

Case Study on usage of polythene bags in super markets of Colombo metropolitan and finding an alternative

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Polyethylene bags since their emergence in the 1940s, is an incredibly useful, highly convenient, strong and inexpensive, to both customers and businesses as a reliable way to deliver goods from the store to home. According to statistic, 20 billion polythene bags are being used per day in Sri Lanka. This creates massive amount of non-biodegradable waste which poses a huge threat to human, animal and the environmental health. This study was conducted with the primary objective of evaluating the current usage of polythene in super markets of Colombo District and to find alternatives to minimize the usage of polythene bags in super markets. Primary data were gathered by a questionnaire survey carried out among the four major super market chains as in Cargills Food City, Keells Super, Arpico Super Centre, Laugfs Supermarket to understand the usage of the polythene bags. Secondary data were gathered from observations, discussions, books, electronic media and other sources. Some paper bag alternatives were made; Cement Paper bag with oil paper coating, Cement Paper bag with corn husk as the bottom, Cement Paper bag with oil paper layering and Cement Paper bag with banana tree bark at the bottom to test the mechanical properties and feasibility of the option. The results from the Market survey signifies that averagely around 8 million of polythene bags are issued per month by all the outlets in Colombo district by each super market category. Therefore, study findings revealed that out of the four types of alternatives tested Cement Paper bag with banana tree bark at the bottom would be the best option as it showed the greatest mechanical properties. When look in to the cost associated with the production, all the four types of bags would have to bear the coat of 6.75 to 7.00 LKR. Therefore, Cement paper bag with banana tree bark at the bottom would be the ideal replacement for polythene bags use to pack different types of dry vegetables and food.

Keywords: Polyethylene bag, non-biodegradable waste, super markets, paper bag