

National Occupational Standards



Introduction to operating solar powered appliances for post-harvest operations

Unit Code: AGR/N6707

Version: 1.0

NSQF Level: 3.5

Agriculture Skill Council of India || 6th Floor, GNG Tower, Plot No. 10, Sector -44, Gurgaon
Haryana-122004 || email:shrinkhala@asci-india.com

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Description

This OS unit is about operating solar-powered appliances for post-harvest operations, viz. drying, cooling and other primary processing activities for value addition / enhancement.

Scope

The scope covers the following :

- Identify, select and prepare solar-powered appliance for use
- Operate solar-powered appliance safely
- Maintain solar-powered appliance in good condition

Elements and Performance Criteria

Identify, Select and prepare solar-powered appliance for use

To be competent, the user/individual on the job must be able to:

- PC1.** identify activities to be undertaken which requires procurement/hiring of equipment/machinery for the post-harvest activities
- PC2.** Analyze the benefits of solar-powered appliances over the traditional methods/fossil-fuel operated equipment for post-harvest activities
- PC3.** Collect and analyse the information on various types and sizes of solar-powered appliances available for the specific activities and shortlist the most appropriate one
- PC4.** avail the potentially relevant Government schemes / incentives and subsidies available for the procurement and use of solar-powered appliance
- PC5.** procure the relevant solar-powered appliance suitable for the identified activities
- PC6.** select and use personal protective equipment according to operation manual and job requirements
- PC7.** conduct routine pre-operational checks as described in operation and maintenance manual
- PC8.** replace and report damaged or worn components to the concerned person/authority
- PC9.** replace and report damaged or worn components to the concerned person/authority

Operate solar-powered appliance safely

To be competent, the user/individual on the job must be able to:

- PC10.** safely operate solar-powered appliance according to task requirements, conditions, operation and maintenance manual and manufacturer specifications
- PC11.** monitor solar-powered appliance performance and efficiency and make adjustments where required
- PC12.** monitor solar-powered appliance performance and efficiency and make adjustments where required
- PC13.** conduct shut down of machinery post use according to workplace procedures

Maintain solar-powered appliance in good condition

To be competent, the user/individual on the job must be able to:

- PC14.** perform routine operational servicing and minor maintenance according to operation and maintenance manual

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- PC15.** identify and report malfunctions, faults, irregular performance or damage according to operation and maintenance manual
- PC16.** clean, secure and store solar-powered appliance according to operation and maintenance manual
- PC17.** maintain the use records of solar-powered appliances

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** post-harvest activities for which solar-powered appliances are available
- KU2.** benefits associated with the use of solar-powered appliances
- KU3.** relevant potential Government schemes/incentives and subsidies available for the procurement and use of solar-powered appliance
- KU4.** different types of solar-powered appliances used in post-harvest operations and their functions
- KU5.** pre-operational and safety checks for solar-powered appliance according to operation and maintenance manual
- KU6.** operating principles and operating methods for solar-powered appliance for cleaning, securing and storing solar-powered appliance
- KU7.** risks associated with the operation of solar-powered appliance in different weather conditions and difficult terrain conditions
- KU8.** workplace procedures applicable to health and safety in the workplace requirements for operating solar-powered appliance

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** maintain work-related notes and records
- GS2.**
 - read the relevant literature to get information about the latest developments in the field of
 - work
- GS3.** listen attentively to understand the information/ instructions being shared by the speaker
- GS4.** communicate clearly and politely with co-workers and clients
- GS5.** co-ordinate with co-workers to achieve work objectives
- GS6.** plan and prioritise tasks to ensure timely completion
- GS7.** identify possible disruptions to work and take appropriate preventive measures
- GS8.** take quick decisions to deal with workplace emergencies/ accidents
- GS9.** evaluate all possible solutions to a problem to select the best one

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Identify, Select and prepare solar-powered appliance for use</i>	10	5	-	10
PC1. identify activities to be undertaken which requires procurement/hiring of equipment/machinery for the post-harvest activities	-	-	-	-
PC2. Analyze the benefits of solar-powered appliances over the traditional methods/fossil-fuel operated equipment for post-harvest activities	-	-	-	-
PC3. Collect and analyse the information on various types and sizes of solar-powered appliances available for the specific activities and shortlist the most appropriate one	-	-	-	-
PC4. avail the potentially relevant Government schemes / incentives and subsidies available for the procurement and use of solar-powered appliance	-	-	-	-
PC5. procure the relevant solar-powered appliance suitable for the identified activities	-	-	-	-
PC6. select and use personal protective equipment according to operation manual and job requirements	-	-	-	-
PC7. conduct routine pre-operational checks as described in operation and maintenance manual	-	-	-	-
PC8. replace and report damaged or worn components to the concerned person/authority	-	-	-	-
PC9. replace and report damaged or worn components to the concerned person/authority	-	-	-	-
<i>Operate solar-powered appliance safely</i>	4	11	-	5
PC10. safely operate solar-powered appliance according to task requirements, conditions, operation and maintenance manual and manufacturer specifications	-	-	-	-
PC11. monitor solar-powered appliance performance and efficiency and make adjustments where required	-	-	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. monitor solar-powered appliance performance and efficiency and make adjustments where required	-	-	-	-
PC13. conduct shut down of machinery post use according to workplace procedures	-	-	-	-
<i>Maintain solar-powered appliance in good condition</i>	1	2	-	2
PC14. perform routine operational servicing and minor maintenance according to operation and maintenance manual	-	-	-	-
PC15. identify and report malfunctions, faults, irregular performance or damage according to operation and maintenance manual	-	-	-	-
PC16. clean, secure and store solar-powered appliance according to operation and maintenance manual	-	-	-	-
PC17. maintain the use records of solar-powered appliances	-	-	-	-
NOS Total	15	18	-	17

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National Occupational Standards (NOS) Parameters

NOS Code	AGR/N6707
NOS Name	Introduction to operating solar powered appliances for post- harvest operations
Sector	Agriculture
Sub-Sector	
Occupation	Renewable Energy Management
NSQF Level	3.5
Credits	1.25
Minimum Job Entry Age	NA
Minimum Educational Qualification & Experience	<p>11th grade pass (or equivalent) with 1 Year of experience relevant experience in Agriculture and Allied Sectors OR 10th grade pass and pursuing continuous schooling (2-year Program) OR 10th grade pass with 1.5 years of experience relevant experience in Agriculture and Allied Sectors OR 8th grade pass with 3 Years of experience relevant experience in Agriculture and Allied Sectors OR Previous relevant Qualification of NSQF Level (3) with 1.5 years of experience relevant experience in Agriculture and Allied Sectors OR Previous relevant Qualification of NSQF Level (2.5) with 3 Years of experience relevant experience in Agriculture and Allied Sectors</p>
Version	1.0
Last Reviewed Date	30/04/2024
Next Review Date	30/04/2027
NSQF Clearance Date	30/04/2024
Reference code on NQR	NG-3.5-AG-02650-2024-V1-ASCI
NQR Version	1.0

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CCN Category	1
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