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Realization of Economic Green-Crop-House to Improve Horticulture Diversity

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Abstract

Besides rice, supplementary foods that meet the body's nutrition can be sourced from vegetables and fruit. The government's sustainable food house movement through the main women-community program has dramatically helped to reduce the impact of this problem. A sustainable food house is a movement to grow vegetables and fruit in the yard of the house to fulfill the people's nutrition, which can be consumed economically without having to buy but through the movement to plant and harvest fruits and vegetables. The fulfillment of plant seeds as a source of material for this movement is one of the limiting factors for this program's success. The activity of women community that we do is making the "Crop House" a village nursery. This crop of bamboo and polyvinyl is very economical because the raw materials are from bamboo, where these raw materials are easily obtained in the village.

Keywords: crop house, horticulture, bamboo, polyvinyl, economic.

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Introduction

Alongside rice yields, some horticulture commodities were the farm's natural features in Wajik village, Lamongan, in varieties of vegetables or pods.The farmer keeps decent crops to encourage their economy.

Food house is one of the concepts of land use (Ingram et al., 2016) in rural and urban areas to support national food security by empowering local food potential(Tando, 2018). This program also introduced how to optimize the use of the yard intensively. The selected plants are determined by

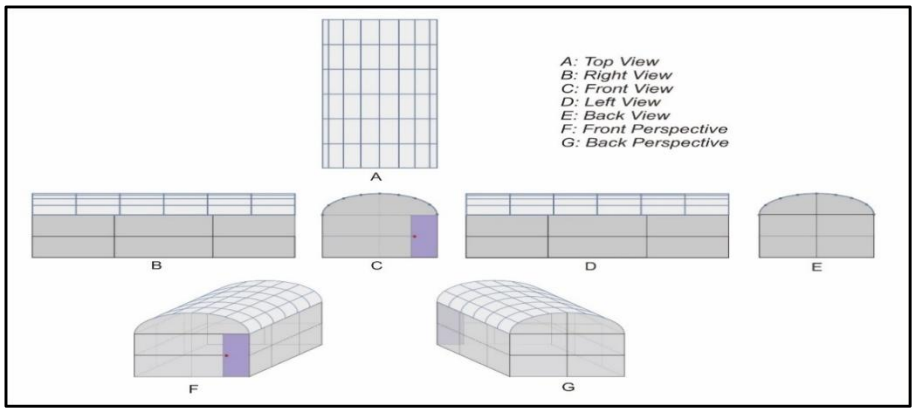

Figure 1. Design of Crop House of Bamboo and Polyvinyl Pipes with UV Plastic & Insect

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considering the fulfillment of the family's food and nutritional needs and their commercial development on an area-based basis. Among them is the cultivation of food crops, vegetables, fruits, family medicinal plants, raising livestock and fish, and processing household waste into compost. In the first stage, the cultivation results are to fulfill household needs; after the household needs are met, marketing and processing of products will be developed to become processed products to increase family income.

With the development of the Sustainable Food Program, Indonesia is expected to avoid the world food crisis, and the impact of soaring world food prices can be minimized by meeting the family's food needs through the Sustainable Food Home program.

The village nursery's existence is beneficial in the development of sustainable food houses in the supply of seeds in this farmer group. So the purpose of this community service activity is that the farmer groups can independently make their seedlings to meet the needs of vegetable and fruit seeds in the Klitih Hamlet community in Wajik Village through the Crop House, a place that functions as a village nursery. This activity's target is a group of women farmers in Klitih village, Wajik village, Lamongan district.

Design

In general, this greenhouse is the cheapest type of greenhouse to make and is widely used by our farmers as a means of production in Figure 1. This bamboo greenhouse is a low-cost option with various materials used that can be said to be friendly in the bag or even can be found in the environment around the residence. This greenhouse's weakness is its relative shortage, and its material can be a medium for pests. Due to the structure's strength and the cost problem, the bamboo greenhouse roof is limited to using UV plastic.

Method

The materials needed are bamboo, net insect size 3 x 1 m, paragon size ½ inch, bend wire, pipe joints, pipe glue, nails, pipe clips, and UV plastic size 5 x 1 m thickness 170 mm.

This activity's method is carried out with a participatory system with farmer groups and women groups in the hamlet of the village klitih, which prioritizes active participation of groups and members. The application of science and technology that we do is [1] designing Crop House designs, [2] preparing materials and tools, [3] building Crop Houses.The bamboo was chosen for diameter as broad as 7 cm approximately and then cut into seven types long cutting for construct the base.

Results and Discussion

The Crop House was strong enough in the construction of the bamboos and PVC. Inside the building, there were large enough for placing some plant or seed areas. However, the planting areas' excellent arrangement is needed for effectiveness and tidiness among diversities of planned seeds.

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(a) (b)

(c)

(d)

(e)

Figure 2. The Bamboo Crop House Views (a) front (b) back (c) left (d) right (e) back

Conclusion

This bamboo and paragon-based crop house are very economical because it is made from bamboo, readily available in the village.

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