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Sustainable Aquaculture for a Secure Future

Title: Water quality in ponds

Author(s): J. S. Diana[1], J. P. Szyper[2], T. R. Batterson[3], C. E. Boyd[4], R.H. Piedrahita[5]

1. School of Natural Resources and Environment, University of Michigan, Ann Arbor, Michigan
2. Hawaii Institute of Marine Biology, University of Hawaii at Manoa, Kaneohe, Hawaii
3. North Central Regional Aquaculture Center, Michigan State University, East Lansing, Michigan
4. International Center for Aquaculture and Aquatic Environments, Department of Fisheries and Allied Aquacultures, Auburn University, Alabama
5. Department of Biological and Agricultural Engineering, University of California at Davis, Davis, California

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Abstract: The various chemicals dissolved in the water, as well as the temperature and other physical attributes of water, all combine to form what is called water quality. For aquaculture systems, changes in water characteristics that improve the production of an aquatic crop would be considered improvements in water quality, while those changes reducing production would be considered degradation of water quality. This definition is important in aquaculture, because the utilization of water to grow aquatic crops at high densities often results in chemical attributes which, by environmental standards, may be considered reductions in water quality. Unless these changes reduce the production, safety, or value of the target organism, they would not be considered degradations of water quality for aquaculture purposes. Good water quality characteristics will be considerably different for some species than for others. Characteristics that enhance production of tilapia might be detrimental to species such as rainbow trout. Species are often chosen for aquaculture because of their tolerance to poor water quality (Chapter 8). Thus, water quality must be viewed in the context of the species cultured. This chapter reviews the quality of water in relation to production of tilapia in semi-intensive to intensive ponds.

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