Pre- and post-harvest factors that affect the quality and commercialization of the Tahiti lime

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Abstract

Colombia has an important Tahiti lime production, but despite the adequate edaphoclimatic and seasonal advantages for its production, its competitiveness is limited by appearance affectations and the short useful post-harvest life caused by inadequate handling. Different symptomatology can be identified in the external appearance of the fruit that can be triggered by either preharvest, or postharvest factors. In the current study, the effect of the location (Lebrija and Villavicencio), the rootstocks (Citromelo, Kryder and Volkameriana), the crop season (dry and rainy seasons) and the storage conditions (temperature and disinfection) on fruit quality were assessed. The relationship between the damage affecting the appearance and the evaluation factors were identified using a Pearson Chi-square statistical analysis. The best quality was observed in fruit from Lebrija, harvested in the dry season, disinfected, and stored at 10 °C. In the identification of the biological factors that affect the appearance of the Tahiti lime fruit, fungi developed during pre- and post-harvest phase were isolated, and strains of the genera *Colletotrichum* spp., *Fusarium* spp., *Alternaria* spp., *Penicillium* spp., *Acremonium* spp., *Trichoderma* spp., *Curvularia* spp., *Phoma* spp., *Stachybotrys* spp. and *Ulocladium* spp., were identified.