SPATIAL TEMPORAL VARIABILITY OF APPLE ORCHARDS IN RESPONSE TO ENVIRONMENTAL CHANGE IN PATTAN VALLEY, HIMACHAL PRADESH USING GEO-INFORMATICS TECHNIQUES

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ABSTRACT

Horticulture in the hilly region of the country is essential for economic development, agriculture diversification and for the sustainable and productive agriculture in this region. Agro-climatic conditions of this region are suitable for the cultivation of subtropical to temperate fruits and also a variety of vegetables. In terms of horticulture framing mainly considering the fruit production, India stands second in the World production of fruits per year. Apple is one of the major components of it and is an important commercial crop of India. But due to nature of environmental change in hilly region, some areas are experiencing negative impact and some are experiencing positive impact on apple orchards growth in the area. The area is covered by present study is Pattan Valley located in Lahaul & Spiti district of Himachal Pradesh also has been experienced such kind of environmental change and its impact upon the spatial-temporal variability of apple orchards. In view of importance the base line information on occurrence of apple orchards is imperative for understanding survival and growth patterns of apple orchards in response to environmental change for future planning and sustainable growth of apple orchards. Such kind of database generation and analysis process has become more efficient and reliable with combined approach of Geospatial techniques with the supplement of field survey by sampling method in the ground which provides an opportunity for making accurate, timely and cost-effective resource evaluation. The present study demonstrates the potential of Geo-informatics techniques to maps and characterization of apple orchards with respect to terrain parameters and analysis the spatial-temporal variability of apple orchards in response to environmental change in Pattan Valley, Himachal Pradesh.

Keywords: Horticulture, Environmental change, Geospatial techniques and Terrain Parameters.