

ABSTRACT

Food security is one indicator of a country's success in managing food in its country. The level of food security can be seen on several factors, namely affordability, availability, quality and safety, and natural resources and resource security. One of the government's efforts to improve food security is to use the urban farming method. Urban farming supports the community in helping the government to grow its own food crops so that it can help the economy of the surrounding area. Although helping the community in planting crops, urban farming has its own difficulties. One of them is in fertilizing plants. Fertilization of plants is very important because it directly affects plant growth. The research was conducted to try to design a design tool called RTDFV (Root Targeting Delivery Fertilizer Vehicle) for fertilization so that it is easier for people to do urban farming. The method used in this study uses the TRIZ Creative Problem Solving method and the Product Design Process to make changes to existing designs. TRIZ Creative Problem solving is used to analyze what changes should be made for. While the product design method is used to design the RTDFV concept

Keywords: TRIZ method, product design process, direct fertilization to roots, food security and urban farming