

**Proceedings of the
First Workshop on
Mare Reproductive
Loss Syndrome**



Proceedings of the First Workshop on Mare Reproductive Loss Syndrome

edited by

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Preface

The dramatic emergence of Mare Reproductive Loss Syndrome (MRLS) among the horse population of Kentucky in April of 2001 and 2002 has had a tremendous impact on the equine industry. The consequences as a result of the significant reduction in the foal population will be felt for several years to come at the state and national level, even extending around the world.

The response to this acute crisis produced an unprecedented collaborative effort to identify the cause. This effort involved scientists, practicing veterinarians, individuals, and organizations representing every facet of the equine industry, both nationally and internationally.

Although the cause of MRLS at the time of writing has not been specifically identified, a massive amount of field and experimental information has been carefully accumulated. To critically evaluate these data and provide guidance for future research as well as developing recommendations to prevent the syndrome, a workshop was convened in August of 2002 at the Maxwell H. Gluck Equine Research Center in Lexington, Kentucky. This *Proceedings* provides a comprehensive account of the two-day meeting.

We extend our appreciation to all those who participated, and we gratefully acknowledge those who sponsored the meeting.

*David G. Powell
Thomas Tobin
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Workshop Goals

To review the current state of knowledge on Mare Reproductive Loss Syndrome (MRLS) with particular emphasis on the recent findings associated with the eastern tent caterpillar (ETC) as they relate to the future of the prevention and control of MRLS.

Rationale

The causative agents of MRLS appear to be strongly associated with the eastern tent caterpillar. The causative agents appear to be remarkably specific for the fetoplacental unit. At this time, the nature of the agents is unknown. The workshop was designed to review our current knowledge and address the need for future research.

Mare Reproductive Loss Syndrome Case Definition

Two major disease entities have been identified with Mare Reproductive Loss Syndrome (MRLS), which occurred between April and June of 2001 and 2002.

- Early fetal loss (EFL) occurred within 35 and 100 days after mares were bred. In mares that underwent ultrasound examination during this period, fetal death followed by expulsion of the fetus was associated with the presence of abnormal echogenic fluid (cloudy and flocculent) around the fetus.
- Late fetal loss (LFL) occurred as abortion during the last trimester of pregnancy. LFL was associated in many but not all cases with a swollen and engorged placenta (premature placental separation or “red bag” syndrome). Foals born alive were sometimes weak and required intensive veterinary care.
- In addition to reproductive losses, a number of cases of pericarditis (inflammation within the sac surrounding the heart) and severe unilateral uveitis (inflammation of one eye) were associated with the occurrence of MRLS.