Digestibility of soybean meal by farmed *Caiman latirostris* in Argentina

Samuel Hilevski[12] and Pablo A. Siroski*[12]

[1]Laboratorio de Ecología Molecular Aplicada (LEMA), Instituto de Ciencias Veterinarias del Litoral (ICIVet-Litoral), Universidad Nacional del Litoral (UNL) / Concejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Santa Fe, Argentina (samyhilevski@gmail.com; cockaima@gmail.com).
[2]Laboratorio de Zoología Aplicada, Gobierno de Santa Fe, Facultad Humanidades y Ciencias, Universidad Nacional del Litoral, Santa Fe, Argentina

Abstract: The objective of this study was to determinate digestibility of diets with protein derived plant sources as a supplement of broad-snouted caiman (*Caiman latirostris*) food. Caimans were laxed with 1.5 mL of lactulose (65 % w/v) per Kg of body weight (BW) once per day and for 48 hours. After that, they were force-feeding with 1% BW of their corresponding treatment (control group: ovalbumin (OVO); and three treatment groups: soybean meal (SOY) mixed with ovalbumin in different percentages A: 20/79.9% SOY/OVO; B: 40/59.9% SOY/OVO; C: 60/39.9% SOY/OVO) once per day during 7 days. Then, every digestives tract was extracted, and feces collected. Digestibility was established through a dietary marker chromic oxide (0,01%) in feed and feces by method of Brisson (1956), and acid digestion of Furukawa and Tsukahara (1966). Digestibility indexes were determined with a standard equation (NRC, 1983). Digestibility of treatment diets were differences among 97-99% (SOY/OVO) between control diet and treatments (P = 0.0006), being control diet lower (P = 0.0050), while digestibility of soybean meal only was 90-95%. There were differences according to the treatment diet (P = 0.018). Digestibility of soybean meal in diet A was lower than B (P = 0.0202), and C (P = 0.0202). Results indicated that inclusion of soybean meal increased digestibility of the diet in 2.45% and that broad-snouted caiman efficiently digested nutrients of plant products when these ingredients were provided at levels of 20–60% without signs of malnutrition. Based on the results obtained we could think that reports about ingestions by wild crocodilians of plant material is deliberate to better digestion and absorption of their diet nutrients, and do not only as gastrolith. This information could be used to developing crocodilian diets and will assist future research to determine optimum nutrient levels and ingredient combinations for farm-raised crocodilian fed compounded diets.

Keywords: Broad-snouted caiman, Nutrition, Plant diets, Digestibility

Presentation type: Poster

Thematic area: *Ex situ* conservation (Miscellaneous)