

PO008 - HEMATOLOGY AND IMMUNOLOGY OF SILVER CATFISH (*RHAMDIA QUELEN*) FED WITH COMMERCIAL OR ORGANIC DIETS IN AGROECOLOGICAL MODEL OF FISH PRODUCTION

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Organic and agroecological production systems are being develop in Brazil in recent years, but fish farming has not followed this process and still in initial stage with no reported areas. Most organic standards, including the Brazilian regulations indicate polyculture as a preferable system and that fish should be fed with organic diets. In this context, there is a lack of information and studies regarding organic feed in aquaculture and its relation to fish health. This study was set out to determine the effects of organic feed of an agorecological system of fish production on silver catfish health condition. Fish were separated in two groups; i) fed with commercial practical diet and ii) fed with organic diet during 12 months in a polyculture system in ponds (1.5 fish/m²). Fish proportion used was 30% of silver catfish (0.23 g of initial weight), 20% of common carp *Cyprinus carpio*, 15% of armored catfish *Pterygoplichthys joselimaianus*, 15% of curimba *Prochilodus lineatus*, 7.5% of silver carp *Hypophthalmichthys molitrix*, 7.5% of bighead carp *Hypophthalmichthys nobilis* and 5% of grass carp *Ctenopharingodon idella*. Silver catfish was sampled 30 days after trial beginning and in the end of experimental period (12 months) for hematological (erythrocyte count, hematocrit, hemoglobin concentration and hematimetric indexes) and immunological (serum lysozyme concentration and leukocyte respiratory burst) parameters. Water temperature ranged between 15.2 to 26.9 °C. Results were submitted to ANOVA. There was no effect (P>0.05) of diet on fish hematological and immunological parameters during trial and remained between physiological values found for *Rhamdia quelen*. In conclusion, agroecological fish production system using organic feed did not impaired fish health and can be suitable for small farmers to improve protein ingestion by the families and improvement of living conditions.