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## Causes of foal death in early life in New Zealand

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**Background:** Late-term abortions and perinatal deaths result in major losses to the equine industry; however, there are few studies reporting the causes of such losses in New Zealand. Most published work on late-term abortions and perinatal death originates in the Northern Hemisphere. In the United Kingdom, the majority of losses are attributed to umbilical cord lesions, dystocia, placentitis and unknown causes (Smith et al, 2003), while recent data from the United States attributed most losses to infectious agents, musculoskeletal problems, and gastrointestinal problems (Sturgill & Carter, 2009).

**Objective:** The objective of our study was to identify the major causes of late abortions and perinatal losses in New Zealand.

**Methods:** Data were collected from pathological investigations on late foal and foals that died within the first month of life from the Manawatu and Waikato regions during the 2007 and 2008 foaling seasons, and from the Manawatu region during the 2009 and 2010 foaling seasons. Foals were classified as stillborn (born dead in the last month of pregnancy), neonatal (born alive but died within 2 days of birth) or post-natal (more than 2 days old at time of death). A diagnosis was made based on the history, gross pathology, histopathological results and other tests as necessary.

**Results:** The causes of death of 89 foals are shown in Table 1.

Season and status	Infectious	Dystocia	Congenital	Other	Unknown	Total
<b>2007/2008</b>						
Stillborn	4	9	1	1	3	<b>18</b>
Neonate	3	4	3	2	5	<b>17</b>
Post-natal	20	0	0	3	1	<b>24</b>
<b>2009/2010</b>						
Stillborn	2	13	2	5	1	<b>23</b>
Neonate	1	0	1	1	1	<b>4</b>
Post-natal	3	0	0	0	0	<b>3</b>
<b>Total</b>	<b>33 (37%)</b>	<b>26 (29%)</b>	<b>7 (8%)</b>	<b>12 (13%)</b>	<b>11 (12%)</b>	<b>89</b>

Table 1: The major causes of death in 89 foals

**Conclusion:** The results of our study showed 37% of foal deaths were associated with the presence of infectious agents, similar to the 38% reported in other studies conducted in the Northern Hemisphere, with different production systems and management of the foaling mare. The high proportion of deaths associated with dystocia (29% of foals in this study) warrants further investigation, as does the relationship between difficult birth and death in the first week of life.

**References**

Smith K., Blunden A., Whitwell K., Dunn K., Wales A. (2003) A survey of equine abortion, stillbirth and neonatal death in the UK from 1988 to 1997. *Equine Veterinary Journal*, 35: 496-501

Sturgill T., Carter C. (2009) Causes of foal mortality, a one year snapshot. *Equine Disease Quarterly*, 17: 6