



SGT UNIVERSITY GURUGRAM

FACULTY OF AGRICULTURAL SCIENCES (FASC)

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Report: Employability Skill Development Module: Soil and Water Testing Training Program

Organized by: Faculty of Agricultural Sciences

Date: 11Feb., 2023 to 31 May, 2023

Time: 09:00 AM to 4:00 PM

Venue: Soil Testing Lab, SGT University

Introduction:

This report presents an evaluation of the Employability Skill Development Module on Soil and Water Testing conducted by Dr. Shakti Om Pathak, Ph.D. in Soil Sciences, Assistant Professor in the Faculty of Agricultural Sciences at SGT University. The program aimed to equip participants with the necessary skills and knowledge required for a successful career in soil and water testing. The training program had a duration of 15 weeks and attracted a total of 33 students.

Program Objectives:

- a) To provide participants with a comprehensive understanding of soil and water testing techniques, including sample collection, laboratory analysis, and interpretation of test results.
- b) To develop practical skills in soil and water sampling, laboratory procedures, data analysis, and report generation.
- c) To enhance participants' knowledge of soil and water fertility, nutrient management, and environmental sustainability.
- d) To foster employability skills such as communication, data interpretation, problem-solving, and an analytical mindset among participants.

Program Details:

The Soil and Water Testing Training Program spanned 15 weeks and included a combination of theoretical sessions, practical training, hands-on experience, and field visits. The program curriculum covered the following key topics:

- a) **Introduction to Soil and Water Testing:** Overview of soil and water testing, its importance in agriculture, and the impact of soil and water quality on crop production.
- b) **Soil Sampling Techniques:** Proper techniques for soil sampling, including site selection, sample collection, and preservation to ensure representative and accurate results.
- c) **Water Sampling Techniques:** Guidelines for water sample collection, preservation, and handling to assess water quality and suitability for irrigation purposes.
- d) **Laboratory Analysis:** Understanding the laboratory procedures for soil and water testing, including pH determination, nutrient analysis, and soil fertility assessment.
- e) **Data Interpretation and Report Generation:** Techniques for interpreting soil and water test results, generating comprehensive reports, and making appropriate recommendations for nutrient management.

f) Nutrient Management: Understanding soil fertility and nutrient requirements, methods for nutrient application, and the principles of balanced fertilization.

g) Environmental Sustainability: Knowledge of sustainable agriculture practices, including soil conservation, water conservation, and nutrient management for environmental protection.

h) Quality Assurance and Accreditation: Familiarity with quality assurance protocols, laboratory accreditation, and ensuring reliable and accurate test results.

Teaching Methodology:

Dr. Shakti Om Pathak employed various teaching methodologies to ensure effective learning outcomes and skill development:

a) Lectures: Engaging lectures were delivered to provide theoretical knowledge on soil and water testing techniques, nutrient management, environmental sustainability, and laboratory procedures.

b) Practical Training: Participants gained hands-on experience in soil and water sampling techniques, laboratory analysis, data interpretation, and report generation.

c) Field Visits: Participants were taken on field visits to agricultural sites and research laboratories to observe and learn from real-world soil and water testing practices.

d) Group Activities and Discussions: Interactive sessions involving group activities, case studies, and discussions were conducted to encourage teamwork, problem-solving, and critical thinking skills.

Skill Development:

The Soil and Water Testing Training Program aimed to develop the following skills among participants:

a) Technical Skills: Participants acquired practical skills in soil and water sampling, laboratory analysis techniques, data interpretation, and report generation.

b) Communication Skills: Through presentations, group activities, and discussions, participants developed effective communication skills required for conveying test results and recommendations to clients and stakeholders.

c) Analytical and Problem-Solving Skills: Participants were exposed to analyzing and interpreting complex soil and water test data, identifying nutrient deficiencies or excesses, and providing appropriate recommendations for nutrient management.

d) Teamwork and Collaboration: Group activities, practical training, and field visits fostered teamwork and collaboration, simulating real-life scenarios in the soil and water testing industry.

e) Attention to Detail and Quality Assurance: The program emphasized the importance of accuracy, attention to detail, and adherence to quality assurance protocols in soil and water testing.

Program Evaluation:

The Soil and Water Testing Training Program conducted by Dr. Shakti Om Pathak received positive feedback from participants. The evaluation was conducted through participant surveys and feedback sessions. Key evaluation parameters included overall satisfaction, perceived skill development,

program content, and the expertise of the facilitator. The majority of participants expressed high levels of satisfaction, reporting significant skill enhancement in both technical and employability domains.

Conclusion:

The Employability Skill Development Module: Soil and Water Testing Training Program conducted by Dr. Shakti Om Pathak proved to be highly effective in equipping participants with the necessary skills and knowledge for a successful career in soil and water testing. The program's comprehensive curriculum, combined with hands-on training, practical experience, and field visits, ensured the holistic development of participants. The positive feedback from participants highlights the program's success in imparting both technical expertise in soil and water testing and employability skills, positioning graduates for future employment opportunities in the agricultural and environmental sectors.



Taking Soil sampling from field



Parameter analysis in laboratory are performed by students



Learning Analytical skill in Lab



Attending theory Class by students



Learning Analytical skill in Lab



Learning Analytical skill in Lab

Employability skill development Module: Soil and Water Testing

List of students enrolled in Soil and Water Testing

Sr. No.	Registration no.	Name of the students	Attendance
1.	191101008	PRINCE KUMAR SINGH	P
2.	191101028	LAKSHAY KUMAR	P
3.	191101032	RITIKA	P
4.	191101042	NEHA BHARTI	P
5.	191101048	DAGLI BAGRA	P
6.	191101049	VIKASH	P
7.	191101051	YASH TEWATIA	P
8.	191101052	AADITYA	P
9.	191101055	DIGAMBER	P
10.	191101059	DINESH PRADHAN	P
11.	191101065	RITESH	P
12.	191101067	ABISHA BHATTA	P
13.	191101072	HARSH VASHISHTH	P
14.	191101077	RAHUL	P
15.	191101093	MOHAMMED TALIM	P
16.	181101040	NEHA KHATRI	P
17.	191101002	NIDHI YADAV	P
18.	191101010	BHAVAY BANGA	P
19.	191101036	DIVYANSHI SARWAN	P
20.	191101040	SWATI	P
21.	191101044	JAGARTI PANWAR	P
22.	191101045	NEHA BOUDH	P
23.	191101057	RAHUL YADAV	P

24.	191101063	ASHWANI	P
25.	191101071	HIMANSHI	P
26.	191101079	NITIN	P
27.	191101008	PRINCE KUMAR SINGH	P
28.	191101080	YASH KUMAR	P
29.	191101081	LOVE KATARA	P
30.	191101087	SARVESH AGARWAL	P
31.	191101015	CHIMANSHETTE NAVNEET TANAJI	P



Coordinator



Dean, FASC
Faculty of Agricultural Sciences
BCT, Ludhiana
Punjab