

NSQF QUALIFICATION FILE

CONTACT DETAILS OF THE BODY SUBMITTING THE QUALIFICATION FILE

Name and address of submitting body:

Agriculture Skill Council of India (ASCI)
6th floor, GNG Building, Plot no – 10, Sector-44,
Gurugram, Haryana – 122004

Name and contact details of individual dealing with the submission

Name: Ms Priyanka Prakash

Position in the organisation: Manager

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List of documents submitted in support of the Qualifications File

1. Qualifications Pack of Pesticide & Fertilizer Applicator
2. Career Map of Pesticide & Fertilizer Applicator
3. List of QP/NOS Validating companies

Model Curriculum to be added which will include the following:

- **Indicative list of tools/equipment to conduct the training**
- **Trainers qualification**
- **Lesson Plan**
- **Distribution of training duration into theory/practical/OJT component**

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SUMMARY

1	Qualification Title	Pesticide & Fertilizer Applicator
2	Qualification Code, if any	AGR/Q1202
3	NCO code and occupation	NCO-2015/NIL
4	Nature and purpose of the qualification (Please specify whether qualification is short term or long term)	Nature of the qualification - a Qualification Pack (QP) The main purpose of the qualification is - This is a short term course which involves training on activities-to undertake field survey, Pest & Disease Management, Preparation of spray solution, Spraying of pesticides & fertilizers
5	Body/bodies which will award the qualification	Agriculture Skill Council of India (ASCI)
6	Body which will accredit providers to offer courses leading to the qualification	Agriculture Skill Council of India (ASCI)
7	Whether accreditation/affiliation norms are already in place or not , if applicable (if yes, attach a copy)	Attached as an annexure
8	Occupation(s) to which the qualification gives access	Farm Management
9	Job description of the occupation	A Pesticide and fertilizer applicator is responsible for proper application of pesticides and fertilizers on various crops. S/he will also be responsible for monitoring of pests in the crop and take appropriate measures for not only the protection of crops but also increase the yields.
10	Licensing requirements	NA
11	Statutory and Regulatory requirement of the relevant sector (documentary evidence to be provided)	NA
12	Level of the qualification in the NSQF	Level 4
13	Anticipated volume of training/learning required to complete the qualification	200 hours
14	Indicative list of training tools required to deliver this qualification	Attached as an annexure
15	Entry requirements and/or recommendations and minimum age	8 th Standard Pass Minimum Job entry age-18 years
16	Progression from the qualification	Plant Protection Supervisor

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	(Please show Professional and academic progression)		
17	Arrangements for the Recognition of Prior learning (RPL)	RPL assessment will be as per ASCI assessment process inline with the PMKVY guidelines. (ASCI recognizes that there may be candidates who have prior learning experience in the Agriculture Sector and are desirous of being certified. Such candidates can apply to ASCI for testing and certification of their skills. Training Partners will be responsible for identifying and counselling candidates for RPL through mobilization camps and advertisements. The details of the RPL process have been defined by ASCI under the document- Guidelines for Recognition of Prior Learning under PMKVY)	
18	International comparability where known (research evidence to be provided)	This course has been compared with the courses being offered by Lantra, UK and no matching course has been found.	
19	Date of planned review of the qualification.	13/09/2021	
20	Formal structure of the qualification		
	Mandatory components		
	Title of component and identification code/NOSs/Learning outcomes	Estimated size (learning hours) Theory Practical	
		Level	
(i)	Introduction (Bridge Module)	10	10
(ii)	AGR/N1210-Understand major pests of area specific crops along with their fertilizer need	30	40
(iii)	AGR/N1211-Use different plant protection chemicals & equipments	40	45
(iv)	AGR/N9903 – Maintain health & safety at the workplace	10	15
	Sub Total (A)	90	110
	Optional components		

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	Title of component and identification code/NOSs/ Learning outcomes	Estimated size (learning hours)	Level
	Sub Total (B)		

Total (A+B)		
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SECTION 1 ASSESSMENT

21	<p>Body/Bodies which will carry out assessment: If there will be more than one assessment body for this qualification, give details.</p> <p>ASCI affiliated assessment bodies.</p> <ol style="list-style-type: none">1. Aspiring Minds Pvt Ltd2. Anant Learning & Development Pvt Ltd3. Assess People Services India Pvt Ltd4. Trendsetters Skill Assessors Pvt Ltd5. Manipal City & Guilds6. Mettl7. SP Institute of Workforce Development8. Multi Skill Assessor Guild <p>More Assessment Agencies are being empanelled to cover wider geographical area</p>
22	<p>How will RPL assessment be managed and who will carry it out?</p> <p>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 ASCI assessment process inline with the PMKVY guidelines. RPL is undertaken in a Project mode under PMKVY. Organizations (including Government entities) are required to submit a project proposal to MSDE , through NSDC, for approval and sanction for release of funds to undertake the RPL. The Training Partner or any other authority as approved by the Steering Committee, will identify and counsel candidates eligible for RPL through mobilization camps and advertisements. The mobilized candidates will be counselled, oriented about the standardized NSQF framework and basis their existing competency will be mapped against the suitable level of the concerned Job role for assessments. The candidates enrolled will be assessed by the Assessment Agency affiliated with the Sector Skill Council on the basis of assessment criteria decided by Sector Skill Council (SSC). The candidate will need to pass in the minimum assessment criteria of a particular QP decided by the SSC. Successfully assessed candidates with a valid Aadhaar or alternate ID (as per process) will be eligible for NOS based Certification.</p>
23	<p>Describe the overall assessment strategy and specific arrangements which have been put in place to ensure that assessment is always valid, reliable and fair and show that these are in line with the requirements of the NSQF.</p> <p>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:</p> <ol style="list-style-type: none">a. An offline Tablet based test through the use of Multiple Choice Text and Picture based questions in vernacular languagesb. Actual demonstration on the fieldc. Viva <p>ASCI's assessment strategy:</p> <ul style="list-style-type: none">• Question sets are developed as per the weightage of each NOS of the

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	<p>Qualification Pack.</p> <ul style="list-style-type: none">• 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 <p>Assessments are preferably conducted on tablets or pen or papers in regional languages according to the requirement.</p>
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Please attach most relevant and recent documents giving further information about assessment and/or RPL.

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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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.

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24. Assessment evidences

Title of the Component: Pesticide & Fertilizer Applicator

CRITERIA FOR ASSESSMENT OF TRAINEES

Job Role Pesticide & Fertilizer Applicator

Qualification Pack AGR/Q1202

Sector Skill Council Agriculture Skill Council of India

Guidelines for Assessment

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
3. Assessment will be conducted for all compulsory NOS, as well as the selected elective NOS/set of NOS.
OR
3. Assessment will be conducted for all compulsory NOS, as well as the selected optional NOS/set of NOS.
4. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below)
5. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on this criteria
6. To pass the Qualification Pack, every trainee should score a minimum of 70% of aggregate marks to successfully clear the assessment.
7. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack

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Assessable Outcomes	Assessment Criteria	Total Marks	Out Of	Marks Allocation	
				Theory	Skills Practical
1. AGR / N 1210 – Understand major pests of area specific crops along with their fertilizer need	PC.1 get familiarized with the cropping pattern in the area	120	10	6	4
	PC.2 diagnose the causes of pest damage symptoms by analysing feeding methods and behaviour		12	6	6
	PC3. identify the factors that determine the occurrence of pest damage and its importance		10	4	6
	PC4. recognize the important pests of specific crops in order to identify, anticipate and prevent the damage each may cause, and to select the most appropriate control measures or combination of measures for specific circumstances		12	6	6
	PC5. conduct field observation for pests judging the intensity of occurrence		10	4	6
	PC6. collect samples of pests and damaged crops		10	4	6

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	PC7. ascertain the insect-pests and confirm its growth stage		8	4	4
	PC8. ascertain the disease infesting the crops		10	4	6
	PC9. ascertain the weed-pests		8	4	4
	PC10. get familiarized with different nutrients deficiency diseases		10	5	5
	PC11. comprehend the importance and application of different types of fertilizers /micronutrients		10	4	6
	PC12. determine the nutrient requirement of plants as per the cropping pattern and soil conditions		10	4	6
		120	120	55	65
AGR / N 1211 - Use different plant protection chemicals & equipments	PC.1 identify important agro-chemicals viz-a-viz their application		6	3	3
	PC2. understand the colour coding & symbols used for pesticides		4	2	2
	PC3. adhere to the safety instructions/warnings & other information given on the label		4	2	2
	PC4. understand the proper application technologies available for pesticide and	120	6	2	4

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fertilizer application on various crops			
PC5. select the most appropriate control measures or combination of measures for specific circumstances	6	3	3
PC6. understand shelf life of chemicals and dispose off expired material	2	1	1
PC6. get familiarized with different types of pesticide and fertilizer formulations	5	3	2
PC7. prepare stock solutions and solution of pesticides/ fertilizers as instructed	6	3	3
PC8. prepare Bordeaux mixture and paste as instructed	5	2	3
PC9. identify different plant protection equipments (PPEs)- dusters, sprayers, seed treating equipments, fogging machine etc	6	2	4
PC10. understand different components of PPEs- their functions & practical use in the field	4	2	2
PC11. dismantle and assemble the common type of PPEs as per the instruction manual	4	2	2
PC12. calibrate and adjust the PPEs as per the instruction manual	4	2	2

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PC13. undertake cleaning, oiling and lubrication of PPEs as per the instruction manual	2	1	1
PC14. detect faults in the PPEs and undertake remedial action	2	1	1
PC15. transport and store pesticides/fertilizers and containers in accordance with the safety manual	2	1	1
PC16. confirm that the environmental conditions are appropriate for the work to be carried out	2	1	1
PC17. select & use appropriate personal protective equipments suitable to the work	2	1	1
PC18. assess the risk factors involved in the application of pesticides and fertilizers	4	2	2
PC19. select a suitable site for preparation of spray solution	2	0	2
PC20. use the correct preparation procedures in accordance with instructions	2	0	2
PC21. use all equipments correctly in accordance with the instruction manual	4	2	2
PC22. calculate the minimum application rate to achieve the desired level of control	4	2	2

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PC23. apply pesticides/ fertilizer at right crop stage & time and in right dose in a way which minimises the risks to non-target species and the environment	4	2	2
PC24. avoid splashing, spilling, leaks and spray drift	2	0	2
PC25. assess the need of subsequent sprayings for controlling pests	2	2	0
PC26. achieve full protection of crops from the pests	4	2	2
PC27. achieve better productivity of crops by applying pesticides and fertilizers	2	1	1
PC28. understand shelf life of agrochemicals & dispose off expired materials safely	2	1	1
PC29. use antidotes and first aid treatment in case of chemical poisoning	4	2	2
PC30. maintain personal hygiene throughout	4	2	2
PC31. maintain and store the equipment correctly after use and clear the site thoroughly	4	2	2
PC32. keep the records accurate, legible and complete	4	2	2
	120	120	56
			64

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3. AGR / N 09903 - Maintain Health & Safety at the workplace	PC1. undertake basic safety checks before operation of all machinery and vehicles and hazards are reported to the appropriate supervisor		2	1	1
	PC2. work for which protective clothing or equipment is required is identified and the appropriate protective clothing or equipment is used in performing these duties in accordance with workplace policy.		2	1	1
	PC3. read and understand the hazards of use and contamination mentioned on the labels of pesticides/fumigants etc		5	2	3
	PC4. assess risks prior to performing manual handling jobs, and work according to currently recommended safe practice.		5	3	2
	PC5. use equipment and materials safely and correctly and return the same to designated storage when not in use		5	2	3
	PC6. dispose of waste safely and correctly in a designated area		2	1	1
	PC7. recognise risks to bystanders and take action to reduce risk associated with				
	jobs in the workplace	60	5	3	2

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PC8. perform your work in a manner which minimizes environmental damage all procedures and work instructions for controlling risk are followed closely.	2	1	1
PC9. report any accidents, incidents or problems without delay to an appropriate person and take necessary immediate action to reduce further danger.	2	1	1
PC10. follow procedures for dealing with accidents, fires and emergencies, including communicating location and directions to emergency.	5	2	3
PC11. follow emergency procedures to company standard / workplace requirements	5	2	3
PC12. use emergency equipment in accordance with manufacturers' specifications and workplace requirements	5	3	2
PC13. provide treatment appropriate to the patient's injuries in accordance with recognized first aid techniques	5	3	2
PC14. recover (if practical), clean, inspect/test, refurbish, replace and store the first aid equipment as appropriate	6	3	3
PC15. report details of first aid administered in accordance with workplace procedures	4	2	2

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			60	30	30
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SECTION 2

25. EVIDENCE OF LEVEL

OPTION B

Title/Name of qualification/component: Pesticide & Fertilizer Applicator			Level: 4
NSQF Domain	Key requirements of the job role	How the job role relates to the NSQF level descriptors	NSQF Level
Process	A Pesticide & Fertilizer Applicator is responsible for assessing the field for pest & disease infestation, preparing equipments for spraying of pesticides & fertilizers, applying the pesticides & fertilizers and ensuring higher yields.	<p>The job holder is responsible for assessing the field for pest infestation, preparing equipment for spraying of pesticides & fertilizers, applying the pesticides & fertilizers and maintains health and safety at the workplace.</p> <p>Since it does not require well developed skill, the role does not qualify for Level 5.</p> <p>The job role demands the job holder to work in familiar, predictable, routine situation of clear choice e.g. assess the pest infestation, efficient use of</p>	4

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Title/Name of qualification/component: Pesticide & Fertilizer Applicator			Level: 4
NSQF Domain	Key requirements of the job role	How the job role relates to the NSQF level descriptors	NSQF Level
		<p>equipment and chemicals, select suitable personal protective equipment and use it according to manufacturer specifications and company requirements, select equipment suitable for spraying chemicals, check calibration and operational effectiveness of equipment, spray chemicals as desired.</p> <p>These activities require the job holder to have some level of understanding apart from practice to take decisions on field. Hence, this role cannot be pegged at Level 3.</p>	
Professional knowledge	<p>The user/individual on the job needs to know symptoms of pest & disease infestation, calculation of threshold level, macro- and micronutrients, selection of fertilizers, soil pH and how it impacts fertilizer applications, and symptoms of either nutrient deficiencies or excesses, nutrient need of the crops as per their growth stage formulation of different agro-chemicals, working of different plant protection equipments, calibration of different Plant protection equipments, safe method of application of agrochemicals, plant protection chemicals, their generic characteristics, high volume, low volume and ultra volume spray, control of active ingredients in the chemical, media/additives for</p>	<p>The job holder is expected to know factual knowledge of field of knowledge or study. For instance risks involved in field operations and related precautions to control the risk, product knowledge, including manufacturer specifications for equipment and products being used, spraying methods, problems that may occur while applying agro-chemicals and appropriate action that has to be taken.</p> <p>Hence, pegged at Level 4.</p>	4

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Title/Name of qualification/component: Pesticide & Fertilizer Applicator			Level: 4
NSQF Domain	Key requirements of the job role	How the job role relates to the NSQF level descriptors	NSQF Level
	making solution, precautions while handling different pesticides and PPEs, trouble shooting and remedies, common accidents and their prevention, poisoning symptoms related with different chemicals and their antidotes, etc		
Professional skill	<p>The individual at this job requires demonstration of practical skills like preparation of spray solution, calibration of plant protective equipments, spraying of pesticides & fertilizers.</p> <p>In addition, the Job holder should have skills like: Decision making, Planning and Organising, Customer centricity, Problem Solving, Analytical Thinking, Critical thinking.</p>	<p>The job holder is expected to demonstrate practical skills like preparation of spray solution, spraying of pesticides & fertilizers</p> <p>understand customer requirements and their priority and respond, understand customer needs and respond accordingly, support supervisor in solving problems by detailing out problems, discuss the possible solutions with the supervisor for problem solving, apply domain information about preparing equipment and agrochemicals for spraying, use common sense and make judgments on day to day basis, use reasoning skills to identify and resolve basic problems.</p> <p>All these activities are practical skills which are routine and repetitive in nature, and has a narrow range of application, using appropriate rule and tool using quality concepts.</p> <p>Hence pegged at Level 4.</p>	4
Core skill	The Job holder must have Core Skills which will	The job holder is expected to have both oral and	4

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Title/Name of qualification/component: Pesticide & Fertilizer Applicator			Level: 4
NSQF Domain	Key requirements of the job role	How the job role relates to the NSQF level descriptors	NSQF Level
	include: Writing Skills, Reading Skills, Oral and Communication (Listening and Speaking). The person should have basic arithmetic skills to calculate the nutrient requirement, prepare the desired spray solution. In addition, s/he should be able to document the record of number of sprays.	<p>written communication skills with required clarity.</p> <p>For instance, s/he should note the information communicated by the farmer, note down observations (if any) related to application of agrochemicals, read and interpret the process required for calibrating plant protective equipments, read equipment manuals and process documents to understand the process of operation of plant protective equipments. Hence, this role qualifies for Level 4.</p> <p>This job role requires the job holder to have both oral and written communication skills with required clarity. For instance, undertake basic safety checks before operation of all machinery and vehicles, read and understand the hazards of use and contamination mentioned on the labels of pesticides, etc., follow procedures for dealing with accidents and emergencies, report any accidents, incidents or problems without delay to an appropriate person and take necessary immediate action to reduce further danger. Hence this job role cannot be pegged at Level 3.</p>	
Responsibility	The Job holder is responsible for assessment of farm/ field for the pest & disease infestation, preparing equipments for spraying agrochemicals, applying and monitoring farm in terms of safety	The job holder is responsible for own work and learning. S/he is a skilled person who can assess the field/farm for pest & disease infestation, identify different PPEs, prepare pesticide and fertilizer spray	4

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Title/Name of qualification/component: Pesticide & Fertilizer Applicator			Level: 4
NSQF Domain	Key requirements of the job role	How the job role relates to the NSQF level descriptors	NSQF Level
	and hygiene	solution, apply them as per the recommended dose, maintain a clean and efficient workplace, render appropriate emergency procedures. Hence, this role qualifies for Level 4 as the job holder has full responsibility for his own work and learning and cannot be pegged at Level 3 as it requires the job holder to be responsible for his own work.	

SECTION 3
EVIDENCE OF NEED

26	What evidence is there that the qualification is needed? What is the estimated uptake of this qualification and what is the basis of this estimate?			
Need of the qualification	<table border="1"> <thead> <tr> <th data-bbox="632 439 1394 472" style="text-align: center;">Basis</th> </tr> </thead> <tbody> <tr> <td data-bbox="632 472 1394 2054"> <p>The increasing demand for agricultural products and the resultant commercialization of agriculture have induced a rising use of agricultural chemicals in India. The shift of agriculture management strategies to the mode of agribusiness laid emphasis on risk management as one of the major challenges in agriculture. Some estimates project that 35-45 per cent crop production is lost due to insects, weeds and diseases, while 35 per cent crop produces are lost during storage. This naturally has facilitated the growth of the crop protection market to the size of which, as per reports, was worth \$3.8 billion (2011-12). India is at the fourth position in the global suppliers of agrochemicals, after USA, Japan and China. The Indian pesticide industry is the biggest in Asia and 12th in the world.</p> <p>The pesticide market in India is expected to grow at 12-13 per cent per annum to reach \$6.8 billion (2017) of which the domestic demand growth may be at the rate of 8-9 per cent and export demand at 15-16 per cent. According to The India Pesticides Industry Analysis, the CAGR (compound annual growth rate) is 14.7 per cent making the predicted size of market at `2,29,800 million by 2018.</p> <p>The Indian Fertilizer companies produced around 32.4 million tonnes of fertilizer in the year 2012-13 However, the total availability was short of demand and was met through imports. India is the second biggest consumer of fertilizer in the world next only to China and ranks third in the world of fertilizer production. Urea, being most common N fertilizer, is indiscriminately used irrespective of scientific prescriptions. Excessive use of urea leads to several adverse implications on soil, crop quality and overall ecosystem. Excessive use of N (urea) encourages climate change (when lost through denitrification) and groundwater pollution (when lost through leaching).</p> <p>Chemical control of pests is a common practice in agriculture. There are more than a thousand pesticides of both chemical and biological nature used around the</p> </td> </tr> </tbody> </table>		Basis	<p>The increasing demand for agricultural products and the resultant commercialization of agriculture have induced a rising use of agricultural chemicals in India. The shift of agriculture management strategies to the mode of agribusiness laid emphasis on risk management as one of the major challenges in agriculture. Some estimates project that 35-45 per cent crop production is lost due to insects, weeds and diseases, while 35 per cent crop produces are lost during storage. This naturally has facilitated the growth of the crop protection market to the size of which, as per reports, was worth \$3.8 billion (2011-12). India is at the fourth position in the global suppliers of agrochemicals, after USA, Japan and China. The Indian pesticide industry is the biggest in Asia and 12th in the world.</p> <p>The pesticide market in India is expected to grow at 12-13 per cent per annum to reach \$6.8 billion (2017) of which the domestic demand growth may be at the rate of 8-9 per cent and export demand at 15-16 per cent. According to The India Pesticides Industry Analysis, the CAGR (compound annual growth rate) is 14.7 per cent making the predicted size of market at `2,29,800 million by 2018.</p> <p>The Indian Fertilizer companies produced around 32.4 million tonnes of fertilizer in the year 2012-13 However, the total availability was short of demand and was met through imports. India is the second biggest consumer of fertilizer in the world next only to China and ranks third in the world of fertilizer production. Urea, being most common N fertilizer, is indiscriminately used irrespective of scientific prescriptions. Excessive use of urea leads to several adverse implications on soil, crop quality and overall ecosystem. Excessive use of N (urea) encourages climate change (when lost through denitrification) and groundwater pollution (when lost through leaching).</p> <p>Chemical control of pests is a common practice in agriculture. There are more than a thousand pesticides of both chemical and biological nature used around the</p>
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		<p>world to minimize crop losses. Agriculture in developing countries suffers most because of high incidence of various pests. In India, estimated annual production losses due to pests are as high as US\$ 42.66 million (Sushil, 2016). Although chemical pesticides are well known for their effectiveness, their impact on soil and environment, and presence of residue in food products are matters of concern.</p> <p>Pesticides are toxic to both pests and humans. However, they need not be hazardous to humans and non-target animal species if suitable precautions are taken. Most pesticides will cause adverse effects if intentionally or accidentally ingested or if they are in contact with the skin for a long time. Pesticide particles may be inhaled with the air while they are being sprayed. An additional risk is the contamination of drinking-water, food or soil. Special precautions must be taken during transport, storage and handling. Spray equipment should be regularly cleaned and maintained to prevent leaks. People who work with pesticides/ fertilizers should receive proper training in their safe use.</p>
	Industry Relevance	Industry Validations have been completed before 5 th February 2018. Details attached as Annexure 4
	Usage of the qualification	<p>There are some issues which need immediate attention to strengthen domestic pesticide industry and safe application of pesticides. One of the important consideration is the promotion of safe application practices and awareness among farmers apart from regulating and encouraging the use of cost-effective and environmentally safe pesticides, collection of data on pesticide production and use.</p> <p>Increased agricultural productivity usually comes from effective adoption of improved technologies. It is assumed that a combination of all the production factors and conditions in a given farm condition results in a given yield, so that if all factors are in optimum especially fertilizers: types and rates, methods and modes of application (broadcasting, deep placement, foliar spray, fertigation, band placement etc.), soil conditions, variety, irrigation water etc, yield will be increased. Among all factors, in fact, the contribution of fertilizers to increased yield is perhaps the greatest. The development of fertilizer use had an influence on the practice of advanced technology in agricultural production systems. Fertilizer use has not only provided</p>

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		<p>additional nutrients and energy to the cropping systems, but has supported a continuous increase in annual crop production. Research has shown that fertilizer input contributes about 40–50% of total yield increase for most crops. Combining fertilizer use with advanced science and technology, improved management in crop production, and a favorable policy environment to support farmers, Facing pressure to both increase yields and improve the environment, a new strategy is required to bring attention on improving fertilizer use efficiency. Considering the fact that most crop production systems particularly in India are highly required to be intensified with high fertilizer input. Site and crop specific fertilizer management, customised fertilizers, fortified fertilizers and Urea Briquette in UDP technology, fertigation, foliar spray, eco-fertilization etc. will be the answer for deriving maximum benefit out of applied fertilizers with respect to maintenance of soil fertility and quality, environmental safety and to ensure food security etc. without compromising the yield of crops</p>
	<p>Estimated uptake</p>	<p>It is difficult to estimate uptake of this qualification at this stage as the sector not only is highly unorganized but also no in-depth skill-gap study has been done. The QP has been developed taking feedback from industry for demand though again sample size may not lend to accurate figures.</p>
<p>27</p>	<p>Recommendation from the concerned Line Ministry of the Government/Regulatory Body. To be supported by documentary evidences</p> <p>Awaited.</p>	
<p>28</p>	<p>What steps were taken to ensure that the qualification(s) does (do) not duplicate already existing or planned qualifications in the NSQF? Give justification for presenting a duplicate qualification</p> <p>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.</p> <p>It has been found that there is no NCVT CTS course pertaining to Pesticide & Fertilizer Applicator. Also, NQR has been checked and no such QP exists there.</p>	

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29	<p>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? Specify the review process here</p> <p>Any institution / individual is welcome to send feedback, which is recorded and considered during next review cycle.</p> <ul style="list-style-type: none">• 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 three years' time
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Please attach most relevant and recent 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.

SECTION 4

EVIDENCE OF PROGRESSION

30	<p>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? <i>Show the career map here to reflect the clear progression</i></p> <p>Career path in agri sector is generally in terms of activities done & ownership of responsibility because they are primarily self-wage employment/entrepreneurship roles.</p> <p>However, there are occupations in the organized segment (Agri Industries) in which career pathway has been identified as illustrated below (Annexure 1)</p>
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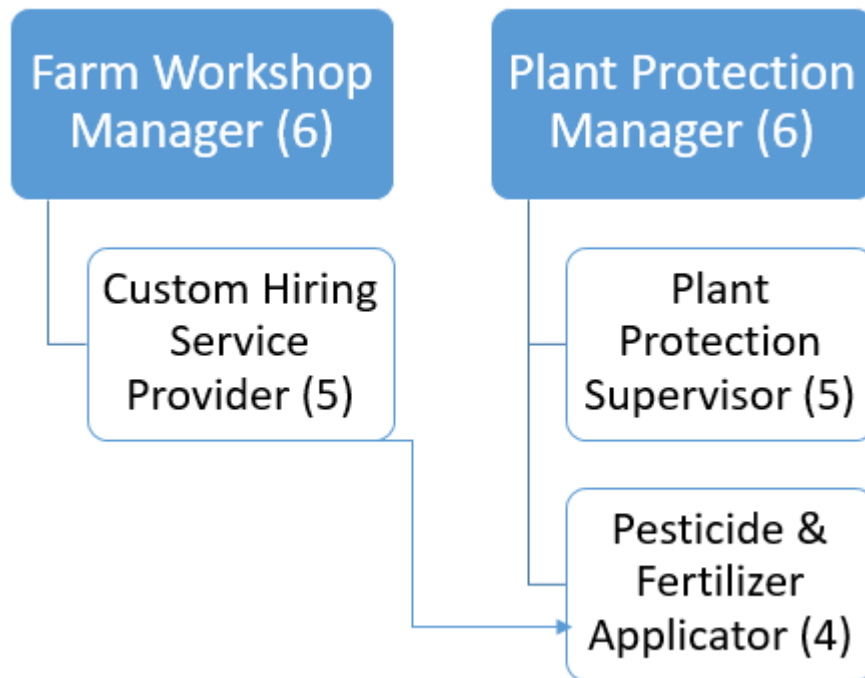
Please attach most relevant and recent documents giving further information about any of the topics above.

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Career Map of Pesticide & Fertilizer Applicator



Qualification Pack of Pesticide & Fertilizer Applicator (separate file)

List of QP/NOS validating companies (separate file)