

Errata Sheet

Four-State Professional Dairy Management Seminar, MWPS 4SD-17

Additional copy for page 39, just above Table 1.

The exact mode of action is unclear but in most of the studies the increased milk yields were probably not primarily a result of improved hoof health. Dry matter intake increased in one study but was not affected by biotin supplementation in the other. Zimmerly and Weiss (15) hypothesized that the likely mode of action for biotin was via increased glucose synthesis. This hypothesis has not been tested directly but Majee et al. (9) reported that 20 mg/d of biotin supplementation increased lactose yield about 100 g/day.

Conclusions

1. In most studies, cows fed approximately 20 mg/d of supplemental biotin had reduced prevalence of hoof lesions and lameness.
2. Biotin must be supplemented for several months before a response in hoof health will be observed.
3. The economic return of improved hoof health caused by biotin supplementation has not been evaluated directly. Considering only lameness caused by white line disease and continuous supplementation of biotin (i.e., 365 day per year), the breakeven cost (i.e., if supplementation costs were less, a positive return on investment would be expected) of biotin is \$0.055/cow per day (20 mg/d supplementation rate). Biotin supplementation has been shown to affect other hoof lesions, therefore, the breakeven cost with respect to hoof health is probably higher.
4. Biotin supplementation increases milk yield by about 3 lbs/day for high producing cows.
5. Production responses occur shortly after supplementation begins.
6. Based on an average increase of 3 lbs of milk (\$0.12/lbs.) per day and assuming an increase in dry matter intake of 1.2 lbs/day (\$0.07/lb of dry matter), the breakeven cost of biotin supplementation (20 mg/day) is \$0.28/cow per day based on milk yields.