

Shelf Life Study of Acid Added Silage Produced from Fresh Water Fish Dressing Waste with and Without the Addition of Antioxidants

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Abstract India accounts for 4.4% of the global fish production. Indian Aquaculture, which is dominated by carps, is highly promising and has grown over six and half fold in the last two decades with freshwater aquaculture contributing over 95% of the total aquaculture production. It is estimated that only 25-50% of the raw material is utilized for human consumption. The remaining 50-75% of the raw material is considered processing waste and can be utilized for low-valued products. Fish silage is a liquid product made from whole fish or parts of fish that are liquefied by the action of natural enzymes in the fish, in the presence of an added acid. It can be used as a feed supplement for fish, livestock and poultry or also as a fertilizer. Acid silage was prepared from the dressing waste of fresh water fishes with (Formic acid+Hydrochloric acid+Butyl Hydroxy Toluene (FHB)) and without (Formic acid +Hydrochloric acid (FH)) the addition of synthetic antioxidant Butyl Hydroxy Toluene (BHT). The Biochemical, microbiological and nutritional quality of the silages were compared. The addition of antioxidant did not significantly ($p>0.05$) alter the proximate composition of the silage (FHB). The addition of BHT significantly reduced the rate of oxidation in FHB. The synthetic antioxidant was not found to significantly reduce the production of volatile bases and also the microbial load.

Keywords: silage, antioxidants, dressing waste, fresh water fish, shelf life