PALM OIL EXTRACTION TECHNOLOGY

Brief Techno Economic Profile:

Oil palm is a new crop to our country and is the highest oil yielding crop, gives about 20 tonnes of oil per hectare. Unlike other oils, palm oil is taken from the fresh fruit and hence the extraction process involves many unit operations. Moreover the fruits have to be processed within 24 hours from hasrvest and during harvest the damage to the fruit has to be minimal otherwise the oil quality will be bad. This necessitates captive process unit for oil palm plantation. Considering these requirements and the land holding pattern, we had designed a 2.5 ton expandable to 5.0 ton and 5.0 ton expandable to 10.0 ton FFB/hr processing plant and commercialized the technology through project engineering companies. The process efficiency and product quality are comparable with international standards. 2.5 ton mill can cater to the need of 500 hectares and other capacity plants can cater the needs accordingly.

Scale of Validation:

Commercial plants have been established based on this technology. Our process efficiency and product quality was same as the competitors and our plant and machinery & utilities package was comparatively better but 2/3rd of the competitor's cost. We are trying to improve the package still better.

Impact of the technology:

This was a major successful programme supported by Technology Mission on Oil seeds (TMOP). The objective of TMOP was to promote high yielding oil crops to bridge the gap between demand and supply of edible oil. Oil palm was identified as the potential crop. Since oil palm is not a saleable commodity and palm oil is the primary saleable product, there was need to have palm oil extraction technology to promote oil palm cultivation in the country. CSIR, through NIIST, Trivandrum had developed the palm oil extraction technology and commercialized the same and demonstrated to the farmers at field level, which catalysed the oil palm development in the country.



PALM OIL MILL