3.2 Shelter

Due to the duration of the event itself, there are no significant impacts on the bulls and steers.

7.3.3 Injury/Pain

- It was suggested that there would be minor pain under standard conditions, but not expected to persist after the event. There is

likely to be discomfort or irritation from the flank strap and the chest rope. It was discussed that if the flank straps are used incorrectly (e.g. strapped too tight), it would immobilise the animal.

- Very occasionally, bulls suffer back injuries/fractures/luxation's that require euthanasia. It is thought that the frequency of these injuries is low.
- It was suggested that the 2nd division animals are at more risk for back injuries as they are younger, produce more testosterone and can tend to arc more when they buck.
- A recent study was discussed that found that bucking bulls are more likely to develop horn and sinus disorders, and musculoskeletal issues (Smith *et.al.* 2017).

7.3.4 Behaviour

- Open bulls are usually contract animals that know their job, with some members of the panel suggesting that they would have the opportunity to express a number of positive behaviours during the event.
- However, the 2nd division bulls and steers are less accustomed; often being younger, inexperienced and locally supplied. These naïve animals may not enjoy the impacts of the event and may perceive it as a threat and may exhibit a heightened flight response.

7.3.5 Mental State

- There is the possibility that some opportunity for positive mental experiences exist for the open bulls with the potential for them to experience enjoyment and excitement. There were anecdotes discussed of contract bulls becoming excited when the “rodeo truck” arrived at the farm, suggesting that these bulls are willing to participate. However, some questions were raised about whether this was trained behaviour, positive motivation, or learned helplessness.
- The panel discussed animals that become sensitised to the event, and picked for future events, would experience an increasingly negative impact upon their mental state each time they are used.
- For 2nd division bulls and steers, being more naïve, it is thought that there is an increased likelihood of negative experiences as they are less habituated and may be more fearful.
- The maturity of animal, and amount of previous experience, will influence how animals react to a rodeo mentally. Younger

animals seem more upset in the chute but bulls often don't appear as stressed as the animals in other events. It was suggested that, due to the weight and size advantage the bulls have over the person riding them, they may not perceive the rider negatively. They appear to 'do the job and walk off'.

7.4 OPTIONS

- The panel discussed that there is a lack of knowledge around the training of the animals, and the amount of times they are used for rodeos. Also, a lack of insight into post-event injury rates, and what happens to the animals once they retire from rodeos.

7.5 RECOMMENDATIONS

- Increase monitoring and record keeping of the animals being trained, including the number of animals involved, and any animal injuries sustained.
- Monitor and report injury rates 48 hours post-event.

8 Event: Saddle and Bareback Bronc Riding

8.1 INTRODUCTION

This event involves releasing a horse from a chute into the arena, where it will buck in an attempt to dislodge the rider from its back. There are two types of event: saddle bronc riding where the horse is fitted with a saddle; and bareback bronc riding where the horse is fitted with bareback rigging only. In both events, the horse will be fitted with a flank strap that runs around the body of the horse just in front of the back legs, and which will encourage the horse to buck.

Broncs are generally contract animals and are therefore trained/habituated. Contract broncs are selected, and generally have Percheron and/or other heavy horse blood lines. The majority of animals are naturally inclined to buck. Animals offered to rodeo that are inclined to buck but are also difficult to handle are likely to be rejected as they are not suitable. The majority of bucking horses are female or gelded, given the risks associated with handling stallions for this event.

For the purposes of the impact assessment of the Bronc Riding event, the pre-survey focussed on bareback riding and the following assumptions were made:

- Horses used are experienced in the riding events and have had prior exposure to the equipment used.
- Horses are able to move freely whilst in the arena.
- Horses are directed from the arena calmly and efficiently following the completion of the ride.
- Horses are fit and sustain no injuries as a result of being ridden in the arena.

8.2 SUMMARY OF DOMAIN RATINGS

Impact of Bronc Riding

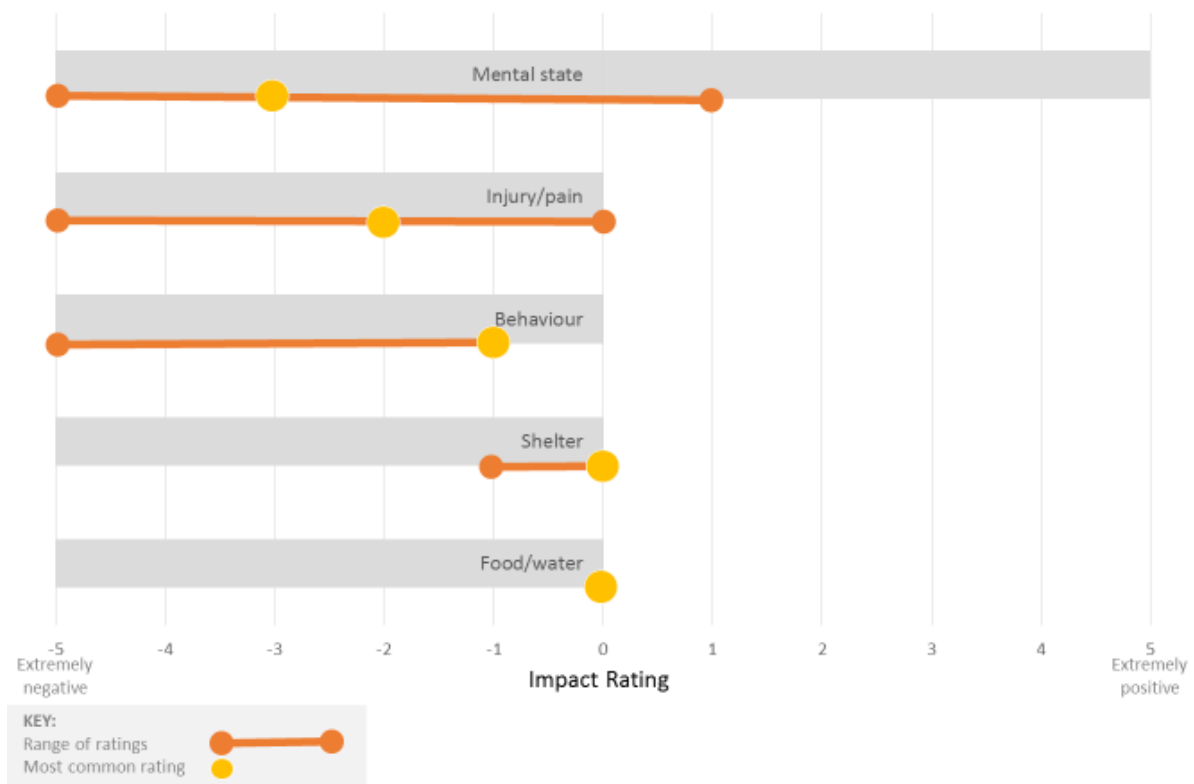


Figure 6: The panel's ratings of the impact of bronc riding.

8.3 RATIONALE FOR DOMAIN RATINGS AND ADDITIONAL DISCUSSION

8.3.1 Food and Water

Due to the short duration of the event there are no significant restrictions to food or water.

8.3.2 Shelter

Due to the short duration of the event there are no significant impacts on the horse.

8.3.3 Injury/Pain

- There may be some discomfort to the horse from the rider and due to the presence of a flank strap. However, the majority of horses are well accustomed to the event and the equipment involved.

- There may be minor pain under normal conditions, which is not expected to persist after event. Horses are thinner skinned than bulls so there is a heightened potential for injury/pain to occur from the spurring action of the cowboy, especially during ‘marking out’ that may cause subcutaneous soft tissue injuries.
- It was suggested that around 3-5% horses get minor injuries, such as skin abrasions, sufficient to rub hair off around the head or flank. The rest have no visible injuries from going through the arena.
- Environmental conditions may influence the amount of pain experienced due to slipping.

8.3.4 Behaviour

- Behaviours exhibited can include a ‘carousel’ state (i.e. repeated circling in a confined space) in the chute before being released into the arena, yarding, blowing/panting, agitated behaviour, etc. None of these are normal behaviours, unless there is a stimulus to induce them (i.e. being confined in a chute, noxious stimuli, or the perception of a predator).

8.3.5 Mental State

- The impact on mental state will be variable depending on the level of habituation or sensitisation.
- Horses are more likely to be negatively impacted than cattle as they are more flighty; for example, horses continue to buck until the flank strap is removed, compared to bulls who tend to stop bucking when the rider is displaced or dismounts.
- There would be negative mental experiences associated with the painful and/or irritable stimuli associated with the event (e.g. spurs and flank straps).

8.4 OPTIONS

- As with bull and steer riding, there is a lack of knowledge around the training of the animals, and the amount of times they are used for rodeos. Also, a lack of insight into post-event injury rates, and what happens to the animals once they retire from rodeos.
- The panel also raised the question of the necessity of spurs in this event.

8.5 RECOMMENDATIONS

- Increase monitoring and record keeping of training of these animals, including the number of animals involved, and injuries sustained.
- Monitor and report injury rates 48 hours post-event.
- Discuss the necessity of spurs and whether alternative equipment can be used.

9 Event: Steer Wrestling

9.1 INTRODUCTION

In the steer wrestling event, an animal is released from a chute, and after a short delay, is followed by two riders. One rider acts as a ‘hazer’ to ensure that the animal runs in a straight line. The other rider is the catcher and drops from the horse to the steer and wrestles the steer to the ground. This is usually done by using the horns to twist the head and neck of the animal, to encourage it to dip on its front legs and roll to the ground.

A time is recorded when the steer has all four hooves off the ground and legs pointing out straight. A maximum of 30 seconds is allowed for the event.

For the purposes of the impact assessment of the Steer Wrestling event, the following assumptions were made:

- The steer is caught and does not escape.
- Steers are experienced in the wrestling event.
- The steer is thrown using the recognised technique.
- The steer leaves the arena alert and uninjured.

9.2 SUMMARY OF DOMAIN RATINGS

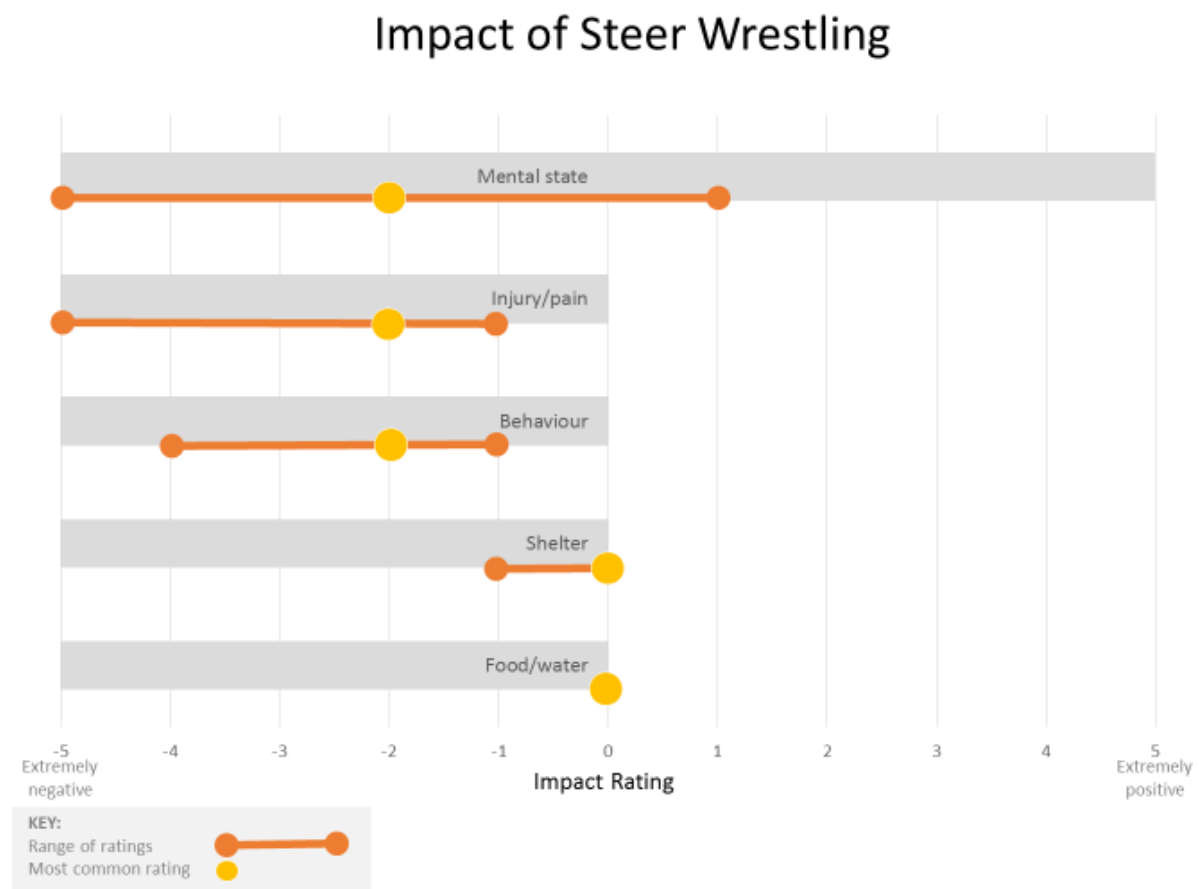


Figure 7: The panel's ratings of the impact of steer wrestling.

9.3 RATIONALE FOR DOMAIN RATINGS AND ADDITIONAL DISCUSSION

9.3.1 Food and Water

The event itself would pose no significant restrictions to food or water, hence the rating above. However, it was brought to the attention of the panel that steers throughout the rodeo season are purposefully kept at a lower body condition, to increase the probability that the cowboy can lift them during the event. This could lead to negative impacts (e.g. hunger, malnutrition malaise) on the animal during the event itself.

9.3.2 Shelter

Due to the short duration of the event, there are no significant impacts on the steer.

9.3.3 Injury & Pain

- It is likely there is at least moderate pain experienced from the ‘throwing’ action imposed by the contestant when the neck twist is applied using the horns and chin as leverage. It is assumed that some bruising would persist after the event.
- Musculoskeletal injuries are usually not seen on the day. However, if it was to occur, likely injuries would be muscle strains and ligament or tendon damage incurred when the animal is brought to ground.
- Occurrences of broken horns (generally split lengthways from when the horns hit the side(s) of the race or the ground) are rare.
- Visual evidence of pain in the holding pens after each steer leaves the arena has not been observed. However, it was noted that there is no evidence to determine the incidence of any injury, such as muscle inflammation, that persists after the event.

9.3.4 Behaviour

- It was agreed that the events offers no opportunities for positive behaviours. The animals exhibit a flight response from being pursued and restrained.
- Chronic under-nutrition (mentioned above) can lead to inactivity.

9.3.5 Mental State

- There is potential for significant negative experiences resulting from the physical nature of the event.
- It was stated that these animals can be observed to be lacking in fight and vigour, especially for animals used at multiple rodeo events and towards the end of a rodeo season. Some of the panel members mentioned that these animals look exhausted.
- It is observed that the steers are likely to be less willing to enter the chute at the start of the event. This is thought to be because they are experienced animals and know what is going to happen.
- Some steers show learned aversion as they stop as soon as they enter the arena or run at speed to the fence line.

9.4 OPTIONS

- The panel discussed gaining insight into the training methods, post-event injuries and number of times the steers are used in a season.

9.5 RECOMMENDATIONS

- Obtain additional information to support or refute anecdotal evidence that steers are purposefully kept at low body condition for the purpose of competing in this event.
- Commission further research into the impact of experiences in the rodeo arena – particularly for, but not limited to, inflammation profile studies on the steers after the event, including 48 hours after the event when inflammation arising from injury is likely to be greatest.
- Increased monitoring and record keeping of the animals being trained and used over a season, including the number of animals involved, and any animal injuries sustained.

10 Additional Matters

10.1 INTRODUCTION

The following issues were raised during the course of the workshop, and are either related to issues outside of the specific rodeo events, or are general and extend across all events.

Each rodeo is required to have a veterinarian and an animal welfare officer (AWO) present. Both of these examine the animals prior to the day's events, and both have the authority to exclude individual animals on the day for welfare reasons (usually a pre-existing injury or poor condition). Both the veterinarian and the AWO need to agree that an animal is fit to partake in an event, for the animal to be used. If either the veterinarian or the AWO wish to exclude an animal from an event as they believe that it is not fit to be used, then the animal will be withdrawn from the event.

10.2 KEY ISSUES

- There is considerable variability across rodeos due to:
 - Inconsistent veterinarian practices at rodeo. The panel discussed that while there is a checklist, there are no consistent standards, and administration is variable. There are no known professional development or forums with other rodeo veterinarians.
 - Inconsistent practices between rodeos appointed Animal Welfare Officers and stockmen. As with veterinarians, there is little / no known professional development to raise standards in the rodeo setting.
 - Challenges with the SPCA/MPI inspectorates and inconsistencies with how they work at rodeos, and the acknowledgment that one person can't be at both the entry and exit of the arena.
- The panel discussed a number of challenges in which make it difficult to score a single animal welfare impact of an event:
 - Rodeos around the country are set up differently and could affect the interpretation. For example, the arena layout, arena floor composition, how the chutes are constructed, how visible the crowd is to the animals differ.
 - Individual animal responses to physical, physiological and behavioural stimuli are neither consistent nor

homogenous. The responses may vary due to a multitude of factors, for example, temperature, humidity, satiation, stress, distance transported, individual variation, injuries, habituation, sensitisation and social grouping are significant variables. This report focuses more on what ‘normally’ happens, but also identifies issues that can lead to additional negative (and sometimes positive) impacts.

- The behaviours of many animals during rodeo events may be described as normal behaviours that are being displayed in the context of the rodeo (e.g. bucking is a normal response to the stimulus of a flank rope). However, the presence of some rodeo-related stimuli (e.g. the flank ropes themselves) are not ‘normal’ for the animal in a context outside a rodeo event.
- For some roughstock animals, the bucking events may in fact be triggering a natural response to a weight being placed on their backs. For others, bucking may be a natural behaviour (i.e. the animal is naturally aggressive, unmanageable, and/or unreasonably dangerous). In some animals, bucking may be a response that indicates that these animals are permanently psychologically affected by previous experience, which may or may not be related to rodeo.
- Rodeo statistics (Appendix B) are for visible injuries at the event. The degree of assessing the physical impact is based on veterinary observations and (some) inspections at the time, and (where relevant) on the second day of the rodeo. However, as mentioned earlier in this report, given that most muscle damage is maximised 48 hours after the impact, the ultimate physical impact of events are not necessarily known.
- The panel discussed the difficulties of using cortisol alone to measure specific causes of stress in animals.
- Injuries can arise from unexpected chance outside of the event itself, such as:
 - an agitated bull that won’t leave the arena,
 - an animal throwing itself off its feet, slips or trips and hitting the fence, or going down in a chute,
 - abrasions caused during transport,
 - injuries from other animals such as kicks or horn gauging.
- Although out of scope of the rodeo event impact assessment, the question of relative impact was raised. Ultimately, all domesticated animals work for humans in some degree and they

all provide something to humans be it dairy products, meat, fibre, transport, and/or companionship. The question proposed was do rodeo animals, in comparison, have a more difficult job?

10.3 GENERAL RECOMMENDATIONS

- Propose the formation of a forum in which rodeo event organisers, rodeo veterinarians and rodeo appointed animal welfare officers can meet periodically with, MPI and SPCA Animal Welfare Inspectors to provide professional development and improve practices and consistency. This recommendation follows the development of a similar group with the introduction of the Racing Integrity Unit.
- Recommend the monitoring and record keeping of all animals used during training activities for rodeo events.
- Recommend more intensive monitoring and record keeping of all animals used in rodeo events, including after retirement from rodeo.
- Recommend research to assess the physical impact of an event on animals, including assessment of physiological markers of injury, at an interval of 48 to 72 hours following completion of the event.

11 References

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12 Appendices

12.1.1 Appendix A

Workshop pre-survey: Assessment of the impact of rodeo events on animal welfare

The welfare of animals participating in New Zealand rodeos is receiving a large amount of societal attention. This survey is part of a structured assessment that focuses on the animal-welfare outcomes associated with rodeo events. The focus is on appraising welfare outcomes through a scientific lens—the ethical issues surrounding rodeos are not being examined as part of this initial assessment.

The assessment is structured around the seven rodeo events outlined in the *2014 Code of Welfare: Rodeos* (<https://www.mpi.govt.nz/.../4810-rodeo-animal-welfare-code-of-welfare-2014>). These are: (1) bronc riding, (2) bull and steer riding, (3) rope and tie, (4) team roping, (5) steer wrestling, (6) calf riding, and (7) barrel racing.

The assessment procedure consists of two stages. The first stage involves each participant filling in a structured survey (see below). The second stage involves a one-day workshop in Wellington on 6 April, where participants will discuss the (anonymised) answers and work to identify key lessons from the assessment. A key outcome from this workshop will be discussing how each rodeo event affects an animal's mental state. The welfare of the animal outside of each specific event will also be considered there.

It is convenient to base this analysis on the five domains of animal welfare. These may be described concisely as:

1. Sufficient food and water.
2. Adequate shelter.
3. Opportunity to display normal behaviour.
4. Protection from injury, pain, and disease.
5. Avoidance of mental suffering, and opportunity to experience positive wellbeing.

If these conditions are not met, then animal welfare is likely to be compromised.

We are using this framework to help understand what impact rodeo events have on the animals and are asking you to tell us what you think. *The first four aspects are covered in the survey below.* The fifth aspect—conditions that maintain or improve an animal’s mental state—will be discussed at length in workshop on April 6.

In the table on the next page, based on your knowledge and experience, please assign a grade to reflect how each of the conditions is affected during the event itself. Possible grades are defined along a six-point scale:

0. *No impact*: No effect on the animal.
1. *Minor impact*: Minor effects that do not persist after event completion.
2. *Mild impact*: Moderate to severe effects that do not persist after event completion.
3. *Moderate impact*: Minor effects that persist after event completion; these may be temporary or permanent.
4. *Severe impact*: Moderate to severe effects that persist after event completion, but are temporary.
5. *Extreme impact*: Moderate to severe effects that are permanent.

An example is provided on the second row of the table on the next page.

A key assumption for the assessment is that the minimum standards set for each event in the *2014 Code of Welfare: Rodeos* are followed. Moreover, it is presumed that competitors are of average competency and size. It is assumed that an animal has previous experience within the event, in line with standard practice. (The welfare outcomes for inexperienced animals will be considered in the workshop on April 6).

| Event | Food/Water | Shelter | Behaviour | Injury/Pain | Comments/Rationale |
|----------------------|------------|---------|-----------|-------------|--|
| Example | 0 | 0 | 1 | 2 | This example displays an outcome that the given event has no predicted impact on provision of food/water or shelter. However, it has a minor impact on behaviour and imparts mild pain/injury. |
| 1. Bronc riding | | | | | |
| 2. Bull/steer riding | | | | | |
| 3. Rope and tie | | | | | |
| 4. Team roping | | | | | |
| 5. Steer wrestling | | | | | |
| 6. Calf riding | | | | | |
| 7. Barrel racing | | | | | |

12.1.2 Appendix B

Summary of data provided by the NZRCA

The NZRCA provided two spreadsheets of data from their 2017/18 season detailing events of each of 23 rodeos (2017/10 season) including the mid-Northern rodeo, a two day event. This data has been collated and is presented below. Some rodeo events do not appear to be reported in this table, e.g. there is no detail for two rodeos for calf rope-and-tie data were reported (Rerewhakaaitu and Waikato).

Data from the Vet Report

Table 1 provides a summary of the Vet Report spreadsheet. Caution should be applied in its interpretation because it was presented in such a way that contract animals used in several rodeos could not be differentiated. Figures for number of animals supplied are therefore inflated and it is not possible to determine how many animals attended multiple rodeos or undertook more than one run in a single rodeo. It is also uncertain how many steers and calves were used for both riding and catching events. Data for total number of runs however should be accurate.

Four rodeos did not provide a calf riding event, and nine did not provide steer wrestling. Steer riding (junior and rookie) would appear to be the most popular event with 1064 runs total. Across all rodeos for calf rope-and-tie, 624 individual runs were held with a success rate of 48% and 25 attempts that were flagged or disqualified. Further detail on a selection of those events is provided below.

Success rate for steer wrestling was 21% and for team roping was 17%, with flag/DQ rates of 0.25% and 0.1% respectively.

Saddle and bareback bronc riding are not differentiated and data are given for divisions – open and second. There is no data provided for barrel-racing.

| | No. Supplied | Total No. Runs | Total No. Catches | No. DQ or flagged | No. Rejected before Rodeo | No. Minor Injuries during event | No. Significant Injuries during event |
|-------------------|--------------|----------------|-------------------|-------------------|---------------------------|---------------------------------|---------------------------------------|
| Calf rope and tie | 515 | 624 | 195 | 25 | 0 | 0 | 0 |
| Steer wrestling | 319 | 426 | 90 | 1 | 4 | 2 | 0 |
| Team roping | 447 | 939 | 156 | 9 | 1 | 0 | 0 |
| Calf riding | 257 | 116 | | | 1 | 0 | 0 |
| Junior steer ride | 292 | 252 | | | 1 | 1 | 0 |
| Rookie steer ride | 891 | 812 | | | 11 | 4 | 0 |
| Bull ride | 532 | 492 | | | 5 | 4 | 0 |
| Bronc open | 532 | 396 | | | 14 | 6 | 0 |
| Bronc 2nd Div | 316 | 214 | | | 6 | 2 | 0 |

Table 1: Summary data from NZRCA provided for 2017/18 rodeo season

Animal rejection rate was highest for broncs (20 total), following by steers (17 total), bulls (4 total) and calves (one). Overall rejection rates cannot be calculated however because the actual total of individuals provided is uncertain, given the likelihood that some animals could be run in different events, and contracted animals will have attended multiple rodeos.

Across this season, NZRCA reported no significant injuries occurred at these 23 rodeos.

Minor injuries (n=19) occurred in broncs (n=8; 1% of runs), bull ride (n=4; 0.8% of runs), steer rides (n=5; 0.5% of runs) and steer wrestling (n=2; 0.5% runs).

Calf rope and tie

The second spreadsheet provided by NZRCA provided more detailed information about six mobs of calves used at 14 rodeos (2017/18 season). This information provided live weights and also allowed the various re-use of calves to be examined.

A total of 81 calves were provided, with groups of 17 and 18 each attending four rodeos, one group of 14 attending three rodeos, and three groups attending one rodeo each.

- 1) Rerewhakaaitu (Open and 2nd division; date not provided), Gisborne (27 Dec 2017), Opotiki (28 Dec 2017), Taupo (29 Dec 2017): n=17 calves provided; live-weights: start 108 kg (103-114kg); end (8 days later) 112 kg (106-119kg)
- 2) Wairoa (20 Jan 2018): n=19 calves provided ; live-weights: start 113 kg (105-117kg); end (4 days later) 118 kg (115-123kg)
- 3) Waikato : n=13 calves provided; live-weights: 124 kg (118-129kg)
- 4) Lawrence (27 Jan 2018), Outram (6 Feb 2018), Maitara (10 Feb 2018): n=14 calves provided; live-weights: 111kg (104-119 kg)
- 5) Millers Flat (26 Dec 2017), Maniatoto (27 Dec 2017), Omarama (28 Dec 2017), Canterbury (26 Jan 2018): 18 calves provided of which two were never used (n=16); live-weights: 108 kg (102-120kg);
- 6) Warkworth (1 Jan 2018): n=11 calves provided; no live-weight data provided

For the three groups (n=47) used at multiple rodeos, across all these events, four calves had six runs, ten had five runs, 22 had four runs, three calves had three runs, five calves ran twice and three ran only once.

In total there were 243 calf rope and tie events using 189 individual calves. For 53 events, calves were on their second run for the day, and one calf was run three times (Outram rodeo). The results of these events were 113 (46%) missed, 111 (46%) successfully tied, and 19 (8%) reported as “flagged”. This was generally for going over time while tying, or an unsuccessful tie, with two each identified as “mishandling” or “disqualified” (1%).