



# Model Curriculum

**Micro Credential: Price Risk Management in Agri Commodities for FPO**

**Micro Credential Code: AGR/MCr-0003**

**Version: 1.0**

**NSQF Level: 4**

**Model Curriculum Version: 1.0**

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## Training Parameters

Sector	Agriculture
Sub-Sector	Agriculture Industries
Occupation	Commodity Management
Country	India
NSQF Level	4
Aligned to NCO/ISCO/ISIC Code	NCO-2015/1324
Minimum Educational Qualification and Experience	12th Grade Pass OR 10th Grade Pass with 2 years of relevant experience OR Previous relevant Qualification of NSQF Level 3 with 3 years of relevant experience
Pre-Requisite License or Training	NA
Minimum Job Entry Age	NA
Last Reviewed On	31-01-2024
Next Review Date	31-01-2027
NSQC Approval Date	31-01-2024
QP Version	1.0
Model Curriculum Creation Date	19-12-2023
Model Curriculum Valid Up to Date	31-01-2027
Model Curriculum Version	1.0
Minimum Duration of the Course	30 Hours
Maximum Duration of the Course	30 Hours

## Program Overview

This section summarizes the end objectives of the program along with its duration.

### Training Outcomes

At the end of the program, the learner should have acquired the listed knowledge and skills to:

- Explain the role of information flow in agriculture
- Explain the commodity market value chain and the role played major participants

- Discuss various factors impacting agri commodity market sentiments
- Explain Market uncertainties and how to insulate against price risk through use of commodity derivatives market
- Discuss Seasonality in agricultural production and Mandi arrivals of the farm produce
- Explain Value addition through modern warehousing
- Demonstrate utilizing the e-NWR for pledge financing through banking system
- Explain about about concepts and terminologies used in commodity derivatives market
- Demonstrate utilizing commodity derivative instruments such as futures and options to improvise farm income and manage price risk for FPOs
- Demonstrate Utilizing the electronic warehouse receipt for pledge financing
- Demonstrate the registration process for FPOs trading on Exchange platform
- Explain various requisites and compliance requirement for FPO participation in exchanges
- Dos and Don'ts of participating in Commodity Derivatives Market
- Complete process of commodity deposit warehouse reservation system

### Compulsory Modules

The table lists the modules and their duration corresponding to the Compulsory NOS of the QP.

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
<b>Price Risk Management in Agri Commodities for FPO</b> AGR/MCr-0003/NSQF Level 4 V1	<b>20:00</b>	<b>10:00</b>	<b>0:00</b>	<b>0:00</b>	<b>30:00</b>
Module 1: Understanding Agri-Commodities Market Ecosystem and Factors Affecting Commodity Trade	02:00	01:00	0:00	0:00	03:00
Module 2: Modern Warehousing for Value Addition and Pledge-Financing for FPOs	02:00	01:00	0:00	0:00	03:00
Module 3: Using Commodity-Derivatives Market for Income Improvisation by FPOs	08:00	04:00	0:00	0:00	12:00
Module 4: FPO participation on Exchange	08:00	04:00	0:00	0:00	12:00
<b>Total Duration</b>	<b>20:00</b>	<b>10:00</b>	<b>0:00</b>	<b>0:00</b>	<b>30:00</b>

## Module Details

### Module 1: Understanding Agri-Commodities Market Ecosystem and Factors Affecting Commodity Trade

#### Bridge Module

#### Terminal Outcomes:

- Explain the role of information flow in agriculture
- Explain the commodity market value chain and the role played major participants
- Discuss various factors impacting agri commodity market sentiments
- Explain Market uncertainties and how to insulate against price risk through use of commodity derivatives market

Duration: 02:00	Duration: 01:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> <li>• Define commodities and their characteristics</li> <li>• Explain distinctive features of agricultural and non-agricultural commodities</li> <li>• Elaborate on the significance of commodities in the international market.</li> <li>• Describe Trade cycle of commodities – value chain of commodities in Indian mandis</li> <li>• Explain about Commodity market players and their contribution in the value chain</li> <li>• Explain the Utility of Commodity Derivatives Market for Farmers Producers Organizations (FPOs)</li> </ul>	<ul style="list-style-type: none"> <li>• identify causes impacting prices of commodities</li> <li>• study market uncertainties and how to cover market risk</li> </ul>
<b>Classroom Aids</b>	
White board, Marker, Overhead projector, Laptop, Internet access,	
<b>Tools, Equipment and Other Requirements</b>	
NA	

## Module 2: Modern Warehousing for Value Addition and Pledge-Financing for FPOs

Mapped to AGR/MCr-0003 v1.0

### Terminal Outcomes:

- Discuss the requirement of storage/warehouse
- Explain about Electronic Negotiable Warehouse Receipt (eNWR) and benefits of the same
- Explain the role of banks in agricultural/storage ecosystem

Duration: 02:00	Duration: 01:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> <li>• Describe the types of storage systems and their characteristics</li> <li>• Explain about Peak and lean periods in agri commodities trade and its impact on prices</li> <li>• Discuss modern warehousing and its features</li> <li>• Explain the impact of factors like weather, news, policies and global events on commodity prices</li> <li>• Discuss challenges and opportunities related to storage and marketing across various contexts and scenarios.</li> <li>• Explain the procedure to pledge finance through Electronic Negotiable Warehouse Receipts</li> <li>• Explain the contribution of banks in commodity financing and price risk mitigation</li> </ul>	<ul style="list-style-type: none"> <li>• Study the seasonality in agricultural production and Mandi arrivals of the farm produce</li> <li>• Analyse the requirement of storage /warehouse</li> <li>• Study the availability and type of storage infrastructure</li> <li>• Explore the types of value addition through modern warehousing</li> <li>• Demonstrate Utilizing the e-NWR for pledge finance</li> </ul>
<b>Classroom Aids</b>	
White board, Marker, Overhead projector, Laptop, Internet access,	
<b>Tools, Equipment and Other Requirements</b>	
NA	

## Module 3: Using Commodity-Derivatives Market for Income Improvisation by FPOs

Mapped to AGR/MCr-0003 v1.0

### Terminal Outcomes:

- Discuss basic concepts and terminologies used in commodity derivatives market
- Demonstrate utilizing commodity derivative instruments such as futures and options to improvise farm income and manage price risk for FPOs
- Demonstrate the use of e-NWR

Duration: 08:00	Duration: 04:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> <li>● Explain the basic concepts and terminology of Commodity Derivatives Market</li> <li>● Discuss types of derivatives contract available for commodity trading – Forwards, Futures, Options, etc.</li> <li>● Classify participants in Commodity Derivatives Market</li> <li>● Differentiate Markets vs. Equity Markets</li> <li>● Explain how commodity market has brought changes in agri value ecosystem</li> <li>● Discuss Economic Utility of Commodity Derivatives Market</li> <li>● Explain the Functions of Commodity Derivatives Market</li> <li>● Explain the role of clearing corporations within the Commodity Derivatives Market.</li> <li>● Explain the Repositories functions in issuance of electronic warehouse receipt</li> <li>● Explain the Relation between spot and futures prices</li> <li>● Discuss the Concept of Commodity Index/Indices</li> </ul>	<ul style="list-style-type: none"> <li>● Demonstrate utilizing basic concepts of commodity derivatives market in trading of agri produce for FPOs</li> <li>● Demonstrate utilizing commodity derivative instruments like futures and options for protection against adverse price movement</li> <li>● Demonstrate the use of e-NWR for pledge financing</li> </ul>
<b>Classroom Aids</b>	
<b>White board, Marker, Overhead projector, Laptop, Internet access,</b>	
<b>Tools, Equipment and Other Requirements</b>	
NA	



## Module 4: FPO participation on Exchange

Mapped to AGR/MCr-0003 v1.0

### Terminal Outcomes:

- Demonstrate the registration process for FPOs trading on Exchange platform
- Explain various requisites and compliance requirement for FPO participation in exchanges
- Dos and Don'ts of participating in Commodity Derivatives Market
- Demonstrate the process of commodity deposit warehouse reservation system

Duration: 08:00	Duration: 04:00
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Enlist the documents required for opening Trading and Repository a/c</li> <li>• Explain the registration process for FPO (Trading/Repository account)</li> <li>• Explain about various compliances for FPOs participating in Commodities derivatives market</li> <li>• Explain the warehouse reservation system for commodity deposition</li> <li>• Explain the Dos and Don'ts of participating in Commodity Derivatives Market</li> </ul>	<ul style="list-style-type: none"> <li>• Prepare the documents required to open Trading and Repository a/c with Exchange and Repository Participants</li> <li>• Demonstrate the A/C opening process for FPO</li> <li>• Participate in Commodity derivatives market</li> </ul>
<b>Classroom Aids</b>	
<b>White board, Marker, Overhead projector, Laptop, Internet access,</b>	
<b>Tools, Equipment and Other Requirements</b>	
<b>NA</b>	



## Annexure

### Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
<b>Graduate</b>	Agriculture/ Horticulture/ Commerce/ /Science/Business management	1	Agri- sector			For school Program minimum qualification of Trainer should be Graduate (Agriculture/ Horticulture/ Commerce/ Science/ Business management). Their Teaching experience will be considered industry experience
<b>Post Graduate</b>	Agriculture/ Horticulture/ Commerce/ Science/ Business management	6 months	Agri- sector	0		For school Program minimum qualification of Trainer should be Graduate (Agriculture/ Horticulture/ Commerce/ Science/ Business management). Their Teaching experience will be considered industry experience
Trainer Certification						
Domain Certification			Platform Certification			
Certified for NOS “Price Risk Management in Agri Commodities for FPO”, mapped to MCr: “AGR/MCr-0003 , v1.0”, Minimum accepted score is 80%			Recommended that the Trainer is certified for the Job Role: “Trainer (Vet and Skills)”, mapped to the Qualification Pack: “MEP/Q2601, v2.0”. The minimum accepted score as per MEPSC guidelines is 80%.			

## Assessor Requirements

### Assessor Prerequisites

Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training/Assessment Experience		Remarks
		Years	Specialization	Years	Specialization	
<b>Graduation</b>	Graduate (Agriculture/ horticulture/ commerce/science/other related streams)	3	Agri Sector	0		Practical skills and knowledge required in agriculture market research and analysis
<b>Graduation</b>	BSc/ BBA (Bachelor of Business Administration) in Logistics and Supply Chain Management, Accounting or Agri Finance or equivalent Bachelor degree/ and other related streams	3	Agri Sector	0		Practical skills and knowledge required in agriculture market research and analysis
<b>Post-Graduation</b>	Masters in Economics/ Agriculture/ other related streams /MBA in Finance/Financial Management/Agri Finance, Procurement and Contract Management, Accounting, Material Management, Inventory Management, Logistics and Supply Chain Management OR Post Graduate Diploma/ MBA Agribusiness Management OR Master of Agribusiness Management or other equivalent degree	2	Agri Sector	0		Practical skills and knowledge required in agriculture market research and analysis

Assessor Certification	
Domain Certification	Platform Certification
Certified for NOS “ <b>Price Risk Management in Agri Commodities for FPO</b> ”, mapped to MCr: “AGR/MCr-0003 , v1.0”, Minimum accepted score is 80%	Certified for the Job Role: “Assessor (Vet and Skills)”, mapped to the Qualification Pack: “MEP/Q2701, v2.0”, with a minimum score of 80%.

## Assessment Strategy

### Assessment System Overview

In Agriculture Sector it is of ultimate importance that individuals dealing with crop production or livestock have the requisite knowledge and competencies to undertake the task. Based on the Assessment Criteria, SSC in association with empaneled AAs, define the test structure for the given job roles to cover the required skills and competencies. Assessment strategy consists of the following:

1. Multiple Choice Questions: To assess basic knowledge (Objective/Subjective)
2. Viva: To assess awareness on processes (Oral and/or written questioning)
3. Practical: To evaluate skills and identify competencies. (Observation)

Assessments for knowledge and awareness on processes may be conducted through ‘real-time’ internet-based evaluation or by conducting the same ‘offline’ through TABs. Skills and competencies are to be assessed by conducting ‘practical’ on the ground through qualified and ToA certified assessors.

An individual must have adequate knowledge and skills to perform a specific task, weightage for different aspects of the assessment is given as follows:

- Multiple Choice Questions: 20%-30%, depending on the specific QP
- Viva: 20%
- Practical: 50% - 60% (Involves demonstrations of applications and presentations of procedures/tasks and other components)
- Assessment will be carried out by certified assessors through empaneled assessment partners. Based on the results of the assessment; ASCI will certify the learners/candidates

### Testing Environment

Assessments are conducted on laptops, Mobiles and android tablets via both offline and online mode depending on the internet connectivity at the assessment location.

In remote locations/villages, assessments get delivered through tablets without the requirement of the Internet.

- Multilingual assessments (ASCI is conducting the assessments in 13 + languages pan India)
- Rubric driven assessments in Practical/Viva sections and responses recorded accordingly
- All responses, data, records and feedback are stored digitally on the cloud
- Advanced auto-proctoring features – photographs, time-stamp, geographic-tagging, toggle- screen/copy-paste disabled, etc.
- Android-based monitoring system
- End to end process from allocation of a batch to final result upload, there is no manual intervention
- Assessment will normally be fixed for a day after the end date of the training / within 7 days of completion of training.
- Assessment will be conducted at the training venue
- The room where assessment is conducted will be set with proper seating arrangements with enough space to curb copying or other unethical activities
- Question bank of theory and practice will be prepared by ASCI /assessment agency and approved ASCI. Only from approved Question Bank assessment agency will prepare the question paper. Theory testing will include multiple-choice questions, pictorial questions, etc. which will test the trainee on his theoretical knowledge of the subject.

Assessment			
Assessment Type	Formative or Summative	Strategies	Examples
Theory	Summative	MCQ/Written exam	Knowledge of facts related to the job role and functions. Understanding of principles and concepts related to the job role and functions

Practical	Summative	Structured tasks/Demonstration	Practical application /Demonstration /Application tasks
Viva	Summative	Questioning and Probing	Mock interviews on the usability of job roles/advantages /importance of adherence to procedures. Viva will be used to gauge trainee's confidence and correct knowledge in handling the job situation

- The theory, practical and viva assessments will be carried out on the same day. In case of a greater number of candidates, the number of assessors and venue facilitation be increased and facilitated

The question paper is pre-loaded in the computer /Tablet and it will be in the language as requested by the training partner.

## Assessment Quality Assurance framework

### Assessment Framework and Design:

Based on the Assessment Criteria, SSC in association with AAs will define the test structure for the given roles to cover the required skills and competencies. ASCI offer a bouquet of tools for multi-dimensional evaluation of candidates covering language, cognitive skills, behavioural traits and domain knowledge.

**Theoretical Knowledge** - Item constructs and types are determined by a theoretical understanding of the testing objectives and published research about the item types and constructs that have shown statistical validity towards measuring the construct. Test item types that have been reported to be coachable are not included. Based on these, items are developed by domain experts. They are provided with comprehensive guidelines of the testing objectives of each question and other quality measures.

**Type** – Questions based on Knowledge Required, Case-based practical scenario questions and automated simulation-based questions.

**Practical Skills** - The practical assessments are developed taking into consideration two aspects: what practical tasks is the candidate expected to perform on the job and what aspects of the job cannot be judged through theoretical assessments. The candidates shall be asked to perform either an entire task or a set of subtasks depending on the nature of the job role

**Type** – Standardized rubrics for evaluation against a set of tasks in a demo/practical task

**Viva Voce** - Those practical tasks which cannot be performed due to time or resource constraints are evaluated through the viva mode. Practical tasks are backed up with Viva for thorough assessment and complete evaluation

**Type** – Procedural questions, dos and don'ts, subjective questions to check the understanding of practical tasks.

The assessor has to go through an orientation program organized by the Assessment Agency. The training would give an overview to the assessors on the overall framework of QP evaluation. The assessor shall be given a NOS and PC level overview of each QP as applicable. The overall structure of assessment and objectivity of the marking scheme will be explained to them. The giving of marks will be driven by an objective framework that will maintain the standardization of the marking scheme.

### Type of Evidence and Evidence Gathering Protocol:

During the assessment the evidence collected by AAs and ASCI are:

- GeoTagging to track ongoing assessment
- AA's coordinator emails the list of documents and evidence (photos and videos) to the assessor one day before the assessment. The list is mentioned below:
  - Signed Attendance sheet
  - Assessor feedback sheet

- Candidate feedback sheet
  - Assessment checklist for assessor
  - Candidate Aadhar/ID card verification
  - Pictures of the classroom, labs to check the availability of adequate equipment's and tools to conduct the training and assessment
  - Pictures and videos of Assessment, training feedback and infrastructure.
- Apart from the Assessor, a Technical assistant is popularly known as Proctor also ensures the proper documentation and they verify each other's tasks.
  - To validate their work on the day of the assessment, regular calls and video calls are done.
  - On-boarding and training of the assessor and proctor are done on a timely basis to ensure that the quality of the assessment should be maintained.
  - Training covers the understanding of QP, NSQF level, NOS and assessment structure

### **Methods of Validation**

- Morning Check (Pre-Assessment): Backend team of AA calls and confirms assessor/technical SPOC event status. Assessor/Technical SPOC are instructed to reach the centre on time by 9:30 AM / as decided with TC and delay should be highlighted to the Training Partner in advance.
- Video Calls: Random video calls are made to the technical SPOC/assessor so as to keep a check on assessment quality and ensure assessment is carried out in a fair and transparent manner
- Aadhar verification of candidates
- Evening Check (Post Assessment): Calls are made to the ground team to ensure the event is over by what time and the documentation is done properly or not.
- TP Calling: To keep a check on malpractices, an independent audit team calls the TP on a recorded line to take confirmation if there was any malpractice activity observed in the assessment on part of the AA/SSC team. If calls are not connected, an email is sent to TP SPOC for taking their confirmation
- Video and Picture Evidence: Backend team collects video and pictures for assessment on a real-time basis and highlights any issue such as students sitting idle/ trainer helping the candidates during the assessment.
- Surprise Visit: Time to time SSC/AA Audit team can visit the assessment location and conduct a surprise audit for the assessment carried out by the ground team.
- Geo Tagging: On the day of the assessment, each technical SPOC is required to login into our internal app which is Geotagged. Any deviation with the centre address needs to be highlighted to the assessment team on a real-time basis.

### **Method for assessment documentation, archiving, and Access:**

- ASCI have a fully automated result generation process in association with multiple AAs
- Theory, Practical and Viva marks form the basis of the results and encrypted files generated to avoid data manipulation. All responses were captured and stored in the



System with Time-Stamps at the end of AAs and SSC. NOS-wise and PC-wise scores can be generated.

- Maker Checker concept: One person prepares the results and another audit result which is internally approved by AA at first and then gets vetted at the end of SSC
- All softcopies of documents are received from the on-ground tech team over email. The same is downloaded by our internal backend team and saved in Repository. The repository consists of scheme-wise folders. These scheme-wise folders have two job role-specific folders. These specific folders have Year wise and Month wise folders where all documents are saved in Batch specific folders. All Hard copies are filed and stored in the storeroom.

#### ***Result Review & Recheck Mechanism –***

- Time-stamped assessment logs
- Answer/Endorsement sheets for each candidate
- Attendance Sheet
- Feedback Forms: Assessor feedback form, Candidate feedback form, TP feedback form
- The results for each of the candidates shall be stored and available for review (retained for 5 years/ till the conclusion of the project or scheme)

## References

### Glossary

Term	Description
<b>Declarative Knowledge</b>	Declarative knowledge refers to facts, concepts and principles that need to be known and/or understood in order to accomplish a task or to solve a problem.
<b>Key Learning Outcome</b>	The key learning outcome is the statement of what a learner needs to know, understand and be able to do in order to achieve the terminal outcomes. A set of key learning outcomes will make up the training outcomes. Training outcome is specified in terms of knowledge, understanding (theory) and skills (practical application).
<b>OJT (M)</b>	On-the-job training (Mandatory); trainees are mandated to complete specified hours of training on-site
<b>OJT (R)</b>	On-the-job training (Recommended); trainees are recommended the specified hours of training on-site
<b>Procedural Knowledge</b>	Procedural knowledge addresses how to do something, or how to perform a task. It is the ability to work or produce a tangible work output by applying cognitive, affective or psychomotor skills.
<b>Training Outcome</b>	Training outcome is a statement of what a learner will know, understand and be able to do upon the completion of the training.
<b>Terminal Outcome</b>	The terminal outcome is a statement of what a learner will know, understand and be able to do upon the completion of a module. A set of terminal outcomes help to achieve the training outcome.

## Acronyms and Abbreviations

Term	Description
AGR	Agriculture
NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training
DF	Dense Forest
PA	Protected Areas
NTFP	Non-Timber Forest Produce
MFFCM	Modern Forest fire Control Methods
JFM	Joint Forest Management
FSI	Forest Survey of India
FRI	Forest Research Institute
FCCM	Forest Fire Control & Management
CS	Conservation & Survey
CNFA	Cultivable Non-Forest Area
AFM	Advanced Forest Management
PPE	Personal Protective Equipment
WII	Wildlife Institute of India
OJT	On-the-job Training
PwD	People with Disability
PPE	Personal Protective Equipment