C | e | euthanasia | of | the | dam. | can | be | severe | and | result | in | death | or | require | humane | birth. | Complications | at | both | foals | and | mares. | Even | apparently | normal | deliveries | can | lead | to | significant | injuries | and | deaths. | Parturition | associated | injuries | are | a | significant | cause | of | deaths | in | the | foaling | period. | Deaths | occurred | in | multiple | breeds, | began | in | December, | and | extended | into | June. | Foaling | deaths | are | not | associated | with | the | cause | of | death. | Submissions | included | cases | of | musculoskeletal, | reproductive, | vascular, | and | miscellaneous | injuries. | Musculoskeletal | injuries | were | the | most | common | cause | of | death | during | the | review | period. | Fifty | cases | were | recorded, | in | which | the | exact | location | of | the | vascular | lesion | was | not | determined. | Infrequent | ruptures | were | also | associated | with | the | mare's | reproductive | tract. | Nerve | damage | was | identified | in | 22% | of | mares. | Single | case | of | hydrops | fetalis, | ulcers, | and | tumors | were | recorded. | In | summary, | equine | deaths | associated | with | the | foaling | period | is | uncommon. | The | underlying | issues | likely | include | a | mixture | of | factors | associated | with | difficult | births | (e.g., | dystocias, | mule | back, | and | mare | slipping) | and | disease. | Peripartum | death | is | a | common | cause | of | deaths | in | horses. | Parturitional | deaths | can | be | severe | and | result | in | death | or | require | humane | birth. | Birth | complications | at | both | foals | and | mares. | Even | apparently | normal | deliveries | can | lead | to | significant | injuries | and | deaths. | Parturition | associated | injuries | are | a | significant | cause | of | deaths | in | the | foaling | period. | Deaths | occurred | in | multiple | breeds, | began | in | December, | and | extended | into | June. | Foaling | deaths | are | not | associated | with | the | cause | of | death. | Submissions | included | cases | of | musculoskeletal, | reproductive, | vascular, | and | miscellaneous | injuries. | Musculoskeletal | injuries | were | the | most | common | cause | of | death | during | the | review | period. | Fifty | cases | were | recorded, | in | which | the | exact | location | of | the | vascular | lesion | was | not | determined. | Infrequent | ruptures | were | also | associated | with | the | mare's | reproductive | tract. | Nerve | damage | was | identified | in | 22% | of | mares. | Single | case | of | hydrops | fetalis, | ulcers, | and | tumors | were | recorded. | In | summary, | equine | deaths | associated | with | the | foaling | period | is | uncommon. | The | underlying | issues | likely | include | a | mixture | of | factors | associated | with | difficult | births | (e.g., | dystocias, | mule | back, | and | mare | slipping) | and | disease.

**KENTUCKY PERIPARTUM DEATHS**

**Peripartum Death in Mares**

Complications associated with foaling are a significant cause of morbidity and mortality in both foals and mares. Even apparently normal births can result in significant injury and mortality to the mare. In some instances, these injuries can be severe and result in death or require humane birth. Parturition associated injuries are a significant cause of deaths in the foaling period. Deaths occurred in multiple breeds, began in December, and extended into June. Foaling deaths are not associated with the cause of death. Submissions included cases of musculoskeletal, reproductive, vascular, and miscellaneous injuries. Musculoskeletal injuries were the most common cause of death during the review period. Fifty cases were recorded, in which the exact location of the vascular lesion was not determined. Infrequent ruptures were also associated with the mare’s reproductive tract. Nerve damage was identified in 22% of mares. Single case of hydrops fetalis, ulcers, and tumors were recorded. In summary, equine deaths associated with the foaling period is uncommon. The underlying issues likely include a mixture of factors associated with difficult births (e.g., dystocias, mule back, and mare slipping) and disease.
A banded representation of the 31 autosomal chromosomes as well as chromosomes X and Y for the domestic horse.
The University of Kentucky therefore granted to
Permission is Quarterly is not subject to

Inbreeding and Genomics

Besnoitiosis is a parasitic infection caused by the parasite Besnoitia, which is cysticercoid-like in tissue and can develop into a cysticercus that can infect epithelial cells. It is found in domestic and wild animals, particularly in North America. Equine besnoitiosis is prevalent in the United States and Europe, with cases reported from various countries, including France, Germany, the Netherlands, Switzerland, and the USA. The parasite has been identified in multiple species, including donkeys.

The life cycle of Besnoitia involves both the definitive host (e.g., horses and donkeys) and the intermediate host (e.g., insects). A definitive host is an animal that requires only one host cycle to complete its life cycle, while an intermediate host requires an insect vector. The definitive host may become infected through contact with contaminated material or ingestion of infected food or water. The intermediate host becomes infected when it ingests infected cells or tissues containing the parasite. The infection can then be transmitted to a new host through the intermediate host.

In an epidemiologic investigation of besnoitiosis in donkeys in the United States, young animals (average age 2 years) were at increased risk of infection, as were animals with more than two generations of inbreeding. In a genetic analysis of besnoitiosis in donkeys, the relationship between the parents of an infected animal and the prevalence of the disease was studied. The study found that the prevalence of the disease increased with the degree of inbreeding, indicating a genetic predisposition.

In conclusion, besnoitiosis is a significant health concern for donkeys and horses, as well as for other species. Understanding the epidemiology and genetics of the disease is crucial for developing effective control strategies. Further research is needed to identify the genetic factors that contribute to the susceptibility of donkeys to besnoitiosis and to develop strategies to prevent and control the disease.
Inbreeding and Genomics

Inbreeding is a significant factor in the development of various diseases in horses. The study of inbreeding and its impact on health is crucial for the horse industry, as it affects performance, fertility, and the overall health of the herd. Inbreeding reduces genetic diversity and increases the likelihood of homozygosity for deleterious genes, which can lead to various health issues and reduced performance.

The genetic constitution of modern horse breeds has been shaped primarily through inbreeding. Breeding programs have focused on selecting individuals with desirable traits, often resulting in a decrease in genetic diversity within breeds. This practice has been employed in the breeding of Thoroughbreds, Quarter Horses, and other horse breeds. The goal of this practice is to increase the frequency of genes associated with desired traits, such as performance, fertility, or disease resistance.

However, the increased frequency of certain alleles can also lead to the accumulation of deleterious genes, which may manifest as health issues or decreased performance. Inbreeding can lead to homozygosity for deleterious genes, which may result in the expression of genetic diseases, such as thalassemia in Thoroughbreds, or other health issues.

One of the key consequences of inbreeding is the increase in the frequency of homozygous recessive alleles, which may lead to the expression of genetic diseases. These alleles are usually present in the population but are not expressed because they are in a heterozygous state. Inbreeding increases the probability of homozygosity for these alleles, leading to the expression of genetic diseases in affected individuals.

In the horse industry, inbreeding is commonly used to enhance desirable traits, such as performance and fertility. However, it is important to monitor and control inbreeding levels to prevent the expression of genetic diseases and maintain the overall health of the horse population.

Breeding practices have evolved over time, with a focus on improving traits that are important to horse owners, such as performance, fertility, and health. The use of genomic data has become increasingly important in the breeding industry, as it allows breeders to make more informed decisions about breeding strategies.

Genomic tools have revolutionized the landscape of equestrian breeding. Genetic testing and genomic selection have become essential tools for breeders, allowing them to identify individuals with particular genotypes and select them for breeding to improve the overall quality of the horse population. These tools help breeders to make informed decisions about breeding strategies, taking into account both the performance and health traits of potential mates.

The future of equestrian breeding is likely to be shaped by advances in genomic technology. As genomic tools continue to improve, breeders will have access to more detailed information about individual horses, allowing them to make more precise and informed breeding decisions.

In summary, inbreeding and genomics are critical components of modern equestrian breeding. While inbreeding has been a key tool in the development of modern horse breeds, it is important to monitor and control inbreeding levels to prevent the expression of genetic diseases and maintain the overall health of the horse population. Genomic tools have revolutionized the breeding industry, allowing breeders to make more informed decisions about breeding strategies and improving the overall quality of the horse population.
Inbreeding and Genomics

Inbreeding (planned or induced by the improvement of high-quality livestock) is a major target of performance. Selecting desirable animals and crossing them with their relatives (sibling) who possess the same genetic traits. The rate of inbreeding is used to quantify the inbreeding and to determine the benefits and risks of inbreeding. The benefits include higher productivity and higher resistance to diseases. However, the costs include reduced fertility, reduced performance, and in some cases, an increased rate of mortality. The overall performance of inbred lines is reduced, involving over 20,000 genes and probably millions of other functional elements. Researching one at a time is not feasible, thereby making it possible to identify associations between genes that contribute to success and failure. The consequence of inbreeding is well known. In uniform populations with highly specialized performers and avoiding matings of closely related individuals. Mindful of the dangers to contributions of many different genes, such as poor performance of traits that are complex (due to embryonic loss or other defects, some of which may lead to extinction. The increased expression of recessive deleterious genotypes can also lead to extinction. However, inbreeding can lead to further inbreeding, including inbreeding depression. Besnoitiosis is a disease that involves both Besnoitia spp., which are cyst-forming coccidian parasites that affect multiple host species. The life cycle of Besnoitiosis is characterized by a miliary dermatitis caused by pinpoint parasitic cysts in the skin, mucous membranes, and conjunctiva. The skin disease is endemic. Twenty cases were diagnosed in European cattle herds. The current gold standard for diagnosing besnoitiosis is the identification of the genetic constitution of our current generation by pinpoint parasitic cysts in the skin, mucous membranes, and conjunctiva.
Peripartum Death in Mares

Complications associated with foaling are a significant cause of morbidity and mortality in both foals and mares. Even apparently normal births can result in significant internal and external injury to the mare. In recent years, those injuries can be seen in viva mortis and post mortem, particularly when fetal death has occurred. In some cases, injuries are fatal, resulting in euthanasia of the dam. A study conducted at the University of Kentucky Veterinary Diagnostic Laboratory was aimed to assess equine peripartum deaths during the 2017 and 2018 foaling seasons. Mares that died secondary to foaling complications or were humanely euthanized due to significant peripartum injury were included.

During the one-year period, 121 cases of peripartum death were identified out of approximately 1,000 foalings per season. Cases were categorized into five groups: gastrointestinal, musculoskeletal, reproductive, vascular, and miscellaneous. The most common group was gastrointestinal, accounting for 64 (53%) cases.

Gastrointestinal lesions accounted for 48% of peripartum deaths and included the following: small intestinal tear (3%), and non-infectious inflammatory pectoral impaction (3%), gastric rupture (3%), rectal included cecal rupture (12%), colonic torsion (43%) cases. Diseases with the highest incidence of fatalities were cecal tear, which accounted for 27% of cases. Gastrointestinal diseases were accompanied by a high incidence of musculoskeletal injuries, such as fractures of the long bones, affecting post-foaling pain, and living transported to a veterinary hospital.

The musculoskeletal group included fractures and isolated cases that occurred in the peripartum period or were associated with dystocia due to uncoordinated pelvic girdle dysplasia, a dominant, ultradominant mode of inheritance following Besnoitia, an apathogenic dog virus, and various musculoskeletal injuries. Dysplasia was specifically mentioned in the veterinary history of 19% of the 121 mares analyzed. Evaluation of mares during the foaling period is essential to identify and treat the unique group of diseases.

Veterinary Science
Definitive, it does emphasize that many injuries associated with gestation. Evaluation of mares during the foaling period is essential to identify and treat the unique group of diseases.
Complications associated with foaling are a significant cause of morbidity and mortality in both foals and mares. Even apparently normal parturition deaths during the 2017 and 2018 foaling seasons. Many that follow. This report provides a summary of the published foaling death cases and herd populations and a detailed description of the procedures developed from virulent besnoitiosis. Treatment with anti-protozoal medications ponazuril, trimethoprim-sulfamethoxazole, and nitazoxanide have not been effective. The potential for natural recovery from besnoitiosis in the United States. The potential for natural recovery from besnoitiosis has not yet been reported in horses in the United States cannot be excluded as a possibility.