

PARBOILED RICE

Parboiled rice also known as converted rice is obtained after rice has been partially boiled while inside the husk. Parboiled rice has higher nutrition advantages than normal white rice. About 50% of the world's paddy production is parboiled but in Tanzania this is not common and very few people are aware of parboiled rice.

Parboiled rice can be processed by either machines in large volumes or human being through physical means using locally available tools / equipment's like charcoals and fire wood stoves, Pots, Plastic containers, buckets, baskets, plastic canvas. In principle there are 4 basic steps in preparing parboiled rice these are partial boiling, Soaking, Steaming and cool drying.

Among the advantages of parboiled rice is that it has more Vitamins, little fat content compared to normal white rice, less starch (glycol factor) than normal white rice so is more safe for people with Diabetes. Parboiled rice is 80% nutritionally equal to brown rice.

Stapes of making parboiled rice:

- Boiling Rice paddy at 70-80C
- Soaking in cold water for 16-18 hours
- Steaming for 20-30 minutes
- Drying in cool condition then in warm condition

1. Boiling to 70-80c

In this step the following tools/equipment's are used, Charcoal stove most recommended the one which use Briquettes, Steel or aluminium pot, Buckets, Plastic containers, local cleaner(Nyungo) and water, Initially make sure that the paddy is clean and is free from any contaminants. Segmentation method could be used to eliminate more contaminants from paddy. Boil paddy to 70-80C if thermometer is available can be used to detect the required temperature if no thermometer physical detection by using hand can be applied and be careful to stop the process before reaching maximum boiling point.



Cleaning by using segmentation method

2. Soaking process

Soaking is the next step after boiling using clean water and soak the boiled paddy in big container for 12-18 hours after soaking for the recommended time remove the paddy from water and filter the paddy by using baskets.

This is important process of reducing moisture content of paddy before exposing to the next step.



The above picture is a container with clean water is soaking with boiled paddy

3. Steaming process

2 pots are used one with water at the bottom and the other with holes at the upper put the soaked paddy in the upper pot when water at the bottom pot reaches a boiling point will create a steam which will penetrate through the holes of upper pot hence steaming process starts. Once the steam starts to penetrate to the paddy will take 20- 30 minutes to complete the process you will see some paddy have started to remove the husk



The above picture is the steaming process

4. Drying process

This is the last step in the parboiling process it is very important step which reduces breakage of rice in the milling process. The place for drying should be clean and covered with plastic canvas or floor with cement should be out of reach of children or domestic animals



We have 2 steps of drying methods:

- Cool drying:

After steaming process the paddy become very soft and molten texture so it requires cool drying in order to maintain its normal structure and texture this takes 5-6 hours.

- Warm drying:

After cool drying expose the paddy to sun drying in order to enhance and facilitate milling process and produce good quality par-boiled rice .



Above picture shows cool drying by using plastic canvas