EFFECTS OF PRUNING ON PHYSIOLOGICAL DETERIORATION, ENZIMATIC ACTIVITY AND PHENOLIC COMPOUND LEVELS IN CASSAVA ROOTS (MANIHOT ESCULENTA CRANTZ) CV. CATARINA AMARELA

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Among the cassava cultivars with wide distribution in Paraná is Catarina Amarela. Some studies have shown that the pruning before harvesting is effective to increasing storage time of cassava roots. Therefore, the objective was to evaluate the influence of pruning in the enzymatic activity (polyphenol oxidase and peroxidase) and phenolic levels as much as its effects on the reduction of the physiological deterioration (PD) in cassava roots of Catarina Amarela cultivar. The cassava were cultivated in Londrina-Brazil. To obtain of roots with treatment of pruning, thirty days before to harvest this was held. After the harvesting of the roots, they were stored for five days. The roots of plants pruned (RPP) had higher moisture content (59.01±0.83%), compared with the roots of plants not pruned (RPNP) (56.63±0.57%), as well as higher activity of peroxidase (14.20±0.09 EU/mL.min) and phenolic compounds (48.27±0.89 mg of gallic acid equiv/100g) when compared with RPNP who presented 16.65±1.67 EU/mL.min and 52.42±3.67 mg of gallic acid equiv/100g respectively. Not detect the activity of polyphenol oxidase. Once the pruning reduces enzymatic activity and phenolic compounds is believed to roots of plants pruned present slow PD. However, in this study it was observed that after of storage, both roots had the same average rate of PD, approximately 25% of the total area affected by the PD. After storage has been observed that in RPP the moisture content (56.93±1.74%) and peroxidase activity (268.99±125.7 EU/mL.min) were higher, compared with RPNP who presenting moisture content (55.32±0.41%) and activity of peroxidase (178.28±57.03 EU/mL.min).