



ROHINI

COLLEGE OF ENGINEERING AND TECHNOLOGY

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DEPARTMENT OF AGRICULTURAL ENGINEERING

AI3601 POST- HARVEST TECHNOLOGY

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Drying

Drying is the process of removal of excess moisture from the grains.

Once dried, the rice grain, now called rough rice, is ready for processing.

Proper drying results in increased storage life of the grains, prevention of deterioration in quality, reduction of biological respiration that leads to quality loss of grains, and optimum milling recovery.



Methods of drying

Sun drying

Mechanical drying

Chemical drying



Sun Drying

Sun drying is a traditional method of drying the paddy grains. Sundrying is the most economical method of drying grains.

Grains are spread on drying surfaces such as concrete pavement, mats, plastic sheets and even on fields to dry naturally.



Mechanical Drying

Mechanical drying process means drying the grains by ventilating natural or heated air through the grain mass to get it evaporated the moisture from it.

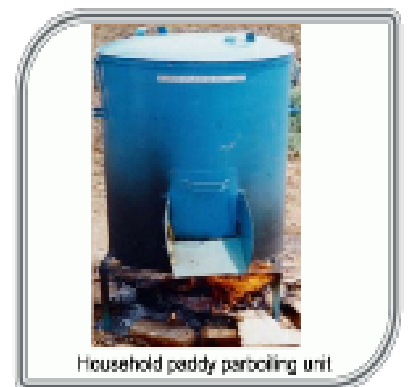
Mechanical dryers are more reliable since drying could be done anytime of the year.



Chemical Drying

Chemical drying method involves the spraying of common salt solution with specific gravity of 1.1 to 1.2 on the ears of the mature paddy crop.

This treatment reduces the moisture content from 29% to 14.5% after four days.



Parboiling

Parboiling is a premilling hydrothermal treatment given to unhulled rice (rough rice) to improve its milling quality, nutritive value, cooking quality and storability.

The process is accomplished in three steps: soaking, steaming and drying.

Traditionally, parboiling was done either by single or double boiling method.

Single boiling method involves soaking the unhulled rice in water at room temperature followed by open steam for 20-30 minutes using iron kettles and then sun drying. In double steaming method, the unhusked rice is steamed to raise its temperature and then soaked in

water for 24-36 hrs. After soaking, it is steamed se time for 20-30 minutes followed by sun drying.