

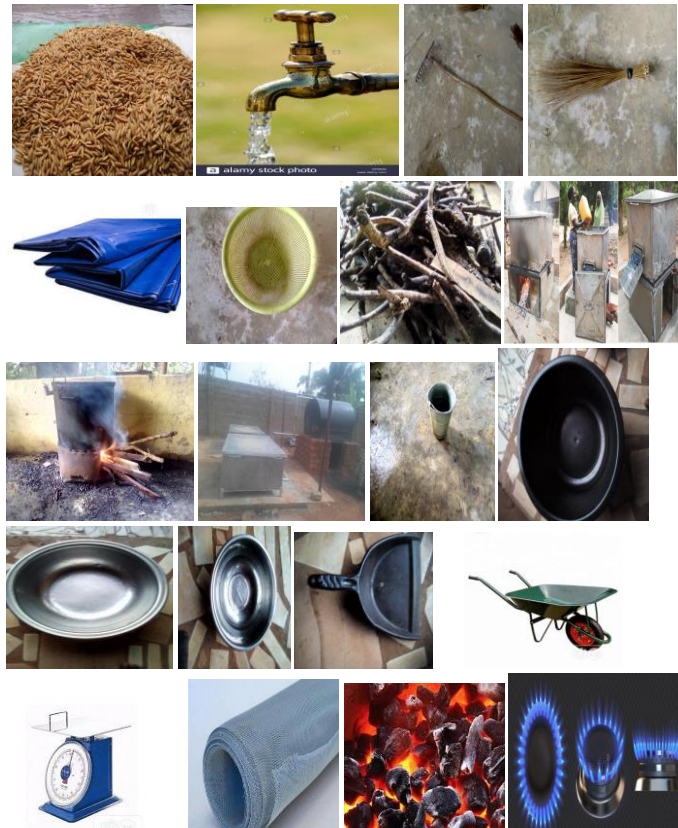
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IMPROVED RICE PARBOILING TECHNOLOGY

FACILITIES REQUIRED

- Paddy Rice
- Water
- Rake
- Broom
- Tarpaulin/Drying slab
- Sieves
- Firewood
- Soaking tank
- Steaming tank
- Buckets
- Basins different sizes
- Parker
- Wheel barrow
- Scale/ weighing balance
- Empty Sacks
- Wire net or mesh
- Other sources of fire



STEPS IN IMPROVED PADDY RICE PARBOILING

STEP ONE: WET-CLEANING

Pour paddy rice into a tank containing water, stir, and remove floating ones. These impurities lower the quality of the product and a focal point for potential infestation.



STEP TWO : SOAKING

Paddy rice is soaked in hot water at a temperature of between 70 -75o C for 5- 8 hours before steaming depending on the variety. The use of hot water reduces

the incidence of aflatoxin contamination during soaking.



STEP THREE: SECOND WASHING



STEP FOUR: STEAMING

Steam cooks the rice starch in the kernel to a level that it will swell irreversibly and lose its crystal nature. Steaming operation should be done 25-35 minutes to maintain the normal colour of the milled rice.

During the steaming the water soluble nutrients are pressed into the rice endosperm and are sealed in the grain.

Non-uniform steaming results in uneven product quality and breakages.



STEP FIVE: DRYING

Use a cleaned drying floor or tarpaulin, then the parboiled rice be spread either on thin layer or thick layer depending on the weather and raked or turned at intervals to allow even drying. Avoid continuous and rapid drying of parboiled paddy rice in the sun



STEP SIX: TEMPERING

Allow the grain to cool after drying before milling. This allows the moisture at the centre of the grain migrate outside thereby equalizing the moisture within and outside the grain, which prevent breakages during milling.



STEP SEVEN: MILLING

Milling is usually done when paddy is dry (about 14%). Wet soft grain will be powdered. It involves dehushing and polishing of rice. Very dry brittle grain will break and produce broken and powdery materials during the milling operations. The milling has to be accomplished with care to prevent excessive breakage of the kernel and improve the recovery of the head rice. To recover the maximum amount of endosperm or edible portion of rice grain with none or minimum broken is the main objective of rice milling.



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