

EFFECTS OF SALINITY ON GROWTH AND
SURVIVAL OF GEMFROSES: (*Hippocampus kuda*)
JUVENILES

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EFFECTS OF SALINITY ON GROWTH AND SURVIVAL OF SEAHORSES;
(*Hippocampus kuda*) JUVENILES.

By

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Research Report submitted in partial fulfillment of the requirements for
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LIST OF ABBREVIATIONS

%	Percentage
°C	degree Celcius
ppt	part per thousand
cm	centimetre
mm	Milimetre
μm	micrometre

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ABSTRACT

The aim of this study is to assess the suitable rearing salinity for seahorse juveniles. A total of 475 juveniles obtained from four different broodstock were used. All juveniles were allocated from the second day post-hatch to experimental tank of different salinity treatment of 21,24,27,30 and 33 ppt for a period of days. The obtained results show that the suitable salinity deemed for rearing juveniles *H.kuda* was 33 ppt, which produces 67% survival rate. Salinities at 24 ppt, 27 ppt and 30 ppt can also be used in culturing *H.kuda* but it is with significantly lower survival rates. Growth varies for all juveniles at the average standard length of juveniles in 24 ppt were $25.11 \text{ mm} \pm 2.65 \text{ S.D}$, whereas those in 30 ppt was $33.23\text{mm} \pm 3.89 \text{ S.D}$. During the first week of rearing, juveniles of seahorse-recorded mortality almost everyday, which explained their response to the rearing parameter. The survival of juvenile seahorses becomes stable on the second week for most of the batches where it shows that the juveniles are able to adapt to their salinity gradually.

ABSTRAK

Objektif kajian ini adalah bagi memperolehi saliniti yang sesuai bagi penternakan juvenil kuda laut. Sebanyak 475 juvenil diperolehi dari empat induk yang berbeza telah digunakan. Ianya telah diagihkan dari hari kedua dilahirkan dan telah dibahagikan kepada lima tahap kemasinan air yang berbeza iaitu 21, 24, 27, 30 dan 33 ppt bagi tempoh beberapa hari. Keputusan yang diperolehi telah menunjukkan saliniti sesuai bagi penternakan juvenil *H.kuda* ialah 33 ppt yang mencatatkan 67% hidup. Sementara 24 ppt, 27 ppt dan 30 ppt boleh juga digunakan tetapi kadar hidupnya adalah rendah. Tumbesaran berbeza bagi setiap juvenil pada purata tumbesaran keseluruhannya ialah $25.11\text{mm} \pm 2.65$ sisihan piawai, manakala pada saliniti 30 ppt ialah $33.23\text{mm} \pm 3.89$ sisihan piawai. Pada minggu pertama, boleh dikatakan setiap hari ianya mencatatkan kematian dan ini menunjukkan tindakbalasnya terhadap persekitaran. Juvenil yang hidup akan menjadi stabil dan kuat pada minggu kedua. Pada tempoh ini ianya telah mampu menyesuaikan diri secara beransur-ansur pada kemasinan persekitaran.