

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- Agriculture Extension Service Provider

SECTOR: AGRICULTURE AND ALLIED

SUB-SECTOR: AGRICULTURE RELATED INDUSTRIES

OCCUPATION: INFORMATION MANAGEMENT

REFERENCE ID: AGR/Q7601

ALIGNED TO: NCO-2004/NIL

Agriculture Extension Service Provider: The Service Provider is responsible for speedy transfer of information and technology to farmers. He reduces the time lag between generation of technology and its transfer to the farmers for increasing production, productivity and income from agriculture and allied sectors on a sustained basis.

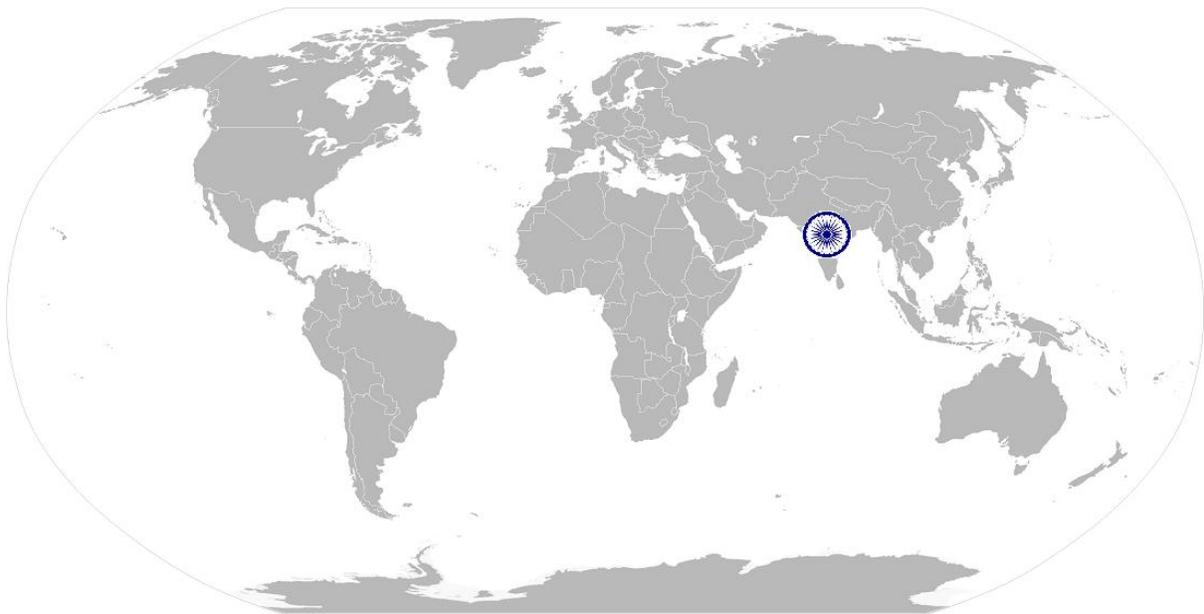
Brief Job Description: An agriculture extension service provider gives talks, guidance and actual demonstrations on latest technologies related to agriculture. He also works with other experts in agriculture to learn more or even develop new methods that could advance production.

Personal Attributes: The job requires the individual to be constantly armed with the latest techniques and information related to agriculture. He should have sound knowledge of the subject, should be able to create motivation and self confidence among farmers.

Job Details	Qualifications Pack Code	AGR/Q7601		
	Job Role	Agriculture Extension Service Provider		
	Credits(NVEQF/NVQF/NSQF) [OPTIONAL]	TBD	Version number	1.0
	Sector	Agriculture and Allied	Drafted on	12/02/14
	Sub-sector	Agriculture industries	Last reviewed on	24/03/14
	Occupation	Information Management	Next review date	24/09/14

Job Role	Agriculture Extension Service Provider Also known as 'Agriculture Extension Worker', 'Field Agent'
Role Description	An agriculture extension service provider gives talks, guidance and actual demonstrations on latest technologies related to agriculture. He also works with other experts in agriculture to learn more or even develop new methods that could advance production
NVEQF/NVQF level	4
Minimum Educational Qualifications*	12 th standard
Maximum Educational Qualifications*	Not applicable
Training (Suggested but not mandatory)	NIL
Experience	N/A
Applicable National Occupational Standards (NOS)	<ol style="list-style-type: none"> 1. AGR/N7601 – Plan for the extension services 2. AGR/N7602 - Identify location specificity of agricultural technology 3. AGR/N7603 - Make frontline demonstrations 4. AGR/N7604 – Provide training to farmers 5. AGR/N7605 – Assist with backward and forward linkages
Performance Criteria	As described in the relevant OS units

National Occupational Standard



Overview

This unit is about the Extension service provider planning for the extension services to be delivered at farmers' fields.

AGR/N7601
Plan for the extension services

Unit Code	AGR/N7601
Unit Title (Task)	Plan for the extension services
Description	This OS unit is about the extension service provider planning for the extension services to be delivered at farmers' fields.
Scope	<p>This unit/ task covers the following:</p> <ul style="list-style-type: none"> • Take inputs for preparing for extension services • Prepare for providing extension services • Prepare the action plan
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Take inputs for preparing for extension services	<p>To be competent, the user/ individual must be able to:</p> <p>PC1. hold discussions with senior extension officers to plan where the services have to be provided</p> <p>PC2. gather information from different sources such as media, internet, exhibitions, seminars, workshop, interaction with experts</p> <p>PC3. take appropriate inputs from senior extension officers on what type of training should be provided in the area chosen</p> <p>PC4. take appropriate inputs on what technologies would be appropriate for the area chosen</p> <p>PC5. take inputs on what factors should be considered for providing demonstrations and trainings</p> <p>PC6. take inputs on what tools and equipment should be used for providing extension services</p>
Prepare for providing extension services	<p>To be competent, the user/ individual must be able to:</p> <p>PC7. take internal trainings from subject matter specialists to prepare for providing extension services</p> <p>PC8. clarify all doubts in the internal trainings</p> <p>PC9. gain mastery over the subject matter</p> <p>PC10. understand fully about the new technologies to be demonstrated</p> <p>PC11. understand the usage of tools and equipment to be used for extension services</p> <p>PC12. prepare to interact with farmers in the area chosen</p> <p>PC13. study the socio-economic aspects of the area chosen</p> <p>PC14. study the agro-climatic condition of the area chosen</p>
Prepare the action plan	<p>To be competent, the user/ individual must be able to:</p> <p>PC15. outline the action plan consisting of shortlisted technologies, tools and equipment, training methodologies, etc.</p> <p>PC16. decide the date and time when the farmers need to be contacted</p> <p>PC17. decide the timeframe of different elements of extension services, such as soil-testing, frontline demonstrations and trainings</p> <p>PC18. follow budget guideline and prepare a cost effective plan for extension services</p>

AGR/N7601
Plan for the extension services

Knowledge and Understanding (K)	
A. Agro-climatic condition	The individual on the job needs understand: KA1. various climatic parameters such as maximum and minimum temperatures, intensity and distribution of precipitation (rainfall), relative humidity etc. KA2. pest and diseases specific to a given agro climatic region, the life cycles of these pests and diseases and the sources of infection
B. Agronomics	The individual on the job needs to know and understand: KB1. various scientific methods and technologies for increasing crop production, farmer productivity as well as earnings KB2. areas such as crop rotation, irrigation and drainage, plant breeding, plant physiology, soil classification, soil fertility, weed control, insect and pest control etc.
C. New agricultural technologies	The individual on the job needs to know and understand: KC1. various operations that have the potential to increase the yield and decrease the incidence of pests and diseases KC2. latest technological developments that have the potential to increase the crop yield and resource use efficiency
D. Socio-economics	The individual on the job needs to know and understand: KD1. factors affecting the socio-economic profile of the farmers KD2. social and cultural constitution of the farmers KD3. factors affecting farmers' decisions to choose which crops to grow and which technologies to use for the same
E. Survey and investigation	The individual on the job needs to know and understand: KE1. techniques of survey design KE2. tools to be used in survey and investigation KE3. machinery, equipment and other inputs to be used for testing
F. Tools and equipment	The individual on the job needs to know and understand: KF1. new types of tools and equipment KF2. tools and equipment to be used in extension services
Skills (S)	
A. Core Skills/ Generic Skills	Reading and comprehension skills
	The individual on the job needs to know and understand: SA1. update oneself about latest technologies by reading research articles, attending seminars, conferences etc. SA2. keep abreast with the latest knowledge by reading brochures, pamphlets, product information sheets etc. SA3. read relevant newspapers / booklets etc.
B. Professional Skills	Interpersonal skills
	The individual on the job needs to know and understand: SB1. develop a rapport with senior officers and specialists SB2. listen carefully and interpret the information given by the seniors SB3. discuss possible solutions
	Communication skills

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Plan for the extension services

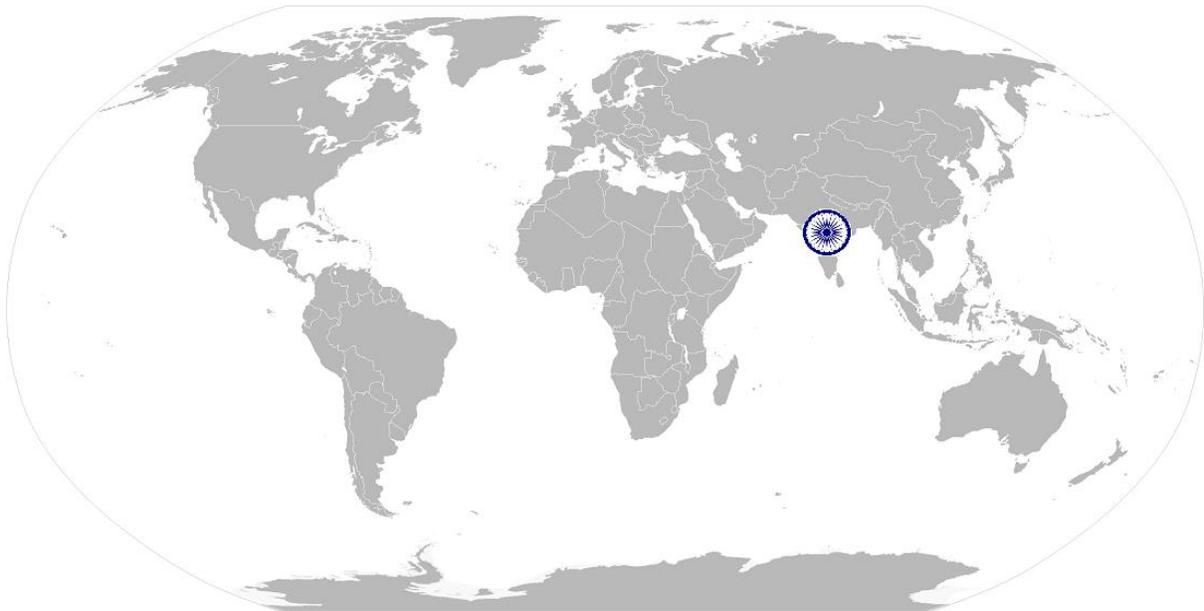
	The individual on the job needs to know and understand: SB4. how to maintain effective relationships with senior officers and specialists SB5. communicate clearly and effectively with seniors SB6. understand information and grasp its meaning SB7. communicate precisely SB8. discuss issues, clarify doubts and seek solutions
	Behavioural skills
	The individual on the job needs to know and understand: SB9. importance of personal grooming SB10. significance of etiquette and body language SB11. being polite and courteous under all circumstances
	Decision making skills
	SB12. make decisions pertaining to the concerned area of work SB13. identify problems that may arise in carrying out tasks and take preventive action following workplace procedures
	Plan and organise
	SB14. plan and organise extension services to be demonstrated SB15. organise meetings of stakeholders SB16. organise meetings of representative group of farmers
	Workshop centricity
	SB17. participate in exhibitions / seminars / workshop which provide information on new technologies in agriculture and allied sectors SB18. make use of exposure visits to model farms
	Problem solving
	SB19. think through the problem, evaluate the possible solutions and take up optimum / best solutions SB20. identify economically viable and operationally feasible solutions which meet farmer needs
	Analytical thinking
	SB21. analyse the information received from officers and specialists SB22. think analytically to come up with solutions SB23. apply, analyse and evaluate the information gathered from trainings SB24. improving / adapting the technologies based on results found from analytical thinking

AGR/N7601
Plan for the extension services

NOS Version Control

NOS Code	AGR/N7601		
Credits(NVEQF/NVQF/NSQF) [OPTIONAL]	TBD	Version number	1.0
Industry	Agriculture and Allied	Drafted on	12/02/14
Industry Sub-sector	Agriculture industries	Last reviewed on	24/03/14
		Next review date	24/09/14

National Occupational Standard



Overview

This unit is about the extension service provider identifying the location specificity of different agricultural technologies under various farming systems.

AGR/N7602 Identify location specificity of agricultural technology

Unit Code	AGR/N7602
Unit Title (Task)	Identify location specificity of agricultural technology
Description	This OS unit is the extension service provider identifying the location specificity of different agricultural technologies under various farming systems.
Scope	<p>This unit/ task covers the following:</p> <ul style="list-style-type: none"> • Interact with farmers and others • Conduct on-farm testing • Complete the documentation
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Interact with farmers and others	<p>To be competent, the user/ individual must be able to:</p> <p>PC1. identify the representative group of farmers</p> <p>PC2. identify other stakeholders in the area such as the sarpanch, village level Agriculture Department officer, etc.</p> <p>PC3. reach out to the representative group of farmers as well as the other stakeholders</p> <p>PC4. discuss the objectives of the exercise</p> <p>PC5. convince the representative group to participate in the exercise</p> <p>PC6. hold detailed discussions to assess their needs</p> <p>PC7. involve the representative group in investigations to find the suitability of the new technology</p>
Conduct on-farm testing	<p>To be competent, the user/ individual must be able to:</p> <p>PC8. list down the problems to be solved</p> <p>PC9. rank the problems by priority</p> <p>PC10. identify causes of problems</p> <p>PC11. list possible solutions</p> <p>PC12. screen possible solutions for feasibility</p> <p>PC13. identify experimental factors to be included in on-farm experiments</p> <p>PC14. conduct on-farm experiments in the fields of representative farmers</p> <p>PC15. involve the representative farmers in the experiments</p> <p>PC16. establish cause-effect relationships</p> <p>PC17. evaluate the performance and potential application of the new technology / farm practice</p> <p>PC18. evaluate if the new technology can be applied 'as-is' or if it needs to be refined and modified to be adapted in the local context</p>
Complete the documentation	<p>To be competent, the user/ individual must be able to:</p> <p>PC19. document properly the results of on-farm testing in a precise, clear and concise manner</p> <p>PC20. discuss test results and ideas with the representative group of farmers as well as the other stakeholders</p>

AGR/N7602 Identify location specificity of agricultural technology

Knowledge and Understanding (K)	
A. Agro-climatic condition	The individual on the job needs understand: KA1. various climatic parameters such as maximum and minimum temperatures, intensity and distribution of precipitation (rainfall), relative humidity etc. KA2. pest and diseases specific to a given agro climatic region, the life cycles of these pests and diseases and the sources of infection
B. Soil sampling and testing	The individual on the job needs to know and understand: KB1. various procedures of soil sampling KB2. soil testing laboratories and various nutrients (macro and micro) that are analysed KB3. soil analysis report and its components KB4. recommendations based on the availability of various micro and macro nutrients in a given soil or crop sample
C. Soil type and nutrient status	The individual on the job needs to know and understand: KC1. soil types, their advantages and disadvantages with reference to the nutrient status KC2. based on the soil type, various methods of land preparation to maintain soil tilth KC3. various farm machinery available and their utility to maintain soil tilth and health
D. Fertiliser / micro nutrient management	The individual on the job needs to know and understand: KD1. appropriate methods of application of various fertilisers and micro nutrients KD2. timing and location of the application of fertilizer/nutrient in the crop life cycle
E. Weed management	The individual on the job needs to know and understand: KE1. interaction affects of the soil type, level of the land and water availability on the crop growth and its yield KE2. timing and method of irrigation and drainage appropriate for a given soil type and climatic condition
F. Irrigation management	The individual on the job needs to know and understand: KF1. various methods of irrigation and resource use efficiency KF2. methods of precision farming and their application in crop cultivation KF3. timing and method of irrigation appropriate for a given soil type
G. Harvesting	The individual on the job needs to know and understand: KG1. various methods of harvesting KG2. precautions to be taken while handling the fruits during harvest KG3. advantages of grading (at the time of harvesting) in the price determination KG4. influence of crop stage of harvesting and method of harvesting, on the keeping quality of the fruits and the affect on storage losses
H. Storage and post-harvesting	The individual on the job needs to know and understand: KH1. use various methods of storage and their influence on the fruit quality and on the health of the consumer KH2. take up various methods of storage and their cost dynamics KH3. advantages and challenges of various latest developments (both institutional and technical) on the keeping quality and revenue

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Identify location specificity of agricultural technology

I. Other farm operations	The individual on the job needs to know and understand: KI1. various operations that have the potential to increase the yield and decrease the incidence of pests and diseases KI2. latest technological developments that have the potential to increase the crop yield and resource use efficiency
J. Safety	The individual on the job needs to know and understand: KJ1. uses and harmful effects of various pesticides KJ2. safe methods of handling the pesticides KJ3. first aid to the exposure of humans to harmful effects of pesticides
K. Survey and investigation	The individual on the job needs to know and understand: KK1. techniques of survey design KK2. tools to be used in survey and investigation KK3. machinery, equipment and other inputs to be used for testing
L. Knowledge of local area	The individual on the job needs to know and understand: KL1. knowledge of the people and their culture in the area where demonstrations have to be made KL2. knowledge of the local language used to communicate KL3. knowledge of problems and issues faced by the locals
M. Documentation and reporting	The individual on the job needs to know and understand: KM1. ways of documenting the results of on-farm testing KM2. various effective ways of effectively reporting the results to the representative group of farmers
Skills (S)	
A. Core Skills/ Generic Skills	Reading and comprehension skills The individual on the job needs to know and understand: SA1. update oneself about latest technologies by reading research articles, attending seminars, conferences etc. SA2. keep abreast with the latest knowledge by reading brochures, pamphlets, product information sheets etc. SA3. read relevant newspapers / booklets etc.
B. Professional Skills	Interpersonal skills The individual on the job needs to know and understand: SB1. develop a rapport with farmers and other stakeholders SB2. listen carefully and interpret their requirements SB3. suggest possible solutions Communication skills The individual on the job needs to know and understand: SB4. maintaining effective relationships with farmers SB5. communicate clearly and effectively with various stakeholders SB6. understand information and grasp its meaning SB7. seek advice from senior people and experts SB8. put the farmers at ease and suggest solutions SB9. communicate in local language SB10. educate and inform farmers about different issues

AGR/N7602
Identify location specificity of agricultural technology

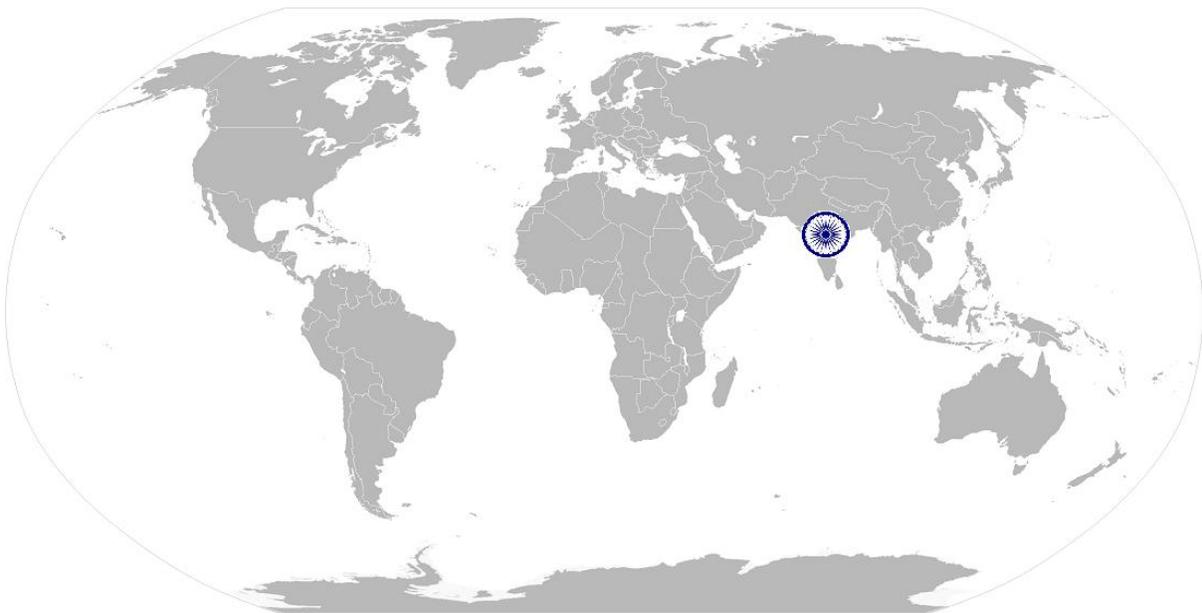
	Behavioural skills
	The individual on the job needs to know and understand: SB11. importance of personal grooming SB12. significance of etiquette and body language SB13. being polite and courteous under all circumstances
	Decision making skills
	SB14. make decisions pertaining to the concerned area of work SB15. identify problems that may arise in carrying out tasks and take preventive action following workplace procedures
	Plan and organise
	SB16. plan and organise on-farm testing SB17. organise meetings of stakeholders if necessary SB18. organise meetings of representative group of farmers for on-farm testing
	Workshop centricity
	SB19. participate in exhibitions / seminars / workshop which provide information on new technologies in agriculture and allied sectors SB20. make use of exposure visits to model farms
	People management
	SB21. manage relationships with farmers SB22. build relationships and use human centric approach
	Problem solving
	SB23. think through the problem, evaluate the possible solutions and take up optimum / best solutions SB24. identify economically viable and operationally feasible solutions which meet farmer needs
	Analytical thinking
	SB25. analyse the data and information collected from on-farm testing to come up with results and solutions thereof SB26. apply, analyse and evaluate the information gathered from observation, on-farm testing, experience, reasoning, discussions with farmers and stakeholders SB27. improving / adapting the technologies based on results found from analytical thinking
	Leadership skills
SB28. organise farmers' groups and lead them towards solutions to their problems	
Reporting and documentation	
SB29. report and document the results collected from on-farm testing SB30. document the findings in a precise, clear and concise manner, which is easy to understand	

AGR/N7602
Identify location specificity of agricultural technology

NOS Version Control

NOS Code	AGR/N7602		
Credits(NVEQF/NVQF/NSQF) [OPTIONAL]	TBD	Version number	1.0
Industry	Agriculture and Allied	Drafted on	12/02/14
Industry Sub-sector	Agriculture industries	Last reviewed on	24/03/14
		Next review date	24/09/14

National Occupational Standard



Overview

This unit is about the agriculture extension service provider making frontline demonstrations to establish the potential of improved agricultural technology in the farmer field.

AGR/N7603
Make frontline demonstrations

Unit Code	AGR /N7603
Unit Title (Task)	Make frontline demonstrations
Description	This OS unit is about the agriculture extension service provider making frontline demonstrations to establish the potential of improved agricultural technology in the farmer field
Scope	<p>This unit/ task covers the following:</p> <ul style="list-style-type: none"> • Preparing for frontline field demonstrations • Conducting frontline field demonstrations • Following up • Record keeping
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Preparing for frontline field demonstrations	<p>To be competent, the user/ individual must be able to:</p> <p>PC1. know the vicinity where demonstrations have to be carried out</p> <p>PC2. select appropriate and proven technologies to be demonstrated</p> <p>PC3. select the block of demonstration site</p> <p>PC4. select a group of farmers who are willing to cooperate for demonstration</p> <p>PC5. finalise package of practices consisting of frontier technologies in consultation with the Agriculture University / Agriculture Department / Research Institutes etc. (as applicable)</p> <p>PC6. prepare for demonstrations by arranging critical inputs to be used for the demonstrations</p>
Conducting frontline field demonstrations	<p>To be competent, the user/ individual must be able to:</p> <p>PC7. guide and assist farmers in laying out the field where demonstrations have to be made</p> <p>PC8. hold special training programmes for the farmers in whose plots demonstrations are to be laid</p> <p>PC9. be present at the time of crucial farm operations like seeding, fertiliser application, weeding, irrigation, plant protection measures, harvesting, threshing, and weighing of produce and use each of these operations as an input for training of farmers</p> <p>PC10. encourage questions from farmers at each stage of the operations</p> <p>PC11. arrange a field day to project the new technologies demonstrated in front of a large manageable group of interested farmers</p> <p>PC12. arrange a few method demonstrations on operation of farm machines and equipment, operation of seed drill, seed treatment, fertiliser application, plant protection etc.</p> <p>PC13. arrange harvesting in the presence of identified group of farmers and ask them to estimate the yield to see the results of demonstrated technologies</p> <p>PC14. assess satisfaction level of the farmers</p>

AGR/N7603
Make frontline demonstrations

Following up	To be competent, the user/ individual must be able to: PC15. provide information reinforcement, timely supply of inputs and / or on-the-spot guidance to ensure that farmers don't revert to old practices PC16. link the follow-up programme with the local institutions like farmer club, farmers cooperative society, village panchayat etc.
Record keeping	To be competent, the user/ individual must be able to: PC17. maintain records for each block demonstration PC18. maintain an information card with basic information of the demonstration site and detailed information of the demonstration PC19. maintain technical report containing information on cost-benefit ratio of the demonstration to help work out the economic returns
Knowledge and Understanding (K)	
A. Agro-climatic condition	The individual on the job needs understand: KA1. various climatic parameters such as maximum and minimum temperatures, intensity and distribution of precipitation (rainfall), relative humidity etc. KA2. pest and diseases specific to a given agro climatic region, the life cycles of these pests and diseases and the sources of infection
B. Soil sampling and testing	The individual on the job needs to know and understand: KB1. various procedures of soil sampling KB2. soil testing laboratories and various nutrients (macro and micro) that are analysed KB3. soil analysis report KB4. recommendations based on the availability of various micro and macro nutrients in a given soil or crop sample
C. Soil type and nutrient status	The individual on the job needs to know and understand: KC1. soil types, their advantages and disadvantages with reference to the nutrient status KC2. based on the soil type, various methods of land preparation to maintain soil tilth KC3. various farm machinery available and their utility to maintain soil tilth and health KE1. interaction affects of the soil type, level of the land and water availability on the crop growth and its yield
D. Fertiliser / micro nutrient management	The individual on the job needs to know and understand: KD1. appropriate methods of application of various fertilisers and micro nutrients KD2. timing and location of the application of fertilizer/nutrient in the crop life cycle
E. Weed management	The individual on the job needs to know and understand: KE2. weed control measures
F. Irrigation management	The individual on the job needs to know and understand: KF1. various methods of irrigation and resource use efficiency KF2. methods of precision farming and their application in crop cultivation KF3. timing and method of irrigation and drainage appropriate for a given soil type

AGR/N7603
Make frontline demonstrations

	and climatic condition
G. Harvesting	The individual on the job needs to know and understand: KG1. various methods of harvesting KG2. precautions to be taken while handling the produce during harvest KG3. advantages of grading (at the time of harvesting) in the price determination KG4. influence of crop stage of harvesting and method of harvesting, on the keeping quality of the fruits and the affect on storage losses
H. Storage and post-harvesting	The individual on the job needs to know and understand: KH1. use various methods of storage and their influence on the fruit or grain or produce quality and on the health of the consumer KH2. take up various methods of storage and their cost dynamics KH3. advantages and challenges of various latest developments (both institutional and technical) on the keeping quality and revenue
I. Other farm operations	The individual on the job needs to know and understand: KI1. various operations that have the potential to increase the yield and decrease the incidence of pests and diseases KI2. latest technological developments that have the potential to increase the crop yield and resource use efficiency
J. Safety	The individual on the job needs to know and understand: KJ1. uses and harmful effects of various pesticides KJ2. safe methods of handling the pesticides KJ3. first aid to the exposure of humans to harmful effects of pesticides
K. Tool handling	The individual on the job needs to know and understand: KK1. use of tools for making demonstrations KK2. appropriate handling of tools KK3. safety measures to be adopted for using tools
Skills (S)	
A. Core Skills/ Generic Skills	Reading and comprehension skills
	The individual on the job needs to know and understand: SA1. update oneself about latest technologies by reading research articles, attending seminars, conferences etc. SA2. keep abreast with the latest knowledge by reading brochures, pamphlets, product information sheets etc. SA3. read relevant newspapers / booklets etc.
B. Professional Skills	Interpersonal skills
	The individual on the job needs to know and understand: SB1. develop a rapport with farmers and other stakeholders SB2. listen carefully and interpret their requirements SB3. suggest possible solutions
	Communication skills
	The individual on the job needs to know and understand: SB4. maintaining effective relationships with farmers SB5. communicate clearly and effectively with various stakeholders

AGR/N7603
Make frontline demonstrations

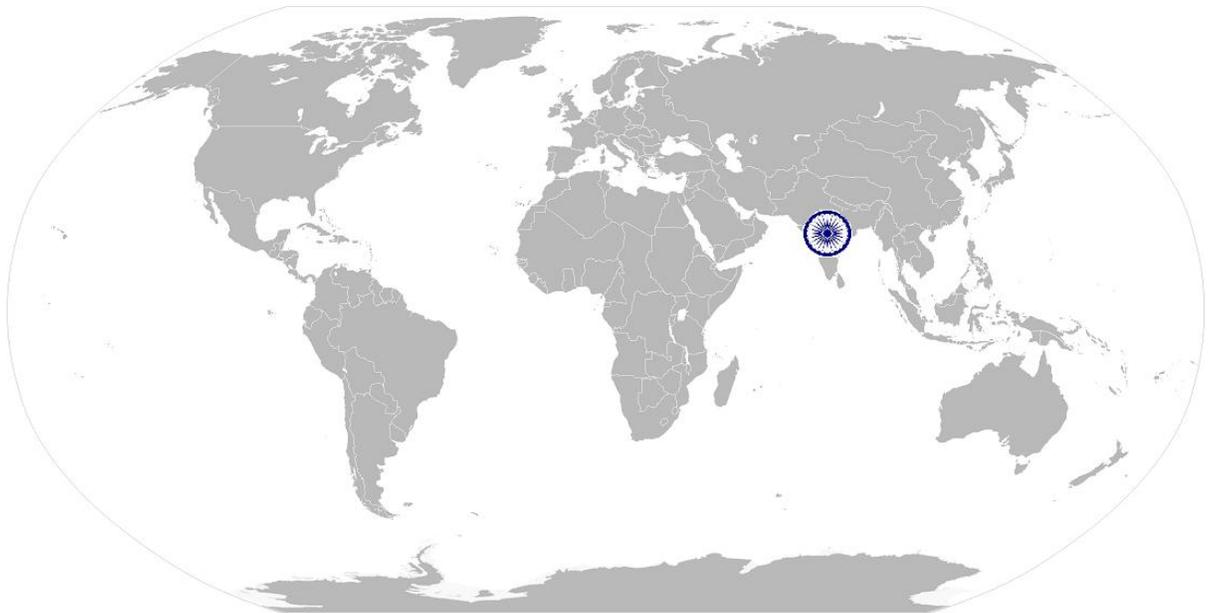
	SB6. understand information and grasp its meaning SB7. seek advice from senior people and experts SB8. put the farmers at ease and suggest solutions SB9. communicate in local language SB10. educate and inform farmers about different issues
	Behavioural skills
	The individual on the job needs to know and understand: SB11. importance of personal grooming SB12. significance of etiquette and body language SB13. being polite and courteous under all circumstances
	Decision making skills
	SB14. make decisions pertaining to the concerned area of work SB15. identify problems that may arise in carrying out tasks and take preventive action following workplace procedures
	Plan and organise
	SB16. plan and organise frontline field demonstrations SB17. organise meetings of stakeholders if necessary SB18. organise meetings of representative group of farmers for frontline field demonstrations
	Workshop centricity
	SB19. participate in exhibitions / seminars / workshop which provide information on new technologies in agriculture and allied sectors SB20. make use of exposure visits to model farms
	People management
	SB21. manage relationships with farmers SB22. build relationships and use human centric approach
	Problem solving
	SB23. think through the problem, evaluate the possible solutions and take up optimum / best solutions SB24. identify economically viable and operationally feasible solutions which meet farmer needs
	Analytical thinking
	SB25. analyse the data and information collected from frontline field demonstrations to come up with results and solutions thereof SB26. apply, analyse and evaluate the information gathered from observation, frontline field demonstrations, experience, reasoning, discussions with farmers and stakeholders
	Reporting and documentation
	SB27. report and document the results collected from frontline field demonstrations SB28. document the findings in a clear and concise manner, which is easy to understand

AGR/N7603
Make frontline demonstrations

NOS Version Control

NOS Code	AGR/N7603		
Credits(NVEQF/NVQF/NSQF) [OPTIONAL]	TBD	Version number	1.0
Industry	Agriculture and Allied	Drafted on	12/02/14
Industry Sub-sector	Agriculture industries	Last reviewed on	24/03/14
		Next review date	24/09/14

National Occupational Standard



Overview

This unit is about providing training to farmers to update their knowledge and skills.

AGR/N7604
Provide training to farmers

Unit Code	AGR /N7604
Unit Title (Task)	Providing training to farmers
Description	This OS unit is about providing training to farmers to update their knowledge and skills
Scope	<p>This unit/ task covers the following:</p> <ul style="list-style-type: none"> • Plan the training program • Deliver training • Ensure feedback mechanism • Documentation
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Plan the training program	<p>To be competent, the user/ individual must be able to:</p> <p>PC1. select technologies / topics on which training has to be provided (could be agriculture as well as allied topics)</p> <p>PC2. select topics which can help farmers with a supplementary source of income</p> <p>PC3. select a place where training has to be provided, i.e. farmers' field, training school etc.</p> <p>PC4. select a group of farmers to whom training has to be provided</p> <p>PC5. arrange necessary inputs required for the training, such as machinery and equipment, black board, leaflets etc.</p>
Deliver training	<p>To be competent, the user/ individual must be able to:</p> <p>PC6. gather the farmers on a specific date and time for the training</p> <p>PC7. deliver training modules in a clear and concise manner</p> <p>PC8. make the training session interactive and encourage questions from the farmers</p> <p>PC9. provide both theoretical as well as practical training</p> <p>PC10. assess satisfaction level of the farmers</p>
Ensure feedback and follow-up mechanism	<p>To be competent, the user/ individual must be able to:</p> <p>PC11. seek feedback after the training session is over</p> <p>PC12. note down the feedback so that it helps with further refinement and development of the training program</p> <p>PC13. follow up with the farmers to ensure whether they are following the new practices taught</p> <p>PC14. follow up with the farmers to assess the benefits they received from the training program</p>
Documentation	<p>To be competent, the user/ individual must be able to:</p> <p>PC15. maintain records of all training programs delivered</p> <p>PC16. maintain details of feedback received and action taken</p> <p>PC17. document the benefits received by farmers from the trainings</p> <p>PC18. document challenges faced during the training programmes</p>
Knowledge and Understanding (K)	

AGR/N7604
Provide training to farmers

A. Agro-climatic condition	The individual on the job needs understand: KA1. various climatic parameters such as maximum and minimum temperatures, intensity and distribution of precipitation (rainfall), relative humidity etc. KA2. pest and diseases specific to a given agro climatic region, the life cycles of these pests and diseases and the sources of infection
B. Soil sampling and testing	The individual on the job needs to know and understand: KB1. various procedures of soil sampling KB2. soil testing laboratories and various nutrients (macro and micro) that are analysed KB3. soil analysis report KB4. recommendations based on the availability of various micro and macro nutrients in a given soil or crop sample
C. Soil type and nutrient status	The individual on the job needs to know and understand: KC1. soil types, their advantages and disadvantages with reference to the nutrient status KC2. based on the soil type, various methods of land preparation to maintain soil tilth KC3. various farm machinery available and their utility to maintain soil tilth and health KC4. interaction affects of the soil type, level of the land and water availability on the crop growth and its yield
D. Fertiliser / micro nutrient management	The individual on the job needs to know and understand: KD1. appropriate methods of application of various fertilisers and micro nutrients KD2. timing and location of the application of fertilizer/nutrient in the crop life cycle
E. Weed management	The individual on the job needs to know and understand: KE1. weed control measures
F. Irrigation management	The individual on the job needs to know and understand: KF1. various methods of irrigation and resource use efficiency KF2. methods of precision farming and their application in crop cultivation KF3. timing and method of irrigation and drainage appropriate for a given soil type and climatic condition
G. Harvesting	The individual on the job needs to know and understand: KG1. various methods of harvesting KG2. precautions to be taken while handling the fruits during harvest KG3. advantages of grading (at the time of harvesting) in the price determination KG4. influence of crop stage of harvesting and method of harvesting, on the keeping quality of the fruits and the affect on storage losses
H. Storage and post-harvesting	The individual on the job needs to know and understand: KH1. use various methods of storage and their influence on the fruit quality and on the health of the consumer KH2. take up various methods of storage and their cost dynamics KH3. advantages and challenges of various latest developments (both institutional and technical) on the keeping quality and revenue

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I. Other farm operations	The individual on the job needs to know and understand: KI1. various operations that have the potential to increase the yield and decrease the incidence of pests and diseases KI2. latest technological developments that have the potential to increase the crop yield and resource use efficiency
J. Safety	The individual on the job needs to know and understand: KJ1. uses and harmful effects of various pesticides KJ2. safe methods of handling the pesticides KJ3. first aid to the exposure of humans to harmful effects of pesticides
K. Training	The individual on the job needs to know and understand: KK1. tools to be used for providing effective training KK2. machinery, equipment and other inputs to be used for providing training KK3. effective methods of delivery of training KK4. availability and use of infrastructure to be used for training
Skills (S) [Optional]	
C. Core Skills/ Generic Skills	Reading and comprehension skills The individual on the job needs to know and understand: SA1. update oneself about latest technologies by reading research articles, attending seminars, conferences etc. SA2. keep abreast with the latest knowledge by reading brochures, pamphlets, product information sheets etc. SA3. read relevant newspapers / booklets etc.
D. Professional Skills	Interpersonal skills The individual on the job needs to know and understand: SB1. develop a rapport with farmers and other stakeholders SB2. listen carefully and interpret their requirements SB3. suggest possible solutions Communication skills The individual on the job needs to know and understand: SB4. maintaining effective relationships with farmers SB5. communicate clearly and effectively with various stakeholders SB6. understand information and grasp its meaning SB7. seek advice from senior people and experts SB8. put the farmers at ease and suggest solutions SB9. communicate in local language SB10. educate and inform farmers about different issues Behavioural skills The individual on the job needs to know and understand: SB11. importance of personal grooming SB12. significance of etiquette and body language SB13. being polite and courteous under all circumstances Decision making skills

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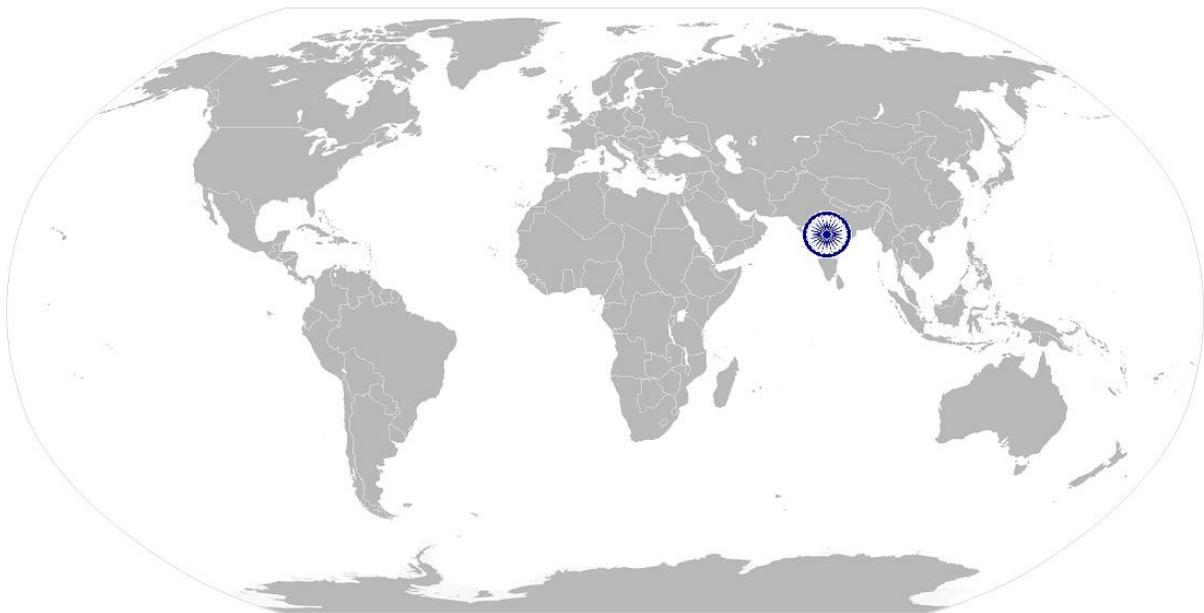
	SB14. make decisions pertaining to the concerned area of work
	SB15. identify problems that may arise in carrying out tasks and take preventive action following workplace procedures
	Plan and organise
	SB16. plan and organise training programmes
	SB17. organise meetings of stakeholders if necessary
	SB18. organise meetings of farmers for trainings
	Workshop centricity
	SB19. participate in exhibitions / seminars / workshop which provide information on new technologies in agriculture and allied sectors
	SB20. make use of exposure visits to model farms
	People management
	SB21. manage relationships with farmers
	SB22. build relationships and use human centric approach
	Problem solving
	SB23. think through the problem, evaluate the possible solutions and take up optimum / best solutions
	SB24. identify economically viable and operationally feasible solutions which meet farmer needs
	Analytical thinking
SB25. analyse the data and information collected from frontline field demonstrations to come up with results and solutions thereof	
SB26. apply, analyse and evaluate the information gathered from observation, frontline field demonstrations, experience, reasoning, discussions with farmers and stakeholders	
Leadership skills	
SB27. organise farmers' groups and lead them towards solutions to their problems	
Reporting and documentation	
SB28. document the feedback received during the trainings	
SB29. document the findings in a clear and concise manner, which is easy to understand	

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Provide training to farmers

NOS Version Control

NOS Code	AGR/N7604		
Credits(NVEQF/NVQF/NSQF) [OPTIONAL]	TBD	Version number	1.0
Industry	Agriculture and Allied	Drafted on	12/02/14
Industry Sub-sector	Agriculture industries	Last reviewed on	24/03/14
		Next review date	24/09/14

National Occupational Standard



Overview

This unit is about the extension executive assisting the farmers in establishing backward linkages with input suppliers and forward linkages with the food industry, warehouse, etc.

AGR/N7605
Assist with backward and forward linkages

Unit Code	AGR/N7605
Unit Title (Task)	Assist with backward and forward linkages
Description	This OS unit is about the extension executive assisting the farmers in establishing backward linkages with input suppliers and forward linkages with the food industry
Scope	This unit/ task covers the following: <ul style="list-style-type: none"> Assist in establishing backward linkages with input suppliers Assist in establishing forward linkages
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Assist in establishing backward linkages with input suppliers	To be competent, the user/ individual must be able to: PC1. help arrange critical inputs like seed, fertilisers, pesticides, credit, insurance etc. at an optimum cost and of high quality PC2. link the farmers to input providers
Assist in establishing forward linkages with the industry	To be competent, the user/ individual must be able to: PC3. develop entrepreneurial skills in farmers for selling their produce PC4. assist in preparing agri-business plan PC5. explain the concept of cash management PC6. assist farmers on effective practice in forward linkage such as warehouse, marketing PC7. link the farmers with supply chain industry PC8. link the farmers to food industry
Knowledge and Understanding (K)	
A. Market understanding	The individual on the job needs to know and understand: KA1. different sources of supplies of inputs KA2. best and most cost-effective sources of supply KA3. ability to negotiate KA4. marketing and sales channels KA5. sale network KA6. prospective buyers
B. Modes of communication	The individual on the job needs to know and understand: KB1. how to get in touch with suppliers of inputs KB2. best ways of getting in touch with the prospective buyers
Skills (S)	
A. Core Skills/ Generic Skills	Reading and comprehension skills
	The individual on the job needs to know and understand: SA1. update oneself about existing and upcoming suppliers of inputs SA2. update oneself about prospective buyers in the market SA3. keep abreast of latest modes of communication with the buyers and sellers

AGR/N7605
Assist with backward and forward linkages

B. Professional Skills	Interpersonal skills
	The individual on the job needs to know and understand: SB1. develop a rapport with farmers, buyers and sellers SB2. listen carefully and interpret their requirements SB3. suggest possible solutions
	Communication skills
	The individual on the job needs to know and understand: SB4. maintaining effective relationships with farmers, buyers and sellers SB5. communicate clearly and effectively with various stakeholders SB6. understand information and grasp its meaning SB7. seek advice from senior people and experts SB8. put the farmers at ease and suggest solutions SB9. communicate in local language
	Behavioural skills
	The individual on the job needs to know and understand: SB10. importance of personal grooming SB11. significance of etiquette SB12. being polite and courteous under all circumstances
	Decision making skills
	SB13. make decisions pertaining to the concerned area of work SB14. identify problems that may arise in carrying out tasks and take preventive action following workplace procedures
	Plan and organise
	SB15. plan and organise the sale and purchase of commodities SB16. organise meetings of stakeholders if necessary
	People management
	SB17. manage relationships with farmers SB18. build relationships and use human centric approach

AGR/N7605
Assist with backward and forward linkages

NOS Version Control

NOS Code	AGR/N7605		
Credits(NVEQF/NVQF/NSQF) [OPTIONAL]	TBD	Version number	1.0
Industry	Agriculture and Allied	Drafted on	12/02/14
Industry Sub-sector	Agriculture industries	Last reviewed on	24/03/14
		Next review date	24/09/14

Definitions

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 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.
Keywords /Terms	Description
NOS	National Occupational Standard(s)
NVQF	National Vocational Qualifications Framework
NSQF	National Qualifications Framework
NVEQF	National Vocational Education Qualifications Framework
QP	Qualifications Pack