Comparison of electrophoretic allele frequencies and genetic variability of common carp stocks from Indonesia and Japan

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Abstract

Allele frequencies and genetic variability of six stocks of common carp collected from Indonesia and three stocks from Japan were evaluated. Twenty-three loci were identified from 11 enzyme and protein systems. Five loci were polymorphic for the Indonesian stocks and eight loci were polymorphic for the Japanese stocks. PGM, EST and GPI were useful for comparison between the Indonesian and Japanese stocks as well as stocks from Europe and China. In general, genetic variability of the stocks from Japan was higher than that of stocks from Indonesia. The genetic distance between pairs of stocks, based on 23 isozyme and protein loci, showed distinct genetic differentiation between Japanese and Indonesian stocks. The sources for the Japanese and Indonesian common carp are discussed in relation to the European and Chinese common carp.