

Syllabus For Citronella Cultivation And Sustainability Program Assistant (RPL)

Course Name	Citronella Cultivation And Sustainability Program Assistant (RPL)
Sector	AGRICULTURE
Course Code	AGR/2024/CSPA/316
Level	4 (RPL)
Occupation	Citronella Cultivation And Sustainability Program Assistant
Course Duration	Total Duration 80 Hrs (T-35 , P-45)
Trainees' Entry Qualification	Class V Pass with 5 years experience in the relevant field
Trainers Qualification	Class 10 pass with 3 years experience in agricultural/medicinal/aromatic plant cultivation field.

SYLLABUS:**1. Theory Components**

Unit	Unit Name	Topics and Sub-topics	Teaching Hours
Unit 1	Introduction (includes scope)		
		1.1 Importance of medicinal and aromatic plants (citronella), history of usage, Global scenario, Indian scenario, Scenario of West Bengal in this sector.	0.5
		1.2 Importance of conservation of biodiversity of medicinal and aromatic plants	0.5
		1.3 Threats of medicinal plants and biodiversity (citronella)	0.5
		1.4 Promotion of medicinal plant sector at national level: National Medicinal Plant Board and State Medicinal Plant Boards - objectives and functions. Other organizational initiatives for promotion of MAPs at National and International levels.	0.5
		1.5 Demand and supply of medicinal plants. Herbal industries.	0.5
Unit 2	Classification of Common		

Unit	Unit Name	Topics and Sub-topics	Teaching Hours
	medicinal plants		
		2.1 Classification of medicinal and aromatic plants on the basis of economic plant parts	01
		2.2 List of common medicinal plants, parts used, utility, picture. Citronella <i>Cymbopogon nardus</i> Lemon grass <i>Cymbopogon citratus</i> Vativer <i>Chrysopogon zizanioides</i> Other aromatic plants of same nature	01
		2.3 Proper identification methodology (citronella)	01
Unit 3	Raw material for crude herb		
		3.1 NTFP as a source of medicinal and aromatic plants / raw material for crude herb	0.5
		3.2 GACP on Medicinal and Aromatic Plants (citronella)	0.5
Unit 4	Nursery practice of citronella plants (specially for improved variety)		
		4.1 Good Agricultural practices (GAP) in nursery	0.5
		4.2 Nursery bed preparation using GAP	0.5
		4.3 Quality planting material –concept, use and availability	0.5
		4.4 Types of planting materials	0.5
		4.5 Best nursery practices: Introduction and importance	01
Unit 5	Planting and management		
		5.1 Good Agricultural practices (GAP) in planting	0.5
		5.3 Planting	0.5

Unit	Unit Name	Topics and Sub-topics	Teaching Hours
		5.4 Irrigation	0.5
		5.5 Weeding	0.5
		5.6 Soil working Mulching	0.5
		5.7 Fertilizer (organic), Pesticides (organic) application	0.5
Unit 6	Good Harvesting Practices (GHP)		
		6.1 GHP concept, application in citronella grass	0.5
		6.2 Harvesting of grass, carriage, shade drying etc	01
Unit 7	Post harvesting practices (distillation, storage, packaging, transport)		
		7.1 Concept, utility	0.5
		7.2 Distillation types	0.5
		7.3 Water distillation	0.5
		7.4 water Distillation process, oil extraction	01
		7.5 oil storage, Packaging	01
		7.6 Recycling of waste	0.5
Unit 8	Value Addition Techniques	8.1 Concept, utility	0.5
		8.2 value addition of citronella plants, different value-added products using aromatic oil.	01
		8.3 Certification Process	0.5

Unit	Unit Name	Topics and Sub-topics	Teaching Hours
Unit 9	Finished products testing		
		9.1 Concept, necessity	0.5
		9.5 Testing parameters of selected species	01
Unit 10	Preparation of Green pesticides		
		10.1 Green Pesticides: Concept and application	01
Unit 11	Marketing		
		11.1 Concept of marketing	0.5
		11.2 Marketing channel	0.5
		11.3 e- marketing	0.5
		11.4 Supply -chain management	0.5
Unit 12	Record keeping and financial aspects		
		12.1 Data recording	0.5
		12.2 Basic accounts for day-to-day use	0.5
Unit 13	Health and safety measures		
		13.1 Basic concept	0.5
		13.2 Guidelines as per Acts	0.5
Unit 14	Soft skill development		

Unit	Unit Name	Topics and Sub-topics	Teaching Hours
		14.1 Accentuation (mode of pronunciation) on simple words, Diction (use of word and speech) Transformation of sentences, Change of tense, Spellings. Reading and understanding simple sentences about self, work and environment. Construction of simple sentences, Writing simple English.	1.5
		14.2 Resumes or curriculum vita essential parts, letters of application reference to previous communication.	01
		14.3 Communication and its importance, Principles of Effective communication, Types of communication – verbal, non-verbal, written, email, talking on phone. Nonverbal communication.	01
		14.4 Self-awareness, Importance of Commitment, Ethics and Values, Ways to Motivate Oneself, Personal Goal setting and Employability Planning. Do's & Don'ts for an interview, Problem Solving, Confidence Building, Attitude.	01
Unit 15	Entrepreneurship Skills		
		15.1 Entrepreneurship vs. management, Entrepreneurial motivation. Performance & Record, Role & Function of Entrepreneur, Qualities of a good Entrepreneur, SWOT and Risk Analysis.	01
		15.2 Preparation of Project. Role of Various Schemes and Institutes for self-employment i.e. DIC, SIDA, SISI, NSIC, SIDO, Idea for financing/ non financing support agencies to familiarizes with the Policies /Programs& procedure and the available scheme.	01
		15.3 Project formation, Feasibility, Legal formalities, Estimation and Costing, Investment procedure – Loan procurement – Banking Processes.	01
Unit 16	Invited lectures		
		16.1 Invited lectures by the eminent scientists / reputed entrepreneurs	01
		Total	35

2. Practical components

Sl. No.	Practical Name	Details	Duration (Hours)
1	Identification of common citronella plants		
		1.1 Identification of common citronella plants, parts used, utility, picture drawing	01
		1.2 Proper identification methodology	01
2	Propagation techniques of selected citronella plants		
		2.1 Demonstrate the different techniques of Propagation of selected citronella plants	01
3	Nursery practice of citronella plants		
		3.1 Good Agricultural practices (GAP) apply in nursery	01
		3.2 Preparation of Nursery bed using GAP	02
		3.3 Use of Quality planting material	01
		3.4 Application of different types of planting materials	01
		3.5 Application of Best nursery practices	01
		3.6 Application of species wise nursery practices	01
4	Citronella plants Planting and management techniques		
		4.1 Good Agricultural practices (GAP) apply in planting	01
		4.3 Planting method	01
		4.4 Irrigation method	01
		4.5 weeding method	01

Sl. No.	Practical Name	Details	Duration (Hours)
		4.6 soil working, Mulching method	01
		4.7 Application Fertilizer (organic) and Pesticides (organic)	01
5	Harvesting techniques (GHP)		
		5.1 Good Harvesting practices (GHP) concept,	01
		5.1 Species wise good harvesting practices	02
6	Techniques of Post harvesting practices		
		6.1 Distillation process, oil extraction,	04
		6.2 Bottling, packaging etc	01
		6.3 Re use of wastes, water etc	01
7	Value Addition Techniques		
		7.1 value addition of citronella plants	02
9	Marketing		
		9.1 Marketing channel	01
		9.2 Supply -chain management	01
10	Record keeping and financial aspects		
		10.1 Data recording and analysis	02
11	Health and safety		

Sl. No.	Practical Name	Details	Duration (Hours)
		11.1 Proper guidelines as per Acts	01
12	Soft skill development	12.1 Communication skill	02
		12.2 Time management system	02
13.	Computer skill		
		13.1 Principles of Effective communication, Types of communication – verbal, non-verbal, written, email, talking on phone. Nonverbal communication.	02
14	Entrepreneurship Skills		
		.1 Project formation, Feasibility, Legal formalities, Estimation and Costing.	02
15	Industry visit and group activity		
		1 Exposure visit to commercial units / Forest distillation units for hands on training.	04
16	Green pesticides preparation		
		.1 Techniques for preparation of green pesticides.	01
		TOTAL	45

3. Course Outcome :

- i) After Completion of Training Trainee will be able to explain importance of aromatic plants.
- ii) Identify common citronella plants, their valuable parts and utility of valuable parts.
- iii) Illustrate basic principles and knowledge about Good Agricultural practices (GAP), Good Harvesting practices (GHP), Post harvesting practices of some selected species of citronella plants.
- iv) Demonstrate skill on nursery, planting, harvesting and distillation
- v) Communicate effectively with others.
- vi) Explain herbal medicinal products manufacturing industry.

vii) Prepare Green Pesticides.

4. Distribution Zone of some selected species of citronella plants in west Bengal

TABLE-1	
Targeted Species	Distribution zone
Citronella <i>Cymbopogon nardus</i>	NBP, SBP
Lemon grass <i>Cymbopogon citratus</i>	NBP, SBP
Vativer <i>Chrysopogon zizanioides</i>	NBP, SBP
Others related species from which water distillation method could be applied eg Pathochli, African merigold)	NBP, SBP

Abbreviation of Distribution zone	
NBP	North Bengal Plains
SBP	South Bengal Plains

5. Tools and Equipments

Tools and Equipments	Quantity
Kodal	03
Belcha	03
sickle	03
Khurpi	03
Watering can	03
knife	03
Grafting tools	03
Axe	03
Pruning knife	03
Polypots	06
Plastic sheet	30 metre
Mother beds	02
Sunken beds	02
50% agro nets	30 meter
Tray drier	01
grinder	01
Boiling bath	02
Filtering funnel	04
Pack sealing machine	02
Weighing Balance (Digital) -120 gm capacity	02
Laboratory Weighing Balance (Digital) – 20 kg capacity	02

