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# Model Curriculum

## Rubber Nursery Worker - General

**SECTOR:** Rubber Industry  
**SUB-SECTOR:** Rubber Plantation (Natural Rubber Production)  
**OCCUPATION:** Rubber Nursery Management  
**REF ID:** RSC/Q6005, V1.0  
**NSQF LEVEL:** 4



## Certificate

### CURRICULUM COMPLIANCE TO QUALIFICATION PACK – NATIONAL OCCUPATIONAL STANDARDS

is hereby issued by

the  
**Rubber Skill Development Council**  
for the

### MODEL CURRICULUM

Complying to National Occupational Standards  
of

Job Role/ Qualification Pack: '**Rubber Nursery Worker** QP No. '**RSC/ Q 6005**  
**NSQF Level 4**'

Date of Issuance: **December 15, 2015**

Valid Upto: **December 15, 2017**

\* Valid up to the next review date of the Qualification Pack



Authorised Signatory

Rubber Skill Development Council

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# Rubber Nursery Worker – General

## CURRICULUM/SYLLABUS

This program is aimed at training candidates for the job of an “Rubber Nursery Worker - General”, in the “Rubber” Sector/Industry and aims at building the following key competencies amongst the learner

<b>Program Name</b>	<b>Rubber Nursery Worker - General</b>		
<b>Qualification Pack Name &amp; Reference ID. ID</b>	RSC/ Q 6005		
<b>Version No.</b>	1.0	<b>Version Update Date</b>	07/11/2019
<b>Pre-requisites to Training</b>	Class 10 <sup>th</sup>		
<b>Training Outcomes</b>	<b>After completing this programme, participants will be able to:</b> <ul style="list-style-type: none"> <li>• Rubber Nursery Practices – Labour orientation</li> <li>• Natural Resources Management</li> <li>• Feedback to Higher Authorities</li> <li>• To Learn Entrepreneurship Skills</li> </ul>		

This course encompasses three out of three National Occupational Standards (NOS) of “RSC/ Q 6005” Qualification Pack issued by “Rubber Skill Development Council”.

S.No	Module	Key Learning Outcomes	Equipment
1	<b>Introduction and Orientation</b>  <b>Theory</b> 2 hours  <b>Practical</b> 0 hours <b>Corresponding NOS</b> Bridge Module	<ul style="list-style-type: none"> <li>• Importance of Rubber Sector</li> <li>• Role and responsibility of Rubber Nursery Worker</li> </ul>	Laptop, white board, marker, projector
2	<b>Rubber Nursery Practices</b>  <b>Theory</b> 25 hours  <b>Practical</b> 40 hours  <b>Corresponding NOS</b> RSC/ N6010	<ul style="list-style-type: none"> <li>• Sort rubber seeds based on quality.</li> <li>• Undertake viability test of the seed.</li> <li>• Store seeds temporarily.</li> <li>• Understand the seeds germination.</li> <li>• Prepare the land and germination beds.</li> <li>• Understand the plantation process in nursery.</li> <li>• Water and care of the rubber seedlings.</li> <li>• Understand the nursery maintenance and disease management.</li> <li>• Know major weeds in rubber lands and their control.</li> <li>• Treat the different types of diseases.</li> <li>• Use sprayers.</li> <li>• Understand the budwood nursery.</li> <li>• Develop the multi-clone budwood nursery.</li> <li>• Produce the advance d planting materials.</li> <li>• Prepare the planting material for sale.</li> <li>• Do packaging.</li> <li>• Understand the transport.</li> </ul>	Power point presentation, LCD projector, Computer, LCD screen, white board, marker, pointer. Sample of Rubber Seeds, Trowel, Coir mat/ gunny bags, watering can, buckets, felling knife, spade, rope, list of Chemicals to prevent diseases, Sample budded stumps, handsaw, budding tape, budding knife, Root trainer cup, poly bags, spade, rope, coir pith
3	<b>Natural Resource Management</b>  <b>Theory</b> 20 hours  <b>Practical</b> 35 hours  <b>Corresponding NOS</b> RSC/ N5005	<ul style="list-style-type: none"> <li>• Identify the possibilities and causes of soil erosion.</li> <li>• Undertake precautions to minimize soil erosion.</li> <li>• Follow correct method and direction of terrace preparation.</li> <li>• Know and implement correct method of providing proper drainage.</li> <li>• Maintain Hedges efficiently.</li> <li>• Protect water source from pollution.</li> <li>• Understand and undertake rain water harvesting.</li> <li>• Judiciously use water during irrigation.</li> <li>• Know and implement mulching for soil and moisture.</li> <li>• Conservation.</li> <li>• Avoid excess dosage of fertilisers and chemicals to minimise damage to soil micro flora and micro fauna.</li> </ul>	Laptop, white board, marker, projector, Spade, felling knife, crowbar, rain shades, Cleaning equipment like dust picker, hand mop, dry mop, brush etc., Samples of fertilizers pesticides, herbicide and fungicide.

<p>4</p>	<p><b>Provide Feedback to Higher Authorities</b></p> <p><b>Theory</b> 15 hours</p> <p><b>Practical</b> 0 hours</p> <p><b>Corresponding NOS</b> RSC / N 5006</p>	<ul style="list-style-type: none"> <li>• Generate innovations through expertise.</li> <li>• Report to the higher authorities for trial, modifications and evaluation.</li> <li>• Implement/adopt the approved innovations.</li> <li>• Identify the issues requiring troubleshooting.</li> <li>• Report to the higher authorities for diagnosing and remedial action.</li> <li>• Carry out protection measures.</li> <li>• Report on the effectiveness of the control measures.</li> <li>• Report on the effect of climatic factors on the functioning of the factory.</li> <li>• Identify appropriate location specific indigenous knowledge.</li> <li>• Report it to higher authorities for trial, evaluation and adoption with modifications, if any.</li> <li>• Report on the results of such trials.</li> <li>• Identify the socio-economic issues.</li> <li>• Report it to higher authorities for investigation and solution.</li> <li>• Generate awareness of the conflict existing and its possible causes.</li> <li>• Report it to the higher authority for resolving the issues.</li> <li>• Extend possible help for solving the conflict.</li> </ul>	<p>Power point presentation, LCD projector, Computer, LCD screen, white board, marker, pointer</p>
<p>5.</p>	<p><b>Learn Entrepreneurship Skills</b></p> <p><b>Theory</b> 8 hours</p> <p><b>Practical</b> 10 hours</p> <p><b>Corresponding NOS</b> RSC / N 5006</p>	<ul style="list-style-type: none"> <li>• Importance of being aware to identify profitable business opportunity (Opportunity can be in the form of new material in use, new process, new technology, new market etc.)</li> <li>• Maintain the confidentiality till the completion of working on the idea</li> <li>• Discuss the opportunity (with trusted ones) to evaluate its feasibility</li> <li>• Arrange/organize related documents/information</li> <li>• Monitor the development at competitors' end</li> <li>• Sustain existing business and make continual improvements</li> <li>• Acquire new information for optimal allocation of resources before others to gain profit</li> <li>• Develop a business plan</li> <li>• Acquire financial and material resources</li> <li>• Organize to hire experienced and efficient human resource</li> <li>• Arrange for best factory set up</li> <li>• Raise capital from different sources keeping the interest cost at minimum</li> <li>• Arrange for purchase, effective utilization and management of the resources</li> <li>• Assume risk and deal with uncertainty</li> <li>• Take initiative to start something new (process, product etc.)</li> <li>• Convert new idea into successful innovation</li> <li>• Replace in whole or in part inferior offerings creating new products/business model</li> <li>• Develop new combinations of existing inputs</li> </ul>	

		<ul style="list-style-type: none"> <li>To be more competitive work towards cost reduction through efficiency, improvement in quality, bring in new product/features of product</li> <li>Acquire semi or fully automatic units for improved productivity</li> <li>Collection and recording of all information</li> <li>Compilation, analysis and documentation</li> <li>Correspondence with vendors, clients, govt. agencies and public</li> <li>Document notifications/letters from Government agencies and management</li> </ul>	
6	<b>Health and Safety Theory</b> 02 Hours  <b>Practical</b> 05 hours  <b>Corresponding NOS</b> Bridge Module	<ul style="list-style-type: none"> <li>Identify different methods of first aid.</li> <li>Perform first aid.</li> <li>Understand CPR.</li> <li>Perform CPR in case of emergency.</li> </ul>	Power point presentation, LCD projector, Computer, LCD screen, white board, marker, pointer, CPR Mannequin, First Aid Kit
7	<b>Soft Skills Theory</b> 03 Hours  <b>Practical</b> 05 hours  <b>Corresponding NOS</b> Bridge Module	<ul style="list-style-type: none"> <li>Understand Art of Effective Communication.</li> <li>Able to handle effective Communication with co-workers and their Family.</li> <li>Able to handle effective Communication with Peers/ colleagues using medical terminology in communication.</li> <li>Learn basic reading and writing skills.</li> <li>Follow basics of grooming and personal health</li> <li>Effectively work in a team</li> <li>Manage time effectively</li> <li>Prepare for interviews</li> </ul>	Power point presentation, LCD projector, Computer, LCD screen, white board, marker, pointer
8	<b>IT Skills Theory</b> 5 hours  <b>Practical</b> 25 hours  <b>Corresponding NOS</b> Bridge Module	<ul style="list-style-type: none"> <li>Understand parts of a computer</li> <li>Understand basics of computer and concept of motherboard</li> <li>Use Microsoft Word</li> <li>Use Microsoft PowerPoint</li> <li>Use Microsoft Excel</li> <li>Understand Internet and its uses</li> </ul>	Power point presentation, LCD projector, Computer, LCD screen, white board, marker, pointer, Microsoft Office, Internet Connectivity
	<b>Total 200 hrs</b>   <b>Theory 80 Hours</b>  <b>Practical 120 Hours</b>		

Grand Course Duration: **200 Hours**

(This syllabus/ curriculum has been approved by [Rubber Skill Development Council](#))

## Trainer Prerequisites for Job role: “Rubber Nursery Worker - General” mapped to Qualification Pack: “RSC/ Q 6005”

Sr. No.	Area	Details
1	<b>Description</b>	To deliver accredited training service, mapping to the curriculum detailed above, in accordance with the Qualification Pack “RSC/ Q 6005 VERSION 1.0”.
2	<b>Personal Attributes</b>	Aptitude for conducting training, and pre/ post work to ensure competent, employable candidates at the end of the training. Strong communication skills, interpersonal skills, ability to work as part of a team; a passion for quality and for developing others; well-organised and focused, eager to learn and keep oneself updated with the latest in the mentioned field.
3	<b>Minimum Educational Qualifications</b>	Any Graduate preferably in rubber or polymer
4a	<b>Domain Certification</b>	Certified for Job Role: “Rubber Nursery Worker - General” mapped to QP: “RSC/ Q 6005”. Minimum accepted score as per RSDC guidelines is 80%
4b	<b>Platform Certification</b>	Recommended that the Trainer is certified for the Job Role: “Trainer”, mapped to the Qualification Pack: “SSC/ Q1402”. Minimum accepted score as per RSDC guidelines is 80%
5	<b>Experience</b>	5+ years of relevant work-experience, above supervisor level



## Annexure: Assessment Criteria

### Assessment Criteria for Rubber Nursery Worker – General

<b>Job Role</b>	<b>Rubber Nursery Worker - General</b>
<b>Qualification Pack</b>	<b>RSC/ Q 6005 VERSION 1.0</b>
<b>Sector Skill Council</b>	<b>Rubber</b>

Sr. No.	Guidelines for Assessment
1	Criteria for assessment for Qualification Pack has been created based on the NOSs and performance criteria by RSDC. Each Performance Criteria (PC) has been assigned marks proportional to its importance within NOS and weightages have also been given among the NOSs accordingly. RSDC has laid down the proportion of marks for Skills and Theory 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 centre (as per assessment criteria below)
4	Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training centre based on this criteria
5	To pass the Qualification Pack , every trainee should score a minimum of 70% aggregate
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

NOS	Elements	Performance Criteria	Mark Allotted		
			Total	Theory	Practical
1. RSC/N 6010 Rubber nursery Practices	Sorting and temporary storage of seeds	PC1. Sorting of quality of the seeds	5	1	4
		PC2. Viability test of the seed	5	1	4
		PC3. Temporary storage of seeds	2	2	0
	Germination of seeds	PC4. Carry out timely sowing of the seeds	2	1	1
		PC5. Prepare the land and make germination beds as per specification	4	1	3
		PC6. Placing of seeds in the germination medium and cover with coir mat/gunny bags	4	2	2
		PC7. Watering the germination beds to maintain optimum moisture	3	1	2
	Planting	PC8. Cast proper land preparation technique and design seedling nursery Beds as per specification	1	1	0
		PC9. Select the best quality germinated seeds and transport without damage	2	1	1
		PC10. Carry out planting of germinated seeds with suitable spacing	3	1	2
		PC11. Ensure planting of germinated seeds at the right stage	2	2	0
		PC12. Irrigate, if required	2	1	1
	Seedling nursery maintenance and disease management	PC13. Carry out timely weeding (minimum three rounds- before fertilizer applications and bud grafting)	5	1	4
		PC14. Carry out fertilizer application (basal dressing with compost and rock phosphate; 2500 kg of 10:10:4:1.5 NPKMg per effective hectare (1 dose) and 550 kg urea per effective hectare (2 nd dose).	5	1	4
		PC15. Carry out mulching irrigation etc	6	2	4
		PC16. Identify diseases and prescribe suitable chemicals and undertake Plant protection measures	5	1	4
		PC17. Thinning out of weaklings/undesired seedlings	5	1	4
		PC 18. Carry out seedling census	1	1	0
	Development of multi-clone Bud wood nursery & maintenance	PC19. Identify clones for raising multi clone bud wood nursery	1	1	0
		PC20. Plant mother plants with spacing as per specification	1	1	0
		PC21. Clone identification and labelling	1	1	0
		PC22. Weeding	2	2	0
		PC23. 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	1	1	0

		back)			
		PC24. Identify diseases and prescribe suitable chemicals and undertake Plant protection measures	1	1	0
		PC25. Carry out Pruning	1	1	0
		PC26. Collection of bud wood for budding/sale (for young bud grafting/Green Bud grafting/brown bud grafting)	1	1	0
		PC27. Cut backing of discarded/unutilised bud wood	1	1	0
	Production of Advanced planting materials (Poly bag plants and root trainer plants)	PC28. Seed at stake method- placing germinated seeds in the poly bags/Root Trainer cups for raising seedlings for bud grafting	1	1	0
		PC29. Select good quality seeds	1	1	0
		PC30. Germination of seeds	1	1	0
		PC31. Plant in the poly bags/root trainer cups & after care	2	2	0
		PC32. Cut backing of bud grafted plants for further development	1	1	0
		PC33. Direct planting of Bud grafted stump method- planting bud grafted Stumps in the poly bag/ root trainer cups.	1	1	0
		PC34. Selection of poly bags of appropriate size and specifications	1	1	0
		PC35. Preparation of potting mixture	1	1	0
		PC36. Planting of germinated seeds/bud grafted stumps	1	1	0
		PC37. Watering for maintaining optimum soil moisture	1	1	0
		PC38. Provide shade to regulate sun light	1	1	0
		PC39. Fertilizer application and disease management	1	1	0
		PC40. Selection of root trainer cups of appropriate size and specifications	1	1	0
		PC41. Seasoning of coir pith (soaking in water to remove resins, tannin etc	1	1	0
		PC41. Preparation of potting mixture (chemical treatment)	1	1	0
		PC43. Potting mixture filling	1	1	0
		PC44. Plant germinated seeds/ bud grafted stumps and after care	1	1	0
		PC45. Watering for maintaining optimum soil moisture	1	1	0
		PC46. Provide shade to regulate sun light	1	1	0
		PC47. Fertilizer application and disease management	1	1	0
	PC48. Root air pruning and Hardening	1	1	0	
	PC49. Pulling out of bud grafted plants	1	1	0	

	Preparation of planting materials for sale	PC50. Cut backing of stock plant, pruning roots and waxing	1	1	0
		PC51. Counting, Bundling and packing of budded stumps in banana sheath	1	1	0
		PC52. Cutting of bud wood, waxing and packing in banana sheath for Transportation	1	1	0
		PC53. Sorting and loading of poly bag plants for sale	2	2	0
		PC54. Mounting on racks and loading of root trainer plants for sale	0	0	0
		<b>Total</b>	<b>100</b>	<b>60</b>	<b>40</b>
2. RSC / N 5005 (Natural Resource Management)	Natural resource management	PC1. The possibilities of soil erosion	6	3	3
		PC2. Precautions to be taken to minimize the soil erosion during soil manipulation	6	3	3
		PC3. Correct method and direction of bed preparation compatible for terrain	6	3	3
		PC4. Correct method of drainage making	6	3	3
		PC5. Reuse of river sand used as seed germination medium	6	3	3
		PC6. Hedge maintenance	6	3	3
		PC7. Protection of water source from pollution	6	3	3
		PC8. Rain water harvesting	6	3	3
		PC9. Judicious use of water during irrigation	6	3	3
		PC10. Mulching for soil and moisture conservation	6	3	3
	Waste management & Health care	PC11. Importance of premise cleanliness	4	2	2
		PC12. Collection of empty containers, worn out polythene bags, waste budding tapes, fertilizer bags etc from the field.	4	2	2
		PC13. Use of dried leaves from the cut back portions of bud wood, seedlings after pulling out for mulching	4	2	2
		PC14. Treatment of waste water from coir pith seasoning	4	2	2
		PC15. Destroy sources of mosquito breeding to control epidemic	4	2	2
	Input (chemical) management	PC16. Consequences of chemical contamination	4	2	2
		PC17. Use of pesticides and fungicides as per recommendations	4	2	2
		PC18. Use herbicides judiciously	4	2	2
		PC19. Spraying & handlings chemicals using hood, masks, gloves etc	4	2	2
		PC20. Use chemical fertilizer as per recommendations only	4	2	2
		<b>Total</b>	<b>100</b>	<b>50</b>	<b>50</b>
3. RSC/N 5006 Natural Resource	Feedback on innovations	PC1. Generate innovations through expertise	5	5	0
		PC2. Report to the higher authorities for trial, modifications and evaluation	5	5	0
		PC3. Implement/adopt the approved innovations	5	5	0
		PC4. Identify the incidence of pest and disease	15	5	10

Management	Feedback on incidence of pest and diseases	PC5. Report to the higher authorities for diagnosing and remedial action	15	5	10	
		PC6. Carry out protection measures	15	5	10	
	Feedback on Indigenous Knowledge/ITK	PC7. Identify appropriate situation/location specific Indigenous Knowledge	5	5	0	
		PC8. Report to higher authorities for trial, evaluation and adoption with Modifications, if any	5	5	0	
	Feedback on socio-economic problems	PC9. Identify the existence of socio-economic problems	5	5	0	
		PC10. Report to higher authorities for investigation and solution	5	5	0	
		PC11. Extent possible help for solving the problem	5	5	0	
	Feedback on conflicts	PC12. Aware of the conflict existing and its possible cause	5	5	0	
		PC13. Report to the higher authority for rectification	5	5	0	
		PC14. Extent possible help for solving the conflict	5	5	0	
			<b>Total</b>	<b>100</b>	<b>70</b>	<b>30</b>
	4. RSC/N 5013 To Learn Entrepreneurship Skills	Business opportunity	PC1.Importance of being aware to identify profitable business opportunity (Opportunity can be in the form of new material in use, new process, new technology, new market etc.)	2	2	0
			PC2.Maintain the confidentiality till the completion of working on the idea	3	2	1
			PC3.Discuss the opportunity (with trusted ones) to evaluate its feasibility	5	3	2
PC4.Arrange/organize related documents/information			4	3	1	
Sustain existing business		PC5.Monitor the development at competitors' end	2	2	0	
		PC6.Sustain existing business and make continual improvements	4	2	2	
		PC7.Evaluate possibilities of process simplification , combining process steps ( wherever applicable) ,reducing manpower dependency	4	2	2	
		PC8.Acquire new information for optimal allocation of resources before others to gain profit	4	2	2	
Factors of Production		PC9.Understanding the requirement of different factors of production: land, labour and capital	5	3	2	
		PC10.Acquire and deploy necessary resources for exploitation of identified business opportunity	5	3	2	
		PC11.Develop a business plan	5	3	2	
		PC12.Acquire financial and material resources	5	3	2	
		PC13.Organize to hire experienced and efficient human resource	4	2	2	
		PC14.Arrange for best factory set up	4	2	2	
		PC15.Raise capital from different sources keeping the interest cost at minimum	4	2	2	

		PC16.Arrange for purchase, effective utilization and management of the resources	4	2	2
Risk and initiative		PC17.Assume risk and deal with uncertainty	2	0	2
		PC18.Take initiative to start something new (process, product etc.)	2	0	2
Innovation		PC19.Convert new idea into successful innovation	2	0	2
		PC20.Replace in whole or in part inferior offerings creating new products/business model	4	2	2
		PC21.Develop new combinations of existing inputs	4	2	2
Bring in Improvement		PC22.To be more competitive work towards cost reduction through efficiency, improvement in quality, bring in new product/features of product	5	3	2
		PC23.Acquire semi or fully automatic units for improved productivity	5	3	2
Documentation		PC24.Collection and recording of all information	3	3	0
		PC25.Compilation, analysis and documentation	3	3	0
		PC26.Correspondence with vendors, clients, govt. agencies and public	3	3	0
		PC27.Document notifications/letters from Government agencies and management	3	3	0
		<b>Total</b>	<b>100</b>	<b>60</b>	<b>40</b>



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