

## The management of horses during fireworks in New Zealand

The negative effects of fireworks on companion animals have been reported, but little has been documented on the impact on horses. Horse anxiety was commonly associated with fireworks, and 26% of owners reported horses injuries as a result of fireworks. Many management strategies were seen as ineffective. The majority of horse owners were in favour of a ban on the sale of fireworks for private use.

Within popular press there has been much coverage of the negative effects linked with firework and horses. The effect of fireworks has been documented in companion animals globally, but no studies have investigated the negative effects, or otherwise, of fireworks on horses.

This lack of scientific literature on the topic may be due to the intensive management of horses within stables and therefore limited exposure to fireworks. The management of horses, even high level competition horses, in New Zealand is unique in that the temperate climate permits management of the horse at pasture year round. This pastoral based management system may allow greater exposure of fireworks and may be a reason for the perception that fireworks represents a hazard for horses at pasture.

Horses are generally considered to be highly unpredictable flight animals shown to be reactive to loud noises and flashing lights. Fear is a reaction to perceived danger and is characterized by physiological and behavioural changes that heighten the individual's ability to deal with that danger. Fear based behaviours in horses are numerous and include running, sweating and trembling. Flight responses are particularly dangerous, with the potential to result in severe accidents of the horse and rider/handler.

At present, the lack of data on management strategies employed by horse owners, the perceived effectiveness of such changes and injuries encountered limits debate on the private use of fireworks and the consequences to horses. The aim of this study was to document horse responses and current management strategies to fireworks via an online survey.

This study aimed to document horse responses and current management strategies to fireworks via an online survey. Of the total number of horses, 39% were rated as "anxious", 40% "very anxious" and only 21% rated as "not anxious" around fireworks. Running (82%) was the most common behaviour reported. Possibly as a consequence of the high frequency of running, 35% of respondents reported having horses break through fences in response to fireworks and a quarter (26%) reported that their horse(s) had received injuries associated with fireworks. The most common management strategy was moving their horse(s) to a paddock away from the fireworks (77%) and to stable/yard them (55%). However, approximately 30% reported these management strategies to be ineffective. Of the survey participants, 90% were against the sale of fireworks for private use.

This study is the first to address the issue of horses and fireworks in New Zealand. The article provides a framework for discussing and reviewing legislation in relation to firework use and the risks posed or perceived by horse owners during Guy Fawkes Day firework displays.

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