

Terms of Reference

Tissue Culture Laboratory Activation and Capacity Building

Location: Diyala Directorate of Agriculture

Target Group: 10 Staff from the Tissue Culture Laboratory

Duration: 10 Days

Session Length: 4 Hours per Day

Total training Hours: 40 Hours

Implementation period: During July-2025

Location : Baqubah , Diyala, Iraq

1. Background

In 2024, the Danish Refugee Council (DRC), through its Economic Recovery Program, provided technical support to the Directorate of Agriculture (DoA)/Diyala to strengthen agricultural services in the governorate.

This support included the rehabilitation of the DoA's Tissue Culture Laboratory to promote sustainable agricultural practices and improve local production systems.

The rehabilitation aimed to enhance the DoA's capacity in plant propagation and genetic resource conservation using modern biotechnology.

The laboratory is intended to function as a local hub for the mass production of high-quality, disease-free planting material—particularly for ornamental and strategic crops—thereby contributing to improved livelihoods for farmers and agricultural stakeholders.

To make the laboratory fully operational, DRC now seeks to engage in technical expertise to deliver intensive, hands-on training to DoA laboratory staff in plant tissue culture techniques.

2. Purpose

To make the Tissue Culture Laboratory at the Directorate of Agriculture/Diyala fully operational by contracting a specialized service provider who will:

- Conduct a technical assessment of the laboratory's current infrastructure.
- Provide a full list of all required equipment, materials, and supplies to make the laboratory functional.
- Install all essential components that DRC provides to make the laboratory functional.
- Deliver a 10-day capacity building program (4 hours per day) for 10 staff.
- Support the establishment of a small-scale tissue culture nursery focused on ornamental plant propagation (e.g., Chrysanthemum, Carnation).

- Offer three months of post-training technical follow-up and onsite advisory.

3. Scope of Work

Assessment and Equipment List

- Assess the existing lab and identify missing or non-functional equipment.
- Submit to DRC a comprehensive bill of quantities (BoQ) of all required items, including equipment, consumables, and chemicals which are required in order to make the Lab functional.
- Install the identified equipment and materials if they are provided by DRC.
- Ensure all components are operational and aligned with international standards.

Training Delivery

- Develop and deliver a structured 10-day training program, combining theory and hands-on practice, with a focus on:
 - Tissue culture principles and applications
 - Laboratory setup, workflow, and safety
 - Media and hormone preparation
 - Sterilization procedures
 - Aseptic techniques under laminar flow
 - Tissue culture stages: initiation, multiplication, acclimatization
 - Nursery establishment using propagated plants

Post-Training Support

- Provide technical support on ongoing culture processes and problem-solving.

4. Expected Outputs

- Fully equipped and operational tissue culture laboratory.
- 10 Department of Agriculture laboratory staff trained and capable of independently running tissue culture operations.
- Final technical report including:
 - Training curriculum and attendance.
 - Photos and documentation of lab setup and training process.
 - Follow-up visit summaries.

5. Requirements from the service provider:

- Proven experience in plant tissue culture training and laboratory setup.
- Capacity to install any new devices related to the laboratory.
- Ability to deliver practical training and provide technical follow-up support.
- Prior work experience with government institutions or agriculture labs.

6. Budget and Cost Breakdown

The company is required to provide a table for the budget breakdown, and it must include all expenses required.