

growth and yield parameters; plant height, number of branches, leaf lamina length, leaf lamina width, number of fruits, length of fruits and fresh weight of fruits, average yield, number of seeds/fruit, seed weight and biomass of plants were taken. Results showed that cowpea performed best with the enriched vermicompost in terms of average yield of fruits (1046.3 g), plant height (114.2 cm), total number of branches/plant (13.4), weight /fruit (4.41 g), number of seeds/fruit (10.5), weight of seeds (4.41 g/10 seeds). The average yield of treatment T2 was 17.96% higher than that of T1. Cow pea plants given inorganic fertiliser had a better biochemical profile with higher total chlorophyll (37.52 mg/g) and carotenoid (1.497 mg/g) content than the organic manure treated plants. It was concluded that enriching vermicompost with fish silage is a potential option for improving the nutrient content of the vermicompost, resulting in higher crop production by converting fish waste into a useful by product

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Effect of high pressure processing on textural and functional modification in fish mince based products

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The volumetric generation of heat energy inside the food during thermal processing had direct implication on the freshness and quality of the food. So the advent of High pressure processing for microbial inactivation has been extended towards the development of new/ improved products with more natural freshness and taste through textural and functional modification. The effect of high

pressure processing was studied on fish mince and mince based products against the conventional heat treatment. Pink perch mince was treated at high pressures (200, 400 and 600 MPa) for 10 min and compared against cooked mince. Gel strength increased in higher pressures (>200 MPa), however lost on reheating, whereas 200 MPa treated gels showed similar gel strength as that of conventional heat induced after reheating. When pressure <400 MPa was applied on mince, no significant loss in functionality of protein was observed, but >400 MPa, pressure had similar effect as cooking. Changes in protein conformation were minimum at 200 MPa. Cooked and 600 MPa treated ones showed yield viscosity, due to random aggregation of protein, which showed thinning behavior on further shearing. Microbiologically 2-4 log reduction was achieved in pressure treated samples. When Pink perch sausages were treated at high pressure, the pressure induced gels formed were observed to be softer and glossier than heat induced gels, with a maximum microbial log reduction at 600 MPa. The sausage texture was modified to softer, cohesive and less chewy and gummier than heat treated one. A similar textural modification was achieved at 250 MPa (10 min), when microbial transglutaminase was used. A better quality retention and increased shelf life was observed in other mince based products like fish balls and fish ham when high pressure processed at 400 & 500 MPa for 15 min.

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Outlining the metabolic versatility of a commercial waste composting consortium to find its lacuna for fish waste management