

**PROCESS ENGINEERING HARVEST AND POSTHARVEST
TO MINIMIZE FOOD LOSS CARROT AND CHINESE
CABBAGE COMMODITIES IN THE BRAKSENG AREA OF
SUMBER BRANTAS VILLAGE**

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Abstract

Agriculture is one of the sectors that support the country's economy. Where each region has a different potential for agricultural products so that to meet their needs they must go through a distribution process from other regions. From the distribution process of horticultural commodities, it is found that they are very susceptible to damage, causing food loss. The research method used in this research is the design thinking method which is useful for getting the main problem and also the solution. In horticulture, carrots and mustard greens each found three causes of food loss, namely high rainfall, damage due to existing pests, and damage to crop yields caused in the postharvest process, namely the distribution process. However, in the observation process on carrot horticulture, no significant amount of food loss was found, so the carrot variable was eliminated in the emphatic stage of the study. The largest percentage of mustard food loss occurs in the distribution process which has the largest percentage of up to 30%, so that at harvest time it can usually transport up to 1 ton of mustard greens. The food loss that occurs can reach 300 kilograms. From the results of the research using the design thinking method, the researchers made a mustard container tool that can help the mustard distribution process with the possibility of food loss being minimal. When using the mustard container, it can transport 874 kilograms of mustard greens, which is a difference of 126 kilograms from the previous process. The addition of work instructions is also recommended in the mustard harvesting process, namely cleaning and turning the mustard greens after the mustard cutting process from the roots. Which will be the engineering of the harvest and post-harvest processes that are expected to effectively reduce the food loss that occurs.

Keywords: *Design Thinking, Food Loss, Horticulture*