

## **THE EFFECT OF TEMPERATURE AND RELATIVE HUMIDITY ON RAINFALL IN GOKWE REGION, ZIMBABWE: A FACTORIAL DESIGN PERSPECTIVE**

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### **ABSTRACT**

The study of weather parameters is paramount in this era of climate change. Temperature, relative humidity, amount of sunshine and wind speed among others; are weather parameters which play a role to determine the amount of rainfall received on land. In this research, the effect temperature and relative humidity on rainfall was studied. The study reveals that both temperature and relative humidity have a positive significant effect on rainfall. Results show that rainfall is maximised when temperature and relative humidity are at high levels and few rainfall is expected when both these parameters are at low levels. It is also observed that temperature contributes about 50% to change in rainfall while relative humidity contributes about 80% to change in rainfall. It has been found that the interaction of temperature and relative humidity has little meaning or insignificant to change in rainfall received.

**Keywords:** Factorial design; rainfall; temperature; relative humidity; weather.