

Abstract

The study aims to demonstrate the effect of climate elements on the cultivation of some deciduous fruit trees (apples, figs, pomegranates, grapes, apricots, peaches, pears, and pears), their ripening date, their geographical distribution, and identifying areas in which agricultural expansion can be carried out within the study area whose climatic data are consistent with the climatic requirements and by using .geomatics techniques

To achieve the goal, the study relied on quantitative and descriptive statistical analysis, aided by the use of geomatics techniques, spatial modeling, analysis and classification of information and models, to show the extent to which climate elements and phenomena (solar radiation, temperature, wind speed and direction, rain, relative humidity, evaporation, dust phenomena) influence the distribution of the studied trees (apples, figs, pomegranates, grapes, apricots, peaches, pears, pears) according to the appropriate regions. Four climate stations were adopted. It is (Azizia, Badra, Kut, Al-Hay) to represent the different geographical parts of the study area for a .(period of (31 years) for the period (1990-2021

The climatic requirements for fruit trees were determined in terms of (light, thermal, water, and wind requirements) during the stages of .tree growth

The study concluded that the actual solar radiation in the study area was not suitable for the cultivation of each of the trees (apple, apricot, peach, pear, pear), while it was moderately suitable for the cultivation of trees (figs, grapes, pomegranates). The maximum temperature was suitable for growing trees (apples, figs, pomegranates, grapes, and pears), while the average temperature was suitable for planting trees (apricots, peaches, and pears). The study showed that the amount of rainfall is not sufficient to meet the needs and cannot be relied upon for agriculture without the presence of another source of water.

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Climatic suitability for growing some deciduous fruit trees in Wasit governorate using Geographic information systems Gis

To the Council of the College of Education for Human Sciences, University of Wasit, which is part of the requirements for obtaining a master's degree in physical geography

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