

Assessment Evidence Guide

for

“Seed Processing Plant Supervisor”

Level-4

(Summative Assessment)



**National Vocational & Technical
Training Commission**

Instruction Sheet for the Candidate

Title of Qualification: National Vocational Certificate Level 4 in Seed Processing & Biotechnology (Seed Processing Plant Supervisor)	CS Code:	Level:4	Version:01
Competency Standard Title: Establish and Maintain the Occupational Health and Safety System Perform advance Communication Perform Collection of Procured Seed at Processing Plant Operate basic Seed Processing Machines Perform Drying and Cleaning of Seed at Processing Plant Perform Seed Treatments Perform Seed Grading Perform Seed Sorting Perform Seed Extraction	Assessment Date (DD/MM/YY): Assessment Time: 5 hrs.		

Candidate Details	Name: Registration/Roll Number:																								
Guidance for Candidate	<p>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):</p> <p style="text-align: center;">Assessment Task 1: Candidate is required to perform sorting and grading of seed as per instruction given by assessor.</p> <p>And complete:</p> <ol style="list-style-type: none"> 1. Knowledge assessment test (Written or Oral) 2. Portfolios at the time of assessment (if any) 																								
Minimum Evidence Required	<p>During a practical assessment, under observation by an assessor, you will complete:</p> <p>Assessment Task 1</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 40%;">Performance criteria 1.</td> <td>Arrange tools and equipment</td> </tr> <tr> <td>Performance criteria 2.</td> <td>Wear PPEs</td> </tr> <tr> <td>Performance criteria 3.</td> <td>Perform pre cleaning of seed as work instructions</td> </tr> <tr> <td>Performance criteria 4.</td> <td>Perform fine cleaning of seed</td> </tr> <tr> <td>Performance criteria 5.</td> <td>Collect and submit seed sample for moisture test</td> </tr> <tr> <td>Performance criteria 6.</td> <td>Follow standard safety checks before and after use of machinery</td> </tr> <tr> <td>Performance criteria 7.</td> <td>Collect seed for sorting</td> </tr> <tr> <td>Performance criteria 8.</td> <td>Perform sorting operation according to work instructions</td> </tr> <tr> <td>Performance criteria 9.</td> <td>Segregate sorted seed according to work instructions</td> </tr> <tr> <td>Performance criteria 10.</td> <td>Maintain record of seed sorting (Type of seeds, supplier details, quality parameters)</td> </tr> <tr> <td>Performance criteria 11.</td> <td>Collect sorted seed for grading</td> </tr> <tr> <td>Performance criteria 12.</td> <td>Perform grading operation according to work</td> </tr> </table>	Performance criteria 1.	Arrange tools and equipment	Performance criteria 2.	Wear PPEs	Performance criteria 3.	Perform pre cleaning of seed as work instructions	Performance criteria 4.	Perform fine cleaning of seed	Performance criteria 5.	Collect and submit seed sample for moisture test	Performance criteria 6.	Follow standard safety checks before and after use of machinery	Performance criteria 7.	Collect seed for sorting	Performance criteria 8.	Perform sorting operation according to work instructions	Performance criteria 9.	Segregate sorted seed according to work instructions	Performance criteria 10.	Maintain record of seed sorting (Type of seeds, supplier details, quality parameters)	Performance criteria 11.	Collect sorted seed for grading	Performance criteria 12.	Perform grading operation according to work
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	<p>instructions</p> <p>Performance criteria 13. Segregate graded seed according to work instructions</p>
	<p>Portfolios required at the time of assessment (if any) for</p> <ul style="list-style-type: none"> ▪ Folder/file includes evidence for seed extraction activities ▪ Folder/file includes evidence of seed treatment ▪ Folder/file includes evidence of drying and cleaning of seed at processing plant <p>Performance criteria 1. Arrange tools/equipment and material for required extraction</p> <p>Performance criteria 2. Perform pre-checks for required machinery</p> <p>Performance criteria 3. Follow safety measures according to workplace safety guidelines</p> <p>Performance criteria 4. Perform manual extraction</p> <p>Performance criteria 5. Perform fermentation</p> <p>Performance criteria 6. Perform mechanical extraction</p> <p>Performance criteria 7. Perform chemical method</p> <p>Performance criteria 8. Prepare solutions for applications as per SOPs</p> <p>Performance criteria 9. Treat seed as per SOPs</p> <p>Performance criteria 10. Collect and submit sample of treated seed for quality</p> <p>Performance criteria 11. Treat seed mechanically as per SOPs</p> <p>Performance criteria 12. Perform storage of treated seed according to SOPs</p> <p>Performance criteria 13. Perform beneficial fungal coating</p> <p>Performance criteria 14. Perform bacterial inoculum coating</p> <p>Performance criteria 15. Perform PGPR (Plant growth promoting rhizobacteria) media coating</p> <p>Performance criteria 16. Perform seed coating with nutrients (macro and micronutrients)</p> <p>Performance criteria 17. Perform seed coating with natural products</p> <p>Performance criteria 18. Process seed for drying according to lab report</p> <p>Performance criteria 19. Dry seed according to air distribution system/ heated air system/ continuous flow dryer</p>

Assessors Judgment Guide

(to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Candidate Details	Name: Registration/Roll Number: Candidate Signature:.....
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:.....

Assessment Summary (to be filled by the assessor)							
Activity	Method					Result	
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Practical Skill Demonstration			✓				
Knowledge Assessment	✓	✓					
Other Requirement							

Observation Checklist				
Assessment Task 1		Description of Assessment Task		
		Perform sorting and grading of seed as per instruction given by assessor.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Arrange tools and equipment			
2.	Wear PPEs			
3.	Perform pre cleaning of seed as work instructions			
4.	Perform fine cleaning of seed			
5.	Collect and submit seed sample for moisture test			
6.	Follow standard safety checks before and after use of machinery			
7.	Collect seed for sorting			
8.	Perform sorting operation according to work instructions			
9.	Segregate sorted seed according to work instructions			
10.	Maintain record of seed sorting (Type of seeds, supplier details, quality parameters)			
11.	Collect sorted seed for grading			
12.	Perform grading operation according to work instructions			
13.	Segregate graded seed according to work instructions			

Competent <input type="checkbox"/>	Not Yet Competent <input type="checkbox"/>
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Portfolio		Description of Portfolio		
		<ul style="list-style-type: none"> ▪ Folder/file includes evidence for seed extraction activities ▪ Folder/file includes evidence of seed treatment 		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Arrange tools/equipment and material for required extraction			
2.	Perform pre-checks for required machinery			
3.	Follow safety measures according to workplace safety guidelines			
4.	Perform manual extraction			
5.	Perform fermentation			
6.	Perform mechanical extraction			
7.	Perform chemical method			
8.	Prepare solutions for applications as per SOPs			
9.	Treat seed as per SOPs			
10.	Collect and submit sample of treated seed for quality			
11.	Treat seed mechanically as per SOPs			
12.	Perform storage of treated seed according to SOPs			
13.	Perform beneficial fungal coating			
14.	Perform bacterial inoculum coating			
15.	Perform PGPR (Plant growth promoting rhizobacteria) media coating			
16.	Perform seed coating with nutrients (maco and micronutrients)			
17.	Perform seed coating with natural products			
18.	Process seed for drying according to lab report			
19.	Dry seed according to air distribution system/ heated air system/ continuous flow dryer			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Knowledge Assessment

Title of Qualification: National Vocational Certificate Level 4 in Seed Processing & Biotechnology (Seed Processing Plant Supervisor)	CS Code:	Level:04	Version:01
Competency Standard Title: Establish and Maintain the Occupational Health and Safety System Perform advance Communication Perform Collection of Procured Seed at Processing Plant Operate basic Seed Processing Machines Perform Drying and Cleaning of Seed at Processing Plant Perform Seed Treatments Perform Seed Grading Perform Seed Sorting Perform Seed Extraction	Assessment Date (DD/MM/YY): Assessment Time: 30 min		

Guidance for Candidate	To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.
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Candidate Details	Name: Registration/Roll Number: Candidate Signature:.....
Written Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:.....

Question	Candidate's answer
Answer these questions.	
1. Define trouble shooting?	
2. Define hazardous waste?	
3. Enlist various methods for seed drying?	

Question	Candidate's answer
Answer these questions.	
4. Define sorting?	
5. Define grading?	
6. Define fumigation?	
7. Explain microclimate for storage?	
8. Enlist different types of seed extraction methods?	
9. Enlist different methods for seed treatment?	
10. Explain biological seed treatment?	

ANSWER KEY

Question	Candidate's answer
1. Define trouble shooting?	Troubleshooting is a form of problem solving, often applied to repair failed products or processes on a machine or a system
2. Define hazardous waste?	Hazardous waste is a waste with properties that make it dangerous or capable of having a harmful effect on human health or the environment
3. Enlist various methods for seed drying?	Physical drying (or) natural drying (or) traditional sun drying II. Mechanical (or) artificial drying • Drying with forced natural air • Drying with forced artificially heated air • Drying with desiccants • Drying with infrared rays
4. Define sorting?	Sorting is any process of arranging items systematically
5. Define grading?	Separation on the basis of size, color and shape called seed grading
6. Define fumigation?	Fumigation is the process of using chemical smoke to kill pests like insects or rodents
7. Explain microclimate for storage?	The controlled environmental conditions in confined space called microclimatic conditions for storage
8. Enlist different types of seed extraction methods?	<ol style="list-style-type: none"> 1. Acid Method. 2. Fermentation Method. 3. Mechanical Seed Extraction. 4. Alkali Method. 5. Citric Acid Method. 6. Modified acid Method. 7. Dry Method. 8. Directly Harvesting of Matured Pod Method.
9. Enlist different methods for seed treatment?	Seed dressing Seed coating Seed pelleting Seed disinfestation Seed disinfection
10. Explain biological seed treatment?	Biological seed treatment consists of active ingredients that can include microbes like fungi and bacteria, as well as plant extracts and algae extracts.