



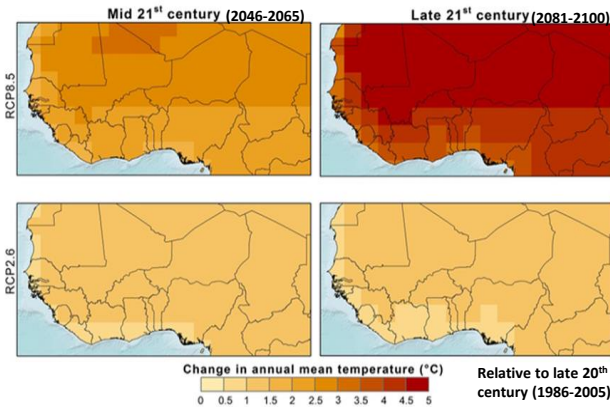
Modulatory effect of high-temperature regimes on the growth, yield, and bioactive components of three selected African leaf vegetables (*Amaranthus cruentus* L, *Celosia argentea* L., *Solanum macrocarpon* L.) and its alleviation by exogenous ascorbic acid, salicylic acid, and alpha-tocopherol

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Background

Projected changes in annual Mean Temperature in West Africa based on two alternative greenhouse gas emission scenarios, RCP2.6 and RCP8.5



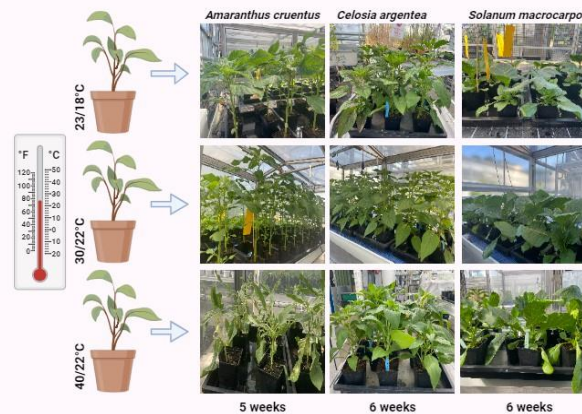
Hypothesis

- ▶ High-temperature regimes will affect the growth, yield, bioactive components, and carbohydrate content of the three selected vegetables
- ▶ The exogenous application of ascorbic acid, salicylic acid and alpha-tocopherol can protect the selected vegetable plants against high-temperature stress

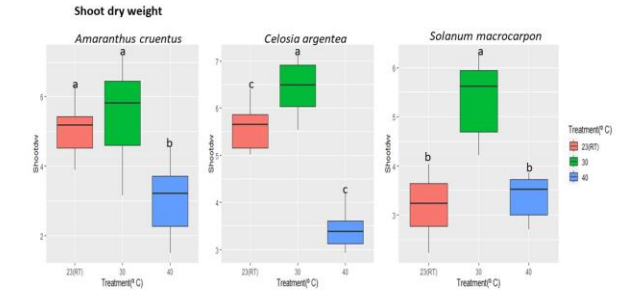
Materials and Methods



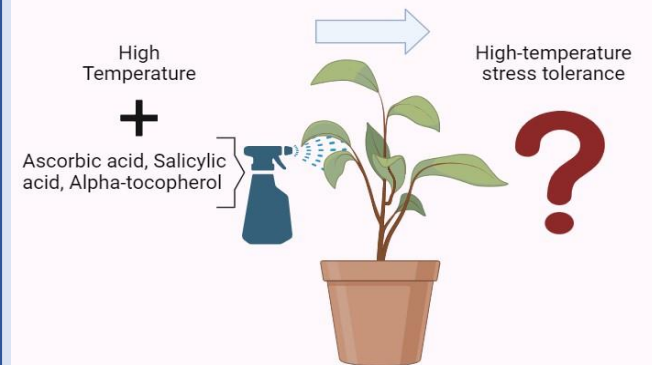
Measured parameters: leaf, stem, root (fresh and dry weight), leaf area, soil temperature, leaf temperature, net photosynthesis, stomatal conductance, transpiration rate, mineral elements, chlorophylls, and carbohydrates



Results



Objective (ii)



Objectives:

- Determine the impact of high-temperature regimes on the growth, yield, bioactive components, and carbohydrate content of the three vegetables
- Evaluate the effects of exogenous application of Ascorbic acid, Salicylic acid, and Alpha-tocopherol on alleviating temperature-induced stress in the three vegetables