

Revolutionizing Water Management with Smart Lysimeters and Tensiometers

Description



?? In the tomato fields of the **Institute of Plant Breeding and Genetic Resources**, new technology is transforming how we understand and manage water dynamics. As part of the **PRIMA-SAFE** project, smart Lysimeters and tensiometers have been installed to track critical data points that inform sustainable irrigation practices.

Smart Lysimeters provide detailed insights into the cumulative volume of water percolating through the soil and the quality of that water. These advanced devices monitor how much water moves beyond the root zone, allowing researchers to assess water efficiency and potential nutrient leaching. By tracking water quality, the Lysimeters also ensure that any irrigation adjustments support both plant health and soil integrity.

Tensiometers, on the other hand, measure soil moisture in real-time at different soil depths. This technology enables precise monitoring of moisture levels, alerting researchers to adjust irrigation schedules based on actual soil conditions rather than estimated needs. By maintaining optimal soil moisture for tomato crops, tensiometers help prevent both over-irrigation and water stress, optimizing crop growth and yield.

Together, these tools empower the institute to make data-driven decisions that improve water conservation and enhance crop resilience. Through these methodologies, the PRIMA-SAFE project demonstrates how technology can revolutionize water management in agriculture, paving the way for more sustainable and efficient farming practices.

Category

1. Senza categoria

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