

## Mitigating Combined Salinity and Drought Stress in Chickpea (*Cicer arietinum* L.) through Biochar Amendment

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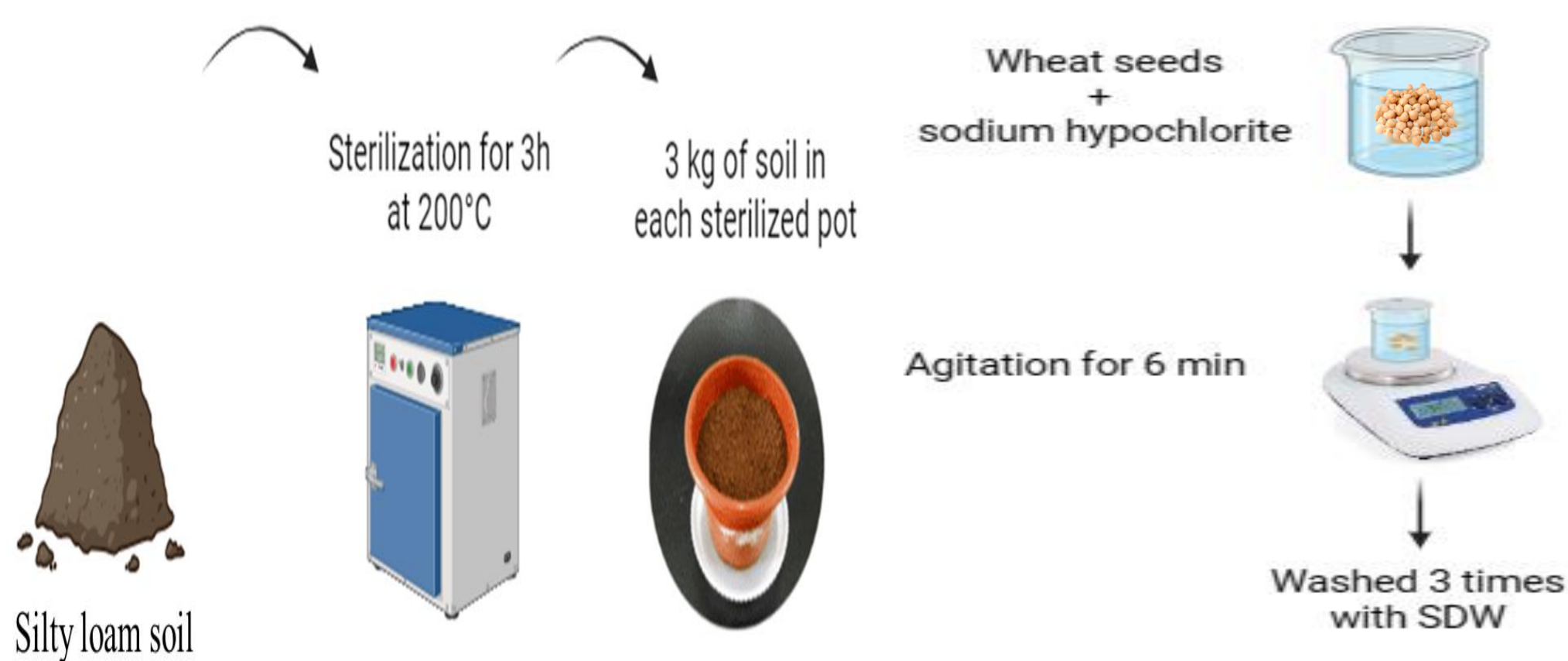
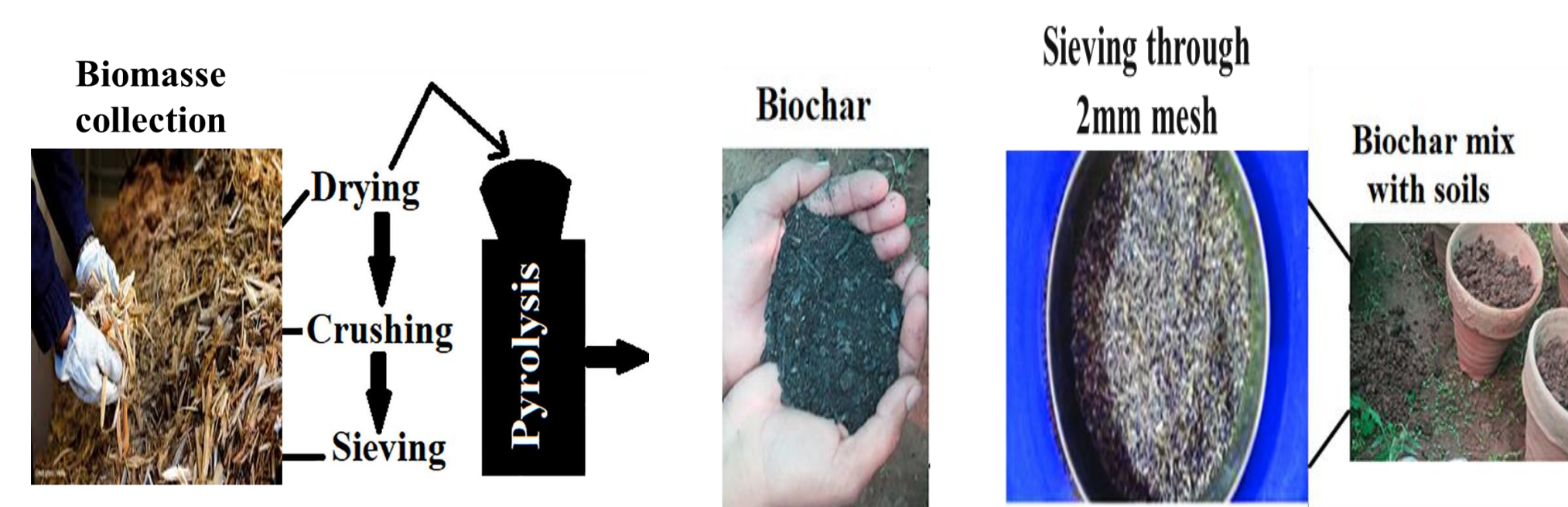
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### INTRODUCTION & AIM

Chickpea cultivation in arid regions faces severe challenges from combined drought-salinity stress, compromising growth and productivity. Biochar, a carbon-rich soil amendment, offers potential for stress mitigation through enhanced water retention and modulation of plant stress responses.

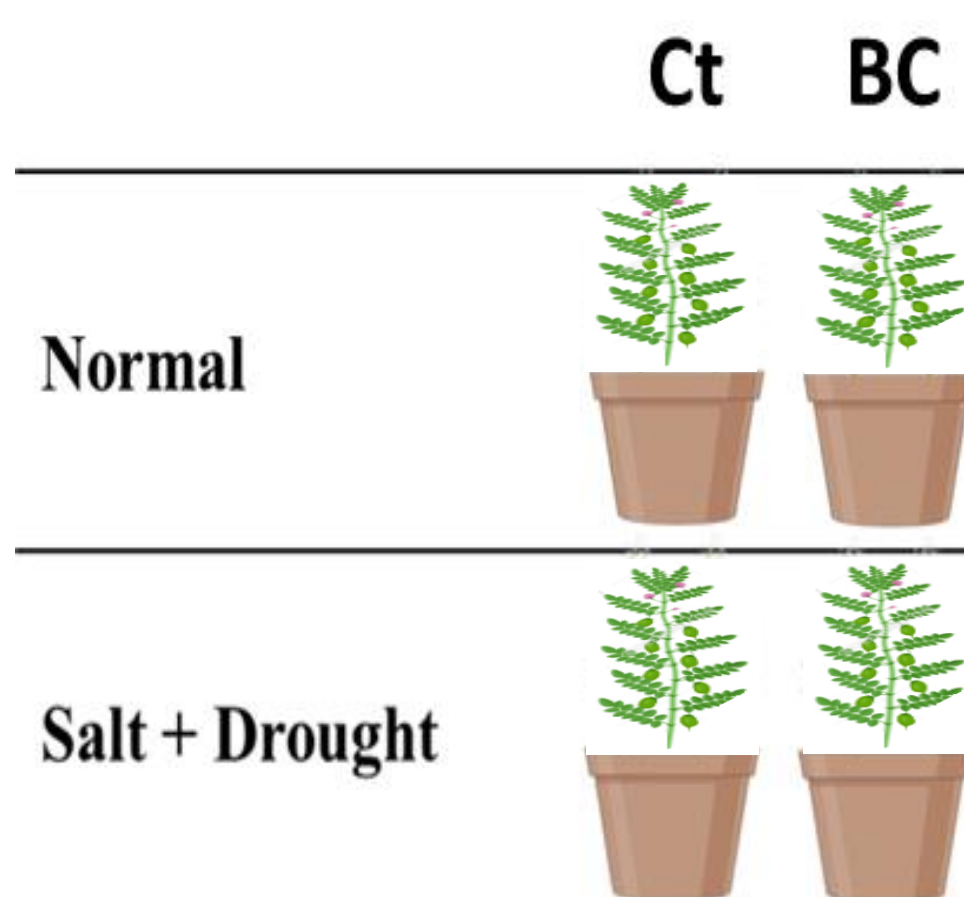
This study evaluated biochar's efficacy in alleviating combined drought-salinity stress (150 mM NaCl at 35% field capacity) in chickpea by assessing morphological, physiological, and biochemical parameters under controlled conditions.

### METHOD



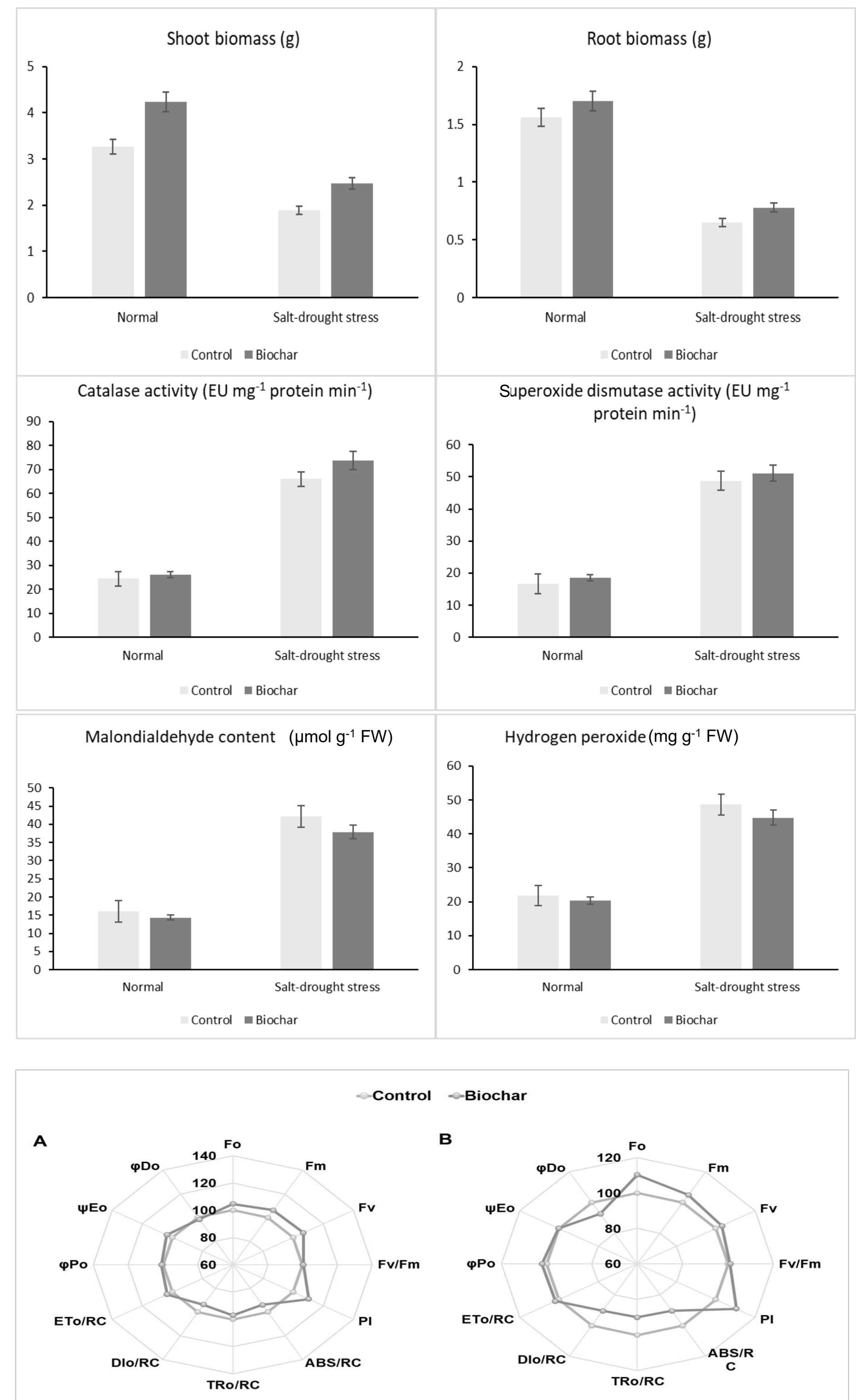
4 replicated pots

Randomized design distribution



Ct : Control BC: Biochar

### RESULTS & DISCUSSION



### CONCLUSION

Biochar effectively mitigated combined drought-salinity stress in chickpea by improving growth and reducing oxidative damage, demonstrating potential for stress-prone agricultural regions.

### FUTURE WORK

Field-scale validation and optimization of biochar application rates under varying stress conditions are needed for practical implementation.