

अर्थशास्त्र विभाग  
शैक्षणिक भ्रमण प्रतिवेदन  
महामाया राईस मिल, कुरुद



दिनांक – 13.2.18  
शासकीय दूधाधारी बजरंग महिला स्नातकोत्तर (स्वशासी) महाविद्यालय,  
रायपुर (छत्तीसगढ़)

## प्राक्कथन

शासकीय दूधाधारी बजरंग महिला स्नातकोत्तर (स्वशासी) महाविद्यालय, रायपुर (छत्तीसगढ़) के अर्थशास्त्र विभाग द्वारा शैक्षणिक भ्रमण हेतु दिनांक 13.02.15 को छात्राओं को महामाया राईस मिल, कुरुद ले जाया गया, जिसमें अर्थशास्त्र विभाग की विभागाध्यक्ष डॉ प्रीति कंसारा, सहायक प्राध्यापक डॉ अनिता दीक्षित एवं अथिति प्राध्यापक दिव्या जैन के साथ एम.ए. द्वितीय एवं तृतीय सेमेस्टर की 27 छात्राएं सम्मिलित हुई। शैक्षणिक भ्रमण का मुख्य उद्देश्य छत्तीसगढ़ में चावल उद्योग का आर्थिक का अध्ययन करना तथा चावल मिल प्रक्रिया की जानकारी एकत्र करना था।

शैक्षणिक भ्रमण की सफलता हेतु हम श्री रोशन चंद्राकर प्रबंधक—महामाया राईस मिल, के आभारी हैं, जिनके सुव्यवस्थित राईस मिल निरीक्षण एवं उत्तम स्वल्पाहार व्यवस्था से हमारा भ्रमण सार्थक हो सका।

अंत में हम सभी प्राचार्या महोदया डॉ. रेखा पाण्डेय के प्रति आभार व्यक्त करते हैं, जिनके सहयोग, प्रोत्साहन एवं मार्गदर्शन से हमारा भ्रमण सफल हो सका।

प्रति,

प्राचार्य,

शास. दू. ब. महिला महाविद्यालय,

रायपुर छत्तीसग

विषय – शैक्षणिक भ्रमण हेतु अनुमति प्रदाय करने बाबत ।

महोदय,

सनम्र निवेदन है, कि अर्थशास्त्र विभाग की कुल..28..छात्राओं के साथ

शैक्षणिक भ्रमण हेतु राईस मिल-कुरुद जाने की अनुमति प्रदान कर

अनुग्रहीत करें ।

धन्यवाद ।

दिनांक – 12.02.18

भवदीया

डॉ. प्रीति कंसारा

विभागाध्यक्ष-अर्थशास्त्र

शा. दू. ब. महिला महाविद्यालय,

## अर्थशास्त्र विभाग

### शैक्षणिक भ्रमण हेतु प्रस्ताव

स्थान – राईस मिल-कुरुद

कक्षा – स्नातकोत्तर

छात्राओं की संख्या – 28

दिनांक– 12.02.18

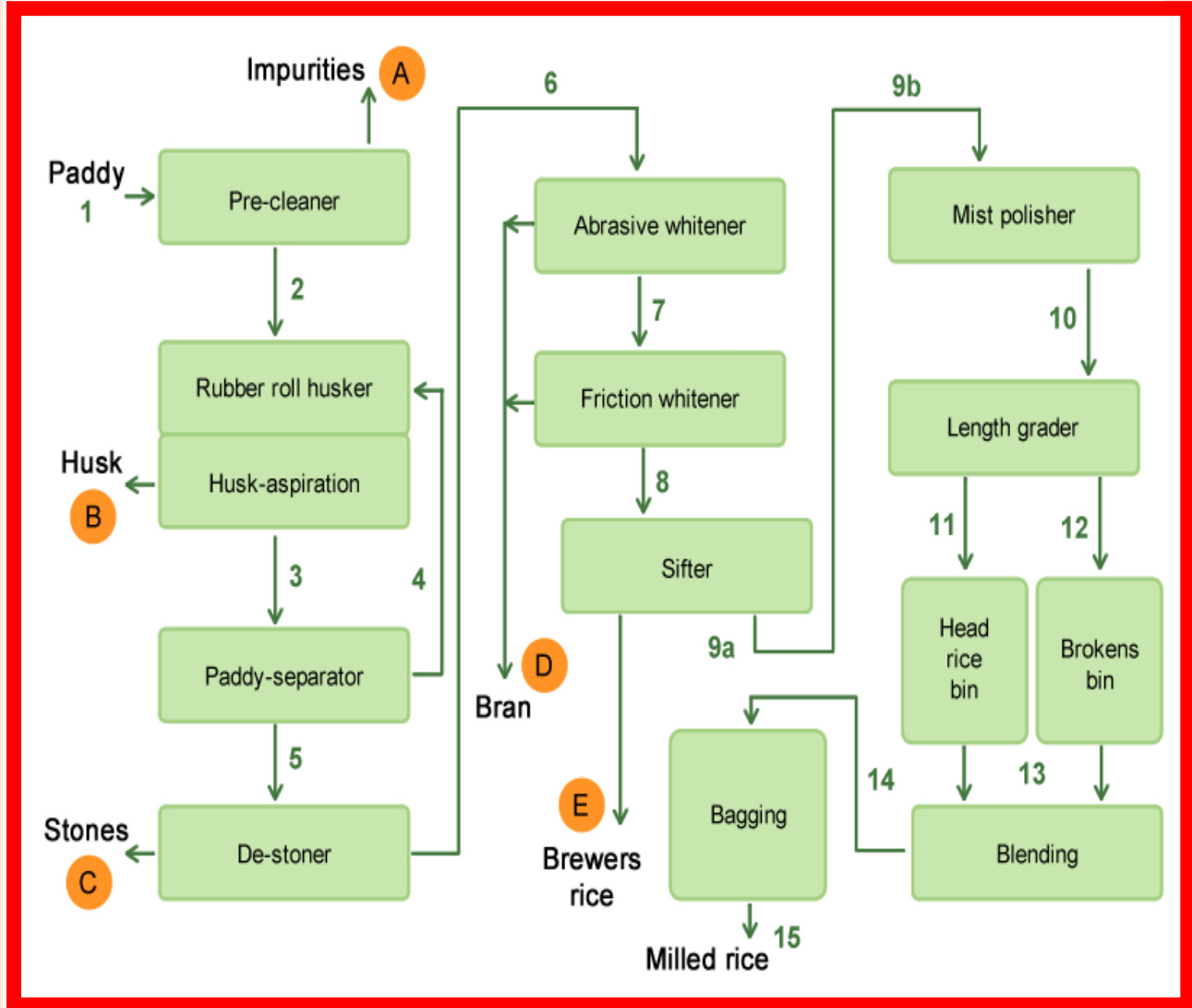
उद्देश्य –

1. छात्राओं को छत्तीसगढ़ में चावल उद्योग की जानकारी उपलब्ध करना ।
2. छात्राओं के शैक्षणिक ज्ञान का उन्नयन करना ।
3. छात्राओं को औद्योगिक विकास की जानकारी उपलब्ध करना ।

विभागाध्यक्ष  
अर्थशास्त्र विभाग

S.NO.	NAME	CLASS
1	MANJU SAHU	M.A.II
2	DIVYA PATEL	M.A.II
3	JYOTI	M.A.II
4	MANJU BANCHOR	M.A.II
5	POOJA VERMA	M.A.II
6	AKANKSHA SHARMA	M.A.II
7	RUKHMANI DEWANGAN	M.A.II
8	BHUMIKA SAHU	M.A.II
9	TRIPTI SAHU	M.A.II
10	MONGRA BHARTI	M.A.II
11	LAKSHMI VERMA	M.A.II
12	MONA VERMA	M.A.II
13	SANGEETA BARLE	M.A.II
14	KHUSBOO PATHAK	M.A.II
15	MANISHA DHIDHI	M.A.II
16	NIKHAT ANJUM	M.A.II
17	JAYAPRABHA NAG	M.A.IV
18	DAMINI VERMA	M.A.IV
19	MANISHA CHANDRKAR	M.A.IV
20	ANUKRITI SHARMA	M.A.IV
21	NEHA SHRIMALI	M.A.IV
22	LILIMA SEN	M.A.IV
23	DIKSHA YADAV	M.A.IV
24	MAMTA YADAV	M.A.IV
25	KAVITA PATEL	M.A.IV
26	DR. PREETI KANSARA	
27	DR. ANITA DIKSHIT	
28	KU. DIVYA JAIN	

## Rice Processing



## **Description of flow of materials and processes-**

- 1** Paddy is dumped in the intake pit feeding the pre-cleaner straw, chaff and empty grains are removed
- 2** Pre-cleaned paddy moves to the rubber roll husker: husk removed by the aspirator
- 3** Mixture of brown rice and unhusked paddy moves to the separator
- 4** Unhusked paddy is separated and returned to the rubber roll husker
- 5** Brown rice moves to the destoner small stones, mudd balls etc. removed by de-stoner
- 6** De-stoned, brown rice moves to the 1st stage (abrasive) whitener
- 7** Partially milled rice moves to the 2nd stage (friction) whitene Coarse (from 1st whitener) and fine (from 2nd whitener) bran removed from the rice grain during the whitening process
- 8** Milled rice moves to the sifter Small broken /brewer's rice removed by the sifter
- 9** Ungraded, milled rice moves to bagging station milled rice moves to the polisher
- 10** Polished rice, will move to length grader
- 11** Head rice moves to head rice bin
- 12** Broken moves to broken bin
- 13** Pre-selected amount of head rice and broken move to blending station
- 14** Custom-made blend of head rice and broken moves to bagging station
- 15** Bagged Rice moves to the market

## POST PRODUCTION

### Harvesting

Harvesting is the process of collecting the mature rice crop from the field. Paddy harvesting activities include reaping, stacking, handling, threshing, cleaning, and hauling.

### Storage

The purpose of any grain storage facility is to provide safe storage conditions for the grain in order to prevent grain loss caused by adverse weather, moisture, rodents, birds, insects and micro-organisms like fungi.

### By-products

The main by-products of rice are rice straw, rice husks or hulls, and rice bran. With proper management, each by-products can be utilized for better purposes such as for energy and non-energy uses (e.g., for agriculture sector and animal fodder production).

### Drying

Drying is the process that reduces grain moisture content to a safe level for storage. It is the most critical operation after harvesting a rice crop. Delays in drying, incomplete drying, or ineffective drying will reduce grain quality and result in losses.

### Milling

Milling is a crucial step in post-production of rice. The basic objective of a rice milling system is to remove the husk and the bran layers, and produce an edible, white rice kernel that is sufficiently milled and free of impurities.

Depending on the requirements of the customer, the rice should have a minimum number of broken kernels.



## Milling process

**1. Pre-cleaning** When paddy comes into the mill, it contains foreign materials such as straw, weed seeds, soil, and other inert materials. If these are not removed before hulling, the efficiency of the huller and milling recovery will be reduced.

**2. Removing the husk (dehusking or dehulling)** Brown rice is produced by removing the husk from rough paddy rice. The husk is removed by friction as the paddy grains pass between two abrasive surfaces that move at different speeds.

**3. Paddy separation** The paddy separator separates unhusked paddy rice from brown rice. The amount of paddy present depends on the efficiency of the husker and should not be more than 10%. Paddy separators work by making use of the differences in specific gravity, buoyancy, and size between paddy and brown rice.

**4. Whitening or polishing** White rice is produced by removing the bran layer and the germ from the paddy. The bran layer is removed from the kernel through either abrasive or friction polishers.

**5. Separation of white rice** After polishing, white rice is separated into head rice, large and small broken rice, and “brewers” by an oscillating screen sifter

**6. Rice mixing** A good rice mill will produce 50–60% head rice (whole kernels), 5–10% large broken and 10–15% small broken kernels. Depending on country standards, rice grades in the market will contain from 5–25% broken kernels.

**7. Mist polishing** Mixing a fine mist of water with the dust retained on the whitened rice improves the luster of rice (polishes) without significantly reducing milling yield.

**8. Rice weighing** Rice is normally sold in 50 kg sacks which must be accurately weighed and labeled. While most rice mills use a manual mechanical weighing system, very accurate, and fast electronic systems are also available.

## The Modern Rice Milling Process

Stage	Function
<i>Pre-cleaning</i>	removing all impurities and unfilled grains from the paddy
<i>Husking</i>	removing the husk from the paddy
<i>Husk aspiration</i>	separating the husk from the brown rice/unhusked paddy
<i>Paddy separation</i>	separating the unhusked paddy from the brown rice
<i>De-stoning</i>	separating small stones from the brown rice
<i>Whitening</i>	removing all or part of the branlayer and germ from the brown rice
<i>Polishing</i>	improving the appearance of milled rice by removing remaining bran particles and by polishing the exterior of the milled kernel
<i>Sifting</i>	separating small impurities or chips from the milled rice
<i>Length grading</i>	separating small and large brokens from the head rice
<i>Blending</i>	mix head rice with predetermined amount of brokens, as required by the customer
<i>Weighing and bagging</i>	preparing milled rice for transport to the customer

## Modern Rice Milling Processes

