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STALLION INFLUENCE ON REPRODUCTIVE LOSS DURING MARE REPRODUCTIVE LOSS SYNDROME (MRLS) IN LEXINGTON, KENTUCKY 2001

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The Early Fetal Loss (EFL) and Late Fetal Loss (LFL) outbreaks experienced in the greater Lexington, KY area during May 2001, together known as the Mare Reproductive Loss Syndrome (MRLS), have received much attention and scientific inquiry. As yet the scientific community has not established a specific cause or causes, although it is considered likely that an environmental point source toxicological insult was the primary cause or an important factor in the outbreak. Apart from questions of etiology, one of the most perplexing questions still unanswered was the differential loss of pregnancies among certain mares or groups of mares, with affected and unaffected individuals grazing alongside.

Previous work from our group has shown that in the human there are specific male fertility factors that influence fetal loss. Following this lead, the current study was designed to retrospectively assess whether or not there may be any stallion components to the differential losses experienced in MRLS, and to determine if any stallion fertility factors could be correlated with loss.

Breeding records where collected for a total of 15 stallions on major breeding farms in the greater Lexington area. All stallions were considered fertile and had pregnant mares both "on" and "off" farm. Fetal loss (FL) was assessed as 2001 pregnancies up to the end of April that were lost in May. Pregnancy Rate Post Loss (PRPL) was defined as mares back in foal from total mare loss.

No significant correlation was found between stallion fertility (conception rate/cycle) and FL. There was no significant difference of FL on or off farm. There was a significant difference ($p<0.05$) in FL from stallion to stallion and there was a significant difference ($p<0.05$) in PRPL between stallions. Interestingly, there was no significant correlation between FL and PRPL. No significant mare, stallion or farm interactions were observed.

This study reveals a potential stallion influence on FL in the spring 2001 MRLS outbreak