

WASTE MINIMIZATION OF POULTRY FEED PROCESSING THROUGH CLEANER PRODUCTION

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ABSTRACT

Cleaner Production (CP) need for a company to succeed in reducing cost, increase productivity, and minimize pollution and production waste. Cost of production can reduce through minimizing of waste in terms of material and energy. In the source of identification, waste and emission sources within the premises were identified. Employees involved in different sections were interviewed and waste process steps were identified. Process flow diagram was constructed as prerequisite for source inventory. Each of the operation unit was studied carefully for identification of waste generation. Finally CP options were suggested to improve work practices and proper maintenance. CP techniques were proposed to improve poultry feeds processing steps. CP options and techniques optimize existing process. Moisture losses in raw material occurred in ware house and silo storage. High moisture losses recorded in rice polish (new crop) during ware house storage (1.30 %). Moisture variation recorded in corn and wheat during silo storage. Due to main types of packing material approximately 11500 Kg of waste were recorded. In the machinery operation trace line waste was high (16374.99 Kg and 46.54 %). Losses were occurred though product filling. Filling of Broiler starter of 50 Kg bags shows 0.04 % variance and filling of acco layer grower of 25 Kg bags shows 0.045 % variance among the samples. By applying the cleaner production concepts to the poultry feed manufacturing process additional benefit can be gain through sale of waste packing material to recycler and also minimize the labor cost for waste management. Through CP can minimize waste generation due to raw material spoilage and moisture losses during silo storage through aeration process. Increase labor efficiency, dumping rate, maintain the storage condition of ware houses were the other achieved advantages of CP concept.

Key words: Poultry feed, Cleaner production, Material balance, Moisture losses