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## RESEARCH REPORTS

Sustainable Aquaculture for a Secure Future

**Title:** Effects of selective harvesting and claw ablation of all-male freshwater prawn (*Macrobrachium rosenbergii*) on water quality, production and economics in polyculture ponds

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**Abstract:** The effects of selective harvesting (SH) and claw ablation (CA) of blue-clawed (BC) prawns on an all-male freshwater prawn-finfish polyculture system were compared with control (Co) in quadruplicate. Ponds were stocked with all-male freshwater prawn *Macrobrachium rosenbergii*, silver carp *Hypophthalmichthys molitrix*, catla *Catla catla* and mola *Amblypharyngodon mola* at 12000, 2000, 500 and 20 000 ha<sup>-1</sup> respectively. Prawns were fed with pelleted feed. Ponds were fertilized regularly with urea, triple super phosphate and cow-dung. SH of BC prawns in treatment SH and CA in treatment CA started on the 60<sup>th</sup> day during a 137-day culture and continued at 15-day intervals until the final harvest. Water quality parameters and plankton abundance did not vary significantly ( $P > 0.05$ ) among the treatments. Treatment SH resulted in a higher ( $P < 0.05$ ) net production of freshwater prawn (437 kg ha<sup>-1</sup>), with better survival and mean weight, followed by CA (354 kg ha<sup>-1</sup>) and Co (322 kg ha<sup>-1</sup>). The combined net production of prawn plus finfish was also higher in SH (1244 kg ha<sup>-1</sup>) as compared with CA (1161 kg ha<sup>-1</sup>) and Co (1137 kg ha<sup>-1</sup>), although the finfish production did not differ significantly. The periodic SH of BC prawns showed a better economic return with a BCR of 1.71.

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