

Antioxidant effect of flaxseed in the fat of *Caiman latirostris*

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Abstract: In Santa Fe (Argentina) Proyecto Yacaré is a program based on ranching (collection of *Caiman latirostris* eggs from wild populations for farming of hatchlings). Ten percent of the hatched animals are reintroduced into the same harvesting areas, and ninety percent is used for leather and meat production; until today lipid deposits of the carcass are discarded. Previous studies reported enrichment of caiman meat when ground flaxseed is included in the regular diet. For this reason, our work aims to assess whether the addition of flaxseed to the diet (considered a powerful antioxidant) also improves fat quality, delaying deterioration and extending fat integrity. In order to do so we grew during 30 and 60 days caimans of slaughtering size. Animals were fed ad libitum six times a week with the control diet (crashed chicken head + dry balanced supplement 70/30) (C30 and C60), and control diet + ground flaxseed (90/10) (FS30 and FS60). After the experiment we removed fat deposits and determined catalase and glutathione peroxidase activity, lipoperoxidation (LPO), and oxygen reactive species (ORSs). Flaxseed addition in diet increased antioxidant enzymes activity, and reduced lipidical peroxides and ORSs in both groups fed with flaxseed but in FS60 there was a greater decrease in LPO and ORSs compared to the other groups. Based on our results, we corroborated the antioxidant capability of the diet with flaxseed, increasing quality duration and integrity of fatty tissues. Future studies will evaluate possible commercial use of caiman fatty tissue.

Keywords: Broad-snouted caiman; fat deposits; PUFA.

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