

Crustacean shell waste as a potential feed material

ABSTRACT

Crustacean wastes are waste products collected from marine industry. This review includes fundamental studies of crustacean waste such as protein, carotenoid and lipid including chitin and natural pigment named astaxanthin. Crude protein in crustacean shells like shrimp shell at 27.23%, crab shell (25.98%) and lobster shell (23.24%) are indicators that crustacean waste can be further developed as essential support feed in industries. Astaxanthin from carotenoid group is the most important property of crustacean waste that can provide red colour pigment besides acts as precursor for mechanism of vitamin. Astaxanthin is a natural source that can provide secondary protein source to livestock and fish as it can replace synthetic colour used today with natural pigment colour for ornamental fish that provides fancy skin colors that could increase market value. Extracts from crustacean waste too could provide benefits to pharmaceuticals industry such as source for cosmetics and health supplement. Astaxanthin in crustacean waste is also an immune system booster that contains high antioxidant. Natural astaxanthin extracts too has potential as an alternative colour source that could replace synthetic colors in feeds for ornamental fish.