

HEAD-STARTING OF RIVER TERRAPINS (*Batagur baska*):  
FEEDING TRIALS OF HATCHLINGS AND JUVENILES

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Chairperson : Professor Chan Eng Hong, Ph.D.

Member : Professor Mohd. Azmi Ambak, Ph.D.

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Growth experiments on the diet, feeding ration, satiation amount, feeding frequency and stocking density, which ranged from eight to 12 weeks were conducted on terrapins aged between two and 20 months old. The terrapins were raised in tanks with complete daily water renewal.

Two- and three-month-old hatchlings recorded a weekly weight gain of 18.04 g, 14.28 g and 13.34 g when fed with Mazuri turtle feed, pelleted frog and tilapia feeds, respectively. There were no significant differences among the treatments, hence tilapia feed is recommended because it is affordable and easily available. The growth of eight, 15 and 20-month old terrapins fed at feeding rations of 1.25, 1.5, 1.75 and 2% body weight of feed did not differ statistically. The eight-month-old terrapins recorded the highest weight gain (an average of 20.62 g per week) when fed with 1.75% of body weight of feed. The 15-month-old terrapins that were fed 2% of their body weight of feed demonstrated the best growth (average weight gain of 15.60 g per week) whereas the 20-month-old terrapins gained an average of 47.85 g per week when fed with 1.25% of their body weight of feed.

Terrapin hatchlings showed better growth when they fed at one feeding, compared to being fed intermittently. Satiation amount of the hatchlings was an average of 23.51 g per week, which could be translated into 1.01% of their body weight. Terrapin hatchlings fed 1% of their body weight of feed twice daily (a total of 2%) recorded the highest weight gain of an average of 14.78 g per week compared to hatchlings that were fed once daily and once in two days.

Finally, terrapins that are stocked at 20 individuals per tank (64.56 g/L) recorded the highest weight gain of an average of 24.04 g per week, compared to terrapins that were stocked at ten individuals per tank (35.38 g/L) and 30 individuals per tank (98.98 g/L). Survival of the terrapins was 100% in all the experiments conducted. The head-starting guidelines presented in the thesis will help to optimize growth of the terrapins in captivity and produce healthy individuals for release. Attainment of rapid growth will also shorten the need to keep them in captivity over extended periods of time.

Abstrak tesis yang dikemukakan kepada Senat Universiti Malaysia Terengganu sebagai memenuhi keperluan untuk ijazah Master Sains.

**PEMELIHARAAN UNTUK PELEPASAN TUNTUNG SUNGAI (*Batagur baska*): PERCUBAAN PEMBERIAN MAKANAN KE ATAS ANAK TETASAN DAN JUVENIL**

**CHEN PELF NYOK**

**March 2008**

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Beberapa eksperimen yang berkaitan dengan pemakanan dan tumbesaran telah dijalankan ke atas tuntung sungai yang berusia dari dua hingga 20 bulan. Setiap eksperimen dijalankan dalam tempoh lapan hingga 12 minggu.

Anak tuntung sungai yang berumur dua dan tiga bulan telah merekodkan pertambahan berat badan sebanyak 18.04 g, 14.28 g and 13.34 g apabila diberi makanan pelet penyusutan Mazuri, pelet katak dan pelet tilapia, masing-masing. Tiada perbezaan yang nyata di antara ketiga-tiga jenis makan tersebut, tetapi pelet tilapia adalah disyorkan kerana ia senang didapati dengan harga yang murah. Tumbesaran tuntung sungai yang berumur lapan, 15 dan 20 bulan yang diberi makanan pada kadar 1.25, 1.5, 1.75 and 2% daripada jumlah berat badan mereka adalah tidak nyata. Anak tuntung sungai yang berumur lapan bulan merekodkan pertambahan berat badan yang paling besar (purata 20.62 g per minggu) apabila diberi makanan pada kadar 1.75% daripada berat badan mereka. Tuntung sungai yang berumur 15 bulan pula menunjukkan tumbesaran yang paling baik (purata pertambahan berat badan sebanyak 15.60 g per minggu)

manakala tuntung yang berumur 20 bulan menunjukkan pertambahan sebanyak 47.85 g apabila diberi makanan pada kadar 1.25%.

Anak-anak tuntung sungai menunjukkan tumbesaran yang lebih baik apabila mereka diberi makanan sekaligus, berbanding dengan pemberian makanan sedikit demi sedikit. Purata tahap kekenyangan pula direkodkan sebanyak 23.51 g seminggu, iaitu sebanyak 1.01% daripada jumlah berat badan mereka. Anak-anak tuntung yang diberi makanan 1% daripada jumlah berat badan mereka sebanyak dua kali sehari (sejumlah 2%) merekodkan pertambahan berat badan yang paling tinggi dengan purata 14.78 g seminggu, berbanding dengan anak-anak tuntung sungai yang diberi makanan sekali sehari dan juga sekali dalam dua hari.

Akhir sekali, tuntung sungai yang diletakkan sebanyak 20 ekor di dalam tangki (muatan sebanyak 64.56 g/L) merekodkan pertambahan berat badan tertinggi dengan purata mingguan sebanyak 24.04 g, berbanding dengan tuntung yang diletakkan sebanyak sepuluh ekor setiap tangki (35.38 g/L) atau 30 ekor setiap tangki (98.98 g/L). Panduan yang disyorkan dalam tesis ini akan membantu mengoptimumkan tumbesaran tuntung sungai di dalam kurungan serta menghasilkan tuntung sungai yang sihat untuk dilepaskan. Tumbesaran yang optimum pula akan memendekkan tempoh masa tuntung tersebut dijaga di dalam kurungan.