

QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR AGRICULTURE AND ALLIED 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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Introduction

Qualifications Pack – Greenhouse Operator

SECTOR: AGRICULTURE AND ALLIED

SUB-SECTOR: Agriculture Crop Production

OCCUPATION: Precision Farming

REFERENCE ID: AGR/Q1003

ALIGNED TO: NCO-2015/NIL

Greenhouse Operator: The individual plays a critical role in executing various operations involved in greenhouse.

Brief Job Description: The individual is responsible for various operations involved in raising seedlings/plantlets under controlled environment in the greenhouse.

Personal Attributes: This job requires the individual to work specifically as per the instructions of the supervisor. The individual should be laborious and should have inclination to new learnings. Requires clarity and should be result oriented. The individual should also be able to demonstrate skills of using various tools and keep records as required.

Job Details	Qualifications Pack Code	AGR/Q1003		
	Job Role	Greenhouse Operator		
	Credits(NSQF)	TBD	Version number	1.0
	Sector	Agriculture And Allied	Drafted on	12/01/16
	Sub-sector	Agriculture Crop Production	Last reviewed on	21/01/16
	Occupation	Precision Farming	Next review date	31/03/20
	NSQC Clearance on	05/02/2018		

Job Role	Greenhouse Operator (Also known as Greenhouse Worker)
Role Description	The operator is responsible for raising plantlets/ seedlings and maintain the required environment in the greenhouse
NSQF level	3
Minimum Educational Qualifications	5 th Standard Pass Preferable
Maximum Educational Qualifications	Not Applicable
Training (Suggested but not mandatory)	On Job Training
Minimum Job Entry Age	18 years
Experience	Not Applicable
Applicable National Occupational Standards (NOS)	Compulsory: <ol style="list-style-type: none"> AGR/N1007 Operate and maintain various greenhouse components AGR/N1008 Manage greenhouse operations AGR/N9903 Maintain Health & Safety at the workplace Optional: NA
Performance Criteria	As described in the OS unit

Definitions

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.

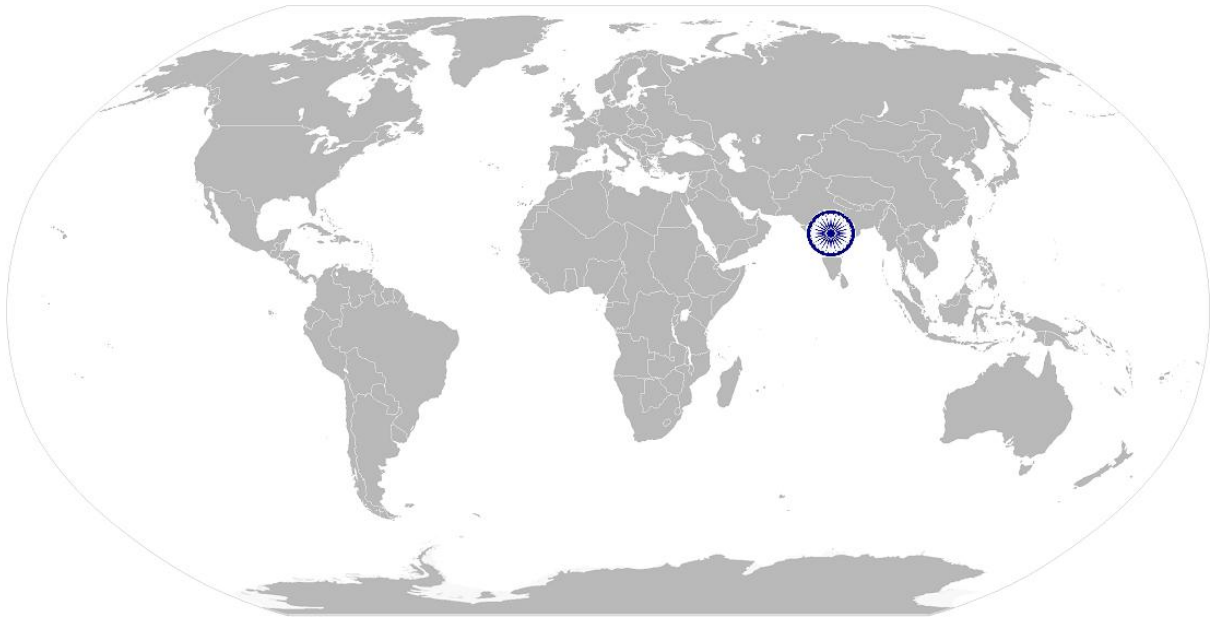
Acronyms

Keywords /Terms	Description
OJT	On Job Training
OS	Occupation Standard
NOS	National Occupation Standard
NSQF	National Skills Qualification Framework
Agr	Agriculture

AGR/N1007

Operate & maintain various greenhouse components

National Occupational Standard



Overview

This unit is about operating and maintaining various greenhouse components.

AGR/N1007

Operate & maintain various greenhouse components

National Occupational Standard

Unit Code	AGR/N1007
Unit Title (Task)	Operate & maintain various greenhouse components
Description	This OS unit is about operating and maintaining various greenhouse components
Scope	This unit/task covers the following: <ul style="list-style-type: none"> • Understand the working of various greenhouse components • Maintain the required environment in the greenhouse
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria \ Skill Set
Understand the working of various greenhouse components	To be competent, the user / individual on the job must be able to: <ul style="list-style-type: none"> PC1. understand various components of greenhouse: galvanized structure, covering, cooling system, exhaust fan, heating system, motorized shading net/ thermal net, fogging/sprinkler system, drip system, control panel, motorized ventilation PC2. get familiarized with the working of different components of greenhouse
Maintain the required environment in the greenhouse	To be competent, the user / individual on the job must be able to: <ul style="list-style-type: none"> PC3. ensure personal hygiene by using of gloves, masks, goggles, boots, etc. whenever required PC4. check all tools and equipments before operating them PC5. perform all procedures and follow work instructions for controlling operational risks PC6. ensure the entire system is shut-off before leaving in the evening PC7. take care to avoid water logging in greenhouse PC8. check the level of water in the tanks daily PC9. maintain temperature, humidity, light on daily basis as per the crop requirement PC10. maintain the temperature with the help of cooling pad and fan as per the crop and season PC11. maintain humidity by the operation of foggers as per the crop & season PC12. ensure proper ventilation through exhaust fan/ motorized ventilation PC13. position and regulate greenhouse irrigation systems to water plants PC14. set up irrigation systems in soil-less growing media PC15. maintain boilers, furnaces, electrical systems and fans PC16. operate & maintain various greenhouse equipments like water treatment machines, carbon dioxide generators and ultraviolet sterilizers etc PC17. clean & place all the tools & equipments at the designated places after use
Knowledge and Understanding (K)	

AGR/N1007

Operate & maintain various greenhouse components

A. Organizational Context	The individual on the job needs to know and understand: KA1. Effective working relationships and how to work effectively with co workers, farmers and seniors KA2. Organizational / farmers / customer's needs and time management
B. Technical Knowledge	The individual on the job needs to know and understand: KB1. Various types of green house, their components and functions KB2. Basics of the system design KB3. Standard Procedures to operate a green house KB4. Irrigation Products KB5. Operation and maintenance of various components/equipments for green house KB6. Basics of crop cultivation / package of practices KB7. Ideal environment required for crop growth
Skills (S)	
A. Core Skills/ Generic Skills	Writing Skills
	The individual on the job needs to know and understand how to: SA1. mention the data which are required for record keeping purpose and maintain the crop calendar SA2. report problems to the appropriate personnel in a timely manner
	Reading Skills
	The individual on the job needs to know and understand how to: SA3. get updated about the latest technologies used in precision farming by reading the newspaper and magazines SA4. keep abreast with the latest knowledge by reading brochures, pamphlets, and product information sheets
	Oral Communication (Listening and Speaking skills)
	The individual on the job needs to know and understand how to: SA5. maintain effective working relationships SA6. communicate clearly and effectively with others like customers, co workers, company representatives, seniors and various other stakeholders SA7. understand information and grasp its meaning SA8. seek advice from seniors
B. Professional Skills	Decision Making
	The individual on the job needs to know and understand how to: SB1. make decisions pertaining to the concerned area of work SB2. identify problems that may arise in carrying out tasks and take preventative action following workplace procedures
	Plan and Organize
	The individual on the job needs to know and understand how to: SB3. plan and schedule various operations

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Operate & maintain various greenhouse components

	Customer Centricity
	The individual on the job needs to know and understand how to: SB4. manage relationships with co-workers and other farmers
	Problem Solving
	The individual on the job needs to know and understand how to: SB5. think through the problem, evaluate the possible solution(s) and suggest an optimum /best possible solution(s) SB6. identify creative and innovative quick solutions to resolve delays
	Analytical Thinking
	The individual on the job needs to know and understand how to: SB7. monitor and maintain the condition of tools and equipment for set up, maintaining and running the poly house SB8. monitor the environment inside the poly house and maintain manually SB9. apply, analyze, and evaluate the information gathered from observation, experience, reasoning, or communication, as a guide to thought and action
	Critical Thinking
	The individual on the job needs to know and understand how to: SB10. take up one's own learning

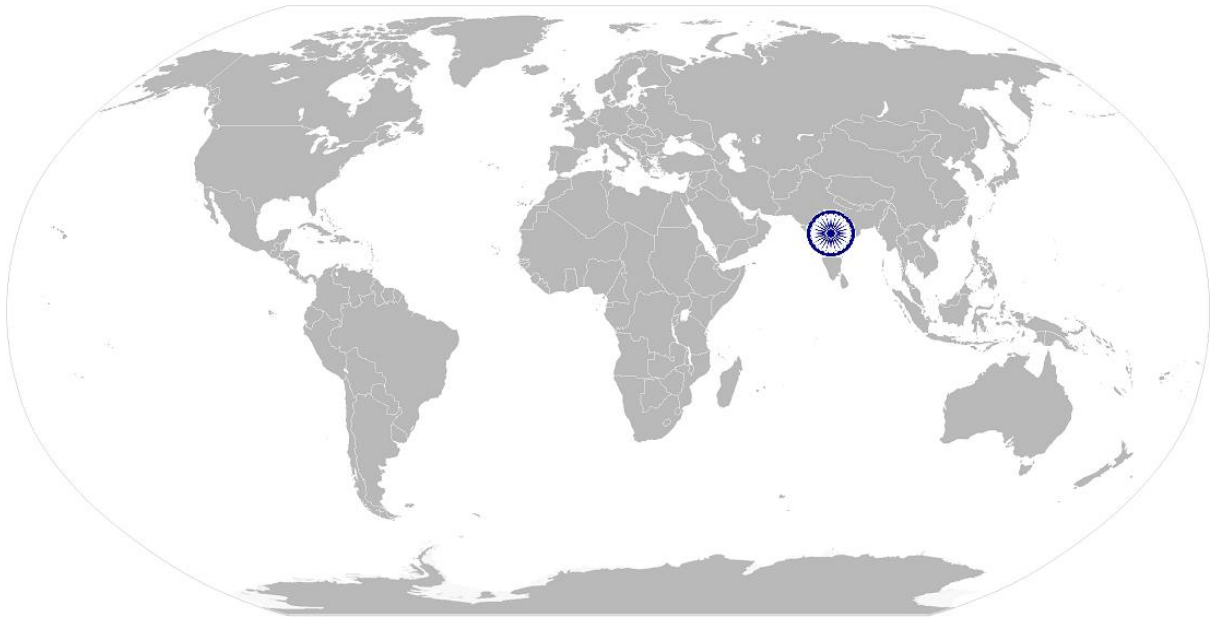
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NOS Code	AGR/N1007		
Credits(NSQF)	TBD	Version number	1.0
Sector	Agriculture And Allied	Drafted on	12/01/16
Sub-sector	Agriculture Crop Production	Last reviewed on	21/01/16
Occupation	Precision Farming	Next review date	31/03/20

AGR/N1008

Manage greenhouse operations

National Occupational Standard



Overview

This unit is about managing greenhouse operations such as planting/transplanting, propagating and raising of seedlings for various purposes.

AGR/N1008

Manage greenhouse operations

Unit Code	AGR/N1008
Unit Title (Task)	Manage greenhouse operations
Description	This OS unit is about managing various greenhouse operations such as planting/transplanting, propogating, and raising of seedlings for various purposes such as primary & secondary hardening (for tissue culture) and harvesting as market produce.
Scope	This unit /task covers the following: <ul style="list-style-type: none"> Undertake various operations Monitor & document various operations
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria \ Skill Set
Undertake various operations	<p>To be competent, the user / individual on the job must be able to:</p> <p>PC1. receive planting material</p> <p>PC2. understand the type and quantity of plants to grow or stock (for example, cut or potted flowers, bedding plants, vegetables, plant varieties)</p> <p>PC3. determine the environmental conditions required to grow the selected plants and set planting and care schedules accordingly</p> <p>PC4. prepare soil or soil-less peat mix growing medium for planting</p> <p>PC5. plant bulbs, seeds and cuttings, graft plants, transplant seedlings and rooted cuttings grade-wise</p> <p>PC6. label each batch of plantlets indicating plant species/ variety, date of transplanting etc</p> <p>PC7. train and prune plants</p> <p>PC8. apply irrigation and schedule fertigation according to the crop requirement</p> <p>PC9. identify and control problems caused by insects, rodents, plant diseases or nutritional deficiencies</p> <p>PC10. remove weeds & off types, spray plants with pesticides and apply fertilizers</p> <p>PC11. ensure safe handling, use, storage and disposal of pesticides</p> <p>PC12. harvest/grade the crop as per the standards/ supervisor's instructions</p>
Monitor and document various operations	<p>To be competent, the user / individual on the job must be able to:</p> <p>PC13. record the details of plantlets received & transplanted- plant species/ variety, Accession Number of clone/genotype, batch of production, no of plant lets, date of transplanting etc in the greenhouse register</p> <p>PC14. monitor the plantlets regularly for their growth and presence of any infestation/infection/off types</p> <p>PC15. remove the off types & dead plantlets promptly to avoid attack by saprophytic fungi and record the plantlet mortalities in green house register</p> <p>PC16. carry out vector monitoring at periodic intervals and record the same in the specified manner</p>

AGR/N1008

Manage greenhouse operations

	<p>PC17. record any kind of treatment given to the plants such as application of fertilizers or micro-nutrients sprays or application of pesticides indicating date/time of application, fertiliser or other chemicals applied, dosage rate and if pesticides applied (including botanicals and microbial pesticides), pest against which applied and name/sign of applicator.</p> <p>PC18. maintain the greenhouse register</p>
Knowledge and Understanding (K)	
A. Organizational Context	<p>The individual on the job needs to know and understand:</p> <p>KA1. Effective working relationships and how to work effectively with co workers, customers and seniors</p> <p>KA2. Organizational / farmers / customer's needs and time management</p>
B. Technical Knowledge	<p>The individual on the job needs to know and understand:</p> <p>KB1. Various types of green house, their components and functions</p> <p>KB2. Basics of crop cultivation / package of practices</p> <p>KB3. Crop calendar</p> <p>KB4. Irrigation Products</p> <p>KB5. Integrated Pest & Disease management</p> <p>KB6. Integrated Nutrient Management</p> <p>KB7. Operation and maintenance of various equipment of green house</p> <p>KB8. Basics of crop cultivation / package of practices</p>
Skills (S)	
A. Core Skills/ Generic Skills	Writing Skills
	<p>The individual on the job needs to know and understand how to:</p> <p>SA1. mention the data which are required for record keeping purpose and maintain the process identification sheet</p> <p>SA2. report problems to the appropriate personnel in a timely manner</p>
	Reading Skills
	<p>The individual on the job needs to know and understand how to:</p> <p>SA3. get updated about the latest technologies used in precision farming by reading the newspaper and magazines</p> <p>SA4. keep abreast with the latest knowledge by reading brochures, pamphlets, and product information sheets</p>
	Oral Communication (Listening and Speaking skills)
	<p>The individual on the job needs to know and understand how to:</p> <p>SA5. maintain effective working relationships</p> <p>SA6. communicate clearly and effectively with others like customers, co workers, company representatives, seniors and various other stakeholders</p> <p>SA7. understand information and grasp its meaning</p> <p>SA8. seek advice from seniors</p>
B. Professional	Decision Making

AGR/N1008

Manage greenhouse operations

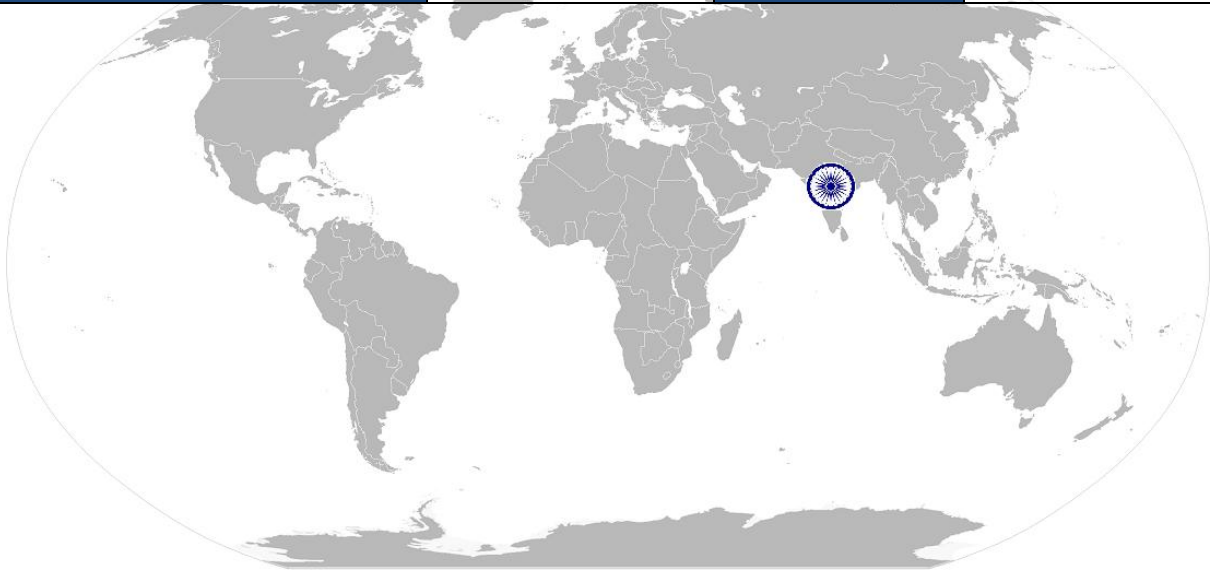
Skills	The individual on the job needs to know and understand how to: SB1. make decisions pertaining to the concerned area of work SB2. identify problems that may arise in carrying out tasks and take preventative action following workplace procedures
	Plan and Organize
	The individual on the job needs to know and understand how to: SB3. plan and schedule various greenhouse operations
	Customer Centricity
	The individual on the job needs to know and understand how to: SB4. manage relationships with co-workers and other farmers
	Problem Solving
	The individual on the job needs to know and understand how to: SB5. think through the problem, evaluate the possible solution(s) and suggest an optimum /best possible solution(s) SB6. Identify creative and innovative quick solutions to resolve delays
	Analytical Thinking
	The individual on the job needs to know and understand how to: SB7. monitor and maintain the condition of tools and equipment for set up, maintaining and running the poly house SB8. monitor the environment inside the poly house SB9. apply, analyze, and evaluate the information gathered from observation, experience, reasoning, or communication, as a guide to thought and action
	Critical Thinking
The individual on the job needs to know and understand how to: SB10. take up one's own learning	

AGR/N1008

Manage greenhouse operations

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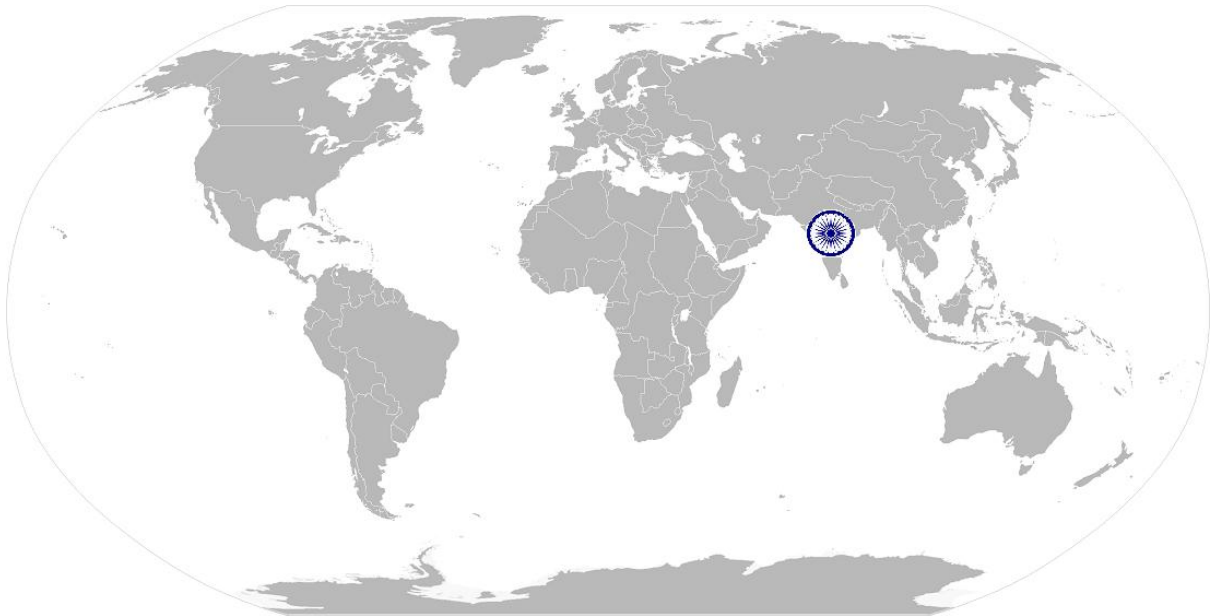
NOS Code	AGR/N1008		
Credits(NSQF)	TBD	Version number	1.0
Sector	Agriculture And Allied	Drafted on	12/01/16
Sub-sector	Agriculture Crop Production	Last reviewed on	21/01/16
Occupation	Precision Farming	Next review date	31/03/20



AGR/N9903

Maintain Health & Safety at the workplace

National Occupational Standard




Overview

This unit is about maintaining health & safety of self and others at the workplace.

AGR/N9903

Maintain Health & Safety at the workplace

Unit Code	AGR/N9903
Unit Title (Task)	Maintain Health & Safety at the workplace
Description	This OS is for the cultivator who is responsible for maintaining health and safety of self and others co workers at workplace
Scope	This unit/task covers the following: <ul style="list-style-type: none"> • Maintain clean and efficient workplace • Render appropriate emergency procedures
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Maintaining clean and efficient workplace	<p>To be competent, the individual must be able to:</p> <p>PC1. undertake basic safety checks before operation of all machinery and vehicles and hazards are reported to the appropriate supervisor</p> <p>PC2. work for which protective clothing or equipment is required is identified and the appropriate protective clothing or equipment is used in performing these duties in accordance with workplace policy.</p> <p>PC3. read and understand the hazards of use and contamination mentioned on the labels of pesticides/fumigants etc </p> <p>PC4. assess risks prior to performing manual handling jobs, and work according to currently recommended safe practice.</p> <p>PC5. use equipment and materials safely and correctly and return the same to designated storage when not in use</p> <p>PC6. dispose of waste safely and correctly in a designated area</p> <p>PC7. recognise risks to bystanders and take action to reduce risk associated with jobs in the workplace</p> <p>PC8. perform your work in a manner which minimizes environmental damage all procedures and work instructions for controlling risk are followed closely.</p> <p>PC9. report any accidents, incidents or problems without delay to an appropriate person and take necessary immediate action to reduce further danger.</p>
Render appropriate emergency procedures	<p>To be competent, the individual must be able to:</p> <p>PC10. follow procedures for dealing with accidents, fires and emergencies, including communicating location and directions to emergency.</p> <p>PC11. follow emergency procedures to company standard / workplace requirements</p> <p>PC12. use emergency equipment in accordance with manufacturers' specifications and workplace requirements</p> <p>PC13. provide treatment appropriate to the patient's injuries in accordance with recognized first aid techniques</p> <p>PC14. recover (if practical), clean, inspect/test, refurbish, replace and store the first aid equipment as appropriate</p>

AGR/N9903

Maintain Health & Safety at the workplace

	PC15. report details of first aid administered in accordance with workplace procedures.
Knowledge and Understanding (K)	
A. Maintain clean and efficient workplace	<p>The user/individual on the job needs to know and understand:</p> <p>KA 1. personal hygiene and fitness requirements</p> <p>KA 2. your general duties under the relevant health and safety legislation</p> <p>KA 3. what personal protective equipment and clothing should be worn and how it is cared for</p> <p>KA 4. the correct and safe way to use materials and equipment required for your work</p> <p>KA 5. the importance of good housekeeping in the workplace</p> <p>KA 6. safe disposal methods for waste</p> <p>KA 7. methods for minimizing environmental damage during work</p>
B. Render appropriate emergency procedures	<p>The user/individual on the job needs to know and understand:</p> <p>KA 8. the risks to health and safety and the measures to be taken to control those risks in your area of work</p> <p>KA 9. workplace procedures and requirements for the treatment of workplace injuries/illnesses.</p> <p>KA 10. basic emergency first aid procedure</p> <p>KA 11. local emergency services</p> <p>KA 12. why accidents, incidents and problems should be reported and the appropriate action to take</p>
Skills (S)	
A. Core Skills/ Generic Skills	Writing Skills
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. mention the data which are required for record keeping purpose</p> <p>SA2. report problems to the appropriate personnel in a timely manner</p> <p>SA3. write descriptions and details about incidents in reports</p>
	Reading Skills
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA4. read instruction manual for hand tool and equipments</p>
	Oral Communication (Listening and Speaking skills)
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA5. communicate clearly and effectively with others like farmers, concerned officer/stakeholders</p> <p>SA6. comprehends information shared by senior people and experts</p>
B. Professional Skills	Decision Making
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB1. make decisions pertaining to types of tools to be used</p> <p>SB2. identify need of first aid and render it accordingly</p>
	Plan and Organize

AGR/N9903

Maintain Health & Safety at the workplace

	The user/individual on the job needs to know and understand how to: SB3. schedule daily activities and drawing up priorities; allocate start times, estimation of completion times and materials, equipment and assistance required for completion.
	Customer Centricity
	The user/individual on the job needs to know and understand how to: SB4. manage relationships with co-workers and managers of the who may be stressed, frustrated, confused or angry
	Problem Solving
	The user/individual on the job needs to know and understand how to: SB5. identify problems immediately and take up solutions quickly to resolve delays
	Analytical Thinking
	The user/individual on the job needs to know and understand how to: SB6. monitor and maintain the condition of tools and equipment SB7. assess situation & identify appropriate control measures
	Critical Thinking
The individual on the job needs to know and understand how to: SB8. take up one's own learning	



AGR/N9903

Maintain Health & Safety at the workplace

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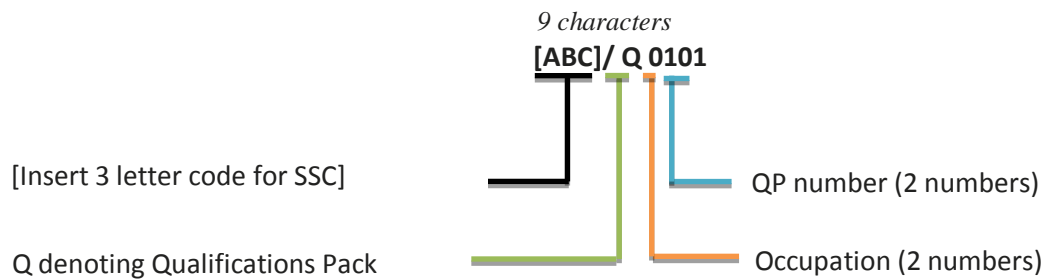
NOS Code	AGR/N9903		
Credits(NSQF)	TBD	Version number	1.0
Sector	Agriculture And Allied	Drafted on	25/02/14
Sub-sector	Agriculture Crop Production	Last reviewed on	15/03/15
Occupation	Precision Farming	Next review date	31/03/16



Annexure

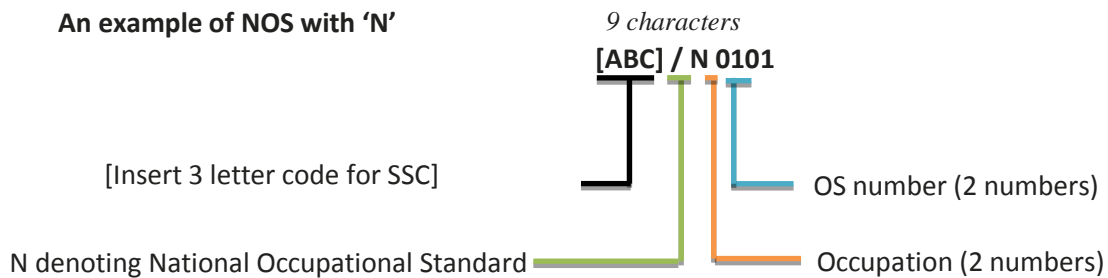
Nomenclature for QP and NOS

Qualifications Pack



Occupational Standard

An example of NOS with 'N'



Qualification Pack For Greenhouse Operator

The following acronyms/codes have been used in the nomenclature above:

Sub-sector	Range of Occupation numbers
Agriculture Crop Production	01 – 40
Dairying	41 – 42
Poultry	43 – 44
Animal Husbandry	45 – 48
Fisheries	49 – 51
Agriculture Allied Activities	52 – 60
Forestry, Environment and Renewable Energy Management	61 - 70
Agriculture Industries	71 – 90
Generic Occupations	96 - 99

Sequence	Description	Example
Three letters	Industry name	AGR
Slash	/	/
Next letter	Whether QP or NOS	Q or N
Next two numbers	Occupation code	01
Next two numbers	OS number	01

Note:

- The range of occupation numbers have been decided based on the number of existing and future occupations in a segment
- Occupation numbers from 91 – 95 have been intentionally left blank to accommodate any emerging segment in future

CRITERIA FOR ASSESSMENT OF TRAINEES

Job Role Greenhouse Operator

Qualification Pack AGR/Q1003

Sector Skill Council Agriculture

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. Assessment will be conducted for all compulsory NOS, as well as the selected elective NOS/set of NOS.
- OR
3. Assessment will be conducted for all compulsory NOS, as well as the selected optional NOS/set of NOS.
 4. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below)
 5. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on this criteria
 6. To pass the Qualification Pack, every trainee should score a minimum of 50% of aggregate marks to successfully clear the assessment.
 7. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack

Assessable Outcomes	Assessment Criteria	Total Marks	Out Of	Marks Allocation	
				Theory	Skills Practical
1. AGR/N1007 Operate & maintain various greenhouse components	PC1. understand various components of greenhouse: galvanized structure, covering, cooling system, exhaust fan, heating system, motorized shading net/ thermal net, fogging/sprinkler system, drip system, control panel, motorized ventilation	85	5	3	2
	PC2. get familiarized with the working of different components of greenhouse		5	3	2
	PC3. ensure personal hygiene by using of gloves, masks, goggles, boots, etc. whenever required		5	2	3
	PC4. check all tools and equipments before operating them		5	3	2
	PC5. perform all procedures and follow work instructions for controlling operational risks		5	2	3
	PC6. ensure the entire system is shut-off before leaving in the evening		2	1	1
	PC7. take care to avoid water logging in greenhouse		5	3	2

Qualification Pack For Greenhouse Operator

	PC8. check the level of water in the tanks daily		5	3	2
	PC9. maintain temperature, humidity, light on daily basis as per the crop requirement		5	2	3
	PC10. maintain the temperature with the help of cooling pad and fan as per the crop and season		5	3	2
	PC11. maintain humidity by the operation of foggers as per the crop & season		5	2	3
	PC12. ensure proper ventilation through exhaust fan/ motorized ventilation		5	2	3
	PC13. position and regulate greenhouse irrigation systems to water plants		5	2	3
	PC14. set up irrigation systems in soil-less growing media		5	3	2
	PC15. maintain boilers, furnaces, electrical systems and fans		5	2	3
	PC16. operate & maintain various greenhouse equipments like water treatment machines, carbon dioxide generators and ultraviolet sterilizers etc		8	2	6
	PC17. clean & place all the tools & equipments at the designated places after use		5	3	2
			85	41	44
2. AGR/N1008 Manage greenhouse operations	PC1. receive planting material		5	2	3
	PC2. understand the type and quantity of plants to grow or stock (for example, cut or potted flowers, bedding plants, vegetables, plant varieties)		5	4	1
	PC3. determine the environmental conditions required to grow the selected plants and set planting and care schedules accordingly		5	3	2
	PC4. prepare soil or soil-less peat mix growing medium for planting		5	2	3
	PC5. plant bulbs, seeds and cuttings, graft plants, transplant seedlings and rooted cuttings grade-wise		10	4	6
	PC6. label each batch of plantlets indicating plant species/ variety, date of transplanting etc		5	2	3
	PC7. train and prune plants		5	2	3
	PC8. apply irrigation and schedule fertigation according to the crop requirement	100	5	2	3

Qualification Pack For Greenhouse Operator

	PC9. identify and control problems caused by insects, rodents, plant diseases or nutritional deficiencies		5	2	3
	PC10. remove weeds & off types, spray plants with pesticides and apply fertilizers		5	2	3
	PC11. ensure safe handling, use, storage and disposal of pesticides		5	2	3
	PC12. harvest/grade the crop as per the standards/ supervisor's instructions		10	4	6
	PC13. record the details of plantlets received & transplanted- plant species/ variety, Accession Number of clone/genotype, batch of production, no of plant lets, date of transplanting etc in the greenhouse register		5	2	3
	PC14. monitor the plantlets regularly for their growth and presence of any infestation/infection/off types		5	2	3
	PC15. remove the off types & dead plantlets promptly to avoid attack by saprophytic fungi and record the plantlet mortalities in green house register		5	2	3
	PC16. carry out vector monitoring at periodic intervals and record the same in the specified manner		5	2	3
	PC17. record any kind of treatment given to the plants such as application of fertilizers or micro-nutrientsprays or application of pesticides indicating date/time of application, fertiliser or other chemicals applied, dosage rate and if pesticides applied (including botanicals and microbial pesticides), pest against which applied and name/sign of applicator.		5	2	3
	PC18. maintain the greenhouse register		5	2	3
			100	43	57
3. AGR/N9903 Maintain Health and safety at the workplace	PC1. undertake basic safety checks before operation of all machinery and vehicles and hazards are reported to the appropriate supervisor		1	0	2
	PC2. work for which protective clothing or equipment is required is identified and the appropriate protective clothing or equipment is used in performing these duties in accordance with workplace policy.		1	1	0
	PC3. read and understand the hazards of use and contamination mentioned on the labels of pesticides/fumigants etc	15	1	1	0

Qualification Pack For Greenhouse Operator

PC4. assess risks prior to performing manual handling jobs, and work according to currently recommended safe practice.	1	0	1
PC5. use equipment and materials safely and correctly and return the same to designated storage when not in use	1	0	1
PC6. dispose of waste safely and correctly in a designated area	1	0	1
PC7. recognise risks to bystanders and take action to reduce risk associated with jobs in the workplace	1	1	0
PC8. perform your work in a manner which minimizes environmental damage all procedures and work instructions for controlling risk are followed closely.	1	0	1
PC9. report any accidents, incidents or problems without delay to an appropriate person and take necessary immediate action to reduce further danger.	1	0	1
PC10. follow procedures for dealing with accidents, fires and emergencies, including communicating location and directions to emergency.	1	1	0
PC11. follow emergency procedures to company standard / workplace requirements	1	1	0
PC12. use emergency equipment in accordance with manufacturers' specifications and workplace requirements	1	0	1
PC13. provide treatment appropriate to the patient's injuries in accordance with recognized first aid techniques	1	0	1
PC14. recover (if practical), clean, inspect/test, refurbish, replace and store the first aid equipment as appropriate	1	0	1
PC15. report details of first aid administered in accordance with workplace procedures.	1	1	0
	15	6	9
Total	200	90	110

SSC	QPCode	Name of the QP	NSQF Level	Equipment Name	Minimum number of Equipment required (per batch of 30)	Unit Type	Is this a mandatory Equipment to be available at the Training Center (Yes/No)	Dimension/Specification/Description of the Equipment/ ANY OTHER REMARK
Agriculture	AGR/Q1003	Greenhouse Operator	3	Benches,	2	Nos	N	
Agriculture	AGR/Q1003	Greenhouse Operator	3	Tables	2	Nos	N	
Agriculture	AGR/Q1003	Greenhouse Operator	3	Plant carts	2	Nos	N	
Agriculture	AGR/Q1003	Greenhouse Operator	3	Containers for plants	30	Nos	Y	Within5 KM
Agriculture	AGR/Q1003	Greenhouse Operator	3	Plastic Seed tray	5	Nos	N	
Agriculture	AGR/Q1003	Greenhouse Operator	3	Greenhouse Structure	1	Nos	Y	Within5 KM
Agriculture	AGR/Q1003	Greenhouse Operator	3	Pad	1	Nos	N	
Agriculture	AGR/Q1003	Greenhouse Operator	3	ventilating fans and air circulation tubes	1	Nos	N	
Agriculture	AGR/Q1003	Greenhouse Operator	3	carbon dioxide units	1	Nos	N	
Agriculture	AGR/Q1003	Greenhouse Operator	3	special lighting designed to stimulate plant growth	1	Nos	N	
Agriculture	AGR/Q1003	Greenhouse Operator	3	Germination equipment including heating mats	1	Nos	N	
Agriculture	AGR/Q1003	Greenhouse Operator	3	Greenhouse equipments	1	Nos	N	
Agriculture	AGR/Q1003	Greenhouse Operator	3	heavy duty electrical generators for the	1	Nos	N	
Agriculture	AGR/Q1003	Greenhouse Operator	3	Pesticides Sprayer	2	Nos	Y	Within5 KM
Agriculture	AGR/Q1003	Greenhouse Operator	3	Watering equipment including sprinkler systems/ Drip System	1	Nos	Y	Within5 KM
Agriculture	AGR/Q1003	Greenhouse Operator	3	pumps	1	Nos	Y	Within5 KM
Agriculture	AGR/Q1003	Greenhouse Operator	3	tanks	1	Nos	Y	Within5 KM
Agriculture	AGR/Q1003	Greenhouse Operator	3	distribution lines	1	Nos	Y	Within5 KM
Agriculture	AGR/Q1003	Greenhouse Operator	3	hoses & nozzles	1	Nos	Y	Within5 KM
Agriculture	AGR/Q1003	Greenhouse Operator	3	fertilizer injectors and propagation misters	1	Nos	Y	Within5 KM
Agriculture	AGR/Q1003	Greenhouse Operator	3	safety shoes	2	Nos	N	
Agriculture	AGR/Q1003	Greenhouse Operator	3	goggles	2	Nos	N	
Agriculture	AGR/Q1003	Greenhouse Operator	3	fire extinguisher	1	Nos	y	Within5 KM
Agriculture	AGR/Q1003	Greenhouse Operator	3	first aid box	1	Nos	y	Within5 KM

Agriculture	AGR/Q1003	Greenhouse Operator	3	hoe	2	Nos	N	
Agriculture	AGR/Q1003	Greenhouse Operator	3	khurpa	5	Nos	N	
Agriculture	AGR/Q1003	Greenhouse Operator	3	spade	2	Nos	N	
Agriculture	AGR/Q1003	Greenhouse Operator	3	hand towel	5	Nos	N	
Agriculture	AGR/Q1003	Greenhouse Operator	3	Herbicides,	1	Kg	N	
Agriculture	AGR/Q1003	Greenhouse Operator	3	Fungicides	1	Kg	N	
Agriculture	AGR/Q1003	Greenhouse Operator	3	fertilizers	1	Kg	N	
Agriculture	AGR/Q1003	Greenhouse Operator	3	cocopeat	1	Kg	N	
Agriculture	AGR/Q1003	Greenhouse Operator	3	compost	1	Kg	N	
Agriculture	AGR/Q1003	Greenhouse Operator	3	vermicompost	1	Kg	N	