



INFORMATION BROCHURE

Skill Development Course

ON

Floriculture-Protected Cultivation

Job Role: Floriculturist-Protected Cultivation



Training Partner

**CENTRAL INSTITUTE OF HORTICULTURE
DEPARTMENT OF AGRICULTURE, COOPERATION & FARMERS WELFARE
MINISTRY OF AGRICULTURE & FARMERS WELFARE
GOVERNMENT OF INDIA
MEDZIPHEMA, NAGALAND**



BACKGROUND OF THE INSTITUTE

Recognizing the huge potential for horticulture development in the North-Eastern region and to provide institutional support to tap this potential, Government of India has set up the “Central Institute of Horticulture” at Medziphema, Nagaland in the year 2005-06 under the Central Sector Scheme. This Institute is set up for holistic development of horticulture in NE Region of India.

The Institute is being set up at Medziphema in an area of 43.50 ha, which is situated at 35 kms from Dimapur and 45 kms from Kohima city on National Highway 39. It has an elevation ranging from 250 to 300 metres having temperature between 12 to 35 degree centigrade and average rainfall of 2500 mm. The area has low hilly terrains with good soil rich in organic matter suitable for growing most of the tropical, sub tropical and temperate horticultural crops.

VISION

To emerge as the pioneering, innovative, farmer focused and self-supporting horticultural Institute in the country.

MISSION

To provide excellent, innovative and relevant training to all the stakeholders so as to empower individuals and enable horticulture industry to bring about socio-economic development and sustainability in North East Region.

OBJECTIVES & PROGRAMMES OF THE INSTITUTE

- ❖ Capacity building by training of trainers and farmers/beneficiaries.
- ❖ Demonstration of improved production technologies.
- ❖ Accreditation and Certification of Nurseries in NE region.
- ❖ Certificate courses in horticulture.
- ❖ Follow-on extension support in the field of horticulture.
- ❖ Promotion of organic cultivation of horticulture crops.
- ❖ Establishing convergence and synergy among programmes in the field of horticulture.
- ❖ Monitoring of Centrally Sponsored Programmes in the area of horticulture.

FOCUS AREAS

- ❖ Training of State Government Officials and Farmers/Beneficiaries of North Eastern Region.
- ❖ Production and supply of Quality Planting Material.
- ❖ Accreditation and certification of horticulture nurseries in NER.
- ❖ Certificate courses in horticulture.
- ❖ Transfer of technology through method & result demonstration & publication of folders, manuals, leaflets etc.
- ❖ Promotion of Organic Farming.
- ❖ Marketing and agri-business promotion through exhibitions, seminars, workshops, exposure trips, buyers & sellers meet.
- ❖ Coordination with State Horticulture Departments of NER and other National Organizations, NGOs, Farmers’ Group and Self Help Groups.



SKILL DEVELOPMENT COURSE

FLORICULTURE-PROTECTED CULTIVATION

Job Role: Floriculturist-Protected Cultivation.



SECTOR: AGRICULTURE AND ALLIED
SUB-SECTOR: Agriculture Crop Production
OCCUPATION: Floriculture Farming
REFERENCE ID: AGR/Q0702
ALIGNED TO: NCO-2004/NIL

Floriculturist (Protected Cultivation) is a person who has to undertake various activities of flower cultivation involving preparatory cultivation, cultivation and post harvest management

Brief Job Description: Primary responsibilities (accounting for approximately 70 percent to 80 percent of daily work time) will be to perform the duties of flower crop cultivation in Green Houses. The proper care of crop involves Design and Maintenance of Green House, preparing the land and various other inputs essential for flower crop cultivation. The job is to be performed in an efficient manner to allow the production of a high quality flowers, their harvesting and post harvest management towards getting higher returns.



Personal Attributes: The Floriculturist for protected cultivation should work independently, laborious and must have the ability to make operational decisions pertaining to his area of work. The individual should have clarity and should be result oriented. The individual should also be able to demonstrate skills to use various tools.

Job Details	Qualifications Pack Code	AGR/Q0702		
	Job Role	Floriculturist – Protected Cultivation		
	Credits(NSQF)	TBD	Version number	1.0
	Sector	Agriculture And Allied	Drafted on	25/02/14
	Sub-sector	Agriculture Crop Production	Last reviewed on	15/03/15
	Occupation	Floriculture Farming	Next review date	31/03/16
	NSQC Clearance on	18/06/2015		

Job Role	Floriculturist
Role Description	The Floriculturist is responsible for taking up flower cultivation in greenhouse
NSQF level	4
Minimum Educational Qualifications	No entry level barrier; 5 th Standard Passed preferable.
Maximum Educational Qualifications	Not Applicable
Training (Suggested but not mandatory)	OJT
Minimum Job Entry Age	17 Years
Experience	One year prior experience in field (crop) operations
Applicable National Occupational Standards (NOS)	<p>Compulsory:</p> <ol style="list-style-type: none"> AGR/N0704 -Pre Cultivation Operations of Floriculture in Green House AGR/N0705 -Cultivation Operations of Floriculture in Green House AGR/N0703 -Harvest &Post Harvest Management in Floriculture AGR/N9903-Maintain health & Safety at the work place <p>Optional: NA</p>
Performance Criteria	As described in the relevant OS units



Floriculturist – Protected Cultivation

CURRICULUM / SYLLABUS

This program is aimed at training candidates for the job of a “Floriculturist – Protected Cultivation”, in the “Agriculture & Allied” Sector/Industry and aims at building the following key competencies amongst the learner

Program Name	Floriculturist – Protected Cultivation		
Qualification Pack Name & Reference ID. ID	AGR/Q0702, v1.0		
Version No.	1.0	Version Update Date	
Pre-requisites to Training	No entry level barrier; 5th Standard Passed preferable.		
Training Outcomes	<p>After completing this programme, participants will be able to:</p> <ul style="list-style-type: none"> • Perform pre-cultivation practices in Green House :Site Selection, Design selection, Soil testing, soil treatment, land preparation, transplantation, etc • Cultivate and Manage Flower Crop in Green house: Inputs procurement, Land preparation, planting, soil testing, application of fertilizer & nutrients, irrigation, etc • Harvest the crop and maintain the quality: Time of Harvesting, method of harvesting, post harvest practice, packing, storage and transportation. • Become well versed with Environment Health & Safety: Well versed with health and safety measures in terms of personal safety and others as well. 		

This course encompasses 4 out of 4 National Occupational Standards (NOS) of “Floriculturist – Protected Cultivation” Qualification Pack issued by “Agriculture Skill Council of India”.

Sr. No.	Module	Key Learning Outcomes	Equipment Required
1	<p>Introduction</p> <p>Theory Duration (hh:mm) 5:00</p> <p>Practical Duration (hh:mm)</p> <p>Corresponding NOS Code</p>	<ul style="list-style-type: none"> • Understand the General Discipline in the class room (Do’s & Don’ts) • Understand the Role of a Floriculturist – Protected Cultivation • Learn and practice Basic skills of communication • Learn and Practice Basic reading capabilities to enable reading of signs, notices and/or cautions at site 	Laptop, white board, marker, projector



2	<p>Pre cultivation operations of Floriculture in Green House</p> <p>Theory Duration (hh:mm) 30:00</p> <p>Practical Duration (hh:mm) 40:00</p> <p>Corresponding NOS Code AGR/No704</p>	<ul style="list-style-type: none"> ● Pre – Cultivation Practices <ul style="list-style-type: none"> - Site Selection for Green House - Selection of Green House Design - Soil Testing - Water Testing - Identify the available resources - Market feasibility ● Crop Selection <ul style="list-style-type: none"> - Pest and Disease resistance - High Yield Variety - Drought tolerant ● Land preparation ● Transplantation of seedlings 	<p>White Board, Marker, Laptop, projector, Tractor, Leveler, Soil Sampling equipments, soil testing instruments, Spade, Green House</p>
3	<p>Cultivation operations of Floriculture in Green House</p> <p>Theory Duration (hh:mm) 20:00</p> <p>Practical Duration (hh:mm) 30:00</p> <p>Corresponding NOS Code AGR/ No705</p>	<ul style="list-style-type: none"> ● Estimation of Nutrients requirement for flower crop production ● Procurement of Inputs ● Cultivation of Flower Crops <ul style="list-style-type: none"> - Type of Flower for Cultivation - Crop Spacing - Time of Planting - Seed rate requirement ● Application of Fertilizers/manures <ul style="list-style-type: none"> - Time of application - Dosage - Method of Application ● Training /Pruning (If Necessary) ● Irrigation Schedule for Flower Crop <ul style="list-style-type: none"> - Frequency - Time of Irrigation - Method of Irrigation - Drainage practices ● Pest and Disease management 	<p>Marker, Laptop, projector, Fertilizers/Plant protection chemicals, Sprayer machine, Gloves, irrigation equipments, Green House</p>
		<ul style="list-style-type: none"> - Identification of Pests - Precautions - Application of Chemicals - Identification of Disease symptoms - Identify the source for diseases - Application of Chemicals - Identify tools/equipments for application of chemicals 	



<p>4</p>	<p>Harvest & Post Harvest management in Floriculture</p> <p>Theory Duration (hh:mm) 20:00</p> <p>Practical Duration (hh:mm) 30:00</p> <p>Corresponding NOS Code AGR/N0706</p>	<ul style="list-style-type: none"> • Method of harvesting • Time of Harvesting • Post Harvest Practices <ul style="list-style-type: none"> - Receiving, Handling of harvested flower crops - Grading of harvested crop - Identify and use the packing materials - Packing of Harvested flower crops - Storage of Packed crop - Transportation 	<p>White Board, Marker, Laptop, projector, Transportation Vehicle, Packing materials – Scissor, Polythene, Storage infrastructure</p>
<p>5</p>	<p>Maintain Health & Safety at the work place</p> <p>Theory Duration (hh:mm) 10:00</p> <p>Practical Duration (hh:mm) 15:00</p> <p>Corresponding NOS Code AGR/N9903</p>	<ul style="list-style-type: none"> • Perform General safety Rules • Gain Knowledge of various health hazards relevant to workplace and basic first aid training. • Understand the basic safety checks and other common reported hazards before all field operation • Understand, identify and study the use of equipment and materials safely and correctly • Understand and handle the emergency situation in workplace 	<p>White Board, Marker, Laptop, projector, First Aid, Safety clothes, Gloves, etc</p>
	<p>Total Duration:</p> <p>Theory Duration 85:00</p> <p>Practical Duration 115:00</p>	<p>Unique Equipment Required: White Board, Marker, Laptop, projector, Green House, Tractor, Leveler, Soil Sampling equipments, soil testing instruments, Spade, Fertilizers/Plant protection chemicals, Sprayer machine, Irrigation Equipments, , First Aid, Safety clothes, Gloves, etc</p>	

Grand Total Course Duration: **200Hours, 0 Minutes**



Annexure: Assessment Criteria

Assessment Criteria	
Job Role	Floriculture – Protected Cultivation
Qualification Pack	AGR/Q0702, v1.0
Sector Skill Council	Agriculture

Sr. No.	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 centre (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 60% in aggregate and 40% in each NOS
6	The marks are allocated PC wise; however, every NOS will carry a weight age in the total marks allocated to the specific QP

Training Centre:	<i>Central Institute of Horticulture Department of Agriculture, Cooperation & Farmers Welfare Ministry of Agriculture & Farmers Welfare Government of India Medziphema, Nagaland-797106.</i>
NSDC Registration No.:	<i>NSDC-REGNo-15564</i>
Training Centre ID:	<i>90550</i>
Course ID:	<i>9187</i>
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