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## Equine Piroplasmosis: Uncommon Transmissible Disease with International Impact

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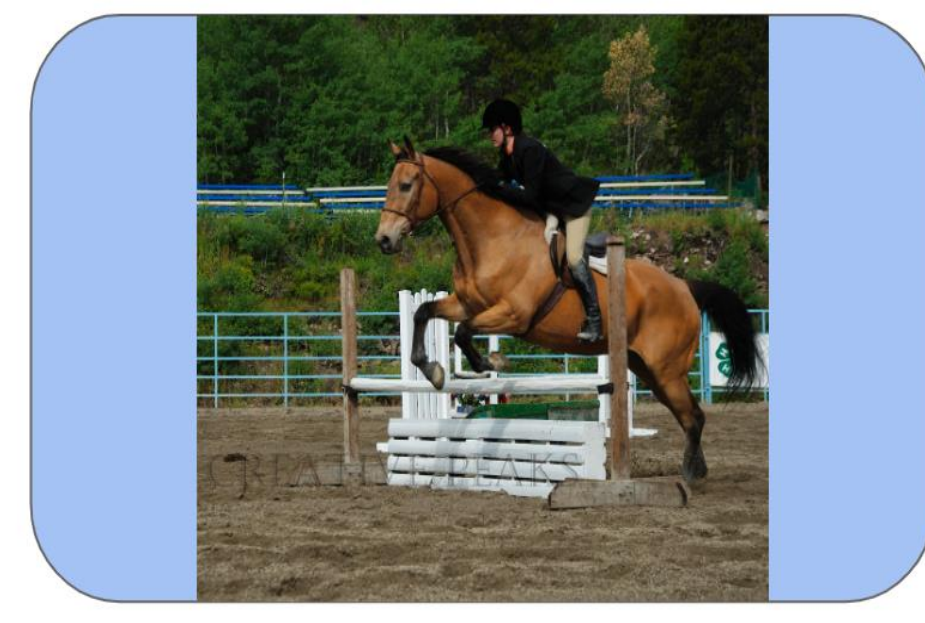


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# THE BASICS

- Why horses?
- Sport/Competition- FUN
    - ♦ Up the Rank
  - Therapy and Connection- Pet
    - ♦ Physical Injuries
    - ♦ Mental Health
  - Exercise/Fitness
    - ♦ Physical Health and Wellness



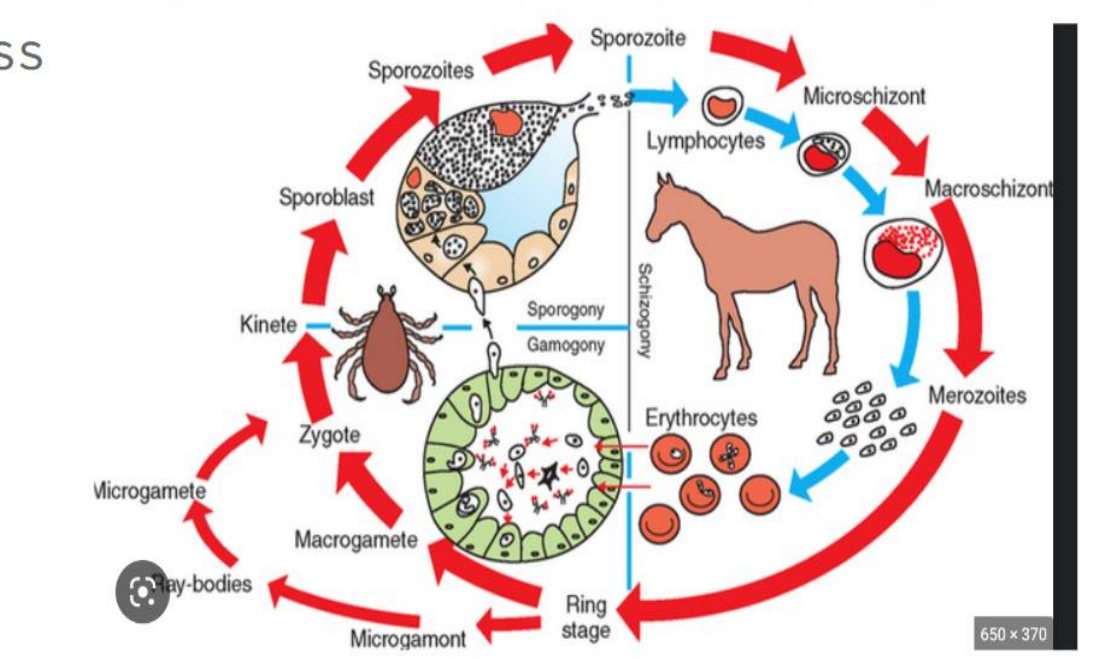
# EQUINE PIROPLASMOSIS



## CHAIN OF INFECTION

**Definition-** A tick-borne protozoal disease that affects horses and other equids. Can range from asymptomatic to a life threatening clinical illness

**Infection Process** - protozoa microorganism that attaches to blood cells and causes illness



**Host-** Horse  
**Agent reservoir-** Ticks (14 species)  
**Exit transmission-** Tick bite or unsterilized needles/medical equipment dealing with blood  
**Entry** - Tick bites another horse after getting blood from infected horse

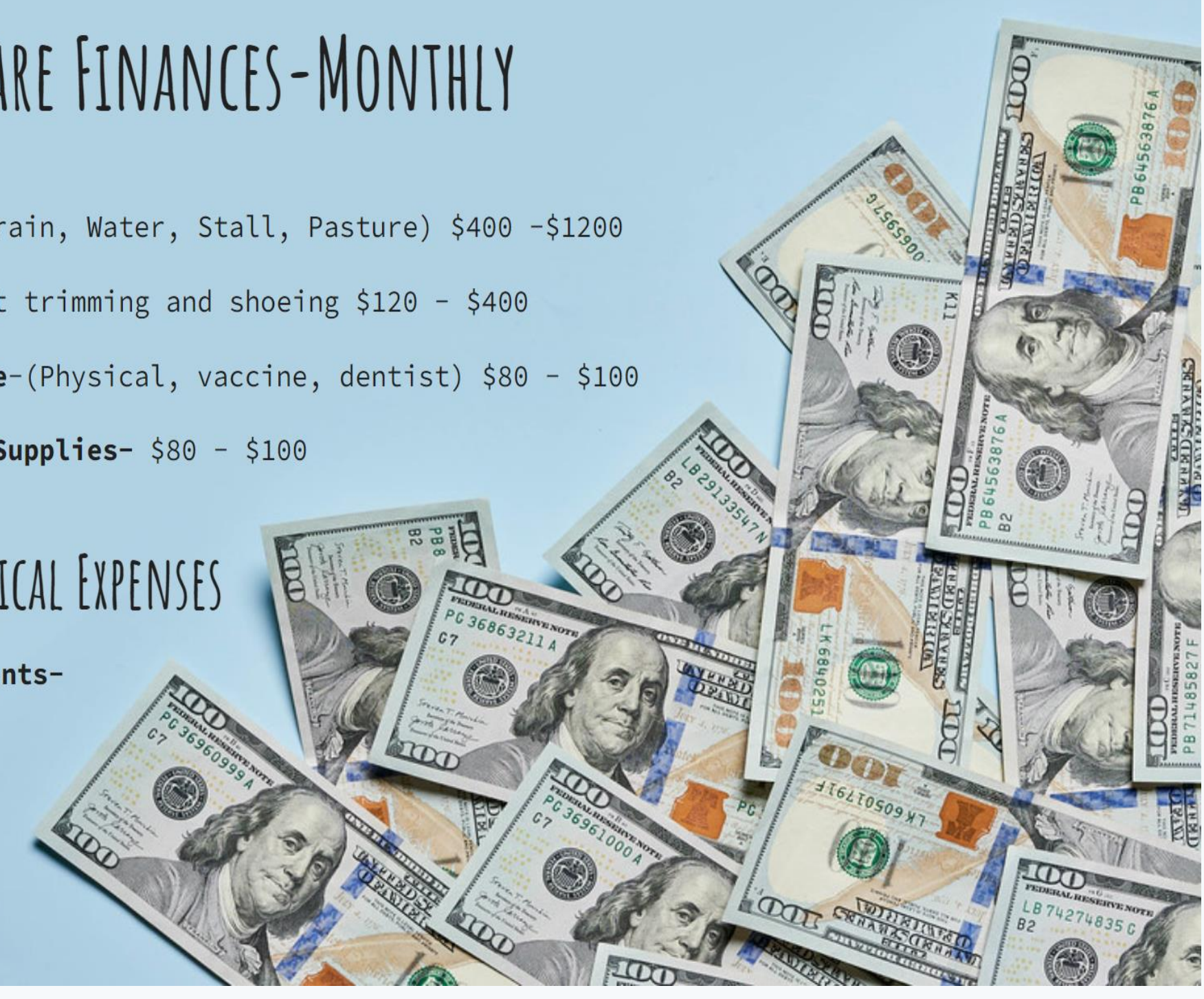


## BASIC HORSE CARE FINANCES-MONTHLY

1. **Board**- (Hay, Grain, Water, Stall, Pasture) \$400 - \$1200
2. **Hoof Care**- Foot trimming and shoeing \$120 - \$400
3. **Veterinary Care**- (Physical, vaccine, dentist) \$80 - \$100
4. **Equipment and Supplies**- \$80 - \$100

## PIROPLASMOSIS MEDICAL EXPENSES

1. **Unexpected Payments-**  
\$1000 - \$2000



## Alexia Stedman, Alexia Blais, Flora Marderosian

**Abstract:** Equine Piroplasmosis is a blood disease that is majorly unknown to the average horse owner. It is a condition where protozoa (single celled organisms) enter the bloodstream through a tick bite and attach themselves to the horse's red blood cells. The protozoa develop and reproduce the best in warm, tropical climates. It is not something we see much in the United States, but this equine disease has a human counterpart that is common around the Northeast known as babesiosis. Based on this knowledge, the ticks that carry Piroplasmosis also survive in the US, however, they do not have access to the protozoa or carriers. As researchers and students, we believe that horse owners and the general public should be informed of this due to the increasing vector populations over the past several years.

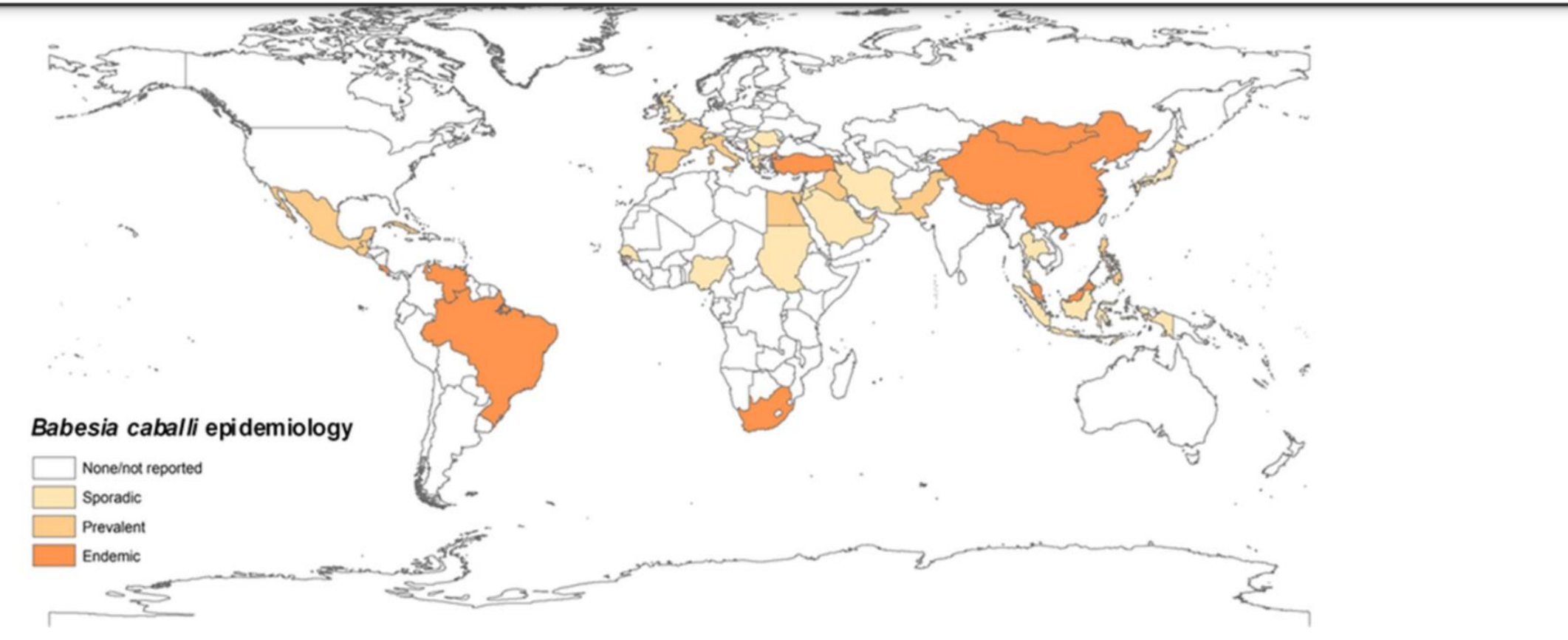
### Importance of Project

In the Equine Diseases class offered here at Johnson and Wales University, Dr. Jacquelyn Bowser PhD. DVM. assigned this project, and it was designed to take individuals from different friend groups and skill sets and combine all our strengths to create a slide show and video project on a disease or condition that is rare or foreign to the United States. In this particular project, the video was filmed live in a large barn on one of the students' properties using three horses, with full permission from the owners, for visual demonstration of the signs and symptoms. Specific details on preventing its chain of infection. The slides detail all the terminology in order for its viewers to fully understand the factors that contribute to the progression and severity of the disease.

## DISEASE FACTS

- Mortality-** 5-10%
- Prevalence-** 20% in endemic areas
- Why is it rare?**- Only found in tropical climates (Brazil, South Africa)
- Risk of Transmission-** Can not be transmitted from horse to human but human can get a similar disease from tick (babesiosis)
- Symptoms-** Weakness, loss of appetite, gums turn yellow, swelling of abdomen in limbs from fluid build up, labored breathing, fever, jaundice

## WHERE CAN YOU FIND THIS DISEASE?



**Figure 3.** Global prevalence of *B. caballi*. The map was constructed based on epidemiological data published in the last 20 years (2000-2019). Endemic: over 30%, prevalent: 10-29%, sporadic: under 10% or singular outbreaks.

## TREATMENT

- Treatment-** Managed symptoms and disinfection practiced, can not be treated, infected for life
- Prevention-** Tick repellents,
- Management-** Grooming, check horse for ticks and treat symptoms with NSAIDS
- Vaccine-** No



## REFERENCES

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