



Effect of live yeast incorporation in compound diet on digestive enzyme activity in sea bass (*Dicentrarchus labrax*) larvae.

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Yeast produce polyamines, and some strains have a strong adhesion potential to intestinal mucus, an important condition for probiotic efficiency. The aim of this study was to explore an in situ production of polyamines by *Debaryomyces hansenii* HF1 (DH), a yeast strain isolated from fish gut, in comparison with *Saccharomyces cerevisiae* X2180 (SC) (Goteborg University Collection). The production of polyamines by DH was three times higher than that of SC. The main polyamines were spermine and spermidine, produced at a similar level. Both strains adhered to the gut of sea bass larvae. When the yeasts were introduced into a compound diet, the colonization was effective in the larvae (10⁴ CFU g⁻¹ on a body weight basis). The DH diet led to an increase in amylase secretion in 27-day-old larvae in comparison with the control diet. The secretion of amylase and trypsin was lower in the SC diet, and some delay in trypsin secretion was still observed in this group at day 42. At day 27, the activity of brush border membrane enzymes was stimulated by the DH diet, and delayed by the SC diet, in comparison with the control diet. The survival of the larvae was also increased in the DH diet, but the growth rate was lower than that in the control group. This may be due to the introduction of live yeast into the diet, which needs to be optimised.