Effect of Pre-Harvest Foliar Calcium and Silicon Fertilization on Pineapple Quality and Fruit Collapse Incidence

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Abstract	Pineapple can be affected by fruit collapse, a disease caused by the bacterium Dickeya zeae. However, adequate fertilization can increase the fruit's resistance to this illness. Therefore, the impact of pre -harvest foliar calcium and silicon fertilization on pineapple quality and fruit collapse incidence was assessed in this study. The experiment implemented a split-plot design with two factors. The first factor has two terms of inoculation (flower induction and before harvest). The second factor uses a control with three foliar fertilization treatments, A (control: No foliar fertilizers applied), B (Ca from 13 to 11 weeks before harvest/ from 6 weeks to harvest), C (Si from 13 to 11 weeks before harvest/from 6 weeks to harvest), and D (Ca + Si from 13 to 11 weeks before harvest/ from 6 weeks to harvest). Treatment D gave the best response. It had the lowest fruit collapse incidence (21.70%), highest ascorbic acid (71.64 mg/ kg), elevated beta-carotene (4.87 mg/kg) and mineral content (Ca: 1851.10 mg/kg, Si: 1164.87 mg/kg), essentially under the before harvest term of inoculation, which was more harmful for the fruit. In conclusion, mixed foliar calcium and silicon fertilization manage to improve the tolerance to fruit collapse incidence, impacting the pineapple quality positively.
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