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Sommario/riassunto

The efficient and profitable production of fish, crustaceans, and other aquatic organisms in aquaculture depends on a suitable environment in which they can reproduce and grow. Because those organisms live in water, the major environmental concern within the culture system is water quality. Water supplies for aquaculture systems may naturally be of low quality or polluted by human activity, but in most instances, the

primary reason for water quality impairment is the culture activity itself. Manures, fertilizers, and feeds applied to ponds to enhance production only can be partially converted to animal biomass. Thus, at moderate and high production levels, the inputs of nutrients and organic matter to culture units may exceed the assimilative capacity of the ecosystems. The result is deteriorating water quality which stresses the culture species, and stress leads to poor growth, greater incidence of disease, increased mortality, and low production. Effluents from aquaculture systems can cause pollution of receiving waters, and pollution entering ponds in source water or chemicals added to ponds for management purposes can contaminate aquacultural products. Thus, water quality in aquaculture extends into the arenas of environmental protection and food quality and safety. A considerable body of literature on water quality management in aquaculture has been accumulated over the past 50 years. The first attempt to compile this information was a small book entitled *Water Quality in Warmwater Fish Ponds* (Boyd 1979a).
