

# QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR RUBBER INDUSTRY

## What are Occupational Standards(OS)?

- OS describe what individuals need to do, know and understand in order to carry out a particular job role or function
- OS are performance standards that individuals must achieve when carrying out functions in the workplace, together with specifications of the underpinning knowledge and understanding

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## Contents

1. Introduction and Contents.....	1
2. Qualification Pack .....	2
3. OS Units.....	2

## Introduction

### Qualifications Pack- Rubber Nursery Supervisor

**SECTOR:** RUBBER INDUSTRY

**SUB-SECTOR:** Rubber Plantation (Natural Rubber Production)

**OCCUPATION:** Rubber Nursery Management

**REFERENCE ID:** RSC/ Q 6002

**ALIGNED TO:** NCO-2004/NIL

**Brief Job Description:** Rubber Nursery Supervisor supervises and give technical advise on all the nursery activities to all workers. He is responsible for the timely completion of all seasonal activities, smooth running of the nursery and production of quality planting materials as envisaged by the organization.

**Personal Attributes:** This job requires the individual to work earnestly for the production of quality planting materials and to work hard to achieve the target fixed for the year. He should have capacity for team building and motivate workers in order to complete the activities in a time bound manner. He should have a in depth knowledge in nursery practices and make the task easier by expertise.

## Job Details

<b>Qualifications Pack Code</b>	<b>RSC/ Q 6002</b>		
<b>Job Role</b>	<b>Rubber Nursery Supervisor</b>		
<b>Credits(NSQF)</b>	<b>TBD</b>	<b>Version number</b>	<b>1.0</b>
<b>Sector</b>	<b>Rubber Industry</b>	<b>Drafted on</b>	<b>07/11/13</b>
<b>Sub-sector</b>	<b>Natural Rubber (NR) Production</b>	<b>Last reviewed on</b>	<b>27/03/15</b>
<b>Occupation</b>	<b>Rubber Nursery Management</b>	<b>Next review date</b>	<b>27/03/16</b>
<b>NSQC Clearance on</b>	<b>20/07/2015</b>		

<b>Job Role</b>	<b>Rubber Nursery Supervisor</b>
<b>Role Description</b>	Nursery Supervisor supervises and extends all amenities and technical advices on nursery activities. He is responsible for the timely completion of all seasonal activities, smooth running of the nursery and production of quality planting materials as envisaged by the organization
<b>NSQF level</b>	5
<b>Minimum Educational Qualifications*</b>	Plus two/VHSC with biological science
<b>Maximum Educational Qualifications*</b>	Basic knowledge of computer operations (MS Office, Excel, PowerPoint etc.)
<b>Training</b> (Suggested but not mandatory)	Training in all aspects of nursery management
<b>Minimum Job Entry Age</b>	18 years
<b>Experience</b>	A Plus two/VHSC with biological science pass with minimum 6 months experience in nursery work/supervising is desirable
<b>Applicable National Occupational Standards (NOS)</b>	<b>Compulsory:</b> <ol style="list-style-type: none"> <li><a href="#">RSC/N 6003 (Rubber nursery development practices)</a></li> <li><a href="#">RSC/N 6004 (Production of Advanced planting materials)</a></li> <li><a href="#">RSC/N 6005 (Quality assurance and preparation of planting materials for sale)</a></li> <li><a href="#">RSC/N 6006 (Data recording, compilation, documentation and reporting)</a></li> <li><a href="#">RSC/ N5011 ( Problem identification and solving )</a></li> </ol> <b>Optional:</b> NA
<b>Performance Criteria</b>	As described in the relevant OS units

Keywords /Terms	Description
Sector	Sector is a conglomeration of different business operations having similar businesses and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
Sub-sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Occupation	Occupation is a set of job roles, which perform similar/related set of functions in an industry.
Function	Function is an activity necessary for achieving the key purpose of the sector, occupation, or area of work, which can be carried out by a person or a group of persons. Functions are identified through functional analysis and form the basis of OS.
Job Role	Job role defines a unique set of functions that together form a unique employment opportunity in an organization.
OS	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the knowledge and understanding they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria	Performance Criteria are statements that together specify the standard of performance required when carrying out a task.
NOS	NOS are Occupational Standards which apply uniquely in the Indian context.
Qualifications Pack Code	Qualifications Pack Code is a unique reference code that identifies a qualifications pack.
Qualifications Pack	Qualifications Pack comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A Qualifications Pack is assigned a unique qualification pack code.
Unit Code	Unit Code is a unique identifier for an Occupational Standard , which is denoted by an 'N'.
Unit Title	Unit Title gives a clear overall statement about what the incumbent should be able to do.
Description	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
Knowledge and Understanding	Knowledge and Understanding are statements which together specify the technical, generic, professional and organizational specific knowledge that an individual needs in order to perform to the required standard.
Organizational Context	Organizational Context includes the way the organization is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Technical Knowledge	Technical Knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills or Generic Skills	Core Skills or Generic Skills are a group of skills that are key to learning and working in today's world. These skills are typically needed in any work environment. In the context of the OS , these include communication related skills that are applicable to most job roles.

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# National Occupational Standard



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## Overview:

This unit is about Rubber Nursery development Practices

**Production of advanced planting materials**

National Occupational Standard

<b>Unit Code</b>	<b>RSC/N 6003</b>
<b>Unit Title (Task)</b>	<b>Rubber nursery development practices</b>
<b>Description</b>	This unit is about Nursery development Practices
<b>Scope</b>	<p>This unit/task covers the following: Proficiency in supervising work in connection with-</p> <ul style="list-style-type: none"> <li>• Selection of good quality seeds, sorting and temporary storage</li> <li>• Germination of seeds- preparation of land germination beds, sowing and after care</li> <li>• Planting- preparation of land and nursery bed, picking of germinated seeds, transportation, planting and after care</li> <li>• Seedling nursery maintenance and disease management</li> <li>• Development of multi clone bud wood nursery &amp; maintenance</li> <li>• Bud grafting</li> </ul>
<b>Performance Criteria(PC) w.r.t. the scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Selection of good quality seeds</b>	<p>To be competent, the individual on the job must be able to supervise–</p> <p>PC1. Sorting of quality of the seeds PC2. Conduct the viability of the seed PC3. Choose apt method for temporary storage of seeds</p>
<b>Germination of seeds</b>	<p>PC4. Carry out timely sowing of the seeds PC5. Prepare the land and make germination beds as per specification PC6. Placing of seeds in the germination medium and cover with coir mat/gunny bags PC7. Watering the germination beds to maintain optimum moisture</p>
<b>Planting</b>	<p>PC5. Cast proper land preparation technique and design seedling nursery Beds as per specification PC6. Select the best quality germinated seeds and transport without damage PC7. Carry out planting of germinated seeds with suitable spacing PC7. Ensure planting of germinated seeds at the right stage PC8. Irrigate, if required</p>

**RSC/N 6003**
**Production of advanced planting materials**

<b>Seedling nursery maintenance and disease management</b>	<p>PC9. Carry out timely weeding (minimum three rounds- before fertilizer applications and bud grafting)</p> <p>PC10. Carry out fertilizer application (basal dressing with compost and rock phosphate; 2500 kg of 10:10:4:1.5 NPKMg per effective hectare (1<sup>st</sup> dose) and 550 kg urea per effective hectare (2<sup>nd</sup> dose).</p> <p>PC11. Carry out mulching irrigation etc</p> <p>PC12. Identify diseases and prescribe suitable chemicals and undertake Plant protection measures</p> <p>PC13. Thinning out of weaklings/undesired seedlings</p> <p>PC 14. Carry out seedling census</p>
<b>Development of multi-clone Bud wood nursery &amp; maintenance</b>	<p>PC15. Identify clones for raising multi clone bud wood nursery</p> <p>PC16. Plant mother plants with spacing as per specification</p> <p>PC17. Clone identification and labelling</p> <p>PC18. Weeding</p> <p>PC19. Application of fertilizer ((basal dressing with 150 kg powdered rock phosphate per hectare; NPKMg 10:10:4:1.5 mixture at the rate of 250 g/plant in two split doses and 10:10:4:1.5 mixture at the rate of 125 g/plant two to three months after cutting back)</p> <p>PC20. Identify diseases and prescribe suitable chemicals and undertake Plant protection measures</p> <p>PC21. Carry out Pruning</p> <p>PC22. Collection of bud wood for budding/sale (for young bud grafting/Green Bud grafting/brown bud grafting)</p> <p>PC23. Cut backing of discarded/unutilised bud wood</p>
<b>Bud grafting</b>	<p>PC24. Ensure timely bud grafting with desired clone</p> <p>PC25. Ensure utilization of good quality scion for bud grafting</p> <p>PC26. Assess budding success and labelling</p> <p>PC27. Carry out subsequent round of bud grafting, if desired</p>
<b>Knowledge and Understanding (K)</b>	
<b>A. Organizational Context</b> (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. Importance of full capacity utilization of inputs</p> <p>KA2. Importance of effective utilization of man power</p> <p>KA3. Relevance of minimizing cost of production</p> <p>KA4. Importance of production of quality planting materials</p> <p>KA5. Importance of maintaining harmony in the work place</p>



**Production of advanced planting materials**

<p><b>B. Technical</b></p> <p><b>Knowledge</b></p>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. Sorting of quality rubber seeds KB2. Viability test for assessing the viability of seeds KB3. Methods for temporary storage of seeds KB4. Preparation of land, germination beds, nursery beds KB5. Right stage of germinated seeds for planting KB6. Planting techniques and nursery and after care KB7. Disease management KB8. Development and maintenance of bud wood nursery KB9. Scientific aspects of bud grafting KB10. Methodology for developing poly bag and root trainer plants and maintenance</p>
<p><b>Skills (S) (Optional)</b></p>	
<p><b>A. Core Skills/ Generic Skills</b></p>	<p><b>Writing Skills</b></p> <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. Express ideas clearly through written document SA2. Document achievements, cost –benefit study, reports, success stories, repots to the manager etc SA3. Prepare proposals, feed back to higher authorities SA4. Recording of data</p> <p><b>Reading Skills</b></p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA5. Read and understand the contents published in scientific journals, newspaper and other publications SA6. Read and understand scientific terminologies, codes, abbreviations etc SA7. Read and understand images, graphs, charts, diagrams etc</p> <p><b>Oral Communication (Listening and Speaking skills)</b></p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA8. The individual should be a good communicator. SA9. Express statements, opinions or information clearly so that the receiver can hear and understand SA10. Respond appropriately to queries SA11. Communicate effectively to Manager, office staff and workers</p>
	<p><b>Decision Making</b></p>

**Production of advanced planting materials**

<b>B. Professional Skills</b>	The user/individual on the job needs to know and understand how to  SB1. Make appropriate decision according to the changing agro climatic conditions  SB2. Arrive proper decision according to the socio-economic situation
	<b>Planning and Organizing</b>
	The user/individual on the job needs to know and understand:  SB3. The apt season for seed collection, sowing, planting etc SB4. Schedule of weeding, fertilizer application, irrigation, mulching etc SB5. Suitable season for bud wood raising, bud grafting etc SB6. Effective planning of land utilization SB7. All the nursery practices are time bound, hence systematic planning and organizing of activities is important
	<b>Customer Centricity</b>
	The user/individual on the job needs to know and understand how to: SB8. Clarify doubts and to help the customer to choose suitable planting Materials SB9. Brief the field planting techniques and after care
	<b>Problem Solving</b>
	The user/individual on the job needs to know and understand how to SB10. Solve problems related to nursery management SB11. Solve labour problems SB12. Solve problems related to equipments and supply of inputs SB13. Solve problems among colleagues SB14. Diagnose problems and nip in the bud stage itself
	<b>Analytical Thinking</b>
	The user/individual on the job needs to know and understand how to: SB15. Suggest improvement over the recommended package of practices
	<b>Critical Thinking</b>
The user/individual on the job needs to know and understand how to: SB16. Take appropriate action/seek expert opinion to over come critical Situations	



## NOS Version Control

<b>NOS Code</b>	RSC/N 6003		
<b>Credits(NSQF)</b>	TBD	<b>Version number</b>	1.0
<b>Industry</b>	Rubber	<b>Drafted on</b>	07/11/13
<b>Industry Sub-sector</b>	Natural Rubber (NR) Production	<b>Last reviewed on</b>	27/03/15
<b>Occupation</b>	Rubber Nursery Management	<b>Next review date</b>	27/03/16



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# National Occupational Standard



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## Overview:

This unit is about Production of advanced planting materials

**Production of advanced planting materials**

<b>Unit Code</b>	<b>RSC/N 6004</b>
<b>Unit Title (Task)</b>	<b>Production of Advanced planting materials</b>
<b>Description</b>	This unit is about Production of advanced planting materials
<b>Scope</b>	This unit/task covers the following: Proficiency in supervision/carry out– <ul style="list-style-type: none"> <li>• Methodology for development</li> <li>• Poly bag plants – development and maintenance</li> <li>• Root trainer plants- development and maintenance</li> </ul>
<b>Performance Criteria(PC) w.r.t. the scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Methodology for Development</b>	<p><b>To be competent, the individual on the job must be able to know, understand and to –</b></p> <p>PC1. Seed at stake method- placing germinated seeds in the poly bags/Root Trainer cups for raising seedlings for bud grafting</p> <p>PC2. Select good quality seeds</p> <p>PC3. Germination of seeds</p> <p>PC4. Plant in the poly bags/root trainer cups &amp; after care</p> <p>PC5. Bud grafting at the right stage with good quality scion</p> <p>PC6. Cut backing of stock for further development</p> <p>PC7. Direct planting of Bud grafted stump method- planting bud grafted Stumps in the poly bag/ root trainer cups.</p>
<b>Poly bag plants-development &amp; maintenance</b>	<p>PC8. Selection of poly bags of appropriate size and specifications</p> <p>PC9. Preparation of potting mixture</p> <p>PC10. Planting of germinated seeds/bud grafted stumps</p> <p>PC11. Watering for maintaining optimum soil moisture</p> <p>PC12. Provide shade to regulate sun light</p> <p>PC13. Fertilizer application and disease management</p>
<b>Root trainer plants, development &amp; maintenance</b>	<p>PC14. Selection of root trainer cups of appropriate size and specifications</p> <p>PC15. Seasoning of coir pith (soaking in water to remove resins, tannin etc)</p> <p>PC16. Preparation of potting mixture (chemical treatment)</p> <p>PC17. Potting mixture filling</p> <p>PC18. Plant germinated seeds/ bud grafted stumps and after care</p> <p>PC19. Watering for maintaining optimum soil moisture</p> <p>PC20. Provide shade to regulate sun light</p> <p>PC21. Fertilizer application and disease management</p> <p>PC22. Root air pruning and Hardening</p>

**Production of advanced planting materials**

Knowledge and Understanding (K)	
<b>B. Organizational Context</b>  (Knowledge of the company / organization and its processes)	<p><b>The user/individual on the job needs to know and understand:</b></p> <p>KA1. Importance of quality planting materials for life long sustainable yield from rubber plantation</p> <p>KA2. Importance of quality of the seeds for development of quality planting materials</p> <p>KA3. Relevance of bud wood and clone used for bud grafting</p> <p>KA4. Importance of stock and scion quality for producing quality planting materials</p> <p>KA5. Importance of advanced planting materials in rubber plantation development</p>
<b>B. Technical Knowledge</b>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. Sorting of quality rubber seeds</p> <p>KB2. Preparation of land, germination beds, nursery beds</p> <p>KB3. Right stage of germinated seeds and selection for planting</p> <p>KB4. Planting techniques and nursery and after care</p> <p>KB5. The technique of quality bud wood production</p> <p>KB6. Timely Bud grafting with quality scion</p> <p>KB7. Raising of poly bag and root trainer plants with quality bud grafted stumps and proper maintenance</p>
Skills (S) (Optional)	
<b>C. Core Skills/ Generic Skills</b>	<b>Writing Skills</b>
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. Express ideas clearly through written document</p> <p>SA2. Document achievements, cost –benefit study, reports, success stories, etc</p> <p>SA3. Prepare proposals, feed back to higher authorities</p>
	<b>Reading Skills</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA4. Read and understand the contents published in scientific journals, newspaper and other publications</p> <p>SA5. Read and understand scientific terminologies, codes, abbreviations etc</p> <p>SA6. Read and understand images, graphs, charts, diagrams etc</p>
	<b>Oral Communication (Listening and Speaking skills)</b>

**Production of advanced planting materials**

	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA6. The individual should be a good communicator. SA7. Express statements, opinions or information clearly so that the receiver can hear and understand SA8. Respond appropriately to queries SA9. Communicate effectively to Manager, office staff and workers</p>
<p><b>D. Professional Skills</b></p>	<p><b>Decision Making</b></p>
	<p>The user/individual on the job needs to know and understand how to</p> <p>SB1. Make appropriate decision according to the changing agro climatic conditions SB2. Arrive proper decision according to the socio-economic situations</p>
	<p><b>Planning and Organizing</b></p>
	<p>The user/individual on the job needs to know and understand:</p> <p>SB3. The apt season for seed collection, sowing, planting etc SB4. Schedule of weeding, fertilizer application, irrigation, mulching etc SB5. Suitable season for bud wood raising, bud grafting etc SB6. Most suitable season for raising poly bag and root trainer plants SB7. Effective planning of land utilization SB8. All the nursery practices are time bound, hence systematic planning and organizing of activities is important</p>
	<p><b>Customer Centricity</b></p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB9. Clarify doubts and to help the customer to choose suitable planting Materials SB10. Brief the field planting techniques and after care</p>
	<p><b>Problem Solving</b></p>
<p>The user/individual on the job needs to know and understand how to</p> <p>SB11 Solve problems related to nursery management SB12 Solve labour problems SB13 Solve problems related to equipments and supply of inputs SB14 Solve conflict among colleagues SB15 Diagnose problems and nip in the bud stage itself</p>	

**Production of advanced planting materials**

	<b>Analytical Thinking</b>
	The user/individual on the job needs to know and understand how to: SB16 Suggest improvement over the recommended package of practices
	<b>Critical Thinking</b>
	The user/individual on the job needs to know and understand how to: SB17 Take appropriate action/seek expert opinion to over come critical Situations



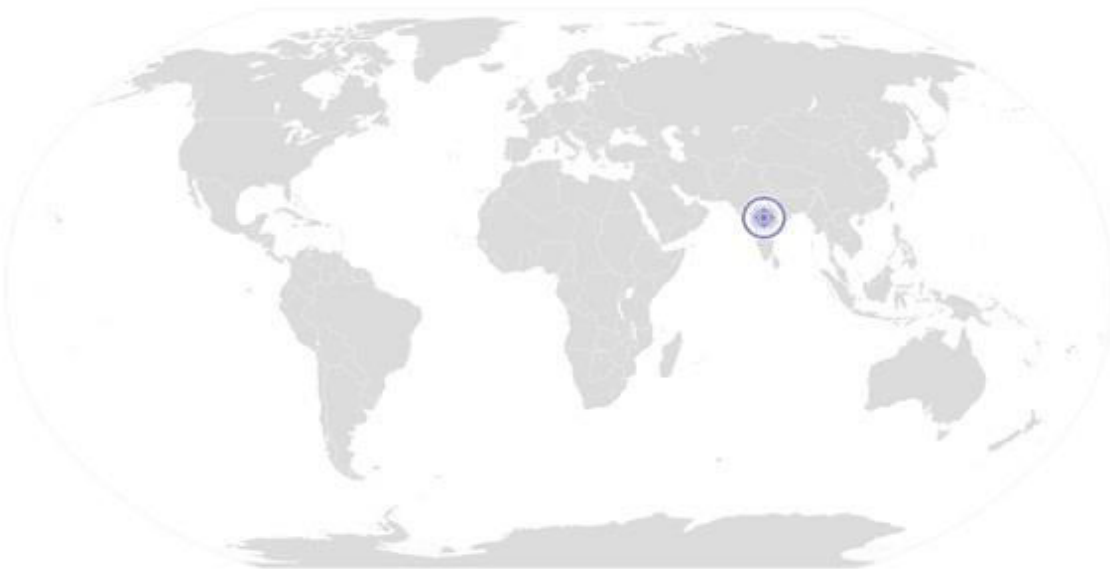


## NOS Version Control

<b>NOS Code</b>	RSC/N 6004		
<b>Credits(NSQF)</b>	TBD	<b>Version number</b>	1.0
<b>Industry</b>	Rubber	<b>Drafted on</b>	07/11/13
<b>Industry Sub-sector</b>	Natural Rubber (NR) Production	<b>Last reviewed on</b>	27/03/15
<b>Occupation</b>	Rubber Nursery Management	<b>Next review date</b>	27/03/16



# National Occupational Standard



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## **Overview:**

This unit is about Quality control/checks and sale of planting materials

## Quality assurance and preparation of planting materials for sale

<b>Unit Code</b>	<b>RSC/N 6005</b>
<b>Unit Title (Task)</b>	<b>Quality assurance and preparation of planting materials for sale</b>
<b>Description</b>	This unit is about Quality control/checks and sale of planting materials
<b>Scope</b>	<p>This unit/task covers the following: Proficiency in -</p> <ul style="list-style-type: none"> <li>• Selection of good quality seeds</li> <li>• Planting sorted germinated seedlings and proper upkeep</li> <li>• Assure bud wood quality</li> <li>• Timely bud grafting and ensure utilization of vigorous scion</li> <li>• Selective utilization of bud grafted stumps for raising advanced planting materials</li> <li>• Quality assurance and preparation for sale</li> </ul>
<b>Performance Criteria(PC) w.r.t. the scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Selection of good quality seeds</b>	<p>To be competent, the individual on the job must be able to –</p> <p>PC1. Ensure the quality of the seeds PC2. Manage timely sowing of the seeds</p>
<b>Planting sorted germinated seedlings and proper upkeep</b>	<p>PC3. Ensure planting of seeds germinated within two weeks PC4. Ensure planting of germinated seeds at the right stage PC5. Implement timely weeding, fertilizer application, mulching irrigation etc PC6. Identify diseases and prescribe chemicals for disease management</p>
<b>Assure bud wood Quality</b>	<p>PC7. Manage development and proper maintenance PC8. Timely pruning/cut back</p>
<b>Timely bud grafting and ensure utilization of vigorous scion</b>	<p>PC9. Manage timely bud grafting with desired clone PC10. Ensure utilization of good quality scion for bud grafting</p>
<b>Utilization of selected bud grafted stumps for raising advanced planting materials</b>	<p>PC11. Select quality bud grafted stumps for raising Poly bag plants PC12. Select quality bud grafted stumps for raising Root trainer plants PC13. Good maintenance of nursery</p>

**RSC/N 6005**
**Quality assurance and preparation of planting materials for sale**

<b>Quality assurance and preparation of planting materials for sale</b>	PC14. Assess quality of planting materials PC15. Prepare planting materials for transportation PC16. Proper packing and despatch		
<b>Knowledge and Understanding (K)</b>			
<b>A. Organizational Context</b> (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand: <ul style="list-style-type: none"> <li>KA1.Importance of quality planting materials for life long sustainable yield from rubber plantation</li> <li>KA2.Importance of quality of the seeds for development of quality planting materials</li> <li>KA3.Relevance of bud wood and clone used for bud grafting</li> <li>KA4.Importance of stock and scion quality for producing quality planting materials</li> <li>KA5.Importance of advanced planting materials in rubber plantation development</li> </ul>		
<b>B. Technical Knowledge</b>	The user/individual on the job needs to know and understand: <ul style="list-style-type: none"> <li>KB1. Sorting of quality rubber seeds</li> <li>KB2. Preparation of land, germination beds, nursery beds</li> <li>KB3. Right stage of germinated seeds and selection for planting</li> <li>KB4. Planting techniques and nursery and after care</li> <li>KB5. The technique of quality bud wood production</li> <li>KB6. Timely Bud grafting with quality scion</li> <li>KB7. Raising of poly bag and root trainer plants with quality bud grafted stumps and proper maintenance</li> </ul>		
<b>Skills (S) (Optional)</b>			
<b>A. Core Skills/ Generic Skills</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="background-color: #d9e1f2; text-align: center;"><b>Writing Skills</b></td> </tr> <tr> <td>           The user/ individual on the job needs to know and understand how to:           <ul style="list-style-type: none"> <li>SA1. Express ideas clearly through written document</li> <li>SA2. Document achievements, cost –benefit study, reports, success stories, etc</li> <li>SA3. Prepare proposals, feed back to higher authorities</li> <li>SA4. Recording of data, compilation and reporting</li> </ul> </td> </tr> </table>	<b>Writing Skills</b>	The user/ individual on the job needs to know and understand how to: <ul style="list-style-type: none"> <li>SA1. Express ideas clearly through written document</li> <li>SA2. Document achievements, cost –benefit study, reports, success stories, etc</li> <li>SA3. Prepare proposals, feed back to higher authorities</li> <li>SA4. Recording of data, compilation and reporting</li> </ul>
<b>Writing Skills</b>			
The user/ individual on the job needs to know and understand how to: <ul style="list-style-type: none"> <li>SA1. Express ideas clearly through written document</li> <li>SA2. Document achievements, cost –benefit study, reports, success stories, etc</li> <li>SA3. Prepare proposals, feed back to higher authorities</li> <li>SA4. Recording of data, compilation and reporting</li> </ul>			

**RSC/N 6005**
**Quality assurance and preparation of planting materials for sale**

	<b>Reading Skills</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA5. Read and understand the contents published in scientific journals, newspaper and other publications</p> <p>SA6. Read and understand scientific terminologies, codes, abbreviations etc</p> <p>SA7. Read and understand images, graphs, charts, diagrams etc</p>
	<b>Oral Communication (Listening and Speaking skills)</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA8. The individual should be a good communicator</p> <p>SA9 . Express statements, opinions or information clearly so that the receiver can hear and understand</p> <p>SA10. Respond appropriately to queries</p> <p>SA11. Communicate effectively to supervisor, office staff and workers</p>
<b>B. Professional Skills</b>	<b>Decision Making</b>
	<p>The user/individual on the job needs to know and understand how to</p> <p>SB1. Make appropriate decision according to the changing agro climatic conditions</p> <p>SB2. Arrive proper decision according to the socio-economic situations</p>
	<b>Planning and Organizing</b>
	<p>The user/individual on the job needs to know and understand:</p> <p>SB3. The apt season for seed collection, sowing, planting etc</p> <p>SB4. Schedule of weeding, fertilizer application, irrigation, mulching etc</p> <p>SB5. Suitable season for bud wood raising, bud grafting etc</p> <p>SB6. Most suitable season for raising poly bag and root trainer plants</p> <p>SB7. Effective planning of land utilization</p> <p>SB8. All the nursery practices are time bound, hence systematic planning and organizing of activities is important</p>
	<b>Customer Centricity</b>

**RSC/N 6005**

**Quality assurance and preparation of planting materials for sale**

	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB9. Clarify doubts and to help the customer to choose suitable planting Materials</p> <p>SB10. Brief the field planting techniques and after care</p>
	<p><b>Problem Solving</b></p>
	<p>The user/individual on the job needs to know and understand how to</p> <p>SB11. Solve problems related to nursery management</p> <p>SB12. Solve labour problems</p> <p>SB13. Solve problems related to equipments and supply of inputs</p> <p>SB14. Solve conflict among colleagues</p> <p>SB15. Diagnose problems and nip in the bud stage itself</p>
	<p><b>Analytical Thinking</b></p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB16. Suggest improvement over the recommended package of practices</p>
	<p><b>Critical Thinking</b></p>
<p>The user/individual on the job needs to know and understand how to:</p> <p>SB17. Take appropriate action/seek expert opinion to over come critical Situations</p>	



## NOS Version Control

<b>NOS Code</b>	RSC/N 6005		
<b>Credits(NSQF)</b>	TBD	<b>Version number</b>	1.0
<b>Industry</b>	Rubber	<b>Drafted on</b>	07/11/13
<b>Industry Sub-sector</b>	Natural Rubber (NR) Production	<b>Last reviewed on</b>	27/03/15
<b>Occupation</b>	Rubber Nursery Management	<b>Next review date</b>	27/03/16



# National Occupational Standard



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## Overview:

This unit is about Documentation & Office Management

**Data recording, compilation, documentation and reporting**

<b>Unit Code</b>	RSC/N 6006
<b>Unit Title (Task)</b>	Data recording, compilation, documentation and reporting
<b>Description</b>	This unit is about Documentation & Office Management
<b>Scope</b>	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> <li>• Data base of the nursery</li> <li>• Filed data collection and recording</li> <li>• Data compilation</li> <li>• Data analysis</li> <li>• Documentation and reporting</li> </ul>
<b>Performance Criteria(PC) w.r.t. the scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Data base of the nursery</b>	<p><b>To be competent, the individual on the job must be able to know and record -</b></p> <p>PC1. Data on land and infrastructure  PC2. Extent of land under utilization  PC3. Production potential of the nursery  PC4. Actual output and deficit if any  PC5. Data on bud wood nursery  PC6. Production, sale and turn over</p>
<b>Field data collection and recording</b>	<p>PC7. Data on seed purchase (quantity, source, date of purchase, sowing, planting etc), viability, germination percentage and utilization  PC8. Data on field planting (date, no of plants, vacancy supply, No of beds with code No, Bed wise planting points etc)  PC9. Data on weeding, irrigation schedule, fertilizer application, mulching practice etc in seedling nursery and bud wood nursery, poly bag and root trainer plant nursery  PC10. Periodical seedling census data  PC11. Data on disease management (quantity of chemical used, type/name, type of disease, rounds of application, dates of application etc)  PC12. Data on bud grafting (number of plants bud grafted- date wise, quantity of bud wood used, quantity of budding materials used, budding success and percentage etc)  PC13. Data on poly bag and root trainer plants (number of plants raised, date of planting, success etc)  PC14. Data on sale (date wise)- no of plants sold, details of the customer with Contact number, clone, type of planting materials, rejections etc.</p>

**RSC/N 6006**
**Data recording, compilation, documentation and reporting**

<b>Data compilation</b>	PC15. Item wise data compilation for summary PC16. For periodical evaluation PC17. For planning and organizing
<b>Data analysis</b>	PC18. For triangulation of data PC19. For inferring
<b>Documentation and reporting</b>	PC20. Reporting to Nursery manage for feed back PC21. Enable the Manager to evaluate progress and action for achieving the mission/target or modifying the goal PC22. Documentation for future reference and publication
<b>Knowledge and Understanding (K)</b>	
<b>A. Organizational Context</b> (Knowledge of the company / organization and its processes)	<b>The user/individual on the job needs to know and understand:</b>  KA1. Efficient management of activities KA2. Planning and organizing activities through data analysis KA3. Analyzing shortfall/achievement for further improvement KA4. Documentation for self awareness and publication
<b>B. Technical Knowledge</b>	The user/individual on the job needs to know and understand the methodologies of:  KB1. Data collection KB2. Data recording KB3. Data analysis KB4. Documentation/report writing KB5. Mathematical/statistical theories and application KB6. Computer application- data processing, report typing etc
<b>Skills (S) (Optional)</b>	
<b>A. Core Skills/ Generic Skills</b>	<b>Writing Skills</b>
	The user/ individual on the job needs to know and understand how to:  SA1. Express ideas clearly through written document SA2. Prepare proposals, feed back to higher authorities SA3. Mathematical Tabulation SA4. Report writing, computerization

	<b>Reading Skills</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA5. Read and understand the contents published in scientific journals, manuals, newspaper and other publications</p> <p>SA6. Read and understand images, graphs, charts, diagrams etc</p> <p>SA7. Read and understand articles and interpret</p>
	<b>Oral Communication (Listening and Speaking skills)</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA8. The individual should be a good communicator.</p> <p>SA6. Express statements, opinions or information clearly so that the receiver can hear and understand</p> <p>SA7. Respond appropriately to queries</p> <p>SA8. Communicate effectively to supervisor, office staff and workers</p>
<b>B. Professional Skills</b>	<b>Decision Making</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB1. Arrive proper decision according to various situations</p>
	<b>Planning and Organizing</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB2. Plan the Seasonal activities in priority basis</p> <p>SB3. Fix the task and allotment</p> <p>SB4. Assign tasks to suitable persons</p> <p>SB5. Motivate them for better out put and time bound completion of tasks</p> <p>SB6. Monitor the progress</p> <p>SB7. All the nursery practices are time bound, hence systematic planning and organizing of activities is important</p>
	<b>Problem Solving</b>

**Data recording, compilation, documentation and reporting**

	<p>The user/individual on the job needs to know and understand how to</p> <ul style="list-style-type: none"> <li>SB8. Solve problems related to nursery management</li> <li>SB9. Solve labour problems</li> <li>SB10. Solve problems related to equipments and supply of inputs</li> <li>SB11. Solve problems among colleagues</li> <li>SB12. Diagnose problems and nip in the bud stage itself</li> </ul>
	<p><b>Analytical Thinking</b></p>
	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> <li>SB13. Suggest impr</li> <li>SB14. ovement over the recommended package of practices</li> </ul>
	<p><b>Critical Thinking</b></p>
	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> <li>SB15. Take appropriate action/seek expert opinion to over come critical Situations</li> </ul>





## NOS Version Control

<b>NOS Code</b>	RSC/N 6006		
<b>Credits(NSQF)</b>	TBD	<b>Version number</b>	<b>1.0</b>
<b>Industry</b>	Rubber	<b>Drafted on</b>	<b>07/11/13</b>
<b>Industry Sub-sector</b>	Natural Rubber Production	<b>Last reviewed on</b>	<b>27/03/15</b>
<b>Occupation</b>	Rubber Nursery Management	<b>Next review date</b>	<b>27/03/16</b>



# National Occupational Standard



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## Overview:

This unit is about Problem identification and reporting for solving

**RSC/ N5011**
**Problem identification and reporting for solving**

<b>Unit Code</b>	<b>RSC/ N5011</b>
<b>Unit Title (Task)</b>	<b>Problem identification and solving</b>
<b>Description</b>	This unit is about Problem identification and reporting for solving
<b>Scope</b>	This unit/task covers the following: Proficiency in identifying problems across <ul style="list-style-type: none"> <li>• Nursery practices</li> <li>• Equipments</li> <li>• Quality of planting materials</li> <li>• Personal management</li> </ul>
<b>Performance Criteria(PC) w.r.t. the scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Problem Identification</b>	To be competent, the individual on the job must be able to know and understand – <ul style="list-style-type: none"> <li>PC1. Recognize and define the problem</li> <li>PC2. Identify the wrong practices that may lead to problems</li> <li>PC3. Refer previous experience if any</li> <li>PC4. Evaluate the possible impacts if the problems remain unsolved</li> </ul>
<b>Problem Solving</b>	Try to- <ul style="list-style-type: none"> <li>PC5. Nip it in the bud stage itself</li> <li>PC6. Find out possible solutions</li> <li>PC7. Evaluate the alternatives</li> <li>PC8. Select the best alternative for solution</li> <li>PC9. Plan for implementation</li> <li>PC10. Implementation according to the existing rules and regulations</li> <li>PC11. Evaluate the results and monitor future problems</li> </ul>
<b>Reporting to higher authority</b>	PC12. If the problem is too complex to rectify within the capacity of the job role, report to the higher authority for expert management
<b>Knowledge and Understanding (K)</b>	

**RSC/ N5011**
**Problem identification and reporting for solving**

<b>A. Organizational Context</b> (Knowledge of the company / organization and its processes)	<b>The user/individual on the job needs to know and understand:</b>  KA1. Problem solving and conflict management for smooth functioning of the Organization KA2. Harmonious working atmosphere for achieving organizational goals KA3. Public reputation and credibility KA4. Maximum out put with quality
<b>B. Technical Knowledge</b>	<b>The user/individual on the job needs to know and understand:</b>  KB1. Problem identification skill KB2. In-depth knowledge in nursery management practices KB3. Knowledge in Labour Act and rules, welfare schemes etc KB4. Insurance schemes KB5. EPF and other service rules KB6. Problem solving/decision making skill
<b>Skills (S) (Optional)</b>	
<b>A. Core Skills/ Generic Skills</b>	<b>Writing Skills</b>
	<b>The user/ individual on the job needs to know and understand how to:</b>  SA1. Express ideas clearly through written document SA2. Prepare letters, mails and other documents for communication SA3. Prepare proposals, feed back to higher authorities SA4. Correspond with other institutions/department SA5. Report writing
	<b>Reading Skills</b>
<b>The user/individual on the job needs to know and understand how to:</b>  SA6. Read and understand the contents published in scientific journals, manuals, newspaper and other publications SA7. Read, understand and interpret various rules, schemes etc SA8. Read and understand images, graphs, charts, diagrams etc SA9. Read and understand articles and interpret	
	<b>Oral Communication (Listening and Speaking skills)</b>

**RSC/ N5011**
**Problem identification and reporting for solving**

	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA10. The individual should be a good communicator.          SA11. Express statements, opinions or information clearly so that the receiver can hear and understand          SA12. Respond appropriately to queries          SA13. Communicate effectively to supervisor, office staff and workers</p>
<b>B. Professional Skills</b>	<b>Decision Making</b>
	<p>The user/individual on the job needs to know and understand how to</p> <p>SB1. Arrive proper decision according to various situations</p>
	<b>Planning and Organizing</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB2. Plan the Seasonal activates in priority basis          SB3. Fix the task and allotment          SB4. Assign tasks to suitable persons          SB5. Motivate them for better out put and time bound completion of tasks          SB6. Monitor the progress          SB7. All the nursery practices are time bound, hence systematic planning and organizing of activities is important</p>
	<b>Problem Solving</b>
	<p>The user/individual on the job needs to know and understand how to</p> <p>SB8. Solve problems related to nursery management          SB9. Solve labour problems          SB10. Solve problems related to equipments and supply of inputs          SB11. Solve problems among colleagues          SB12. Diagnose problems and nip in the bud stage itself</p>
	<b>Analytical Thinking</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB13. Suggest improvement over the recommended package of practices</p>
<b>Critical Thinking</b>	
<p>The user/individual on the job needs to know and understand how to:</p> <p>SB14. Take appropriate action/seek expert opinion to over come critical Situations</p>	

## NOS Version Control

<b>NOS Code</b>	RSC/N 5011		
<b>Credits(NSQF)</b>	TBD	<b>Version number</b>	1.0
<b>Industry</b>	Rubber	<b>Drafted on</b>	07/11/13
<b>Industry Sub-sector</b>	Natural Rubber Production	<b>Last reviewed on</b>	27/03/15
<b>Occupation</b>	Rubber Nursery Management	<b>Next review date</b>	27/03/16



[Back to QP](#)

## CRITERIA FOR ASSESSMENT OF TRAINEES

<b>Job Role</b>	Rubber Nursery Supervisor
<b>Qualification Pack</b>	RSC/Q 6002
<b>Sector Skill Council</b>	Rubber Skill Development Council

### Guidelines for Assessment

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC
3. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below)
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on this criteria
5. To pass the Qualification Pack, every trainee should score a minimum of 70% in every NOS
6. In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack

			Marks Allocation		
NOS	Elements	Performance Criteria	Total	Theory	Practical
RSC/ N 6003 Rubber nursery development practices	Selection of good quality seeds	PC1. Sorting of quality of the seeds	4	2	2
		PC2. Conduct the viability of the seed	4	2	2
		PC3. Choose apt method for temporary storage of seeds	2	2	0
	Germination of	PC4. Carry out timely sowing of the seeds	2	2	0

seeds	PC5. Prepare the land and make germination beds as per specification	8	4	4
	PC6. Placing of seeds in the germination medium and cover with coir mat/gunny bags	8	4	4
	PC7. Watering the germination beds to maintain optimum moisture	3	0	3
Planting	PC8. Cast proper land preparation technique and design seedling nursery Beds as per specification	5	3	2
	PC9. Select the best quality germinated seeds and transport without damage	3	3	0
	PC10. Carry out planting of germinated seeds with suitable spacing	8	4	4
	PC11. Ensure planting of germinated seeds at the right stage	2	2	0
Seedling nursery maintenance and disease management	PC12. Carry out timely weeding (minimum three rounds-before fertilizer applications and bud grafting)	2	2	0
	PC13. Carry out fertilizer application (basal dressing with compost and rock phosphate; 2500 kg of 10:10:4:1.5 NPKMg per effective hectare (1st dose) and 550 kg urea per effective hectare (2nd dose).	7	4	3
	PC14. Carry out mulching irrigation etc	4	2	2
	PC15. Identify diseases and prescribe suitable chemicals and undertake Plant protection measures	6	3	3
	PC16. Thinning out of weaklings/undesired seedlings	2	2	0
	PC 17. Carry out seedling census	2	2	0
Development of multi-clone Bud wood nursery & maintenance	PC18. Identify clones for raising multi clone bud wood nursery	2	0	2
	PC19. Plant mother plants with spacing as per specification	4	0	4
	PC20. Clone identification and labelling	3	0	3
	PC21. Weeding	6	4	2
	PC22. Application of fertilizer ((basal dressing with 150 kg powdered rock phosphate per hectare; NPKMg 10:10:4:1.5 mixture at the rate of 250 g/plant in two split doses and 10:10:4:1.5 mixture at the rate of 125 g/plant two to three	4	4	0



		months after cutting back)			
		PC23. Cut backing of discarded/unutilised bud wood	2	2	0
	Bud grafting	PC24. Ensure timely bud grafting with desired clone	2	2	0
		PC25. Ensure utilization of good quality scion for bud grafting	2	2	0
		PC26. Assess budding success and labelling	2	2	0
		PC27. Carry out subsequent round of bud grafting, if desired	1	1	0
			100	60	40
RSC/ N 6004 Production of advanced planting materials	Methodology for Development	PC1. Seed at stake method- placing germinated seeds in the poly bags/Root Trainer cups for raising seedlings for bud grafting	2	0	2
		PC2. Select good quality seeds	6	2	4
		PC3. Germination of seeds	8	4	4
		PC4. Plant in the poly bags/root trainer cups & after care	2	0	2
		PC5. Bud grafting at the right stage with good quality scion	4	4	0
		PC6. Cut backing of stock for further development	4	0	4
		PC7. Direct planting of Bud grafted stump method- planting bud grafted Stumps in the poly bag/ root trainer cups.	6	2	4
	Poly bag plants- development & maintenance	PC8. Selection of poly bags of appropriate size and specifications	10	4	6
		PC9. Preparation of potting mixture	8	2	6
		PC10. Planting of germinated seeds/bud grafted stumps	10	4	6
		PC11. Watering for maintaining optimum soil moisture	4	0	4
		PC12. Provide shade to regulate sun light	5	2	3
		PC13. Fertilizer application and disease management	7	4	3
	Root trainer plants, development & maintenance	PC14. Selection of root trainer cups of appropriate size and specifications	2	2	0
		PC15. Seasoning of coir pith (soaking in water to remove resins, tannin etc)	2	2	0
		PC16. Preparation of potting mixture (chemical treatment)	2	0	2
		PC17. Potting mixture filling	2	0	2

		PC18. Plant germinated seeds/ bud grafted stumps and after care	4	2	2
		PC19. Watering for maintaining optimum soil moisture	2	0	2
		PC20. Provide shade to regulate sun light	4	2	2
		PC21. Fertilizer application and disease management	2	2	0
		PC22. Root air pruning and Hardening	4	2	2
			100	40	60
RSC/ N 6005 Quality assurance and preparation of planting materials for sale	Selection of good quality seeds	PC1. Ensure the quality of the seeds	10	6	4
		PC2. Manage timely sowing of the seeds	6	4	2
	Planting sorted germinated seedlings and proper upkeep	PC3. Ensure planting of seeds germinated within two weeks	7	5	2
		PC4. Ensure planting of germinated seeds at the right stage	7	5	2
		PC5. Implement timely weeding, fertilizer application, mulching irrigation etc	8	6	2
		PC6. Identify diseases and prescribe chemicals for disease management	10	8	2
	Assure bud wood Quality	PC7. Manage development and proper maintenance	6	6	0
		PC8. Timely pruning/cut back	5	2	3
	Timely bud grafting and ensure utilization of vigorous scion	PC9. Manage timely bud grafting with desired clone	6	6	0
		PC10. Ensure utilization of good quality scion for bud grafting	8	6	0
	Utilization of selected bud grafted stumps for raising advanced planting materials	PC11. Select quality bud grafted stumps for raising Poly bag plants	4	2	2
		PC12. Select quality bud grafted stumps for raising Root trainer plants	4	2	2
		PC13. Good maintenance of nursery	5	3	2
	Quality assurance and	PC14. Assess quality of planting materials	5	3	2
		PC15. Prepare planting materials for transportation	5	2	3

	preparation of planting materials for sale	PC16. Proper packing and despatch	6	4	2
			102	70	30
RSC/ N 6006 Documentation & Office Management	Data base of the nursery	PC1. Data on land and infrastructure	5	2	3
		PC2. Extent of land under utilization	5	2	3
		PC3. Production potential of the nursery	4	4	0
		PC4. Actual output and deficit if any	4	4	0
		PC5. Data on bud wood nursery	2	2	0
		PC6. Production, sale and turn over	7	4	3
	Field data collection and recording	PC7. Data on seed purchase (quantity, source, date of purchase, sowing, planting etc), viability, germination percentage and utilization	3	3	0
		PC8. Data on field planting (date, no of plants, vacancy supply, No of beds with code No, Bed wise planting points etc)	2	2	0
		PC9. Data on weeding, irrigation schedule, fertilizer application, mulching practice etc in seedling nursery and bud wood nursery, poly bag and root trainer plant nursery	8	4	4
		PC10. Periodical seedling census data	8	4	4
		PC11. Data on disease management (quantity of chemical used, type/name, type of disease, rounds of application, dates of application etc)	8	4	4
		PC12. Data on bud grafting (number of plants bud grafted-date wise, quantity of bud wood used, quantity of budding materials used, budding success and percentage etc)	7	4	3
		PC13. Data on poly bag and root trainer plants (number of plants raised, date of planting, success etc	3	3	0
		PC14. Data on sale (date wise)- no of plants sold, details of the customer with Contact number, clone, type of planting materials, rejections etc.			
	Data	PC15. Item wise data compilation for summary	10	4	6

	compilation	PC16. For periodical evaluation	8	4	4
		PC17. For planning and organizing	8	4	4
	Data analysis	PC18. For triangulation of data	2	2	0
		PC19. For inferring	2	2	0
	Documentation and reporting	PC20. Reporting to Nursery manage for feed back	2	0	2
		PC21. Enable the Manager to evaluate progress and action for achieving the mission/target or modifying the goal	1	1	0
PC22. Documentation for future reference and publication		1	1	0	
			100	60	40
RSC/ N 5011 Problem identification and reporting for solving	Problem Identification	PC1. Recognize and define the problem	13	5	8
		PC2. Identify the wrong practices that may lead to problems	14	9	5
		PC3. Refer previous experience if any	6	6	0
		PC4. Evaluate the possible impacts if the problems remain unsolved	14	10	4
	Problem Solving	PC5. Nip it in the bud stage itself	4	4	0
		PC6. Find out possible solutions	8	6	2
		PC7. Evaluate the alternatives	9	7	2
		PC8. Select the best alternative for solution	10	8	2
		PC9. Plan for implementation	8	6	2
		PC10. Implementation according to the existing rules and regulations	7	4	3
	Reporting to higher authority	PC11. Evaluate the results and monitor future problems	6	4	2
		PC12. If the problem is too complex to rectify within the capacity of the job role, report to the higher authority for expert management National Occupational	1	1	0
				100	70