

QUALIFICATION FILE

Smart Farming Supervisor

☒ Short Term Training (STT) ☐ Long Term Training (LTT) ☐ Apprenticeship

☐ Upskilling ☐ Dual/Flexi Qualification ☐ For ToT ☐ For ToA

☐ General ☐ Multi-skill (MS) ☐ Cross Sectorial (CS) ☒ Future Skills ☐ OEM

NCrF/NSQF Level: 5

Submitted By:

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Section 1: Basic Details

1.	Qualification Name	Smart Farming Supervisor																			
2.	Sector/s	Agriculture																			
3.	Type of Qualification: ☒ New ☐ Revised ☐ Has Electives/Options ☐ OEM	NQR Code & version of existing/previous qualification: (change to previous, once approved) NA	Qualification Name of existing/previous version: NA																		
4.	a. OEM Name b. Qualification Name (Wherever applicable)	NA																			
5.	National Qualification Register (NQR) Code &Version (Will be issued after NSQC approval)	QG-05-AG-04287-2025-V1-CUTM	6. NCrF/NSQF Level: 5																		
7.	Award (Certificate/Diploma/Advance Diploma/ Any Other (Wherever applicable specify multiple entry/exits also & provide details in annexure)	Certificate (Smart Farming Supervisor)																			
8.	Brief Description of the Qualification	The individual manages the crop in the farm using smart tools and latest technology. He or she is responsible to understand field variability using IoT based sensors and UAV. Further, he should devise appropriate strategies to manage the identified variability precisely, synchronizing to the crop demand.																			
9.	Eligibility Criteria for Entry for Student/Trainee/Learner/Employee	a. Entry Qualification & Relevant Experience: <table border="1"> <thead> <tr> <th>S. No.</th> <th>Academic/Skill Qualification (with Specialization - if applicable)</th> <th>Required Experience (with Specialization - if applicable)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>UG Diploma in Agriculture/ Horticulture</td> <td>NA</td> </tr> <tr> <td>2</td> <td>UG Certificate in Agriculture/ Horticulture</td> <td>1.5 years of relevant experience</td> </tr> <tr> <td>3</td> <td>12th grade passed</td> <td>3 years of relevant Experience</td> </tr> <tr> <td>4</td> <td>Relevant NSQF level 4 job role certified person</td> <td>3 years of relevant Experience</td> </tr> <tr> <td>5</td> <td>Relevant NSQF level 4.5 certified person</td> <td>1.5 years of relevant experience</td> </tr> </tbody> </table>		S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1	UG Diploma in Agriculture/ Horticulture	NA	2	UG Certificate in Agriculture/ Horticulture	1.5 years of relevant experience	3	12 th grade passed	3 years of relevant Experience	4	Relevant NSQF level 4 job role certified person	3 years of relevant Experience	5	Relevant NSQF level 4.5 certified person	1.5 years of relevant experience
S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)																			
1	UG Diploma in Agriculture/ Horticulture	NA																			
2	UG Certificate in Agriculture/ Horticulture	1.5 years of relevant experience																			
3	12 th grade passed	3 years of relevant Experience																			
4	Relevant NSQF level 4 job role certified person	3 years of relevant Experience																			
5	Relevant NSQF level 4.5 certified person	1.5 years of relevant experience																			
10.	Credits Assigned to this Qualification, Subject to Assessment (as per National Credit Framework (NCrF))	22	11. Common Cost Norm Category (I/II/III) (wherever applicable): II																		

12.	Any Licensing requirements for Undertaking Training on This Qualification (wherever applicable)	NA																		
13.	Training Duration by Modes of Training Delivery (Specify Total Duration as per selected training delivery modes and as per requirement of the qualification)	☒ Offline ☐ Online ☐ Blended <table border="1"> <thead> <tr> <th>Training Delivery Modes</th> <th>Theory (Hours)</th> <th>Practical (Hours)</th> <th>OJT Mandatory (Hours)</th> <th>OJT Recommended (Hours)</th> <th>Total (Hours)</th> </tr> </thead> <tbody> <tr> <td>Classroom (offline)</td> <td>204</td> <td>336</td> <td>120</td> <td>-</td> <td>660</td> </tr> <tr> <td>Online</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> </tbody> </table> (Refer Blended Learning Annexure for details)	Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)	Classroom (offline)	204	336	120	-	660	Online	-	-	-	-	-
Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)															
Classroom (offline)	204	336	120	-	660															
Online	-	-	-	-	-															
14.	Aligned to NCO/ISCO Code/s (if no code is available mention the same)	NCO2015: 8341.9900																		
15.	Progression path after attaining the qualification (Please show Professional and Academic progression)with	Professional progression: <pre> graph BT A[Smart Farming Supervisor] --> B[Smart Farming Manager] </pre>																		
16.	Other Indian languages in which the Qualification & Model Curriculum are being submitted	Hindi																		
17.	Is similar Qualification(s) available on NQR-if yes, justification for this qualification	☐ Yes ☒ No URLs of similar Qualifications:																		
18.	Is the Job Role Amenable to Persons with Disability	☐ Yes ☒ No If "Yes", specify applicable type of Disability:																		
19.	How Participation of Women will be Encouraged	An increasing population of educated and working women needs inclusion, by formulating policy measures on skilling, job creation, and support services. Women comprises of >30% of the laborers among micro, small and medium enterprises. Opportunities for work that is proximate, child care facilities, safe transportation, gender acceleration plan and return to work (women to join back the workforce after motherhood) go a long way in increasing the proportion of women in the workforce.																		
20.	Are Greening/ Environment Sustainability Aspects Covered (Specify the NOS/Module which covers it)	☒ Yes ☐ No																		

21.	Is Qualification Suitable to be Offered in Schools/Colleges	Schools ☐ Yes ☐ No Colleges ☒ Yes ☐ No	
22.	Name and Contact Details of Submitting / Awarding Body SPOC (In case of CS or MS, provide details of both Lead AB & Supporting ABs)	Name: ParthaSarathi Mohanty Email: partha@cutm.ac.in Contact No.:9937033338 Website: https://cutm.ac.in	
23.	Final Approval Date by NSQC: 08.05.2025	24. Validity Duration: 3 years from the date of NSQC approval	25. Next Review Date: 08.05.2028

Section 2: Module Summary

NOS/s of Qualifications

(In exceptional cases these could be described as components)

Mandatory NOS/s:

Specify the training duration and assessment criteria at NOS/ Module level. For further details refer curriculum document.

Th.-Theory **Pr.**-Practical **OJT-On the Job** **Man.**-Mandatory **Training Rec.**-Recommended **Proj.**-Project

S.No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/ Non-Core	NCrF/NS QF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Prac	Proj.	Viva	Total	Weightage (%) (if applicable)
1	Preparation of land using Smart Tools and Equipment	CUTM/AGR/N1105, V.1.0	Core	5	3	30	40	20		90	40	40	0	20	100	15%
2	Knowledge of Smart Seed and Sowing	CUTM/AGR/N1106, V.1.0	Core	5	4	30	60	30		120	40	50	0	10	100	20%
3	Understand Smart Nutrient Management	CUTM/AGR/N1107, V.1.0	Core	5	3	30	40	20		90	40	50	0	10	100	10%
4	Study of Smart Irrigation Water and Weed Management	CUTM/AGR/N1108, V.1.0	Core	5	4	30	60	30		120	30	60	0	10	100	20%
5	Monitoring and Management of Insects and Diseases Management using Smart Technology	CUTM/AGR/N1109, V.1.0	Core	5	3	30	40	20		90	40	40	0	20	100	15%
6	Ensure organizational health, safety, and security	CUTM/VSQ/N7801, V.1.0	Non-Core	5	3	30	60	0		90	30	70	0	0	100	10%
7	Employability Skills	DGT/VSQ/N0102, V.1.0	Non-Core	5	2	24	36	0		60	20	30	0	0	50	10%
Duration (in Hours) / Total Marks					22	204	336	120		660	240	340	0	70	650	100%

Elective NOS/s:

Sl. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/Non-Core	NCrF/NS QF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1.	NA															
2.																
Duration (in Hours) / Total Marks																

Optional NOS/s:

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/Non-Core	NCrF/NS QF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1.	NA															
2.																
Duration (in Hours) / Total Marks																

Assessment - Minimum Qualifying Percentage

Please specify **any one** of the following:

Minimum Pass Percentage – Aggregate at qualification level: 70 % (Every Trainee should score specified minimum aggregate passing percentage at qualification level to successfully clear the assessment.)²

Minimum Pass Percentage – NOS/Module-wise: 60 % (Every Trainee should score specified minimum passing percentage in each mandatory and selected elective NOS/Module to successfully clear the assessment.)

Section 3: Training Related

1	Trainer's Qualification and experience in the relevant sector (in years) <i>(as per NCVET guidelines)</i>	Bachelor in Agriculture/Botany/Horticulture with 3 years of Industry experience and 1 year training experience
2	Master Trainer's Qualification and experience in the relevant sector (in years) <i>(as per NCVET guidelines)</i>	Bachelor in Agriculture with 10 years of Industry experience and 1 year training experience
3	Tools and Equipment Required for Training	☒ Yes ☐ No <i>(If "Yes", details to be provided in Annexure)</i>
4	In Case of Revised Qualification, Details of Any Upskilling Required for Trainer	NA

Section 4: Assessment Related

1.	Assessor's Qualification and experience in relevant sector (in years) <i>(as per NCVET guidelines)</i>	Bachelor in Agriculture/Botany/Horticulture with 3 years of Industry experience and 1 year training experience
2.	Proctor's Qualification and experience in relevant sector (in years) <i>(as per NCVET guidelines)</i>	Bachelor degree with 5 years online assessment experience
3.	Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years) <i>(as per NCVET guidelines)</i>	Bachelor degree with 8 years of Industry experience and 1 year Assessment experience
4.	Assessment Mode <i>(Specify the assessment mode)</i>	Offline / Online mode for special cases
5.	Tools and Equipment Required for Assessment	☒ Same as for training ☐ Yes ☐ No <i>(details to be provided in Annexure-if it is different for Assessment)</i>

Section 5: Evidence of the need for the Qualification

Provide Annexure/Supporting documents name.

1.	Latest Skill Gap Study (not older than 2 years) (Yes/No): Yes
2.	Latest Market Research Reports or any other source (not older than 2 years) (Yes/No): Yes
3.	Government /Industry initiatives/ requirement (Yes/No): Yes
4.	Number of Industry validation provided: 35 Industry validation
5.	Estimated nos. of persons to be trained and employed: 600 in 3 years
6.	Evidence of Concurrence/Consultation with Line Ministry/State Departments: Yes

	If “No”, why:
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Section 6: Annexure & Supporting Documents Check List

Specify Annexure Name / Supporting document file name

1.	Annexure: NCrf/NSQF level justification based on NCrf level/NSQF descriptors <i>(Mandatory)</i>	Yes
2.	Annexure: List of tools and equipment relevant for qualification <i>(Mandatory, except in case of online course)</i>	Yes
3.	Annexure: Detailed Assessment Criteria <i>(Mandatory)</i>	Yes
4.	Annexure: Assessment Strategy <i>(Mandatory)</i>	Yes
5.	Annexure: Blended Learning <i>(Mandatory, in case selected Mode of delivery is “Blended Learning”)</i>	NA
6.	Annexure: Multiple Entry-Exit Details <i>(Mandatory, in case qualification has multiple Entry-Exit)</i>	NA
7.	Annexure: Acronym and Glossary <i>(Optional)</i>	Yes
8.	Supporting Document: Model Curriculum <i>(Mandatory – Public view)</i>	Yes
9.	Supporting Document: Career Progression <i>(Mandatory - Public view)</i>	Yes
10.	Supporting Document: Occupational Map <i>(Mandatory)</i>	Yes
11.	Supporting Document: Assessment SOP <i>(Mandatory)</i>	Yes
12.	Any other document you wish to submit:	NA

Annexure: Evidence of Level

NCrF/NSQF Level Descriptors	Key requirements of the job role/ outcome of the qualification	How the job role/ Outcomes? relate to the NCrF/NSQF level descriptor	NCrF/NSQF Level
Professional Theoretical Knowledge/Process.	Work in familiar, predictable, routine, situations of clear choice • Understand the knowledge on smart farming. • Understanding of land, resources, water, etc. conditions • Basic terminologies used for smart forming. • Government/corporate policies and guidelines on workplace safety, identification and mitigation of safety hazards, work procedures, and guidelines. • Document information using appropriate forms.	Refer to the evidence provided in the adjacent column. Hence it falls under Level 5	5
Professional and Technical Skills/ Expertise/ Professional Knowledge	Factual knowledge of the field of knowledge or study. • Handle smart farming technologies like Drone, water irrigation, internet of Things. • Understand the technology used in the system. • Expertise in measuring various specifications of different land areas • Knowledge of different types of product manufacturers. • Relevant occupational health and safety standards • Understand documentation standards and controls. • Expertise on waste disposal procedures and standards • Knowledge on various subsidies, excise duty exemptions and loans available	Refer to the evidence provided in the adjacent column. Hence it falls under Level 5	5
Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	• Recall and demonstrate practical skill, routine and repetitive in narrow range of application. • Maintain work-related notes and records. • Read the relevant literature to get the latest updates about the field of work. • Perform basic calculations and assumptions. • Listen attentively to understand the information/ instructions being shared. • Communicate clearly and politely. • Plan and prioritize tasks to ensure timely completion. • Evaluate all possible solutions to a problem to select the best one. • Co-ordinate with the co-workers to achieve the work objectives. • Identify possible disruptions to work and take appropriate preventive measures.	Refer to the evidence provided in the adjacent column. Hence it falls under Level 5.	5

	Take quick decisions to deal with workplace emergencies/ accidents.		
Broad Learning Outcomes/Core Skill	- Language to communicate written or oral, with required clarity, skill of basic arithmetic and algebraic principles, personal banking, basic understanding, understanding of social and natural environment - Proper documentation as per relevant industry standards. - Communicate politely and professionally. - Read the relevant literature to learn about the latest developments in the field of work. - listen attentively to understand the information/ instructions being shared. - Plan and prioritize tasks to ensure timely completion. - Co-ordinate with the co-workers to achieve the work objectives. - Express statements or information clearly so that others can hear and understand. - Read safety instructions, symbols while using the equipment in plant area.	Refer to the evidence provided in the adjacent column. Hence it falls under Level 5	5

Responsibility	Responsibility for own work and learning • Apply knowledge of facts, principles and processes to select the right course of action to perform tasks. • Plan and organize work to meet deadlines. • Plan to utilize time and equipment effectively. • Work constructively and collaboratively with others. • Maintain Health and Safety at Work Place. • Use acquired knowledge of the process for identifying and handling issues. • Identify possible disruptions to work and take appropriate preventive measures. • Approach relevant authority when required.	Refer to the evidence provided in the adjacent column. Hence it falls under Level 5.	5
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Annexure: Tools and Equipment (Lab Set-Up)**List of Tools and Equipment****Batch Size: 30**

Sl. No.	Tool / Equipment Name	Specification	Quantity for specified Batch. size
1	Drones with multi spectral camera	Agriculture Purpose	5
2	Image processing Softwares	Agri land evaluation	5
3	Soil Moisture Sensors		30
4	IoT panel	Agriculture purpose	2
5	Micro-irrigation	Set-up	2
6	Fertilizers		5 Kgs
7	Cloud Storage	Amazon / Google	2
8	ploughing	Different Types	Each 3
9	software for crop modelling		5
10	High value crops		5
11	seed drill/ robotic planter		5
12	nutrient specific sensors		5
13	Variable Rate Technology (VRT)		2

Classroom Aids

The aids required to conduct sessions in the classroom are:

1. Personal Computer
2. Projection Equipment
3. White Board
4. Board Marker
5. PowerPoint Presentation
6. Participant's Handbook.

Annexure: Industry Validations Summary

Provide the summary information of all the industry validations in table. This is not required for OEM qualifications.

S. No	Organization Name	Representative Name	Designation	Contact Address	Contact Phone No	E-mail ID	LinkedIn Profile (if available)
1	Arogya Millets Producer Company Limited	Usharani Ganthakora	Director	Arogya Millets Producer Company Limited Office Address: Flat no.6, first floor of SBI, Opp: Police station, Kothavalasa, Vizianagaram, Andhra Pradesh, PIN: 535183	8639277205	arogyamilletsfpo@gmail.com	-
2	ANGARALAMMA SAHAJA FARMERS PRODUCER COMPANY LIMITED	Chiranjeevi Neechuka	Director	Office Address: - Pedakarja, Gummalaxmi Puram Vizianagaram, Vizianagaram, Andhra Pradesh - 535523	-	artskurupam@yahoo.com	-
3	BLOSSOM EDUCATION AND SOCIAL TRUST	Maheubub Shariff	Chairman	Office Address: At- Municipality Square, Ramachandrapur Bazar PO- Jatni, Dist- Khordha State- Odisha, Pin- 752050	8280172557	-	-
4	Bishwa Seva Pratishthan	Arun Kumar Nayak	Secretary	Bishwa Seva Pratishthan Registration No: 20489/39, sundargarh (ORISSA) Bargaon ITI Campus, At/Po- Bargaon District-Sundargarh Odisha-770016	9777354017	dr.aknayak17@gmail.com	-

5	BLISS Foundation	Tirtha Chandan Patra	Chairman	Registered Office Address: C/O Joel Raju Gupta, Nehru Nagar, Second Lane, Near Balaji Sweet, Jyoti Foundry, Rayagada – 765001	9437018337	foundationbliss@gmail.com	-
6	Bapuji Rural Enlightenment and Development Society	Tara Srinivas	Project Head	Registered Office Address: Madhavadhara, Visakhapatnam – 530018, Andhra Pradesh	9348385804	tsreddy74@gmail.com	-
7	Choudhury Agro Industry	Susil Dwari	COO	Gundadwar, Badamba, Odisha	8249337429	susildwari@gmail.com	-
8	Eastern Ghat Farmer Producer Pvt Ltd	Pasupuleti Subbarao	Board of Director	Chinna korada street, srikakulam, AP	7569570724	easternghatsfpci@outlook.com	-
9	FRIEND'S ASSOCIATION FOR RURAL RECONSTRUCTION (FARR)	Bijay Kumar Baboo	Chairman	Registered Office Address: Muniguda, Muniguda, Rayagada, Odisha – 765020	6670 230105	farrbkumar@gmail.com	-
10	General Aeronautics Innovation in Aviation	Abhisek Barman	CEO and Founder Director	F86, First Floor, Vinyas Building, ITI Campus, Doorvaninagar, KR Puram, Bangalore- 560016	-	info@generalaeronautics.com	-
11	Gramasiri Farmer Producer Company Ltd	R. Gouri Naidu	Chief Executive Officer	Baskar Colony, Chanapuram Limits, SBI Staff colony, Srikakulam	6300976023	gramsirifpo@gmail.com	-

12	Ganapati Agro	Prasant Kunal	Managing Director	Bhagabanpur, Patrapada, BBSR	9439085732	prasantkunal1994@gmail.com	-
13	Gogu Kiranalu Producer Company Ltd	N.Srinivas Rao	Chief Executive Officer	Bejipuram Village and post ,Laveru Mandal, Srikakulam	9573401471	gogukiranalufpo@gmail.com	-
14	Green Bird Farmer Producer Company Ltd		Board of Director	Chinna korada street, srikakulam, AP	9550806518	greenbirdfpcl@gmail.com	-
15	Gram Tarang Inclusive Development Services Pvt. Ltd	B. Venkata Sivananda Kumar	Managing Director	Door No: 39-33-33, 1st Floor, B-107, Vuda Colony, Madhavadhara, Visakhapatnam - 530018	7382092355	venkat@gramtarang.org	-
16	Gram Tarang Technology	B. Venkata Sivananda Kumar	Director	Admin Office: D No-50-42/21/4, Flat No 501, P& T Colony, Seethammadhara, Vishakhapatnam – 530013 Registered Office: B107 KSR Pleasant Valley, Madhavadhara, Vishakhapatnam - 530018	7382092355	venkat@gramtarang.org	
17	General Aeronautics	Abhishek Burman	CEO	Doorvaninagar, KR Puram, Bangalore		info@generalaeronautics.com	-

18	Jagannath Agro Industry	Subrat Sahu	CEO	Jagatpur Industry Estate, Jagatpur, Odisha	9861329308	sahu.sks@gmail.com	-
19	Kathya Agro Industry Pvt Ltd	Diptimayee Sinha	CEO	Tankapani Road, Bhubaneswar	9861805588	diptilohita@gmail.com	-
20	Krisivala Mitra Agriculture and Allied Producer Mutually Aided cooperative Society Ltd	K.Lakhsamana Rao	Chief Executive Officer	Divanjipeta village, Srikakulam, AP	9963203885	lakhsamanaraokoti@gmail.com	-
21	Karsaka Mitra Agriculture and Allied Producers Mutually Aided Cooperative Society Ltd	K.Sriramulu	Chief Executive Officer	Laveru Mandal, Srikakulam	9704021677	kallasriram86@gmail.com	-
22	Kulamani Agro Industry	Kulamani Bastia	Deputy Manager	Malia Chakka, Asureswar, Odisha	8270343670	bastia_657@gmail.com	-
23	Maa Byaghradevi Agro Industry	Sunil Patnaik	Director	Dadaralunda, Mujagada, Ganjam, Odisha	9439913653	patnaiksunil1@gmail.com	-
24	Mahalaxmi Agro Industry	Biraja Prasad Senapati	Manager	Aul, Odisha	9778862233	birajapr007@gmail.com	-
25	Rivan Smart Manufacturing Pvt. Ltd	Arun Manohar	CEO	Rollawaka Village, Vizianagaram	7751053118	amgurram@cutmap.ac.in	-

26	Rameswar Agro Industry Pvt. Ltd	Ranjit Pradhan	Manager	Bhubaneswar, Odisha	7735321383	ranjitpradhan995@gmail.com	
27	Sagarmal Fisheries Producer Company limited	Duvvarapu Venkateswarelu	Board of Director	Gandhinagar Street, Mandal, Srikakulam, AP	9494234519	sagarmalafpcl@outlook.com	-
28	Samridhi Sagara Mitra Producer company ltd	M. Pattabhi	Chief Executive Officer	Palakonda Road, Srikakulam	9177809166	samridhisagarmitrafpo@gmail.com	-
29	SB Agro Vision Pvt. Ltd	Ankita Nayak	Manager	Phulachhachuni, Odisha	7008112866	nayakankita95@gmail.com	
30	Shreejew Agro Industries Corporation ltd	Masang Murmu	Manager	Badagada village, Pandav Nagar, Bhubaneswar	9337586486	masang2011@gmail.com	-
31	Shakti Organization Catalysing Sustainable Development	Akhil Ranjan Panda	CEO	Sai Priya Nagar, Rayagada	9437125605	shaktiorg@gmail.com	-
32	Sun Enterprises	Surravaram Raveender	Managing Partner	Gajapati, Odisha	9492220567	sunenterprisesbbsr@gmail.com	-
33	Udyam Vikash Farmer Producer Company Ltd	Tara Srinivas Mobile	Project Head	ADS Compound, Gumma, Gaiba Road, Gajapati, Odisha, 761207	9348385804	tsreddy74@gmail.com	-
34	Vaksana Farmer Production Company ltd	Boyina Mangama	Board of Director	Chinna korada street, srikakulam, AP	8985158518	vaksanafpcl@gmail.com	-

35	Vinna Producer Company Ltd	Gadhipalli Chinnayya	Director	Office Address: LIG 147, 1st Floor, Vuda Colony Baba Metta Vizianagaram AP 535002	-	gudipatirkrishna@yahoo.co.in	-
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Annexure: Training & Employment Details

Training and Employment Projections:

Year	Total Candidates		Women		People with Disability	
	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities
2025	100	100	40	40	-	-
2026	200	150	80	50	-	-
2027	300	250	100	70	-	-

Data to be provided year-wise for next 3 years

Training, Assessment, Certification, and Placement Data for previous versions of qualifications:

Qualification Version	Year	Total Candidates				Women				People with Disability			
		Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed
NA													

Applicable for revised qualifications only, data to be provided year-wise for past 3 years.

List Schemes in which the previous version of Qualification was implemented:

1. NA
- 2.

Content availability for previous versions of qualifications:

☐ Participant Handbook ☐ Facilitator Guide ☐ Digital Content ☐ Qualification Handbook ☐ Any Other:

Languages in which Content is available: English

Annexure: Blended Learning

Blended Learning Estimated Ratio & Recommended Tools:

Refer NCVET “Guidelines for Blended Learning for Vocational Education, Training & Skilling” available on:

<https://ncvet.gov.in/sites/default/files/Guidelines%20for%20Blended%20Learning%20for%20Vocational%20Education,%20Training%20&%20Skilling.pdf>

S. No.	Select the Components of the Qualification	List Recommended Tools – for all Selected Components	Offline : Online Ratio
1	☐ Theory/ Lectures - Imparting theoretical and conceptual knowledge	NA	
2	☐ Imparting Soft Skills, Life Skills, and Employability Skills /Mentorship to Learners		
3	☐ Showing Practical Demonstrations to the learners		
4	☐ Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training		
5	☐ Tutorials/ Assignments/ Drill/ Practice		
6	☐ Proctored Monitoring/ Assessment/ Evaluation/ Examinations		
7	☐ On the Job Training (OJT)/ Project Work Internship/ Apprenticeship Training		

Annexure: Detailed Assessment Criteria

Detailed assessment criteria for each NOS/Module are as follows:

NOS / Module Name	Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
CUTM/AGR/N1105, V.1.0: Preparation of land using Smart Tools and Equipment	PC1. Fly the drone equipped with multi spectral camera and capture images	5	4	-	2
	PC2. Collect the captured images and perform image stitching	2	2	-	-
	PC3. Process those stitched images in an image processing software	2	2	-	-
	PC4. Based on the results obtained from image processing determine the right tillage equipment and number of tillages required to obtain optimum tilth	2	5	-	3
	PC5. Fix the appropriate gradient in the fields to avoid water stagnation	5	5	-	1
	PC6. Divide the site into grids based on its variability for installation of soil moisture sensors	4	6	-	1
	PC7. Calibrate the soil moisture sensors and fix a threshold for scheduling irrigation based on crop	5	8	-	2
	PC8. Understand circuit of IoT panel to which soil moisture sensors were connected	4	2	-	3
	PC9. Fix the micro-irrigation set up along the gradient based on the crop	4	2	-	1
	PC10. Connect the output points in the IoT panel to the motor connected to micro-irrigation set up	3	1	-	1
	PC11. Assure uniform application of recommended fertilizers as basal dose	2	1	-	2
	PC12. Check the sensor data is stored in cloud	2	2	-	4
	NOS Total	40	40	0	20

CUTM/AGR/N1106, V.1.0: Knowledge of Smart Seed and Sowing	PC1. Install decision support software for crop modelling	5	10	-	1
	PC2. Perform crop modeling and select suitable high value crop	5	5	-	2
	PC3. Procure the seed material from a reliable source	5	5	-	1
	PC4. Test the purity and germination percentage	5	5	-	1
	PC5. Measure the 1000 grain weight using seed counter	5	5	-	1
	PC6. Fix the optimum spacing for sowing	5	5	-	1
	PC7. Calibrate the seed drill/ robotic planter	5	5	-	1
	PC8. Sow the seed at optimum soil depth	5	10	-	2
	NOS Total	40	50	0	10
CUTM/AGR/N1107, V.1.0: Understand Smart Nutrient Management	PC1. Install nutrient specific sensors	7	9	-	2
	PC2. Connect the sensor data to IoT	7	9	-	1
	PC3. Develop soil fertility maps using GIS software	8	9	-	1
	PC4. Calibrate the Variable Rate Technology (VRT)	8	8	-	1
	PC5. Devise nutrient application map and feed it to VRT	4	8	-	1
	PC6. Collect the data to train the decision support system	3	4	-	2
	PC7. Use Decision Support Systems to identify the right source and dose of application of nutrients	3	3	-	2
	NOS Total	40	50	0	10
CUTM/AGR/N1108, V.1.0: Study of Smart	PC1. Install IoT based soil moisture sensors across the farm	3	6	-	1
	PC2. Adopt the right method of micro-irrigation	3	6	-	1

Irrigation Water and Weed Management	PC3. Code the IoT based sensors for threshold and duration of irrigation schedule	3	6	-	1
	PC4. Calibrate the system before installation	3	6	-	1
	PC5. Install the calibrated irrigation system in the field	3	6	-	1
	PC6. Schedule the application using variable rate technology	3	6	-	1
	PC7. Distinguish weed species from crop by their differences in wavelength	3	6	-	1
	PC8. Use image processing softwares to differentiate weeds from crop	3	6	-	1
	PC9. Ascertain the type of weeds that will affect the crop	3	6	-	1
	PC10. Use appropriate herbicides in the appropriate time	3	6	-	1
	NOS Total	30	60	0	10
CUTM/AGR/N1109, V.1.0: Monitoring and Management of Insects and Diseases Management using Smart Technology	PC1. Remote sense the farm using multispectral scanners	3	3	-	1
	PC2. Analyze the images in an image processing software	2	1	-	1
	PC3. Identify the pest	2	2	-	1
	PC4. Find out the level of incidence	2	2	-	2
	PC5. Identify the stage of crop growth when the pests attack	3	3	-	1
	PC6. Identify the part of the crop where the specific pests will attack	3	3	-	1
	PC7. Identify and document the pest behavior	3	3	-	1
	PC8. Prepare a pest calendar with all pest characteristics	3	3	-	1
	PC9. Document the preventive measures for the pests	2	3	-	1
	PC10. Adopt UAV based pest control when the incidence level is above ETL	2	3	-	1
	PC11. Identify the stage of crop when it is vulnerable to disease	2	1	-	1
	PC12. Identify the symptoms for the diseases	2	2	-	1
	PC13. Identify the mode of disease transfer	1	3	-	1

	PC14. Ascertain the appropriate integrated pest management techniques	1	3	-	1
	PC15. Use appropriate pest and disease management chemicals in right quantities	3	3	-	2
	PC16. Use pest and disease resistant varieties	3	1	-	1
	PC17. Practice preventive techniques like pheromone traps, light traps, bird perches, sticky traps, etc. according to the cultivar	3	1	-	2
	NOS Total	40	40	0	20
CUTM/VSQ/N7801, V.1.0: Ensure organizational health, safety, and security	PC1. identify different kinds of possible hazards at the workplace hazards: environmental, personal, ergonomic and chemical.	2	4	-	-
	PC2. recognize other possible security issues existing in the workplace.	2	4	-	-
	PC3. plan safety techniques for self and others.	2	4	-	-
	PC4. recognize different measures to curb the hazards.	2	4	-	-
	PC5. implement programs for health, safety and security of the people at the workplace.	2	4	-	-
	PC6. communicate the safety plans to everyone at the workplace.	2	4	-	-
	PC7. attach disciplinary rules with the implementation at the workplace.	2	4	-	-
	PC8. comply with regulatory health and safety guidelines applicable to the workplace.	2	4	-	-
	PC9. use and maintain protective equipment as per requirement in a production house.	2	3	-	-
	PC10. ensure organizational activities in line with approved guidelines and procedures.	2	3	-	-

	PC11. undertake and advise healthy lifestyle for self and others.	1	3	-	-
	PC12. follow environment management system related procedures.	1	3	-	-
	PC13. ensure safe handling and disposal of waste and debris.	2	4	-	-
	PC14. minimize health and safety risks to self and others due to own actions.	1	4	-	-
	PC15. monitor the workplace and work processes for potential risks and threats to self and others.	1	4	-	-
	PC16. carry out periodic check to keep work area free from hazards and obstructions.	1	4	-	-
	PC17. ensure participation of self and others in mock drills/ evacuation procedures organized at the workplace.	1	4	-	-
	PC18. organize first aid, firefighting and emergency training sessions for others.	1	3	-	-
	PC19. instruct and guide others to take action in the event of fire, emergencies or accidents.	1	3	-	-
	NOS Total	30	70	0	0
DGT/VSQ/N0102,V.1.0: Employability Skills	<i>Introduction to Employability Skills</i>	1	1	-	-
	PC1. understand the significance of employability skills in meeting the current job market requirement and future of work	-	-	-	-
	PC2. identify and explore learning and employability relevant portals	-	-	-	-

PC3. research about the different industries, job market trends, latest skills required and the available opportunities	-	-	-	-
<i>Constitutional values – Citizenship</i>	1	1	-	-
PC4. recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc.	-	-	-	-
PC5. follow environmentally sustainable practices	-	-	-	-
<i>Becoming a Professional in the 21st Century</i>	1	3	-	-
PC6. recognize the significance of 21st Century Skills for employment	-	-	-	-
PC7. practice the 21st Century Skills such as Self-Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life	-	-	-	-
PC8. adopt a continuous learning mindset for personal and professional development	-	-	-	-
<i>Basic English Skills</i>	3	4	-	-
PC9. use basic English for everyday conversation in different contexts, in person and over the telephone	-	-	-	-
PC10. read and understand routine information, notes, instructions, mails, letters etc. written in English	-	-	-	-
PC11. write short messages, notes, letters, e-mails etc. in English	-	-	-	-
<i>Career Development & Goal Setting</i>	1	2	-	-
PC12. identify career goals based on the skills, interests, knowledge, and personal attributes	-	-	-	-
PC13. prepare a career development plan with short- and long-term goals	-	-	-	-
<i>Communication Skills</i>	2	2	-	-
PC14. follow verbal and non-verbal communication etiquette while communicating in professional and public settings	-	-	-	-
PC15. use active listening techniques for effective communication	-	-	-	-
PC16. communicate in writing using appropriate style and format based on formal or informal requirements	-	-	-	-
PC17. work collaboratively with others in a team	-	-	-	-
<i>Diversity & Inclusion</i>	1	1	-	-

PC18. communicate and behave appropriately with all genders and PwD	-	-	-	-
PC19. escalate any issues related to sexual harassment at workplace according to POSH Act	-	-	-	-
<i>Financial and Legal Literacy</i>	2	3	-	-
PC20. identify and select reliable institutions for various financial products and services such as bank account, debit and credit cards, loans, insurance etc.	-	-	-	-
PC21. carry out offline and online financial transactions, safely and securely, using various methods and check the entries in the passbook	-	-	-	-
PC22. identify common components of salary and compute income, expenses, taxes, investments etc	-	-	-	-
PC23. identify relevant rights and laws and use legal aids to fight against legal exploitation	-	-	-	-
<i>Essential Digital Skills</i>	3	5	-	-
PC24. operate digital devices and use their features and applications securely and safely	-	-	-	-
PC25. carry out basic internet operations by connecting to the internet safely and securely, using the mobile data or other available networks through Bluetooth, Wi-Fi, etc.	-	-	-	-
PC26. display responsible online behaviour while using various social media platforms	-	-	-	-
PC27. create a personal email account, send and process received messages as per requirement	-	-	-	-
PC28. carry out basic procedures in documents, spreadsheets and presentations using respective and appropriate applications	-	-	-	-
PC29. utilize virtual collaboration tools to work effectively	-	-	-	-
<i>Entrepreneurship</i>	2	3	-	-
PC30. identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research	-	-	-	-
PC31. develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion	-	-	-	-
PC32. identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity	-	-	-	-
<i>Customer Service</i>	1	2	-	-

	PC33. identify different types of customers and ways to communicate with them	-	-	-	-
	PC34. identify and respond to customer requests and needs in a professional manner	-	-	-	-
	PC35. use appropriate tools to collect customer feedback	-	-	-	-
	PC36. follow appropriate hygiene and grooming standards	-	-	-	-
	<i>Getting ready for apprenticeship & Jobs</i>	2	3	-	-
	PC37. create a professional Curriculum vitae (Résumé)	-	-	-	-
	PC38. search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively	-	-	-	-
	PC39. apply to identified job openings using offline /online methods as per requirement	-	-	-	-
	PC40. answer questions politely, with clarity and confidence, during recruitment and selection	-	-	-	-
	PC41. identify apprenticeship opportunities and register for it as per guidelines and requirements	-	-	-	-
	NOS Total	20	30	0	0
	Grand Total	240	340	0	70

Annexure: Assessment Strategy

1. Assessment System Overview:

- Batches would be assigned to Assessment Agencies as per the sectors for conducting assessment on CUTM portal or by email.
- Assessment agencies will have to give a confirmation regarding the assigned batches and share the particular Question set to Centurion University.
- Assessment agency deploys the ToA certified Assessor for conducting the assessment from the pool of verified assessor by Centurion University.
- Centurion University will monitor the assessment process and keep the records online or offline (wherever needed)

2. Procedure at Testing Centre:

- Check the Assessment location, date and time
- Maximum batch size will be of 30.
- Assessor will Check that the allotted time to the candidates to complete Theory & Practical Assessment is correct.
- Assessor will ensure all the equipment's and required materials are available at the testing center.

3. Assessment Quality Assurance:

- Question bank is created by the Subject Matter Experts (SME) of Assessment Agencies verified by Centurion University.
- Questions are mapped to the specified assessment criteria
- Assessor must be ToA certified & trainer must be ToT Certified
- Surprise visit would be done time to time.

4. Assessment Evidence collection:

- Geo tagged photographs of assessment sessions would be captured by the Assessor.
- Video call verification will be done by Centurion University during assessment and keep the recorded videos.

5. Document storing:

- Hard copies will be stored in the respective files.
- Some of documents will kept in both soft copies and hardcopies.
- All the assessment related data will be kept in CUTM portal.

On the Job:

1. Each module will be assessed separately.
2. The candidate must score 70% in each module to successfully complete the OJT.
3. Acquiring job-specific technical skills related to the industry or field.
4. Learning how to operate and maintain relevant tools, equipment, and machinery.
5. Gaining proficiency in tasks and procedures directly related to the job role.
6. Developing problem-solving skills by addressing real-time challenges encountered on the job.
7. Learning to troubleshoot issues and find practical solutions.

8. Enhancing verbal and written communication skills in a professional context.
9. Learning how to communicate effectively with colleagues, superiors, and clients.
10. Learning to prioritize tasks and manage time efficiently to meet deadlines.
11. Understanding the importance of time management in a work setting.
12. Developing skills related to customer interaction, satisfaction, and conflict resolution.
13. Understanding how to address customer needs and provide excellent service.
14. Understand the working of various tools and equipment

Annexure: Acronym and Glossary

Acronym

Acronym	Description
AA	Assessment Agency
AB	Awarding Body
ISCO	International Standard Classification of Occupations
NCO	National Classification of Occupations
NCrF	National Credit Framework
NOS	National Occupational Standard(s)
NQR	National Qualification Register
NSQF	National Skills Qualifications Framework
OJT	On the Job Training

Glossary

Term	Description
National Occupational Standards (NOS)	NOS define the measurable performance outcomes required from an individual engaged in a particular task. They list down what an individual performing that task should know and also do.
Qualification	A formal outcome of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards
Qualification File	A Qualification File is a template designed to capture necessary information of a Qualification from the perspective of NSQF compliance. The Qualification File will be normally submitted by the awarding body for the qualification.
Sector	A grouping of professional activities on the basis of their main economic function, product, service or technology.
Long Term Training	Long-term skilling means any vocational training program undertaken for a year and above. https://ncvet.gov.in/sites/default/files/NCVET.pdf