

Project title	New Professional Diploma in Plant Clinic and Phytopathology Technologies (PRO-DPCP)
Project No	609550-EPP-1-2019-1-BG-EPPKA2-CBHE-JP
Work Package	3.5
Title of Deliverable	Training technical staff on new equipment
Date	
Dissemination level	National
Editor	Dr. Laura Gioia Prof. Vinale Prof. Waleed I Shaban Prof. Manal Eid

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	3.5.	
	Title	Training technical staff on installation and maintenance new equipment's.	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input checked="" type="checkbox"/> Training material	<input type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	<p>Training workshops on techniques of installation and maintenance of the equipment and software for video and audio conferencing to be organized.</p> <p>Installation and technical testing of all equipment; agreement on standards for use by staff and students; publication of standard of usage; security arrangements for the equipment.</p> <p>- Technical personnel working with equipment will be employed to take care of all equipment and maintenance of the Networks.</p> <p>- Including the tender specification; contract conditions of training, regular check and maintenance and provision of accessories will be carried out by the companies the accepted offer of tender.</p> <p><u>INPUTS: Technical staff from each Egyptian partner university</u> <u>Venue: local training at each partner / workshops</u></p>	
	Due date	4 weeks of M14-M15	
	Languages		
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input checked="" type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input checked="" type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		
Dissemination level	<input checked="" type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National		
	<input checked="" type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International		

- **Introduction:**

The WP 3 intends to provide appropriate and progressive teaching resources to support the construction of a new program of plant clinic education and collaboration through technology transfer and innovations between network stakeholders and higher education institutions.

The staff and student training scheme has provided opportunities for professional growth for academic and professional services staff and students through participation in a collaborative training program led by specialists from EU and Egypt partners.

In particular during the Task 3.5 the Partner P4, P6, P7, P8, P9 organized at National Level in each university training workshops for the technical staff and trainees on installation and maintenance of the equipment software for video and audio conferencing to be organized.

- **Report of the activities by the Partners**

1. Partner P4, Mansoura University

1.1 Description of the activities by Mansoura University

Date:

Number of Days:

Number of participants:

Number of Teaching Staff:

Number of Trainees:

Number of Technical Staff:

Add details of the activities as done by Suez Canal (4.1)

1.2 Training material

1.3 Attendance List of participants

1.4 Photo Gallery

2. Partner P6, Alexandria University

2.1 Description of the activities by Alexandria University

Date:

Number of Days:

Number of participants:

Number of Teaching Staff:

Number of Trainees:

Number of Technical Staff:

2.2 Training material

2.3 Attendance List of participants

2.4 Photo Gallery

3 Partner P7, South Valley University

3.1 Description of the activities by South Valley University

Date:

Number of Days:

Number of participants:

Number of Teaching Staff:

Number of Trainees:

Number of Technical Staff:

Add details of the activities as done by Suez Canal (4.1)

3.2 Training material

3.3 Attendance List of participants

3.4 Photo Gallery

4 Partner P8, Suez Canal University

4.1 Description of the activities

Date: 1-3/10/2022

Number of Days: 3 days

Number of participants: 8

Number of Teaching Staff: 1

Number of Trainees: 8

Number of Technical Staff: 1

In order to provide trainers to train the technical staff on advanced devices acquired by Suez Canal University thanks to the funding of the plant clinic project funded by the European Union,

the team working on the plant clinic project was eager to get in touch with private sector companies active in this field.

The plant clinic training team coordinated between the trainers and the activity's target groups.

Prior to the training days, the technical and administrative employees of the Department of Agricultural Botany at Suez Canal University were formally invited in order to identify those interested in participating in the training and create the work schedule.

The first day started off with the trainees being introduced to the various elements of the plant clinic laboratory, particularly the new tools and supplies.

Additionally, the purpose of each apparatus was described, along with its significance in relation to the plant clinic laboratory and safety considerations.

The topics of the second day were determining the required safeguards for device functioning, laboratory security, and safety.

The third day was devoted to introducing the learners about quick maintenance techniques for small malfunctions.

4.2 Training material

Figure 1 Training technicians on the use of plant clinic laboratory equipment and safety and security precautions.

الامن والسلامة

و التعريف بالاجهزة الهامة للمعمل استخدامات والجراءات الاحترازية اللازمة لها



1- تعريف السلامة في المختبرات بأنها:
مفهوم الامن والسلامة هو علم يهتم بامن وسلامة وصحة الانسان بمجموعة الجرايات وقواعد وعمليات تكون معقدة وقائية وقوائم على العمل بتوفير بيئة آمنة حول الانسان قدر الامكان خالفة عن مصادر الخطر والاسباب ووقوع الاحاسيه او الحوادث. و تعريف السلامة في المختبرات بأنها: مجموعة من الاجراءات والقواعد التي تهدف إلى الحفاظ على العاملين في المختبر من خطر الإصابة، والمحافظة على المستلكات من خطر التلف والضياع، وتوفير بيئات عمل آمنة.

مفهوم الامن والسلامة
هو علم يهتم بامن وسلامة وصحة الانسان بمجموعة اجراءات وقواعد وعمليات تكون معقدة وقائية وقوائم على العمل بتوفير بيئة آمنة حول الانسان قدر الامكان خالفة عن مصادر الخطر والاسباب ووقوع الاحاسيه او الحوادث.

و تعريف السلامة في المختبرات بأنها:
مجموعة من الاجراءات والقواعد التي تهدف إلى الحفاظ على العاملين في المختبر من خطر الإصابة والمحافظة على المستلكات من خطر التلف والضياع وتوفير بيئات عمل آمنة.

1

4.3 Attendance List of participants

No	Name	Position	Signature		
			1/10	2/10	3/10
	ل. محمد سعيد	فنا اجهز	ل. محمد سعيد	ل. محمد سعيد	ل. محمد سعيد
	هداح مهناتي	فنا اجهز	هداح مهناتي	هداح مهناتي	هداح مهناتي
	رحيم بنشاري	امين عمل	رحيم بنشاري	رحيم بنشاري	رحيم بنشاري
	محمد الجهاد	فنا عمل	محمد الجهاد	محمد الجهاد	محمد الجهاد
	نبيل محمد	امين عمل	نبيل محمد	نبيل محمد	نبيل محمد
	كودي محمد كمال	امين عمل	كودي محمد كمال	كودي محمد كمال	كودي محمد كمال
	لين حنا / حنا	كيمياي	لين حنا	لين حنا	لين حنا
	عبدالله محمد	كبير اختصاصيه	عبدالله محمد	عبدالله محمد	عبدالله محمد



4.4 Photo Gallery

Figure 2 Training a Suez Canal University



Figure 3 Training at Suez Canal University





5 Partner P9, Sohag University

5.1 Description of the activities by Sohag University

Date: 10-12/Oct./2022

Number of Days: 3 days

Number of participants: 6

Number of Teaching Staff: 1

Number of administrative: 1

Number of Trainees: 6

Number of Technical Staff: 1

The Plant Clinic Center at Sohag University is well equipped, where it has many previously existing devices, devices that are used to study plants, in particular research related to salt, salinity, and temperature stresses. In addition, there are laboratory equipment used in plant breeding research using modern propagation techniques that rely on plant tissue and cell cultures. Applications of these techniques are conducted in the center to produce plants that are resistant to salt, drought, or pathogens, especially viral diseases. A comparative study is also being conducted between plant strains of certain plant species at the molecular level for the purpose of selecting plants that tolerate biotic or abiotic factors. The laboratory also has

laboratory equipment used in microbiological research, in particular saprophytic, parasitic and endobacteria bacteria.

Through the project, the purchase of many laboratory components complementary to what was previously present in the Plant Clinic Center was financed, which makes the Plant Clinic at Sohag University distinguished in equipment that is compatible with development in the fields of basic and agricultural sciences, which can be used for researchers and training undergraduate and graduate students such as plant clinic diploma students and applied microbiology students. A cooperation protocol has been concluded between Plant Clinic Center and the Central Laboratory for Genetic Engineering, allowing the use of available equipment for the benefit of both parties (The two centers are adjacent and complementary).

To maintain the plant clinic's equipment, it takes place in three stages:

The first stage: According to the purchasing protocols applied at Sohag University:

- 1- The offers of the supplying companies must include a commitment to maintain the scientific equipment during the warranty period, which extends for a period of two years.
- 2- Companies supplying scientific equipment are committed to providing spare parts after the expiration of the warranty period.
- 3- The supplier company's commitment to install and operate the device and train laboratory officials on operation and maintenance.

The second stage: maintenance of scientific equipment through the university's center for scientific equipment maintenance:

- 1- The department head is informed of the need to perform maintenance on a device within a specific period.
- 2- The department head informs the college dean of the need to carry out maintenance.
- 3- The maintenance unit carries out maintenance during the specified period, taking into account that maintenance and re-operation are carried out in the presence of those responsible for the device in the laboratory.

The third stage: Internal Quality audit:

General Policy:

Internal Quality Audits of the Laboratory Quality System are carried under the direction of the Lab. Director, the Lab. Quality Manager bears the complete responsibilities for the effective implementation of the quality policy of research and training scientific labs. It carries out through direct monitoring and provision of adequate resources. The Quality Manager reports to lab director the trainees and client satisfaction.

Conducting the audit:

Internal quality audit is used as the procedure for examining the extent of compliance of the operation with known quality system on continuous manner. The Quality Manager has the full responsibility for planning, coordinating and reporting of internal quality audits, she shall ensure that testing and management activities are audited at appropriate intervals such that each aspect of the quality system will be audited at least once a year.

Internal auditor shall be well trained and qualified staff. Where the audit findings cast doubt on the correctness of validity of the laboratory test results , the Quality Manager shall ensure that immediate corrective action is taken.

Training those responsible for operating the equipment in the laboratory by scientific lab expert to obtain the best results and maintain the efficiency of the device:

- 1- A training workshop is held for those responsible for operating laboratory equipment, including administrators and young researchers, every 6 months or if necessary (if experts notice a deviation in the results).
- 2- The devices are operated professionally by lab experts and the device is operated and maintained after each period of operation.
- 3- Disconnect the power supply after operation is essential prerequisite.
- 4- The necessity of providing security and safety procedures during operation.

Safe disposal of the products of operating devices, in particular experiments with nucleic acids and proteins.

5.2 Training material

General Policy:

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Internal auditor shall be well trained and qualified staff. Where the audit findings cast doubt on the correctness of validity of the laboratory test results , the Quality Manager shall ensure that immediate corrective action is taken.

Training those responsible for operating the equipment in the laboratory by scientific lab expert to obtain the best results and maintain the efficiency of the device:

- 1- How the devices are operated professionally and maintained after each period of operation.
- 2- Disconnection of the power supply after operation.
- 3- The necessity of providing security and safety procedures during operation.
- 4- Safe disposal of the products of operating devices, in particular experiments with nucleic acids and proteins.

5.3 Attendance List of participants



Co-funded by the
Erasmus+ Programme
of the European Union

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609550-EPP-1-2019-1-BG-EPPKA2-CBHE-JP

Attendance Sheet

Date: 10-12/10/2023
Place: P9 SOU, Sohog University

WP3.5: Training technical staff on installation and maintenance new equipment's.

No.	Name	Position	email	Signature		
				10/10/2023	11/10/2023	12/10/2023
1	Bahigia A. El-Dar	Prof.	bahig57@yahoo.com	Bahigia A. El-Dar	Bahigia A. El-Dar	Bahigia A. El-Dar
2	Deva El-Dar	PhD	deva901@yahoo.com	Deva El-Dar	Deva El-Dar	Deva El-Dar
3	Mohamed A. Otaibi	PhD	otaimohamed@sohag.sohag.edu.eg	M. Otaibi	M. Otaibi	M. Otaibi
4	Ghada Kanel Saad	Tech	ghadakandala1@yahoo.com	Ghada	Ghada	Ghada
5	Jehan H. Salem	Prof.	ehussien1@science.sohag.edu.eg	Jehan	Jehan	Jehan
6	Wahab Mohamed Abdel-Rahem	PhD	Wahab12345@gmail.com	Wahab	Wahab	Wahab
7	Amira Atef Rashad	MSc student	amir.aatef26@gmail.com	Amira	Amira	Amira
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11						
12						
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3.4 Photo Gallery



Operating and maintaining the PCR device



Operating and maintaining electrophoresis device for detection of specific DNA bands



Operating and maintaining the DNA departing cell



Operating and maintaining the electrical separation device



Operating and maintaining of deionized water device