SUMMARY

Edaphoclimatic factors that influence the productivity of three mango varieties in the Papaloapan basin, Veracruz, Mexico.

México ranks fifth in the world for mango (*Mangifera indica* L.) production; in addition is one of the main exporters, due to its particular flavor and aroma that makes it acceptable in domestic and international markets. The productivity of mango fruit depends on factors associated with soil and climatic conditions that influence the development of the tree, particularly its flowering and fruit production. In this study, the edaphoclimatic factors that influence the productivity of three mango varieties (*Keitt*, *Ataulfo* and *Manila*) were analyzed. Comparison of the dendrometric and production patterns, edaphoclimatic characteristics and their correlation with the dendrometric variables, lead to a final description of the socioeconomic factors in the Papaloapan basin mango productivity. With the purpose of contributing to the restoration and recovery of mango production in the Papaloapan Basin, because it is a product that has been undervalued by the agricultural population. The field work was carried out in 15 mango orchards (5 per variety), in the municipalities of Cosamaloapan and Chacaltianguis, using technologies, precision agriculture and GIS. The results showed indexes in an interval from low to medium relative to association with productivity of each mango variety. The variety that presented the most satisfactory adjustments from the dendrometric variables was *Manila*, the three varieties presented notable differences in requirements of soil quality, as well as for the bioclimatic context. In conclusion, productivity was more significant for the *Keitt* and *Manila* mango orchards, which coincides with a more fertile and resilient soil habitat. Regardless of the production system, it is concluded that, in this region, the orchards have the capacity to produce mango, considering it a fruit adapted to the bioclimatic conditions and the needs of the market, they constitute productive, profitable and in some cases a sustainable systems at the service of farmers and consumers.

Key words: Bioclimatic conditions, *Keitt, Ataulfo* y *Manila*, productivity