

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- Pesticide & Fertilizer Applicator

SECTOR: AGRICULTURE & ALLIED

SUB-SECTOR: Agriculture Crop Production

OCCUPATION: Farm Management

REFERENCE ID: AGR/Q1202

ALIGNED TO: NCO-2015/NIL

Pesticide and Fertilizer Applicator : Pesticide and fertilizer applicator is a person responsible for spraying and applying the pesticides and fertilizers on various crops.

Brief Job Description : A Pesticide and fertilizer applicator is responsible for proper application of pesticides and fertilizers on various crops. S/he will also be responsible for monitoring of pests in the crop and take appropriate measures for not only the protection of crops but also increase the yields.

Personal Attributes: A pesticide and fertilizer applicator should have a mind of science, belongingness to the community, good communication and observation skills. S/he should be physically strong and have mutual dexterity to perform on the job.

Qualifications Pack Code	AGR/Q1202		
Job Role	Pesticide & Fertilizer Applicator		
Credits (NSQF)	TBD	Version number	1.0
Sector	Agriculture & Allied	Drafted on	18/09/15
Sub-sector	Agriculture Crop Production	Last reviewed on	13/09/17
Occupation	Farm Management	Next review date	13/09/21
NSQC Clearance on	DD/MM/YYYY		

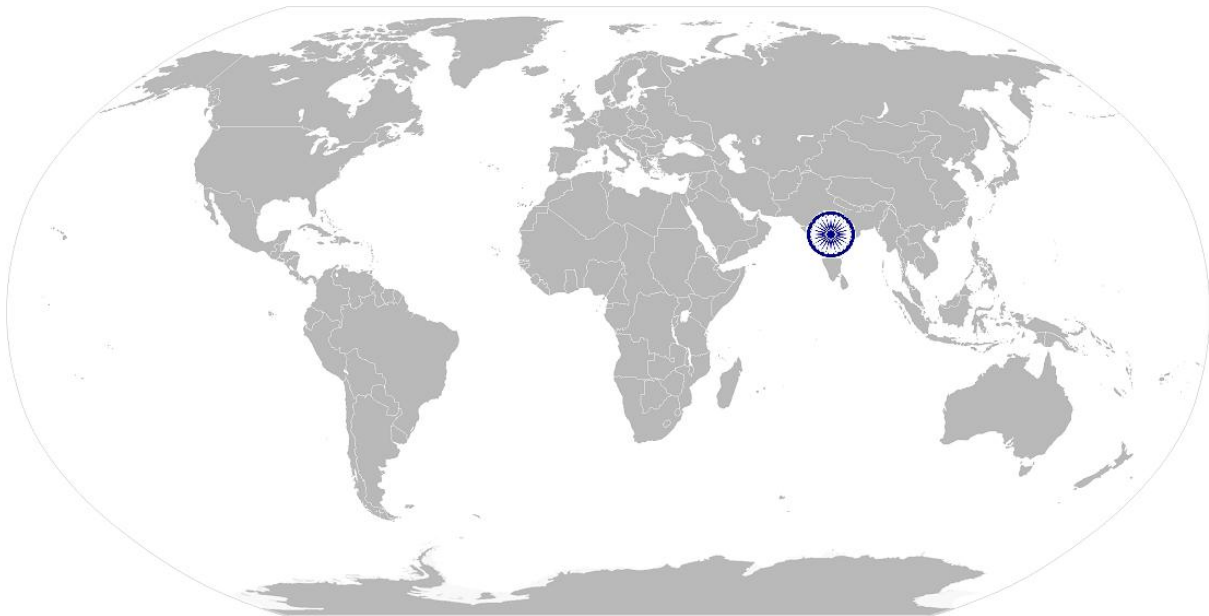
Job Role	Pesticide & Fertilizer Applicator
Role Description	Responsible for proper application of pesticides and fertilizers on various crops. Also responsible for monitoring of pests in the crop and take appropriate measures for not only the protection of crops but also increasing the yields
NSQF level	4
Minimum Educational Qualifications	8 th Standard Pass
Maximum Educational Qualifications	Not Applicable
Training	Not Mandatory
Minimum Job Entry Age	18 Years
Experience	Not Applicable
Applicable National Occupational Standards (NOS)	<p>Compulsory:</p> <ol style="list-style-type: none"> AGR/N1210 Understand major pests of area specific crops along with their nutrients need AGR/N1211 Use different plant protection chemicals & equipments AGR/N9903 Maintain health & safety at the workplace <p>Optional: NA</p>
Performance Criteria	As described in the relevant OS units

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.

Vertical	Vertical may exist within a sub-sector representing different domain areas or the client industries served by the industry
Cultivar	Is Cultivated Variety. To propagate true-to-type clones, many cultivars must be propagated vegetatively through cuttings, grafting, and even tissue culture. Propagation by seed usually produces something different than the parent plant.
Seed Material	Sexually or vegetatively propagated planting materials which are used for seeding and planting.
Tilth	Physical condition of soil, especially in relation to its suitability for planting or growing a crop.
FYM	Farm Yard Manure. Farmyard manure refers to the decomposed mixture of dung and urine of farm animals along with litter and left over material from roughages or fodder fed to the cattle.
INM	Integrated Nutrient Management is a practice where all sources of nutrients namely organic, inorganic (chemical fertilizer), Biofertilizer can be combined and applied to soils so that crop growth is enhanced and we can get good yield with quality product.
Fertigation	Fertigation is the application of fertilizers, soil amendments, or other water soluble products through an irrigation system.
Keywords /Terms	Description
OS	Occupation Standard
NOS	National Occupation Standard
NSQF	National Skills Qualification Framework
AGR	Agriculture
PPE	Plant Protection Equipment

AGR/N1210 Understand major pests of area specific crops along with their nutrients need

National Occupational Standard



Overview

This unit is about understanding the cropping pattern existing in an area, their nutrient requirement and identification of prevalent pests and diseases infestation.

AGR/N1210 Understand major pests of area specific crops along with their nutrients need

Unit Code	AGR /N1210
Unit Title (Task)	Understand major pests of area specific crops along with their nutrients need
Description	This OS unit is about understanding of nutrient requirement as per cropping pattern and identification of major pests & diseases infesting crops in particular areas
Scope	This unit/task covers : <ul style="list-style-type: none"> • understanding the cropping pattern of the area and associated pests • identification of major pests infesting crops • understanding nutrient deficiencies and corrective measures as per the agronomic situation
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Understanding the cropping-pattern of the area and associated pests	To be competent, the individual on the job must be able to : <ul style="list-style-type: none"> PC1. get familiarized with the cropping pattern in the area PC2. diagnose the causes of pest damage symptoms by analysing feeding methods and behaviour PC3. identify the factors that determine the occurrence of pest damage and its importance PC4. recognize the important pests of specific crops in order to identify, anticipate and prevent the damage each may cause, and to select the most appropriate control measures or combination of measures for specific circumstances
Identification of major pests infesting crops	To be competent, the individual must be able to : <ul style="list-style-type: none"> PC5. conduct field observation for pest/disease judging the intensity of occurrence PC6. collect samples of pests and damaged crops PC7. ascertain the insect-pests and confirm its growth stage PC8. ascertain the disease infesting the crops PC9. ascertain the weed-pests
Understanding the nutrient deficiencies & corrective measures as per the agronomic situation	To be competent, the individual must be able to : <ul style="list-style-type: none"> PC10. get familiarized with different nutrients deficiency diseases PC11. comprehend the importance and application of different types of fertilizers/ micronutrients PC12. determine the nutrient requirement of plants as per the cropping pattern and soil conditions etc
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the	The user/individual on the job needs to know and understand: <ul style="list-style-type: none"> KA1. relevant organizational policy on health hazards due to pesticides and fertilizers

AGR/N1210 Understand major pests of area specific crops along with their nutrients need

<p>company / organization and its processes)</p>	<p>KA2. supervisory structure- relevant people and their responsibilities within the work area KA3. relevant health and safety requirements applicable in the work environment KA4. own job role and responsibilities KA5. who to approach for support in order to obtain work related instructions, clarifications and support KA6. importance of following health, hygiene, safety and quality standards and the impact of not following the standards on customers and the business</p>
<p>B. Technical Knowledge</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. basics of crop production/ agronomy KB2. definition & classification of pests and diseases KB3. seasonal occurrence of pests and diseases and favourable environmental condition KB4. basic morphology & life cycle of insects KB5. symptoms of pests and disease infestation KB6. integrated pest management KB7. integrated nutrient management KB8. soil health management KB9. classification of fertilizers KB10. importance of fertilizers KB11. water soluble fertilizers/liquid fertilizers KB12. importance of incorporation of crop residues along with bio decomposers KB13. different strains of bio agents to accelerate decomposition process KB14. different prophylactic measures to contain pest/disease in relation to weather parameter KB15. essentiality of nutrients and nutrient deficiency of plants KB16. macro- and micronutrient, selection of fertilizers based on soil test based recommendations, soil pH and how it impacts fertilizer applications, and symptoms of either nutrient deficiencies or excesses KB17. nutrient need of the crops as per their growth stage</p>
<p>Skills (S)</p>	
<p>A. Core Skills/ Generic Skills</p>	<p>Writing Skills</p> <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. prepare a brief case report SA2. fill data sheet related to field observation for incidence of pests and diseases</p> <p>Reading Skills</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA3. read government/organizational guidelines/manuals SA4. read brochures/pamphlets on different pests and diseases</p>

AGR/N1210 Understand major pests of area specific crops along with their nutrients need

	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: SA5. discuss the prevalent field conditions with farmers and co-workers SA6. discuss survey details with seniors/supervisors SA7. advise farmers to incorporate crop residues along with bio-decomposers to improve soil health
B. Professional Skills	Decision Making
	The user/individual on the job needs to know and understand how to: SB1. make decisions pertaining to specific pest and disease incidence
	Plan and Organize
	The user/individual on the job needs to know and understand how to: SB2. plan field survey for assessment of incidence of pests and diseases
	Customer Centricity
	The user/individual on the job needs to know and understand how to: SB3. develop a rapport with farmers and senior officers and specialists SB4. listen carefully and interpret the information given by the seniors
	Problem Solving
	The user/individual on the job needs to know and understand how to: SB5. think through the problem, evaluate the possible solutions and take up optimum / best solutions
	Analytical Thinking
	The user/individual on the job needs to know and understand how to: SB6. Investigate and analyze in case any mistake has occurred during the identification of pests and diseases
Critical Thinking	
The user/individual on the job needs to know and understand how to: SB7. use the existing data to arrive at specific data points SB8. use the existing data points for improving the call resolution time SB9. use the existing data points to generate required reports for business	

AGR/N1210 Understand major pests of area specific crops along with their nutrients need

NOS Version Control

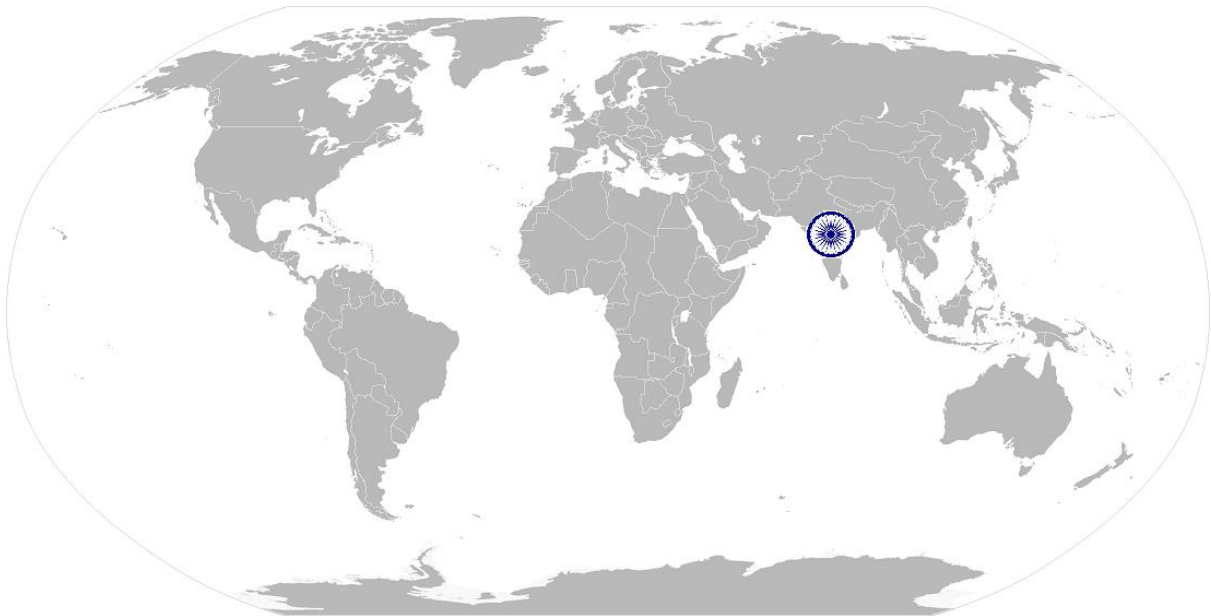
NOS Code	AGR/N1210		
Credits (NSQF)	TBD	Version number	1.0
Industry	Agriculture & allied	Drafted on	18/09/15
Industry Sub-sector	Agriculture Crop Production	Last reviewed on	13/09/17
Occupation	Farm Management	Next review date	13/09/21



AGR/N1211

Use different plant protection chemicals & equipments

National Occupational Standard




Overview

This unit is about proper and safe use of plant protection chemicals & equipments for effective control of pests and disease infestation and nutrient application.

AGR/N1211
Use different plant protection chemicals & equipments

Unit Code	AGR /N1211
Unit Title (Task)	Use different plant protection chemicals & equipments
Description	This OS unit is about proper & safe use of plant protection chemicals & equipments
Scope	This unit/task covers : <ul style="list-style-type: none"> • use of different plant protection chemicals • preparation of spray solution • use of different plant protection tools & equipments • safe field operation of PPEs
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Use of different plant protection chemicals	To be competent, the individual on the job must be able to : <ul style="list-style-type: none"> PC1. identify important agro-chemicals viz-a-viz their application PC2. understand the colour coding & symbols used for pesticides PC3. adhere to the safety instructions/warnings & other information given on the label PC4. understand the proper application technologies available for pesticide and fertilizer application on various crops PC5. select the most appropriate control measures or combination of measures for specific circumstances
Preparation of spray solution	To be competent, the individual must be able to : <ul style="list-style-type: none"> PC6. get familiarized with different types of pesticide and fertilizer formulations PC7. prepare stock solutions and solution of pesticides/ fertilizers as instructed PC8. prepare Bordeaux mixture and paste as instructed
Use of different plant protection tools & equipments	To be competent, the individual must be able to : <ul style="list-style-type: none"> PC9. identify different plant protection equipments (PPEs)- dusters, sprayers, seed treating equipments, fogging machine etc PC10. understand different components of PPEs- their functions & practical use in the field PC11. dismantle and assemble the common type of PPEs as per the instruction manual PC12. calibrate and adjust the PPEs as per the instruction manual PC13. undertake cleaning, oiling and lubrication of PPEs as per the instruction manual PC14. detect faults in the PPEs and undertake remedial action
Safe Field Operation of PPEs	To be competent, the individual must be able to : <ul style="list-style-type: none"> PC15. transport and store pesticides/fertilizers and containers in accordance with the safety manual

AGR/N1211
Use different plant protection chemicals & equipments

	<p>PC16. confirm that the environmental conditions are appropriate for the work to be carried out</p> <p>PC17. select & use appropriate personal protective equipments suitable to the work</p> <p>PC18. assess the risk factors involved in the application of pesticides and fertilizers</p> <p>PC19. select a suitable site for preparation of spray solution</p> <p>PC20. use the correct preparation procedures in accordance with the instructions</p> <p>PC21. use all equipments correctly in accordance with the instruction manual</p> <p>PC22. calculate the minimum application rate to achieve the desired level of control</p> <p>PC23. apply pesticides/ fertilizer at right crop stage & time and in right dose in a way which minimises the risks to non-target species and the environment</p> <p>PC24. avoid splashing, spilling, leaks, spray drift</p> <p>PC25. assess the need of subsequent sprayings for controlling pests</p> <p>PC26. achieve full protection of crops from the pests</p> <p>PC27. achieve better productivity of crops by applying pesticides and fertilizers</p> <p>PC28. understand shelf life of chemicals and dispose off expired material safely</p> <p>PC29. use antidotes and first aid treatment in case of chemical poisoning</p> <p>PC30. maintain personal hygiene throughout </p> <p>PC31. maintain and store the equipment correctly after use and clear the site thoroughly</p> <p>PC32. keep the records accurate, legible and complete</p>
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand: <ul style="list-style-type: none"> KA1. relevant organizational policy on health hazards due to pesticides and fertilizers KA2. supervisory structure- relevant people and their responsibilities within the work area KA3. relevant health and safety requirements applicable in the work environment KA4. own job role and responsibilities KA5. who to approach for support in order to obtain work related instructions, clarifications and support KA6. importance of following health, hygiene, safety and quality standards and the impact of not following the standards on customers and the business
B. Technical Knowledge	The user/individual on the job needs to know and understand: <ul style="list-style-type: none"> KB1. basics of crop production/ agronomy KB2. integrated pest management KB3. integrated nutrient management KB4. soil health management KB5. importance of incorporation of crop residues along with bio decomposers KB6. different strains of bio agents to accelerate decomposition process KB7. different prophylactic measures to contain pest/disease in relation to weather parameter KB8. basics about pesticides and fertilizers KB9. safety guidelines in handling chemicals KB10. classification of pesticides

AGR/N1211
Use different plant protection chemicals & equipments

	<p>KB11. basic knowledge about different chemicals and PPEs</p> <p>KB12. plant protection chemicals, their generic characteristics, compatibility with fertilizers, hormones etc</p> <p>KB13. high volume, low volume and ultra volume spray</p> <p>KB14. knowledge about appropriate use of application equipment</p> <p>KB15. right time for spraying of chemicals</p> <p>KB16. different nutrients and work out of fertilizer dosage requirement for the crop</p> <p>KB17. formulation of pesticides and fertilizers</p> <p>KB18. control of active ingredients in the chemical, media/additives for making solution</p> <p>KB19. right stage and dose of application from food safety (MRL) angle</p> <p>KB20. precautions while handling different pesticides and PPEs</p> <p>KB21. trouble shooting and remedies</p> <p>KB22. common accidents and their prevention</p> <p>KB23. poisoning symptoms related with different chemicals and their antidotes</p> <p>KB24. first-aid application and medical centres for further treatment</p>
Skills (S)	
A. Core Skills/ Generic Skills	Writing Skills
	The user/ individual on the job needs to know and understand how to: <ul style="list-style-type: none"> SA1. prepare a brief case report SA2. fill data sheet related to periodical applications of pesticides and fertilizers.
	Reading Skills
	The user/individual on the job needs to know and understand how to: <ul style="list-style-type: none"> SA3. read government/organizational guidelines/manuals SA4. read brochures/pamphlets given with the pesticides/fertilizers SA5. read labels on the pesticide/fertilizer packets
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: <ul style="list-style-type: none"> SA6. discuss task lists, schedule of application etc. with co-workers SA7. explain farmers/clients on the use of tools/equipment SA8. give clear suggestions/guidance to farmers/clients SA9. advise farmers to incorporate crop residues along with bio decomposers to improve the soil health
B. Professional Skills	Decision Making
	The user/individual on the job needs to know and understand how to: <ul style="list-style-type: none"> SB1. make decisions pertaining to the use of equipment and material (pesticide/ fertilizer)
	Plan and Organize
	The user/individual on the job needs to know and understand how to: <ul style="list-style-type: none"> SB2. plan the application of pesticides and fertilizers in the farm

AGR/N1211

Use different plant protection chemicals & equipments

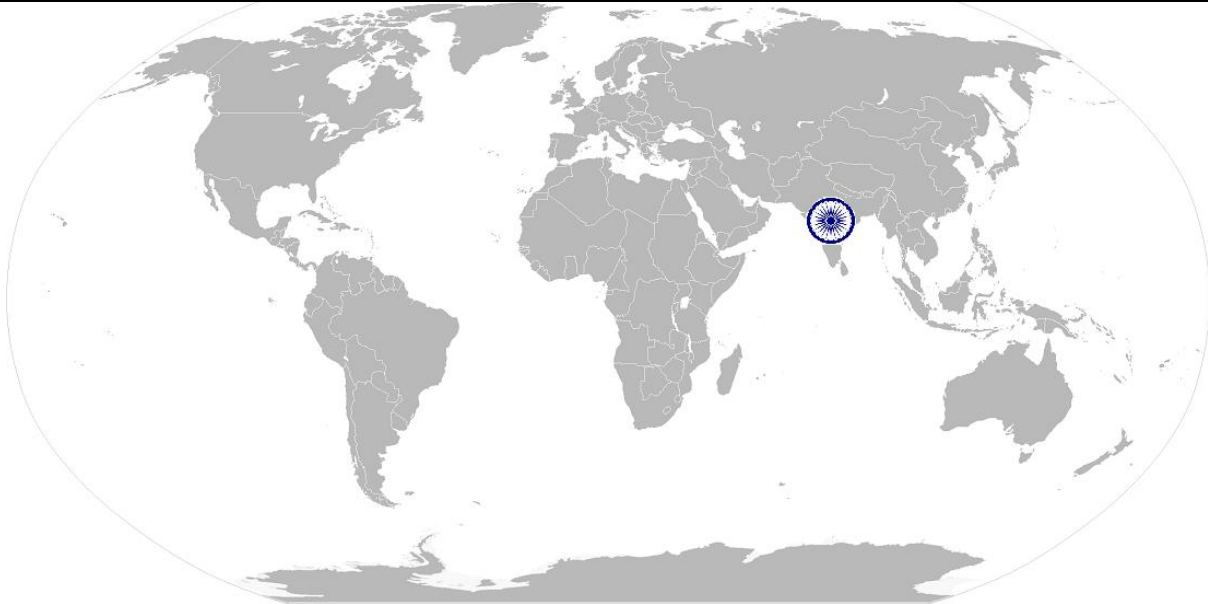
	Customer Centricity
	The user/individual on the job needs to know and understand how to: SB3. develop a rapport with farmers and senior officers and specialists SB4. listen carefully and interpret the information given by the seniors
	Problem Solving
	The user/individual on the job needs to know and understand how to: SB5. think through the problem, evaluate the possible solutions and take up optimum / best solutions
	Analytical Thinking
	The user/individual on the job needs to know and understand how to: SB6. investigate and analyze in case any mistake has occurred during the application of pesticides and fertilizers
	Critical Thinking
	The user/individual on the job needs to know and understand how to: SB7. use the existing data to arrive at specific data points SB8. use the existing data points for improving the call resolution time SB9. use the existing data points to generate required reports for business

AGR/N1211

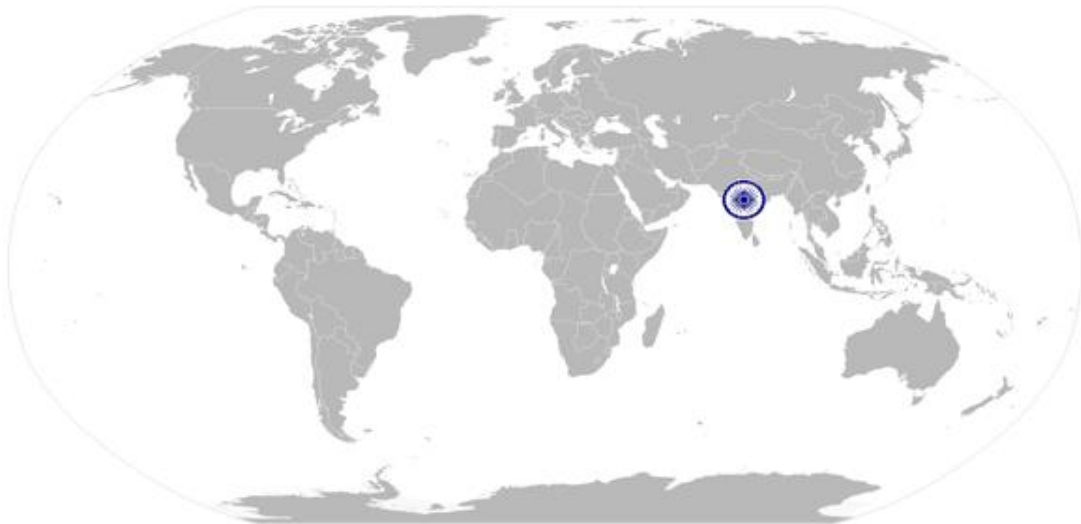
Use different plant protection chemicals & equipments

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NOS Code	AGR/N1210		
Credits (NSQF)	TBD	Version number	1.0
Industry	Agriculture & allied	Drafted on	18/09/15
Industry Sub-sector	Agriculture Crop Production	Last reviewed on	30/11/15
Occupation	Farm Management	Next review date	31/03/18



National Occupational Standard



Overview

This unit is about dealing with health and safety of the farmers and co workers at workplace.

AGR/N9903
Maintain health & safety at the work place

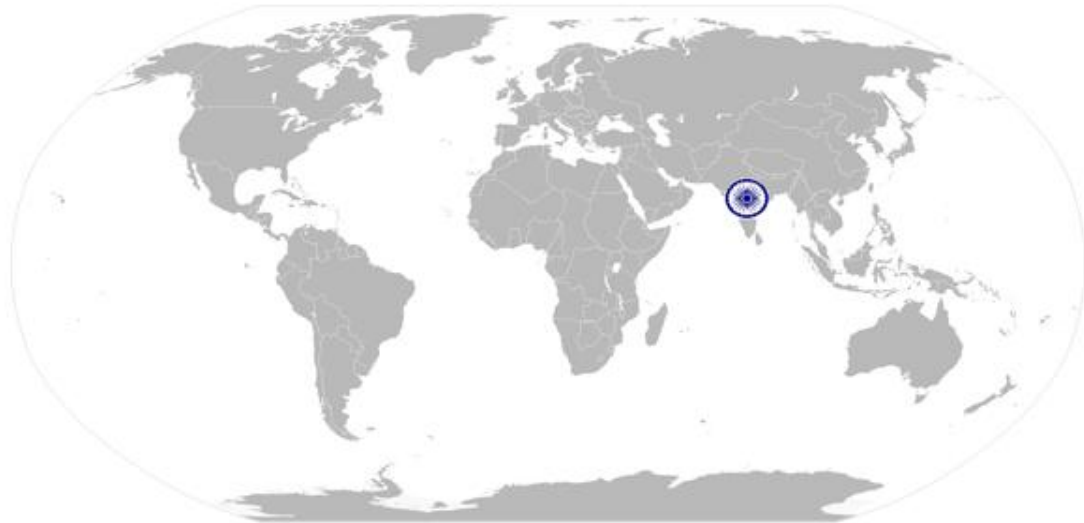
Unit Code	AGR/N9903
Unit Title (Task)	Maintain health and safety at the workplace
Description	This OS is for the cultivator who is responsible for maintaining health and safety of self and others co workers at workplace
Scope	This unit/task covers the following: <ul style="list-style-type: none"> • maintain 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> <p>PC15. report details of first aid administered in accordance with workplace procedures.</p>

AGR/N9903
Maintain health & safety at the work place

Knowledge and Understanding (K)	
A. Maintain clean and efficient workplace	The user/individual on the job needs to know and understand: <ul style="list-style-type: none"> KA1. personal hygiene and fitness requirements KA2. your general duties under the relevant health and safety legislation KA3. what personal protective equipment and clothing should be worn and how it is cared for KA4. the correct and safe way to use materials and equipment required for your work KA5. the importance of good housekeeping in the workplace KA6. safe disposal methods for waste KA7. methods for minimizing environmental damage during work
B. Render appropriate emergency procedures	The user/individual on the job needs to know and understand: <ul style="list-style-type: none"> KB1. the risks to health and safety and the measures to be taken to control those risks in your area of work KB2. workplace procedures and requirements for the treatment of workplace injuries/illnesses. KB3. basic emergency first aid procedure KB4. local emergency services KB5. why accidents, incidents and problems should be reported and the appropriate action to take
Skills (S)	
A. Core Skills/ Generic Skills	Writing Skills
	The user/ individual on the job needs to know and understand how to: <ul style="list-style-type: none"> SA1. mention the data which are required for record keeping purpose SA2. report problems to the appropriate personnel in a timely manner SA3. write descriptions and details about incidents in reports
	Reading Skills
	The user/ individual on the job needs to know and understand how to: <ul style="list-style-type: none"> SA4. read instruction manual for hand tool and equipments
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: <ul style="list-style-type: none"> SA5. communicate clearly and effectively with others like farmers, concerned officer/stakeholders SA6. comprehends information shared by senior people and experts
B. Professional Skills	Decision Making
	The user/individual on the job needs to know and understand how to: <ul style="list-style-type: none"> SB1. make decisions pertaining to types of tools to be used SB2. identify need of first aid and render it accordingly
	Plan and Organize
	The user/individual on the job needs to know and understand how to: <ul style="list-style-type: none"> SB3. schedule daily activities and drawing up priorities; allocate start times, estimation of completion times and materials, equipment and assistance required for completion.

AGR/N9903
Maintain health & safety at the work place

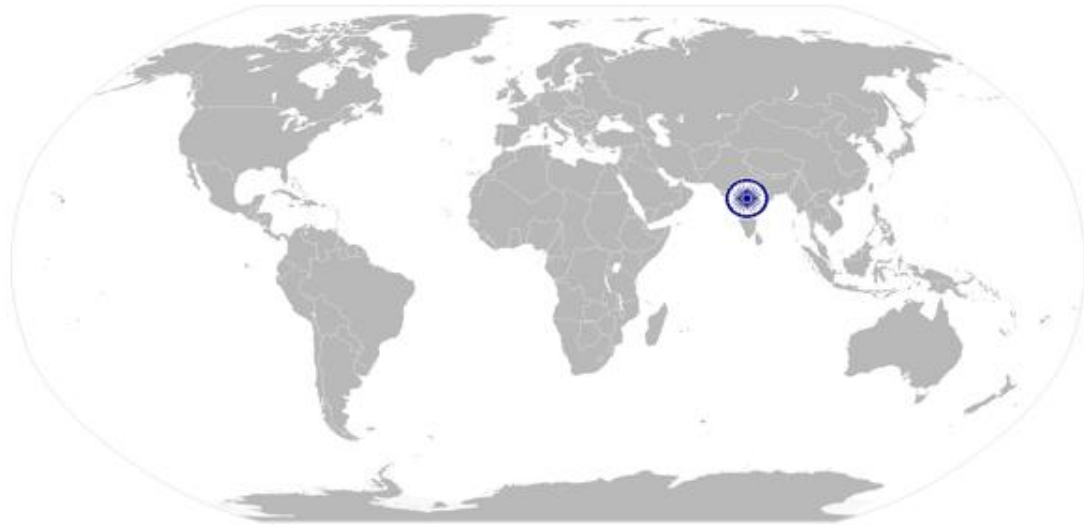
	Customer Centricity
	The user/individual on the job needs to know and understand how to: SB4. manage relationships with co-workers and managers of the who may be stressed, frustrated, confused or angry SB5. participate in paddy exhibition/seminar/workshop
	Problem Solving
	The user/individual on the job needs to know and understand how to: SB6. identify appropriate solutions to resolve delays various problems in the field and take necessary steps to solve the problem
	Analytical Thinking
	The user/individual on the job needs to know and understand how to: SB7. monitor and maintain the condition of tools and equipment SB8. assess situation & identify appropriate control measures
	Critical Thinking
	The user/individual on the job needs to know and understand how to: SB9. apply, analyze, and evaluate the information gathered from observation, experience, reasoning, or communication, as a guide to thought and action



AGR/N9903
Maintain health & safety at the work place

NOS Version Control

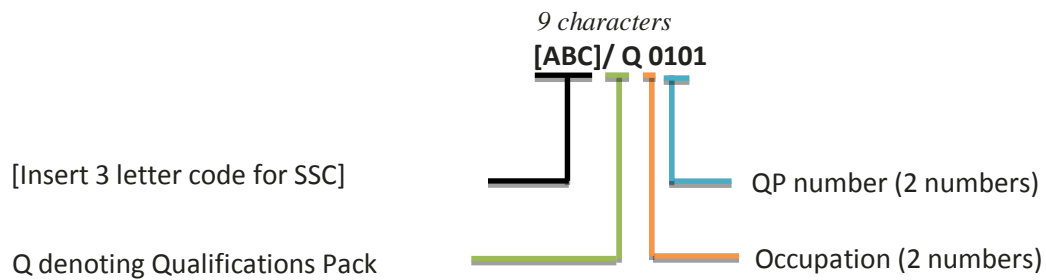
NOS Code	AGR/N9903		
Credits (NSQF)	TBD	Version number	1.0
Sector	Agriculture and Allied	Drafted on	25/02/14
Sub Sector	Agriculture Crop Production	Last reviewed on	13/09/17
Occupation	Generic	Next review date	13/09/21



Annexure

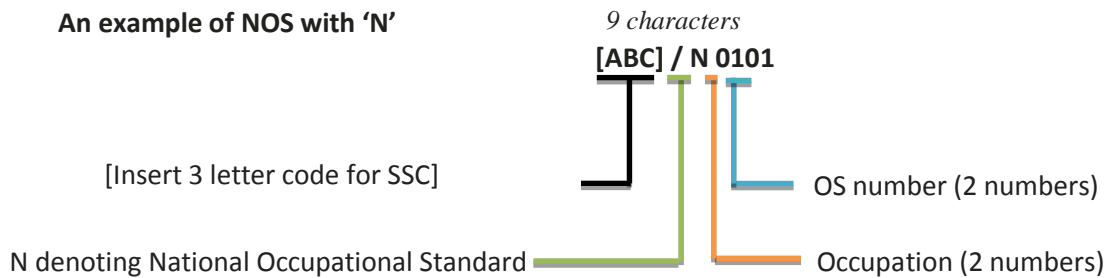
Nomenclature for QP and NOS

Qualifications Pack



Occupational Standard

An example of NOS with 'N'



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: Pesticide & Fertilizer Applicator

Qualification Pack: AGR/Q1202

Sector Skill Council: Agriculture Skill Council of India

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.
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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 70% 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 / N 1210 – Understand major pests of area specific crops along with their fertilizer need	PC.1 get familiarized with the cropping pattern in the area	120	10	6	4
	PC.2 diagnose the causes of pest damage symptoms by analysing feeding methods and behaviour		12	6	6
	PC3. identify the factors that determine the occurrence of pest damage and its importance		10	4	6
	PC4. recognize the important pests of specific crops in order to identify, anticipate and prevent the damage each may cause, and to select the most appropriate control measures or combination of measures for specific circumstances		12	6	6
	PC5. conduct field observation for pests judging the intensity of occurrence		10	4	6
	PC6. collect samples of pests and damaged crops		10	4	6
	PC7. ascertain the insect-pests and confirm its growth stage		8	4	4
	PC8. ascertain the disease infesting the crops		10	4	6

	PC9. ascertain the weed-pests		8	4	4
	PC10. get familiarized with different nutrients deficiency diseases		10	5	5
	PC11. comprehend the importance and application of different types of fertilizers /micronutrients		10	4	6
	PC12. determine the nutrient requirement of plants as per the cropping pattern and soil conditions		10	4	6
		120	120	55	65
AGR / N 1211 - Use different plant protection chemicals & equipments	PC.1 identify important agro-chemicals viz-a-viz their application		6	3	3
	PC2. understand the colour coding & symbols used for pesticides		4	2	2
	PC3. adhere to the safety instructions/warnings & other information given on the label		4	2	2
	PC4. understand the proper application technologies available for pesticide and fertilizer application on various crops		6	2	4
	PC5. select the most appropriate control measures or combination of measures for specific circumstances		6	3	3
	PC6. understand shelf life of chemicals and dispose off expired material		2	1	1
	PC6. get familiarized with different types of pesticide and fertilizer formulations		5	3	2
	PC7. prepare stock solutions and solution of pesticides/ fertilizers as instructed		6	3	3
	PC8. prepare Bordeaux mixture and paste as instructed		5	2	3
	PC9. identify different plant protection equipments (PPEs)- dusters, sprayers, seed treating equipments, fogging machine etc		6	2	4
	PC10. understand different components of PPEs- their functions & practical use in the field		4	2	2
	PC11. dismantle and assemble the common type of PPEs as per the instruction manual		4	2	2
	PC12. calibrate and adjust the PPEs as per the instruction manual		4	2	2
	PC13. undertake cleaning, oiling and lubrication of PPEs as per the instruction manual		2	1	1
PC14. detect faults in the PPEs and undertake remedial action	120	2	1	1	

	PC15. transport and store pesticides/fertilizers and containers in accordance with the safety manual		2	1	1
	PC16. confirm that the environmental conditions are appropriate for the work to be carried out		2	1	1
	PC17. select & use appropriate personal protective equipments suitable to the work		2	1	1
	PC18. assess the risk factors involved in the application of pesticides and fertilizers		4	2	2
	PC19. select a suitable site for preparation of spray solution		2	0	2
	PC20. use the correct preparation procedures in accordance with instructions		2	0	2
	PC21. use all equipments correctly in accordance with the instruction manual		4	2	2
	PC22. calculate the minimum application rate to achieve the desired level of control		4	2	2
	PC23. apply pesticides/ fertilizer at right crop stage & time and in right dose in a way which minimises the risks to non-target species and the environment		4	2	2
	PC24. avoid splashing, spilling, leaks and spray drift		2	0	2
	PC25. assess the need of subsequent sprayings for controlling pests		2	2	0
	PC26. achieve full protection of crops from the pests		4	2	2
	PC27. achieve better productivity of crops by applying pesticides and fertilizers		2	1	1
	PC28. understand shelf life of agrochemicals & dispose off expired materials safely		2	1	1
	PC29. use antidotes and first aid treatment in case of chemical poisoning		4	2	2
	PC30. maintain personal hygiene throughout		4	2	2
	PC31. maintain and store the equipment correctly after use and clear the site thoroughly		4	2	2
	PC32. keep the records accurate, legible and complete		4	2	2
		120	120	56	64
3. AGR / N 9903 - Maintain Health & Safety at the workplace	PC1. undertake basic safety checks before operation of all machinery and vehicles and hazards are reported to the appropriate supervisor	60	2	1	1

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.	2	1	1
PC3. read and understand the hazards of use and contamination mentioned on the labels of pesticides/fumigants etc	5	2	3
PC4. assess risks prior to performing manual handling jobs, and work according to currently recommended safe practice.	5	3	2
PC5. use equipment and materials safely and correctly and return the same to designated storage when not in use	5	2	3
PC6. dispose of waste safely and correctly in a designated area	2	1	1
PC7. recognise risks to bystanders and take action to reduce risk associated with jobs in the workplace	5	3	2
PC8. perform your work in a manner which minimizes environmental damage all procedures and work instructions for controlling risk are followed closely.	2	1	1
PC9. report any accidents, incidents or problems without delay to an appropriate person and take necessary immediate action to reduce further danger.	2	1	1
PC10. follow procedures for dealing with accidents, fires and emergencies, including communicating location and directions to emergency.	5	2	3
PC11. follow emergency procedures to company standard / workplace requirements	5	2	3
PC12. use emergency equipment in accordance with manufacturers' specifications and workplace requirements	5	3	2
PC13. provide treatment appropriate to the patient's injuries in accordance with recognized first aid techniques	5	3	2
PC14. recover (if practical), clean, inspect/test, refurbish, replace and store the first aid equipment as appropriate	6	3	3
PC15. report details of first aid administered in accordance with workplace procedures	4	2	2
	60	30	30