

## **FIBER DIGESTIBILITY IN BLACK LEMURS (*Eulemur macaco macaco*)**

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Black lemurs are classified as generalist feeders, existing on both fruits and leaves depending upon seasonal availability. In captivity they are typically fed a diet of commercially manufactured primate biscuits and readily available produce, both of which are limited in fermentable fiber. Digestibility trials were conducted on fourteen black lemurs, housed in 4 groups (4, 3, 3 & 2) and two housed individually. The lemurs were fed four nutritionally complete feeds differing in form and fiber content. Diet A was the traditional primate biscuit, containing approximately 27% neutral detergent fiber (NDF). Diet B contained the same brand of primate biscuit ground and incorporated into a fiber-based gel matrix<sup>a</sup>, raising the NDF content of this diet to 47% NDF. Diets C and D were formulated using the gel matrix and either soybean hulls or ground corn cobs as the fiber source, resulting in 53% NDF and 47% NDF, respectively. Produce was added to the diet at 36% on an as fed basis. Dry matter digestibility differed significantly ( $P < 0.05$ ) among all diets and was highest for Diet A, followed by Diets B, D and C, respectively. Neutral detergent fiber digestibility was highest ( $P < 0.05$ ) for Diet B at 32.4%, followed by Diet A at 27.1%, and not significantly different between Diets C and D at 12.2% and 11.9%, respectively. The diminished digestibility of the high fiber soybean hull or ground corn cob diet in this trial means the black lemurs were capable of limited fiber digestion. Since they were not capable of digesting higher fiber diets, the benefit of increasing fermentable fiber in black lemur diets above the level available in primate biscuits was not apparent.

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