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High growth rates of Asian seabass (*Lates calcarifer* Bloch, 1790) fry reared using a demand feeder with an image processing system for detecting fish behaviour

By: [Mukai, Y](#) (Mukai, Yukinori) ¹; [Taha, Z](#) (Taha, Zahari) ²; [Ismail, KM](#) (Ismail, Khairul Muttaqin) ³; [Tan, NH](#) (Tan, Nai Han) ³; [Razman, MAM](#) (Mohd Razman, Mohd Azraai) ⁴; [Jizat, JAM](#) (Mat Jizat, Jessnor Arif) ⁴

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Abstract

The feeding behaviour and growth rates of Asian seabass (*Lates calcarifer* Bloch, 1790) fry were studied using a new type demand (NTD) feeder. This feeding system was equipped with a programme to detect hunger behaviour in fish and automatically dispense pellets. This system could overcome hierarchy in fish during feeding. Fish rearing experiments were conducted to compare the NTD feeder with infrared light demand (ILD) and automatic timer (AT) feeders. The specific growth rate of body weight (SGR(BW)) was significantly higher with the use of the NTD feeder than with the ILD or AT feeders. The specific growth rate of total length (SGR(TL)) and feed conversion ratios (FCR) showed no significant differences among the three types of feeders. Fish feeding behaviour experiments were conducted, and the feeding frequencies were compared. The average feeding frequency and feeding amount per day by the NTD feeder were significantly higher than those by the ILD feeder. In the NTD feeder, seabass ate small amounts of pellets with high frequencies at each feeding time. Therefore, high frequency feeding could be one of the reasons for the high growth rates of fish fed using the NTD feeder.

Keywords

Author Keywords: [fish behaviour](#); [images processing system](#); [new type demand feeder](#); [specific growth rates](#)

Keywords Plus: [DAILY FEEDING RHYTHMS](#); [SERIOLA-QUINQUERADIATA](#); [CIRCADIAN-RHYTHMS](#); [SELF FEEDERS](#); [REWARD LEVEL](#); [YELLOWTAIL](#); [TIME](#)



Author Information**Corresponding Address:** Mukai, Yukinori (corresponding author)

- ▼ Int Islamic Univ Malaysia, Kulliyah Sci, Dept Marine Sci, Jalan Sultan Ahmad Shah, Kuantan 25200, Pahang, Malaysia

Addresses:

- ▼ ¹ Int Islamic Univ Malaysia, Kulliyah Sci, Dept Marine Sci, Jalan Sultan Ahmad Shah, Kuantan 25200, Pahang, Malaysia
- ² Dzuki Consultancy & Training DR67, Kampung Kuala Pahang, Pekan, Malaysia
- ▼ ³ Int Islamic Univ Malaysia, Kulliyah Sci, Dept Biotechnol, Kuantan, Malaysia
- ⁴ Univ Malaysia Pahang Pekan Campus, Fac Mfg Engr, Innovat Mfg Mechatron & Sports Lab, Pekan, Malaysia

E-mail Addresses: mukai9166@gmail.com**Categories/Classification****Research Areas:** Fisheries**Funding**

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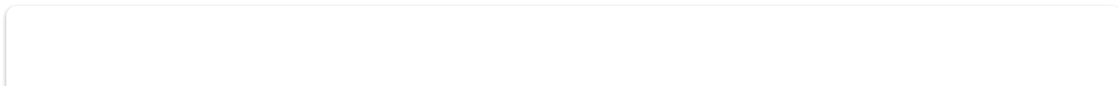
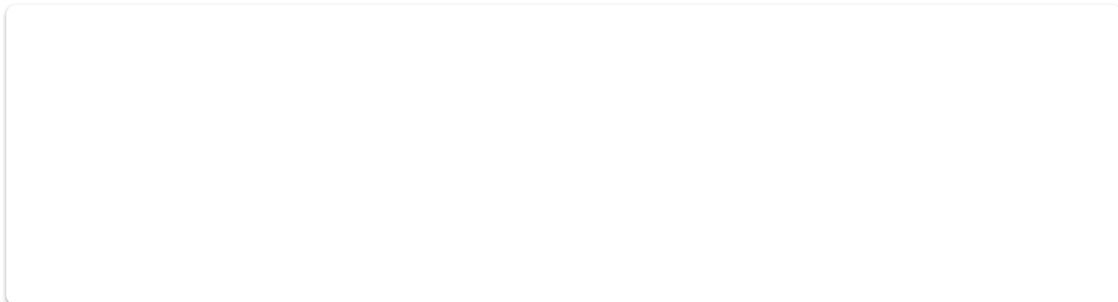
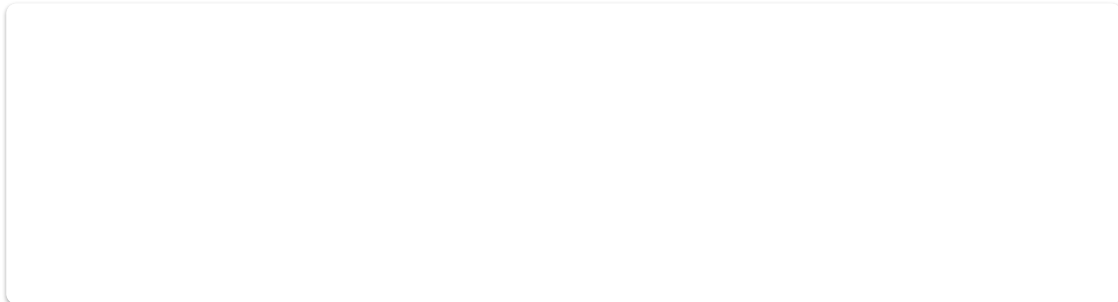
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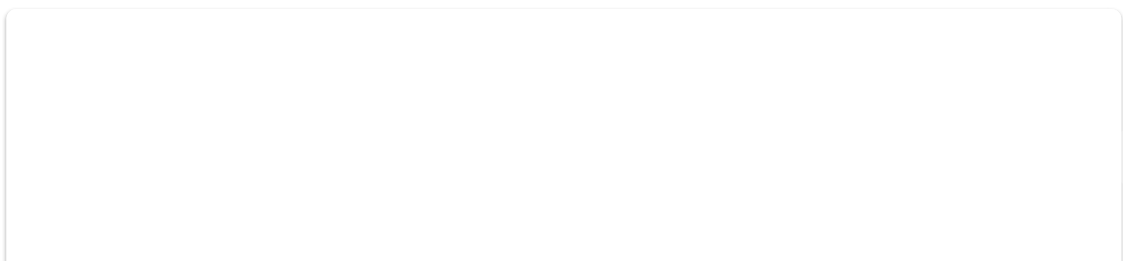
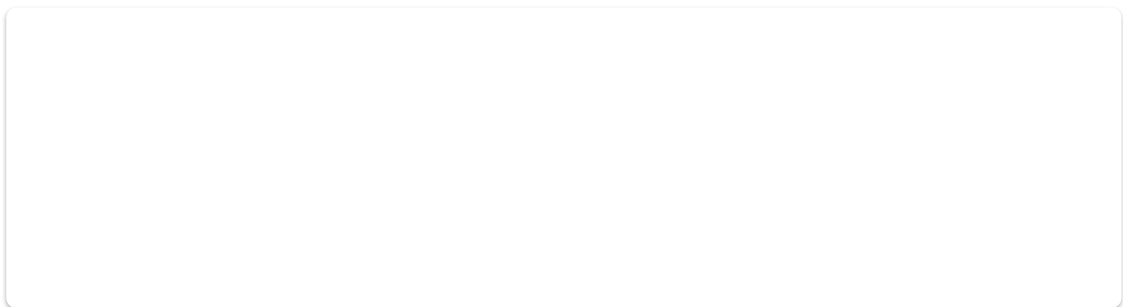
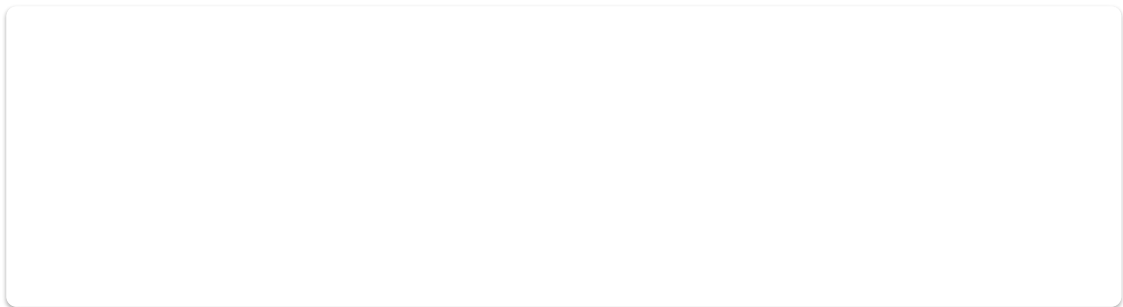
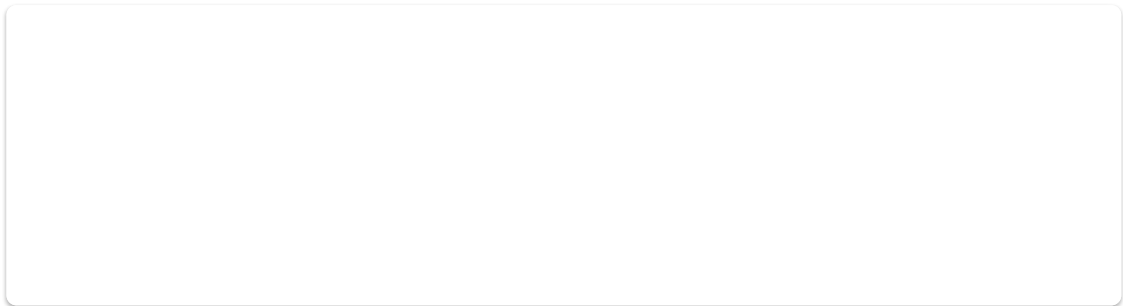
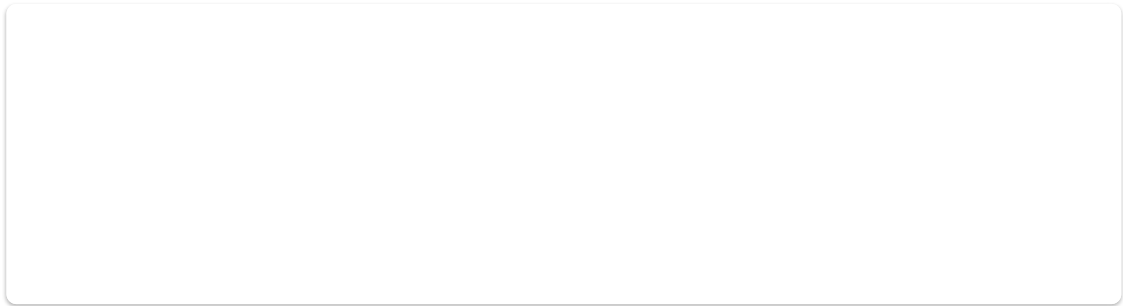
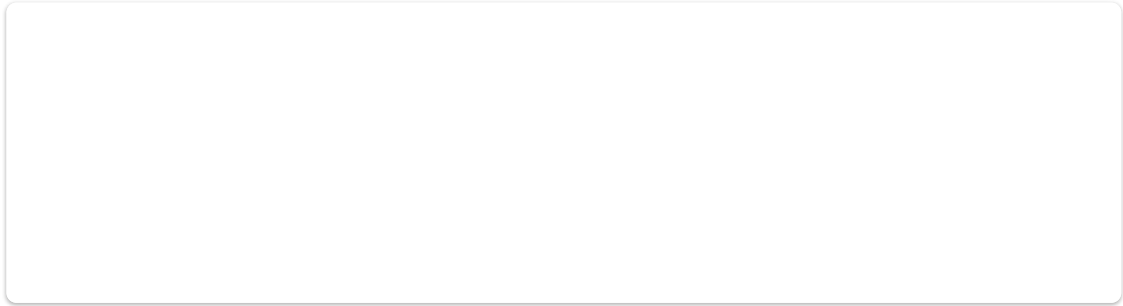
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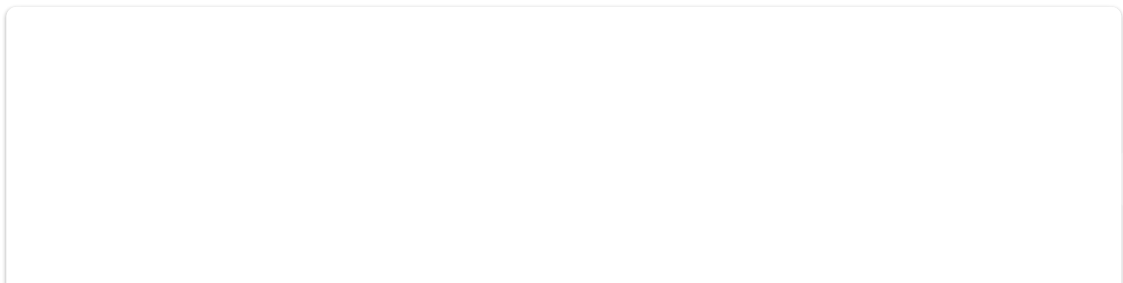
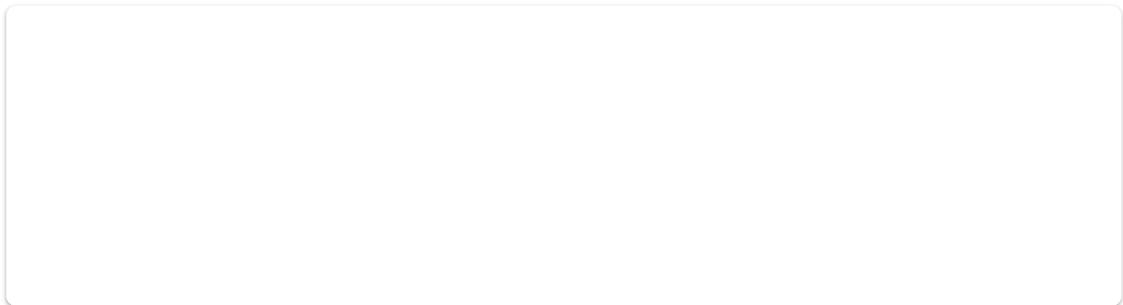
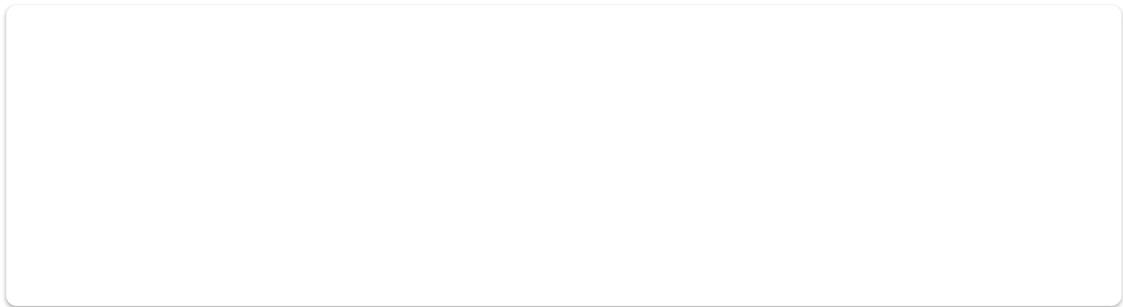
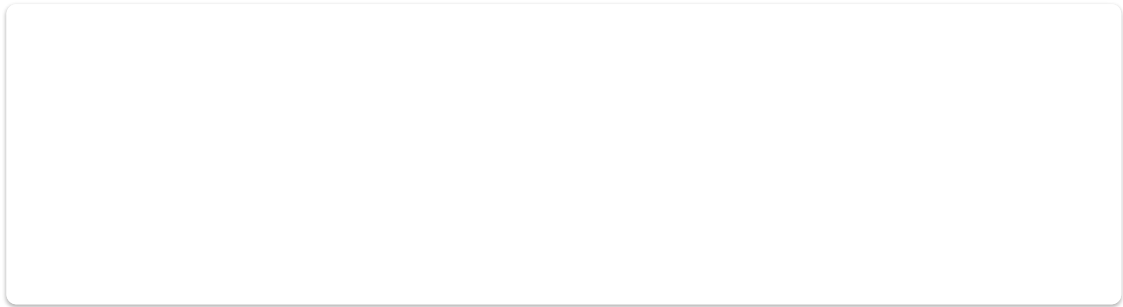
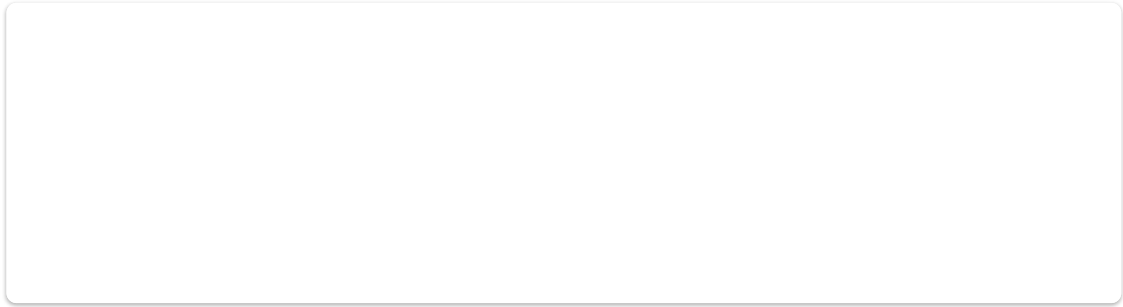
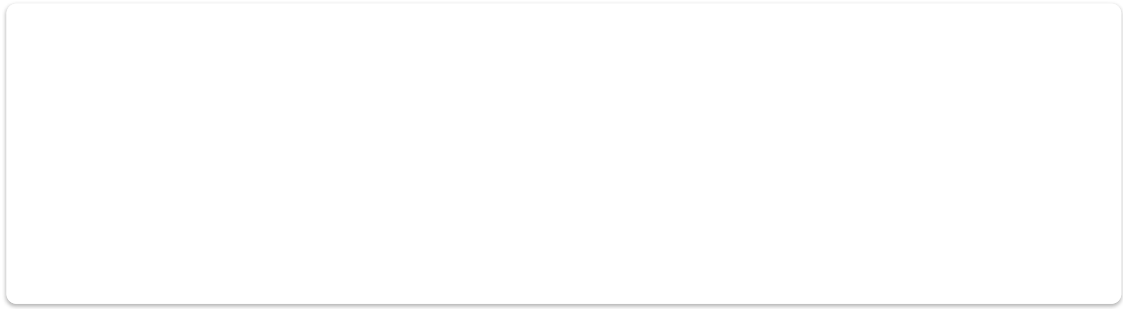
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