



Compost Effect on Radish Growth

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About Our (Junior) Internship

- ▶ Vale da Lama's first Junior Internship program
 - ▶ A 13-week program for secondary school students
 - ▶ Focuses on teaching and applying soil science in the context of ecosystem regeneration
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- ▶ As part of the junior internship, we have been conducting a research project to apply what we've been learning!



The Context of the Experiment

- ▶ Elodie da Silva's experiment on how vermicompost affects lettuce growth
- ▶ We decided to expand on our inspiration by adding multiple composts and concentrations to compare with each other
- ▶ The Vale Da Lama market garden
- ▶ Why radishes?



Lettuce cultivation exponential growing experiment

by Elodie da Silva and Jeroen Boss | Dec 1, 2023 | Uncategorized

Growing lettuce at Quinta Vale da Lama, a Soil Food Web Trial in Fall 2023 During this fall, a 6-week field experiment has been running on the farm – Quinta Vale da Lama – in order to measure soil improvement and agricultural production gains through...



Compost and Soil Combinations

Two types of compost were used during this experiment, and 8 soils, including mixtures, overall.

Composts:

- Nutriverde (thermophilic)
- Worm Castings (vermicompost)

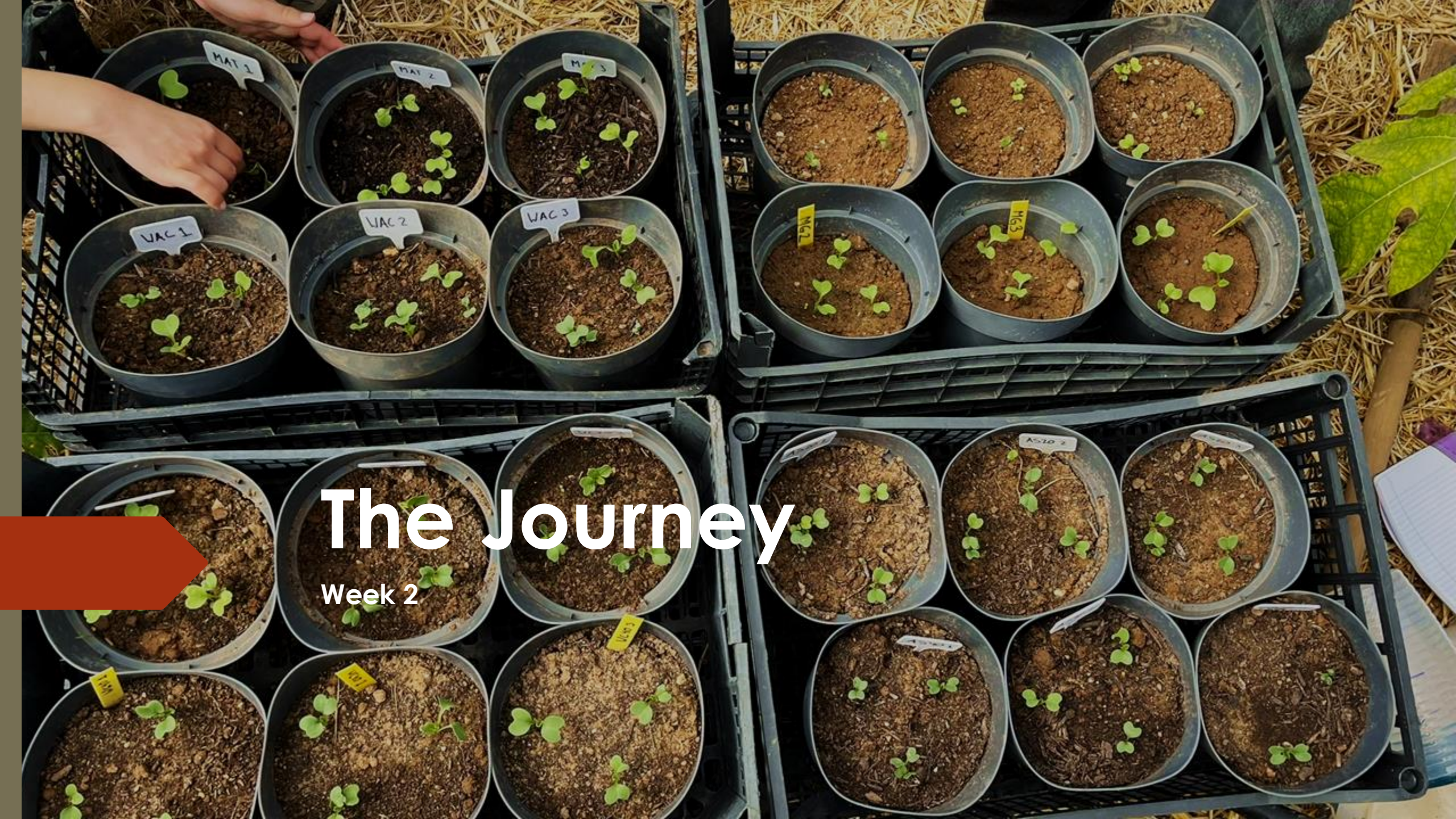
Soils:

- Market Garden (MG)
- Algarvian Soil (AD)
- Worm Castings and Soil (WC20 and WC40)
- Nutriverde and Soil (AS20 and AS40)
- Worm Castings, Nutriverde, and Soil (WAC)
- Soil with a Layer of Nutriverde on Top (MAT)



The Journey

Week 0 + 1



The Journey

Week 2





The Journey

Week 3



The Journey

Week 4



The Journey

Week 5



The Journey

Week 6

Week 6 – Taste Test!

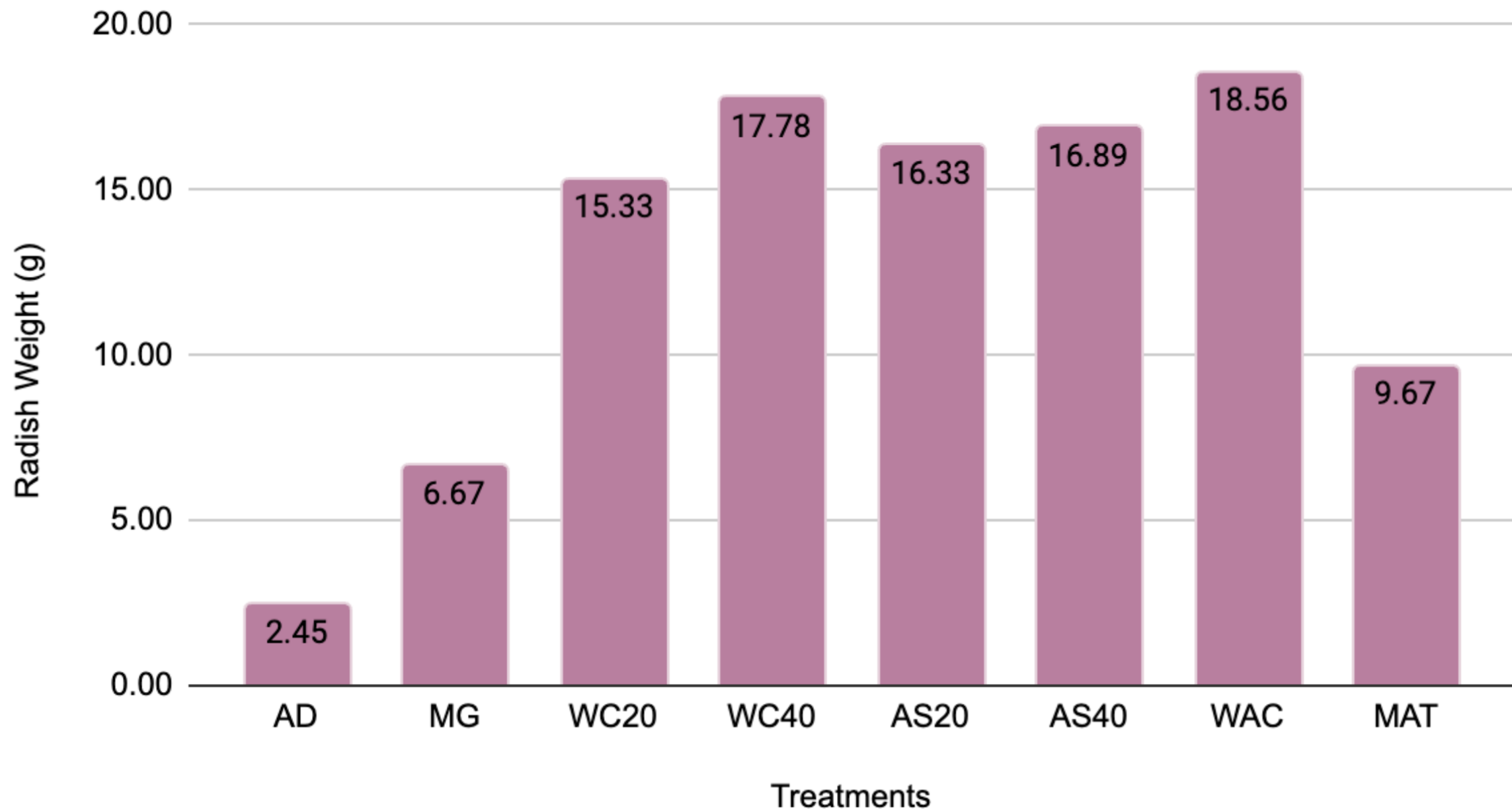
- WC20 and 40 radishes were extremely spicy.
- AS20 and 40 radishes were mild and juicy.
- AD radishes were bland.
- MAT radishes were slightly spicy, and were rather juicy.
- WAC radishes had notably fibrous taproots and thick skin.
- MG radishes were rather fibrous, but neutral in taste.
- Radishes of any type that had gone to flower were bland.





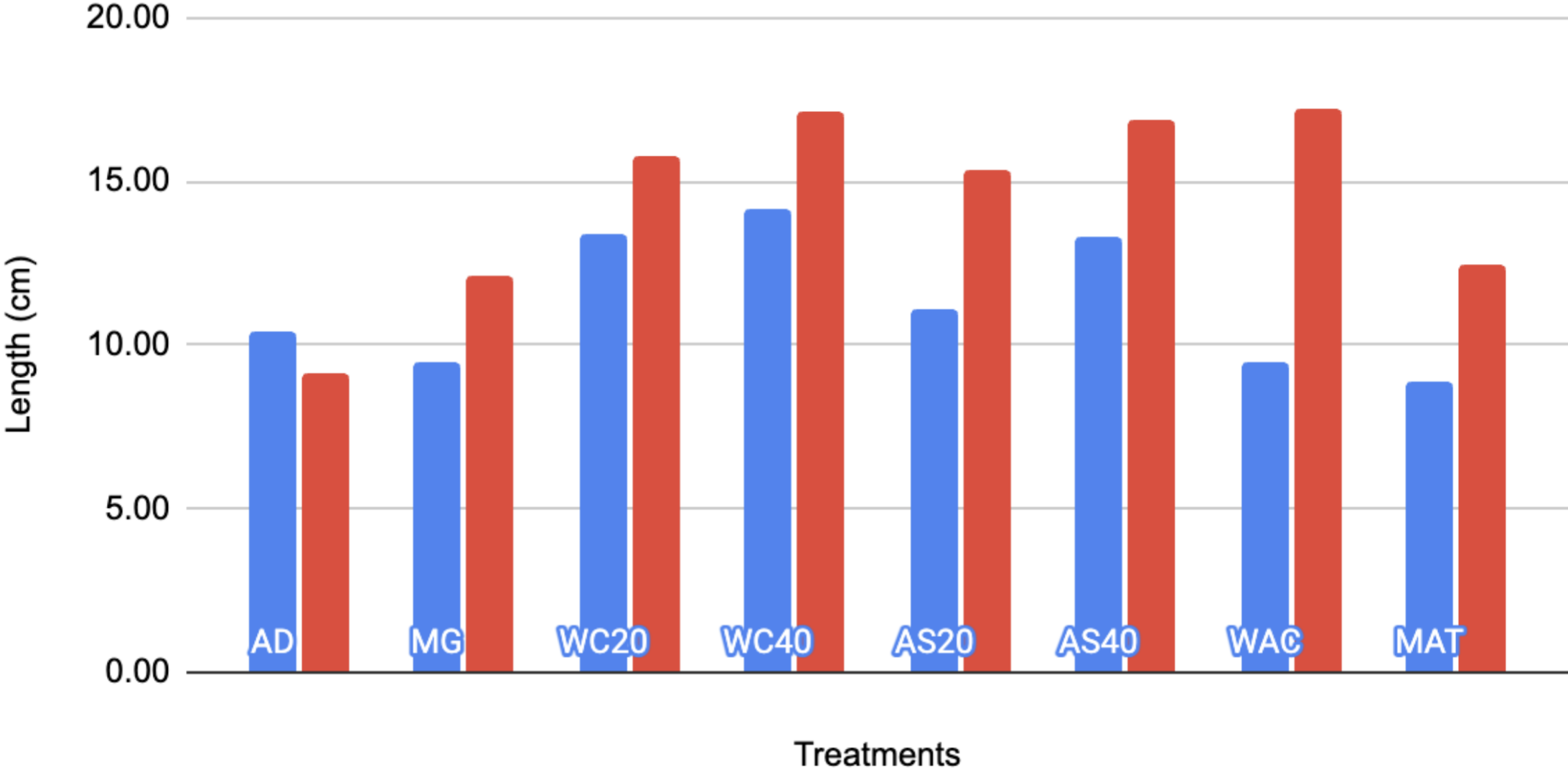
Our Results

6-week Radish weight (without Roots)

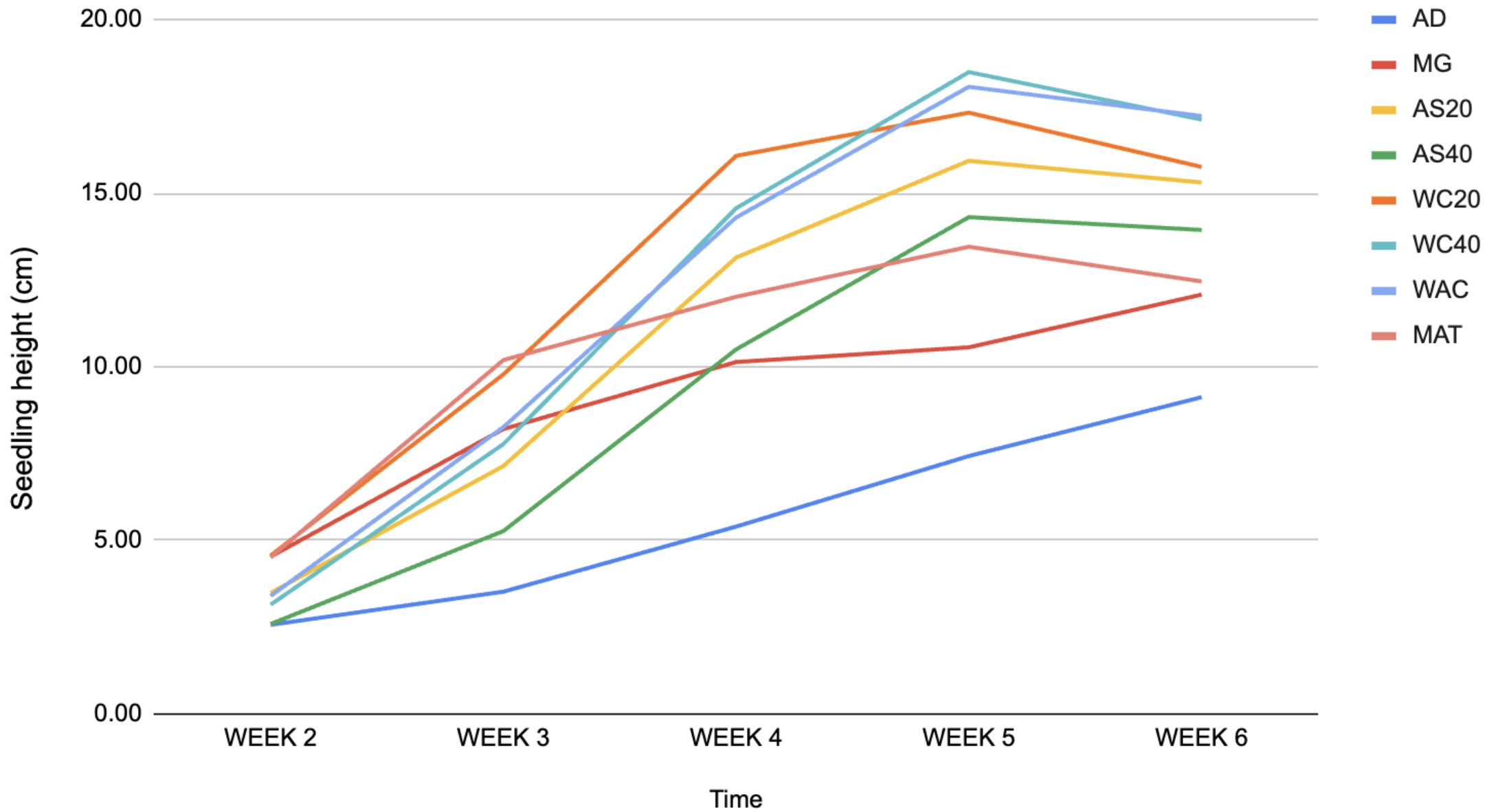


Leaf and root length average of 6-week grown radishes

Root Leaf



Seedling height along 6 weeks





Conclusion

Our Hypothesis:

"The hypothesis is that the soil treatments with a concentration of 40% compost, and the ones that contain worm casting compost, will result in the healthiest soils and therefore the best radish growth and quality."

Our research showed us that...

- Compost matters!
- WC compost is more effective than AS
- 40% composts did slightly better than 20% ones
- Mixing the soil is important
- Composts have an effect on radish taste



Stay tuned for our full report if you're interested!

Thank you for listening!