

## EFFECT OF THE ANNATTO EXTRACT IN THE PIGMENTATION OF DWARF-RED GOURAMY (*Colisa lalia*)

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Aiming to evaluate the efficiency of skin pigmentation and effects on fish performance, five levels of the carotenoid bixin (0, 719, 1390, 2110 and 2890 mg/kg) extracted from seeds of annatto (*Bixa orellana*) were used for rations enrichment to feed dwarf-red gouramy fish (*Colisa lalia*). The experiment was conducted with five replicates in a randomized design. It was observed that the bixin at high levels provides a reduction in food consumption and also in the intensity of the yellow skin of the fish, without affecting weight gain and feed conversion.

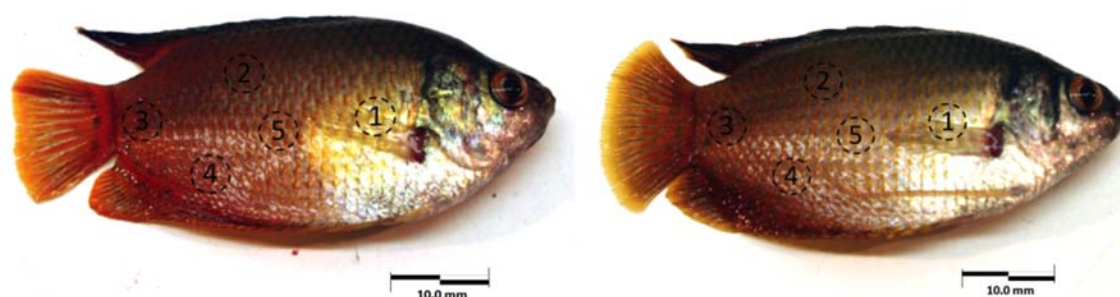


Figure - Ornamental fish dwarf-red gouramy skin pigmentation measurement scheme *in vivo* based on five points (50.3 mm<sup>2</sup> each) identified with circles numbered from one to five, using a portable colorimeter Konika Minolta M-10. The fish on the left is representative of the control treatment and the fish from the right is representative of the treatment that has fed the diet supplemented with bixin (2,890 mg/kg)

Table - Color mean values indexes in the Hunter coordinate system (L\* a\* b\*) and CMYK standard, obtained from dwarf-red gouramy through digital photos with Adobe® Photoshop CS2, CV (%) and adjusted by the respective coefficients of determination (r<sup>2</sup>), depending on bixin level of the diet

Color indexes	Bixin level (X) added to diet (mg/Kg)					CV (%)	Regression equations
	0	719	1.390	2.110	2.890		
L	44.2	44.7	43.6	44.3	44.2	4.52	44.2
a	11.2	10.8	9.3	9.9	9.2	19.61	10.1
b	8.9	8.5	7.5	7.3	8.1	20.75	8.6 - 0.0004.X (r <sup>2</sup> = 0.95)