

# Model Curriculum for Recognition of Prior Learning (RPL)

## Bamboo Cultivator

**SECTOR: AGRICULTURE**

**SUB-SECTOR: Forestry, Environment and Renewable Energy Management**

**OCCUPATION: Agro-Forestry Management (Bamboo Grower)**

**QP Code: AGR/Q6101**

**QP Version: 4.0**

**NSQF LEVEL: 3**

# Bamboo Cultivator

## CURRICULUM / SYLLABUS

This program is aimed at training to Recognition of Prior Learning (RPL) candidates for the job of a “**Bamboo Cultivator**”, in the “**Agriculture**” Sector/Industry and aims at building the following key competencies amongst the learners

Program Name	Bamboo Cultivator		
Qualification Pack Name & Reference ID.	AGR/Q6101		
Version No.	4.0	Version Update Date	
Pre-requisites to Training	10 <sup>th</sup> or equivalent OR 8 <sup>th</sup> class pass with 3 years of relevant experience in Agriculture & allied sector OR Previous NSQF Level 2.5 with 1.5 years of relevant experience in Agriculture & allied sector OR Previous NSQF Level 2 with 3 years of relevant experience in Agriculture & allied sector Minimum Job Entry Age: 17 Years		
Training Outcomes: Orientation and Soft Skill	After completing this programme, participants will be able to: <ul style="list-style-type: none"> <li>• Identify personal strengths and value systems: safe work habits, achievement motivation, time management, anger management, stress management.</li> <li>• Prepare for employment and self-employment: preparing for an interview, effective resume writing, basic workplace terminology.</li> <li>• Illustrate the basics of entrepreneurship and identify new business opportunities</li> <li>• Develop personality and learn general ethics and discipline</li> <li>• Learn about health and safety hazards and hygiene at work place</li> <li>• Learn effective communication skills</li> <li>• Learn about importance of RPL certification and process of assessment.</li> </ul>		

<p><b>Training Outcomes:</b></p> <p><b>Bridge Course</b></p>	<p>After completing this programme, participants will be able to:</p> <ul style="list-style-type: none"> <li>• Demonstrate the process of propagating bamboo saplings in the nursery.</li> <li>• Describe the process of selecting the bamboo variety and site and preparing the field.</li> <li>• Demonstrate the process of transplanting and maintaining the bamboo sapling.</li> <li>• Demonstrate the process of carrying out pruning and weeding in the bamboo crop.</li> <li>• Demonstrate the process of carrying out irrigation, nutrient management and intercropping.</li> <li>• Demonstrate the process of carrying out integrated pest and disease management for the bamboo crop.</li> <li>• Demonstrate the process of carrying out harvesting, post-harvest processing and marketing activities.</li> <li>• Explain the basic entrepreneurial activities for small enterprise.</li> <li>• Describe the process of undertaking employability and entrepreneurial practices.</li> <li>• Demonstrate various practices to maintain health, hygiene and safety at the workplace.</li> </ul>
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## Orientation and Soft Skill Details

Sr. No.	Module	Key Learning Outcomes	Equipment Required
A.	<b>Orientation, General Discipline, doubts/gaps in Domain Training and Health and Safety</b>		
1.	<b>Orientation, General Discipline, doubts/gaps in Domain Training and Health and Safety</b> <b>Theory Duration (hh:mm)</b> <b>06:00</b>  <b>Practical Duration (hh:mm)</b> <b>00:00</b>	<ul style="list-style-type: none"> <li>Domain Training (clarifying any doubts/gaps regarding Job Role)</li> <li>Understanding Qualification Packs, NOS</li> <li>Understanding about NSQF framework and applied level descriptors</li> <li>Understand skill development ecosystem, roles of various stakeholders</li> <li>Recognize the importance of general discipline in the classroom (dos and don'ts)</li> <li>List expectations from the program</li> <li>Outline the objectives of the RPL and importance of skill and certification</li> <li>Identify risks to health and safety at the workplace and measures to be taken to control them</li> </ul>	White Board, Marker, Laptop, projector,
B.	<b>Soft Skills and Entrepreneurship Tips specific to the Job Role</b>		
1.	<b>Entrepreneurship</b>  <b>Theory Duration (hh:mm)</b> <b>02:00</b>	<ul style="list-style-type: none"> <li>Discuss the concept and significance of entrepreneurship and the characteristics of an entrepreneur</li> <li>List the traits of an effective team and team dynamics</li> <li>Resolve problems by identifying important problem-solving traits</li> <li>Discuss how to identify new business opportunities within your business</li> <li>Follow the entrepreneurial process and explain the entrepreneurship ecosystem</li> <li>Identify key schemes of the govt. and banks to promote entrepreneurship</li> <li>Define the relationship between entrepreneurship and risk appetite and entrepreneurship and resilience</li> <li>Importance of book keeping and accounts management.</li> <li>Understand market dynamics and value chain of agri products.</li> <li>Understanding formation of cooperatives, FPO, FPC and enterprise creation</li> </ul>	Laptop, white board, marker and projector,  SWOT activity: pen and paper individual exercise, charts, colour pens, Group Activity: poster making on entrepreneurship ecosystem.  Activity: SMART Goal writing

	<b>Personal Strengths and Value Systems</b>  <b>Theory Duration (hh:mm)</b> <b>01:00</b> <b>Practical Duration (hh:mm)</b> <b>00:00</b>	<ul style="list-style-type: none"> <li>• Self-Improvement, inculcate leadership qualities.</li> <li>• Importance of Discipline in managing small business.</li> <li>• Discuss how to maintain a positive attitude</li> <li>• List your strengths and weaknesses</li> <li>• Describe the importance of honesty in entrepreneurs</li> <li>• Discuss the benefits of time management and applied techniques</li> <li>• Apply tips for anger management and stress management</li> <li>• Effective interpersonal skills, listening and speaking skills.</li> </ul>	Workbook exercises on health standards, Laptop, activity on strengths and weaknesses, white board, marker, projector
	<b>Preparing for Employment and Self-Employment</b>  <b>Theory Duration (hh:mm)</b> <b>01:00</b> <b>Practical Duration (hh:mm)</b> <b>00:00</b>	<ul style="list-style-type: none"> <li>• Follow the steps to prepare for an interview</li> <li>• Create an effective Resume</li> <li>• Conduct mock interviews</li> <li>• Identify the most frequently asked interview questions and how to answer them</li> </ul>	Laptop, white board, marker, projector, sample CVs, Mock interviews, role plays, role play briefs, FAQs, quiz on basic workplace technologies.
C.	<b>Familiarization with Assessment Process and Terms</b>		
1	<b>Familiarization with Assessment Process and Terms (hh:mm)</b> <b>02:00</b>	<ul style="list-style-type: none"> <li>• Familiarization about assessment process</li> <li>• Understanding the need of assessment</li> <li>• Preparation tips for assessment</li> <li>• Doubt clearance session</li> </ul>	
	<b>Total Duration:</b>  <b>Theory Duration (hh:mm)</b> <b>12:00</b>  <b>Practical Duration (hh:mm)</b> <b>00:00</b>	Laptop, white board, marker and projector,  SWOT activity: pen and paper individual exercise, charts, coloured pens, Group Activity: poster making on entrepreneurship ecosystem. Activity: SMART Goal writing	

## Bridge Course Details

This course encompasses 9 out of 9 National Occupational Standards (NOS) of “Bamboo Grower” Qualification Pack issued by “Agriculture Skill Council of India”.

Sr. No.	Module	Key Learning Outcomes	Equipment Required
1	<b>Introduction to the role of a Bamboo Grower</b> <b>Theory Duration (hh:mm)</b> <b>01:00</b>  <b>Practical Duration (hh:mm)</b> <b>00:00</b> <b>Corresponding NOS Code</b> <b>AGR/N6101</b>	<ul style="list-style-type: none"> <li>Describe the size and scope of the Agriculture industry and its sub-sectors.</li> <li>Discuss the role and responsibilities of a Bamboo Grower.</li> <li>Identify various employment opportunities for a Bamboo Grower.</li> </ul>	Trainer Guide, Presentation s, Whiteboard, Marker, Projector, Laptop
2	<b>Process of Propagating bamboo samplings in the nursery</b>  <b>Theory Duration (hh:mm)</b> <b>03:00</b>  <b>Practical Duration (hh:mm)</b> <b>03:00</b>  <b>Corresponding NOS Code</b> <b>AGR/N6101</b>	<ul style="list-style-type: none"> <li>Explain the criteria for selecting a site for nursery propagation of bamboo saplings such as the appropriate climatic conditions, adequate exposure to sunlight.</li> <li>Describe different methods for the cultivation of bamboo saplings such as planting culms, cutting, tillering, layering, etc</li> <li>Explain the importance of ensuring effective drainage in the nursery bed.</li> <li>State the irrigation schedule and the recommended quantity of water for irrigating bamboo saplings.</li> <li>Explain the importance and ways of protecting saplings from strong winds, overexposure to sunlight and fluctuations in temperature.</li> <li>Demonstrate how to treat the planting material before use to prevent pest and disease during propagation and cultivation.</li> <li>Demonstrate the process of preparing the sunken, raised or level nursery bed as per the requirement.</li> <li>Demonstrate the process of planting seeds, cuttings or culms at the recommended depth and planting density.</li> <li>Demonstrate the process of applying the recommended pesticides, insecticides or fungicides</li> </ul>	White Board, Marker, Laptop, projector,  Chemicals, Pruning, Tools and Equipment

		<p>to protect the saplings from pests and disease.</p> <ul style="list-style-type: none"> <li>• Demonstrate the process of harvesting the saplings using required tools, implements and accessories.</li> </ul>	
3	<p><b>Process of selecting the bamboo variety, site and preparing the field</b></p> <p><b>Theory Duration (hh:mm)</b> <b>03:00</b></p> <p><b>Practical Duration (hh:mm)</b> <b>04:00</b></p> <p><b>Corresponding NOS Code</b> <b>AGR/N6103</b></p>	<ul style="list-style-type: none"> <li>• Explain the criteria for selecting a variety of bamboo to be cultivated and a site for cultivation.</li> <li>• Explain the characteristics of soil suitable for bamboo cultivation.</li> <li>• Explain the importance of applying the prescribed organic and inorganic fertilisers.</li> <li>• Explain the use of lime or gypsum to adjust the soil's pH and salinity levels.</li> <li>• Demonstrate the process of carrying out deep ploughing to remove shrubs, weeds, rocks, tree roots and stumps from the site.</li> <li>• Demonstrate the process of carrying out soil fumigation using the recommended chemicals to disinfect the soil and watering it with the recommended quantity to wash away the disinfectants.</li> <li>• Demonstrate the process of preparing holes of the recommended depth and dimensions at appropriate spacing for planting bamboo saplings.</li> </ul>	<p>Whiteboard, Marker, Projector, Laptop</p> <p>Record Keeping Book, Voucher, Receipts</p>
4	<p><b>Process of transplanting and maintaining the bamboo saplings</b></p> <p><b>Theory Duration (hh:mm)</b> <b>03:00</b></p> <p><b>Practical Duration (hh:mm)</b> <b>04:00</b></p> <p><b>Corresponding NOS Code</b> <b>AGR/N6104</b></p>	<ul style="list-style-type: none"> <li>• Explain the importance of acclimatising and transplanting bamboo saplings at an appropriate temperature to ensure their survival.</li> <li>• State the recommended planting depth and density to be maintained while transplanting bamboo saplings.</li> <li>• Explain the importance and ways of protecting bamboo saplings from strong winds direct sunlight during the early stages of their growth.</li> <li>• Explain the importance of irrigating bamboo sapling with an appropriate quantity of water to prevent root rot.</li> <li>• Demonstrate the process of transplanting the bamboo saplings in the field using the appropriate tools and implements.</li> <li>• Demonstrate the process of applying the recommended fertiliser in an appropriate quantity to provide immediate care after transplantation.</li> </ul>	<p>Whiteboard Marker, Projector, Laptop</p> <p>Soil Testing Kit, Plastic Bags, Labels</p>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
5	<p><b>Process of carrying out pruning and weeding in bamboo crop</b></p> <p><b>Theory Duration (hh:mm)</b> <b>03:00</b></p> <p><b>Practical Duration (hh:mm)</b> <b>04:00</b></p> <p><b>Corresponding NOS Code</b> <b>AGR/N6105</b></p>	<ul style="list-style-type: none"> <li>• Explain the use of the appropriate tools and implements such as pruner and lopper for pruning unwanted or dead culms, branches or leaves from bamboo trees.</li> <li>• Describe different methods of pruning bamboo trees.</li> <li>• State the recommended chemicals to be applied on the pruned areas on bamboo trees.</li> <li>• Demonstrate how to remove the pruned tree parts and use them to prepare compost.</li> <li>• Demonstrate how to remove unwanted, old and rotting clumps.</li> <li>• Demonstrate the process of pruning the clumps at appropriate intervals and as per the requirement to prevent clump congestion.</li> <li>• Show how to apply mulch or recommended herbicides to prevent the growth of weeds.</li> </ul>	<p>White Board, Marker, Laptop, projector</p> <p>Mulching Materials, Chemicals, Pruning Tools/ Equipment</p>
6	<p><b>Process of carrying out irrigation, nutrient management and intercropping</b></p> <p><b>Theory Duration (hh:mm)</b> <b>03:00</b></p> <p><b>Practical Duration (hh:mm)</b> <b>04:00</b></p> <p><b>Corresponding NOS Code</b> <b>AGR/N6106</b></p>	<ul style="list-style-type: none"> <li>• Explain how to ascertain the irrigation needs of bamboo trees based on the soil moisture and climate.</li> <li>• Explain the importance of following the irrigation schedule as per the stages of growth of bamboo trees.</li> <li>• Explain the benefits of intercropping.</li> <li>• Explain how to select appropriate vegetable or cash crops for intercropping with the bamboo crop.</li> <li>• Explain the importance of trimming the culms on bamboo plants.</li> <li>• State the recommended practices to be followed to prevent canopy exposure, loss of soil moisture through evaporation and competition from weeds and other vegetation.</li> </ul>	<p>White Board, Marker, Laptop, projector</p> <p>Mulching Materials, Chemicals, Soil Testing Kit, Plastic Bags</p>
		<ul style="list-style-type: none"> <li>• Demonstrate the process of carrying out</li> </ul>	



		<p>intercropping of the selected crops with the bamboo crop</p> <ul style="list-style-type: none"> <li>• Show how to trim the culms on bamboo plants to ensure the intercropped vegetables/ crops receive the required exposure to sunlight.</li> </ul>	
7	<p><b>Process of carrying out integrated pest and disease management for bamboo crop</b></p> <p><b>Theory Duration (hh:mm)</b> <b>02:00</b></p> <p><b>Practical Duration (hh:mm)</b> <b>04:00</b></p> <p><b>Corresponding NOS Code</b> <b>AGR/N6107</b></p>	<ul style="list-style-type: none"> <li>• Explain the recommended prophylactic measures to be followed to protect bamboo trees from common pests and disease.</li> <li>• Explain how to identify the symptoms, stage and location of various pests and diseases in bamboo trees along with the extent of the damage.</li> <li>• Explain the use of the relevant PPE.</li> <li>• Explain the importance of maintaining the record of pesticides/ insecticides/ fungicides applied to bamboo trees.</li> <li>• Demonstrate the process of applying the selected treatment using the recommended personal protective equipment (PPE) to protect the bamboo trees from common pests and disease.</li> <li>• Demonstrate how to remove the bamboo tree parts damaged by pests and disease and dispose them safely in an environment-friendly manner.</li> </ul>	<p>White Board, Marker, Laptop, projector</p> <p>Chemicals, Soil Testing Kit</p>
8	<p><b>Process of carrying out harvesting, post-harvest processing and marketing activities</b></p> <p><b>Theory Duration (hh:mm)</b> <b>02:00</b></p> <p><b>Practical Duration (hh:mm)</b> <b>04:00</b></p> <p><b>Corresponding NOS Code</b> <b>AGR/N6108</b></p>	<ul style="list-style-type: none"> <li>• List the signs of maturity of bamboo culms for being harvested.</li> <li>• Explain the use of the appropriate hand and mechanical tools and implements for harvesting bamboo culms.</li> <li>• Explain the importance of removing branches extending from the lower nodes of the mature culms.</li> <li>• Explain the importance of ensuring no damage to young culms and rhizomes on bamboo trees during harvesting.</li> <li>• Explain the criteria for selecting the appropriate storage area for storing culms.</li> <li>• Demonstrate the process of harvesting mature bamboo culms appropriately using the</li> </ul>	<p>White Board, Marker, Laptop, projector</p>

		<p>relevant tools and implements.</p> <ul style="list-style-type: none"> <li>• Show how to air dry the harvested bamboo culms.</li> </ul>	
9	<p><b>Health &amp; Safety at the workplace</b></p> <p><b>Theory Duration (hh:mm)</b> <b>00:30</b></p> <p><b>Practical Duration (hh:mm)</b> <b>00:30</b></p> <p><b>Corresponding NOS Code</b> <b>AGR/N9903</b></p>	<ul style="list-style-type: none"> <li>• Explain the requirements of personal health, hygiene and fitness at work.</li> <li>• Describe common health-related guidelines laid down by the organizations/ Government at the workplace.</li> <li>• Demonstrate personal hygiene practices to be followed at the workplace.</li> <li>• Demonstrate adherence to the workplace sanitization norms.</li> </ul>	<p>Personal Protective Equipment, Cleaning Equipment and Materials, Sanitizer, Soap, Mask</p>

<b>Total Duration:</b>  <b>Theory Duration</b> <b>(hh:mm): 20:30</b>  <b>Practical Duration:</b> <b>(hh:mm): 27:30</b> <b>Grand Total Bridge Course Duration:</b> <b>(hh:mm): 48:00</b>	<b>Unique Equipment Required:</b> Harvesting Saw, Brush cutter, Secateurs, Bamboo plants/ culms, Weeder, Soil testing Kit, Shovel, Khurpi, Rubber gloves, Wheel barrow, Gumboots, Knife, Knapsack sprayer, Rakes, Organic manure/ Compost, Shade net, Fawda/ Kudal, N-P-K Fertilizer, Video Recording Equipment
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**Grand Total Course Duration: 12 (Orientation session) + 48 (Bridge Course) = 60 Hours, 0 Minutes**