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AGRO-INDUSTRIAL WASTE WATER CLEAN-UP: RECOVERY OF NUTRIENT LOAD BY FERMENTATION

Andrew G. M. Pearson
The University of the West Indies, Mona Campus, Jamaica

Industrial processing of agricultural products inevitably results in wastes which are now more properly regarded as sources of potential co-products. Indeed recovery of such co-products from waste streams reduces the nutrient load where the end-of-pipe meets its receiving waters, thus reducing eutrophication and other forms of environmental nuisance which increasingly attracts punitive fines meted out by Government agencies, and can also result in loss of sales.

Our laboratory has investigated the recovery of some of the nutrients from rum distillery and citrus factory liquid waste streams using microorganisms, and produced lipids and polysaccharides including polyhydroxy butyrates, which are increasingly being viewed as possible contributors to a solution of the environmental accumulation of waste plastics.

Keywords: Nutrient removal, Waste streams, Cost recovery, Microbial products

andrew.pearson@uwimona.edu.jm