TRAINING HOW TO INCREASE HYDROPONIC PLANT PRODUCTION WITH THE EFFECTIVENESS OF PLANTING PESTS IN ANGGADITA VILLAGE, KARAWANG

Rujito, Fransisca Listyaningsih, Nurul Hidayah, and Noor Hazlina bt Ahmad
Universitas Mercu Buana Jakarta, Indonesia
Universiti Sains Malaysia, Malaysia.

ABSTRACT

Anggadita Village is one of the villages in Klari Subdistrict, Karawang Regency, West Java. The village is located in a densely industrial and residential area so it is very arid. The density of settlements around the village of Anggadita Karawang and the lack of land that can be used to plant crops is a problem of the lack of interest of residents to plant. Hydroponic cultivation is a solution to the problem of limited land for the residents of Anggadita Village, Karawang. By providing training to residents it is hoped that residents around the village of Anggadita Karawang can continue to increase the production of their hydroponic plants. The method used is training in how to plant and care for plants, including eradication of pests against these hydroponic plants so that the yield of hydroponic plants is increasing. The training was carried out by practicing how to plant hydroponics, followed by visits to the homes of residents to evaluate the growth of the plants.

Keywords: Hydroponics, Plant Pests, Production Results

1. PRELIMINARY

1.1. Background

The current environmental conditions have undergone many changes. The number of settlements narrows open land that can be used for farming. With the increase in population, the increasing need for agricultural land as the main producer of food. In addition, air conditions and temperatures have changed due to increasing population. To overcome this, a solution is needed to balance the growing needs of food while agricultural land is increasingly narrow. One solution used is the hydroponic growing method.

To overcome this problem, the suitable method for use in confined lands is the hydroponic method. This method does not use soil as a planting medium but rather uses water and places more emphasis on meeting the nutritional needs of plants. Water requirements in hydroponics are less than water requirements in aquaculture with soils.

Based on the description, the cultivation of hydroponic plants needs to be socialized to Anggadita Village residents. Besides being used to utilize limited land for reforestation, this training is expected to be able to improve the economy of the citizens. The results of the cultivation of hydroponic plants can be consumed alone so that the household economy becomes more efficient. One of the methods used to increase the yield of hydroponic plants is the eradication of pests and diseases.

1.2. Focus on Community Service

Anggadita Village is located in Klari Subdistrict, Karawang Regency consisting of 7 hamlets and is one of the fastest growing villages. This is because the village of Anggadita is located in the industrial estate development area, Klari, Karawang. Many industries are found in the village of Anggadita, such as the garment, chemical, plumbing, electronics and construction industries.

The density of settlements around the village of Anggadita Karawang and the lack of land that can be used to plant crops is a problem of the lack of interest of residents to plant. Hydroponic cultivation is a solution to the problem of limited land for the residents of Anggadita Village, Karawang. How to grow hydroponics is very easy and inexpensive by using used items such as used bottles to grow vegetables or fruit. Narrow land can also be used to conduct hydroponics by sticking to walls, fences, roofs or even in narrow spaces so that land constraints can be overcome.

1.3. Justification And Targets

The density of settlements around the village of Anggadita Karawang and the lack of land that can be used to plant crops is a problem of the lack of interest of residents to plant. Hydroponic cultivation is a solution to the problem of limited land for the residents of Anggadita Village, Karawang. How to grow hydroponics is very easy and inexpensive by using used items such as used bottles to grow vegetables or fruit. Narrow land can also be used to conduct hydroponics by sticking to walls, fences, roofs or even in narrow spaces so that land constraints can be overcome. Besides being able to be used for reforestation, the results of vegetables or hydroponic fruit can be consumed alone so that it can save household expenses.

Another obstacle encountered in the cultivation of hydroponic plants is the presence of pests and diseases. Pest or disease attacks on hydroponic plants can be done manually by wiping out one by one pest attacking hydroponic plants or by spraying using chemicals. The socialization and training on eradicating pests and diseases on hydroponic plants is done through counseling and direct practice of plants affected by pests or diseases. This is done so that Anggadita Karawang Village residents can listen to explanations and instructions and see first hand the process of eradicating pests and diseases that attack hydroponic plants.

Counseling on eradication of pests and diseases is carried out so that the production of hydroponic plants can continue to increase. With the increased production of hydroponic plants, it is expected that the level of welfare of Anggadita Karawang Village residents can also increase.

1.4. Identification of Problems

From the identification of these problems, several important points were obtained, including:

1. Anggadita villagers have not used the yard or narrow land to do hydroponic planting.
2. Anggadita villagers do not yet know how to plant hydroponics properly and the results can be consumed by themselves so that household expenditure becomes more efficient.
3. Anggadita villagers do not know about pest and disease eradication of hydroponic plants so that the production of hydroponic plants can increase.

1.5. Relevance

The hydroponic plant pest restriction is related to the family economy and is a research in order to support the entrepreneurship courses in the Faculty of Economics, UMB which are still being developed. Eradication of pests and diseases of hydroponic plants makes the production of hydroponic plants increase. With the increased production of hydroponic plants, citizens' welfare will also increase because it can save household expenses.

2. METHOD

The method of implementing the activity is divided into 4 parts, namely:

2.1. Pre-Activity

At the pre-activity stage, a visit to the training location was held and a discussion about the technical implementation of the activity with leaders and community leaders in the village of Anggadita, Karawang, preparation of training materials, tools and materials as well as setting targets for the training participants.

2.2. Directing

The briefing is carried out, namely giving a general description of:

1. Hydroponic cultivation
2. Types of pests that attack hydroponic plants

2.3. Training Implementation

The training is carried out in the following stages:

1. How to care for hydroponic plants
2. Hydroponic plant pest restrictions.

2.4. Post–Test dan Questionnaire

Post-Test activities are carried out after the training activities are given. Residents already know the types of pests of hydroponic plants and carry out training on how to eradicate these pests. The questionnaire was conducted to obtain information about the results of the training program, also to include feedback from the training participants that was very helpful in improving the training.

3. RESULTS AND DISCUSSIONS

3.1. Results

No	Output Type	Performance Indicator
1	Scientific publications in ISSN jurnals/proceeding 1)	
2	Publication in print/online/repository media 6)	
3	Increasing competitiveness (increasing quality, quantity, and value added of goods, services, product diversification, or other resources 4)	
4	Improvement of science and technology in society (mechanization, IT, and management) 4)	
5	Improvement of community values (cultural, social, political, security, security, education, health) 2)	**Reached**
6	Publication in international journal 1)	**Reached**
7	Services, social engineering, methods or systems, products / goods 5)	**Reached**
8	New Innovation atau TTG 5)	
9	Intellectual property rights (Patents, simple patents, copyrights, trademarks, trade secrets, industrial product design, protection of plant varieties, protection of integrated circuit toography designs) 3)	
10	Book with ISBN 6)	

3.2. Discussion

The initial stage carried out by the community service team before conducting training and counseling is a survey and interview of residents in the village of Anggadita Karawang. The next stage is making agreements with residents through the kelurahan, RT management and PKK management. After an agreement with the residents and the village, RT and PKK, the next step is to make an invitation and distribute it to all residents in the village of Anggadita Karawang. Training participants are citizens who are representatives determined by the head of the RT or RW leader. This dedication activity took the form of training and practice in eradicating pests and diseases of hydroponic plants which was held in the Anggadita Village Hall, Karawang.

Training and counseling activities for residents include the following activities:

1. The opening of the training was attended by Lecturers, Head of Desa Anggadita along with staff and staff and began with remarks from relevant parties regarding the benefits of planting using hydroponic media and how to increase production of hydroponic plants through eradicating pests and diseases on hydroponic plants.
2. Counseling and eradication of pests and diseases in hydroponic plants so that the production of hydroponic plants can increase. The training was attended by a number of representative citizens from RT and RW. The trainees seemed enthusiastic to join the activity. This can be seen from the number of questions from participants.
3. Monitoring of hydroponic plants affected by pests or diseases. Monitoring of the success of this pest eradication is carried out by direct observation to the field by the PPM team. The review is carried out as follows:
   a. Review 3 days after the training, each participant observed his plant growth on the third day, which began to grow plant seeds.
   b. Review after 10 days, the plants begin to grow and have many leaves, but there is a problem that is faced by some of the plants whose leaves have holes and change color to yellow or black. This change is caused by pests or diseases that attack the plant. Eradication of pests or diseases is based on damage to plants.

c. On-site plant review by the PPM team was conducted to provide input on how to eradicate pests and diseases on hydroponic plants. This activity continues until the age of the plant reaches 30 days.

4. Assessment of crop yields. After the plants are 30 days old, the PPM team will assess and judge the results of the participant's hydroponic plants. Participants who have fertile and healthy hydroponic plants will be declared champions.

4. CONCLUSIONS AND RECOMMENDATION

The conclusions that can be drawn from the results of community service activities with the theme of increasing the yield of planting crops through eradicating plant pests are:

1. The participants of the activity do not fully understand and know how to plant hydroponically and eradicate pests and diseases against hydroponic plants.
2. Participants in the activity feel happy and enthusiastic about the training activities. This can be seen from the many participants who attended the activities carried out at the Anggadita Village Hall, Karawang.
3. Participants gain new knowledge and experience through counseling, practice and direct monitoring to the field.
4. This hydroponic training is a provision for the participants to continue to improve the yield of hydroponic plants because it can be consumed alone so that household expenditure becomes more efficient.

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