

# **Making Goat Urine Poc for Cultivation Celery Plants (*Apium Graveolens L.*) In The Use of House Yards with A Verticulture System**

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## **Abstract**

Sampe Cita Village is the name of an area in Kutalimbaru subdistrict, Deli Serdang district, North Sumatra Province. Sampe Cita Village is located in the Kutalimbaru District, Deli Serdang Regency, North Sumatra Province, which borders Lau Bekeri Village, Perpenden Village, Suka Rende Village and Pasar X Village, Perpenden Village and Lau Bekeri Village, Kutalimbaru District, Deli Serdang Regency. Sampe Cita Village is a village that is not too densely populated, so residents' houses have large yards and the use of their yards can be optimized. Residential communities generally have yards. Utilization of house yard land aims to optimize unused land in people's home areas by planting horticultural plants (vegetables and fruit). Planting horticultural plants in the yard area of the house can have a positive impact on the community, including meeting the food needs of householders, fulfilling family nutrition and increasing the economic income of residents because the products from the yard land commodities can be consumed directly or sold. Methods for implementing community service include the Socialization/Counseling Method, Community Development Method, Community Mentoring Method. The regional potential of Ujung Bandar Village includes: Local Resources/Local Wisdom, Village/Subdistrict Infrastructure (education and health), Aspects of Village/Subdistrict Potential, Village/Subdistrict Development Priorities, Regional Situation Analysis.

**Keywords:** Population, Yard, Community

## **Introduction**

Sampe Cita Village is the name of an area in Kutalimbaru subdistrict, Deli Serdang district, North Sumatra Province. The area of the village until Cita is 730 Ha, of which 75% is land with hilly topography and 20% of the land is used as agricultural land for rain-fed rice fields. Sampe Cita Village Climate, like other villages in Indonesia, it has a dry and rainy climate, this has a direct influence on the planting patterns on agricultural land in Sampe Cita Village, Kutalimbaru District. Sampe Cita Village is located in the Kutalimbaru District, Deli Serdang Regency, North Sumatra Province, which borders the north, Lau Bekeri Village, Kutalimbaru District, the South borders with Perpenden Village, Kutalimbaru District, the East borders with Suka Rende Village and Pasar X Village, Kutalimbaru District. To the west it borders Perpenden Village and Lau Bekeri Village, District Kutalimbaru, Deli Serdang Regency.

The area of Sampe Cita Village is ± 730 Ha. The use of the land is 189 Ha of dry land, 483 Ha of plantations and 58 Ha of public facilities. Residential land use in the area generally consists of built-up land and open land. The community uses built-up land as a settlement consisting of residential houses, places of worship, educational facilities and large open areas. Residential communities generally have yards. The community uses the yard land to cultivate plants, but the cultivation is not optimal and the plants planted are monotonous without crop rotation.

Utilization of house yard land aims to optimize unused land in people's home areas by planting horticultural plants (vegetables and fruit). Planting horticultural plants in the yard area of the house can have a positive impact on the community, including meeting the food needs of household residents, fulfilling family nutrition and increasing the economic income of residents because the products from the yard land commodities can be consumed directly or sold. It is hoped that this program will become a role model for other communities who have not implemented this program.

In the context of sustainable agricultural development, community gardens are an important part of achieving the goals of food security, environmental health and overall community welfare. Therefore, community assistance in introducing sustainable agricultural practices and yard management is very necessary to achieve optimal and beneficial results for the community and the surrounding environment.

This results in a lot of potential that has not been explored to improve community welfare and environmental sustainability. In addition, excessive use of chemical fertilizers is a major concern because it can threaten human health and cause serious environmental damage. To overcome this challenge, assistance is needed in the introduction and implementation of safe and environmentally friendly liquid organic fertilizer in people's yards. This assistance can involve various parties, including universities, foundations, community organizations, and agricultural experts, to provide training, technical guidance, and support in using the yard sustainably. By implementing this approach, it is hoped that people will be more encouraged to manage their yards better, create green and healthy yards, and contribute to reducing the use of chemical fertilizers which are harmful to the environment and health. In the long term, this can have a positive impact on local food security, public health and environmental sustainability in the region.

The problems found in the village community in Sampe Cita are a lack of public awareness in terms of implementing the use of home gardens, limited knowledge, implementation of assistance programs for the introduction and use of safe and environmentally friendly liquid organic fertilizer, the community lacks information about the use of safe and friendly liquid organic fertilizer. environment.

## **Methods of Devotion**

### **Approach methods offered**

The approach method used in implementing community service is as follows:

#### **1 Socialization/Extension Method**

The socialization method is carried out using a direct approach to the community (persuasive approach) such as deliberation, discussion, question and answer and holding counseling instructions regarding the service activities that will be carried out. Socialization is very important to know the character of each individual without having to look at the caste of each individual. In service activities, it is also an effort or attempt to change the behavior of farmers and their families, so that they know and have the will and are able to solve their own problems in business or activities to improve the results of their business and their level of living.

#### **2 Community Development Methods**

Community development is a process of providing ongoing guidance, direction and support to the community in achieving certain goals. This coaching focuses on the personal, social and

professional development of individuals or community groups. Coaching is often carried out by a mentor or guide who is experienced and has relevant knowledge.

### 3 Methods of Assistance to the Community

Community assistance is the process of providing active support and assistance to community members to achieve certain goals or overcome the problems they face. The aim of mentoring is to provide appropriate and relevant assistance so that people can overcome obstacles and achieve significant progress in achieving goals.

#### **Work procedures**

The preparation of work procedures is carried out in several stages, including:

1. Register the community.
2. Socialization.
3. Community development.
4. Practice and direct demonstration to the community.
5. Community assistance in applying liquid organic fertilizer to celery plants (*Apium graveolens L.*) vertically in the yard.
6. See the results of applying liquid organic fertilizer to celery plants (*Apium graveolens L.*) vertically.
7. Monitoring and evaluation.
8. Plans for follow-up activities in the future.

#### **Work plan**

The work plan that will be implemented in community service is as follows:

1. Conduct outreach to the community regarding community service training that will be implemented.
2. Training in making liquid organic fertilizer for celery plants (*Apium graveolens L.*) in a verticultural manner that is safe and environmentally friendly.
3. The material in this service is:
4. Utilization of a green and healthy home yard.
5. Use of liquid organic fertilizer on celery plants (*Apium graveolens L.*) in a verticultural manner that is safe and environmentally friendly.
6. Training in making liquid organic fertilizer for celery plants (*Apium graveolens L.*) in a verticultural manner that is safe and environmentally friendly.
7. Implementing the application of liquid organic fertilizer to celery plants (*Apium graveolens L.*) in a verticultural manner that is safe and environmentally friendly.

#### **Description of Partner Participation**

Description of community participation in Sampe Cita Village, Kutalimbaru District, Deli Serdang Regency, after receiving service material and additional information about liquid organic fertilizer for celery plants (*Apium graveolens L.*) in a safe and environmentally friendly verticulture manner, the community is expected to understand the material presented and be willing to participate in the community service program, the community knows more about how to utilize a green and healthy home yard by using safe and environmentally friendly liquid organic fertilizer. The community is able to apply liquid organic fertilizer to celery plants (*Apium graveolens L.*) verticulturally in the activities of utilizing the home garden. The community get information about a green and healthy environment that is safe and environmentally friendly.

## Devotion Results and Discussion

### Results of Service

#### 1 Form of Activity

The target of the activity of making liquid organic fertilizer for celery plants (*Apium graveolens L.*) using verticulture in the form of outreach is expected to be used by the community to care for home garden plants.

#### 2 General description of the implementation of community service programs

The general picture obtained in the community service program activities is that the activities are running well in accordance with the objectives, residents are enthusiastic about taking part and are enthusiastic about paying attention to all the material provided, community service activities will be held on June 24 2024 at 10.00 WIB-Finish and practical activities for making fertilizer liquid organic and planting celery (*Apium graveolens L.*) using a verticulture system.

### Discussion

#### 1 Submission of Material

Presentation of material on making liquid organic fertilizer and planting celery (*Apium graveolens L.*) using a verticulture system. The aim of delivering this material is to raise attention and motivate the community about the importance of liquid organic fertilizer in cultivating plants, as well as delivering material about celery plants planted using verticulture so that the people of Sampe Cita Village know about the use of narrow home gardens.

#### 2 Demonstration of Making Liquid Organic Fertilizer



**Figure 1.** Demonstration

The stages of work carried out in making liquid organic fertilizer are as follows:

- a. Before making liquid organic fertilizer, collect the ingredients used. namely goat urine, rice washing water, and coconut water.
- b. First prepare the bioactivator which is made by mixing molasses and EM4
- c. Mix all the ingredients such as goat urine, rice washing water and coconut water into the prepared barrel.
- d. Enter the bioactivator which has been given a solution of brown sugar or molasses to activate the microorganisms.
- e. Stir until all the ingredients are mixed evenly.
- f. Wait approximately 2-3 weeks, and open the barrel every 4 days for maximum results.
- g. Open the barrel every 4 days to stir, which is useful for evenly distributing the

ingredients so that the decomposition process is complete.

- h. If you want to use liquid organic fertilizer, it is best to filter it so that when applying the organic fertilizer dregs, it does not create a blockage in the nozzle hole.

### 3 Planting Celery Plants (*Apium graveolens L.*) Verticurally



**Figure 2.** Planting

The aim of the practical activity of planting celery plants using verticulture is so that people know how to plant celery plants using verticulture properly and correctly. It is hoped that all people who take part in this activity can apply it in their own homes so that their yards which have not been used properly so far, so that after participating in this service they can make good use of their yards.

#### **Conclusions and Recommendations**

From the results of the community service program (PKM) activities carried out in Sampe Cita Village, Kutalimbaru District, Deli Serdang Regency, it can be concluded that: the community service activities (PKM) carried out on June 24 2024 were completed well, the local village community accepted us as lecturers and students serve well, the activities we carry out in community service activities are delivering material about Making Goat Urine POC for Cultivating Celery Plants (*Apium graveolens L.*) in Utilizing Home Yards with a Verticulture System, Community service about Making Goat Urine POC for Cultivation of Celery Plants (*Apium graveolens L.*) in the Use of Home Yards Using a Verticulture System made from Goat Urine, Coconut Water, Rice Washing Water, Moringa Leaves and Lamtoro Leaves can streamline neglected/not properly utilized yards and can increase the use value of the home yard.

#### **Recommendations**

Considering the enormous benefits of this community service activity, it is necessary to hold similar outreach and training for other communities in other sub-districts, with the same material.

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