RICE HUSK AS TOOL FOR LOSS MINIMIZATION IN RICE PROCESSING INDUSTRY

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ABSTRACT

Rice is a cereal grain and most important staple food for a large part of the world's human population. This study determines the possibility of applying chemical extraction technology for profit maximization in Ceylon rice industry. Selected chemical extraction technology for this study was the extraction of amorphous silica compound from the byproduct of rice husk which has various applications. This technology is a value addition to the rice husk which is at present discarded. Technical feasibility of production technology, market feasibility of the product and financial feasibility for a pilot scale plant.

The technical feasibility of production technology was determined by studying the information about the extraction procedure, equipment and technology, utilities and supportive services needed. This technology was a amorphous silica extraction method and then purification it by using relevant technology. This has been a proven technology and the study revealed that there are Sri Lankan companies who could fabricate a production facility successfully.

According to the market feasibility study, the industry is high demanded industry and India and China dominantly the export market while European countries are main buyers.

According to the financial feasibility study conducted for a pilot scale plant of a capacity of 225,000 kg/yr, cost benefit ratio was 3.43 and these promising financial indictors revealed the financial feasibility of the project.

Key words: Amorphous silica, extraction technology, technical feasibility, market feasibility, financial feasibility