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Adaptation strategies of fruit orchards under climate change conditions

Due to global warming fruit orchards are continuously challenged by abiotic stresses, etc, under harsh climate conditions, there are adverse effects of fruit orchards production particularly in arid and semi-arid regions, a rising temperature associated with drought increase soil salinity which affects negatively on sustaining the productivity of various fruit orchards. So, under abiotic stress conditions trees used different strategies to minimize the adverse effects like decreased stomatal conductance, reduced photosynthesis, and decreased CO2 concentration inside the leaf, also, plants could use different physiological mechanisms such as ion homeostasis, synthesis of more compatible solute, polyamines production, and antioxidant regulation, also, there are different steps required to maintain orchards productivity include using proper management practices that include providing adequate nutrients requirement and maintain soil moisture, using proper rootstocks tolerant for drought and heat stress as well as exogenous application of plant growth substances.

Therefore, adaptation strategies could play a significant role in improving the growth of fruit orchards and increase tolerance for these adverse environmental conditions, in addition to using proper agricultural practice, exogenous applications of plant growth regulators, with tolerant rootstocks, could play a significant role in the sustained production of fruit orchards under harsh climate conditions.

Keywords: Climate change, fruit orchards, temperature, drought, adaptation strategies.

Biography:

Dr. Abobatta is a member of Scientific Committee for Greenhouses Plantation (A.R. C.), he's an Expert of International Society of Citriculture, University of California (UC RIVERSIDE), and a member of Scientific Team for National Campaign for Navel Orange improvement (H. R. I.). Abobatta is a Scientific Committee Member of different international and national conferences, Abobatta is a supervisor of M. Sc. and Ph. D. Thesis in agricultural science. He has edited 2 books and published 5 book chapters and 44 Research paper in various branche of Agricultural science, Abobatta serving as an editorial board member in several respected journals).