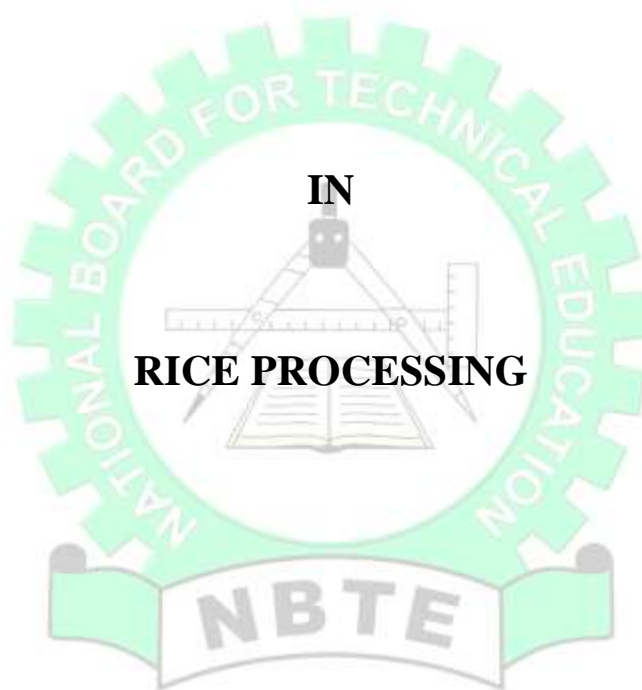




**NATIONAL SKILLS QUALIFICATIONS/  
NATIONAL OCCUPATIONAL STANDARD  
(NSQ/NOS)**



**LEVELS 2 -4**

**MARCH, 2026**

## PREFACE

It is with great pleasure that I present the National Occupational Standards (NOS) for Rice Processing, Tomato Processing, and Agro-Postharvest Management, developed under the Better Education for Africa's Rise (BEAR III) Project jointly supported by UNESCO and the Government of the Republic of Korea, with technical support from the Korean Research Institute for Vocational Education and Training (KRIVET). The BEAR III Project seeks to strengthen TVET systems, improve skills relevance, and enhance youth employability through competency-based training and stronger linkages between education, industry, and the labour market.

The development of these standards represents a significant milestone in Nigeria's efforts to strengthen the agricultural value chain and address critical skills gaps within the agro-processing sector. Rice and tomato processing, alongside agro-postharvest management, are strategic subsectors with immense potential for enhancing food security, reducing post-harvest losses, creating employment opportunities, and contributing to national economic development. The standards provide a clear framework for the acquisition, assessment, certification, and recognition of occupational competencies required by industry practitioners and employers.

These National Occupational Standards were developed through a rigorous consultative process involving industry experts, employers, professional associations, training institutions, Sector Skills Councils, government agencies, and development partners. Their collective expertise ensured that the standards accurately reflect current industry practices, technological advancements, occupational requirements, and emerging trends within the agricultural sector.

The standards will serve as essential reference documents for curriculum development, training delivery, assessment, certification, and workforce development under the Nigerian Skills Qualifications Framework (NSQF). They will also facilitate greater industry participation in skills development and support the production of a competent workforce capable of meeting national and international standards.

I wish to express my sincere appreciation to UNESCO, the Government of the Republic of Korea, KRIVET, the Federal Ministry of Education, the Sector Skills Council for Agriculture, industry stakeholders, resource persons, and all organizations and individuals whose contributions made the development of these standards possible. Their commitment and collaboration have been instrumental in ensuring the successful realization of this important initiative. It is my expectation that these National Occupational Standards will contribute significantly to the advancement of skills development, productivity enhancement, and sustainable growth within Nigeria's agricultural sector, while promoting decent employment opportunities and strengthening the nation's competitiveness in the global economy.

**Professor Idris M. Bugaje**

Executive Secretary

National Board for Technical Education

Kaduna, Nigeria

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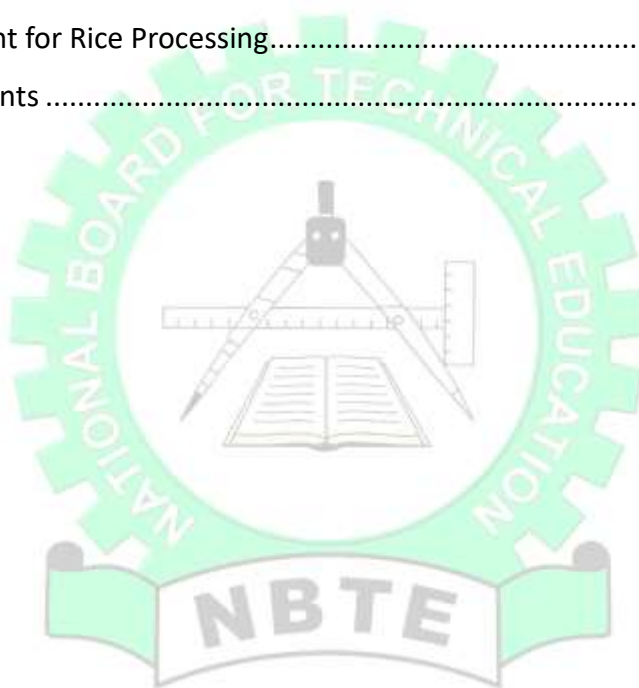
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**RICE PROCESSING LEVELS 2**



## GENERAL INFORMATION

### OVERVIEW

This qualification is designed for individuals who are interested in pursuing a career in Rice Processing for the award of National Skills Qualifications (NSQ)/National Occupational Standards (NOS). It is aimed at producing craftsmen in Rice Processing NSQ Level 2 with the competences necessary to work in Rice Processing industries. This qualification is subject to review as when the need arises.

### QUALIFICATION PURPOSE

This qualification is targeted at developing competence in Rice Processing. This is focused on knowledge, practical skills, communication skills, health and safety, team work and workplace experience.

### QUALIFICATION REQUIREMENTS

All Candidates must:

- a. Be at least (17) years of age;
- b. Be medically fit;
- c. Be mentally fit (Mental alertness);
- d. Have achieved all the Safety and Health mandatory units in the qualification;
- e. Be a Nigerian citizen;
- f. Other nationals (International passport, residence permit);
- g. Be vetted.

### QUALIFICATION OBJECTIVES

To achieve this qualification, the learner should have the following competences:

1. Adhere to health and safety precaution and avoidance of environmental hazards associated with working on a rice processing environment;
2. Communicate in rice processing environment;
3. Develop team spirit and positive working relationship with colleagues;
4. Support in rice processing;
5. Use rice processing tools, machineries and equipment for quality improvement;
6. Parboiling Paddy rice to improve rice quality;
7. Observe standard operational procedures in paddy rice processing;
8. Package and store of paddy and milled rice;
9. Use rice milling output to produce rice milling by-product.

## UNIT ASSESSMENT/EVIDENCE REQUIREMENTS:

Assessment must be carried out in real workplace in which learning and human development is carried out. Simulation is allowed in this unit and level.

Assessment Methods to be Used Include:

1. Direct Observation (DO);
2. Question and Answer (QA);
3. Witness Testimony (WT);
4. Personal statement (PS) or Reflective Practice (RP);
5. Assignment (ASS).

## Mandatory Units

S/No /Unit	Reference Number	NOS Title	Credit Value	Guided Learning
1	AGP/RCP/001/L2	Safety in Rice Processing environment	3	30
2	AGP/RCP/002/L2	Communicate Effectively in Rice Processing environment	3	30
3	AGP/RCP/003/L2	Teamwork	2	20
4	AGP/RCP/004/L2	Practice of Rice Processing	4	40
5	AGP/RCP/005/L2	Use Rice Processing Tools, Equipment and Machinery	4	40
6	AGP/RCP/006/L2	Perform Rice Parboiling and Milling	4	40
7	AGP/RCP/007/L2	Quality Practices in Paddy Rice Processing	3	30
8	AGP/RCP/008/L2	Packaging and storage of paddy and milled rice	3	30
9	AGP/RCP/009/L2	Rice Milling output and By-product	4	40
TOTAL			30	300

## GENERAL GUIDE

<b>Unit title</b>	Provides a clear explanation of the content of the unit.
<b>Unit number</b>	The unique number assigned to the unit.
<b>Unit reference</b>	The unique reference number given to each unit at qualification approval by NBTE
<b>Unit level</b>	Denotes the level of the unit within the National Vocational Qualification framework NSQF.
<b>Unit credit value</b>	The value that has been given to the unit based on the expected learning time for an average learner. 1 credit = 10 learning hours
<b>Unit aim</b>	Provides a brief outline of the unit content.
<b>Learning outcome</b>	A statement of what a learner will know, understand or be able to do, as a result of a process of learning.
<b>Assessment criteria</b>	A description of the requirements a learner must achieve to demonstrate that a learning outcome has been met.
<b>Unit assessment guidance</b>	Any additional guidance provided to support the assessment of the unit.
<b>Unit guided learning hours</b>	The average number of hours of supervised or directed study time or assessment required to achieve a qualification or unit of a qualification.



**Unit 1: Safety in Rice Processing Environment**

**Unit Reference Number: AGP/RCP/001/L2**

**NSQ Level: 2**

**Credit Value: 3**

**Guided Learning Hours: 30**

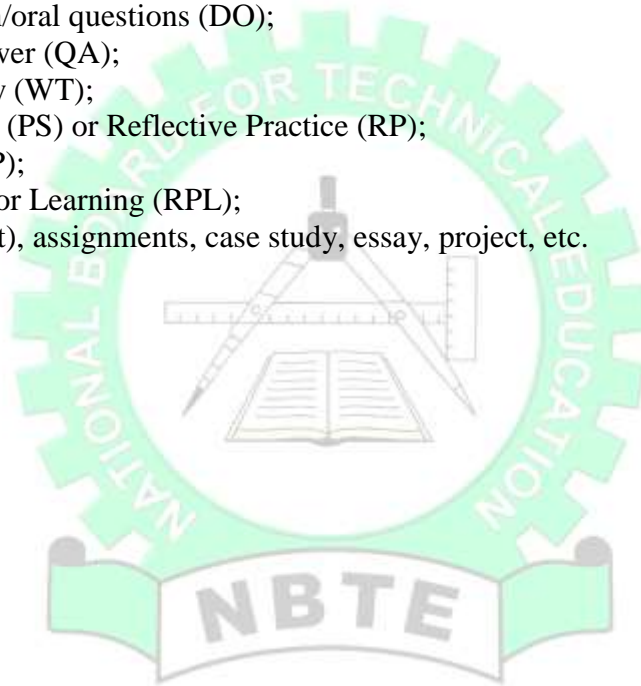
**Unit Purpose:** This unit focuses on the adherence to health and safety precaution and avoidance of environmental hazards associated with working on a rice processing environment.

**Unit assessment requirements/evidence requirements:**

Assessment must be carried out in real workplace in which learning and human development is carried out. *Simulation is not allowed* in this unit and level.

**Assessment methods to be used include:**

1. Direct Observation/oral questions (DO);
2. Question and Answer (QA);
3. Witness Testimony (WT);
4. Personal statement (PS) or Reflective Practice (RP);
5. Work Product (WP);
6. Recognition of Prior Learning (RPL);
7. Other methods (O t), assignments, case study, essay, project, etc.



## Unit 1: Safety in Rice Processing Environment

LEARNING OBJECTIVE (LO)		PERFORMANCE CRITERIA  The learner can:	Evidence Type				Evidence Ref. Page No.			
<b>LO 1:</b> Work safely on a rice processing environment	1.1	Observe safe work practices as obtained along the rice processing value chain								
	1.2	Identify safety signs and symbols on rice processing								
	1.3	Observe correctly, the safety signs and symbols								
	1.4	Demonstrate safe work practices and instructions on rice processing								
	1.5	Operate in accordance with health and safety practices								
<b>LO 2:</b> Comply with safety standards on rice processing environment	2.1	Identify work environment hazards								
	2.2	Identify types of hazards and risks associated with rice processing								
	2.3	Observe safety standards on rice farms and processing facilities								
	2.4	Use safety tools, materials and equipment in rice processing facilities								
<b>LO 3:</b> Apply personal protective equipment (PPE) in rice processing facilities	3.1	Identify the types of PPEs required for rice processing plants								
	3.2	Select appropriate PPE for rice processing plants								
	3.3	Demonstrate the use of PPE								
	3.4	Maintain PPE before or after use								
<b>LO 4:</b> Response to accidents/injury in rice processing plants	4.1	Locate first aid facility								
	4.2	Use basic dressing materials								
	4.3	Respond to supervisor given instructions								
	4.4	Report incidences of accident/injury to the appropriate supervisor								

LEARNING OBJECTIVE (LO)  The learner will:		PERFORMANCE CRITERIA  The learner can:	Evidence Type				Evidence Ref. Page No.			
LO 5: Apply safe work habit and clean work environment in rice processing plants	5.1	Use safe access and exit routes in the work environment								
	5.2	Identify appropriate working tools, materials and equipment								
	5.3	Use tools and equipment safely in accordance with the supervisor's instructions								
	5.4	Return all tools, equipment and unused materials for appropriate storage								
	5.5	Carry out general housekeeping of work environment								
	5.6	Dispose all wastes appropriately to designated waste facilities								
LO 6: Comply with standards of lifting, loading/offloading and stacking of materials in rice processing facilities	6.1	Identify lifting and stacking techniques								
	6.2	Demonstrate lifting techniques in loading and offloading of materials without assistance								
	6.3	Demonstrate correct lifting and loading techniques with mechanical assistance								
	6.4	Stack materials correctly								

<b>Learners Signature:</b>	<b>Date:</b>
<b>Assessors Signature:</b>	<b>Date:</b>
<b>IQA Signature (if sampled)</b>	<b>Date:</b>
<b>EQA Signature (if sampled)</b>	<b>Date:</b>

## **Unit 2: Communicate Effectively in Rice Processing Environment**

**Unit Reference Number: AGR/RCP/002/L2**

**NSQ Level: 2**

**Credit Value: 3**

**Guided Learning Hours: 30**

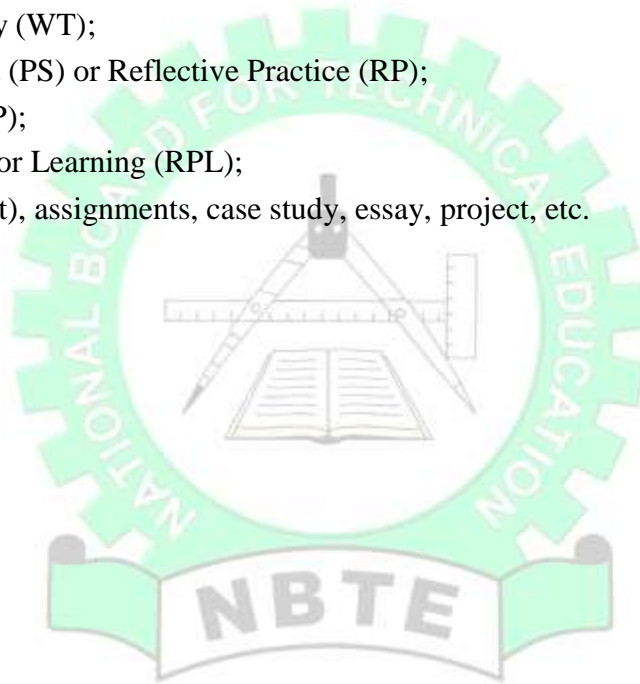
**Unit Purpose:** This unit is about simple communication techniques in rice processing environment

### **Unit assessment requirements/evidence requirements:**

Assessment must be carried out in real workplace in which learning and human development is carried out. *Simulation is not allowed* in this unit and level.

**Assessment methods** to be used include:

1. Direct Observation/oral questions (DO);
2. Question and Answer (QA);
3. Witness Testimony (WT);
4. Personal statement (PS) or Reflective Practice (RP);
5. Work Product (WP);
6. Recognition of Prior Learning (RPL);
7. Other methods (O t), assignments, case study, essay, project, etc.



## UNIT 2: Communicate Effectively in Rice Processing Environment

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type				Evidence Ref. Page No.			
<b>LO 1:</b> Apply the use of a non-complex communication system in a work environment	1.1	Use a verbal means to pass on necessary information								
	1.2	Use non-verbal means to convey necessary information e.g. body language, signs								
	1.3	Interpret symbols and signs appropriately								
<b>LO 2:</b> Source for information on a work environment	2.1	Identify the source of information in the work environment								
	2.2	Relate effectively with the source of information								
	2.3	Use the different information flow systems in a work environment								
	2.4	Use information gathered to avoid challenges in a work situation								
	2.5	Report findings appropriately in accordance with laid down procedures in the work environment i.e. Cards, Flip Chart								
	2.6	Use simple communication gadget like mobile phones and table phones								
<b>LO 3:</b> Apply various means of communication in a work environment	3.1	Locate the various communication equipment in the work environment								
	3.2	Use effectively the various communication equipment in a work environment								
	3.3	Pass information effectively to the right personnel								
	3.4	Obey instructions in line with ethics of the work environment								

<b>Learners Signature:</b>	<b>Date:</b>
<b>Assessors Signature:</b>	<b>Date:</b>
<b>IQA Signature (if sampled)</b>	<b>Date:</b>
<b>EQA Signature (if sampled)</b>	<b>Date:</b>

### **Unit 3: Teamwork**

**Unit Reference Number: AGR/RCP/003/L2**

**NSQ Level: 2**

**Credit Value: 2**

**Guided Learning Hours: 20**

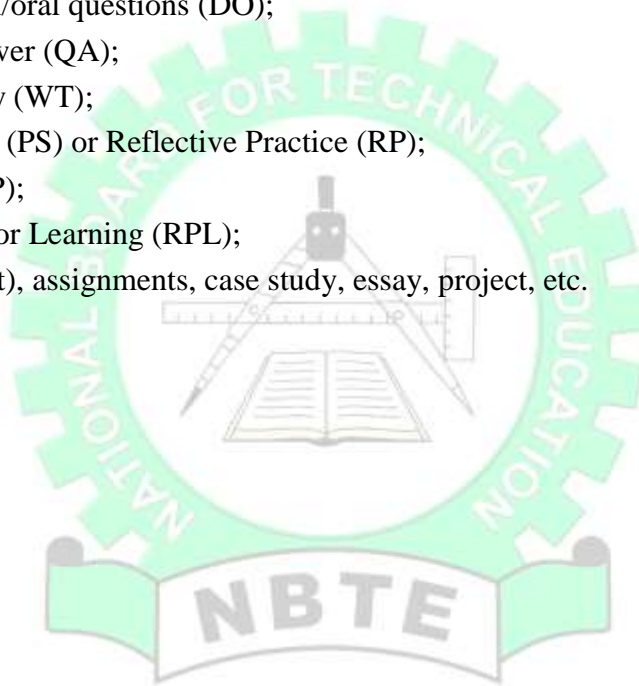
**Unit Purpose:** The purpose for this unit is to impact into the learner the necessary skills, knowledge and understanding required to develop team spirit and positive working relationship with colleagues.

#### **Unit Assessment requirement**

Assessment of this unit must be at a real practical work environment, simulation is not allowed unless where indicated.

#### **Unit assessment requirements/evidence requirements**

1. Direct Observation/oral questions (DO);
2. Question and Answer (QA);
3. Witness Testimony (WT);
4. Personal statement (PS) or Reflective Practice (RP);
5. Work Product (WP);
6. Recognition of Prior Learning (RPL);
7. Other methods (O t), assignments, case study, essay, project, etc.



### Unit 3: Teamwork

LO (Learning outcome)		Criteria:-	Evidence Type				Evidence Ref Page number			
<b>LO 1:</b> Positive working relationship with colleagues	1.1	Identify the need for developing positive working relationship with colleagues								
	1.2	Recognize the importance of relating with other people in a way that makes them feel valued and respected								
	1.3	Assist team members when required.								
	1.4	Report to the appropriate personnel when request for assistance fall outside area of responsibility.								
	1.5	Communicate information to colleagues about individual work that may affect team work.								
<b>LO 2:</b> Take responsibility within the team										
	2.1	Recognize own role and responsibilities within a team								
	2.2	Perform individual tasks in line with the team's rules and regulations.								
	2.3	Participate effectively in teamwork.								
<b>LO 3:</b> Compliance with policy of organisation										
	3.1	Follow organizational code of conduct								
	3.2	Work in line with organizational standard								
	3.3	Use organizational code of practice								
	3.4	Adhere strictly to instructions given by the Management								
<b>Learners Signature:</b>			<b>Date:</b>							
<b>Assessors Signature:</b>			<b>Date:</b>							
<b>IQA Signature (if sampled)</b>			<b>Date:</b>							
<b>EQA Signature (if sampled)</b>			<b>Date:</b>							

## **Unit 4: Practice of Rice Processing**

**Unit Reference Number: AGP/RCP/004/L2**

**NSQ Level: 2**

**Credit Value: 4**

**Guided Learning Hours: 40**

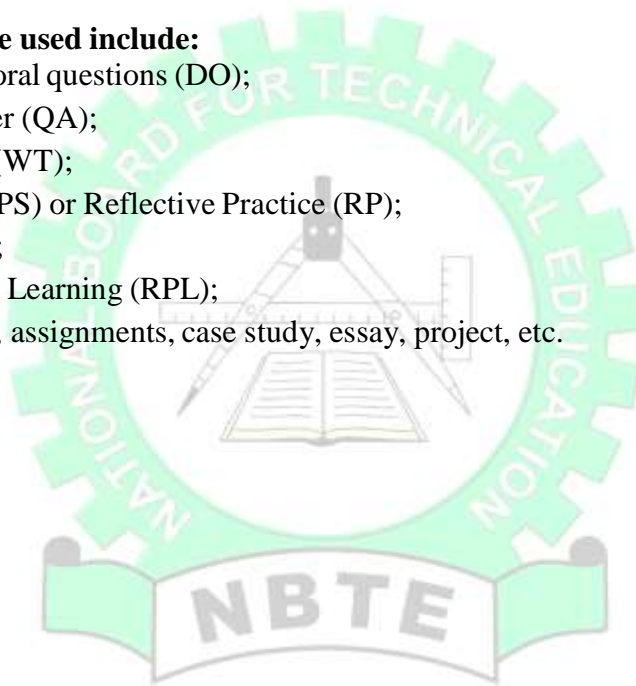
**Unit Purpose:** This unit is designed to equip the learner with knowledge and skills to practice rice processing

### **Unit assessment requirements/evidence requirements:**

Assessment must be carried out in real workplace in which learning and human development is carried out. *Simulation is not allowed* in this unit and level.

### **Assessment methods to be used include:**

1. Direct Observation/oral questions (DO);
2. Question and Answer (QA);
3. Witness Testimony (WT);
4. Personal statement (PS) or Reflective Practice (RP);
5. Work Product (WP);
6. Recognition of Prior Learning (RPL);
7. Other methods (O t), assignments, case study, essay, project, etc.

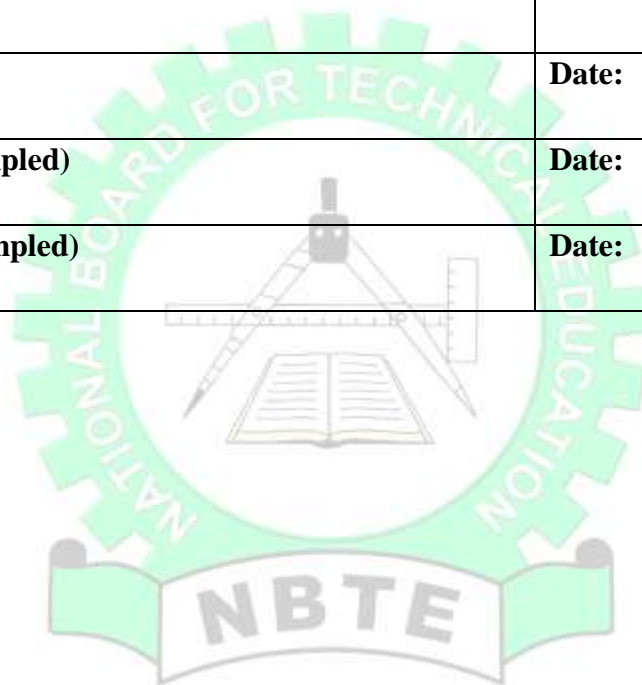


## UNIT 4: Practice of Rice Processing

LEARNING OUTCOME (LO)		PERFORMANCE CRITERIA	Evidence Type				Evidence Ref. Page No.			
<b>LO 1:</b> Apply value chain principles in rice processing	1.1	Demonstrate paddy rice value chain								
	1.2	Illustrate the stages in the paddy rice value chain								
	1.3	Identify the functions of key players in the paddy rice value chain								
	1.4	Identify the mode of operations of the key players in the paddy rice processing								
	1.5	Identify the relationships of the key players in the paddy rice processing								
<b>LO 2:</b> Compare the different rice varieties used by the farmers	2.1	Identify the different varieties of paddy								
	2.2	Demonstrate paddy rice processing methods								
	2.3	Differentiate the characteristics of long and short varieties								
<b>LO 3:</b> Winnow paddy rice using various methods	3.1	Identify the methods of winnowing paddy rice								
	3.2	Demonstrate the traditional method of winnowing								
	3.3	Demonstrate the manual method of winnowing								
	3.4	Demonstrate the mechanized method of winnowing								
	3.5	Carry out winnowing of paddy rice using traditional method								
	3.6	Carry out winnowing of paddy rice using manual method								
	3.7	Carryout winnowing of paddy rice using mechanical method								
	3.8	Compare the advantages and disadvantages of the methods								
<b>LO 4:</b> Dry paddy rice	4.1	Identify the method of drying paddy rice								
	4.2	Demonstrate the methods of drying paddy rice								

	4.3	Carryout drying of paddy rice										
	4.4	Test paddy dryness using different methods										
<b>LO 5: Control post- harvest loss</b>	5.1	Identify the possible areas of post-harvest losses										
	5.2	Demonstrate the methods for reducing post-harvest losses.										
	5.3	Perform the methods of reducing post-harvest loss										

<b>Learners Signature:</b>	<b>Date:</b>
<b>Assessors Signature:</b>	<b>Date:</b>
<b>IQA Signature (if sampled)</b>	<b>Date:</b>
<b>EQA Signature (if sampled)</b>	<b>Date:</b>



## **Unit 5: Use Rice Processing Tools, Equipment and Machinery**

**Unit Reference Number: AGP/RCP/005/L2**

**NSQ Level: 2**

**Credit Value: 4**

**Guided Learning Hours: 40**

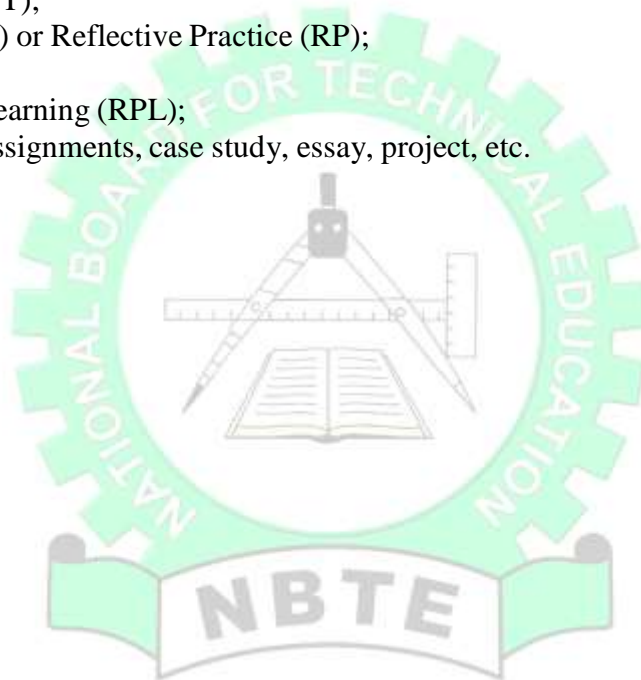
**Unit Purpose:** This unit is designed to equip the learner with knowledge and skills to apply rice processing tools, machineries and equipment for quality improvement.

### **Unit assessment requirements/evidence requirements:**

Assessment must be carried out in real workplace in which learning and human development is carried out. *Simulation is not allowed* in this unit and level.

**Assessment methods** to be used include:

1. Direct Observation/oral questions (DO);
2. Question and Answer (QA);
3. Witness Testimony (WT);
4. Personal statement (PS) or Reflective Practice (RP);
5. Work Product (WP);
6. Recognition of Prior Learning (RPL);
7. Other methods (O t), assignments, case study, essay, project, etc.

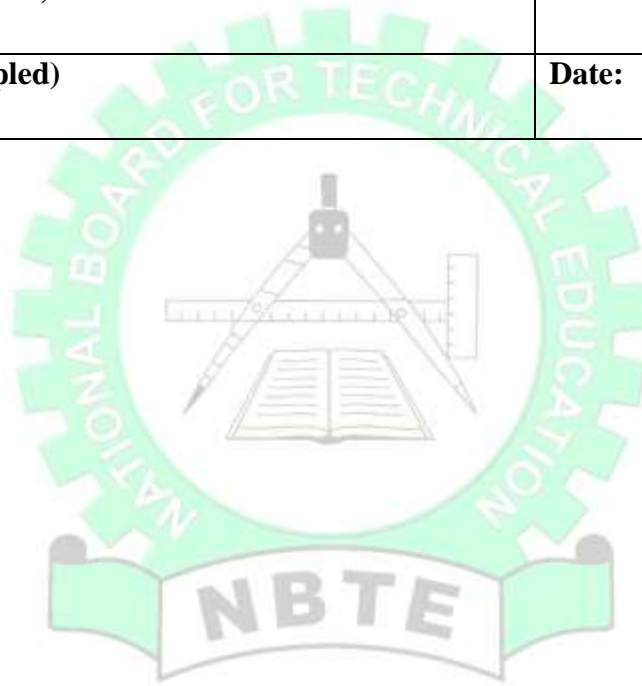


## UNIT 5 Use Rice Processing Tools, Equipment and Machinery

LEARNING OUTCOME (LO)		PERFORMANCE CRITERIA	Evidence Type				Evidence Ref. Page No.			
<b>LO 1:</b> Recognise rice processing machines	1.1	Identify rice processing machines and equipment								
	1.2	Demonstrate the use of rice processing machines and equipment								
	1.3	Identify tools and equipment used for maintenance of rice processing machine								
<b>LO 2:</b> Operate rice processing machines and	2.1	Demonstrate the operation of rice harvesting machine and equipment								
	2.2	Demonstrate the operation of rice winnowing machinery and								
	2.3	Demonstrate the operation of rice milling machine								
	2.4	Demonstrate the operation of rice de-stoning machine								
<b>LO 3:</b> Carry out basic operations with rice milling machine	3.1	Identify basic rice milling machine								
	3.2	Demonstrate the operation of basic rice milling								
	3.3	Assist in operation of rice milling machine								
<b>LO 4:</b> Perform basic operations on rice de-husking machine	4.1	Identify basic rice de-husking machine								
	4.2	Demonstrate the operation of basic rice de-husking machine								
	4.3	Assist in the operation of rice de-husking machine								
<b>LO 5:</b> Carry out basic operations on rice de-stoning machine	5.1	Identify basic rice de-stoning machine								
	5.2	Demonstrate the operation of basic rice de-stoning machine								
	5.3	Operate rice de-stoning machine								

<b>LO 6:</b> Demonstrate the basic operations of rice polishing machine	6.1	Identify parts of basic rice polishing machine									
	6.2	Operate basic rice polishing machine									
	6.3	Assist in the maintenance of rice polishing machine									

<b>Learners Signature:</b>	<b>Date:</b>
<b>Assessors Signature:</b>	<b>Date:</b>
<b>IQA Signature (if sampled)</b>	<b>Date:</b>
<b>EQA Signature (if sampled)</b>	<b>Date:</b>



## **Unit 6: Perform Rice Parboiling and Milling**

**Unit Reference Number: AGP/RCP/006/L2**

**NOS Level: 2**

**Credit Value: 4**

**Guided Learning Hours: 40**

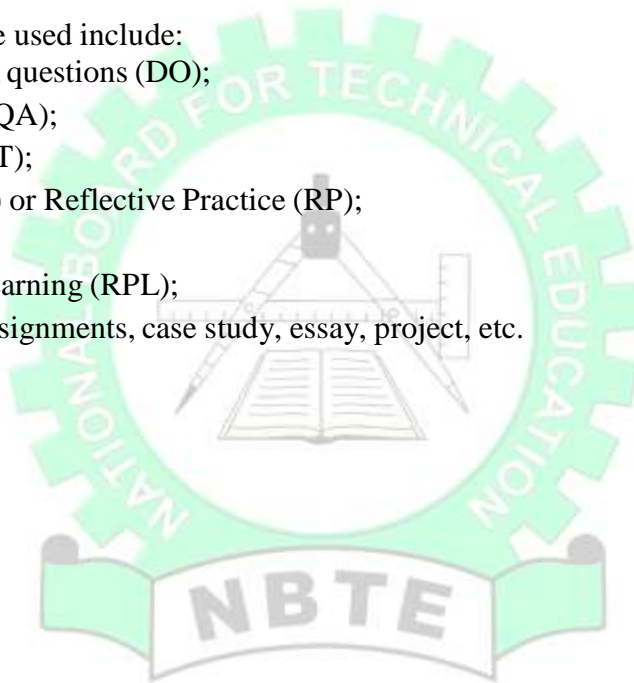
**Unit Purpose:** This unit is designed to equip the learner with knowledge and skills in paddy rice parboiling and milling processes targeting those employable at mills to improve rice quality.

### **Unit assessment requirements/evidence requirements:**

Assessment must be carried out in real workplace in which learning and human development is carried out. *Simulation is not allowed* in this unit and level.

**Assessment methods** to be used include:

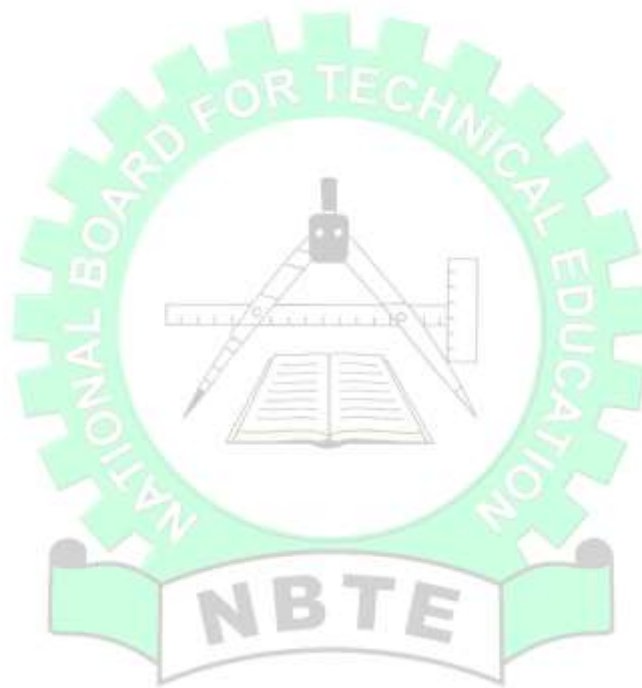
1. Direct Observation/oral questions (DO);
2. Question and Answer (QA);
3. Witness Testimony (WT);
4. Personal statement (PS) or Reflective Practice (RP);
5. Work Product (WP);
6. Recognition of Prior Learning (RPL);
7. Other methods (O t), assignments, case study, essay, project, etc.



## UNIT 6: Perform Rice Parboiling and Milling

LEARNING OUTCOME(LO)	PERFORMANCE CRITERIA	Evidence Type				Evidence Ref. Page No.			
<b>LO 1:</b> Perform paddy rice pre-cleaning	1.1	Perform washing of paddy rice							
	1.2	Segregate paddy rice from other impurities							
	1.3	Remove cleaned paddy from the water							
	1.4	Drain water from paddy rice							
<b>LO 2:</b> Soak paddy rice	2.1	Apply the right temperature for soaking							
	2.2	Set the duration for soaking paddy rice							
	2.3	Compare the relationship between duration and temperature in soaking paddy rice							
	2.4	Soak paddy rice at the appropriate duration and temperature							
<b>LO 3:</b> Perform paddy rice parboiling	3.1	Identify paddy rice parboiling equipment							
	3.2	Demonstrate the use of traditional method to carry out parboiling of paddy rice							
	3.3	Carry out parboiling of paddy rice using traditional method							
	3.4	Demonstrate mechanised method of parboiling paddy rice							
	3.5	Assist in carrying out the mechanised method(s) of parboiling of paddy rice							
<b>LO 4:</b> Perform paddy rice milling	4.1	Identify paddy rice milling equipment							
	4.2	Demonstrate the use of rice milling equipment							
	4.3	Demonstrate the use of traditional method of paddy rice milling							
	4.4	Assist in carrying out the mechanised method of paddy rice milling							

<b>Learners Signature:</b>	<b>Date:</b>
<b>Assessors Signature:</b>	<b>Date:</b>
<b>IQA Signature (if sampled)</b>	<b>Date:</b>
<b>EQA Signature (if sampled)</b>	<b>Date:</b>



## **Unit 7: Quality Practices in Paddy Rice Processing**

**Unit Reference Number: AGP/RCP /007/L2**

**NSQ Level: 2**

**Credit Value: 3**

**Guided Learning Hours: 30**

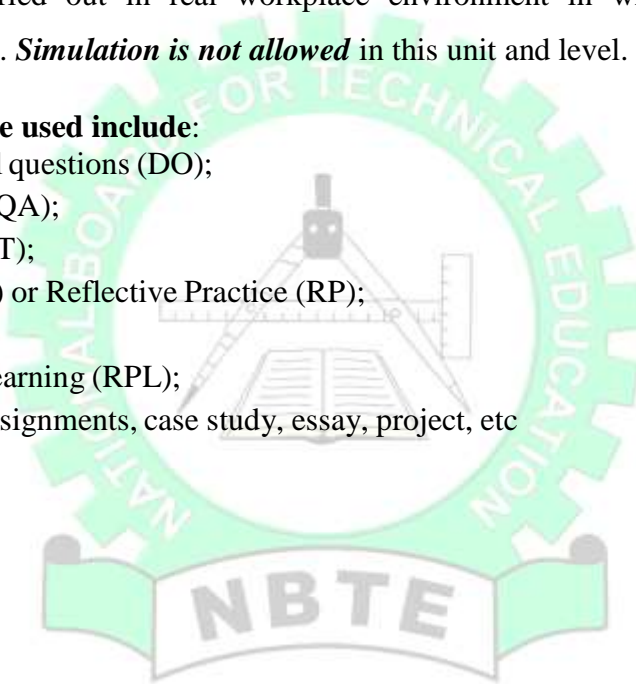
**Unit Purpose:** This unit is designed to equip the learner with knowledge and skills of standard operational procedures in paddy rice processing.

### **Unit assessment requirements/evidence requirements:**

Assessment must be carried out in real workplace environment in which learning and human development is carried out. *Simulation is not allowed* in this unit and level.

### **Assessment methods to be used include:**

1. Direct Observation/oral questions (DO);
2. Question and Answer (QA);
3. Witness Testimony (WT);
4. Personal statement (PS) or Reflective Practice (RP);
5. Work Product (WP);
6. Recognition of Prior Learning (RPL);
7. Other methods (O t), assignments, case study, essay, project, etc



## UNIT 7: Quality Practices in Paddy Rice Processing

LEARNING OUTCOME(LO)		PERFORMANCE CRITERIA	Evidence Type			Evidence Ref. Page No.			
The learner will:									
LO 1: Perform activities of paddy rice quality inspection	1.1	Observe paddy rice inspection methods							
	1.2	Identify paddy rice inspection tools							
	1.3	Use paddy rice inspection tools							
	1.4	Carry out paddy rice inspection activity							
LO 2: Comply with paddy rice quality control measures	2.1	Observe paddy rice quality control							
	2.2	Identify paddy rice quality control points							
	2.3	Carry out paddy rice quality control							
	2.4	Adhere to Standard Organization of Nigeria (SON) paddy rice grading							
	2.5	Observe SON milled rice grading standard							
	2.6	Adhere to NAFDAC rice paddy grading standard							
	2.7	Observe NAFDAC milled rice grading standard							
LO 3: Comply to Paddy and rice quality assurance measures	3.1	Identify methods for carrying out rice quality assurance							
	3.2	Monitor quality assurance in paddy rice							
	3.3	Monitor quality assurance in milled rice							
	3.4	Comply to quality assurance methods							

<b>Learners Signature:</b>	<b>Date:</b>
<b>Assessors Signature:</b>	<b>Date:</b>
<b>IQA Signature (if sampled)</b>	<b>Date:</b>
<b>EQA Signature (if sampled)</b>	<b>Date:</b>

## **Unit 8: Packaging and Storage of Paddy and Milled rice**

**Unit Reference Number: AGP/RCP/008/L2**

**NSQ Level: 2**

**Credit Value: 4**

**Guided Learning Hours: 40**

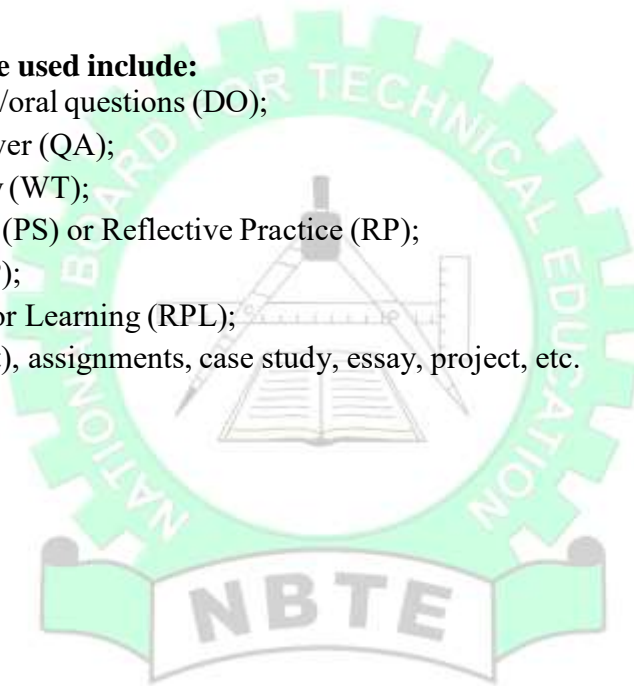
**Unit Purpose:** This unit is designed to equip learners with knowledge and skills in packaging and storage of paddy and milled rice.

### **Unit assessment requirements/evidence requirements:**

Assessment must be carried out in real workplace in which learning and human development is carried out. *Simulation is not allowed* in this unit and level.

### **Assessment methods to be used include:**

1. Direct Observation/oral questions (DO);
2. Question and Answer (QA);
3. Witness Testimony (WT);
4. Personal statement (PS) or Reflective Practice (RP);
5. Work Product (WP);
6. Recognition of Prior Learning (RPL);
7. Other methods (O t), assignments, case study, essay, project, etc.



## UNIT 8: Packaging and Storage of Paddy and Milled rice

LEARNING OUTCOME (LO)		PERFORMANCE CRITERIA	Evidence Type				Evidence Ref. Page No.			
<b>LO 1:</b> Perform rice packaging	1.1	Identify paddy and rice packaging materials								
	1.2	Identify types of rice packaging materials								
	1.3	Identify bag sizes and weights								
	1.4	Identify ideal weighing methods								
<b>LO 2:</b> Perform bagging and weighing	2.1	Identify the types of bag used in Bagging								
	2.2	Identify different types of weighing equipment								
	2.3	Assist in carrying out rice filling								
	2.4	Assist in weighing bagged rice								
<b>LO 3:</b> Maintain storage areas	3.1	Identify the types of storage facilities								
	3.2	Demonstrate how to prepare a storage area for paddy and rice								
	3.3	Assist in the preparation of storage area for paddy and rice								
<b>LO 4:</b> Perform inventory and stacking	4.1	Identify the methods of carrying out inventory and stacking								
	4.2	Demonstrate how to carry out inventory and stacking								
	4.3	Assist in carrying out inventory and stacking								

<b>Learners Signature:</b>	<b>Date:</b>
<b>Assessors Signature:</b>	<b>Date:</b>
<b>IQA Signature (if sampled)</b>	<b>Date:</b>
<b>EQA Signature (if sampled)</b>	<b>Date:</b>

## **Unit 9: Rice Milling Output and By-Products**

**Unit Reference Number: AGP/RCP/009/L2**

**NSQ Level: 2**

**Credit Value: 4**

**Guided Learning Hours: 40**

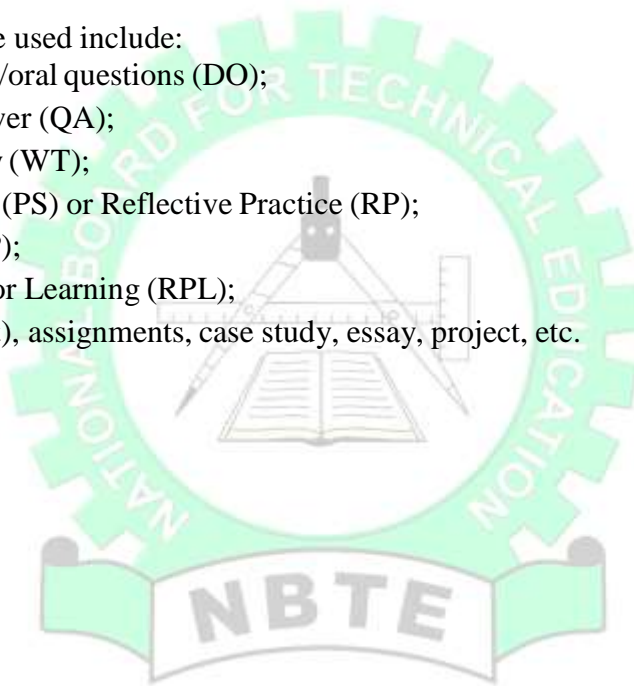
**Unit Purpose:** This unit is designed to equip the learner with knowledge and skills to understand rice milling output and the use of rice milling by-product.

### **Unit assessment requirements/evidence requirements:**

Assessment must be carried out in real workplace in which learning and human development is carried out.

**Assessment methods** to be used include:

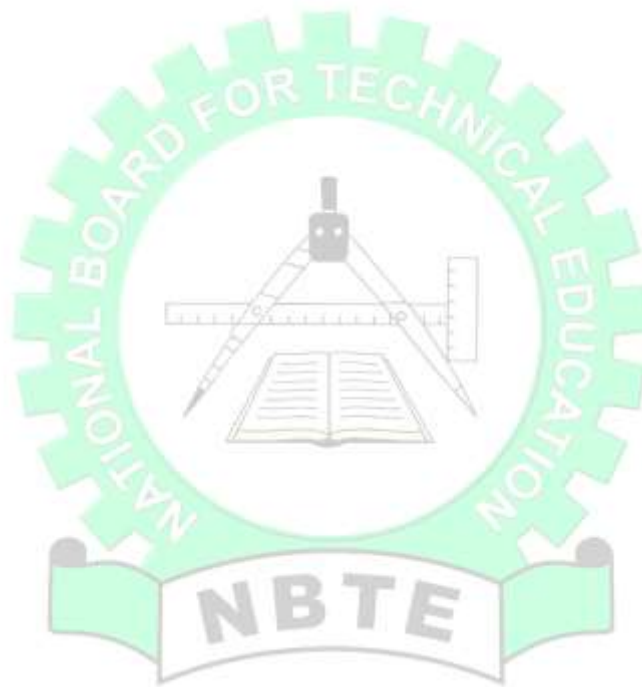
1. Direct Observation/oral questions (DO);
2. Question and Answer (QA);
3. Witness Testimony (WT);
4. Personal statement (PS) or Reflective Practice (RP);
5. Work Product (WP);
6. Recognition of Prior Learning (RPL);
7. Other methods (O t), assignments, case study, essay, project, etc.



## UNIT 9: Rice Milling Output and By-Products

LEARNING OUTCOME (LO)		PERFORMANCE CRITERIA	Evidence Type				Evidence Ref. Page No.			
<b>LO 1:</b> Collect Rice Milling Output	1.1	Identify the rice milling Output e.g. white , polish or brown rice								
	1.2	Identify the stages of rice milling that produce each output in 1.1 above								
	1.3	Handle different rice milling output in 1.1 above								
	1.4	Estimate the percentages of rice milling output at each stage in 1.1 above								
<b>LO 2:</b> Collect by-products of rice milling	2.1	Identify the rice milling by-products e.g. husk, bran and broken rice								
	2.2	Identify the stages of rice milling that produce each output								
	2.3	Separate the various by-products of rice milling								
	2.4	Estimate the percentages of by-products of rice milling at each stage in 2.2 above								
<b>LO 3:</b> Compare rice milling output and by-products	3.1	Identify the features of rice milling output								
	3.2	Identify the features of rice milling by-products								
	3.3	Distinguish rice milling output and by-products based on physical appearance								
	3.4	Differentiate between rice milling output and by-products at various stages of milling process.								

<b>Learners Signature:</b>	<b>Date:</b>
<b>Assessors Signature:</b>	<b>Date:</b>
<b>IQA Signature (if sampled)</b>	<b>Date:</b>
<b>EQA Signature (if sampled)</b>	<b>Date:</b>





**RICE PROCESSING LEVEL 3**

## GENERAL INFORMATION

### OVERVIEW

This qualification is designed for individuals who are interested in pursuing a career in Rice Processing for the award of National Skills Qualifications (NSQ)/National Occupational Standards (NOS). It is aimed at producing Semi-Forman or assistants in Rice Processing, NSQ Level 3 with the competencies necessary to assist in Rice Processing. This qualification is subject to review as when the need arises.

### QUALIFICATION PURPOSE

This qualification is targeted at developing competences in Rice Processing. This is focused on knowledge, practical skills, communication skills, health and safety, team work and workplace experience.

### QUALIFICATION REQUIREMENTS

All Candidates must:

1. Be at least (18) years of age;
2. Be medically fit;
3. Be mentally fit (Mental alertness);
4. Have achieved all the Safety and Health mandatory units in the qualification;
5. Be a Nigerian citizen;
6. Other nationals (International passport, residence permit);
7. Be vetted.

### QUALIFICATION OBJECTIVES

To achieve this qualification, the learner should have the following competencies:

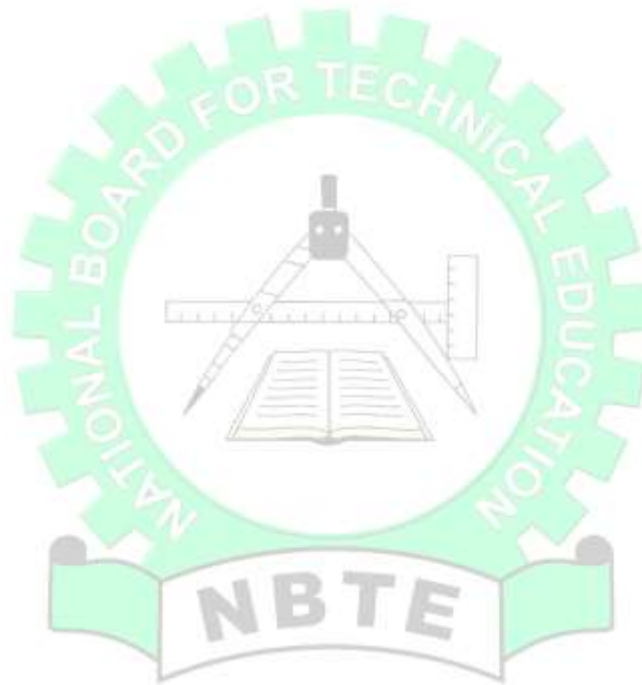
1. Adhere to health and safety precautions and avoidance of environmental hazards associated with working on rice processing sector;
2. Communicate effectively in a rice processing environment;
3. Develop team spirit and cordial working relationship with colleagues;
4. Practice rice processing;
5. Use rice processing tools, machineries and equipment for quality improvement;
6. Parboil Paddy rice targeting those employable at mills to improve rice quality;
7. Carry out standard operational procedures in paddy rice processing;
8. Carry out packaging and storage of paddy rice;
9. Carryout rice processing in accordance to regulations.

## **UNIT ASSESSMENT/EVIDENCE REQUIREMENTS:**

Assessment must be done in real workplace in which learning and human development is to be carried out. Simulation is not allowed in this level.

Assessment Methods to be Used Include:

1. Direct Observation (DO);
2. Questions and Answers (QA);
3. Witness Testimony (WT);
4. Personal Statement (PS) or Reflective Practice (RP);
5. Assignment (ASS);
6. Recognition of Prior Learning (RPL);
7. Other methods, case study, essay, project, etc.

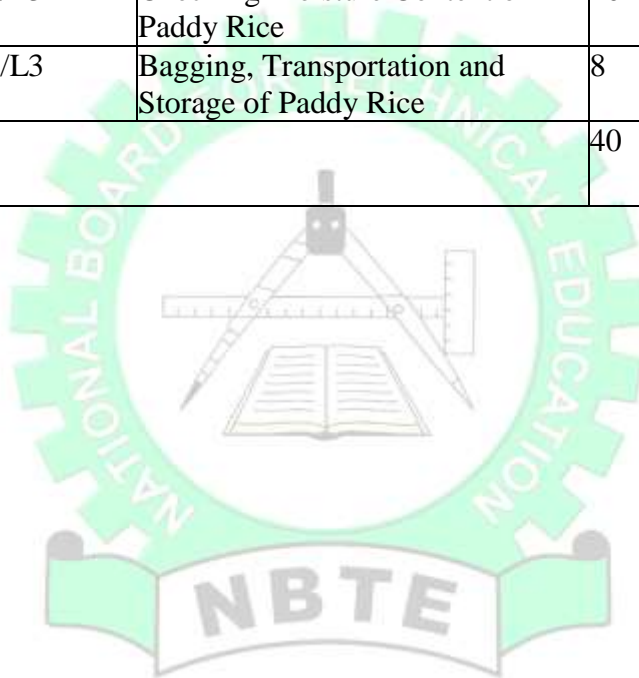


## National Skills Qualification/National Occupation Standard (NSQ/NOS) Unit Table

### LEVEL 3

#### LEVEL 3 Mandatory Units

S/No /Unit No	Reference Number	NOS Title	Credit Value	Guided Learning Hours
1	AGP/RCP/001/L3	Health and Safety in Rice Processing Environment	3	30
2	AGP/RCP/002/L3	Communicate Effectively in Rice Processing Environment	3	30
3	AGP/RCP/003/L3	Teamwork	2	20
4	AGP/RCP/004/L3	Drying of Paddy Rice	8	80
5	AGP/RCP/005/L3	Winnowing of Paddy Rice	6	60
6	AGP/RCP/006/L3	Checking Moisture Content of Paddy Rice	10	100
7	AGP/RCP/007/L3	Bagging, Transportation and Storage of Paddy Rice	8	80
TOTAL			40	400



## GENERAL GUIDE

<b>Unit title</b>	Provides a clear explanation of the content of the unit.
<b>Unit number</b>	The unique number assigned to the unit.
<b>Unit reference</b>	The unique reference number given to each unit at qualification approval by NBTE
<b>Unit level</b>	Denotes the level of the unit within the National Vocational Qualification framework NSQF.
<b>Unit credit value</b>	The value that has been given to the unit based on the expected learning time for an average learner. 1 credit = 10 learning hours
<b>Unit aim</b>	Provides a brief outline of the unit content.
<b>Learning outcome</b>	A statement of what a learner will know, understand or be able to do, as a result of a process of learning.
<b>Assessment criteria</b>	A description of the requirements a learner must achieve to demonstrate that a learning outcome has been met.
<b>Unit assessment guidance</b>	Any additional guidance provided to support the assessment of the unit.
<b>Unit guided learning hours</b>	The average number of hours of supervised or directed study time or assessment required to achieve a qualification or unit of a qualification.



## **Unit 1: Health and Safety in Rice Processing Environment**

**Unit Reference Number: AGP/RCP/001/L3**

**NSQ Level: 3**

**Credit Value: 2**

**Guided Learning Hours: 20**

**Unit Purpose:** This unit is to implement and monitor health and safety measure and avoidance of environmental hazards associated with rice processing.

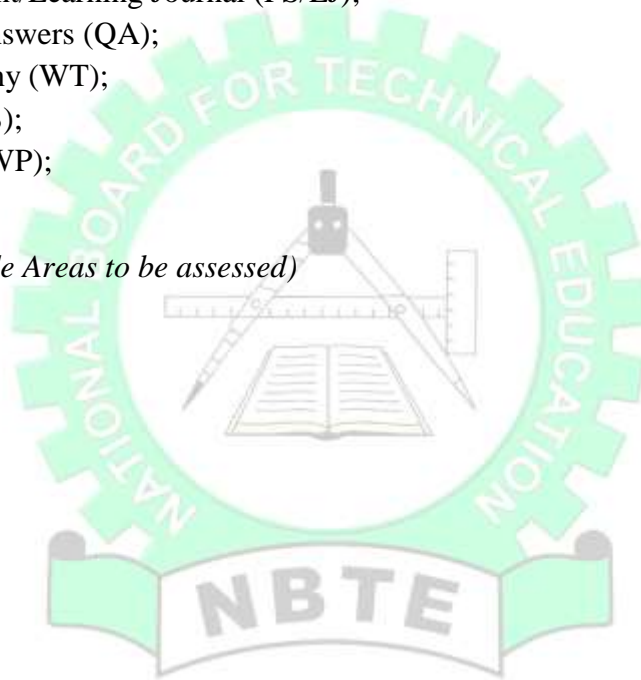
### **Unit assessment requirements/evidence requirements:**

Assessment must be carried out in real workplace in which learning and human development is to be carried out.

### **Assessment methods to be used include:**

1. Direct Observation (DO);
2. Personal Statement/Learning Journal (PS/LJ);
3. Questions and Answers (QA);
4. Witness Testimony (WT);
5. Assignment (ASS);
6. Work Products (WP);

*(This depends on the Trade Areas to be assessed)*



**Unit 1: Health and Safety in Rice Processing Environment**

<b>LEARNING OUTCOME (LO)</b>  <b>The learner will:</b>		<b>PERFORMANCE CRITERIA</b>  <b>The learner can:</b>	<b>Evidence Type</b>				<b>Evidence Ref. Page No.</b>			
<b>LO 1:</b>  Work safely in rice processing facilities.	1.1	Observe safe work practices along the rice value chain								
	1.2	Identify safety signs and symbols in rice processing facilities								
	1.3	Interpret signs and symbols correctly								
	1.4	Demonstrate safe work practices and instructions in rice processing facilities								
	1.5	Operate in accordance with health and safety practices								
<b>LO 2:</b>  Comply with safety standards in rice processing facilities	2.1	Identify work environment hazards								
	2.2	Identify types of hazards and risks in rice processing facilities								
	2.3	Observe safety standards in rice processing facilities								
	2.4	Use safety tools and materials in rice processing facilities								
LO 3: Apply personal protective equipment (PPE) in rice processing facilities	3.1	Identify the types of PPEs								
	3.2	Select appropriate PPE								
	3.3	Demonstrate the use of PPE								
	3.4	Maintain PPE before or after use								
<b>LO 4:</b> Response to accidents/injury in rice processing	4.1	Locate first aid facility								
	4.2	Use basic dressing materials								
	4.3	Respond to supervisor given instructions								
	4.4	Report accident/injury to the								

		appropriate Supervisor										
<b>LO 5:</b> Apply safe work habit and clean work environment in rice processing	5.1	Use safe access and exit routes in the work environment										
	5.2	Identify appropriate working tools, materials and equipment										
	5.3	Use tools and equipment safely in accordance with the supervisors instructions										
	5.4	Return all tools, equipment and unused materials for appropriate storage										
	5.5	Carry out general housekeeping of work environment										
	5.6	Dispose waste according to standards										
<b>LO 6:</b> Comply with standards of lifting, loading/offloading and stacking of materials in rice processing facilities	6.1	Identify lifting and stacking techniques										
	6.2	Demonstrate lifting techniques in loading and offloading of materials manually										
	6.3	Demonstrate correct lifting and loading techniques mechanically										
	6.4	Stack materials correctly										

## **Unit 2: Communicate Effectively in Rice Processing Environment**

**Unit reference number: AGP/RCP/002/L3**

**NSQ Level: 3**

**Credit value: 3**

**Guided learning hours: 30**

**Unit Purpose:** This unit is about effective communication in rice processing environment

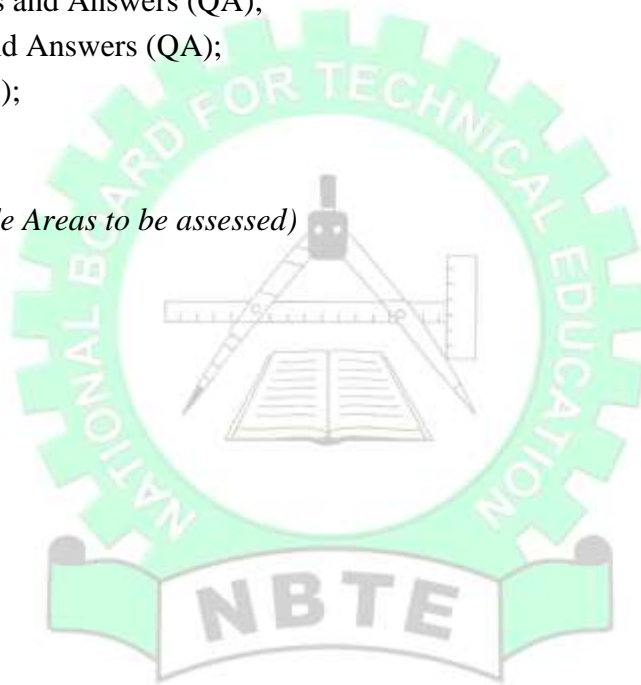
**Unit assessment requirements/evidence requirement:**

Assessment must be carried out in real workplace in which learning and human development is to be carried out.

**Assessment methods to be used include:**

1. Direct Observation (DO);
2. Written Questions and Answers (QA);
3. Oral Questions and Answers (QA);
4. Assignment (ASS);
5. Role Play.

*(This depends on the Trade Areas to be assessed)*

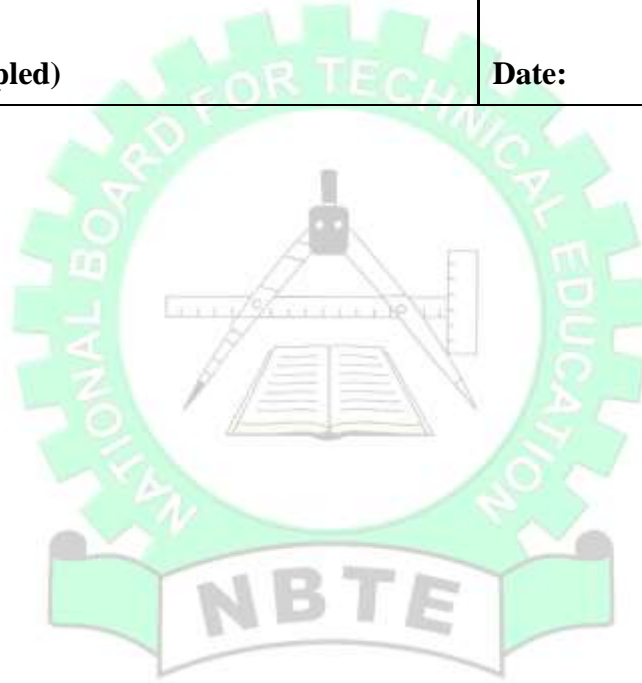


**Unit 2: Communicate Effectively in Rice Processing Environment**

<b>LEARNING OBJECTIVE (LO)</b>  <b>The learner will:</b>		<b>PERFORMANCE CRITERIA</b>  <b>The learner can:</b>	<b>Evidence Type</b>				<b>Evidence Ref. Page No.</b>					
<b>LO 1:</b> Apply the use of a non-complex communication system in a work environment	1.1	Use verbal means to pass on necessary Information										
	1.2	Use non-verbal means to convey necessary information e.g. body language and signs										
	1.3	Interpret symbols and signs appropriately										
	1.4	Speak in a respectful manner										
	1.5	Use respectful body language										
	1.6	Interpret verbal communication accurately										
<b>LO 2:</b> Source for information in a work environment	2.1	Identify the source of information in the work environment										
	2.2	Relate effectively with the source of information										
	2.3	Use the different information flow systems in a work environment										
	2.4	Use the information gathered to avoid challenges in a work environment										
	2.5	Report findings appropriately in accordance with laid down procedures in the work environment i.e. Cards, Flip Chart etc										
	2.6	Use simple communication gadget like mobile phones and table phones										
<b>LO 3:</b> Apply various means of communication in a work environment	3.1	Locate the various communication equipment in the work environment										
	3.2	Apply effectively the various communication equipment in a work environment										

	3.3	Pass information effectively to the right Personnel											
	3.4	Obey instructions in line with ethics of the work environment											

<b>Learners Signature:</b>	<b>Date:</b>
<b>Assessors Signature:</b>	<b>Date:</b>
<b>IQA Signature (if sampled)</b>	<b>Date:</b>
<b>EQA Signature (if sampled)</b>	<b>Date:</b>



### **Unit 3: Teamwork**

**Unit Reference Number: AGR/RCP/003/L3**

**NSQ Level: 3**

**Credit Value: 2**

**Guided Learning Hours: 20**

**Unit Purpose:** This unit is designed to provide learners with the knowledge and skills required to develop team spirit and positive working relationship with co-workers.

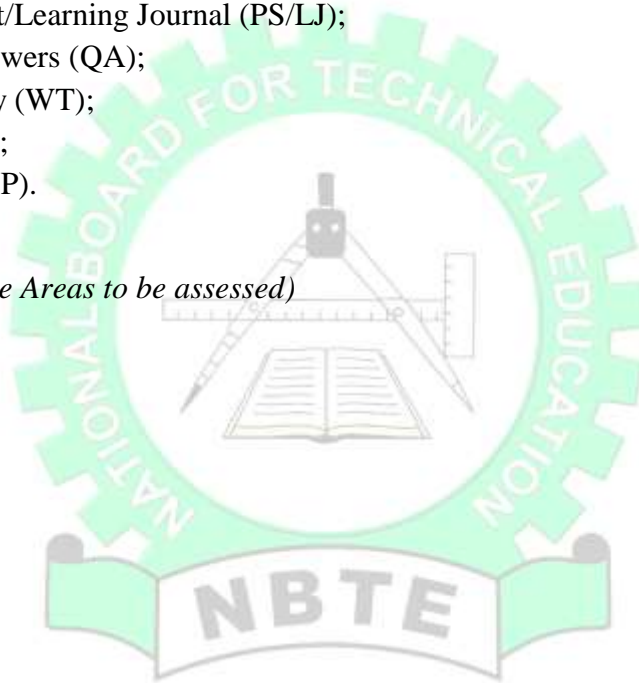
**Unit assessment requirements/evidence requirements:**

Assessment must be carried out in real workplace in which learning and human development is to be carried out.

**Assessment methods to be used include:**

1. Direct Observation (DO);
2. Personal Statement/Learning Journal (PS/LJ);
3. Questions and Answers (QA);
4. Witness Testimony (WT);
5. Assignment (ASS);
6. Work Products (WP).

*(This depends on the Trade Areas to be assessed)*



**Unit 3: Teamwork**

LO (Learning Outcome) Criteria: -			Evidence Type				Evidence Ref Page Number			
<b>LO 1</b> Develop good working relationship with co- workers	1.1	Perform teamwork								
	1.2	Identify the importance of teamwork								
	1.3	Observe the qualities of a team player								
<b>LO 2</b> Take responsibility within the team	2.1	Perform own roles and responsibilities within a team								
	2.2	Perform tasks in line with the team rules and regulations								
	2.3	Work well in a group								
<b>LO 3</b> Comply with the rules of organization	3.1	Observe code of conduct in work environment								
	3.2	Use organizational code of practice								
	3.3	Work in line with organizational standard								

## Unit 4: Drying of Paddy Rice

**Unit Reference Number: AGP/RCP/004/L3**

**NSQ Level: 3**

**Credit Value: 8**

**Guided Learning Hours: 80**

**Unit Purpose:** This unit is designed to equip learner with knowledge and skills to carry out drying process of paddy rice in rice processing.

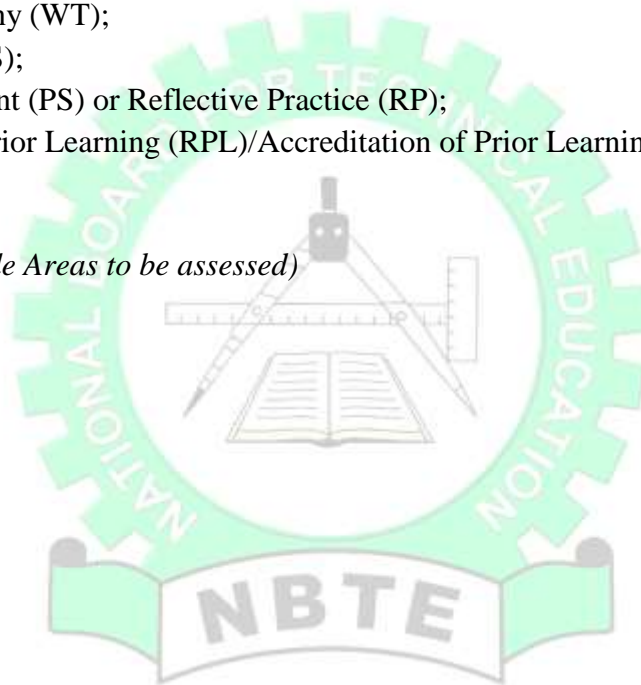
### **Unit assessment requirements/evidence requirements:**

Assessment must be carried out in real workplace in which learning and human development is to be carried out.

### **Assessment methods to be used include:**

1. Direct Observation (DO);
2. Questions and Answers (QA);
3. Witness Testimony (WT);
4. Assignment (ASS);
5. Personal Statement (PS) or Reflective Practice (RP);
6. Recognition of Prior Learning (RPL)/Accreditation of Prior Learning (APL).

*(This depends on the Trade Areas to be assessed)*

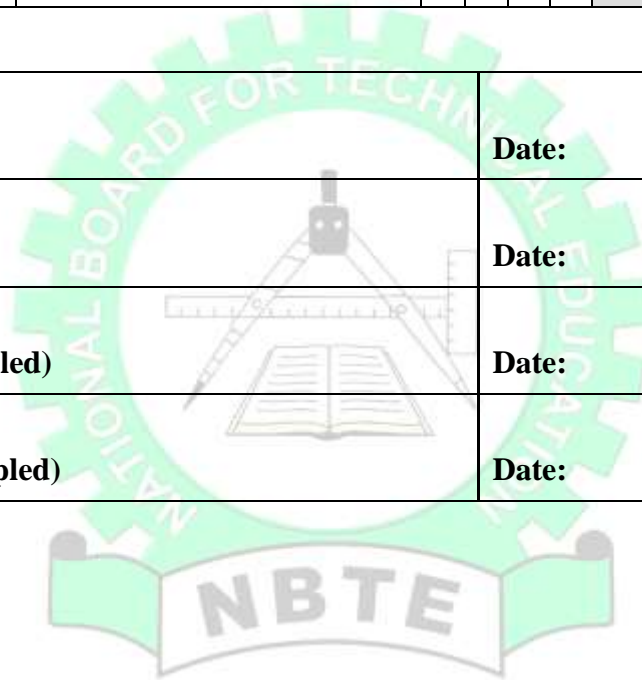


#### Unit 4: Drying of Paddy Rice

LEARNING OBJECTIVE (LO)  The learner will:		PERFORMANCE CRITERIA  The learner can:	Evidence Type				Evidence Ref. Page No.			
<b>LO 1:</b> Apply the principles of drying of paddy rice in rice processing	1.1	Identify the key players in drying of paddy rice Perform paddy rice drying								
	1.2	Identify the stages of paddy rice drying								
	1.3	Assist in carrying out paddy rice drying								
<b>LO 2:</b> Demonstrate the methods of drying paddy rice	2.1	Identify the different methods of paddy rice drying i.e. mechanical method, sun drying method and field-panicle drying								
	2.2	Identify features of the different methods of paddy rice drying								
	2.3	Demonstrate the above methods mentioned in 2.2 above								
<b>LO 3:</b> Differentiate the major drying methods of paddy rice	3.1	Compare the different methods of paddy rice drying								
	3.2	Practice the methods of paddy rice drying								
	3.3	Identify the tools and equipment used in the different drying methods								
<b>LO 4:</b> Perform paddy rice drying using mechanical method	4.1	Identify mechanical methods of paddy rice drying e.g. solar, electrical and biofuel mechanical dryers								
	4.2	Demonstrate the use of the above methods in 4.1 above								
	4.3	Assist in carrying out paddy rice drying using any of the mentioned methods in 4.1								

		above									
	4.4	Demonstrate routine maintenance of the dryers									
<b>LO 5:</b> Carry out paddy rice drying using sun drying method	5.1	Identify the materials used in paddy rice drying using sun drying method									
	5.2	Carry out paddy rice drying using sun-drying method									
	5.3	Demonstrate proper maintenance of tools and equipment used in sun drying of paddy rice									

<b>Learners Signature:</b>	<b>Date:</b>
<b>Assessors Signature:</b>	<b>Date:</b>
<b>IQA Signature (if sampled)</b>	<b>Date:</b>
<b>EQA Signature (if sampled)</b>	<b>Date:</b>



## **Unit 5: Winnowing of Paddy Rice**

**Unit reference number: AGP/RCP/005/L3**

**NSQ Level: 3**

**Credit value: 6**

**Guided learning hours: 60**

**Unit Purpose:** This unit is designed to equip learner with knowledge and skills in carrying out winnowing process of paddy rice in order to remove the chaps and other impurities which are lighter than the paddy rice.

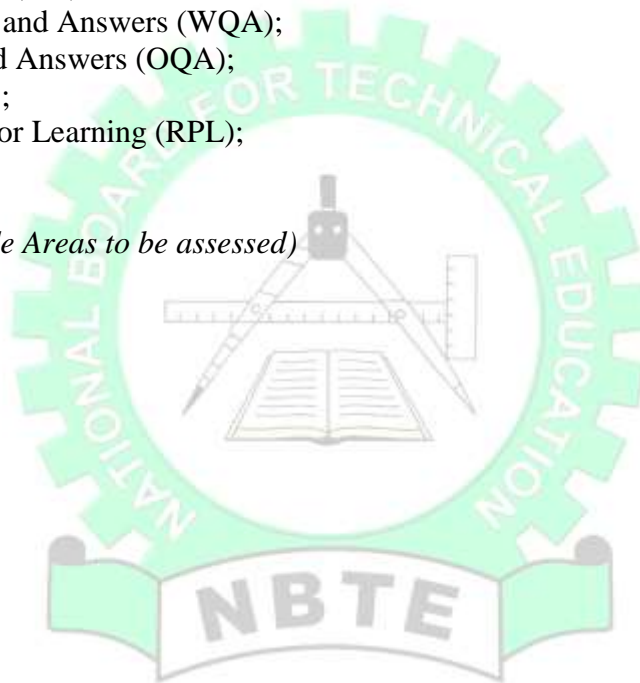
### **Unit assessment requirements/evidence requirement:**

Assessment must be carried out in real workplace in which learning and human development is to be carried out.

### **Assessment methods to be used include:**

1. Direct Observation (DO);
2. Written Questions and Answers (WQA);
3. Oral Questions and Answers (OQA);
4. Assignment (ASS);
5. Recognition of Prior Learning (RPL);
6. Role Play.

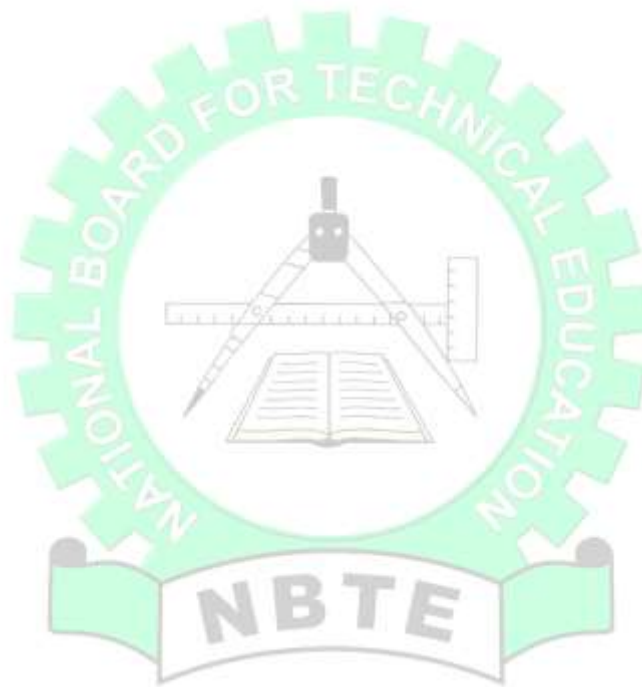
*(This depends on the Trade Areas to be assessed)*



**Unit 5: Winnowing of Paddy Rice**

<b>LEARNING OBJECTIVE (LO)</b>  <b>The learner will:</b>		<b>PERFORMANCE CRITERIA</b>  <b>The learner can:</b>	<b>Evidence Type</b>				<b>Evidence Ref. Page No.</b>					
<b>LO 1:</b> Apply the principles of winnowing in paddy rice processing	1.1	Identify the principles of winnowing in paddy rice processing										
	1.2	Identify tools and equipment used for winnowing in paddy rice processing										
	1.3	Identify the importance of winnowing of paddy rice										
<b>LO 2:</b> Execute the process of winnowing	2.1	Carry out winnowing process using traditional method										
	2.2	Carry out winnowing process using mechanical method										
	2.3	Observe precautionary measures when carrying out winnowing process using traditional method										
	2.4	Observe precautionary measures when carrying out winnowing process using mechanical method										
<b>LO 3:</b> Use the tools and equipment for carrying out winnowing in paddy rice	3.1	Identify the components of winnower										
	3.2	Demonstrate the operational sequence of winnowing paddy rice										
	3.3	Carry out evaluation/checks when conducting the winnowing process										

<b>Learners Signature:</b>	<b>Date:</b>
<b>Assessors Signature:</b>	<b>Date:</b>
<b>IQA Signature (if sampled)</b>	<b>Date:</b>
<b>EQA Signature (if sampled)</b>	<b>Date:</b>



## **Unit 6: Checking Moisture Content of Paddy Rice**

**Unit Reference Number: AGP/RCP/006/L3**

**NSQ Level: 3**

**Credit Value: 10**

**Guided Learning Hours: 100**

**Unit Purpose:** This unit is designed to equip learner with knowledge and skills required to carry out moisture content checks in order to conform to standards.

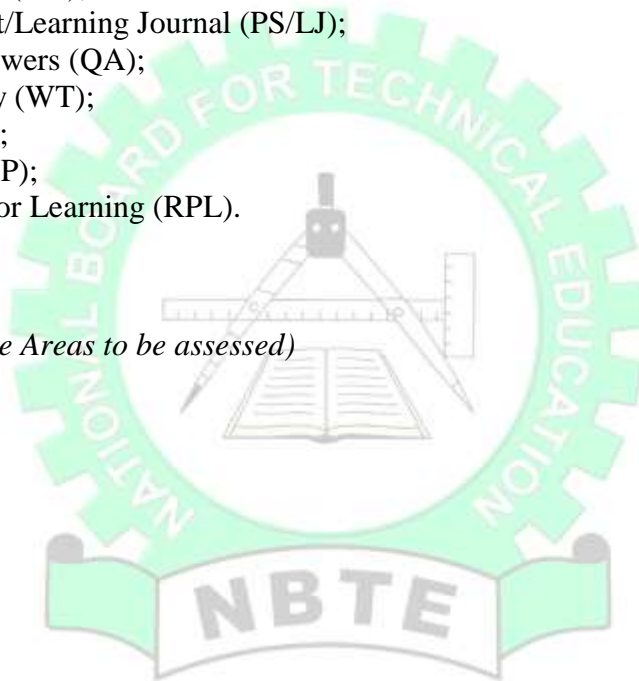
### **Unit assessment requirements/evidence requirements:**

Assessment must be carried out in real workplace in which learning and human development is to be carried out.

### **Assessment methods to be used include:**

1. Direct Observation (DO);
2. Personal Statement/Learning Journal (PS/LJ);
3. Questions and Answers (QA);
4. Witness Testimony (WT);
5. Assignment (ASS);
6. Work Products (WP);
7. Recognition of Prior Learning (RPL).

*(This depends on the Trade Areas to be assessed)*

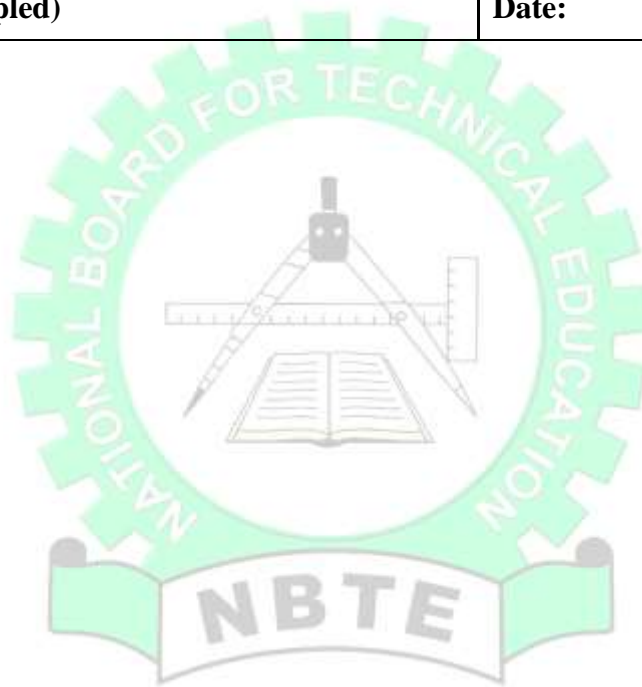


## Unit 6: Checking Moisture Content of Paddy Rice

LEARNING OBJECTIVE (LO)  The learner will:	PERFORMANCE CRITERIA  The learner can:		Evidence Type	Evidence Ref. Page No.			
<b>LO 1:</b> Apply the procedures for checking moisture content in paddy rice	1.1	Identify the stages of paddy rice moisture content checks					
	1.2	Identify the methods of checking moisture content of paddy rice i.e. moisture meters, manual estimation, oven method etc.					
	1.3	Demonstrate the methods of checking moisture content of paddy rice					
<b>LO 2:</b> Conduct moisture content tests of paddy rice using moisture meter	2.1	Identify a moisture meter					
	2.2	Calibrate a moisture meter					
	2.3	Demonstrate the steps involved in moisture content test of paddy rice					
	2.4	Carry out paddy rice moisture content test using moisture meters					
	2.5	Record results of test in a log book					
	2.6	Carry out routine maintenance of moisture meter					
<b>LO 3:</b> Conduct moisture content tests of paddy rice using oven	3.1	Identify an oven dryer used for paddy rice moisture test					
	3.2	Calibrate an oven dryer used for paddy rice moisture test					
	3.3	Demonstrate the steps involved in moisture content test of paddy rice using oven dryer					
	3.4	Carry out paddy rice moisture content test using oven dryer					
	3.5	Record results of test in a log book					
	3.6	Carry out routine maintenance of oven dryer					
<b>LO 4:</b> Compare the major methods of checking	4.1	Evaluate the methods of checking moisture content of paddy rice					
	4.2	Make decision for the choice of the most efficient methods based on 4.1 above					

moisture content of paddy rice	4.3	Justify the reason of selected method in 4.2 above																		
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<b>Learners Signature:</b>	<b>Date:</b>
<b>Assessors Signature:</b>	<b>Date:</b>
<b>IQA Signature (if sampled)</b>	<b>Date:</b>
<b>EQA Signature (if sampled)</b>	<b>Date:</b>



## **Unit 7: Bagging, Transportation and Storage of Paddy Rice**

**Unit Reference Number: AGP/RCP/007/L3**

**NSQ Level: 3**

**Credit Value: 8**

**Guided Learning Hours: 80**

**Unit Purpose:** This unit is designed to equip learner with knowledge and skills required to bag, transport and store paddy rice.

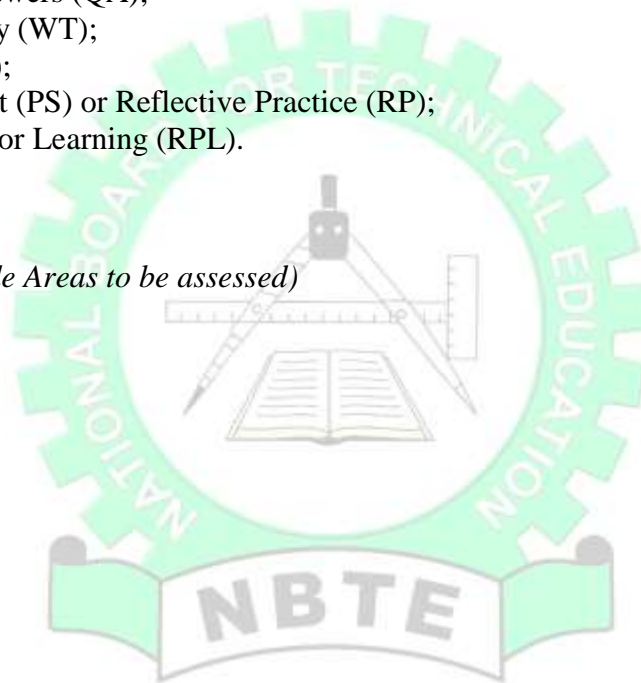
### **Unit assessment requirements/evidence requirements:**

Assessment must be carried out in real workplace in which learning and human development is to be carried out.

### **Assessment methods to be used include:**

1. Direct Observation (DO);
2. Questions and Answers (QA);
3. Witness Testimony (WT);
4. Assignment (ASS);
5. Personal Statement (PS) or Reflective Practice (RP);
6. Recognition of Prior Learning (RPL).

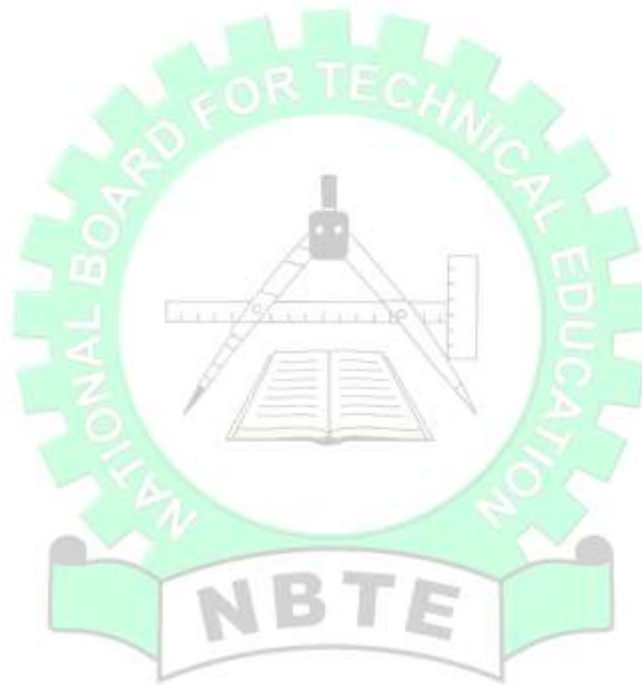
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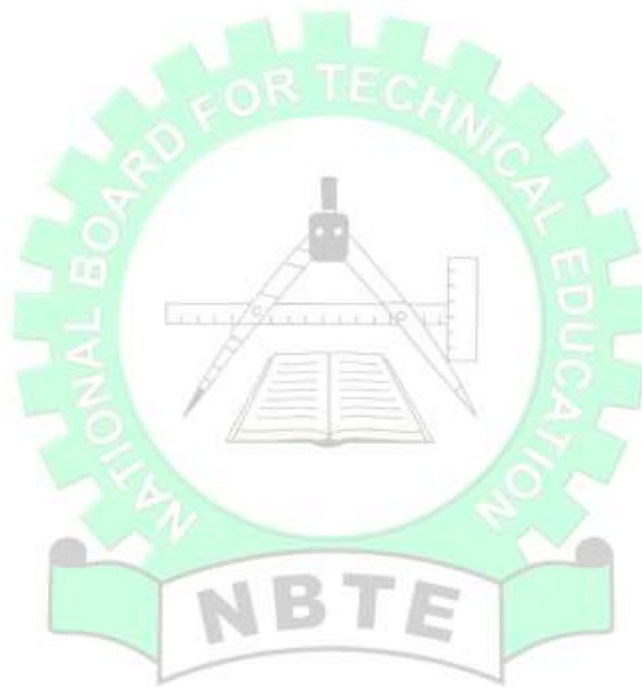
### Unit 7: Bagging, Transportation and Storage of Paddy Rice

LEARNING OBJECTIVE (LO)  The learner will:		PERFORMANCE CRITERIA  The learner can:	Evidence Type				Evidence Ref. Page No.			
<b>LO 1:</b> Apply the concept of bagging in relation to paddy rice	1.1	Demonstrate bagging of paddy rice								
	1.2	Demonstrate the steps and precautions to avoid wastage in bagging paddy rice								
	1.3	Perform bagging of paddy rice								
<b>LO 2:</b> Use the common types of bags for bagging paddy rice	2.1	Identify the different types of bags for paddy rice								
	2.2	Perform comparison of the different bags used in bagging paddy rice								
	2.3	Use the different types of bags for paddy rice								
<b>LO 3:</b> Organise transportation in relation to paddy rice	3.1	Identify different means of transporting paddy rice								
	3.2	Demonstrate transportation in relation to paddy rice								
	3.3	Compare the different means of transportation of paddy rice and compare them								
<b>LO 4:</b> Apply the concept of storage in relation to paddy rice	4.1	Identify different storage methods of paddy rice								
	4.2	Demonstrate storage in relation to paddy rice								
	4.3	Compare different storage methods of paddy rice								

<b>Learners Signature:</b>	<b>Date:</b>
<b>Assessors Signature:</b>	<b>Date:</b>
<b>IQA Signature (if sampled)</b>	<b>Date:</b>
<b>EQA Signature (if sampled)</b>	<b>Date:</b>



**RICE PROCESSING LEVEL 4**



## GENERAL INFORMATION

### OVERVIEW

This qualification is designed for individuals who are interested in pursuing a career in Rice Processing for the award of National Skills Qualifications (NSQ)/National Occupational Standards (NOS). It is aimed at producing technicians in Rice Processing, NSQ Level 4 with the competencies necessary to assist supervisor of Rice Processing. This qualification is subject to review as and when the need arises.

### QUALIFICATION PURPOSE

This qualification is targeted at developing competency in Rice Processing. This focuses on knowledge, practical skills, communication skills, health and safety, team work and workplace experience.

### QUALIFICATION REQUIREMENTS

All Candidates must:

- a. Be at least (19) years of age;
- b. Be medically fit;
- c. Be mentally fit (Mental alertness);
- d. Have achieved all the Safety and Health mandatory units in the qualification;
- e. Be a Nigerian citizen;
- f. Other nationals (International passport, residence permit);
- g. Be vetted.

### QUALIFICATION OBJECTIVES

To achieve this qualification, the learner should have the following competencies:

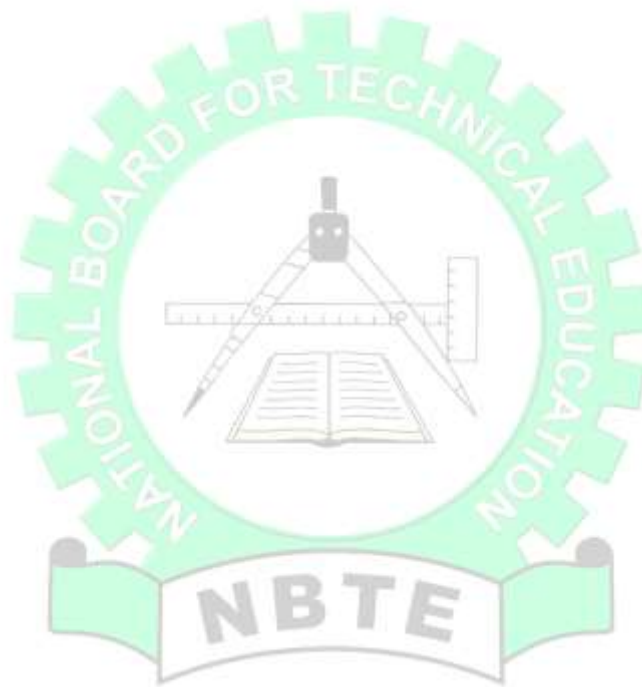
1. Adhere to health and safety precautions and avoidance of environmental hazards associated with working on rice processing sector;
2. Communicate effectively in rice processing environment;
3. Develop team spirit and cordial working relationship with colleagues;
4. Practice rice processing;
5. Use rice processing tools, machinery and equipment for quality improvement;
6. Parboil paddy rice targeting those employable at mills to improve rice quality;
7. Carry out standard operational procedures in paddy and milled rice processing;
8. Carry out packaging, transportation and storage of paddy and milled rice;
9. Understand rice milling output and the use of rice milled by-product;
10. Carry out rice processing based on the regulatory standards.

### UNIT ASSESSMENT/EVIDENCE REQUIREMENTS:

Assessment must be carried out in real workplace environment in which learning and human development is to be carried out. Simulation is allowed where necessary in this level.

Assessment Methods to be used include:

1. Direct Observation (DO);
2. Question and Answer (QA);
3. Witness Testimony (WT);
4. Personal Statement (PS) or Reflective Practice (RP);
5. Assignment (ASS);
6. Recognition of Prior Learning (RPL);
7. Other methods, projects, case study, essay etc.



**National Skills Qualification/National Occupation Standard (NSQ/NOS) Unit Table**

**LEVEL 4**

**MANDATORY UNITS**

<b>Unit</b>	<b>Unit Reference Number</b>	<b>Unit Title</b>	<b>Credit Value</b>	<b>Guided Learning Hours</b>
1	AGP/RCP/001/L4	Health and Safety in Rice Processing Environment	3	30
2	AGP/RCP/002/L4	Communicate Effectively in Rice Processing Environment	3	30
3	AGP/RCP/003/L4	Teamwork	2	20
4	AGP/RCP/004/L4	Raw Material Quality Control Checks	5	50
5	AGP/RCP/005/L4	Pre-Cleaning Processes Prior to Parboiling	5	50
6	AGP/RCP/006/L4	Parboiling Processes	5	50
7	AGP/RCP/007/L4	Pre-Milling Processes	5	50
8	AGP/RCP/008/L4	Milling Processes	5	50
9	AGP/RCP/009/L4	Moisture Content Checks of Processed Rice	5	50
10	AGP/RCP/010/L4	Bagging, Transportation & Storage of Processed Rice	5	50
11	AGP/RCP/011/L4	Rice Powder/Flour Production	5	50
12	AGP/RCP/012/L4	Production Planning	5	50
13	AGP/RCP/013/L4	Team Management	5	50
<b>TOTAL</b>			<b>53</b>	<b>530</b>

## GENERAL GUIDE

<b>Unit title</b>	Provides a clear explanation of the content of the unit.
<b>Unit number</b>	The unique number assigned to the unit.
<b>Unit reference</b>	The unique reference number given to each unit at qualification approval by NBTE
<b>Unit level</b>	Denotes the level of the unit within the National Vocational Qualification framework NSQF.
<b>Unit credit value</b>	The value that has been given to the unit based on the expected learning time for an average learner. 1 credit = 10 learning hours
<b>Unit aim</b>	Provides a brief outline of the unit content.
<b>Learning outcome</b>	A statement of what a learner will know, understand or be able to do, as a result of a process of learning.
<b>Assessment criteria</b>	A description of the requirements a learner must achieve to demonstrate that a learning outcome has been met.
<b>Unit assessment guidance</b>	Any additional guidance provided to support the assessment of the unit.
<b>Unit guided learning hours</b>	The average number of hours of supervised or directed study time or assessment required to achieve a qualification or unit of a qualification.

## **Unit 1: Health and Safety in Rice Processing Environment**

**Unit Reference Number: AGP/RCP/001/L4**

**NSQ Level: 4**

**Credit Value: 3**

**Guided Learning Hours: 30**

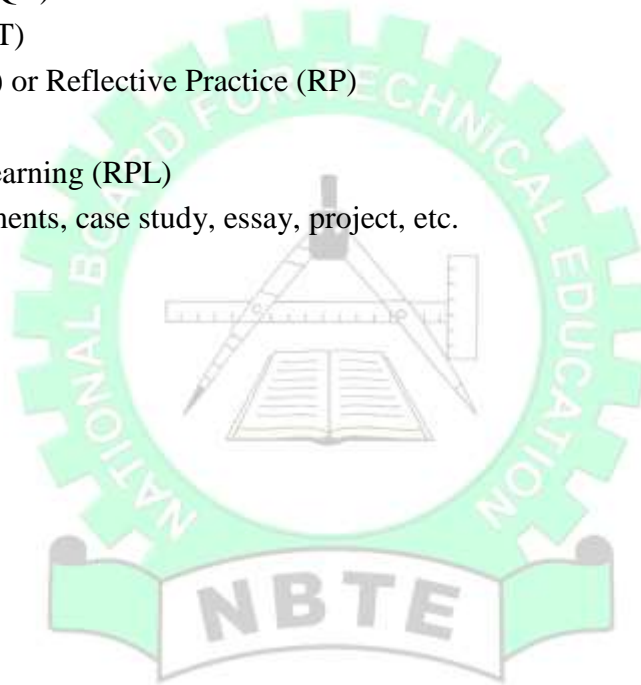
**Unit Purpose:** This unit focuses on the adherence to health and safety precaution and avoidance of environmental hazards associated with working in a rice processing environment.

### **Unit assessment requirements/evidence requirements:**

Assessment must be carried out in real workplace in which learning and human development is carried out. Simulation is allowed where necessary in this unit.

**Assessment methods** to be used include:

1. Direct Observation/oral questions (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Work Product (WP)
6. Recognition of Prior Learning (RPL)
7. Other methods, assignments, case study, essay, project, etc.



## UNIT 1: Health and Safety in Rice Processing Environment

LEARNING OBJECTIVE (LO)		PERFORMANCE CRITERIA	Evidence Type				Evidence Ref. Page No.			
The learner will:		The learner can:								
LO 1: Work safely in a rice processing environment	1.1	Demonstrate safe work practices as obtained along the rice processing value chain								
	1.2	Interpret safety precautionary signs and symbols in rice processing plant								
	1.3	Enforce correctly the use of safety signs and symbols								
	1.4	Demonstrate safe work practices in rice processing plant								
	1.5	Identify in accordance with health and safety practices								
LO 2: Comply with safety standards in rice processing environment	2.1	Identify work environment hazards								
	2.2	Identify various types of hazards and risks associated with rice processing								
	2.3	Interpret safety standards in rice farms and processing facilities								
	2.4	Use safety tools, materials and equipment in rice processing facilities								
LO 3: Apply personal protective equipment (PPE) in rice processing facilities	3.1	Identify the types of PPEs required for rice processing plants								
	3.2	Select appropriate PPE for rice processing plants								
	3.3	Demonstrate the use of PPE								
	3.4	Maintain PPE before or after use								
LO 4: Response to accidents/injury in rice processing plants	4.1	Enforce the use of first aid facility								
	4.2	Use basic first aid materials								
	4.3	Report incidences of accident/injury to the appropriate supervisor								
LO 5: Apply safe work habit and clean	5.1	Enforce the use of safe access and exit routes in the work environment								

work environment in rice processing plants	5.2	Demonstrate the use of appropriate working tools, materials and equipment																		
	5.3	Enforce the use of tools and equipment safely in accordance with standard instructions																		
	5.4	Keep all tools, equipment and unused materials appropriately in the store stored																		
	5.5	Carry out general housekeeping of work environment																		
	5.6	Dispose all wastes appropriately to designated waste facilities																		
LO 6: Comply with standards of lifting, loading/offloading and stacking of materials in rice processing facilities	6.1	Demonstrate lifting and stacking techniques																		
	6.2	Demonstrate lifting techniques in loading and offloading of materials manually																		
	6.3	Demonstrate correct lifting and loading techniques mechanically																		
	6.4	Stack materials correctly																		

<b>Learners Signature:</b>	<b>Date:</b>
<b>Assessors Signature:</b>	<b>Date:</b>
<b>IQA Signature (if sampled)</b>	<b>Date:</b>
<b>EQA Signature (if sampled)</b>	<b>Date:</b>

## **Unit 2: Communicate effectively in rice processing environment**

**Unit Reference Number: AGR/RCP/002/L4**

**NSQ Level: 4**

**Credit Value: 3**

**Guided Learning Hours: 30**

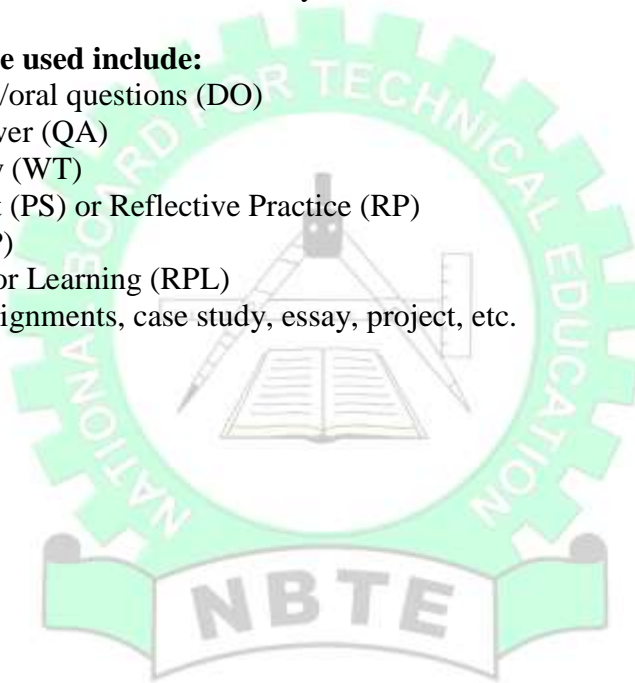
**Unit Purpose:** This unit is designed to train learners on simple communication techniques in rice processing environment

### **Unit assessment requirements/evidence requirements:**

Assessment must be carried out in real workplace in which learning and human development is to be carried out. *Simulation is allowed* where necessary in this unit.

### **Assessment methods to be used include:**

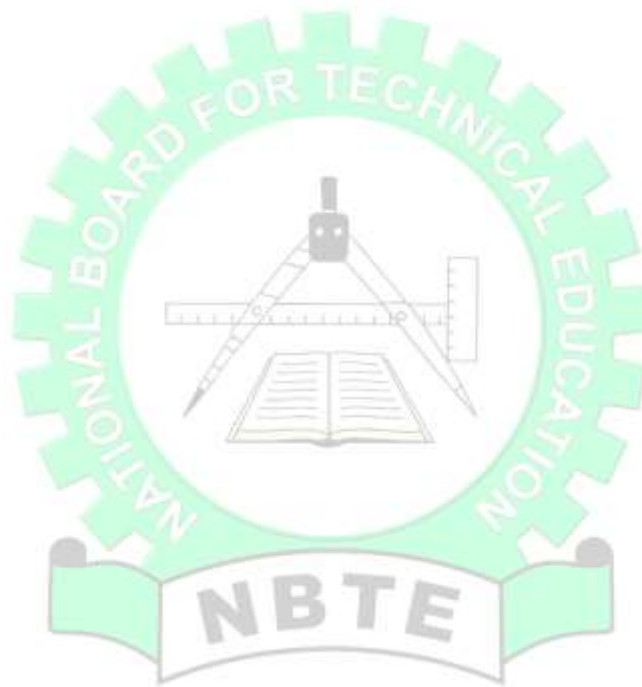
1. Direct Observation/oral questions (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal Statement (PS) or Reflective Practice (RP)
5. Work Product (WP)
6. Recognition of Prior Learning (RPL)
7. Other methods, assignments, case study, essay, project, etc.



**Unit 2: Communicate effectively in rice processing environment**

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type				Evidence Ref. Page No.			
LO 1: Apply the use of a non-complex communication system in a work environment	1.1	Use verbal means to pass on necessary information								
	1.2	Use non-verbal means to convey necessary information e.g. body language, signs								
	1.3	Interpret symbols and signs appropriately								
LO 2: Source for information in a work environment	2.1	Illustrate the source of information in the work environment								
	2.2	Relate effectively with the source of information								
	2.3	Use different information flow systems in a work environment								
	2.4	Analyze information gathered to avoid challenges in a work situation								
	2.5	Report findings appropriately in accordance with laid down procedures in the work environment i.e. Cards, Flip Chart								
	2.6	Use simple communication gadget like mobile phones and table phones								
LO 3: Apply various means of communication in a work environment	3.1	Enforce the use of various communication equipment in the work environment.								
	3.2	Utilize effectively the various communication equipment in a work environment								
	3.3	Pass information effectively to the right channel								
	3.4	Obey instructions in line with ethics of the work environment								

<b>Learners Signature:</b>	<b>Date:</b>
<b>Assessors Signature:</b>	<b>Date:</b>
<b>IQA Signature (if sampled)</b>	<b>Date:</b>
<b>EQA Signature (if sampled)</b>	<b>Date:</b>



### **Unit 3: Teamwork**

**Unit Reference Number: AGR/RCP/003/L4**

**NSQ Level: 4**

**Credit Value: 2**

**Guided Learning Hours: 20**

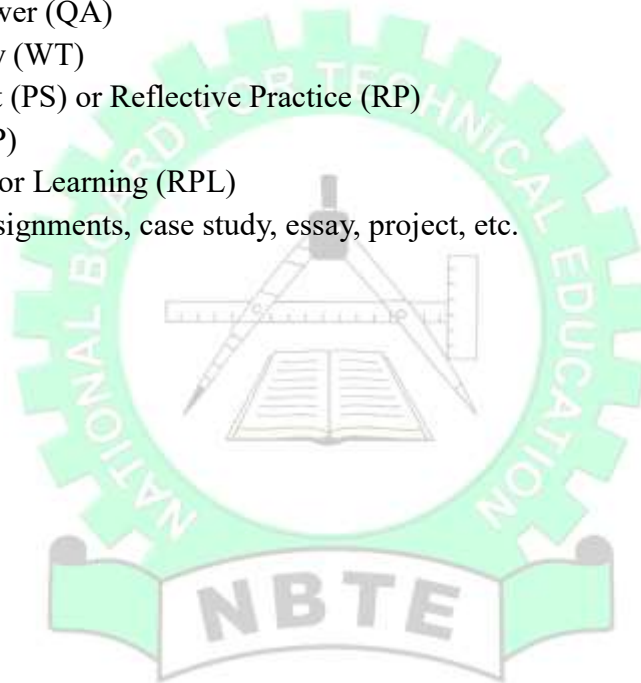
**Unit Purpose:** The purpose for this unit is to impact into the learner the necessary skills, knowledge and understanding required to develop team spirit and cordial working relationship with colleagues.

#### **Unit Assessment requirement**

Assessment of this unit must be at a real practical work environment, simulation is not allowed unless where indicated.

**Assessment methods** to be used include:

1. Direct Observation/oral questions (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Work Product (WP)
6. Recognition of Prior Learning (RPL)
7. Other methods, assignments, case study, essay, project, etc.



### Unit 3: Teamwork

LEARNING OBJECTIVE (LO) The learner will:	PERFORMANCE CRITERIA The learner can:	Evidence Type				Evidence Ref. Page No.			
<b>LO 1</b> Positive working relationship with colleagues	1.1	Develop cordial working relationship with colleagues							
	1.2	Recognize the importance of relating with other people in a way that makes them feel valued and respected							
	1.3	Assist team members when required.							
	1.4	Report to the appropriate personnel when request for assistance fall outside area of responsibility.							
	1.5	Communicate information to colleagues about individual work that may affect team work							
<b>LO 2:</b> Take responsibility within the team	2.1	Recognize own role and responsibilities within a team							
	2.2	Perform individual tasks in line with the team's rules and regulations.							
	2.3	Participate effectively in teamwork.							
<b>LO 3:</b> Compliance with policy of organisation									
	3.1	Interpret organisational code of conduct							
	3.2	Work in line with organisational standard							
	3.3	Enforce organisational code of practice							
	3.4	Adhere strictly to instructions given by the Management							

<b>Learners Signature:</b>	<b>Date:</b>
<b>Assessors Signature:</b>	<b>Date:</b>
<b>IQA Signature (if sampled)</b>	<b>Date:</b>
<b>EQA Signature (if sampled)</b>	<b>Date:</b>

## Unit 4: Raw Materials Quality Control Checks

**Unit Reference Number: AGP/RCP/004/L4**

**NSQ Level: 4**

**Credit Value: 5**

**Guided Learning Hours: 50**

**Unit Purpose:** The purpose of this unit is to impart into the learner the necessary skills, knowledge and understanding required to carry out raw materials quality control checks in order to minimize losses and enhance shelf life of the raw materials.

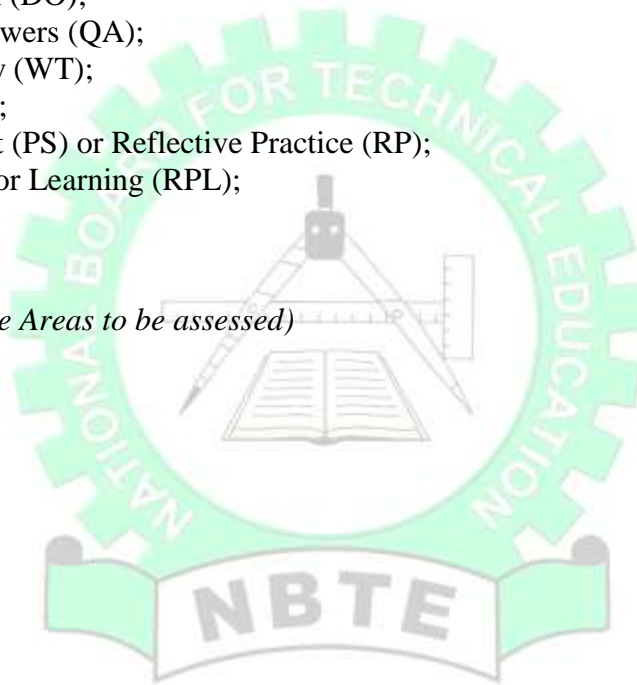
### **Unit assessment requirements/evidence requirements:**

Assessment must be carried out in real workplace in which learning and human development is to be carried out.

**Assessment methods** to be used include:

1. Direct Observation (DO);
2. Questions and Answers (QA);
3. Witness Testimony (WT);
4. Assignment (ASS);
5. Personal Statement (PS) or Reflective Practice (RP);
6. Recognition of Prior Learning (RPL);

*(This depends on the Trade Areas to be assessed)*



#### Unit 4: Raw Materials Quality Control Checks

LEARNING OBJECTIVE (LO)		PERFORMANCE CRITERIA	Evidence Type				Evidence Ref. Page No.			
The learner will:		The learner can:								
<b>LO 1:</b> Apply sampling procedure for raw material quality control checks of paddy rice.	1.1	Carry out sampling of raw materials for quality control checks in paddy rice								
	1.3	Conduct sampling of raw materials for quality control checks in paddy rice using standard sample size								
	1.3	Carry out the storage of samples meant for raw materials quality control checks in paddy rice								
<b>LO 2:</b> Apply physical analysis in raw material quality control checks of paddy rice	2.1	Carry out the physical inspection (visual checks) to check for the uniformity or consistency in size, shape and maturity of grains								
	2.2	Carry out the physical inspection (visual checks) to check for the colour and smell								
	2.3	Carry out the physical inspection (visual checks) to check for the damaged or insect-infested grains								
	2.4	Carry out the physical inspection (manual checks) to check for foreign materials such as stones, mud, balls, weed seeds and straw								
<b>LO 3:</b> Perform moisture content test for raw material quality control checks	3.1	Carry out calibration of the moisture meter as based on the user manual								
	3.2	Carry out moisture content test using the calibrated moisture meter								
	3.3	Document results in log books								
	3.4	Conduct routine maintenance on the moisture meter								

<b>Learners Signature:</b>	<b>Date:</b>
<b>Assessors Signature:</b>	<b>Date:</b>
<b>IQA Signature (if sampled)</b>	<b>Date:</b>
<b>EQA Signature (if sampled)</b>	<b>Date:</b>

## **Unit 5: Pre-cleaning of Paddy Prior to Parboiling**

**Unit Reference Number: AGP/RCP/005/L4**

**NSQ Level: LEVEL 4**

**Credit Value: 5**

**Guided Learning Hours: 50**

**Unit Purpose:** The purpose of this unit is to impart into the learner the necessary skills, knowledge and understanding required to carry out pre-cleaning of paddy rice before parboiling so as to remove impurities and other foreign matters.

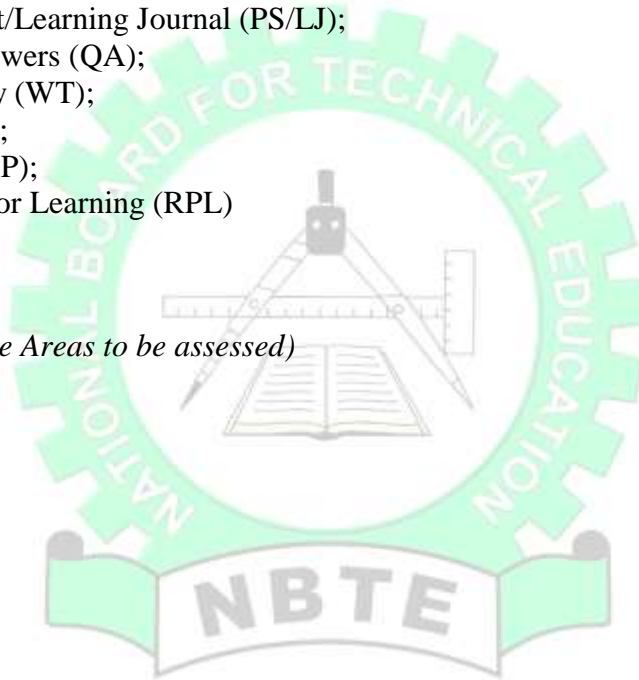
### **Unit assessment requirements/evidence requirements:**

Assessment must be carried out in real workplace in which learning and human development is to be carried out.

### **Assessment methods to be used include:**

1. Direct Observation (DO);
2. Personal Statement/Learning Journal (PS/LJ);
3. Questions and Answers (QA);
4. Witness Testimony (WT);
5. Assignment (ASS);
6. Work Products (WP);
7. Recognition of Prior Learning (RPL)

*(This depends on the Trade Areas to be assessed)*



### Unit 5: Pre-cleaning of Paddy Prior Parboiling

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type				Evidence Ref. Page No.			
<b>LO1:</b> Apply the steps involved in pre-cleaning of paddy rice	1.1	Carry out pre-cleaning screening								
	1.2	Carry out aspiration								
	1.3	Perform sieving								
	1.4	Apply magnetic separation paddy rice								
<b>LO2:</b> Demonstrate manual method of pre-cleaning paddy rice	2.1	Carry out washing								
	2.2	Perform hand sorting								
	2.3	Carry out drying								
<b>LO3:</b> Apply the automated method of pre-cleaning paddy rice	3.1	Sieve paddy rice using vibration system screen								
	3.2	Clean paddy rice using aspiration system								
	3.3	Perform out cleaning using magnetic separation								
	3.4	Carry out cleaning using destoning system								

<b>Learners Signature:</b>	<b>Date:</b>
<b>Assessors Signature:</b>	<b>Date:</b>
<b>IQA Signature (if sampled)</b>	<b>Date:</b>
<b>EQA Signature (if sampled)</b>	<b>Date:</b>

## **Unit 6: Parboiling of Paddy Rice**

**Unit Reference Number: AGP/RCP/006/L4**

**NSQ Level: 4**

**Credit Value: 5**

**Guided Learning Hours: 50hrs**

**Unit Purpose:** The purpose of this unit is to impart into the learner the necessary skills, knowledge and understanding required to carry out parboiling of paddy rice to recondition (mending cracks and avoidance of chalkiness due to uniform miniaturization) and impart colour of the paddy rice.

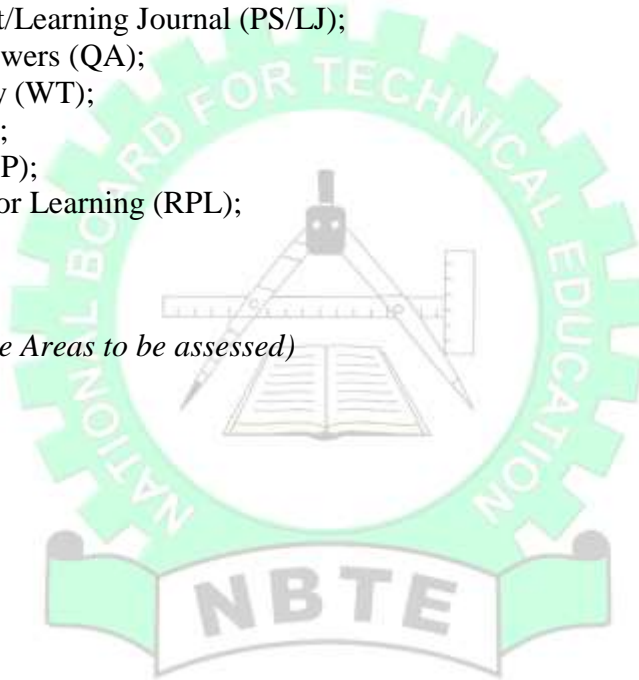
### **Unit assessment requirements/evidence requirements:**

Assessment must be carried out in real workplace in which learning and human development is to be carried out.

### **Assessment methods to be used include:**

1. Direct Observation (DO);
2. Personal Statement/Learning Journal (PS/LJ);
3. Questions and Answers (QA);
4. Witness Testimony (WT);
5. Assignment (ASS);
6. Work Products (WP);
7. Recognition of Prior Learning (RPL);

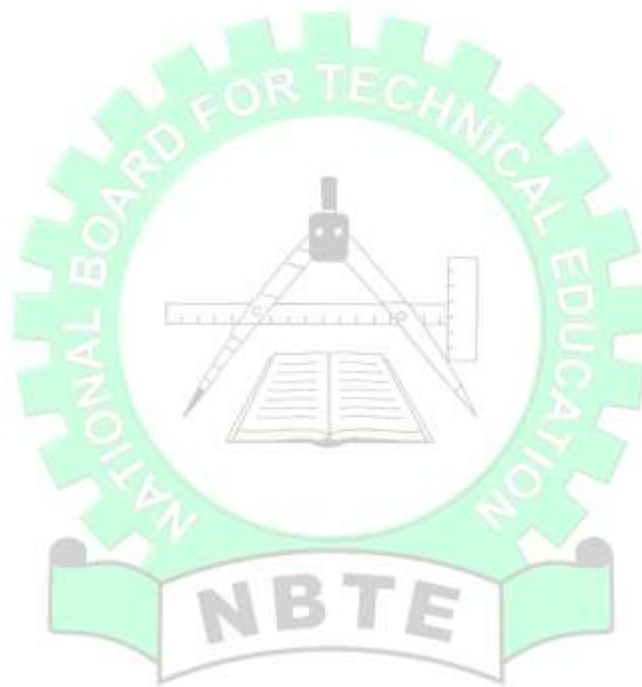
*(This depends on the Trade Areas to be assessed)*



### Unit 6: Parboiling of Paddy Rice

LEARNING OBJECTIVE (LO)  The learner will:		PERFORMANCE CRITERIA  The learner can:	Evidence Type				Evidence Ref. Page No.			
<b>LO 1:</b> Apply the process of parboiling of paddy rice using manual method	1.1	Clean the paddy rice to remove impurities								
	1.2	Soaking the paddy rice in water (typically 4-8 hours)								
	1.3	Carry out steaming of the paddy rice in a vessel with boiling water								
	1.4	Dry the parboiled paddy rice (sun drying or using a dryer).								
<b>LO2:</b> Apply the process of parboiling of paddy rice using automated method	2.1	Clean remove impurities using automated cleaners								
	2.2	Soak the paddy rice in water in automated soaking tanks with controlled temperature and time								
	2.3	Steam the paddy rice under controlled pressure and time using automated steamers								
	2.4	Dry parboiled paddy rice using automated dryers with controlled temperature and airflow								
	2.5	Cool the dried paddy rice before milling								
<b>LO 3:</b> Maintain equipment for parboiling paddy rice	3.1	Carry out periodic cleaning of soaking and cooking tanks								
	3.2	Perform routine maintenance of equipment								
	3.3	Observe safety precautions and proper handling of tools and equipment such as hot surface, steam pipes and cooking tanks								
	3.4	Check conduits regulator for clogging, wear and tear								

<b>Learners Signature:</b>	<b>Date:</b>
<b>Assessors Signature:</b>	<b>Date:</b>
<b>IQA Signature (if sampled)</b>	<b>Date:</b>
<b>EQA Signature (if sampled)</b>	<b>Date:</b>



## **Unit 7: Pre-Milling of Paddy Rice**

**Unit Reference Number: AGP/RCP/007/L4**

**NSQ Level: 4**

**Credit Value: 5**

**Guided Learning Hours: 50**

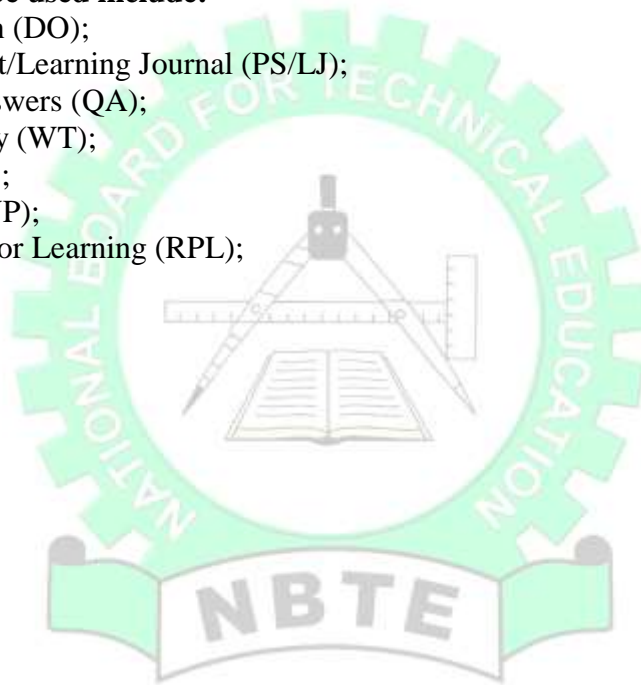
**Unit Purpose:** The purpose of this unit is to impart into the learner the necessary skills, knowledge and understanding required to carry out pre-milling of paddy rice to remove stones, chaff, sand and immature grains.

### **Unit assessment requirements/evidence requirements:**

Assessment must be carried out in real workplace in which learning and human development is to be carried out.

### **Assessment methods to be used include:**

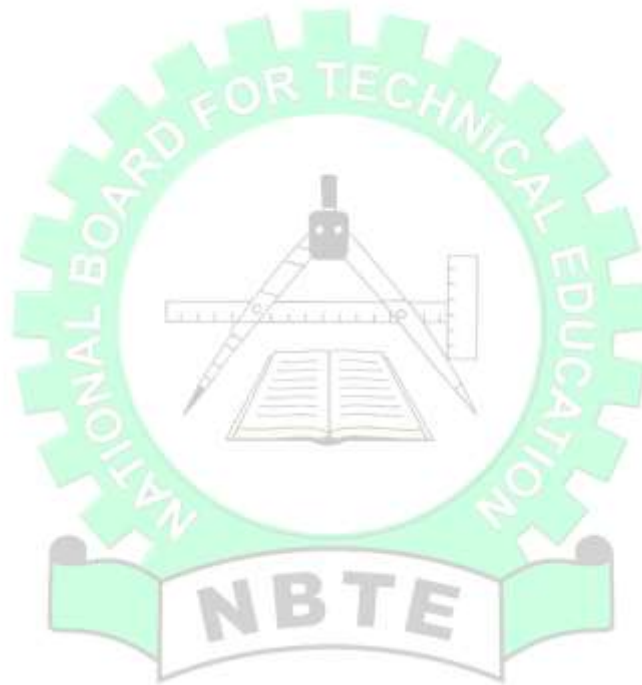
1. Direct Observation (DO);
2. Personal Statement/Learning Journal (PS/LJ);
3. Questions and Answers (QA);
4. Witness Testimony (WT);
5. Assignment (ASS);
6. Work Products (WP);
7. Recognition of Prior Learning (RPL);



**Unit 7: Pre-milling of paddy rice**

<b>LEARNING OBJECTIVE (LO)</b>  <b>The learner will:</b>		<b>PERFORMANCE CRITERIA</b>  <b>The learner can:</b>	<b>Evidence Type</b>				<b>Evidence Ref. Page No.</b>			
<b>LO 1:</b> Execute magnetization processes to remove metallic impurities	1.1	Carry out magnetization process of paddy rice								
	1.2	Carry out periodic cleaning of the magnetizer								
	1.3	Determine metal presence in paddy rice								
	1.4	Record findings in log book								
<b>LO 2:</b> Apply the process of seed cleaning	2.1	Carry out seed cleaning process of paddy rice								
	2.2	Carry out periodic cleaning of the seed cleaner								
	2.3	Evaluate cleaned paddy rice								
	2.4	Carry out waste disposal according to legal requirement								
<b>LO 3:</b> Perform the process of husking paddy rice	3.1	Carry out husking of paddy rice								
	3.2	Check worn rubber rolls on the husker								
	3.3	Replace worn rubber rolls on the husker as when due								
	3.4	Perform proper waste management of husk								
<b>LO 4:</b> Apply the process of destoning paddy rice	4.1	Carry out destoning of paddy rice								
	4.2	Evaluate destoned paddy rice								
	4.3	Carry out waste disposal according to legal requirement								
	4.4	Observe safety rules when carrying destoning paddy rice								

<b>Learners Signature:</b>	<b>Date:</b>
<b>Assessors Signature:</b>	<b>Date:</b>
<b>IQA Signature (if sampled)</b>	<b>Date:</b>
<b>EQA Signature (if sampled)</b>	<b>Date:</b>



## Unit 8: Milling of Paddy Rice

**Unit Reference Number: AGP/RCP/008/L4**

**NSQ Level: 4**

**Credit Value: 5**

**Guided Learning Hours: 50**

**Unit Purpose:** The purpose of this unit is to impart into the learner the necessary skills, knowledge and understanding required to carry out milling of paddy rice.

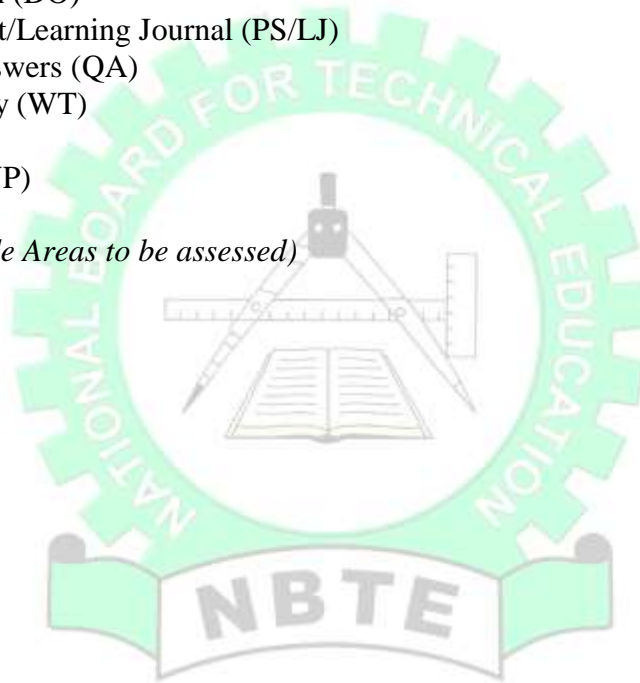
**Unit assessment requirements/ evidence requirements:**

Assessment must be carried out in real workplace in which learning and human development is to be carried out.

**Assessment methods to be used include:**

1. Direct Observation (DO)
2. Personal Statement/Learning Journal (PS/LJ)
3. Questions and Answers (QA)
4. Witness Testimony (WT)
5. Assignment (ASS)
6. Work Products (WP)

*(This depends on the Trade Areas to be assessed)*

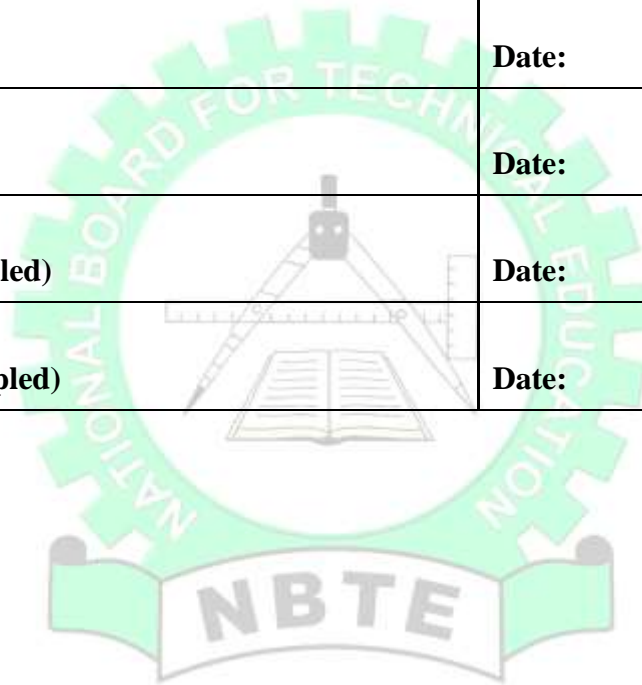


### Unit 8: Milling of Paddy Rice

LEARNING OBJECTIVE (LO)  The learner will:		PERFORMANCE CRITERIA  The learner can:	Evidence Type				Evidence Ref. Page No.			
<b>LO 1:</b> Operate the rice whitener	1.1	Perform whitening of brown rice								
	1.2	Carryout evaluation and recording of whitening								
	1.3	Carryout routine maintenance of whitener:  a. Inlet/outlet rice; b. Rotary mechanism; c. Abrasive stones.								
	1.4	Perform proper management of bran								
<b>LO 2:</b> Operate the rice water polisher	2.1	Carry out polishing of rice								
	2.2	Check for clogging of water nozzle								
	2.3	Carry out maintenance of milling rolls and screen/sieve								
	2.4	Maintain correct humidity level								
	2.5	Maintain correct flow rate of rice								
<b>LO 3:</b> Operate the rice sifter/multi grader	3.1	Carry out sifting/grading								
	3.2	Carry out maintenance of sifter screen/sieve								
	3.3	Carry out maintenance of sifter Teflon								
	3.4	Carryout evaluations of rice grades								
	3.5	Record all findings in a log book								
<b>LO 4:</b> Operate the rice length grader	4.1	Carry out length grading								
	4.2	Carry out maintenance of screen on length grader								
	4.3	Maintain length grader motor								
	4.4	Maintain length grader belt								

	4.5	Record all findings in a log book											
<b>LO 5:</b> Implement the application and maintenance of colour sorter	5.1	Carry out colour sorting											
	5.2	Perform maintenance of colour sorter sensor											
	5.3	Maintain colour sorter light source											
	5.4	Perform maintenance of colour sorter air compressor											
	5.6	Record all findings in a log book											

<b>Learners Signature:</b>	<b>Date:</b>
<b>Assessors Signature:</b>	<b>Date:</b>
<b>IQA Signature (if sampled)</b>	<b>Date:</b>
<b>EQA Signature (if sampled)</b>	<b>Date:</b>



## **Unit 9: Moisture Content Checks of Processed Rice**

**Unit Reference Number: AGP/RCP/009/L4**

**NSQ Level: 4**

**Credit Value: 5**

**Guided Learning Hours: 50**

**Unit Purpose:** The purpose of this unit is to impart into the learner the necessary skills, knowledge and understanding required to carry out moisture content checks of processed rice to ensure the processed rice is ready for transportation, storage and distribution

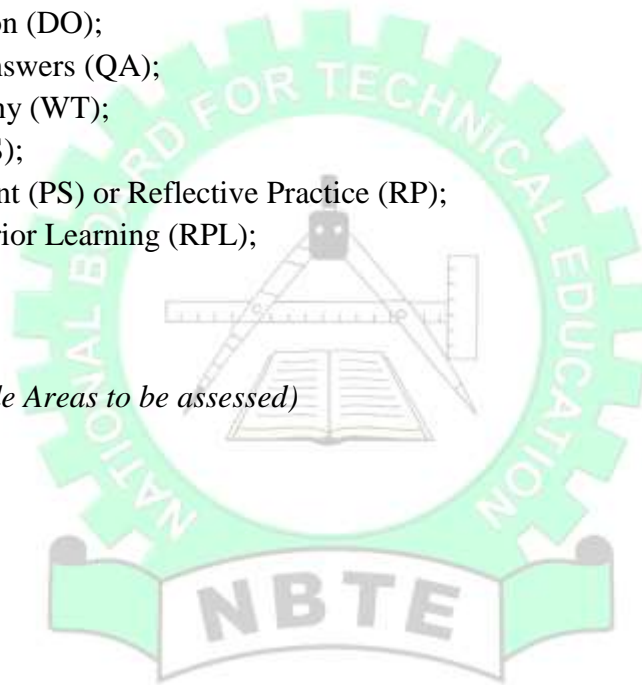
### **Unit assessment requirements/evidence requirements:**

Assessment must be carried out in real workplace in which learning and human development is to be carried out.

### **Assessment methods to be used include:**

1. Direct Observation (DO);
2. Questions and Answers (QA);
3. Witness Testimony (WT);
4. Assignment (ASS);
5. Personal Statement (PS) or Reflective Practice (RP);
6. Recognition of Prior Learning (RPL);

*(This depends on the Trade Areas to be assessed)*

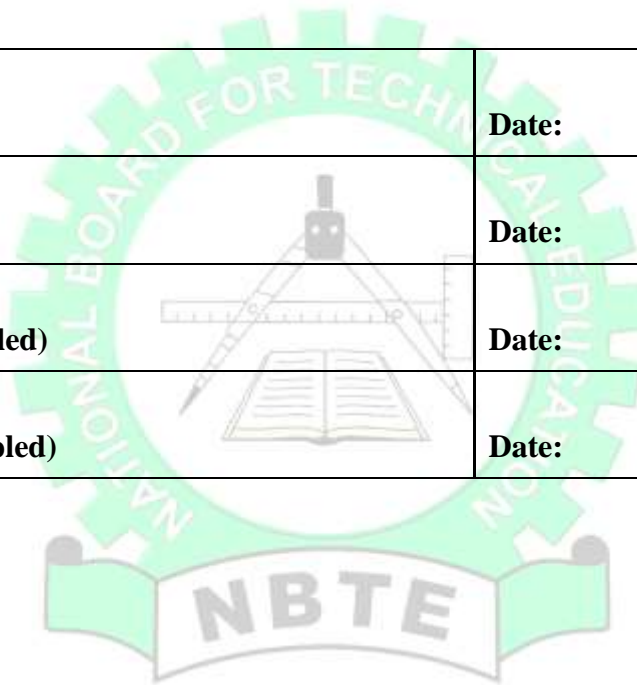


### Unit 9: Moisture Content Checks of Processed Rice

LEARNING OBJECTIVE (LO)  The learner will:		PERFORMANCE CRITERIA  The learner can:	Evidence Type				Evidence Ref. Page No.			
LO 1: Outline the procedure of Moisture Content Checks for Processed Rice	1.1	Sample of processed rice for testing.								
	1.2	Make decision on which method to use								
	1.3	prepare samples for testing according to the method's requirements								
	1.4	Describe the process of moisture content test								
LO 2: Perform the Process of Moisture Content Checks using oven-drying method	2.1	Carry out sampling by taking a representative rice sample (about 5-10 grams)								
	2.2	Perform weighing of the sample and record the initial weight ( $W_1$ ) of the sample using a digital balance.								
	2.3	Set oven temperature to a controlled value (usually 130°C for rice)								
	2.4	Dry the sample by placing the sample in the oven for a specified time (e.g., 1-2 hours)								
	2.5	Carry out cooling of the sample by transferring it to a desiccator to cool								
	2.6	Perform weighing of the dried sample and record the final weight ( $W_2$ )								
	2.7	Calculate moisture content: Moisture content (%) = $[(W_1 - W_2) / W_1] \times 100$								
	2.8	Perform routine maintenance of equipment used for moisture content check to ensure accuracy and reliability								
LO 3: Apply the Process of Moisture Content Checks using	3.1	Set the correct grain type (rice) on the moisture meter if applicable								
	3.2	Carry out sampling by filling the meter's sample cup or chamber with a representative rice sample								
	3.3	Insert the probe or sample by								

moisture meter method		following the meter's specification (e.g., insert probe into the sample or place sample in the meter)										
	3.4	Take the readings by pressing the test button to get the moisture content (%)										
	3.5	Take multiple readings for accuracy										
	3.6	Record the results by noting the moisture content reading on the meter's display										
	3.7	Perform routine maintenance of equipment used for moisture content check to ensure accuracy and reliability										

<b>Learners Signature:</b>	<b>Date:</b>
<b>Assessors Signature:</b>	<b>Date:</b>
<b>IQA Signature (if sampled)</b>	<b>Date:</b>
<b>EQA Signature (if sampled)</b>	<b>Date:</b>



## **Unit 10: Bagging, Transportation and Storage of Processed Rice**

**Unit Reference Number: AGP/RCP/010/L4**

**NSQ Level: 4**

**Credit Value: 5**

**Guided Learning Hours: 50**

**Unit Purpose:** The purpose of this unit is to impart into the learner the necessary skills, knowledge and understanding required to supervise bagging, transportation and storage operations of processed rice

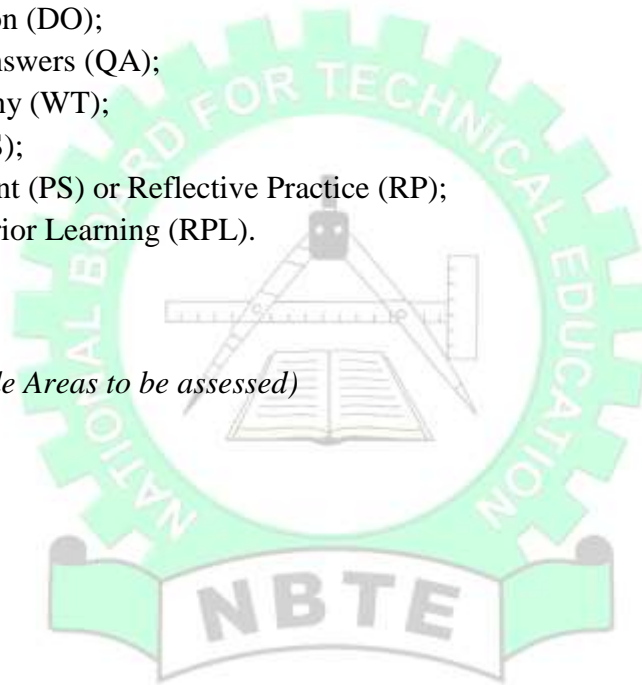
### **Unit assessment requirements/evidence requirements:**

Assessment must be carried out in real workplace and simulation is allowed in which learning and human development is to be carried out.

### **Assessment methods to be used include:**

1. Direct Observation (DO);
2. Questions and Answers (QA);
3. Witness Testimony (WT);
4. Assignment (ASS);
5. Personal Statement (PS) or Reflective Practice (RP);
6. Recognition of Prior Learning (RPL).

*(This depends on the Trade Areas to be assessed)*



### Unit 10: Bagging, Transportation & Storage of Processed Rice

LEARNING OBJECTIVE (LO)  The learner will:		PERFORMANCE CRITERIA  The learner can:	Evidence Type				Evidence Ref. Page No.			
LO 1: Apply the concept of bagging in relation to processed rice	1.1	Carry out selection of branded bags based on rice grades								
	1.2	Weigh the processed rice to ensure accurate quantity is filled into the branded bag								
	1.3	Carry out filling of weighed rice into the branded bag using manual filling system								
	1.4	Use automated bagging machine to fill weighted rice in to branded bag								
	1.5	Seal of the bags securely by heat sealing or stitching, to prevent leakage and contamination.								
	1.6	Inspect the bagged rice to ensure there is no leakage and contamination.								
LO 2: Organise transportation in relation to processed rice	2.1	Comply with food safety regulation and transport guidelines during transportation								
	2.2	Select suitable transportation mode based on distance, cost, and urgency								
	2.3	Supervise loading of the rice into transport vehicles (trucks, containers, etc.).								
	2.4	Supervise proper securing (e.g., palletized, strapped) for transport								
LO 3: Apply the concept of storage in relation to processed rice	3.1	Carry out pre-storage checks to ensure rice is properly cooled and dried to safe moisture levels before storage								
	3.2	Inspect storage facilities to ensure warehouses or containers are clean, dry, pest-free, have good airflow,								

		allows easy inspection and food-grade compliant											
	3.3	Carry out temperature and humidity control to maintain suitable conditions (cool, dry environment) to prevent spoilage and pest issues.											
	3.4	Perform pest control measures to prevent pest infestation (e.g., screens, fumigation if needed)											
	3.5	Use stock rotation and monitoring by practicing FIFO (first-in, first-out) and regularly check for quality i.e. moisture content and infestation											
	3.5	Carry out protection from contaminants by storing away from chemicals, strong odours etc.											

<b>Learners Signature:</b>	<b>Date:</b>
<b>Assessors Signature:</b>	<b>Date:</b>
<b>IQA Signature (if sampled)</b>	<b>Date:</b>
<b>EQA Signature (if sampled)</b>	<b>Date:</b>

## **Unit 11: Rice Powder/Flour Production**

**Unit Reference Number: AGP/RCP/011/L3**

**NSQ Level: 4**

**Credit Value: 5**

**Guided Learning Hours: 50**

**Unit Purpose:** The purpose of this unit is to impart into the learner the necessary skills, knowledge and understanding required to carry out rice powder/flour production

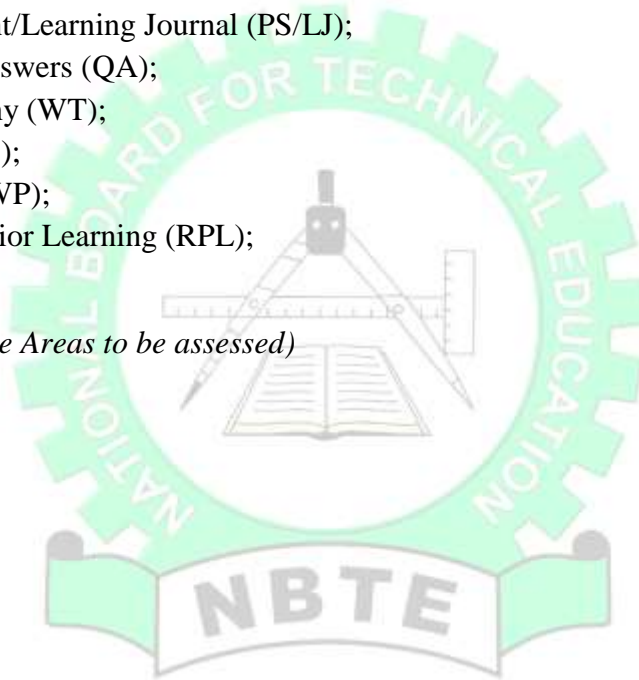
### **Unit assessment requirements/evidence requirements:**

Assessment must be carried out in real workplace in which learning and human development is to be carried out.

### **Assessment methods to be used include:**

1. Direct Observation (DO);
2. Personal statement/Learning Journal (PS/LJ);
3. Questions and Answers (QA);
4. Witness Testimony (WT);
5. Assignment (ASS);
6. Work Products (WP);
7. Recognition of Prior Learning (RPL);

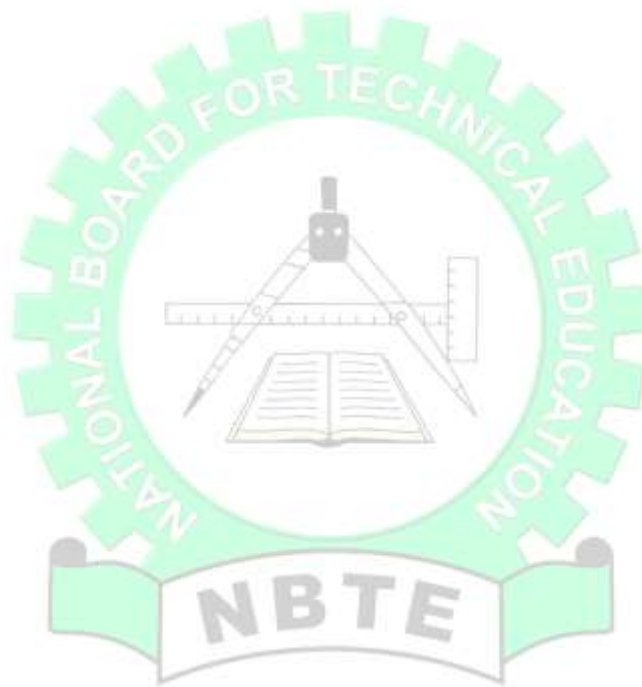
*(This depends on the Trade Areas to be assessed)*



**Unit 11: Rice Powder/Flour Production**

LEARNING OUTCOME (LO)  The learner will:		PERFORMANCE CRITERIA  The learner can:	Evidence Type				Evidence Ref. Page No.			
LO 1: Assess the process of rice powder/flour production using wet method	1.1	Carry out the selection and preparation of raw rice								
	1.2	Perform Soaking and dehydrating of raw rice								
	1.3	Carry out milling or grinding and sieving. Repeat until larger grade are exhausted								
	1.4	Dry the rice powder or flour								
LO 2: Assess the process of rice powder/flour production using dry method	2.1	Carry out the selection and preparation of raw rice								
	2.2	Perform milling or grinding and sieving or separation								
	2.3	Repeat milling or grinding and sieving or separation process until lager grades are exhausted								
LO 3: Monitor the process of packaging and storage of rice powder/flour	3.1	Select branded packaging material								
	3.2	Accurately weigh the rice powder or flour to ensure correct quantity is filled into the branded packaging material								
	3.3	Fill weighed rice powder/flour into the branded packaging material using manual filling system								
	3.4	Carry out filling of weighed rice powder/flour into branded packaging material using automated bagging machine								
	3.5	Seal packaging material securely by heat sealing or stitching, to prevent leakage and contamination.								
	3.6	Inspect the bagged rice powder/flour to ensure there is no leakage and contamination.								
	3.7	Observe proper handling of packaging material according to standards								
	3.8	Carry out routine maintenance of equipment								
	3.9	Observe safety rules and regulations								

<b>Learners Signature:</b>	<b>Date:</b>
<b>Assessors Signature:</b>	<b>Date:</b>
<b>IQA Signature (if sampled)</b>	<b>Date:</b>
<b>EQA Signature (if sampled)</b>	<b>Date:</b>



## **Unit 12: Production Planning**

**Unit Reference Number: AGP/RCP/012/L4**

**NSQ Level: 4**

**Credit Value: 5**

**Guided Learning Hours: 50**

**Unit Purpose:** The purpose of this unit is to impart into the learner the necessary skills, knowledge and understanding required to carry out production planning in rice processing.

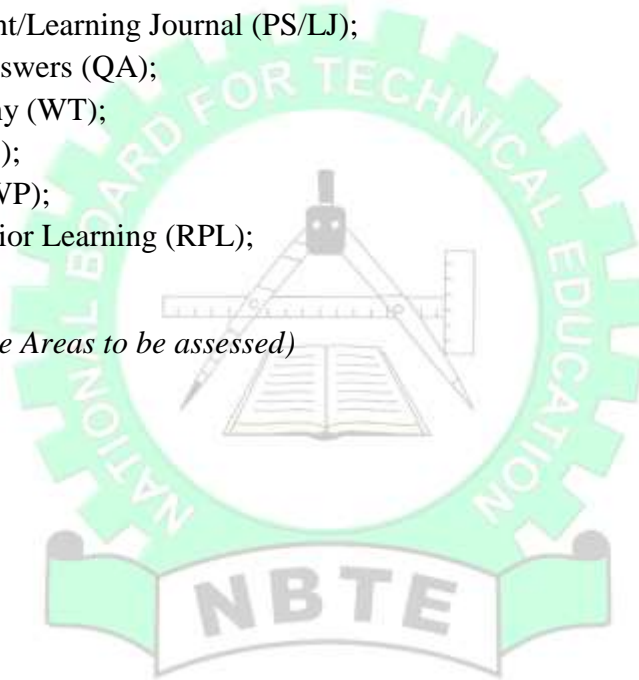
Unit assessment requirements/evidence requirements:

Assessment must be carried out in real workplace in which learning and human development is to be carried out. Simulation is allowed in this unit.

### **Assessment methods to be used include:**

1. Direct Observation (DO);
2. Personal Statement/Learning Journal (PS/LJ);
3. Questions and Answers (QA);
4. Witness Testimony (WT);
5. Assignment (ASS);
6. Work Products (WP);
7. Recognition of Prior Learning (RPL);

*(This depends on the Trade Areas to be assessed)*

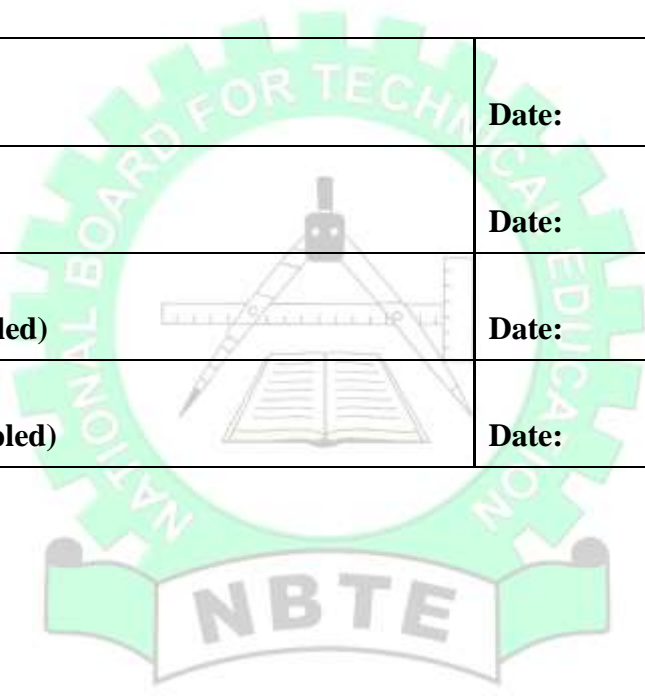


## Unit 12: Production Planning

LEARNING OUTCOME (LO)  The learner will:		PERFORMANCE CRITERIA  The learner can:	Eviden ce Type				Eviden ce Ref. Page No.			
<b>LO 1:</b> Apply the process of Pre-production Planning in rice processing	1.1	Identify the stages of pre-production planning								
	1.2	Identify necessary resources for rice processing e.g. suitable rice varieties, processing equipment etc.								
	1.3	Carry out rational resource allocation								
	1.4	Carry out appropriate budget estimation								
	1.5	Carry out profitability analysis								
	1.6	Comply with relevant regulations and standards								
<b>LO 2:</b> Perform the process of post-harvest handling in production planning	2.1	Implement effective cleaning and sorting procedures to remove impurities and damaged grains								
	2.2	Ensure paddy is dried to safe moisture levels (between 12% to 14%) to prevent spoilage								
	2.3	Plan storage facilities that are clean, dry, ventilated and pest-free								
	2.4	Use efficient transportation facilities								
	2.5	Keep routine/regular records of all operations								
<b>LO 3:</b> Apply the	3.1	Outline the process of rice milling operations								

process of rice milling operations in production planning	3.2	Identify necessary resources required for milling e.g. quality paddy and efficient machinery/equipment											
	3.3	Plan to prioritize safety of operators											
	3.4	Plan a maintenance schedule											
	3.5	Carry out appropriate cost benefit analysis											
	3.6	Plan for efficient handling and utilization of by-products e.g., bran, husk, broken											

<b>Learners Signature:</b>	<b>Date:</b>
<b>Assessors Signature:</b>	<b>Date:</b>
<b>IQA Signature (if sampled)</b>	<b>Date:</b>
<b>EQA Signature (if sampled)</b>	<b>Date:</b>



## **Unit 13: Team Management**

**Unit Reference Number: AGP/RCP/013/L4**

**NSQ Level: 4**

**Credit Value: 5**

**Guided Learning Hours: 50**

**Unit Purpose:** The purpose of this unit is to impart into the learner the necessary skills, knowledge and understanding required to carry out team management in rice processing.

### **Unit assessment requirements/evidence requirements:**

Assessment must be carried out in real workplace in which learning and human development is to be carried out. Simulation is allowed in this unit.

### **Assessment methods to be used include:**

1. Direct Observation (DO);
2. Personal Statement/Learning Journal (PS/LJ);
3. Questions and Answers (QA);
4. Witness Testimony (WT);
5. Assignment (ASS);
6. Work Products (WP);
7. Recognition of Prior Learning (RPL);

*(This depends on the Trade Areas to be assessed)*

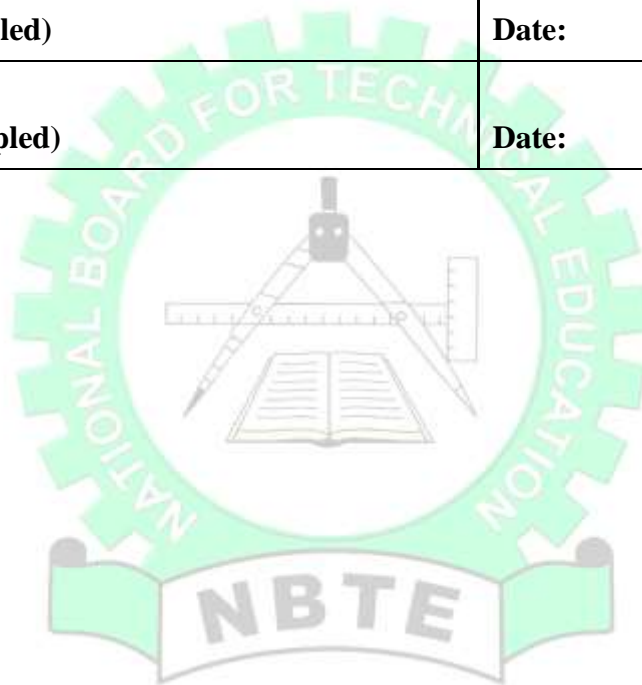


## Unit 13: Team Management

<b>LEARNING OUTCOME (LO)</b>  <b>The learner will:</b>		<b>PERFORMANCE CRITERIA</b>  <b>The learner can:</b>	<b>Evidence Type</b>				<b>Evidence Ref. Page No.</b>			
<b>LO 1:</b>  Apply the concept of planning and organization in team management	1.1	Establish goals and specific objectives								
	1.2	Assign roles to team members								
	1.3	Allocate resources effectively to meet goals e.g., personnel, budget and equipment								
<b>LO 2:</b>  Apply the concept of communication in team management	2.1	Identify the principles of communication in team management								
	2.2	Establish free and consistent flow of information								
	2.3	Apply the concept of feedback monitoring in team management								
<b>LO 3:</b>  Evaluate the performance and development in team management	3.1	Provide regular and constructive feedback								
	3.2	Encourage training and retraining of team members								
	3.3	Encourage recognition of outstanding performance of team members								
<b>LO 4:</b> Prepare task delegation	4.1	Assign the right task to team members as appropriate e.g. based on skills								

schedule	4.2	Ensure that team members take responsibility for delegated tasks											
	4.3	Ensure that delegated members communicate progress and issues promptly											

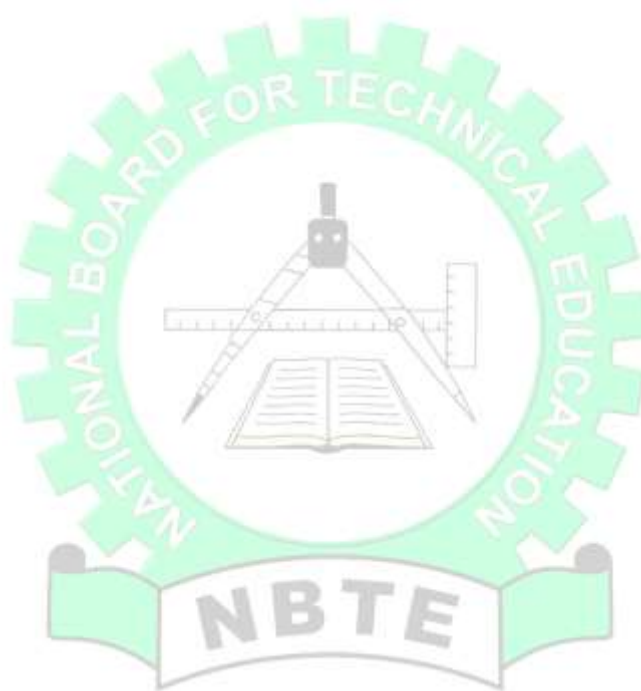
<b>Learners Signature:</b>	<b>Date:</b>
<b>Assessors Signature:</b>	<b>Date:</b>
<b>IQA Signature (if sampled)</b>	<b>Date:</b>
<b>EQA Signature (if sampled)</b>	<b>Date:</b>



### List of Tools and Equipment for Rice Processing

S/N	NAME OF TOOL OR EQUIPMENT	QUANTITY
1	Intake Screen	10
2	Magnet Trap	5
3	Seed cleaner/Drum Sieve	5
4	De-stoner	4
5	Blower/Aspirator	5
6	Soaking Tanks	4
7	Cooking Tank/Cooker	4
8	Driers	5
9	Bin (Tampering/Storage)	10
10	Hoppers/Elevators/Conveyors	5
11	Seed Cleaners/Vibro	5
12	Huskers	6
13	Whiteners	4
14	Silky Polisher/Water Polisher	4
15	Sifter/Multi Grader	5
16	Length Grader	3
17	Sorter (Colour Sorter)	4
18	Packaging Equipment (Scale, Sewing Machine)	10
19	Personal Protective Equipment (PPE) Kits	50
20	Steam Boiler	4
21	Air Compressor	4
22	First Aid Box	5
23	Tool Box	5
24	Pallets (Rice Bran Pelletizer)	4
25	Power Source	3
26	Pallet Truck/Fork Lift	2
27	Tarpaulin	5
28	Oven Drier	4

29	Digital Weighing Balance	10
30	Desiccator	5
31	Moisture Meter	10
32	Paddy tester (Mini for Quality Control Checks)	10
33	Paddy husker (Mini for Quality Control Checks)	5
34	Solar Dryer	10
35	Electric Dryer	5
36	Bubble Dryer	5
37	Multi-purpose Dryer	2



### List of Workshop Participants

S/N	NAME	ADDRESS	EMAIL
1	Tgst. Ibrahim Bala Yusuf	Government Technical College, Bagauda,	<a href="mailto:ibrahimbyusuf2@gmail.com">ibrahimbyusuf2@gmail.com</a>
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