

EMPOWERMENT OF MSMES IN BONJOKLOR VILLAGE THROUGH COUNSELING ON MERANG MUSHROOM CULTIVATION

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Abstract - *Bonjoklor Village has abundant natural resource potential, especially in the agricultural sector. The increase in productivity of various types of agricultural crops is also another problem, including the increase in agricultural waste, if not managed properly. This agricultural waste still contains substances that can be used to increase the use value of the waste. One of the efforts to overcome this problem is to utilize waste, so that it has high economic value, such as turning waste into a mushroom growth medium, because it still contains cellulose. Merang mushroom, known as straw mushroom or in Latin, Volvariella Volvacea, is a type of mushroom that is cultivated in almost all regions of East Asia and Southeast Asia. The implementation of counseling on merang mushroom cultivation with straw media was carried out at the women's KKN post on July 25, 2024 and was delivered through power point media. The results of the mushroom harvest are used for processing trials by processing the mushrooms into food and are suitable for consumption.*

Keyword: *Agriculture, Straw, Merang Mushroom Cultivation.*

1. INTRODUCTION

Community development and empowerment are very important to improve the quality of a village because they are different components but interconnected. Without the cooperation of the two, the quality of the village will not develop optimally. To improve the development and empowerment of a village, it is important to study the shortcomings, advantages, and potentials that exist in various social, cultural, educational, economic, and geographical aspects (MODUL KKN TEMATIK DESA MEMBANGUN PEMBERDAYAAN

MASYARAKAT DESA, n.d.).

Bonjoklor Village, Bonorowo District, Kebumen Regency, has an area of 274 hectares with a population of 3,300 people and 100 heads of families (Apriando, n.d.). Geographical Conditions of Bonjoklor Village consists of an expanse of land plains that have irrigation flows to irrigate the agricultural needs of rice crops and gardens. Based on data from the Bonjoklor Village Head office in 2019, the area of rice fields is 181 hectares and residential land is 93 hectares. Most of them make a living as farmers, some are farm laborers and the rest work as factory workers. The economic level of Bonjoklor villagers is still in the middle to lower level with an uncertain income and an average income of less than Rp.950,000.00 per month.

With these geographical conditions, Bonjoklor Village has abundant natural resource potential, especially in the agricultural sector. Optimal processing of agricultural products can have many good impacts on the progress of the residents' economy. In addition, superior quality of human resources is also needed so that productivity in processing agricultural products can also be maximized. But on the other hand, with the increase in productivity, various types of agricultural products can become another problem, including the increase in agricultural waste, if not managed properly. Waste is everything that is no longer used as a production or consumption item, which if directly disposed of into the environment without first treatment can become a burden for the environment. The types of waste in agricultural areas include straw (Wahyuni & Hermanto, 2018).

The agricultural waste still contains substances that can be used to increase the use value of the waste. One of the efforts to overcome this problem is to utilize waste, so that it has high economic value, such as turning waste into a mushroom growth medium, because it still contains cellulose. Plantation and agricultural waste includes empty oil palm bunches, rice straw, corn stalks, corn cobs and others. The nutrient content in 100 grams of rice straw consists of 29.63% cellulose, with hemicellulose content of 17.11% and lignin as much as 12.17% (Wahyuni & Hermanto, 2018). Rice straw is usually burned or used as animal feed. Rice straw is high in fiber but low in protein. Straw serves as a substrate for mycelium attachment and a source of nutrients, especially carbon.

Merang mushroom (*Volvariella volvacea*) known as straw mushroom or merang mushroom is a type of merang mushroom that is cultivated throughout East and Southeast Asia. Merang mushroom can grow in household industrial waste as well as agricultural waste. Merang mushroom cultivation can increase the added value of rice straw and increase the income of poor farmers in developing countries (Afifaturrosyidah et al., 2021). Cultivation of merang mushrooms with straw planting media does not

require a large cost because rice straw is widely found in every region and the price is cheap. Rice straw can also be stored for a long time so that it can be used at any time (Meriana et al., 2013).

Based on the description above, efforts to utilize agricultural waste can provide business opportunities, and economic prospects. Farmers and residents in Bonjoklor village have never cultivated merang mushrooms due to limited knowledge, understanding and skills. This training aims to increase the knowledge, understanding and skills of merang mushroom cultivation in all cadres and PKK women in Bonjoklor village, Kutowinangun District, Kebumen Regency so that later the knowledge obtained can be disseminated to the farmers of Bonjoklor village.

2. METHOD

Growing merang mushrooms using straw media is one of the most common ways to do it. Here are the steps:

1. Preparation Of Ingredients:
Prepare dry hay, manure (such as chicken manure), and agricultural lime (dolomite) as basic materials.
2. Straw Soaking:
Soak the straw in water for 2-3 days to make it soft and more easily decompose. Make sure the straw is completely submerged.
3. Arrangement of Beds:
Arrange the soaked straw in the form of beds or piles as high as about 20-30 cm. Mix manure and dolomite lime evenly into the pile straw.
4. Fermentation
Let the haystack ferment for 5-7 days. During the process fermentation, be sure to flip the pile every 2-3 days to allow the fermentation to be evenly distributed and the temperature is not too high.
5. Mushroom Seed Planting:
After the fermentation process is completed and the temperature of the medium drops, spread the merang mushroom seeds evenly over the surface of the straw. Cover the seedlings with a small layer of straw or black plastic to keep moisture in.
6. Watering:
Water the medium regularly, but not too wet, enough to keep Moisture. The ideal humidity is about 60-70%.
7. Care and Maintenance:
Make sure the humidity and ambient temperature remain optimal. Ideal temperature for the growth of merang fungus is between 30-35°C.
8. Harvesting:
Merang mushroom can begin to be harvested after 12-14 days after planting seedlings, depending on the growing conditions. Harvesting is carried out when the mushrooms are already sized optimally, before the lid opens.

3. RESULTS AND DISCUSSION

1) Training Implementation

The implementation of counseling on planting merang mushrooms with straw media was carried out at the women's KKN post on July 25, 2024 and was delivered through power point media. The material presented was about the introduction of merang mushrooms in general and cultivation procedures, then the material will be explained by KKN students with an audience of all PKK women in Bonjoklor Village totaling approximately 25 participants.

The first stage of socialization is an explanation of the material which is then followed by a question and answer session from the audience to KKN students about the material or discussion of the socialization. Furthermore, a demonstration of direct practice of merang mushroom cultivation procedures which was attended by all socialization participants which was divided into several groups through direction and guidance from KKN students and direct assistance by KKN students.

The last stage that is also included in the work program of merang mushroom cultivation through straw planting media is the implementation of merang mushroom harvest carried out by KKN students. The harvest of merang mushrooms is not only carried out once, but several times gradually with a certain period of time. The first harvest was held on August 10, 2024, which then continued. The results of the mushroom harvest are used for processing trials by processing the mushrooms into food and are suitable for consumption.

2) Merang Mushroom

Mushrooms themselves are plants that do not have chlorophyll, so they cannot photosynthesize to produce their own food. Mushrooms themselves can survive by taking food substances such as cellulose, glucose, lignin, protein, and starch compounds from other plants or those they inhabit. Usually the fungus grows in dark, damp places, such as in forests or decaying places or objects.

Merang mushroom, known as straw mushroom or in Latin, *Volvariella Volvacea*, is a type of mushroom that is cultivated in almost all regions of East Asia and Southeast Asia. Merangs mushrooms are also one of the most cultivated mushrooms and occupy the order of important mushrooms, as they have a delicious taste.

Merangs mushroom can grow in warm weather areas, usually this mushroom grows in areas with tropical and subtropical climates with an optimal temperature of

30-35°C for the growth of the mycelium and 28-30°C for the production of fruit bodies. Relative humidity levels of 70-90% is best for merang mushroom growth with a pH of

6.5. A pH value higher than 6.5 will inhibit the growth of *misellia*.

3) Benefits of Merang Mushroom

Some of the benefits of merang mushrooms that are very influential for the health of the body include helping to prevent the growth of cancer cells; help

reduce the risk of heart disease; helps to strengthen bones; And usually this merang mushroom is highly recommended for consumption for diabetics.

Because in an easy way to cultivate merang mushrooms, the KKN students of UIN Sunan Kalijaga Yogyakarta carry out their work program in Bonjoklor village, Bonorowo District, Kebumen, Central Java to be used as the development of MSMEs.

Seeing that the average livelihood in the village is farmers, it also reduces wasted straw waste in addition to being used as animal feed.

In addition to being useful in the development of MSMEs in Bonjoklor village, merang mushroom cultivation also has several benefits, such as increasing added value for rice straw and reducing environmental pollution, especially in agriculture, it can also increase the income of underprivileged farmers in terms of economy in developing countries.

DOKUMENTATION

1. Merang mushroom cultivation extension with PKK mother



2. The process of fermenting merang mushrooms with straw media



4. CONCLUSION

Mushroom cultivation can contribute to the development of MSMEs in Bonjoklor, increase the value of mushrooms and promote sustainable agriculture in other areas.

The training on merang mushroom cultivation in Bonjoklor Village provides a great opportunity for the community to improve welfare and optimize local potential, especially through the use of straw waste. With relatively simple techniques, people can utilize agricultural waste into products of high economic value, while contributing to preserving the environment.

The program not only supports the economic growth of the village, but also develops the skills and knowledge of the community, which can ultimately create sustainability and economic independence in the future.

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