



**ERASMUS +
LET'S FOCUS ON WATER -
JOINING HANDS ACROSS
BORDERS**

2nd Gymnasium Of Agrinio | 2025

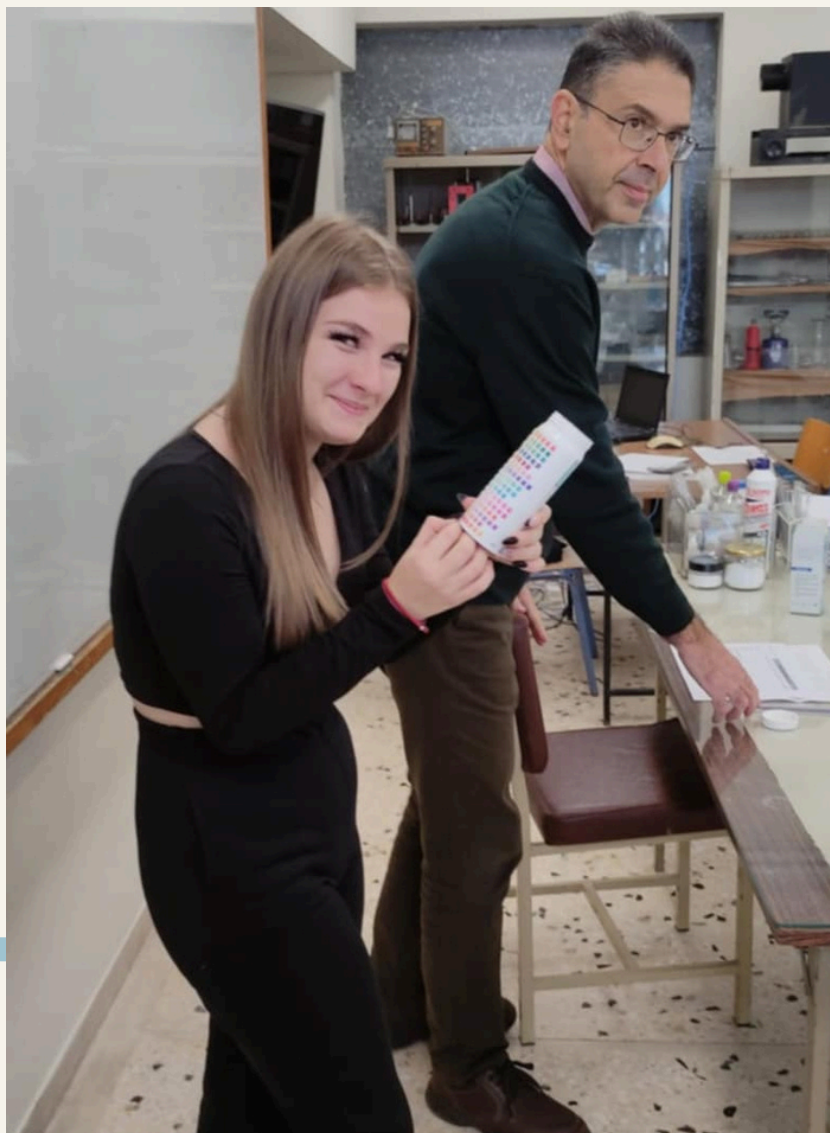
THE IMPORTANCE OF WATER QUALITY IN PLANT CULTIVATION

Research Question: Does the quality of WATER affect the growth of plants?



WATER ANALYSIS

- We analyzed the chemical and physical properties of the seven kinds of water that were going to be used to water the bean seeds.



Water Analysis Results

- The Fertilized water has a higher concentration in Nitrates and Phosphates
- No kind of water contains Chlorine.
- No kind of water is contaminated with Lead
- The pH level of Salty water is greater than the others

	Physical and Chemical Properties Of Water						
	Tap	Rain	Distilled	Lake	Salty	Acidic	Fertilized
Clarity	clear	clear	clear	clear	clear	clear	clear
Colour	no	no	no	no	no	no	no
Odour	no	no	no	no	no	no	no
Reaction	40	0	0	80	120	40	40
NO ₃ ⁻ concentration	0	0	0	0	0	0	10
PO ₄ ³⁻ concentration	0	0	0	0	0	0	2
Cl ⁻ content	0	0	0	0	0	0	0
pH level	6,2	6,2	6,2	6,8	7	6,2	6,2
Lead (mg/lit)	0	0	0	0	0	0	0

Planting of bean seeds



Planting process

- We planted the bean seeds in the same soil in 7 different pots.
- We placed two seeds in each pot.
- We placed the pots near the window of the faculty room.
- The planting took place on 2/12/2024

Monitoring of growth



16/12/2024



19/12/2024

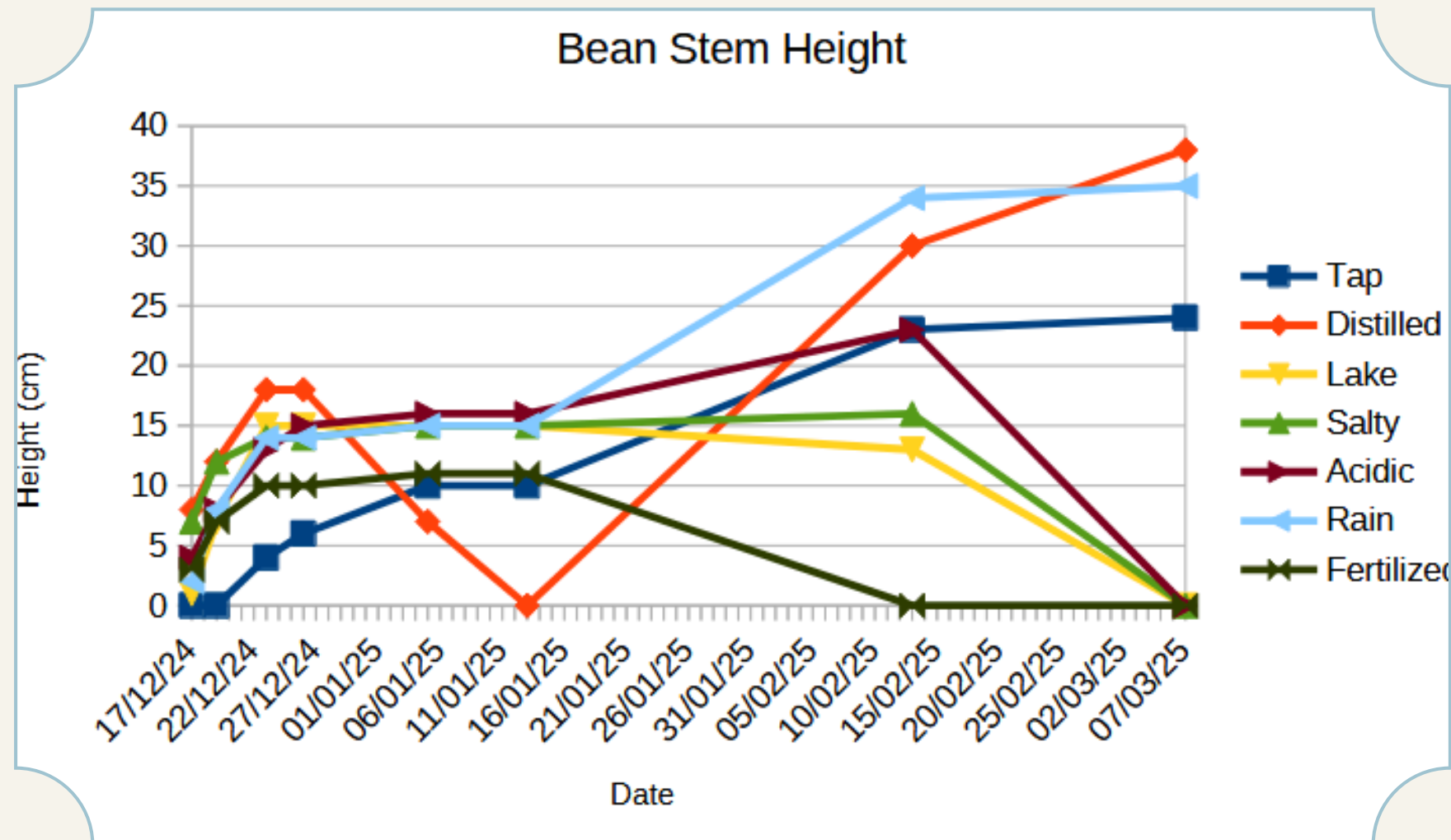


23/12/2024

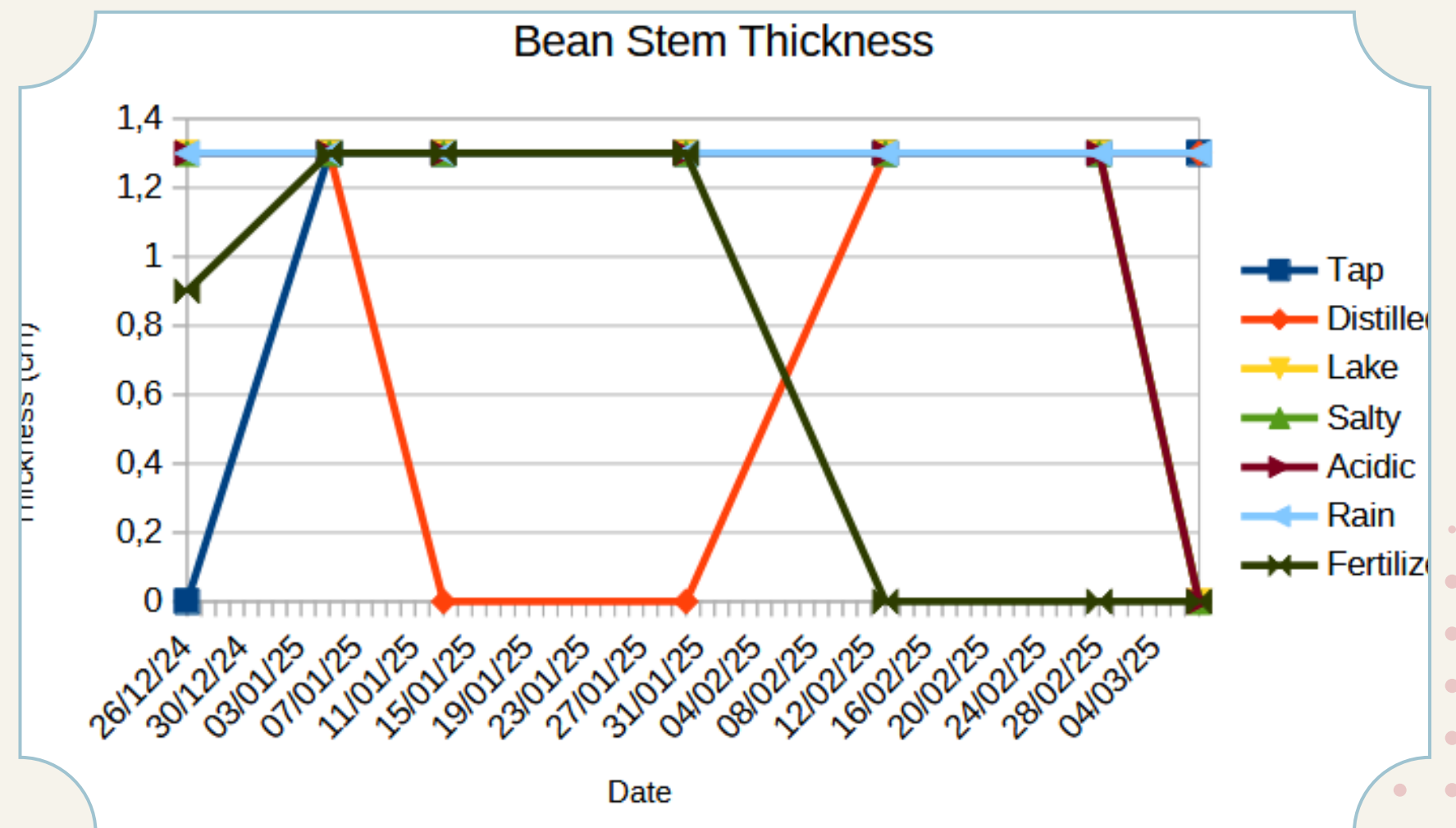


26/02/2025

Graphs of Stem Height and Thickness



Unfortunately the plant that was watered with distilled water dried out and we had to plant new seeds



The other plants grew evenly without significant differences.

CONCLUSIONS OF THE EXPERIMENT

● Resilience

The most resilient plants were the ones watered with distilled water and rain water.

● Soil and temperature

The quality of the soil as well as the ambient temperature play a significant role in the plant growth.

Thank you for your attention

