## NOTICE OF PUBLICATION



AQUACULTURE & FISHERIES INNOVATION LAB

## 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

Author(s): Sheikh Md. Shamsur Rahman<sup>1</sup>, Md. Abdul Wahab<sup>1</sup>, Md. Ashraful Islam<sup>1</sup>, Mrityunjoy

Kunda<sup>1</sup>, Md. Ekram Azim<sup>2</sup>

1. Department of Fisheries Management, Bangladesh Agricultural University (BAU), Mymensingh, Bangladesh

2. Department of Physical and Environmental Sciences, University of Toronto, Toronto, ON,

Canada

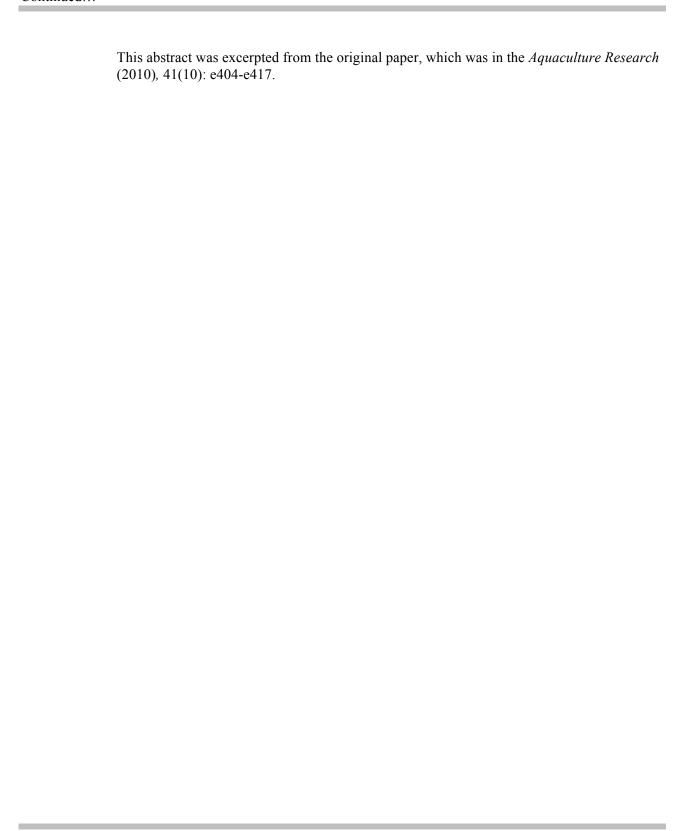
Date: 05 September 2017 Publication Number: AquaFish Research Report 10-A09

AquaFish will not be distributing this publication. Copies may be obtained by writing to the authors.

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 a137-day culture and continued at15-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 (1161kg 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 of1.71.

**AQUAFISH RESEARCH REPORTS** are published as occasional papers by the Management Entity, AquaFish Innovation Lab, Oregon State University, Corvallis, Oregon 97331-1643 USA. The AquaFish Innovation Lab is supported by the US Agency for International Development under Grant No. EPP-A-00-06-00012-00. See the website at <aquafishcrsp.oregonstate.edu>.



**AQUAFISH RESEARCH REPORTS** are published as occasional papers by the Management Entity, AquaFish Innovation Lab, Oregon State University, Corvallis, Oregon 97331-1643 USA. The AquaFish Innovation Lab is supported by the US Agency for International Development under Grant No. EPP-A-00-06-00012-00. See the website at <aquafishcrsp.oregonstate.edu>.