

Effects of Bovine Serum on a Foal's IgG Levels

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(Assisting the Research Trial by Chelsea Sinclair)



Introduction

- Colostrum is a mare's first milk containing antibodies that are provided to the foal with the first 24 hours post birth.
- Without absorbing antibodies the foal is at risk for becoming ill.
- Lifeline Elite contains Bovine Serum, which has been shown in calves to improve passive transfer of IgG.
- Potentially, this Lifeline Elite supplement may have increased benefits in IgG levels as well improve the foal's absorption of antibodies.

Objective

- To determine if supplementing Lifeline Elite will affect passive transfer of IgG in newborn foals.

Procedures

- 15 pregnant mares were used. 8 were given the Lifeline supplement and 7 a placebo.
- Mares were fed 2x daily starting February 5th up until 10 days post-parturition.
- Blood samples were collected from the mare and foal just after parturition and again collected from the foal post 30 hours. Colostrum was also collected from the mare post-parturition.
- Data was collected using the Hydrometer and the Brix Refractometer on a sample of the mare's colostrum.
- Further procedures will include performing an ELISA test on each mare to show IgG values.



Current Results

Below is the data received by testing blood and colostrum samples using the Hydrometer and the Brix Test. (More data is to be collected as foaling season ends. The ELISA test will also be performed on each mares sample.)
 Colostrometer: 1.06 s.g. = Normal; Brix: >20% = Normal

(Lifeline) MARES (#)	Colostrometer (sg)	Brix
40	1.06 sg	21.4 = Good = 1.08-1.09 sg
11	1.06 sg	24.6 = Good = 1.08-1.09 sg
Rita	1.095 sg	33.2 = Excellent = >1.10 sg
3211	1.07 sg	25.3 = Good = 1.08-1.09 sg
33	1.085 sg	23.6 = Good = 1.08-1.09 sg
1	1.09 sg	30.0 = Excellent = >1.10 sg
13	N/A	N/A
5	N/A	N/A

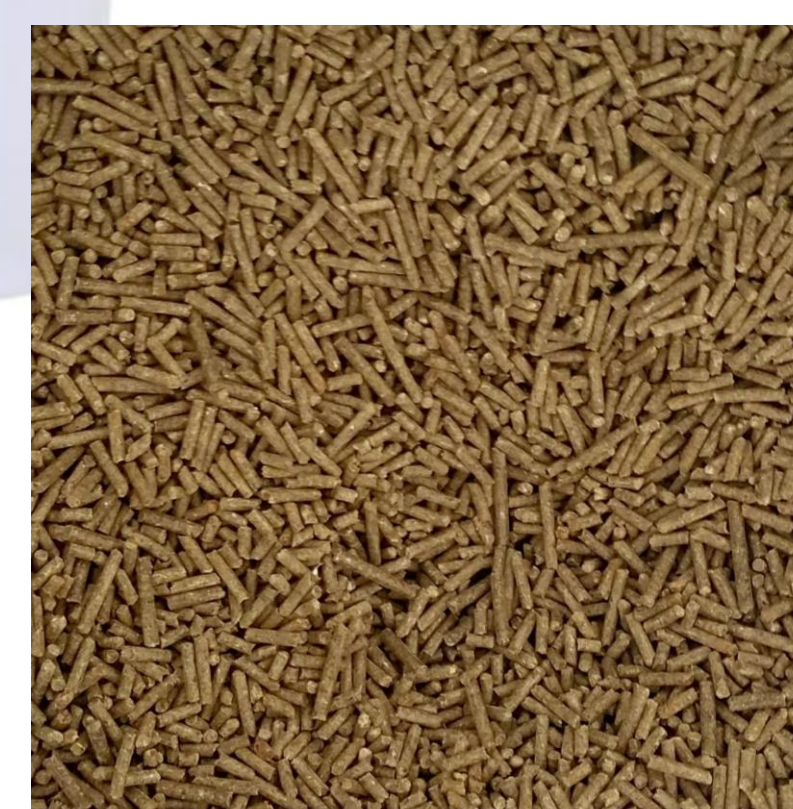
(Placebo) MARES (#)	Colostrometer (sg)	Brix
32	1.07 sg	27.5 = Good = 1.08-1.09 sg
10	1.075 sg	25.3 = Good = 1.08-1.09 sg
9	1.085 sg	34.1 = Excellent = >1.10 sg
512	1.07 sg	29.2 = Good = 1.08-1.09 sg
2712	N/A	N/A
41	N/A	N/A
3	N/A	N/A



Photo: Mare #0512 and Foal



LIFELINE
Photo: Retrieved from Valley Vet



COLOSTROMETER
Photo: Retrieved from Colorado State



Photo: Retrieved from Colorado State

Likely Conclusions

- Mares with poor colostrum quality benefit from supplementing Bovine Serum.
- Bovine Serum when supplemented prior to foaling will increase the amount of IgG absorbed in the foal.