



Unit 5 – Topic 2

Dehusking Of Paddy –Methods – Merits And Demerits

The dehusking of paddy, also known as rice hulling or shelling, is a critical step in rice processing that involves the removal of the outer husk from the rice grains. The husk, or hull, is the protective layer that surrounds the rice kernel. Dehusking is typically carried out using various methods, each with its merits and demerits.

Methods of Dehusking:

1. **Engelberg Huller:**
 - This is a traditional rice milling machine that uses an abrasive roller to remove the husk. It's a common method in smaller rice mills.
2. **Rubber Roll Huller:**
 - This method uses a rubber-covered roller to remove the husk. The rubber helps in grip and friction, facilitating the separation of the husk from the rice.
3. **Disk Mill:**
 - Disk mills utilize abrasive disks to remove the husk. The process involves rubbing the rice grains against the disks to achieve dehusking.
4. **Friction Mill:**
 - Friction mills use the principle of friction between rice grains to remove the husk. The grains are passed through a set of abrasive surfaces, and the husk is rubbed off.
5. **Abrasive Cone Polisher:**
 - This method involves using a cone-shaped abrasive surface to remove the husk. The rice grains pass through the cone, and the husk is abraded off.

Merits of Dehusking:

1. **Improved Edibility:**
 - Dehusking makes rice suitable for consumption by removing the inedible and hard husk, making the rice grains more palatable.
2. **Increased Nutritional Value:**
 - Dehusking helps in exposing the endosperm of the rice kernel, which is the part that is typically consumed. This improves the digestibility and nutritional value of the rice.
3. **Enhanced Cooking Qualities:**
 - Dehusked rice typically has better cooking qualities, such as reduced cooking time and improved texture, compared to paddy rice.
4. **Improved Appearance:**
 - Dehusked rice has a polished appearance, making it more visually appealing. This can be important for consumer preferences and marketability.



5. **Easier Storage:**
 - Dehusked rice has a longer shelf life compared to paddy rice, as the husk protects the grain from environmental factors such as insects and moisture.

Demerits of Dehusking:

1. **Loss of Nutrients:**
 - Some nutrients, particularly in the outer layers of the rice grain, may be lost during the dehusking process. This is why parboiled rice, which retains more nutrients, is preferred in some regions.
2. **Energy Consumption:**
 - Dehusking often requires energy, especially in mechanized rice mills. The energy consumption can contribute to the overall cost of rice production.
3. **Wastage:**
 - Some methods of dehusking may result in a certain amount of broken or damaged grains, contributing to wastage.
4. **Equipment Cost:**
 - Setting up and maintaining dehusking equipment can be expensive, particularly for modern and efficient rice milling machinery.
5. **Environmental Impact:**
 - In some traditional methods, the disposal of rice husks can be an environmental concern. However, rice husks are also used for various purposes, such as fuel and building materials, reducing waste.

The choice of dehusking method depends on factors such as the scale of operation, available technology, and desired rice quality. Advances in technology continue to address some of the challenges associated with dehusking, making the process more efficient and sustainable.