

NSQF QUALIFICATION FILE GUIDANCE

Version 6: Draft of 08 March 2016

CONTACT DETAILS OF THE BODY SUBMITTING THE QUALIFICATION FILE

Name and address of submitting body:

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List of documents submitted in support of the Qualifications File

1. Qualifications Pack of Agriculture Machinery Operator
2. Industry Engagement Certificate
3. Career Map of Agriculture Machinery Operator

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SUMMARY

Qualification Title	Agriculture Machinery Operator
Qualification Code	AGR/Q1103
Nature and purpose of the qualification	<p>Nature of the qualification</p> <ul style="list-style-type: none">- a Qualification Pack (QP) <p>The main purpose of the qualification</p> <ul style="list-style-type: none">- to train the incumbent for operating machineries used in farming processes such as tilling, planting seeds, fertilizing plants, spraying and dusting of plants and harvesting crops.
Body/bodies which will award the qualification	Agriculture Skill Council of India (ASCI)
Body which will accredit providers to offer courses leading to the qualification	Agriculture Skill Council of India (ASCI)
Body/bodies which will carry out assessment of learners	Agriculture Skill Council of India (ASCI)
Occupation(s) to which the qualification gives access	Agriculture Machinery Operator
Licensing requirements	N/A
Level of the qualification in the NSQF	Level 4
Anticipated volume of training/learning required to complete the qualification	200 hours
Entry requirements and/or recommendations	<p>Class 8, preferably</p> <p>0-6 months of experience of working in a related field</p>
Progression from the qualification	Agriculture Machinery Demonstrator/ Custom Hiring Service Provider
Planned arrangements for the Recognition of Prior learning (RPL)	RPL assessment will be as per normal ASCI assessment process.
International comparability where known	Not done as yet

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Date of planned review of the qualification. 01/07/2019

Formal structure of the qualification			
Title and identification code of component.	Mandatory/Optional	Estimated size (learning hours)	Level
Introduction (Bridge Module)	Mandatory	2	4
1. AGR/N1107 Prepare for operation of farm machineries	Mandatory	32	4
2. AGR/N1108 Select power operated farm implements to be used	Mandatory	32	4
3. AGR/N1109 Operate power tiller	Mandatory	32	4
4. AGR/N1110 Carry out land shaping and plant protection	Mandatory	32	4
5. AGR/N1111 Carry out minor repair and periodical maintenance of agriculture machineries	Mandatory	32	4
6. AGR/N9903 Maintain health and safety at the workplace	Mandatory	18	4
7. AGR/N1112 Identify hand operated farm implements and alternative sources of farm energy to be used	Optional	20	4

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Please attach any document giving further detail about the structure of the qualification – eg a Curriculum Document or a Qualification Pack.

Give the titles and other relevant details of the document(s) here. Include page references showing where to find the relevant information.

1. Qualification Pack of Agriculture Machinery Operator - Annexure 1

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SECTION 1 ASSESSMENT

Body/Bodies which will carry out assessment:

Name of assessment body:

Agriculture Skill Council of India (ASCI)

If there will be more than one assessment body for this qualification, give details.

ASCI affiliated assessment bodies.

1. Aspiring Minds Pvt Ltd
2. Anant Learning & Development Pvt Ltd
3. Assess People Services India Pvt Ltd
4. Trendsetters Skill Assessors Pvt Ltd
5. Mettl
6. Manipal City & Guilds
7. SP Institute of Workforce Development
8. Multi Skill Assessor Guild

More Assessment Agencies are being empanelled to cover wider geographical area

How will RPL assessment be managed and who will carry it out?

RPL will be based on the same approved Qualification Pack and Assessment Criteria mentioned in the Qualification Pack and will be carried out as per normal ASCI assessment process.

Describe the overall assessment strategy and specific arrangements which have been put in place to ensure that assessment is always valid, consistent and fair and show that these are in line with the requirements of the NSQF:

A robust technology enabled assessment methodology has been designed keeping in mind the geographical/Physical constraints and target segment which assess a trainee's knowledge and skill set through three methods:

- a. An offline Tablet based test through the use of Multiple Choice Text and Picture based questions in vernacular languages
- b. Actual demonstration on the field
- c. Viva

ASCI's assessment strategy:

- Question sets are developed as per the weightage of each NOS of the Qualification Pack.
- Assessment criteria for each Qualification Pack developed, in which each Performance criteria (PC) assigned marks based on NOS
- Question Bank is developed to assess the theoretical and practical knowledge. To ensure the quality, each trainees get different set of question
- Empanelment of subject matter expert as assessor primarily from the Industry to assess trainee specifically on practical skills as per Industry demands

Assessments are preferably conducted on tablets or pen or papers in regional languages according to the requirement.

Please attach any documents giving further information about assessment and/or RPL.

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Give the titles and other relevant details of the document(s) here. Include page references showing where to find the relevant information.

ASSESSMENT EVIDENCE

Complete a grid for each component as listed in “Formal structure of the the qualification” in the Summary.

NOTE: this grid can be replaced by any part of the qualification documentation which shows the same information – ie Learning Outcomes to be assessed, assessment criteria and the means of assessment.

Title of Component: Agriculture Machinery Operator

CRITERIA FOR ASSESSMENT OF TRAINEES

Job Role Agriculture Machinery Operator

Qualification Pack AGR/Q1103

Sector Skill Council Agriculture Skill Council of India

Guidelines for Assessment

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC
3. 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 criteria
5. To pass the Qualification Pack, every trainee should score a minimum of 70% in aggregate
6. In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack

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Assessment outcomes	Assessment criteria for outcomes	Marks Allocation			
		Total Marks	Out Of	Theory	Skills Practical
1. AGR/N1107 Prepare for operation of farm machineries	PC1. identify and monitor different engine parts		5	2	3
	PC2. carry out dismantling of engine, cleaning and inspection of various parts as per the instructions given in the manuals		5	1	4
	PC3. undertake proper functioning of different engine parts such as:		6	1	5
	<ul style="list-style-type: none"> air intake and exhaust system 				
	<ul style="list-style-type: none"> fuel system i.e. fuel and oil pump 				
	<ul style="list-style-type: none"> lubrication system 				
	<ul style="list-style-type: none"> cooling system i.e. water pump, fan, radiator 				
	<ul style="list-style-type: none"> governing system 		6	1	5
	PC4. carry out proper measurement and adjustment of different components such as cylinder liner, piston rings, connecting rods, etc.		5	2	3
	PC5. carry out reassembling of engine after dismantling in a proper manner		5	2	3
	PC6. carry out troubleshooting as and when required on a regular basis		5	2	3
	PC7. identify and understand full working of a power tiller		5	2	3
	PC8. check proper working of all controls, gauges, and symbols		5	2	3
PC9. perform pre start up checks	5	1	4		

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	PC10. perform corrective operations if any anomaly is detected		5	2	3
	PC11. carry out maintenance and servicing of the equipment on a regular basis		6	2	4
	PC12. check if the liquid ballast on each tyre, and the inflation pressures are within the limits specified by the tyre manufacturer (for wheeled power tillers)		6	1	5
	PC13. test for maximum power and pull of the power tiller by testing for factors such as fuel consumption, temperature of engine oil, coolant, transmission oil, wheel slip forward speed		6	1	5
	PC14. identify and understand the production of crops in different season		6	2	4
	PC15. identify new techniques ensuring good soil health condition for the crop		6	2	4
	PC16. ensure different weed management tools/implements		6	2	4
	PC17. identify new inter-cultural operations techniques used for weeding, hoeing, topping, nipping of buds, pruning, shading and earthing up etc		6	2	4
	PC18. identify new farming techniques for integrated pest and disease management		6	2	4
			100	30	70
2. AGR/N1108 Select power operated farm implements to be used	PC1. ensure that proper implements for the power tiller are available so that the power tiller is capable of performing field operations which maybe stationary and/or mobile		10	3	7
	PC2. select the power operated implement based on the type of activity to be carried out		10	3	7
	PC3. use the following implements for seed bed preparation		10	3	7
	— plough				
	— sub soiler				
	— rotavator				
	— land shaper and leveler		10	3	7
PC4. use the following implements for improved sowing and planting					
— seed cum fertilizer drill and planters					

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	— paddy planter and seed drill				
	— fertilizer applicator				
	— vegetable planter				
	PC5. use the following equipments for inter row weeding and inter cultivation				
	— power weeder		10	3	7
	— high clearance weeder				
	— plant protection equipments				
	PC6. use the following equipments for harvesting and threshing				
	— diggers				
	— self propelled vertical conveyor reaper		10	3	7
	— tractor drawn vertical conveyor reaper				
	— forage harvester and thresher				
	— combine harvester				
	PC7. use the following equipments for crop processing				
	— chaff cutter				
	— maize sheller		10	3	7
	— de husker/huller				
	— sugarcane crusher				
	— dryer				
	PC8. use the following equipment for transportation				
	— two/four wheel trolley		10	3	7
	PC9. ensure safety measures are undertaken during the operation of these equipments		10	3	7
	PC 10. ensure proper storage of these equipments during off season and when not in use		10	3	7
			100	30	70
3. AGR/N1109 Operate power tiller	PC1. achieve weight balance of tiller by adding the manufacturer's recommended ballast for the attachment before starting operations		11	3	8
	PC2. ensure pre-start checks		11	4	7
	PC3. ensure handles and grips are free of mud and grease before operation of the machinery		11	3	8
	PC4. avoid changing gear or suddenly pressing one of the side clutches or brakes which can cause the tiller to swing to either side or lift upwards during operation		12	4	8
	PC5. maintain protective shield at rear of rotary in good condition as it protects		11	3	8

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	the operator from stones and mud thrown up by rotary blades				
	PC6. take the tiller in reverse when going down a slope		11	3	8
	PC7. ensure that control linkages are in good condition and control levers are operating smoothly before start of operation		11	4	7
	PC8. avoid using side clutch and ensure disengagement of rotary when moving up or down slopes or crossing bunds		11	3	8
	PC9. ensure post stop checks		11	3	8
			100	30	70
4. AGR/N1110 Carry out land shaping and plant protection	PC1. carry out levelling, smoothing and shaping of the field surface		8	2	6
	PC2. use animal power or small mechanized equipment to carry out these operations		8	3	5
	PC3. carry out loosening of soil by using ploughs, land shapers and levelers which help in breaking the soil		8	2	6
	PC4. use levelling boards, floats and harrows for carry out smoothening of the seed bed		9	3	6
	PC5. apply plant protection chemicals on plants and soil in the form of spray, dust or mist to prevent from diseases		9	3	6
	PC6. use equipments based on the following factors:				
	— duster in case of portable machinery and simple operations/lesser plants or area to be covered		9	2	7
	— sprayer for higher efficiency				
	PC7. assemble the sprayer and duster as per the manufacturer's instructions and ensure there are no damages in any of the parts		9	3	6
	PC8. follow the instructions for mixing the chemicals as given on the labels		8	2	6
	PC9. ensure proper clothing is worn during the operation		8	3	5
	PC10. dismantle all the parts after use		8	2	6
	PC11. ensure the equipment is properly cleaned after usage		8	3	5
PC12. store the equipment in a safe and proper condition when not in use		8	2	6	
			100	30	70
5. AGR/N1111 Carry out minor repair and periodical maintenance of	PC1. carry out servicing and maintenance activities in accordance with the operator's manual		17	5	12

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agriculture machineries	PC2. ensure regular servicing of the equipments and tools		17	5	12
	PC3. follow guidelines for storage of spare parts and other agriculture machineries/implements		17	5	12
	PC4. maintain record of consumption of fuel/oil with reference to operation and soil condition		16	5	11
	PC5. keep machine clean and check for leakage if oil, fuel, etc.		16	5	11
	PC6. ensure that repairs are carried out using genuine spare parts		17	5	12
			100	30	70
6. AGR/N9903 Maintain health and safety at the workplace	PC1. undertake basic safety checks before operation of all machinery and vehicles and report all potential hazards to the supervisor	100	6	2	4
	PC2. identify work for which protective clothing or equipment is required and perform those duties in accordance with workplace policy		7	2	5
	PC3. read and understand the hazards of use and contamination mentioned on the labels of pesticides/fumigants, etc.		7	2	5
	PC4. assess risks prior to performing manual handling jobs, and work according to currently recommended safe practices		7	2	5
	PC5. use equipment and materials safely and correctly and return the same to designated storage when not in use		7	2	5
	PC6. dispose off waste safely and correctly in a designated area		6	2	4
	PC7. recognize risks to bystanders and take action to reduce risk associated with jobs in the workplace		7	2	5
	PC8. perform work in a manner which minimizes environmental damage all procedures and ensure work instructions for controlling risks are followed closely		7	2	5
	PC9. report any accidents, incidents or problems without delay to an appropriate person and take necessary immediate action to reduce further danger		7	2	5
	PC10. follow procedures for dealing with accidents, fires and emergencies, including communicating location and directions for emergency evacuation		7	2	5
	PC11. follow emergency procedures to company standard / workplace requirements		6	2	4

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	PC12. use emergency equipment in accordance with manufacturers' specifications and workplace requirements		7	2	5
	PC13. provide treatment appropriate to the patient's injuries in accordance with recognized first aid techniques		7	2	5
	PC14. recover (if practical), clean, inspect/test, refurbish, replace and store the first aid equipment as appropriate		6	2	4
	PC15. report details of first aid administered in accordance with workplace procedures.		6	2	4
			100	30	70
7. AGR/N1112 Identify hand operated farm implements and alternative sources of farm energy to be used	PC1. analyze the constructional features of all hand tools and implements		16	5	11
	PC2. analyze the conditions under which the implements and tools could be used		16	5	11
	PC3. carry out proper identification and operation and maintenance of all tools such as:		17	5	12
	— wheel hand hoe				
	— seed drill				
	— fertilizer broadcaster/appliator				
	— maize sheller				
	— grain cleaner cum grader				
	— seed treater				
	— other horticulture tools				
	PC4. identify sources of alternative farm energy such as:		17	5	12
	— solar energy for equipments such as threshers, cleaners, graders, chaff cutters				
	— solar cooker				
	— lamp or solar light/lamp				
	— heater or solar dryer				
— battery charger					
— pumps					
— solar agricultural dryers					
PC5. apply and use alternative sources of energy where possible by ensuring proper care and maintenance		17	5	12	
PC6. identify renewable sources of energy that are locally available		17	5	12	
			100	30	70

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SECTION 2

EVIDENCE OF LEVEL

Awarding bodies will enter a proposed NSQF level for the qualification in the Qualification File Summary. This section asks for the evidence on which that proposal is based. The evidence must refer to the level descriptors of the NSQF.

NSDA recommends an approach to working out the level of qualifications which starts with the level descriptor domains (Process, Professional knowledge, Professional skill, Core skill and Responsibility: see annex A). Two variants for providing the evidence of level are offered here: Option A and Option B in the following pages. Awarding bodies should choose the option which best suits the qualification.

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OPTION B

Title/Name of qualification/component: Agriculture machinery operator			Level: 4
NSQF Domain	Key requirements of the job role	How the job role relates to the NSQF level descriptors	NSQF Level
Process	An Agriculture Machinery Operator is responsible for operating machineries used in farming processes such as tilling, planting seeds, fertilizing plants, spraying and dusting of plants and harvesting crops.	<p>The job holder is required to prepare for operation of farm machineries, select power operated farm implements to be used, operate power tiller, carry out land shaping and plant protection, carry out minor repair and periodical maintenance of agriculture machineries, maintain health and safety at the workplace, identify hand operated farm implements and alternative sources of farm energy to be used. Since the job requires working in a familiar, predictable, routine, situation of clear choice, it has been placed at Level 04.</p> <p>Since it does not involve limited range of activities, it cannot be placed at Level 03. For example, the job holder is required to perform pre start up checks, carry out maintenance and servicing of the equipment on a regular basis, ensure that proper implements for the power tiller are available, carry out levelling, smoothing and shaping of the field surface, apply plant protection chemicals on plants and soil in the form of spray, dust or mist to prevent</p>	4

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Title/Name of qualification/component: Agriculture machinery operator			Level: 4
NSQF Domain	Key requirements of the job role	How the job role relates to the NSQF level descriptors	NSQF Level
		<p>from diseases, achieve weight balance of tiller by adding the manufacturer's recommended ballast for the attachment before starting operations.</p> <p>Considering these outcomes, the job qualifies for a level 04 role.</p>	
Professional knowledge	<p>The job holder needs to know and understand procedures specified by the organization for testing of farm machinery, standard implements and standard operating procedures for usage of implements, safety precautions to be undertaken during operation.</p>	<p>The job holder is expected to have factual knowledge of field of knowledge or study. For example the individual is required to have knowledge about identification of machine parts and understanding of different attachments, construction and working principles of farm machineries, minor repair and periodical maintenance of different components of farm machineries/implements, handling and usage of working equipment, tools and equipments, importance of repair and maintenance, general and periodic maintenance, function of different parts of farm machineries and implements. Since all the above mentioned areas are related to factual knowledge of field of knowledge, the role qualifies for Level 4. Since the job requires more than basic facts, process, and principles, it cannot be placed at Level 03.</p>	4

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Title/Name of qualification/component: Agriculture machinery operator			Level: 4
NSQF Domain	Key requirements of the job role	How the job role relates to the NSQF level descriptors	NSQF Level
Professional skill	The job holder must possess professional skills for performing the job, which include handle issues pertaining to machine parts and equipments and decide corrective actions to be undertaken, plan and prioritize the work based on the instructions received, plan to utilize time and equipments effectively, ensure proper fault finding and solution generation in consultation with key stakeholders such as farmers and other team members.	The job holder is expected to carry out routine and repetitive activities in a narrow range of application, using appropriate rule and tool. For example, the job holder is required to identify and monitor different engine parts, check proper working of all controls, gauges, and symbols, carry out reassembling of engine after dismantling in a proper manner, carry out troubleshooting as and when required on a regular basis, select the power operated implement based on the type of activity to be carried out, ensure that control linkages, are in good condition and control levers are operating smoothly before start of operation, dismantle all the parts after use, ensure the equipment is properly cleaned after usage, store the equipment in a safe and proper condition when not in use, maintain record of consumption of fuel/oil with reference to operation and soil condition, keep machine clean and check for leakage of oil, fuel, etc. Since this involved usage of quality concepts as well, it cannot be placed at Level 03.	4

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Title/Name of qualification/component: Agriculture machinery operator			Level: 4
NSQF Domain	Key requirements of the job role	How the job role relates to the NSQF level descriptors	NSQF Level
Core skill	The job holder should have core skills for performing the job which includes writing skills, reading skills, and oral and communication skills, such as noting the information communicated, reading and interpreting the process required, effectively communicating with farmers, attentively listen and comprehending the information given by the speaker ,communicating clearly on the issues being faced	The job holder is expected to communicate with clarity, have basic arithmetic skills and a basic understanding of political and natural environment. For example, test for maximum power and pull of the power tiller by testing for factors such as fuel consumption, temperature of engine oil, coolant, transmission oil, wheel slip forward speed, read and understand the hazards of use and contamination mentioned on the labels of pesticides/fumigants, etc., carry out proper measurement and adjustment of different components such as cylinder liner, piston rings, connecting rods, etc., check proper working of all controls, gauges, and symbols, follow the instructions for mixing the chemicals as given on the labels, perform corrective operations if any anomaly is detected. Hence the role qualifies for Level 04. Since the job holder is required to communicate with more than minimum required clarity, the job role cannot be placed at Level 03.	4
Responsibility	An Agriculture Machinery Operator is responsible for operating agriculture machineries such as seed cum fertilizer drill, sprayer, duster with the help of power tiller or tractor and also responsible for carrying out periodical maintenance procedures	The job holder is responsible for own work and learning. For example, perform engine overhauling of machinery, ensure proper functioning of power tillers and other basic mechanisms, identify new farming techniques for enhancing crop productivity, analyze the operation of power operated	4

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Title/Name of qualification/component: Agriculture machinery operator		Level: 4	
NSQF Domain	Key requirements of the job role	How the job role relates to the NSQF level descriptors	NSQF Level
	for the same and making minor adjustments.	implements and carry out usage based on different conditions, ensure proper operation of power tiller, carry out land levelling and shaping operations, carry out plant protection operations, ensure safe operation and storage, undertake minor repair and periodical maintenance activities, maintain health and safety at the workplace. Hence the job qualifies for a level 04 role. Since the job holder does not work under close supervision, he/she cannot be placed at Level 03.	

India-EU Skills Development project: Qualification File

SECTION 3 EVIDENCE OF NEED

What evidence is there that the qualification is needed?

While collecting data from the companies for the occupational map, we also took feedback from industry, training institutions which was collected with respect to roles for which qualification packs development, was to be prioritized. This was largely based on volume of people required, quantitative and qualitative shortfall which the industry feels they face. Governing council of ASCI and Occupational Standards Committee which comprises of experts & senior leaders gave final approval and endorsement for the same. According to industry interactions held, agricultural machinery market in India is estimated to grow at a CAGR of over 10 percent during the period 2013-18. Although India is the largest manufacturer of tractors in the world, accounting for one-third of the global production, farm mechanization in India is still at a nascent stage, with the average farm power availability in the country lower than in countries such as Korea, Japan and the US. Though, India is one of the top countries in agricultural production, in terms of farm mechanization, it is behind the world average. According to the Department of Agriculture, the share of agriculture workers and draught animals (farm power sources in agriculture) has come down from 63.5 per cent in 1971-72 to 13.67 per cent in 2009-10, whereas the share of tractors, power tillers, and motors has gone up from 36.51 per cent to 86.33 per cent during the same period. The increasing cost of agriculture labour and upkeep of draught animals has also partly resulted in the greater adoption of tractors for farm operations. Hence, there exists significant opportunity for skilling in the area of farm mechanization and farm mechanization equipments.

What is the estimated uptake of this qualification and what is the basis of this estimate?

In India, increased use of tractors has been associated with a marked rise in employment due to their effect on cropping intensity. Large scale adoption of high yielding varieties accompanied by higher use level of chemical fertilizers and enhanced cropping intensity has raised the demand for farm labour. Farm Mechanization is expected to help increase the overall employment of human labour by facilitating more intensive cultivation.

What steps were taken to ensure that the qualification(s) does (do) not duplicate already existing or planned qualifications in the NSQF?

NSDC list of Approved and Under-Development QPs was checked prior to commissioning the work and also our occupational map/QPs are put on ASCI & NSDC websites.

What arrangements are in place to monitor and review the qualification(s)? What data will be used and at what point will the qualification(s) be revised or updated?

- Any institution / individual is welcome to send feedback, which is recorded and considered During next review cycle.
- Communication will be sent for any feedback to all the main stakeholders/users one month prior to the review of the qualifications pack.
- A formal review is scheduled in one year time

Please attach any documents giving further information about any of the topics above.

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Give the titles and other relevant details of the document(s) here. Include page references showing where to find the relevant information.

SECTION 4

EVIDENCE OF PROGRESSION

What steps have been taken in the design of this or other qualifications to ensure that there is a clear path to other qualifications in this sector?

Career path in agri sector is generally in terms of activities done & ownership of responsibility because they are primarily self-wage employment/entrepreneurship roles.

However, there are occupations in the organized segment (Agri Industries) in which career pathway has been identified as illustrated below (Annexure 1)

Please attach any documents giving further information about any of the topics above.

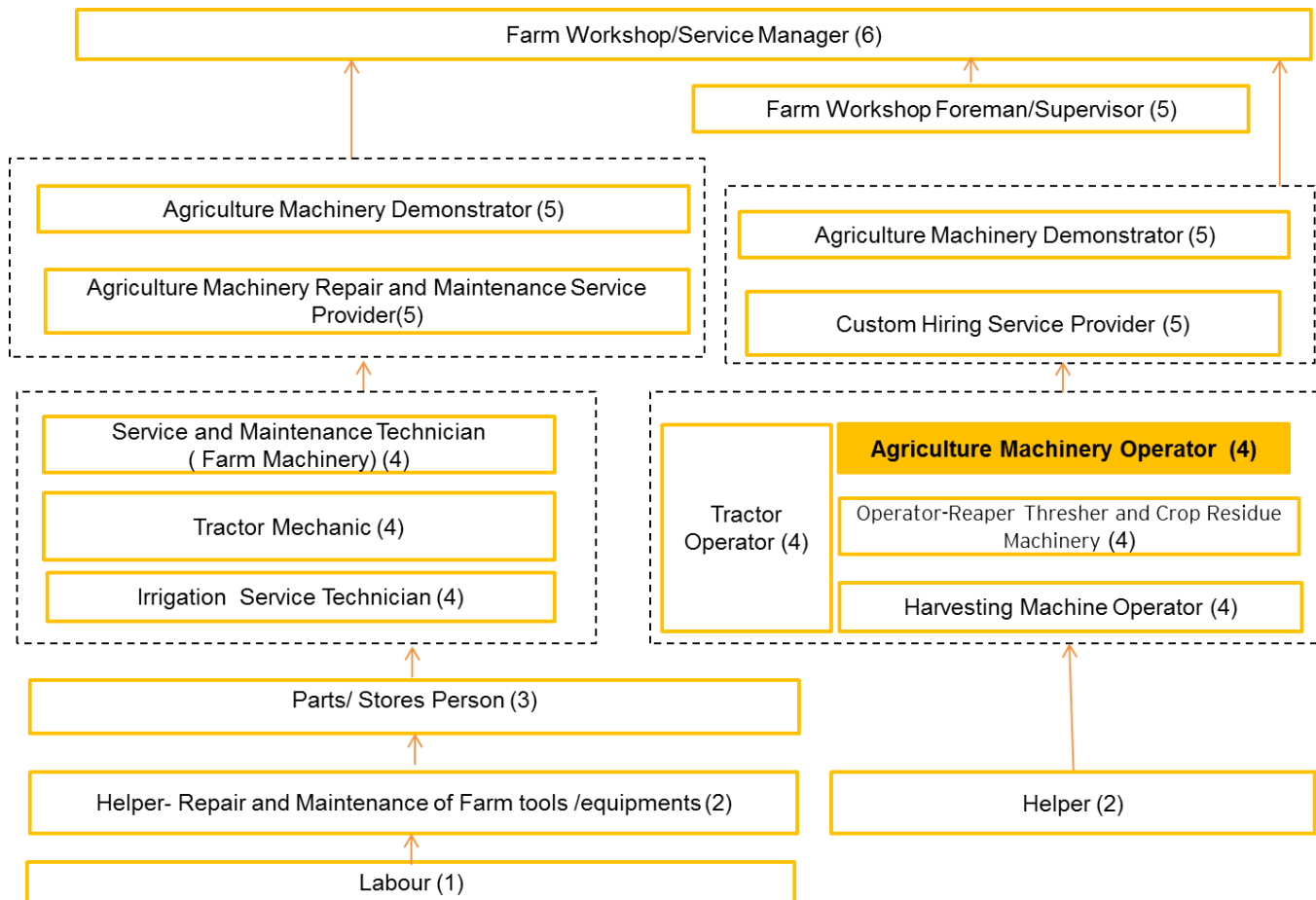
Give the titles and other relevant details of the document(s) here. Include page references showing where to find the relevant information.

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Annexure 1: Career Map of Agriculture Machinery Operator



Annexure 2: Qualification Pack of Agriculture Machinery Operator (separate file)

Annexure 3: List of QP/NOS validating companies (separate file)

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ANNEX A

NSQF LEVEL DESCRIPTORS

LEVEL	Process required	Professional knowledge	Professional skill	Core skill	Responsibility
1	Prepares person to/carry out process that are repetitive on regular basis require no previous practice,	Familiar with common trade terminology, instructional words, meanings and understanding.	Routine and repetitive, takes safety and security measures.	Reading and writing; addition, subtraction; personal financing; familiarity with social and religious diversity, hygiene and environment.	No responsibility; always works under continuous instruction and close supervision.
2	Prepares person to/carry out processes that are repetitive, on a regular basis, with little application of understanding, more of practice.	Material, tools and applications in a limited context, understands context of work and quality.	Limited service skills used in limited context; select and apply tools; assist in professional works with no variables; differentiate good and bad quality.	Receive and transmit written and oral messages, basic arithmetic, personal financing, understanding of social, political, and religious diversity, hygiene and environment.	No responsibility; works under instruction and close supervision.
3	Person may carry out a job which may require limited range of activities routine and predictable.	Basic facts, process and principle applied in trade of employment.	Recall and demonstrate practical skill, routine and repetitive in narrow range of application	Communication written and oral, with minimum required clarity, skill of basic arithmetic and algebraic principles, personal banking, basic understanding of social and natural environment.	Under close supervision. Some responsibility for own work within defined limit.

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LEVEL	Process required	Professional knowledge	Professional skill	Core skill	Responsibility
4	Work in familiar, predictable, routine, situation of clear choice.	Factual knowledge of field of knowledge or study.	Recall and demonstrate practical skill, routine and repetitive in narrow range of application, using appropriate rule and tool, using quality concepts.	Language to communicate written or oral, with required clarity, skill to basic arithmetic and algebraic principles, basic understanding of social political and natural environment.	Responsibility for own work and learning.
5	Job that requires well developed skill, with clear choice of procedures in familiar context.	Knowledge of facts, principles, processes and general concepts, in a field of work or study.	A range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools, materials and information.	Desired mathematical skill; understanding of social, political; and some skill of collecting and organising information, communication.	Responsibility for own work and learning and some responsibility for others' works and learning.
6	Demands a wide range of specialised technical skill, clarity of knowledge and practice in broad range of activity involving standard and non-standard practices.	Factual and theoretical knowledge in broad contexts within a field of work or study.	A range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study.	Reasonable good in mathematical calculation, understanding of social, political and reasonably good in data collecting organising information, and logical communication.	Responsibility for own work and learning and full responsibility for other's works and learning.
7	Requires a command of wide-ranging specialised theoretical and practical skills, involving	Wide-ranging factual and theoretical knowledge in broad contexts within a field of work or	Wide range of cognitive and practical skills required to generate solutions to specific	Good logical and mathematical skill understanding of social political and natural environment and organising	Full responsibility for output of group and development.

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LEVEL	Process required	Professional knowledge	Professional skill	Core skill	Responsibility
	variable routine and non-routine contexts.	study.	problems in a field of work of study.	information, communication and presentation skill.	
8	Comprehensive, cognitive, theoretical knowledge and practical skills to develop creative solutions to abstract problems. Undertakes self-study; demonstrates intellectual independence, analytical rigour and good communication.			Exercise management and supervision in the context of work/study having unpredictable changes; responsible for the work of others.	
9	Advanced knowledge and skill. Critical understanding of the subject, demonstrating mastery and innovation, completion of substantial research and dissertation.			Responsible for decision making in complex technical activities involving unpredictable work/study situations.	
10	Highly specialised knowledge and problem solving skill to provide original contribution to knowledge through research and scholarship.			Responsible for strategic decisions in unpredictable complex situations of work/study.	

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ANNEX B

NSQF LEVEL OUTLINES

NSQF levels related to the labour market

Level 1: Work requiring knowledge, skills and aptitudes at level 1 will be routine, repetitive, and focused on limited tasks carried out under close supervision. In some sectors, people carrying out these job roles may be described as “helpers”.

Individuals in jobs which require level 1 qualifications **may** be expected to be able to read, write, add and subtract, but will not normally be required to have any previous knowledge or skills relating to the work¹.

When employed, they will be instructed in their tasks and expected to learn and use the common terminology of the trade and acquire the basic skills necessary for the work.

Job holders at this level will be expected to carry out the tasks they are given safely and securely and to use hygienic and environmentally friendly practices. This means that they will be expected to take some responsibility for their own health and safety and that of fellow workers.

In working with others, they will be expected to respect the different social and religious backgrounds of their fellow workers.

Level 2: Work requiring knowledge, skills and aptitudes at level 2 will also be routine and repetitive, and tasks will be carried out under close supervision. The individuals will not be expected to deal independently with variables which affect the carrying out of the work. People carrying out these work roles may be described as “assistants” and the range of tasks they carry out will be limited.

Individuals in jobs which require level 2 qualifications will normally be expected to be able to read and write, add and subtract. Their work may involve taking and passing on messages.

They may also be expected to have some previous experience, knowledge and skills in the occupation. When employed, they will be instructed in their tasks and expected to acquire the practical skills necessary to assist skilled workers and/or give a limited service to customers. They will learn about, and use, the materials, tools and applications required to carry out basic tasks in an occupation. They may have to select the appropriate materials, tools and/or applications to carry out tasks.

They will be expected to understand what constitutes quality in their job role and distinguish between good and bad quality in the context of the tasks they are given. Job holders at this level will be expected to carry out the tasks they are given safely and securely and to use hygienic and environmentally friendly practices. This means that they will be expected to take some responsibility for their own health and safety and that of fellow workers and, where appropriate, customers.

In working with others, they will be expected to respect the different social and religious backgrounds of their fellow workers, but their contribution to team work may be limited.

¹ In practice many workers at this level will have limited literacy and NOS and qualifications at this levels should reflect this – eg in relation to assessment.

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Level 3: Work requiring knowledge, skills and aptitudes at level 3 will be routine and predictable. Job holders will be responsible for carrying out a limited range of jobs under close supervision. Their work may require the completion of a number of related tasks. People carrying out these job roles may be described as “partly-skilled workers”.

Individuals in jobs which require level 3 qualifications will normally be expected to be able to communicate clearly in speech and writing and may be required to use arithmetic and algebraic processes. They will be expected to have previous knowledge and skills in the occupation and should know the basic facts, processes and principles applied in the trade for which they are qualified and be able to apply the basic skills of the trade to a limited range of straightforward jobs in the occupation.

They will be expected to understand what constitutes quality in their job role and more widely in the sector or sub-sector and to distinguish between good and bad quality in the context of the jobs they are given. Job holders at this level will be expected to carry out the jobs they are given safely and securely. They will work hygienically and in ways which show an understanding of environmental issues. This means that they will be expected to take responsibility for their own health and safety and that of fellow workers and, where appropriate, customers and/or clients.

In working with others, they will be expected to conduct themselves in ways which show a basic understanding of the social environment. They should be able to make a good contribution to team work.

Level 4: Work requiring knowledge, skills and aptitudes at level 4 will be carried out in familiar, predictable and routine situations. Job holders will be responsible for carrying out a range of jobs, some of which will require them to make choices about the approaches they adopt. They will be expected to learn and improve their practice on the job. People carrying out these jobs may be described as “skilled workers”.

Individuals in jobs which require level 4 qualifications should be able to communicate clearly in speech and writing and may be required to use arithmetic and algebraic processes. They will be expected to have previous knowledge and skills in the occupation in which they are employed, to appreciate the nature of the occupation and to understand and apply the rules which govern good practice. They will be able to make choices about the best way to carry out routine jobs where the choices are clear.

They will be expected to understand what constitutes quality in the occupation and will distinguish between good and bad quality in the context of their job roles. Job holders at this level will be expected to carry out their work safely and securely and take full account of the health and safety on colleagues and customers. They will work hygienically and in ways which show an understanding of environmental issues.

In working with others, they will be expected to conduct themselves in ways which show a basic understanding of the social and political environment. They should be able to guide or lead teams on work within their capability.

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Level 5: Work requiring knowledge, skills and aptitudes at level 5 will also be carried out in familiar situations, but also ones where problems may arise. Job holders will be able to make choices about the best procedures to adopt to address problems where the choices are clear.

Individuals in jobs which require level 5 qualifications will normally be responsible for the completion of their own work and expected to learn and improve their performance on the job. They will require well developed practical and cognitive skills to complete their work. They may also have some responsibility for others' work and learning. People carrying out these jobs may be described as "fully skilled workers" or "supervisors".

Individuals employed to carry out these jobs will be expected to be able to communicate clearly in speech and writing and may be required to apply mathematical processes. They should also be able to collect and organise information to communicate about the work. They will solve problems by selecting and applying methods, tools, materials and information.

They will be expected to have previous knowledge and skills in the occupation, and to know and apply facts, principles, processes and general concepts in the occupation.

They will be expected to understand what constitutes quality in the occupation and will distinguish between good and bad quality in the context of their work. They will be expected to operate hygienically and in ways which show an understanding of environmental issues. They will take account of health and safety issues as they affect the work they carry out or supervise.

In working with others, they will be expected to conduct themselves in ways which show an understanding of the social and political environment.

Level 6: Work requiring knowledge, skills and aptitudes at level 6 will require the use of both standard and non-standard practices. Job holders will carry out a broad range of work which will require a wide range of specialised technical skills backed by clear factual and theoretical knowledge.

Individuals in jobs which require level 6 qualifications will normally be responsible for the completion of their own work and expected to learn and improve their performance on the job. They are likely to have full responsibility for others' work and learning. People carrying out these jobs may be described as "master technicians" and "trainers".

Individuals employed to carry out these job roles will be expected to be able to communicate clearly in speech and writing and may be required to carry out mathematical calculations. They should also be able to collect data, organise information, and communicate logically about the work. They will solve problems by selecting and applying methods, tools, materials and information.

They will be expected to have broad factual and theoretical knowledge applying to practice within the occupation, and a range of practical and cognitive skills. They will be able to generate solutions to problems which arise in their practice.

They will be expected to understand what constitutes quality in the occupation and to distinguish between good and bad quality in the context of all aspects of their work. They will be expected to work in ways which show an understanding of environmental issues. They will take account of health and safety issues as they affect the work they carry out or manage.

In working with others, they will be expected to conduct themselves in ways which show an understanding of the social and political environment.

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Level 7: Work requiring knowledge, skills and aptitudes at level 7 will take place in contexts which combine the routine and the non-routine and are subject to variations. Job holders will carry out a broad range of work which requires wide-ranging specialised theoretical and practical skills.

Individuals in jobs which require level 7 qualifications will normally be responsible for the output and development of a work group within an organisation. People carrying out these job roles are likely to be graduates. They may be described as “managers” or “senior technicians”.

Individuals employed to carry out these job roles will be expected to be able to communicate clearly in speech and writing and are likely to be required to carry out mathematical calculations as part of their work. They should also be skilful in collecting and organising information to communicate logically about the work.

They will be expected to have wide-ranging factual and theoretical knowledge of practice within the occupation, and a wide range of specialised practical and cognitive skills. They will be able to generate solutions to problems which arise in their work.

They will be expected to understand what constitutes quality in the occupation and distinguish between good and bad quality in all aspects of their work. They will be expected to work in ways which show a good understanding of environmental issues. They will take account of health and safety issues as they affect the work they carry out and manage.

In working with others, they will be expected to conduct themselves in ways which show a good understanding of the social and political environment.

Level 8: Individuals in jobs which require level 8 qualifications will normally be responsible for managing the work of a team and developing the team. The work will involve dealing with unpredictable circumstances affecting the work.

Their work will require the use of comprehensive knowledge and understanding of the occupational field and a commitment to self-development.

They will normally need an ability to develop creative solutions to problems requiring abstract thought. They will be required to show intellectual independence and a rigorous analytical ability. They will need to be good communicators.

Level 9: Individuals in jobs which require level 9 qualifications will normally be responsible for complex decision-making in unpredictable contexts.

They will have to exercise senior responsibility in an organisation and show mastery of the issues in the occupation and the ability to innovate.

Their work will require the use of advanced knowledge and skill. They may make contributions to knowledge in their field through research.

Level 10: Job Individuals in jobs which require level 10 qualifications will normally be responsible for strategic decision-making. The context of their work will be complex and unpredictable.

They are likely to be responsible for an organisation or a significant division of an organisation. They will have to provide leadership.

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Their work will require highly specialised knowledge and problem-solving skills. They may make original contributions to knowledge in their field through research, scholarship or innovative practice.