

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 Educational Qualification & Experience	<p>11th grade pass (or equivalent) with 1 Year of experience relevant experience in Agriculture and Allied Sectors OR</p> <p>10th grade pass and pursuing continuous schooling (2-year Program) OR</p> <p>10th grade pass with 1.5 years of experience relevant experience in Agriculture and Allied Sectors OR</p> <p>8th grade pass with 3 Years of experience relevant experience in Agriculture and Allied Sectors OR</p> <p>Previous relevant Qualification of NSQF Level (3) with 1.5 years of experience relevant experience in Agriculture and Allied Sectors OR</p> <p>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
NSQC Clearance Date	30/04/2024
Reference code on NQR	NG-3.5-AG-02650-2024-V1-ASCI
NQR Version	1.0
CCN Category	1