

SUMMARY

Climate change and yield of *Sechium edule* (Jacq.) Sw. in Veracruz and characterization of the production system in the Altas Montañas Region.

This study was carried out in the Altas Montañas region, covering the municipalities of Coscomatepec, Chocamán, Orizaba and Ixtaczoquitlán. The objective was to characterize the production system of the *Sechium edule* crop and analyze the variation in temperature and precipitation in the period 1980-2017. Likewise, the identification of climatic effects on performance. For the characterization of the system, surveys were carried out, implementing a non-probabilistic sampling "for convenience", through a questionnaire including open and close questions, the data obtained was analyzed through contingency tables and percentages were obtained to observed differences. For the analysis of variability, data from Terraclimate were taken and analyzed by means of Rstudio, in terms of the effects on yield - climate, correlations were made with the data obtained in Terraclimate and yield data obtained from SIAP, under the methods of Spearman and Pearson. The results showed that the majority of the producers have one or two hectares, aged 41-60 years, they are producers with basic knowledge about the plantation, they do not implement a resistance management plan for pests and diseases, so they use chemical products without knowing the causal agent, which has raised their production costs and affected soil fertility and therefore yield. Regarding the climatic variables in the evaluated period, the maximum temperature (Tmax) has increased between (1.2-1.3 °C,) minimum temperature (Tmin) (0.31-0.36 °C) and precipitations of (168-208 mm). Correlations, Tmax in the Spearman (p-value = 0.50) and Pearson (p-value = 0.56) tests, Tmin Spearman (p-value = 0.29) and Pearson (p-value = 0.16) and Spearman rainfall (p-value = 0.26) and Pearson's (p-value = 0.18) proved not to be significant in terms of performance. Within the crop production systems, three types of producers were found: subsistence, transitional and entrepreneurs. The effects of climate change are affecting the management practices of producers; however, they are reactive actions, therefore research is required to quantify and assess the damage caused by this phenomenon.

Key words: *Sechium edule* (Jacq.) Sw., production system, climate and yield.