Minimal processing of vegetables is a growing activity in medium and large urban centers, tending to grow in other regions of Brazil. Within other goals, this processing aims to satisfy the increasing consumption of fruits and vegetables in the world, adapting to present-day trend of use in domestic and institutional meal, in societies without too much time to meal preparation. The objective of this study is to evaluate the use of bleaching and lemongrass oil on arracacha cultivated in soil with half decomposed poultry litter (soil without poultry litter, with poultry litter in coverage, with incorporated poultry litter and with poultry litter incorporated plus in coverage) for post-harvest storage at -18° C. The arracacha were stored in a freezer (-18° C) for 157 days, and during this period the following parameters were evaluated: soluble solids, pH, titratable acidity, pathogenesis-related enzymes, carotenoids and phenolic compounds. Based on the analysis of the variables, results were positive for both producers and consumers. The use of post-harvest bleach in arracacha grown in soil without poultry litter showed physical and chemical conditions for consumption after 157 days of storage at -18 ° C as well as those without any post-harvest treatment, but grown in soil with poultry litter in coverage.