

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- Quality Seed Grower

SECTOR: AGRICULTURE INDUSTRIES

SUB-SECTOR: Agriculture Industries

OCCUPATION: Seed Production And Processing

REFERENCE ID: AGR/Q7101

ALIGNED TO: NCO-2015/6130.0201

Quality Seed Grower: Quality Seed Grower is responsible for producing foundation and multiplication seeds according to pre-determined standards and systems while maintaining its genetic purity.

Brief Job Description: The individual at work cultivates breeder seeds to produce foundation seeds and foundation seeds to produce multiplication seeds of crops by undertaking recommended practices and methods.

Personal Attributes: The job requires the individual to have: good eyesight and observation ability, attention to details, ability to work independently as well as under expert's supervision, quality orientation, health safety, willingness to wear protective gears and the stamina for long hours of work in different environmental conditions.

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Job Details	Qualifications Pack Code	AGR/Q7101		
	Job Role	Quality Seed Grower		
	Credits (NSQF)	TBD	Version number	1.0
	Sector	Agriculture and Allied	Drafted on	25/02/14
	Sub Sector	Agriculture Industries	Last reviewed on	14/06/17
	Occupation	Seed Production And Processing	Next review date	14/06/21
	NSQC Clearance on	18/06/2015		

Job Role	Quality Seed Grower Also called as "Seed grower"
Role Description	The individual cultivates breeder seeds to produce foundation seeds and foundation seeds to produce multiplication seeds of crops by undertaking recommended practices and methods
NSQF level	4
Minimum Educational Qualifications	5 th standard pass, preferably
Maximum Educational Qualifications	Not Applicable
Training (Suggested but not mandatory)	NA
Minimum Job Entry Age	17 Years
Experience	Six months experience in crop cultivation practices
Applicable National Occupational Standards (NOS)	Compulsory: <ol style="list-style-type: none"> AGR/N7101 Collect information and resources for seed production AGR/N7102 Prepare field and sow seeds AGR/N7103 Grow and manage seed crop AGR/N7104 Harvest and thresh the seed crop AGR/N7105 Post harvest management of seeds AGR/N9903 Maintain Health & Safety at the work place
Performance Criteria	As described in the relevant OS units

Keywords /Terms	Description
Sector	Sector is a conglomeration of different business operations having similar business 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 an 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.
Sub-function	Sub-functions are sub-activities essential to fulfil the achieving the objectives of the function.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
Occupational Standards (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.
National Occupational Standards (OS)	NOS are occupational standards which apply uniquely in the Indian context.
Qualifications Pack (QP)	QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications 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.
Scope	Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.
Knowledge and Understanding	Knowledge and understanding are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.
Organisational Context	Organisational context includes the way the organisation 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/ Generic Skills	Core skills or generic skills are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any

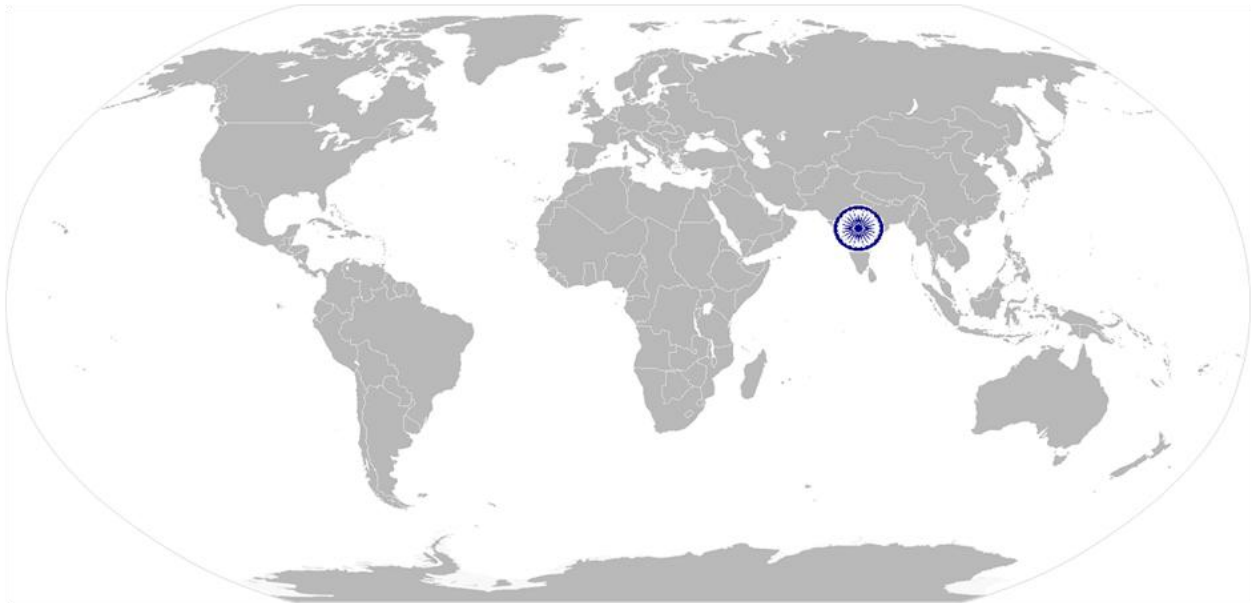
Acronym

	work environment 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.
SOP	Standard Operating Procedure
Keywords /Terms	Description
NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
AGR	Agriculture

AGR/N7101

Collect information and resources for seed production

National Occupational Standard



Overview

This unit is about collecting the information and required resources for production of quality seeds.

AGR/N7101
Collect information and resources for seed production

Unit Code	AGR/N7101
Unit Title (Task)	Collect information and resources for seed production
Description	This OS is about collecting the information and required resources for production of quality seeds.
Scope	This unit/task covers the following: <ul style="list-style-type: none"> • Understand work requirements • Indent and receive required resources • Store the received material • Achieve productivity and quality standards
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Understand work requirements	To be competent, the individual on the job must be able to: PC1. receive the instructions and work requirements from company's field supervisor PC2. understand standard practices and methods for quality seed growing PC3. understand the methods of using tools, equipments and personal protective gears for seed growing PC4. understand the standard precautions to be taken for quality seed growing PC5. understand the quality parameters on which seed crop will be evaluated and payment will be made to the seed grower PC6. sign a contract with the seed processor to produce seeds of predetermined quality and standard
Indent and receive required resources	To be competent, the individual on the job must be able to: PC7. indent for breeder / foundation seeds, fertilizers, tools, equipments, personal protective gears, containers for collecting soil samples for testing and work instructions PC8. receive all the resources from the field supervisor PC9. document the materials received as per company's work instructions
Store the received material	To be competent, the individual on the job must be able to: PC10. segregate the received material as per the work instructions PC11. unpack the material as per the requirement PC12. follow the standard precautions for handling the material like seed, fertilizers etc. PC13. store them as per instructions
Achieve productivity and quality standards	To be competent, the user/ individual must be able to: PC14. get complete understanding of producing the quality seeds as per predetermined quality and standard PC15. identify missing resources or their shortages for producing the seed yield as per the contract PC16. ensure proper handling and storage of received resources
Knowledge and Understanding (K)	

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Collect information and resources for seed production

A. Organizational Context (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand: KA1. relevant legislation, standards, policies, and procedures in work KA2. relevant health and safety requirements applicable in the work environment KA3. own job role and responsibilities and sources for information pertaining to work KA4. who to approach for support in order to obtain work related information, clarifications and support KA5. importance of following health, hygiene, safety and quality standards and the impact of not following the standards on consumers and the business KA6. documentation and related procedures applicable in the context of work
B. Technical Knowledge	The individual on the job needs to know and understand: KB1. company's policies on: incentives; quality, safety and delivery standards KB2. company's reporting structure KB3. company's grievance redressal system KB4. about different types of seeds and their characteristics KB5. correct way of handling different types and varieties of seeds KB6. about different types of resources required to produce quality seeds KB7. about effective storage of different types of resources KB8. about characteristics of good quality seed KB9. about factors influencing seed production KB10. about agro-climatic conditions of the area KB11. about site selection and field preparation
Skills (S)	
A. Core Skills/ Generic Skills	Writing Skills The user/individual on the job needs to know and understand how to SA1. document information regarding materials received
	Reading skills The user/individual on the job needs to know and understand how: to SA2. read agriculture related articles
	Oral Communication (Listening & Speaking Skills) The user/individual on the job needs to know and understand how to SA3. listen to supervisor to capture information on production of quality of seeds SA4. communicate clearly and effectively to field supervisor on resource requirements
B. Professional Skills	Decision Making The user/individual on the job needs to know and understand:how to SB1. whether to consult field supervisor for calculation of quantity of resources required as per the field size or not
	Plan and Organize The user/individual on the job needs toknow: how to SB2. how to operate tools and equipments used for seed production e.g chemical sprayer etc.

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Collect information and resources for seed production

	SB3. how to do the routine maintenance of these equipments
	Problem Solving
	The user/individual on the job needs to know and understand how: to SB4. resolve work-related problems e.g., work instructions not available in-vernacular
	Customer Centricity
	SB5. manage relationships with laborers and other co-farmers SB6. attend and make use of exposure visit
	Analytical Thinking
	The user/individual on the job needs to know and understand how: to SB7. monitor and maintain the material and equipment required for various farm operations
	Critical Thinking
The user/individual on the job needs to know and understand how: to SB8. take up his own working and learning	



AGR/N7101

Collect information and resources for seed production

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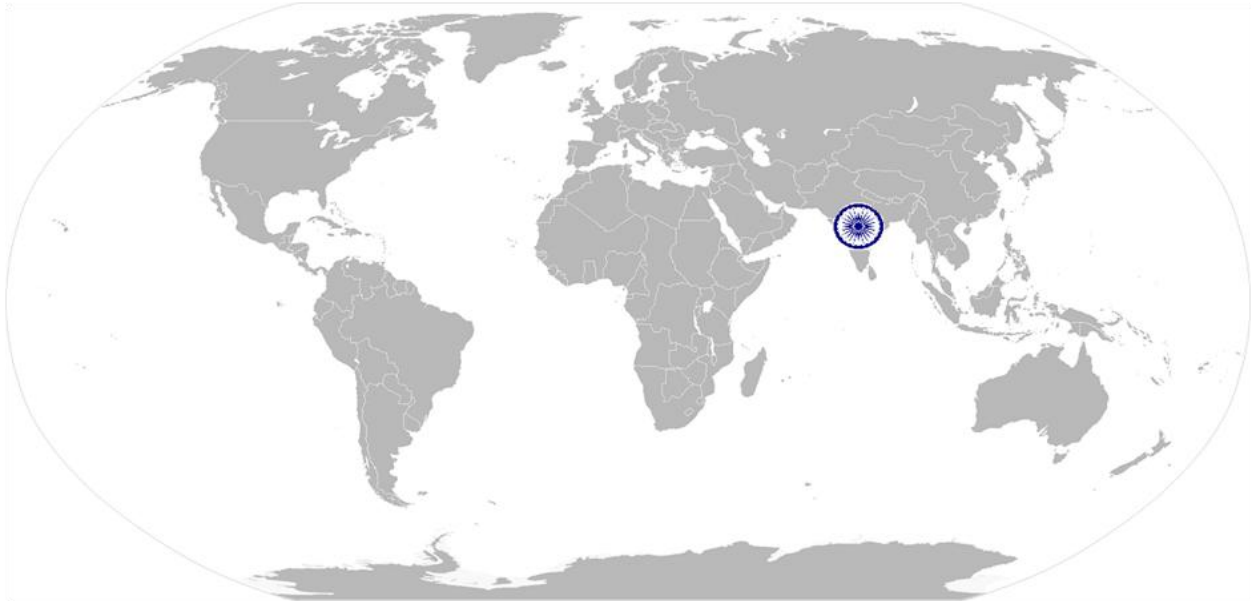
NOS Code	AGR/N7101		
Credits (NSQF)	TBD	Version number	1.0
Sector	Agriculture and Allied	Drafted on	25/02/14
Sub Sector	Agriculture Industries	Last reviewed on	14/06/17
Occupation	Seed Production And Processing	Next review date	14/06/21



AGR/N7102

Prepare field and sow seeds

National Occupational Standard



Overview

This unit is about getting the field ready for seed crop and then sowing the seeds.

AGR/N7102
Prepare field and sow seeds

Unit Code	AGR/N7102
Unit Title (Task)	Prepare field and sow seeds
Description	This OS is about getting the field ready for seed crop and then sowing the seeds
Scope	This unit/task covers the following: <ul style="list-style-type: none"> • Take soil sample for lab testing • Prepare field for sowing • Sow seed crop • Achieve productivity and quality standards
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Take soil sample for lab testing	To be competent, the individual must be able to: PC1. take multiple soil samples of the field from different parts as per instructions PC2. pack and label the soil samples and send them for lab testing to the company PC3. document as per the company's instructions
Prepare the field for sowing	To be competent, the individual must be able to: PC4. carefully clean and plough the land as per instructions of the company PC5. receive the soil testing report from the company along with their recommendations for preparing the soil PC6. use right kind and quantity of fertilizer(s) to improve the soil fertility as recommended by the company PC7. prepare the field as per company's instructions PC8. get the field inspected by the field supervisor
Sow seed crop	To be competent, the individual must be able to: PC9. receive instructions from the field supervisor regarding timing of sowing seeds based on the local climatic conditions PC10. sow the seed crop with the method suggested by the field supervisor depending on soil, topography and climatic conditions PC11. sow seeds in rows keeping appropriate distance as per the work instructions
Achieve productivity and quality standards	To be competent, the user/ individual must be able to: PC12. prepare and plough the field so that the best possible seed bed is prepared PC13. ensure preparation of field about 2 weeks before sowing so that weed seed in the soil could germinate to form small weed plants which could be removed from the field PC14. harrow and cultivate the field to destroy young weed plants PC15. eliminate weed plants which would otherwise grow in with the seed crop PC16. sowing of seed crop with optimum rate(quantity) in a given piece of land, so that it gives high yield PC17. ensure proper documentation as per the company's SOP
Knowledge and Understanding (K)	

AGR/N7102
Prepare field and sow seeds

A. Organizational Context (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand: KA1. relevant legislation, standards, policies, and procedures in work KA2. relevant health and safety requirements applicable in the work environment KA3. own job role and responsibilities and sources for information pertaining to work KA4. who to approach for support in order to obtain work related information, clarifications and support KA5. importance of following health, hygiene, safety and quality standards and the impact of not following the standards on consumers and the business KA6. documentation and related procedures applicable in the context of work
B. Technical Knowledge	The individual on the job needs to know and understand: KB1. company's policies on: incentives; quality, safety and delivery standards KB2. company's reporting structure KB3. company's grievance redressal system KB4. about soil sampling and handling procedures KB5. level of soil tillage include depth of ploughing and appropriate equipment for ploughing KB6. seed bed preparation using recommended mixture of soil and manure cost KB7. appropriate time for sowing by considering soil, climatic conditions KB8. suitability and advantages & disadvantages of various sowing methods KB9. spacing between rows and plants KB10. about different types of seeds and their characteristics KB11. correct way of handling different types and varieties of seeds KB12. about characteristics of good quality seed KB13. about ways of deterioration of crop varieties and prevention methods KB14. about factors influencing seed production KB15. about agro-climatic conditions of the area KB16. about site selection and field preparation KB17. about right sowing season and correct planting density KB18. about weed management and rouging KB19. about pest and disease management KB20. about ways of maintaining the pure accessions
Skills (S)	
A. Core Skills/ Generic Skills	Writing Skills
	The user/individual on the job needs to know and understand how: to SA1. document information regarding field preparation and seed sowing
	Reading skills
	The user/individual on the job needs to know and understand how:to SA2. read agriculture related articles
	Oral Communication (Listening & Speaking Skills)

AGR/N7102

Prepare field and sow seeds

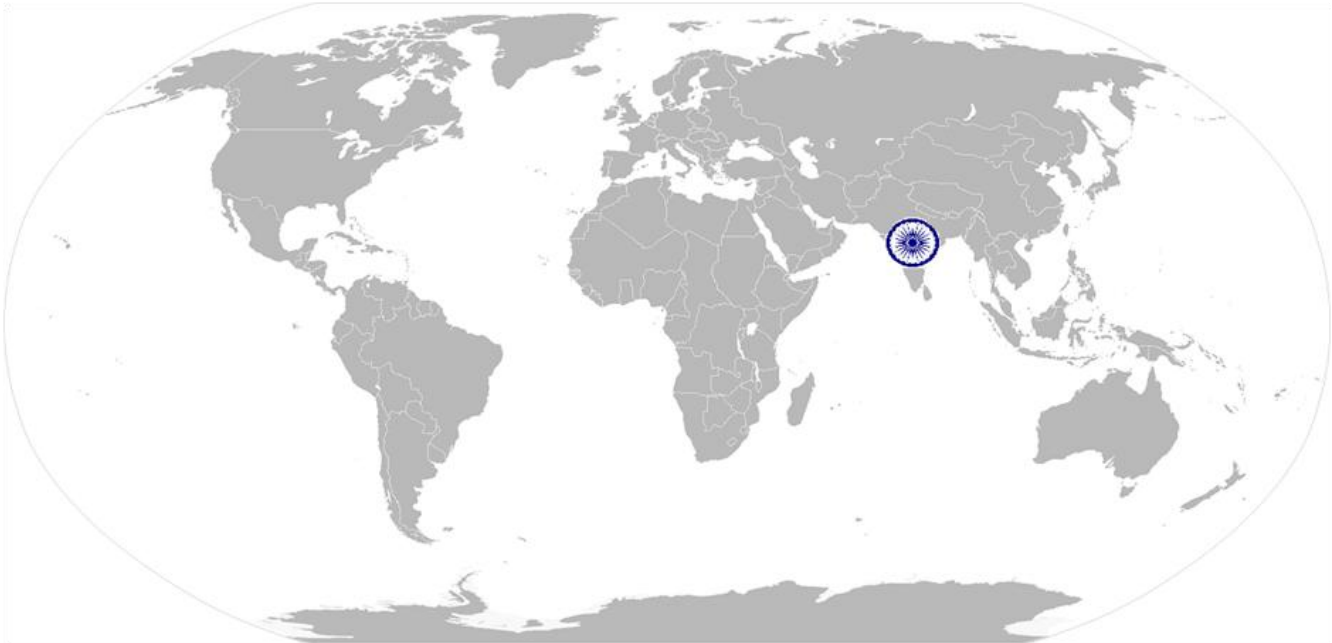
	<p>The user/individual on the job needs to know and understand how: to</p> <p>SA3. listen to supervisor to capture information on field preparation and right time to sow the seeds</p> <p>SA4. communicate clearly and effectively to field supervisor on resource requirements</p>
A. Professional Skills	Decision Making
	<p>The user/individual on the job needs to know and understand:</p> <p>SB1. when to consult field supervisor for issues related to field preparation and seed sowing</p>
	Plan and Organize
	<p>The user/individual on the job needs to know and understand how: to</p> <p>SB2. operate tools and equipments used for field preparation and seed sowing</p> <p>SB3. do the routine maintenance of these equipments</p>
	Problem solving
	<p>The user/individual on the job needs to know and understand how: to</p> <p>SB4. resolve work-related problems e.g., inadequate seed quantity for sowing as per the field area</p>
	Customer Centricity
	<p>The user/individual on the job needs to know and understand how: to</p> <p>SB5. manage relationships with laborers and other co-farmers</p> <p>SB6. attend and make use of exposure visit</p>
	Analytical Thinking
	<p>The user/individual on the job needs to know and understand how: to</p> <p>SB7. monitor and maintain the material and equipment required for various farm operations</p>
Critical Thinking	
<p>The user/individual on the job needs to know and understand how: to</p> <p>SB8. take up his own working and learning</p>	

AGR/N7102

Prepare field and sow seeds

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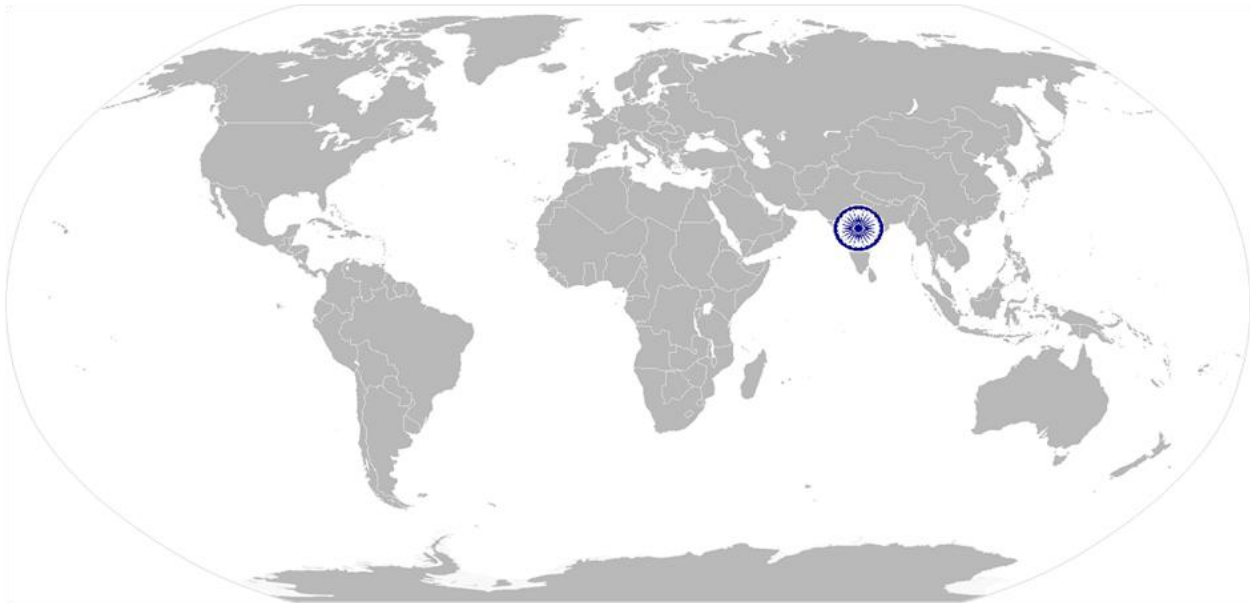
NOS Code	AGR/N7102		
Credits (NSQF)	TBD	Version number	1.0
Sector	Agriculture and Allied	Drafted on	25/02/14
Sub Sector	Agriculture Industries	Last reviewed on	14/06/17
Occupation	Seed Production And Processing	Next review date	14/06/21



AGR/N7103

Grow and manage seed crop

National Occupational Standard



Overview

This unit is about growing and managing the seed crop as per the standard practices to maintain predetermined quality.

AGR/N7103
Grow and manage seed crop

Unit Code	AGR/N7103
Unit Title (Task)	Grow and manage seed crop
Description	This OS is about growing and managing the seed crop as per the standard practices to maintain pre-determined quality
Scope	This unit/task covers the following: <ul style="list-style-type: none"> • Apply fertilizer(s) • Undertake weed control • Inspect and diagnose problems related to seed crop • Irrigate seed crop optimally • Achieve productivity and quality standards
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Apply fertilizer(s)	To be competent, the individual must be able to: PC1. get the seed crop inspected by the field supervisor PC2. receive instructions from the field supervisor regarding use of organic and inorganic fertilizers including farm yard manure PC3. apply organic and inorganic fertilizer in correct dosages on seed crop as advised by the field supervisor
Undertake weed control	To be competent, the individual must be able to: PC4. identify the types of weeds in the crop PC5. identify field patches infested with troublesome weeds which interfere with crops PC6. perform manual removal of weeds regularly while they are small PC7. apply bio-herbicides, weedicides and chemicals as advised by the field supervisor in prescribed quantity to control and remove weeds PC8. maintain records as per instructions
Inspect and diagnose problems related to seed crop	To be competent, the individual must be able to: PC9. inspect and diagnose early signs and symptoms of seed crop damage PC10. Identify the extent of crop damage due to pests, insects and disease if any PC11. notify any damage to the crops to field supervisor PC12. apply chemical(s) on seed crop suggested by the field supervisor to make it disease free PC13. maintain records as per the work instructions
Irrigate seed crop optimally	To be competent, the individual must be able to: PC14. inspect seed crop regularly and identify the time of irrigation PC15. check availability of irrigation channels in the field PC16. incorporate appropriate micro-irrigation techniques (such as drip irrigation) using appropriate equipments PC17. apply smaller amounts of water more often to maintain the optimum soil moisture in the field PC18. ensure proper water drainage PC19. maintain records as per the work instructions
Achieve productivity and	To be competent, the user/ individual must be able to:

AGR/N7103
Grow and manage seed crop

quality standards	PC20. ensure daily regular walking back and forth through a field to timely identify problems related to seed crop PC21. ensure appropriate and uniform application of fertilizers in prescribed doses PC22. ensure pulling out weeds without damaging the crop plants PC23. maintain uniform moisture in the soil PC24. ensure proper water drainage PC25. ensure proper documentation as per the company's SOP
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: KA1. relevant legislation, standards, policies, and procedures in work KA2. relevant health and safety requirements applicable in the work environment KA3. own job role and responsibilities and sources for information pertaining to work KA4. who to approach for support in order to obtain work related information, clarifications and support KA5. importance of following health, hygiene, safety and quality standards and the impact of not following the standards on consumers and the business KA6. documentation and related procedures applicable in the context of work
B. Technical Knowledge	The individual on the job needs to know and understand: KB1. company's policies on: incentives; quality, safety and delivery standards, KB2. company's reporting structure KB3. company's grievance redressal system KB4. different types of pests affecting seed crops KB5. different stages of crop and insect incidence KB6. signs and symptoms of crop damage KB7. major seed crop diseases KB8. characteristics of good irrigation systems KB9. about ways of deterioration of crop varieties and prevention methods KB10. about factors influencing seed production KB11. about weed management and rouging KB12. about pest and disease management KB13. about ways of maintaining the pure accessions
Skills (S)	
A. Core Skills/ Generic Skills	Writing Skills
	The user/individual on the job needs to know and understand how: to SA1. document information regarding seed crop management
	Reading skills
	The user/individual on the job needs to know and understand how: to SA2. read agriculture related articles
	Oral Communication (Listening and Speaking skills)

AGR/N7103
Grow and manage seed crop

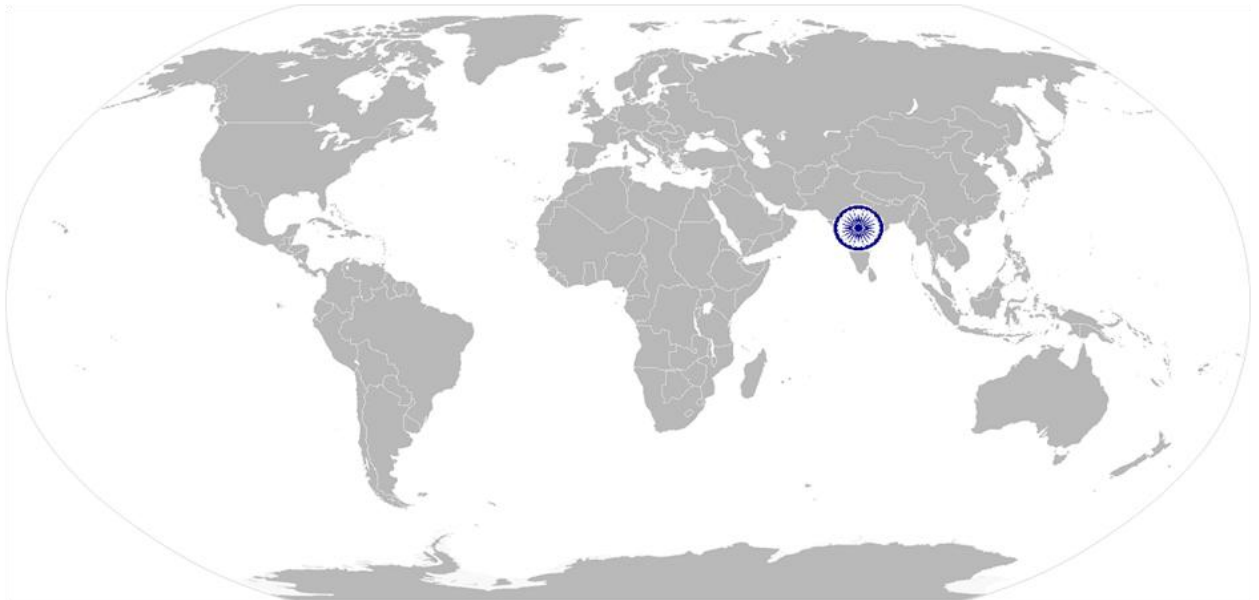
	<p>The user/individual on the job needs to know and understand how: to</p> <p>SA3. listen to field supervisor to capture information on seed crop management</p> <p>SA4. communicate clearly and effectively to field supervisor regarding problems related to seed crop management</p>
A. Professional Skills	<p>Decision Making</p> <p>The user/individual on the job needs to know and understand: how to</p> <p>SB1. consult field supervisor for issues related to seed crop management</p>
	<p>Plan and Organize</p> <p>The user/individual on the job needs to know and understand: how to</p> <p>SB2. operate tools and equipments used for seed production and management e.g chemical sprayer etc.</p> <p>SB3. do the routine maintenance of these equipments</p>
	<p>Problem solving</p> <p>The user/individual on the job needs to know and understand: how to</p> <p>SB4. solve work related problems e.g., non-functional sprayer</p>
	<p>Customer Centricity</p> <p>The user/individual on the job needs to know and understand: how to</p> <p>SB5. build relationships and use human centric approach</p> <p>SB6. attend and make use of exposure visit</p>
	<p>Analytical Thinking</p> <p>The user/individual on the job needs to know and understand: how to</p> <p>SB7. monitor and maintain the material and equipment required for various farm operations</p>
	<p>Critical Thinking</p> <p>The user/individual on the job needs to know and understand: how to</p> <p>SB8. take up his own working and learning</p>

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Grow and manage seed crop

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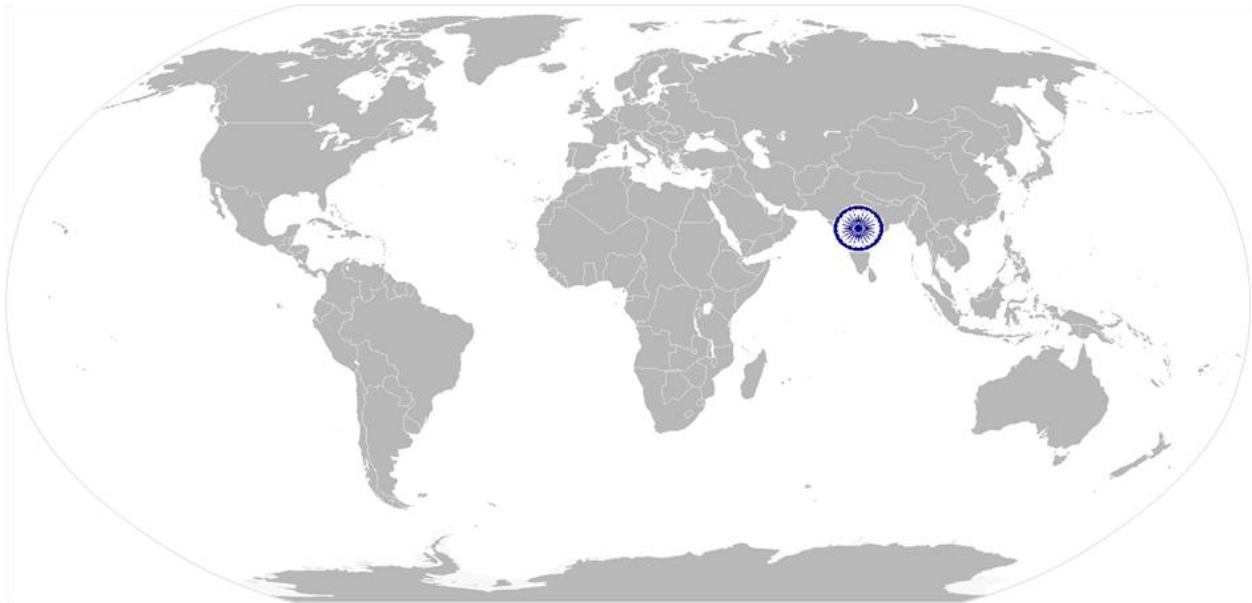
NOS Code	AGR/N7103		
Credits (NSQF)	TBD	Version number	1.0
Sector	Agriculture and Allied	Drafted on	25/02/14
Sub Sector	Agriculture Industries	Last reviewed on	14/06/17
Occupation	Seed Production And Processing	Next review date	14/06/21



AGR/N7104

Harvest and thresh the seed crop

National Occupational Standard



Overview

This unit is about reaping the seed crop at maturity and then threshing it to get the seeds.

AGR/N7104
Harvest and thresh the seed crop

Unit Code	AGR/N7104
Unit Title (Task)	Harvest and thresh the seed crop
Description	This OS is about reaping the seed crop at maturity and then threshing it to get the seeds
Scope	This unit/task covers the following: <ul style="list-style-type: none"> • Reap seed crop at maturity • Thresh seed crop • Handle threshed seeds • Achieve productivity and quality standards
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Reap seed crop at maturity	To be competent, the individual must be able to: <ul style="list-style-type: none"> PC1. ascertain that crop has matured for harvest PC2. get the seed crop inspected by the field supervisor PC3. receive instructions from the field supervisor for reaping the seed crop PC4. reap the crop as per company's set practices and methods PC5. maintain record as per instructions
Thresh seed crop	To be competent, the individual must be able to: <ul style="list-style-type: none"> PC6. select appropriate method for threshing the seed crop as per instructions PC7. keep the seeds of one type of variety / crop completely separated from the other variety / crop PC8. ensure proper collection of seeds as per instructions PC9. maintain record as per instructions
Handle threshed seeds	To be competent, the individual must be able to: <ul style="list-style-type: none"> PC10. keep the threshed seeds separate from other seeds PC11. keep seeds in a way to prevent their contamination with undesirable materials PC12. put threshed seeds into bags provided by the company and label them as per instructions for easy identification
Achieve productivity and quality standards	To be competent, the user/ individual must be able to: <ul style="list-style-type: none"> PC13. ensure maturity of seeds before harvesting seed crop PC14. ensure harvesting the seed crop without damaging it PC15. ensure threshing seed crop effectively without incurring seed loss PC16. ensure storage of different seed lots separately PC17. ensure that stack bags of one lot are not on top of a different lot PC18. ensure stacking of bags to any efficient storage height without causing weight or pressure damage to seed at the bottom PC19. ensure proper upright position of seed bags PC20. ensure that bags are not dropped-off during handling PC21. ensure that the storage place is spotlessly clean all the time PC22. ensure proper documentation as per the company's SOP

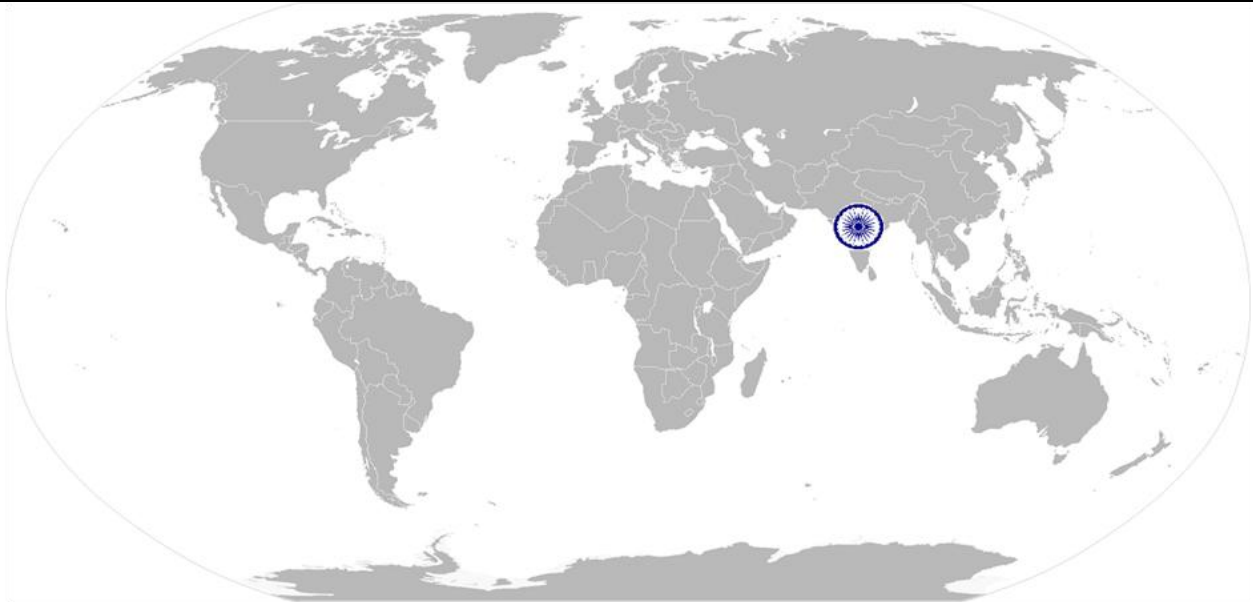
AGR/N7104
Harvest and thresh the seed crop

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: KA1. relevant legislation, standards, policies, and procedures in work KA2. relevant health and safety requirements applicable in the work environment KA3. own job role and responsibilities and sources for information pertaining to work KA4. who to approach for support in order to obtain work related information, clarifications and support KA5. importance of following health, hygiene, safety and quality standards and the impact of not following the standards on consumers and the business KA6. documentation and related procedures applicable in the context of work
B. Technical Knowledge	The individual on the job needs to know and understand: KB1. company's policies on: incentives; quality, safety and delivery standards, KB2. company's reporting structure KB3. company's grievance redressal system KB4. about different types of harvesting methods for seed crop KB5. about different types of threshing methods for seed crop KB6. correct way of handling threshed seeds KB7. correct way of storing threshed seeds KB8. about characteristics of good quality seed KB9. about ways of maintaining the pure accessions
Skills (S)	
A. Core Skills/ Generic Skills	Writing Skills
	The user/individual on the job needs to know and understand how: to SA1. document information regarding harvesting and threshing seed crop
	Reading Skills
	The user/individual on the job needs to know and understand how to SA2. read agriculture related articles
A. Professional Skills	Oral Communication (Listening & Speaking Skills)
	The user/individual on the job needs to know and understand how to SA3. listen to supervisor to capture information on harvesting and threshing seed crop and its handling SA4. communicate clearly and effectively to field supervisor on resource requirements
	Decision Making
	The user/individual on the job needs to know and understand: how to SB1. when to consult field supervisor for issues related to harvesting and threshing of seed crop
	Plan and Organize

AGR/N7104

Harvest and thresh the seed crop

	The user/individual on the job needs to know and understand: how to SB2. operate tools and equipments used for harvesting and threshing of seed crop SB3. do the routine maintenance of these equipments
	Problem Solving
	The user/individual on the job needs to know and understand how: to SB4. resolve work-related problems e.g., non-availability of computerized labels
	Customer Centricity
	The user/individual on the job needs to know and understand: how to SB5. build relationships and use human centric approach SB6. manage relationships with laborers and other co-farmers
	Analytical Thinking
	The user/individual on the job needs to know and understand: how to SB7. monitor and maintain the material and equipment required for various farm operations
	Critical Thinking
The user/individual on the job needs to know and understand: how to SB8. take up his own working and learning	

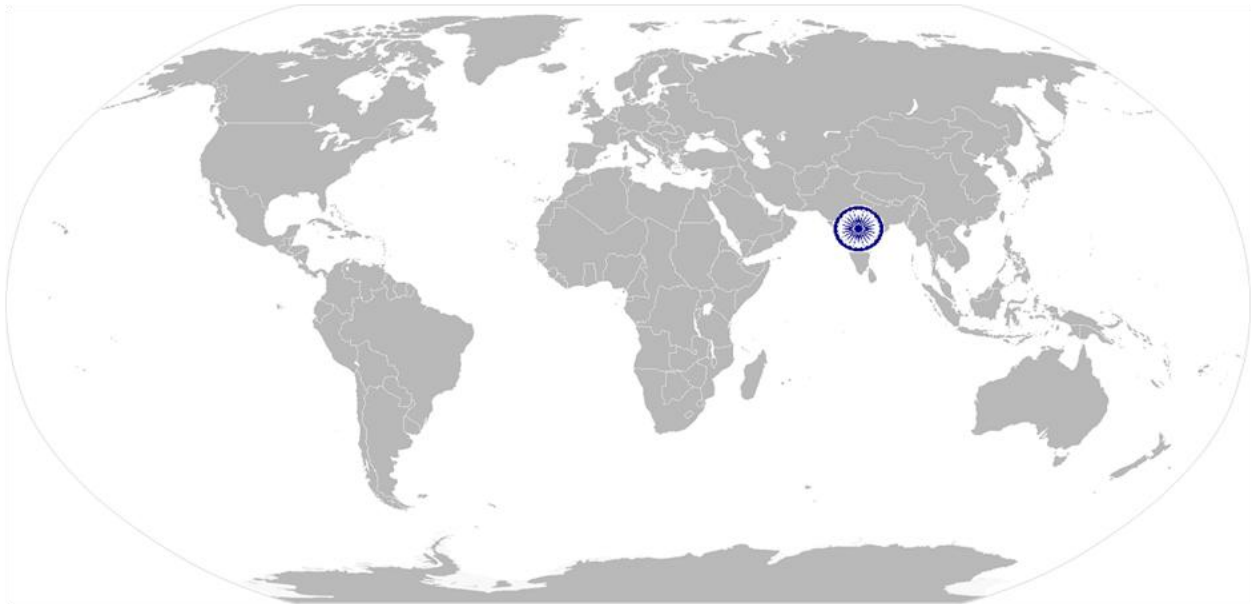


AGR/N7104

Harvest and thresh the seed crop

NOS Version Control

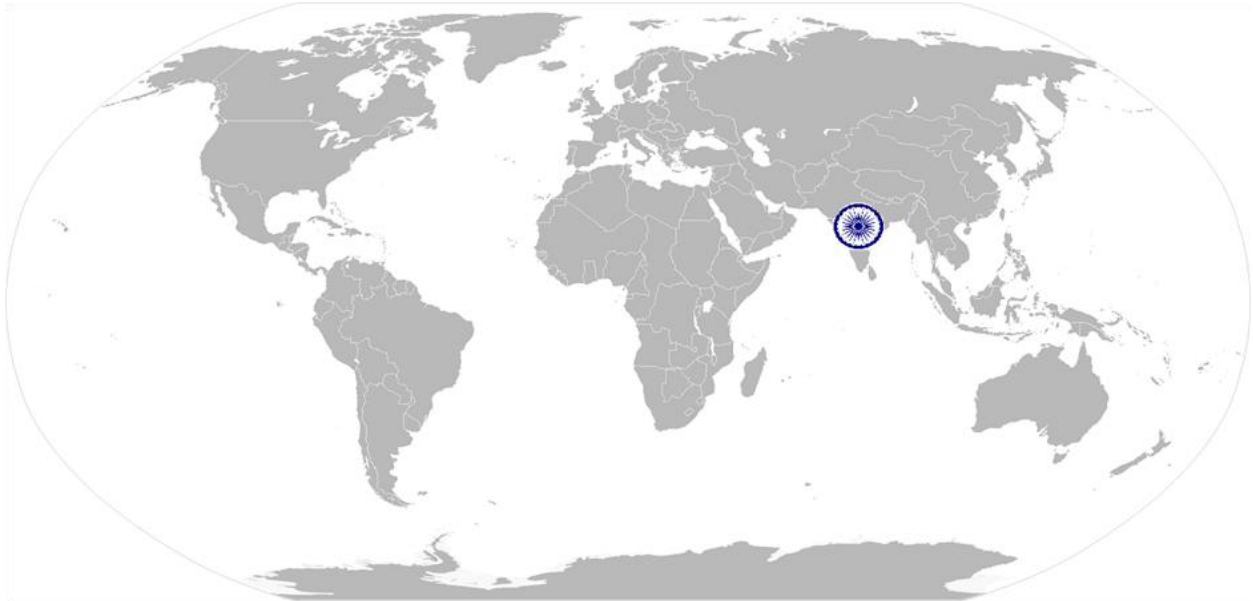
NOS Code	AGR/N7104		
Credits (NSQF)	TBD	Version number	1.0
Sector	Agriculture and Allied	Drafted on	25/02/14
Sub Sector	Agriculture Crop Production	Last reviewed on	14/06/17
Occupation	Seed Production and Processing	Next review date	14/06/21



AGR/N7105

Post harvest management of seeds

National Occupational Standard



Overview

This unit is about managing the threshed seeds before sending them to seed processing unit.

AGR/N7105
Post harvest management of seeds

National Occupational Standard

Unit Code	AGR/N7105
Unit Title (Task)	Post harvest management of seeds
Description	This OS is about managing the threshed seeds before sending them to seed processing unit
Scope	This unit/task covers the following: <ul style="list-style-type: none"> Undertake sun-drying of seeds Undertake cleaning of seeds Achieve productivity and quality standards
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Undertake sun drying of seeds	To be competent, the individual must be able to: <ul style="list-style-type: none"> PC1. identify appropriate time for sun-drying of seeds considering weather conditions and possibility of seed shattering PC2. select appropriate place for sun-drying the seeds PC3. open bags, spread seeds and sun-dry them by following procedures, practices and methods suggested in instructions
Undertake cleaning of seeds	To be competent, the individual must be able to: <ul style="list-style-type: none"> PC4. remove dust, debris, trash etc. from dry seeds using graded sieves as per the instructions PC5. separate lightweight material and empty glumes by gentle winnowing PC6. spread the seeds on clean and well-lit surface to remove damaged seeds, seeds of different species etc. if any PC7. put dry and cleaned seeds in bags and label them as per instructions PC8. send seeds to company for further processing as per the instructions PC9. maintain the record as per the instructions
Achieve productivity and quality standards	To be competent, the user/ individual must be able to: <ul style="list-style-type: none"> PC10. ensure drying of seeds immediately after threshing them PC11. ensure seeds are dried up to the optimum level of moisture content in them PC12. avoid breaking or damaging the seeds during post harvest management of seeds PC13. ensure proper cleaning of seeds before bagging them PC14. ensure proper documentation as per the company's SOP
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 legislation, standards, policies, and procedures in work KA2. relevant health and safety requirements applicable in the work environment KA3. own job role and responsibilities and sources for information pertaining to work KA4. who to approach for support in order to obtain work related information,

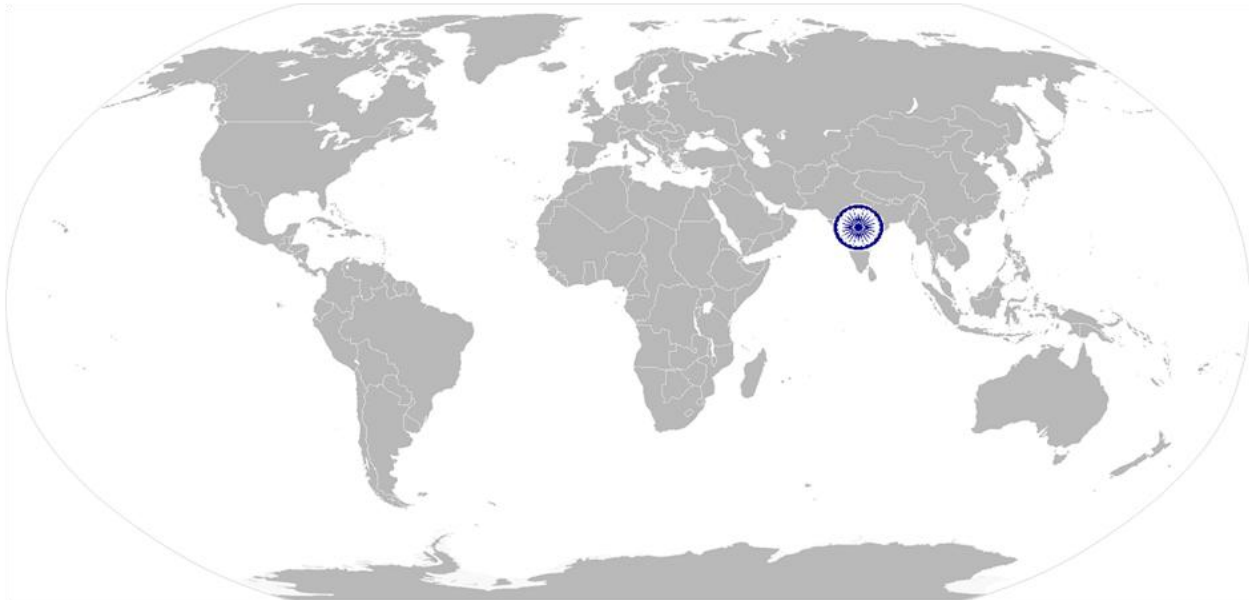
AGR/N7105
Post harvest management of seeds

	clarifications and support KA5. importance of following health, hygiene, safety and quality standards and the impact of not following the standards on consumers and the business KA6. documentation and related procedures applicable in the context of work
B. Technical Knowledge	The individual on the job needs to know and understand: KB1. company's policies on: incentives; quality, safety and delivery standards, KB2. company's reporting structure KB3. company's grievance redressal system KB4. about different types of seeds and their characteristics KB5. correct way of handling different type and variety of seeds KB6. about effective storage of threshed seeds KB7. about effective ways of sun drying the seeds KB8. about effective methods of cleaning sun dry threshed seeds
Skills (S)	
A. Core Skills/ Generic Skills	Writing Skills
	The user/individual on the job needs to know and understand how: to SA1. document information regarding post harvest management of seeds
	Reading skills
	The user/individual on the job needs to know and understand how: to SA2. read articles related to agriculture & quality seeds
	Oral Communication (Listening & Speaking Skills)
	The user/individual on the job needs to know and understand how: to SA3. listen to supervisor to capture information on post harvest management of seeds SA4. communicate clearly and effectively to field supervisor on resource requirements
B. Professional Skills	Decision Making
	The user/individual on the job needs to know and understand how: to SB1. when to consult field supervisor for issues related to post harvest management of seeds
	Plan and Organize
	The user/individual on the job needs to know and understand how: to SB2. operate tools and equipments used for post harvest management of seeds SB3. do the routine maintenance of these equipments
	Problem solving
	The user/individual on the job needs to know and understand how: to SB4. resolve work-related problems
	Customer Centricity
	The user/individual on the job needs to know and understand how: to SB5. build relationships and use human centric approach SB6. manage relationships with laborers and other co-farmers

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Post harvest management of seeds

	Analytical Thinking
	The user/individual on the job needs to know and understand how: to SB7. monitor and maintain the material and equipment required for various farm operations
	Critical Thinking
	The user/individual on the job needs to know and understand how: to SB8. take up his own working and learning



AGR/N7105

Post harvest management of seeds

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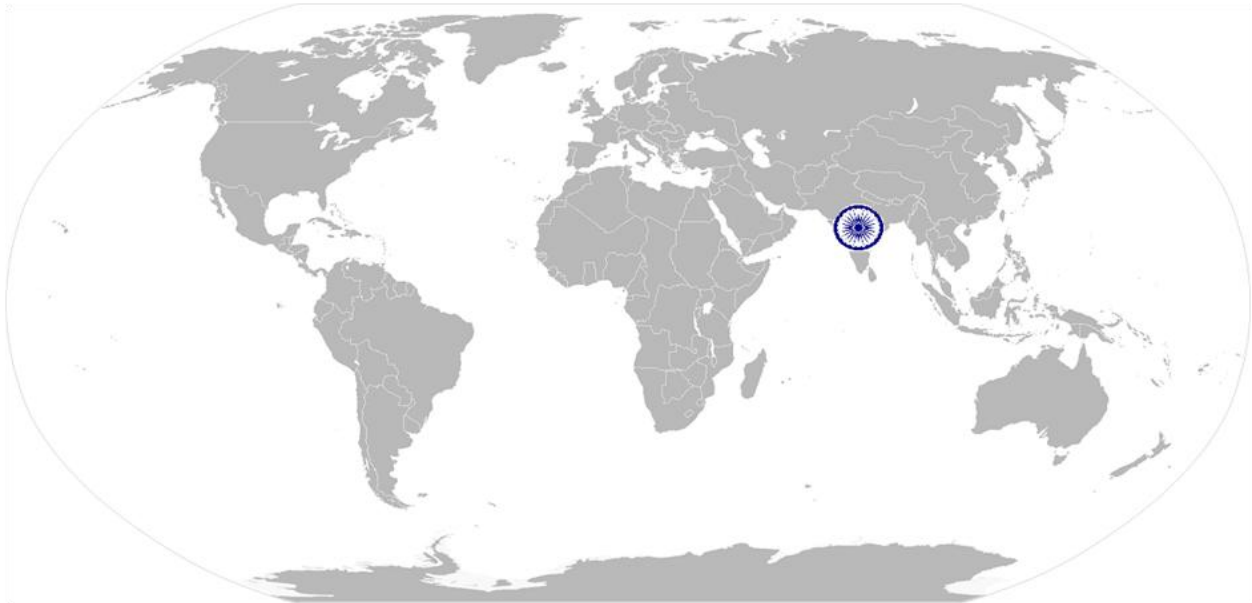
NOS Code	AGR/N7105		
Credits (NSQF)	TBD	Version number	1.0
Sector	Agriculture and Allied	Drafted on	25/02/14
Sub Sector	Agriculture Industries	Last reviewed on	14/06/17
Occupation	Seed Production And Processing	Next review date	14/06/21



AGR/N9903

Maintain health & safety at the work place

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

National Occupational Standard

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
Maintain clean and efficient workplace	To be competent, the individual must be able to: <ul style="list-style-type: none"> PC1. undertake basic safety checks before operation of all machinery and vehicles and hazards are reported to the appropriate supervisor 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. PC3. read and understand the hazards of use and contamination mentioned on the labels of pesticides/fumigants etc PC4. assess risks prior to performing manual handling jobs, and work according to currently recommended safe practice. PC5. use equipment and materials safely and correctly and return the same to designated storage when not in use PC6. dispose of waste safely and correctly in a designated area PC7. recognise risks to bystanders and take action to reduce risk associated with jobs in the workplace PC8. perform your work in a manner which minimizes environmental damage all procedures and work instructions for controlling risk are followed closely. PC9. report any accidents, incidents or problems without delay to an appropriate person and take necessary immediate action to reduce further danger.
Render appropriate emergency procedures	To be competent, the individual must be able to: <ul style="list-style-type: none"> PC10. follow procedures for dealing with accidents, fires and emergencies, including communicating location and directions to emergency. PC11. follow emergency procedures to company standard / workplace requirements PC12. use emergency equipment in accordance with manufacturers' specifications and workplace requirements PC13. provide treatment appropriate to the patient's injuries in accordance with recognized first aid techniques PC14. recover (if practical), clean, inspect/test, refurbish, replace and store the first aid equipment as appropriate

AGR/N9903
Maintain health & safety at the work place

	PC15. report details of first aid administered in accordance with workplace procedures.
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. relevant legislation, standards, policies, and procedures in work</p> <p>KA2. relevant health and safety requirements applicable in the work environment</p> <p>KA3. own job role and responsibilities and sources for information pertaining to work</p> <p>KA4. who to approach for support in order to obtain work related information, clarifications and support</p> <p>KA5. importance of following health, hygiene, safety and quality standards and the impact of not following the standards on consumers and the business</p> <p>KA6. documentation and related procedures applicable in the context of work</p>
B. Technical Knowledge	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. personal hygiene and fitness requirements</p> <p>KB2. your general duties under the relevant health and safety legislation</p> <p>KB3. what personal protective equipment and clothing should be worn and how it is cared for</p> <p>KB4. the correct and safe way to use materials and equipment required for your work</p> <p>KB5. the importance of good housekeeping in the workplace</p> <p>KB6. safe disposal methods for waste</p> <p>KB7. methods for minimizing environmental damage during work</p> <p>KB8. the risks to health and safety and the measures to be taken to control those risks in your area of work</p> <p>KB9. workplace procedures and requirements for the treatment of workplace injuries/illnesses.</p> <p>KB10. basic emergency first aid procedure</p> <p>KB11. local emergency services</p> <p>KB12. 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>

AGR/N9903
Maintain health & safety at the work place

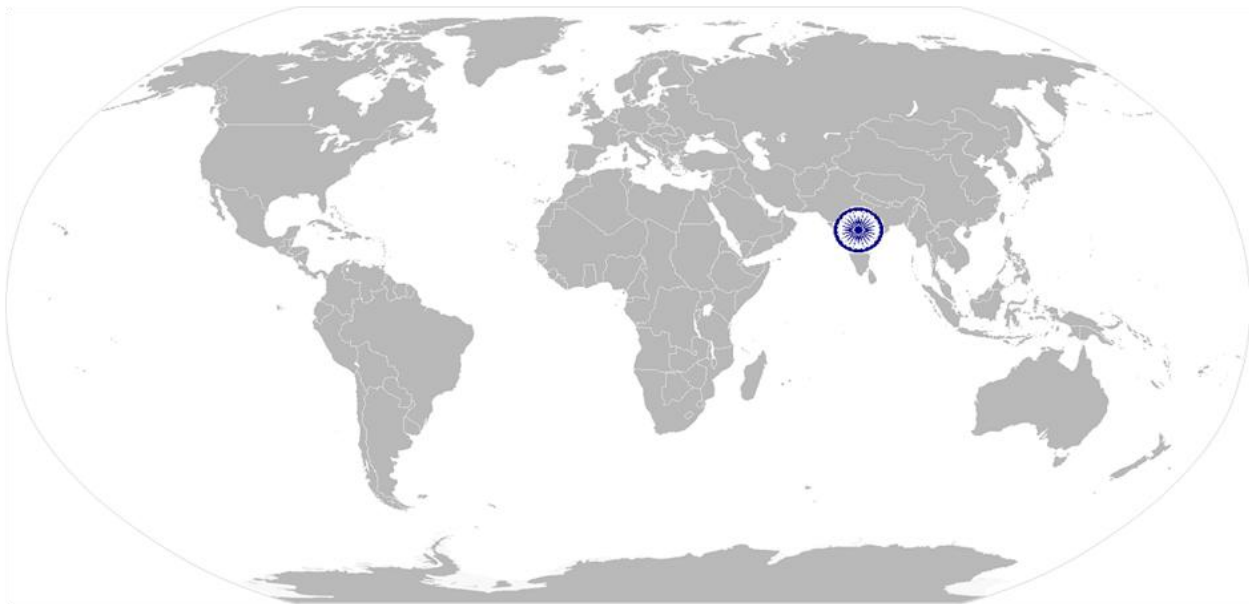
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: SA5. communicate clearly and effectively with others like farmers, concerned officer/stakeholders SA6. comprehends information shared by senior people and experts
B. Professional Skills	Decision Making
	The user/individual on the job needs to know and understand how to: 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: 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 user/individual on the job needs to know and understand how to: SB7. take up his own working and learning	

AGR/N9903

Maintain health & safety at the work place

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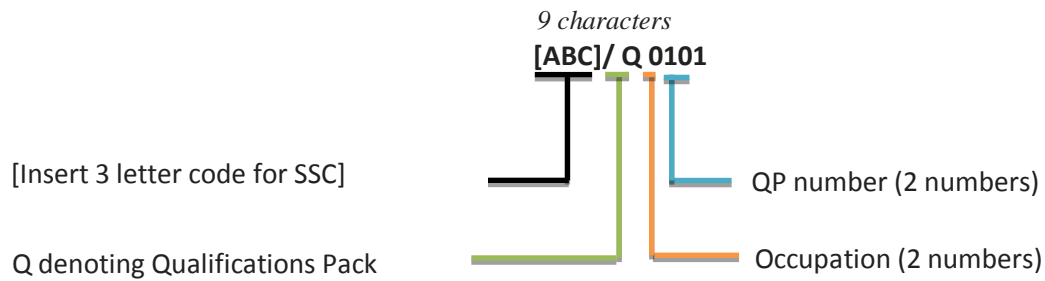
NOS Code	AGR/N9903		
Credits (NSQF)	TBD	Version number	1.0
Sector	Agriculture and Allied	Drafted on	25/02/14
Sub Sector	Agriculture Industries	Last reviewed on	14/06/17
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Annexure

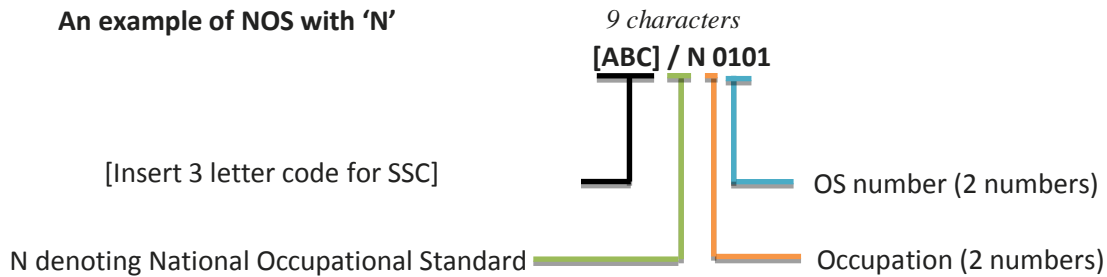
Nomenclature for QP and NOS

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

Quality Seed Grower

Qualification Pack

AGR/Q7101

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, and where applicable, on the selected elective/option 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).
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on this criterion.
5. To pass the Qualification Pack , every trainee should score a minimum of 70% of aggregate marks to successfully clear the assessment.
6. In case of *unsuccessful completion*, the trainee may seek reassessment on the Qualification Pack.

Assessment outcomes	Assessment Criteria for outcomes	Total Marks (300)	Out Of	Marks Allocation	
				Theory	Skills Practical
1.AGR/N7101 Collect information and resources for seed production	PC1. receive the instructions and work requirements from company's field supervisor	45	3	1	2
	PC2. understand standard practices and methods for quality seed growing		4	2	2
	PC3. understand the methods of using tools, equipments and personal protective gears for seed growing		2	1	1
	PC4. understand the standard precautions to be taken for quality seed growing		2	1	1
	PC5. understand the quality parameters on which seed crop will be evaluated and payment will be made to the seed grower		4	2	2
	PC6. sign a contract with the seed processor to produce seeds of predetermined quality and standard		3	1	2
	PC7. indent for breeder / foundation seeds, fertilizers, tools, equipments, personal protective gears, containers for collecting soil samples for testing and work instructions		4	2	2
	PC8. receive all the resources from the field supervisor		1	0	1
	PC9. document the materials received as per company's work instructions		4	2	2

	PC10. segregate the received material as per the work instructions		2	1	1
	PC11. unpack the material as per the requirement		2	1	1
	PC12. follow the standard precautions for handling the material like seed, fertilizers etc.		2	1	1
	PC13. store them as per instructions		3	1	2
	PC14. get complete understanding of producing the quality seeds as per predetermined quality and standard		3	1	2
	PC15. identify missing resources or their shortages for producing the seed yield as per the contract		3	1	2
	PC16. ensure proper handling and storage of received resources		3	2	1
			45	20	25
2. AGR/N7102 Prepare field and sow seeds	PC1. take multiple soil samples of the field from different parts as per instructions		4	1	3
	PC2. pack and label the soil samples and send them for lab testing to the company		4	1	3
	PC3. document as per the company's instructions		4	1	3
	PC4. carefully clean and plough the land as per instructions of the company		4	1	3
	PC5. receive the soil testing report from the company along with their recommendations for preparing the soil		1	1	0
	PC6. use right kind and quantity of fertilizer(s) to improve the soil fertility as recommended by the company		6	3	3
	PC7. prepare the field as per company's instructions		4	2	2
	PC8. get the field inspected by the field supervisor		2	2	0
	PC9. receive instructions from the field supervisor regarding timing of sowing seeds based on the local climatic conditions		2	2	0
	PC10. sow the seed crop with the method suggested by the field supervisor depending on soil, topography and climatic conditions		2	1	1
	PC11. sow seeds in rows keeping appropriate distance as per the work instructions		2	1	1
	PC12. prepare and plough the field so that the best possible seed bed is prepared		2	1	1
	PC13. ensure preparation of field about 2 weeks before sowing so that weed seed in the soil could germinate to form small weed plants which could be removed from the field		2	2	0
	PC14. harrow and cultivate the field to destroy young weed plants		3	3	0
	PC15. eliminate weed plants which would otherwise grow in with the seed crop		2	1	1
	PC16. sowing of seed crop with optimum rate(quantity) in a given piece of land, so that it gives high yield		2	1	1
	PC17. ensure proper documentation as per the company's SOP	50	4	1	3
			50	25	25
3. AGR/N7103 Grow and manage seed crop	PC1. get the seed crop inspected by the field supervisor		2	1	1
	PC2. receive instructions from the field supervisor regarding use of organic and inorganic fertilizers including farm yard manure		2	1	1
	PC3. apply organic and inorganic fertilizer in correct dosages on seed crop as advised by the field supervisor	75	4	2	2

	PC4. identify the types of weeds in the crop		4	2	2
	PC5. identify field patches infested with troublesome weeds which interfere with crops		2	1	1
	PC6. perform manual removal of weeds regularly while they are small		2	1	1
	PC7. apply bio-herbicides, weedicides and chemicals as advised by the field supervisor in prescribed quantity to control and remove weeds		4	2	2
	PC8. maintain records as per instructions		4	2	2
	PC9. inspect and diagnose early signs and symptoms of seed crop damage		4	2	2
	PC10. identify the extent of crop damage due to pests, insects and disease if any		3	1	2
	PC11. notify any damage to the crops to field supervisor		2	1	1
	PC12. apply chemical(s) on seed crop suggested by the field supervisor to make it disease free		4	2	2
	PC13. maintain records as per the work instructions		4	2	2
	PC14. inspect seed crop regularly and identify the time of irrigation		3	1	2
	PC15. check availability of irrigation channels in the field		2	1	1
	PC16. incorporate appropriate micro-irrigation techniques (such as drip irrigation) using appropriate equipments		2	1	1
	PC17. apply smaller amounts of water more often to maintain the optimum soil moisture in the field		2	1	1
	PC18. ensure proper water drainage		2	1	1
	PC19. maintain records as per the work instructions		4	2	2
	PC20. ensure daily regular walking back and forth through a field to timely identify problems related to seed crop		3	1	2
	PC21. ensure appropriate and uniform application of fertilizers in prescribed doses		3	2	1
	PC22. ensure pulling out weeds without damaging the crop plants		3	1	2
	PC23. maintain uniform moisture in the soil		3	1	2
	PC24. ensure proper water drainage		3	1	2
	PC25. ensure proper documentation as per the company's SOP		4	2	2
			75	35	40
4. AGR/N7104 Harvest and thresh the seed crop	PC1. ascertain that crop has matured for harvest		3	1	2
	PC2. get the seed crop inspected by the field supervisor		2	1	1
	PC3. receive instructions from the field supervisor for reaping the seed crop		2	2	0
	PC4. reap the crop as per company's set practices and methods		4	2	2
	PC5. maintain record as per instructions		3	1	2
	PC6. select appropriate method for threshing the seed crop as per instructions		2	1	1
	PC7. keep the seeds of one type of variety / crop completely separated from the other variety / crop		3	1	2
	PC8. ensure proper collection of seeds as per instructions		3	1	2
	PC9. maintain record as per instructions	45	3	0	3

	PC10. keep the threshed seeds separate from other seeds		2	2	0
	PC11. keep seeds in a way to prevent their contamination with undesirable materials		3	1	2
	PC12. put threshed seeds into bags provided by the company and label them as per instructions for easy identification		2	1	1
	PC13. ensure maturity of seeds before harvesting seed crop		1	1	0
	PC14. ensure harvesting the seed crop without damaging it		1	1	0
	PC15. ensure threshing seed crop effectively without incurring seed loss		1	1	0
	PC16. ensure storage of different seed lots separately		1	1	0
	PC17. ensure that stack bags of one lot are not on top of a different lot		1	1	0
	PC18. ensure stacking of bags to any efficient storage height without causing weight or pressure damage to seed at the bottom		1	1	0
	PC19. ensure proper upright position of seed bags		1	1	0
	PC20. ensure that bags are not dropped-off during handling		1	1	0
	PC21. ensure that the storage place is spotlessly clean all the time		1	1	0
	PC22. ensure proper documentation as per the company's SOP		4	2	2
			45	25	20
5. AGR/N7105 Post harvest management of seeds	PC1. identify appropriate time for sun-drying of seeds considering weather conditions and possibility of seed shattering		2	2	0
	PC2. select appropriate place for sun-drying the seeds		3	3	0
	PC3. open bags, spread seeds and sun-dry them by following procedures practices and methods suggested in instructions		5	2	3
	PC4. remove dust, debris, trash etc from dry seeds using graded sieves as per the instructions		7	3	4
	PC5. separate lightweight material and empty glumes by gentle winnowing		7	3	4
	PC6. spread the seeds on clean and well-lit surface to remove damaged seeds, seeds of different species etc. if an		9	3	6
	PC7. put dry and cleaned seeds in bags and label them as per instructions		9	3	6
	PC8. send seeds to company for further processing as per the instructions		2	0	2
	PC9. maintain the record as per the instructions		5	0	5
	PC10. ensure drying of seeds immediately after threshing them		2	2	0
	PC11. ensure seeds are dried up to the optimum level of moisture content in them		2	2	0
	PC12. avoid breaking or damaging the seeds during post harvest management of seeds		3	3	0
	PC13. ensure proper cleaning of seeds before bagging them		2	2	0
	PC14. ensure proper documentation as per the company's SOP	60	2	2	0
			60	30	30
6. AGR/N9903 Maintain	PC1. undertake basic safety checks before operation of all machinery and vehicles and hazards are reported to the appropriate supervisor	25	3	1	2

Health & Safety at the work place	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.			3	1	2
	PC3. read and understand the hazards of use and contamination mentioned on the labels of pesticides/fumigants etc			3	1	2
	PC4. assess risks prior to performing manual handling jobs, and work according to currently recommended safe practice.			1	1	0
	PC5. use equipment and materials safely and correctly and return the same to designated storage when not in use			3	1	2
	PC6. dispose of waste safely and correctly in a designated area			1	1	0
	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	1	0
	PC9. report any accidents, incidents or problems without delay to an appropriate person and take necessary immediate action to reduce further danger.			1	1	0
	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			3	1	2
	PC13. provide treatment appropriate to the patient's injuries in accordance with recognized first aid techniques			1	1	0
	PC14. recover (if practical), clean, inspect/test, refurbish, replace and store the first aid equipment as appropriate			1	1	0
	PC15. report details of first aid administered in accordance with workplace procedures.			1	1	0
				25	15	10
	TOTAL	300	300	150	150	