

Improving Traditional Methods of Handling Fish from Integrated Pond Culture Systems in Monai Village, New Bussa, Nigeria

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Abstract : The study assessed the quality changes of *Clarias gariepinus* obtained from integrated culture systems (rice, poultry and fish) which were displayed at 31-33°C average daily temperature on the traditional market table used by local fish farmers to sell fish harvested from their ponds and those on an improved table designed for this study. Unlike the conventional table, the improved table was screened against flies and indiscriminate touch by customers. The fishes were displayed on both tables for 9 hours and quality attributes were monitored hourly by trained panelists. For *C. gariepinus*, the gills, and intestine recorded faster deterioration starting from the fourth and fifth hours while those on the improved table were prolonged by one hour. Scores for skin brightness and texture did not indicate quality deterioration throughout the display period. However, at the end of the storage time, samples on the improved table recorded 1.5×10^4 cfu/g while samples in unscreened table recorded 3.7×10^7 cfu/g. The study shows how simple modifications of a traditional practice can help extend keeping qualities of farmed fish, reduce health hazards in local communities where there is no electricity to preserve fish in whatever form despite a boom in aquaculture. Monai community has a fish farm estate of over 200 small holder farmers with annual output capacity of over \$10 million dollars. The simple improvement made to farmers practice in this study is to ensure Community hygiene and boost income of peasant fish farmers by improving the market quality of their products.

Keywords : fish spoilage, improved handling, income generation, retail table

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