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Effect of storage period on soaking time of paddy during parboiling.

Parboiling of paddy involves a number of processes, the first of which is the soaking of paddy in hot or cold water. Many workers have observed differences in the soaking time required for parboiling with aging of paddy. Experiments were conducted at the Rice Processing Research & Development Anuradhapura, Sri Lanka to determine the effect of period of storage on soaking time required for parboiling using two paddy varieties commonly grown in Sir Lanka.

They were BG 300 (long white grain)and 450 (short white grain). The soaking time required to hydrate the grains from 14 to 30% (wb) varied significantly with period of storage for the two paddy varieties tested up to a storage period of twelve months. In the long grain variety this significant difference in the soaking time was observed from two weeks onwards. On the other hand, in the short grain variety a significant effect in the soaking time was observed only after 2 months of storage. Determination of optimum soaking time is important not only minimize leaching losses and improve the grain quality but also reduce the overall processing time and thereby reduce processing cost.

The non-linear model $Y=ax^b$ was used to fit the experimental data. Where Y is the duration of soaking in hours and X is the storage period in weeks. A, b were the parameters estimated according to the equation, $Y=70x^{-0.0987}$, R-squared = 80.03 percent and $Y=26.688x^{-0.0987}$, R-squared =80.03 percent and Y= 26.68x, R-squared =90.33 percent can be proposed to Bg 300 and Bg 45 respectively which co-relation the period of storage up to 48 weeks with the duration of soaking.