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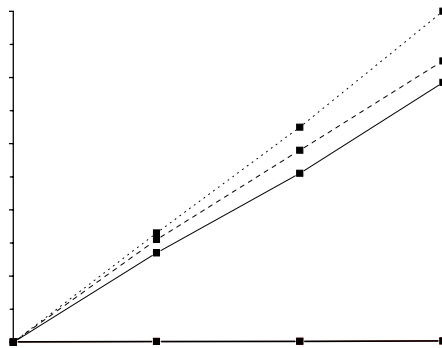
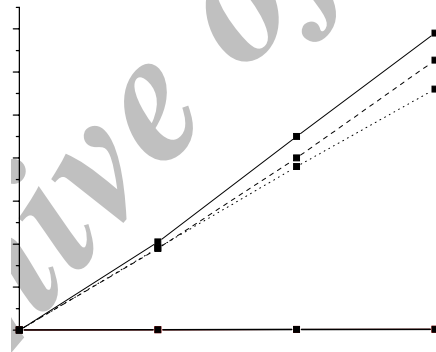
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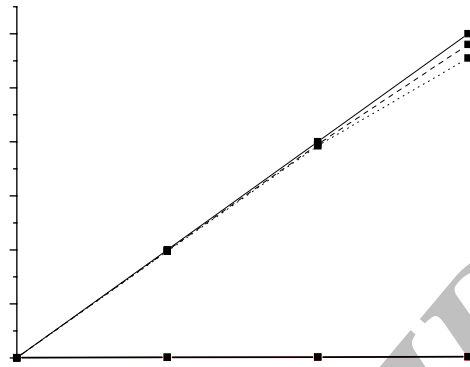
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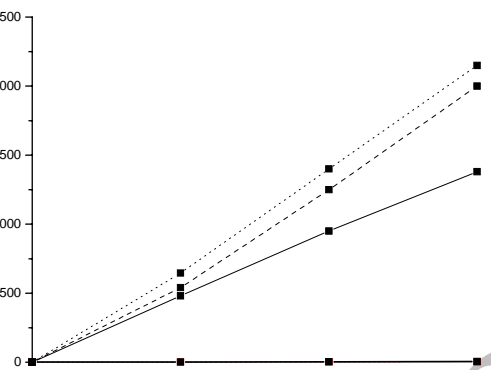
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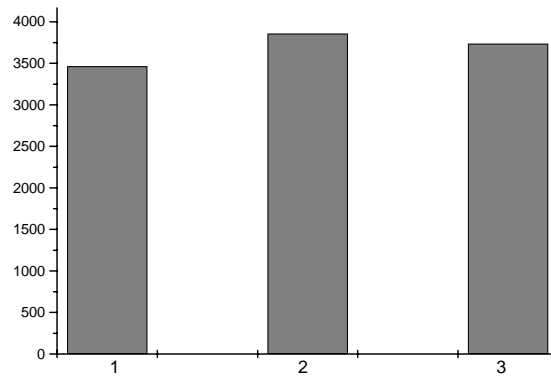
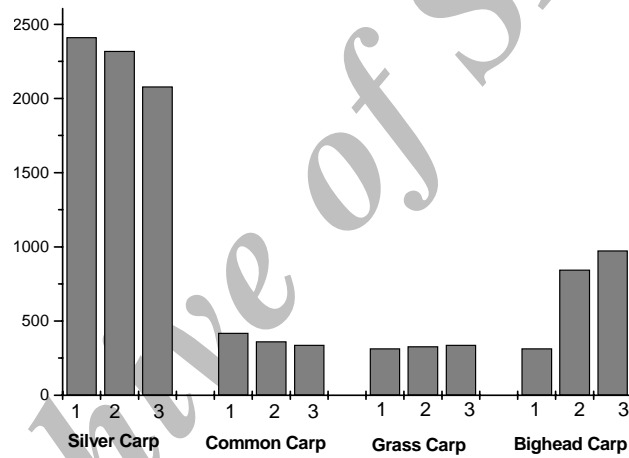
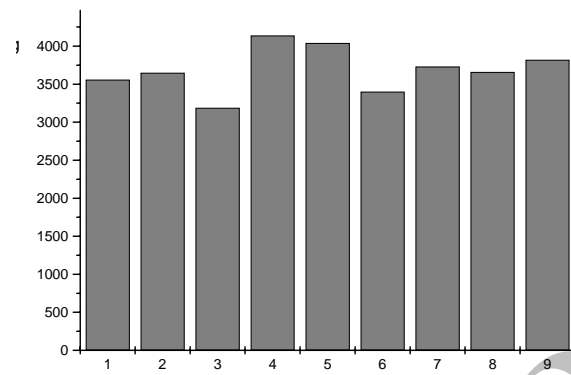
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3. Horvath, L. & G. Tamas & I. Tolg. 1984. Special Methods in Pond fish Husbandry. Halvar Corporation, Seattle, WA, 146pp.
 4. Lannan, E. & R. Smitherman & G. Tchobanoglous. 1986. Principles and Practices of Pond Aquaculture. Oregon State University Press. 252pp.
 5. Rath, R.K. 1993. Freshwater Aquaculture. Scientific Publisher. 493pp.

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Effect of Species Combination on Growth and Yield of Cultured Carps

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G. Azari Takami²

Abstract

In a combined species method of carp fish production, the effect of species combination (other culture conditions unchanged) on growth and final yield was tested. A polyculture of silver, common, grass and bighead carp was employed. Feeding was established on the basis of natural food. Three combinations (treatment) of the above mentioned fish species were selected respectively consisting of silver carp, common carp, Grass Carp, and Bighead carp, with respective ratios as follows: 70%, 15%, 10%, 5% for the first treatment, 60%, 15%, 10%, 15% for the second treatment; and 50%, 15%, 10%, 25% for the third treatment. Each treatment was replicated in 3 ponds (9 ponds in total). Species percentage of Grass Carp and Common Carp has been equal in all treatments. A decrease in silver carp percentage went together with a decrease in Bighead Carp percentage in combinations. Final growth differences ($P < 0.01$) for species have only been significant for Bighead carp with other species not having exhibited a significant difference. Also, there was not a significant difference ($P < 0.01$) observed in final yield. Because of severe reduction in individual growth of Bighead Carp in the third treatment (Profitability reduction) along with more final yield in the second treatment as compared with other treatments, species combination percentage in the second treatment resulted in better growth, leading to the best production ponds (with constancy other culture conditions).

Keyword: Fish culture, Species combination, Polyculture, Common Carp, Silver Carp, Bighead Carp, Grass Carp.