

## OPTIMIZATION OF THE USE OF GARDEN LAND THROUGH NUTRITIONAL GARDEN ACTIVITIES IN BULUREJO SIMO BOYOLALI VILLAGE

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**Abstract** - *This paper aims to reveal the importance of the use of yard land which was previously a barren land of no economic value to be converted into land of economic value. Yard land is open land around a residence that can be used as agricultural land. Nutrition gardens are a community-based program to meet the need for fruit and vegetables by utilizing garden land in the community. Students held counseling and outreach to the community to introduce the nutrition garden as one of the local government programs to invite village communities to live healthy lives, utilize land, and help economic growth in Bulurejo Hamlet. The procedural method for implementing nutritional garden activities begins with a partner approach, outreach to the community, clearing land, preparing planting media, maintenance (fertilizing and watering), harvesting, and evaluating nutritional garden management. The results of the nutrition garden activities are expected to provide motivation for the community to live a healthy life, optimize the use of yard land and can help the economy of the people of Bulurejo Hamlet.*

**Keywords:** *Nutrition Garden, Yard Soil, Optimization*

## 1. INTRODUCTION

Bulurejo Hamlet is one of the hamlets in Blagung Village, Simo District, Boyolali Regency, Central Java. Bulurejo Hamlet is located between 175-215 m above sea level with the following boundaries:

North : Gebang Hamlet  
West Side : Poncowidodo Hamlet  
South side : Tanjungsari Hamlet  
East : Rivercombat

With more than 130 (one hundred and thirty) heads of families. Most of the people of Bulurejo Hamlet make their living as farmers. The farming activities carried out by the people of Bulurejo Hamlet almost every day involve various activities such as planting peanuts, vegetables, fruit, and so on. However, the arrival of a long dry season can affect the availability of vegetables or fruit. The people of Bulurejo hamlet have large yards, but the people leave the land neglected, leaving it overgrown with grass and other wild plants. In fact, if it is managed and planted, it can produce maximum results that the owner can benefit from. This is the basis for the Boyolali DKP to establish a nutritional garden program for the entire community.

The nutrition garden is a community activity as an effort to meet the needs of vegetables and fruit by utilizing yard soil and using other media such as polybags and bottle waste with the concept that the plants planted have nutritional value for humans. Directly nutrition garden activities can encourage the community to participate in planting vegetables and fruit and have an impact on increasing consumption of vegetables and fruit in the community. The nutritional garden program has been widely socialized to the community. Communities in various areas of Boyolali welcomed this program. All levels of society synergize and work together to prepare nutritional gardens, one of which is in Blagung village.

Blagung Village, which is located in Simo sub-district, currently has more than 25 (twenty five) nutritional gardens spread across every hamlet. Village officials and PKK members are very active in promoting the nutritional garden program in every hamlet. The community is competing to prepare the best nutrition garden in their respective hamlets, because an assessment will be carried out from the village government in each hamlet as a form of appreciation for community cooperation.

Bulurejo Hamlet views this nutritional garden activity as optimizing the use of yard land by covering the RT 27 and RT 34 areas. With the existence of a nutritional garden that uses yard land, it is hoped that the entire community will benefit. For example, when preparing the land and caring for the nutritional garden, it increases the sense of brotherhood between the communities in Bulurejo Hamlet, when harvesting vegetables grown in the nutritional garden, the harvest can be sold as a form of effort to improve the finances of the Bulurejo Hamlet community. In addition, the local community's nutritional intake can be fulfilled by consuming fresh vegetables and fruit from their plants.

This community service program aims to assist the residents of Bulurejo Hamlet in optimizing their yard land as a place for nutrition garden activities by conducting

socialization and being directly involved with the people of Bulurejo Hamlet. Apart from that, it increases the sense of solidarity of the Bulurejo Hamlet community and increases the RT's financial income. The program implemented in Bulurejo Hamlet during the Real Work Lecture (KKN) in Bulurejo Hamlet, Blagong Village, Simo District, Boyolali Regency in 2023 is optimizing the use of yards through nutrition garden activities in Bulurejo Hamlet, Blagong Village, Simo District, Boyolali Regency.

## **2. METHODS OF IMPLEMENTING ACTIVITIES**

### **Time and place**

The nutrition garden activity took place in Bulurejo Hamlet, Blagung Village, Simo District, Boyolali Regency, Central Java which consisted of 2 (two) RTs, namely RT 27 and RT 34. In RT 27 the nutrition garden activities began on July 23, 2023 on the land Mr. Ngalimin's yard. Meanwhile, in RT 34, nutrition garden activities began to be implemented on July 17 2023, located in Mr. Basiron's yard.

### **Partner Approach**

The initial method for implementing nutritional garden activities was conveyed directly by Mr. Supar as the head of Bulurejo Hamlet. Plant seeds have been provided by the hamlet head and the Bulurejo hamlet community. Before planting in the yard, first approach the local community by staying in touch as a form of getting to know each other and bonding closeness. The Bulurejo Hamlet community is directly involved in planning the types of plants to be planted in the nutritional garden according to their needs. The majority of the Bulurejo people's livelihood as farmers is a distinct advantage in carrying out nutrition garden activities, because they already have farming knowledge and skills. on the other hand, The village culture of the people of Bulurejo Hamlet has a very close sense of brotherhood with each other, so they have a high sense of enthusiasm for nutritional garden activities. Furthermore, after holding a friendly meeting, open socialization was held with the Bulurejo community, including youth organizations.

### **Implementation Procedures**

The implementation of nutrition garden activities generally goes through three stages; pre-planting, planting, and care. At the pre-planting stage, the implementation of activities begins with socializing the nutritional garden activity program to the people of Bulurejo Hamlet. This socialization aims to introduce nutritional gardens as one of the regional government programs delivered by the KKN 243 team and the head of Bulurejo Hamlet. This socialization also aims to create synergy between the people of Bulurejo Hamlet and the KKN 243 team so that the implementation of this nutritional garden can take place and be sustainable. The results of this socialization resulted in decisions regarding the location of the yard land to be used, types of plants, planting media, and the willingness of residents to work together in nutritional garden activities. Determining the location of land is located in each RT which has potential and strategic locations with different areas. The land area in RT 27 is 15 m<sup>2</sup>, while in RT 34 it is 12 m<sup>2</sup>.

The planting stage was carried out in mutual cooperation with the people of Bulurejo Hamlet and the KKN 243 Team. However, the yard land was not immediately planted with vegetable seeds, because the soil was dry, it needed to loosen the soil by hoeing. Apart from the characteristics of dry soil, these yards were previously not land specifically used for growing vegetables. Previously, in RT 27, Mr. Ngalimin's yard had not been planted with anything, thorny weeds grew around the land. Meanwhile, in RT 34, Mr. Basiron's yard is used for planting cassava and bananas, as a place to collect cow dung and rice straw. This requires creating a plot of land as a medium for planting vegetable seeds.

The implementation of nutritional garden activities involves farmers and the community of Bulurejo Hamlet, creating mutual cooperation and synergy between the community and the KKN 243 Team in directing and creating nutritional gardens. Evaluation of nutrition garden activities is carried out through an initial process starting from coordination to making a schedule for the person responsible for the nutrition garden. The activity implementation procedure is shown in Figure 1.



### 3. RESULTS AND DISCUSSION

In general, Bulurejo Hamlet has a dry climate with an altitude of 175-215 meters above sea level. Most of the people in this hamlet work as farmers. The selection of the types of plants to be planted in the nutritional garden is done before and during planting. Selection of the types of plants to be planted is carried out by means of discussions with the community to find out which plants are suitable for the climatic conditions and community interests. Some of the plants planted in the nutritional gardens of RT 27 and 34 include:

**Table 1.** Nutritional garden plants

Vegetables	Fruit	Herbs
a) Chilli	a) Tomato	a) Ginger
b) Spinach	b) Eggplant	b) Galangal
c) Mustard	c) Cucumber	c) Red onion
d) Lettuce	d) Pawpaw	d) Lemongrass
e) Naughty		
f) Leek		
g) Spinach		

## Land clearing

The location of the nutrition garden land in Bulurejo Hamlet uses the yard owned by Pak Ngalimin in RT 27 with an area of 15 m<sup>2</sup> and Pak Basiron in RT 34 with an area of 12 m<sup>2</sup>. The yard land chosen for the nutritional garden was not previously used specifically for growing crops. Villagers generally leave their yards as a place for banana and cassava shoots to grow and do not look after them too much. This can be seen from Mr. Ngalimin's land in RT 27. The land has so many thorny weeds growing around the land. Similar to the condition of Mr. Ngalimin's land, the same thing happened to Mr. Basiron's land in RT 34. Mr. Basiron's yard was used to grow cassava and bananas, a place to collect cow dung and rice straw.

The cleaning of the yard was carried out in mutual cooperation between the KKN 243 Team and the people of Bulurejo Hamlet. The people of Bulurejo Hamlet and the KKN 243 Team cut down thorny grass, plants around their yards that were no longer productive, as well as branches and tree trunks that blocked sunlight from entering the nutrition garden land. The characteristics of dry soil in every yard require loosening efforts by hoeing the soil. Soil loosening is done after the land is clean. The soil in the yard that has been loosened needs to be made into a bed as a planting medium. The final step of the land clearing stage is the installation of nets to prevent animals such as chickens and ducks from entering the nutrition garden.

## Preparation of planting media



Yard land is the main planting medium used in the nutrition garden in Bulurejo Hamlet. Making beds aims to prevent plants from attacks by pests and diseases, maintain humidity, pH, temperature, and sufficient groundwater, as well as to facilitate land irrigation.<sup>1</sup> The size of the beds is 60 cm, 20 cm high, and the distance between the beds is 30 cm. Each bed is made 2 holes facing each other for a place to plant seeds. After the bed is ready, it is poured with a large volume of water and left for one day so that the soil is loose. The soil used is not covered with mulch plastic.

Other supporting planting media are plastic waste in the form of used drink bottles and gallons of mineral water painted in various colors and created in various shapes. Plastic waste is taken from the homes of the people of Bulurejo Hamlet. The use of plastic waste aims to reduce plastic waste in people's homes. The nutritional garden in

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<sup>1</sup> Muhammad Taufik Akbar, Anjas Madisha (dkk). *Pemanfaatan Lahan Tidur melalui Kegiatan Kebun Gizi di Desa Salut, Kecamatan Kayangan, Kabupaten Lombok Utara, Nusa Tenggara Barat*. Jurnal Pusat Inovasi Masyarakat. November 2019, Vol 1 (1). hlm 48.

RT 27 utilizes used gallons of mineral water which are shaped creatively by residents and colored. While in RT 34 the residents provided used bottles, which were then shaped like flowers by the KKN 234 Team. The flower-shaped bottles were filled with soil mixed with fertilizer. To make it more attractive, the bottles are colored with paint using a compressor or paint brush.



## Planting

In planting, the seeding process is needed when the seeds are too small, so that when they are planted directly they are not washed away by water and can grow the seeds into plant seeds so they are ready to move to the field. The purpose of sowing seeds is to reduce the death rate of plants. Planting using seeds with a planting hole depth of 3-9 cm and a spacing of 50 cm. Then, the soil that has been perforated is then given 2 handfuls of compost and then the seeds are put in and covered.

Then for plants that use seeds, before being transferred to the planting medium, the planting medium should be watered first. The seeds selected are of good quality, such that the plants are not stunted. Then, when moving the plants from the nursery to the polybag, you have to be careful, there are no damaged roots and stems and the transfer should be done in the morning or evening. Eggplant, tomato and chili plants can only be moved to land or beds after they are 1-2 months old with a planting distance of 50 cm. Whereas the seedlings of kale, spinach, and lettuce were transferred to the beds after the planting period was 3 weeks old by planting a spacing of 30 cm.



## Maintenance

Plant care is given fertilizer during the vegetative and generative periods. The type of fertilizer used is compost, which is given when making the planting medium by mixing it with the soil. In addition, fertilizer application is also carried out after the seeds are transferred to the beds by adding compost when transferring the seeds to the beds. Then,

the follow-up fertilizer that is added is manure with an intensity of giving once every 7 days. Manure is a source of nitrogen that can provide the most rapid and striking effect on plant growth compared to other elements.<sup>2</sup>

Other supporting planting media are polybags and plastic waste in the form of used bottles and gallons of mineral water which are painted in colors and created in various shapes. Polybags used consist of various sizes, namely medium and large. Plastic waste is taken from the houses of the people of Bulurejo Hamlet. The use of plastic waste aims to reduce plastic waste in people's homes. The nutrition garden in RT 27 utilizes gallons of used mineral water creatively formed by residents and colored. Meanwhile, in RT 34, residents provided used bottles, which were then shaped like flowers by the KKN 234 Team. The flower-shaped bottles were filled with soil mixed with fertilizer. To make it more interesting, the bottles are colored using a compressor.



### **Harvesting**

This is done after the plants grow and bear fruit, and for leafy vegetables that are old enough and ready to be harvested. Plants planted in nutritional gardens have different ages when they are ready to harvest. When the KKN 243 Team was in Bulurejo Hamlet,



together with the community in RT 27 they had succeeded in harvesting spinach, kale and mustard greens, while in RT 34 they had succeeded in harvesting chili, lettuce and mustard greens.

### **Evaluation**

The questionnaire was distributed to find out the benefits and suggestions for nutritional gardens which were filled in by 95 respondents consisting of community

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members living in Bulurejo Hamlet. The results of the questionnaire can be seen in the following table

**Table 2. Nutrition garden benefits questionnaire**

No	Question	Answer n (%)		Total
		Yes	No	
1	Do you use the land for a nutrition garden?	95 (100%)	0 (0%)	100%
2	Is the location of the land for a strategic nutrition garden?	95 (100%)	0 (0%)	100%
3	Are the plants in the nutritional garden sufficient to meet daily needs?	95 (100%)	0 (0%)	100%
4	In your opinion, is the land used for nutritional gardens optimally used?	95 (100%)	0 (0%)	100%
5	Do you feel that the use of a nutrition garden has an impact on togetherness in the community?	95 (100%)	0 (0%)	100%

From the results of the questionnaire analysis on the nutrition garden, it was concluded that all respondents considered the nutrition garden very useful as a step to optimize the benefits of the land owned by the people of Bulurejo Hamlet. They felt that the plants in the nutrition garden were complete for their daily needs and had an impact on increasing the intensity of togetherness in the people of Bulurejo Hamlet. The existence of a nutrition garden helps to increase the RT's cash finances in Bulurejo Hamlet, because the community also trades in the harvest of the nutrition garden. It also has a positive impact in helping to maintain the health status of the community where green vegetable plants, especially spinach and kale are quite often used because their harvest period is relatively fast.

However, in every activity it is necessary to evaluate what has been done. Questionnaires were distributed to find out the shortcomings in this nutritional garden activity, including:

- 1) There are many concept inputs from the community related to planting models and types of plants which make the process of planting seeds changeable and slow
- 2) There are seeds that have withered due to the length of time they have been moved to the planting medium
- 3) There have been no efforts to innovate planting media such as microgreens, hydroponics, and others.

#### 4. CONCLUSION

The use of yard land is suitable for planting fruit and vegetable plants. Supported by Indonesia's tropical climate, cultivating fruit and vegetable plants is quite easy to do. The nutrition garden as a program from the government carried out by the community is able to live healthily by maintaining nutrient intake by consuming planted vegetables and fruit as well as a step to optimize the use of yard land in Bulurejo Hamlet. In addition, the crops obtained can be used alone to help fulfill family consumption, thereby saving

household expenses. The intensity of meetings between the people of RT 27 and 34 of Bulurejo Hamlet has increased since the nutrition garden activity began, thus creating a closer sense of family togetherness in Bulurejo Hamlet.

Nutrition garden land that was originally owned by the community per RT, should be owned and managed by community members per house who have yards but are still neglected or not optimally utilized, can be used as independent nutrition garden land. Apart from that, efforts are needed to develop the crops that are planted so that they can be traded to the wider community so that they can increase the income of household cash in Bulurejo Hamlet.

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