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## Influence of some natural factors on the survival, growth performance and production of European sea bass fish (*Dicentrarchus labrax*) larvae and juveniles

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Addition of different microalgae as green water, *Nannochloropsis salina*, *Isochrysis galbana*, *Tetraselmis chuii*, *Chlorella salina* and a mix of them, to enrich the rearing water during the larval to post-larval stages of sea bass (*Dicentrarchus labrax*) was evaluated in terms of growth, survival and metabolic chemical composition. The present study was carried in Marine Hatchery of NIOF, Alexandria, where first it starts from the third day after hatch till the 45<sup>th</sup> day of aged post-larvae. The results revealed that the user of the *Isochrysis galbana* promoted growth performance by increasing weight gain (WG) to 12.75mg/fish compared with control 10.18mg/fish and also achieved survival percentage 46.08%, which was 20.09% in control group. Moreover, *I. galbana* and mixed algae showed the highest values for protein, lipid and dry matter contents at significance level  $P < 0.05$  compared to the control treatment. Microbiological analysis showed highest total bacterial count in the water containing *I. galbana*, considering this microalga may benefit larvae by producing probiotic as bacterial associated communities that promising green water effect for enhancing the appropriate larval environment, growth and survival of the *D. labrax* larvae during the early larval stage. Secondly, this present study also dealt with weaning period in post larval stages to Juveniles by applying five different treatments of food additives in the diets formulations composed of natural Seafood sources compared to artificial food. (DZ) Zoo control dry feed 45% protein, (DS) dry feed 30% protein, (FF) equal mixture proportions of fresh sardines and squid and crab eggs and decapsulated artemia cysts, (D+A): 80% dry feed (Skretting) dry feed addition to 5% Fish oil (weight of dry feed Hendrix) and 20% decapsulated artemia cysts by on a dry weight basis and (D+C): 80% dry feed (Skretting) dry feed addition to 5% fish oil (from weight Hendrix) +20% Minced crab hydrated by on a dry weight basis. The result revealed a significant difference ( $P < 0.05$ ) in FW and WG between the control basal diet and the other experimental diets. The FW and WG showed the highest value recorded for FF ( $37.34 \pm 0.183$  and  $33.90 \pm 0.18$ g/fish respectively as well as highest survival percentage (100%) while the lowest performance was obtained for (DS) treatment with values  $9.00 \pm 0.317$  and  $5.58 \pm 0.30$  g respectively &  $90.00 \pm 5.774$  % for survival which increased gradually in DZ (control) to  $96.67 \pm 3.333$ %.

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