Kentucky Foal and Yearling Growth Rates Not Affected By Mare Reproductive Loss Syndrome

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Introduction

There has been a tremendous amount of speculation about whether mare reproductive loss syndrome (MRLS) has adversely affected the growth rates of foals and yearlings in central Kentucky. Very little evidence has been published to substantiate these claims. Therefore, the following study was conducted to compare the growth rates of Thoroughbred foals born in Kentucky in 2000 and 2001 with a large set of reference growth rates collected in central Kentucky in the mid-1990s.

Materials and Methods

Growth data were analyzed from 160 Thoroughbred foals born in 2000 and 275 Thoroughbred foals born in 2001. All foals were raised in central Kentucky. The foals had been measured monthly by Steve Caddel of Farmers Feed Mill, a central Kentucky feed manufacturer that has offered a weighing service to its customers for many years. The 2000 foals were raised on 9 different farms located throughout the bluegrass region, and the 2001 foals were housed on 14 different central Kentucky farms. Body weights of foals were measured monthly with a portable electronic scale.

The average body weight and withers height were calculated for each month of age and compared to a reference set of growth rates collected from 700 Thoroughbred foals in central Kentucky over a three-year period from 1993-1995 (Pagan, 1998).

Results

The growth rates of the 2000 foals are summarized in figures 1, 2 and 3. The average foaling date for these foals was March 10, 2000. Therefore, the average age at the onset of MRLS in late April was about 415 days. As is evident in figure 1, the average body weights of 2000 foals were nearly identical to the Kentucky reference weights. During the period following the outbreak (circled in figure 1), there was no reduction in body weight in these yearlings. The average daily weight
gain is presented in figure 2. Overall, average daily gains were similar to the historical Kentucky average and tended to be slightly higher following MRLS. Withers height was also similar or slightly taller in the 2000 foals compared to the reference foals (figure 3).

![Average Daily Gain](image1)

**Figure 2.** Average daily gain in yearlings born in 2000 compared to the historical Kentucky average.

![Withers Height](image2)

**Figure 3.** Withers height in yearlings born in 2000 compared to the historical Kentucky average.
The growth rates of the 2001 foals are summarized in figures 4, 5 and 6. Figure 4 shows the body weights of the 2001 foals compared to the historical Kentucky average. As with the 2000 foals, the 2001 foals have body weights that are very similar to the Kentucky reference weights. The period corresponding to MRLS is circled in figure 4, and there is no difference in body weight during this period. Average daily gain in the 2001 foals was also unaffected by MRLS (figure 5). Withers height in the 2001 foals was slightly above the historical Kentucky average (figure 6).

Figure 4. Body weights in foals born in 2001 compared to the historical Kentucky average.

Figure 5. Average daily weight gain in foals born in 2001 compared to the historical Kentucky average.
Conclusion

The results of this study clearly demonstrate that MRLS had no effect on the growth rates of Thoroughbred foals born and raised in the bluegrass region of Kentucky. Whatever caused the reproductive problems experienced in Kentucky broodmares in April and May, 2001 did not affect the growth of foals that were born in 2001 or the growth of yearlings that were raised in Kentucky during this same time.

Reference


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