



Metagenomic Analysis of Heat-Disturbed Soil Microbial Community

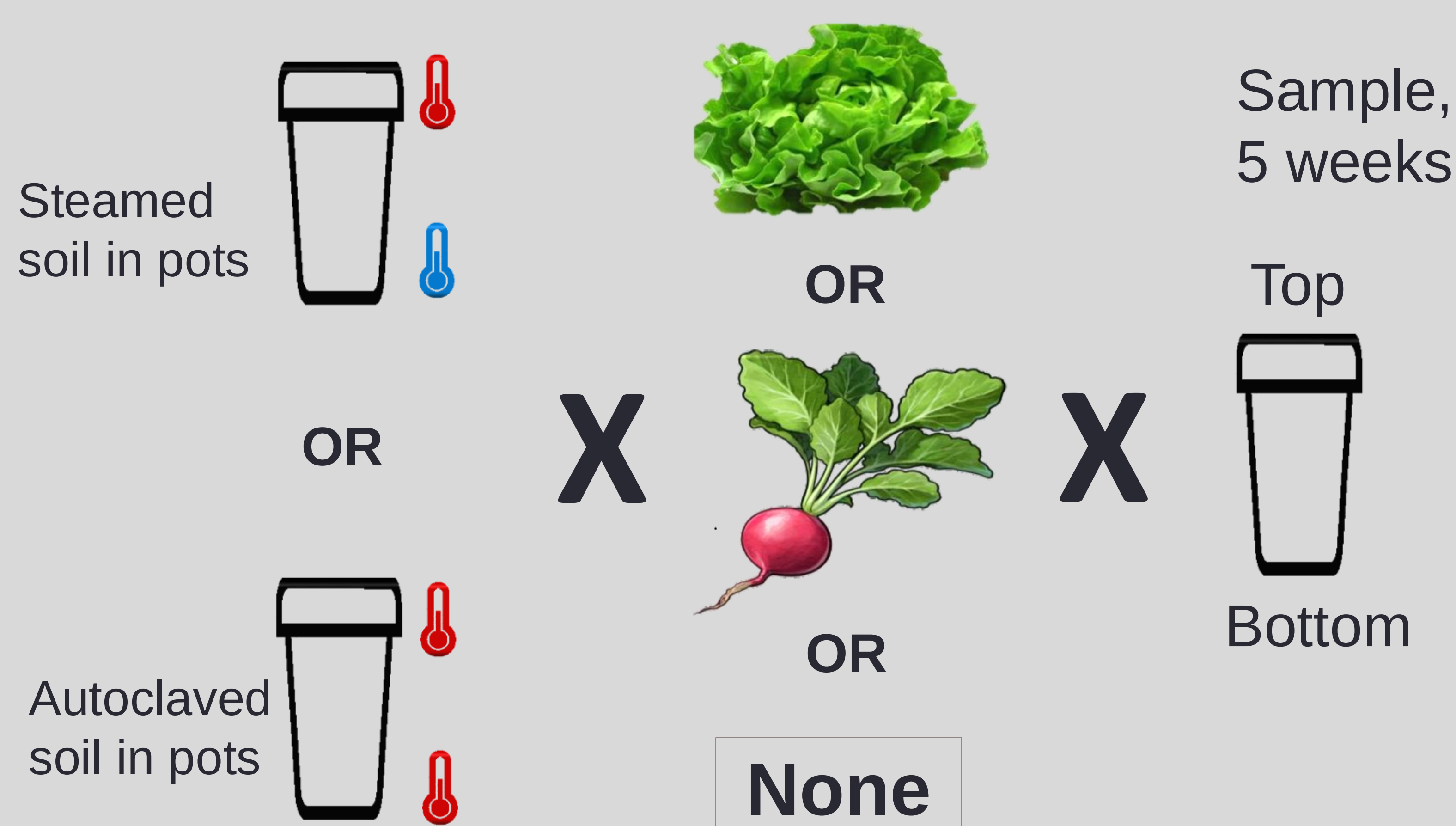


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- Crops provide 82% of the global calorie supply.
- Soil microbes affect crop production and include both beneficial and pathogens.
- Heat treatments, including steaming, are popular for pests and disease control and can alter soil microbiomes.
- Planting after heat may alter microbiome recovery, as plants affect microbial colonization.

Do hosts alter the recovery of heat-disturbed microbiomes?

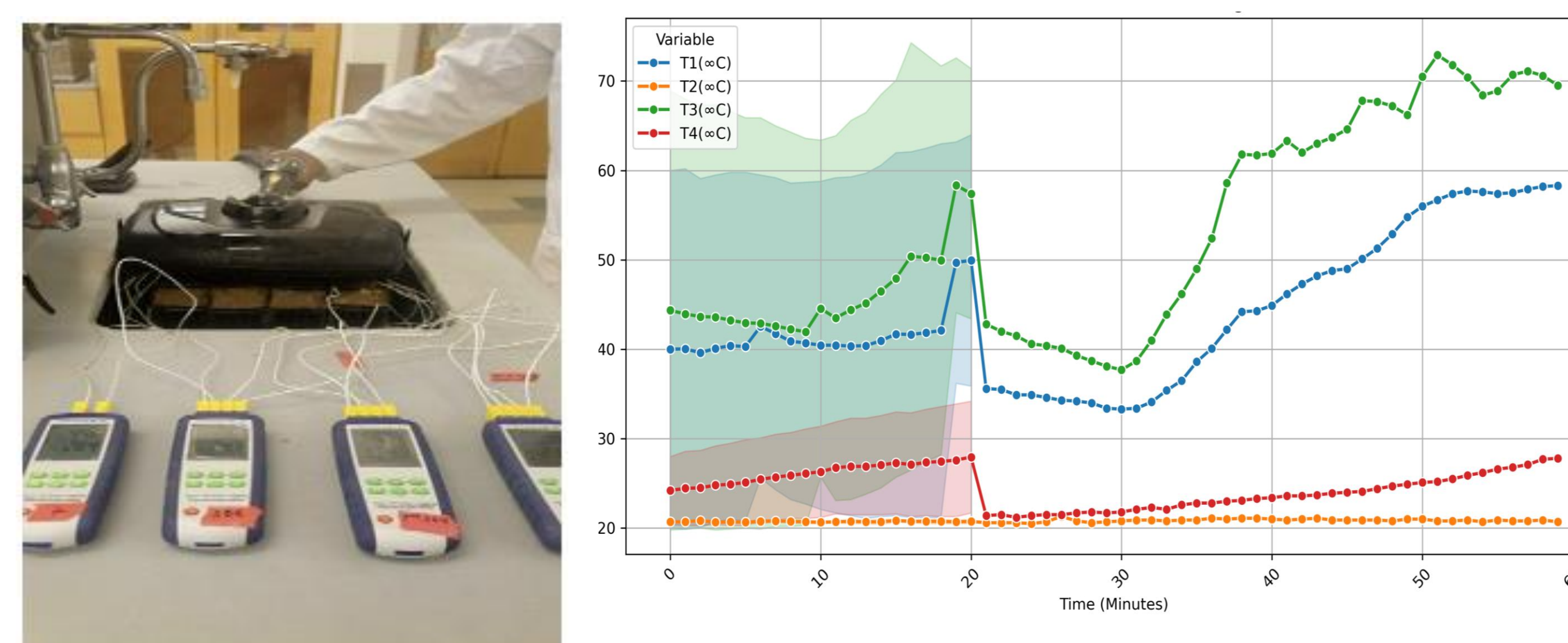


DNA extraction
DNeasy PowerSoil Pro Kits

Shotgun metagenome sequencing
Illumina NovaSeq-6000

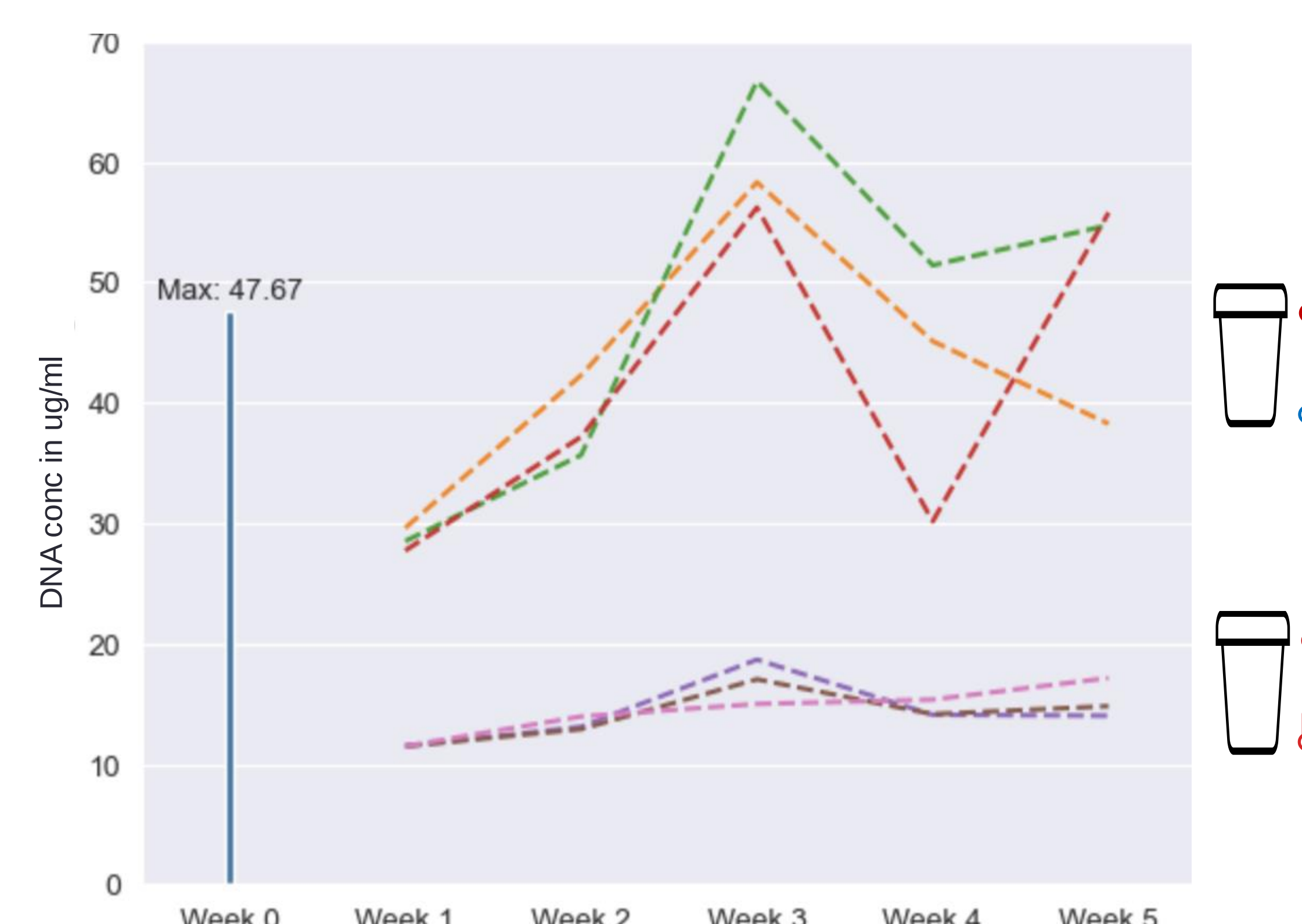
Data organization & cleaning
FastQC and Trimmomatic

Community composition analysis
Kraken 2 and Bracken

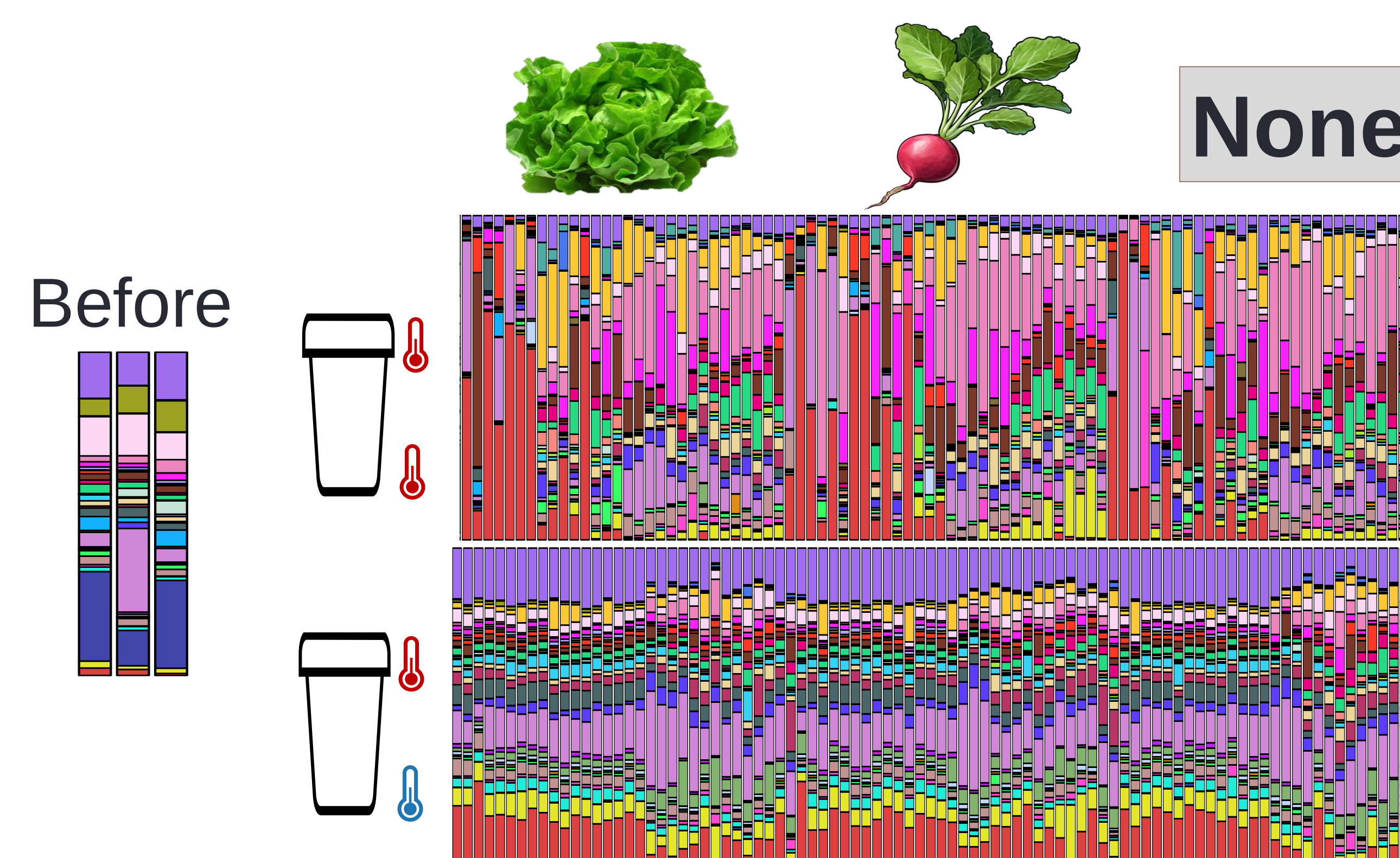


Pot **top** is hot but **bottom** is cool during steaming

DNA concentration recovered faster in steamed pots.



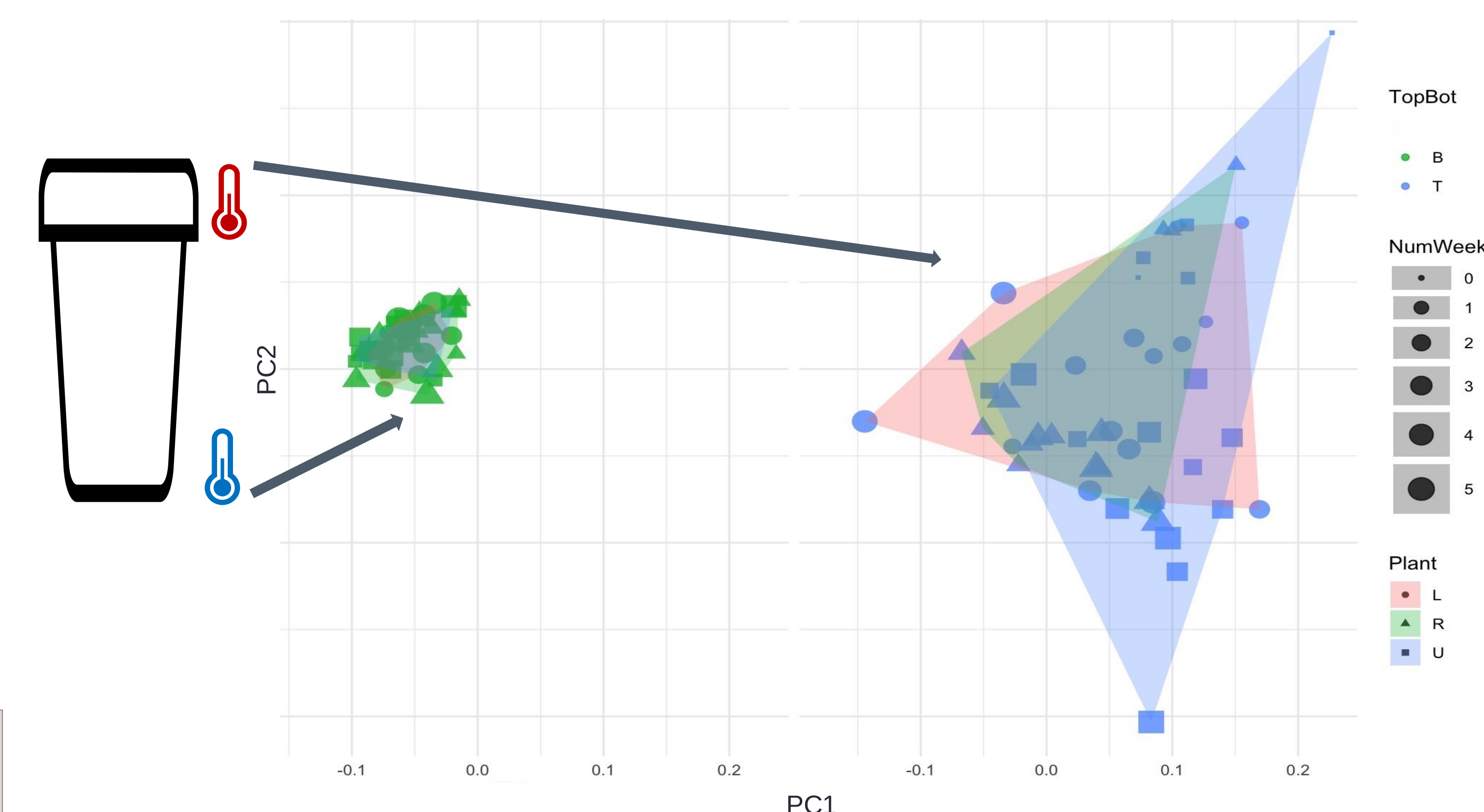
Autoclaving impacted microbiome composition more than steaming.



Plants may increase microbiome recovery in autoclaved samples.



Microbiomes were more resistant/resilient to steaming than autoclaving.



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