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Counseling on the Use of Organic Waste in Realizing Sustainable Development in Villages

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Abstrak

Desa Biringala merupakan salah satu desa yang berada di Kecamatan Barombong, Kabupaten Gowa, Sulawesi Selatan. Secara geografis letak Desa Biringala sangat strategis karena Desa Biringala merupakan salah satu desa penopang Kawasan Ekonomi di Kabupaten Gowa Sulawesi Selatan. Permasalahan yang saat ini dihadapi oleh desa Biringala adalah permasalahan lingkungan hidup, hal ini disebabkan karena masih kurangnya kesadaran masyarakat terhadap pengelolaan sampah, selain itu sarana prasarana seperti armada pengangkut sampah serta TPA (Tempat Pembuangan Akhir) dan TPS (Tempat Pembuangan Sampah) masih belum ada. sangat terbatas. Untuk mengatasi permasalahan tersebut, salah satu alternatif solusi yang dapat diterapkan adalah dengan mengadakan kegiatan pengelolaan pemanfaatan sampah organik dalam mewujudkan pembangunan berkelanjutan di Desa Biringala, Kecamatan Barombong, Kabupaten Sulawesi Selatan. Oleh karena itu, tujuan dari pengabdian masyarakat ini adalah untuk melihat potensi pemanfaatan sampah organik dalam mewujudkan pembangunan berkelanjutan di Desa Biringala, Kecamatan Barombong, Sulawesi Selatan. Untuk memperoleh data yang digunakan adalah observasi dan studi pustaka. Kegiatan pengabdian ini merupakan upaya edukasi pemanfaatan sampah organik di Desa Biringala, Kecamatan Barombong, Kabupaten Gowa, Sulawesi Selatan. Sebagai bentuk pemikiran penulis, maka ditawarkan beberapa upaya dan terobosan, yaitu: 1.) Meningkatkan pengetahuan dan pendapatan masyarakat yang telah mengetahui bahwa sampah organik dapat dimanfaatkan sehingga dapat menciptakan kesejahteraan masyarakat yang berkelanjutan, 2.) Peran serta pemanfaatan sampah organik bagi masyarakat Desa Biringala dalam mewujudkan pembangunan desa berkelanjutan adalah untuk meningkatkan kualitas hidup menjadi lebih bersih dan Sehat.

Kata Kunci: *Sampah, Sampah Organik, Pembangunan Berkelanjutan*

Abstract

Biringala Village is one of the villages in Barombong District, Gowa Regency, South Sulawesi. Geographically, the location of Biringala Village is very strategic because Biringala Village is one of the supporting villages for the Economic Zone in Gowa Regency, South Sulawesi. The current problem faced by Biringala village is environmental problems, this is due to the lack of public awareness about waste management, besides that infrastructure such as waste transport fleets as well as TPA (Final Disposal Site) and TPS (Trash Disposal Site) are still very limited. To overcome this problem, one alternative solution that can be implemented is by holding activities to manage the use of organic waste in realizing sustainable development in Biringala Village, Barombong District, South Sulawesi Regency. Therefore, the aim of this community service is to see the potential of using organic waste in realizing sustainable development in Biringala Village, Barombong District, South Sulawesi. To obtain the data used were observation and literature review. This service activity is an educational effort on the use of organic waste in Biringala Village, Barombong District, Gowa Regency, South Sulawesi. As a form of the author's thinking, several efforts and breakthroughs are offered, namely: 1.) Increasing community knowledge and community income who already know that organic waste can be utilized so that it can create sustainable community welfare, 2.) The role of using organic waste for the people of Biringala Village in realizing sustainable village development is to improve the quality of life to be cleaner and Healthy.

Keywords: *Waste, Organic Waste, Sustainable Development*

INTRODUCTION

Indonesia is a country with very high population growth, this can give rise to various problems, one of which is environmental problems. Environmental issues are a very disturbing problem for the Indonesian people because they can cause environmental crises, whether caused by nature or human actions. The environmental problems we are currently facing include waste, people's ignorance of the environment, people's bad habits of throwing waste carelessly and people's knowledge about waste knowledge and management is still quite low, which is a factor in the waste problem which has not been resolved until now. If this continues to happen on an ongoing basis it could have a negative impact on public health and the environment (Zulkifli, *et. al.*, 2022).

The waste is a problem faced by almost all countries in the world. Not only in developing countries, but also in developed countries, waste is always a problem. On average, every day big cities in Indonesia produce tens of tons of waste. The rubbish is transported by special trucks and thrown away or simply piled up in the place provided

without doing anything else about it. From day to day the rubbish continues to pile up and there is a rubbish hill as we often see. The piled up rubbish will certainly disturb the surrounding residents. Apart from the unpleasant smell, the garbage is often infested with flies. And it can also cause disease outbreaks. Even though it is proven that waste can be detrimental, there are benefits to it. This is because apart from being able to bring disaster to society, waste can also be converted into useful goods. The benefits of this waste cannot be separated from the use of science and technology in handling it. One of them is organic waste (Disperkimta, 2018).

According to Anggraini *et. al.* (2023) The Ministry of Environment notes that the average Indonesian population produces around 2.5 liters of waste per day or 625 million liters of the total population. This condition will continue to increase according to environmental conditions. This increase in waste volume becomes a big problem if it is not handled properly. Apart from damaging the environment, this waste is also often a source of disease for the community, especially people who live around final disposal sites (TPA).

Organic waste comes from living creatures, whether humans, animals or plants, organic waste itself is divided into two, namely: Wet organic waste where the waste has a fairly high water content and dry organic waste, usually this waste is made from materials with a small water content (Wiryono, *et. al.,* 2020). Management of organic waste, whether household waste or waste, can be reprocessed into organic material in the form of fertilizer which has economic value for society. Organic fertilizer is fertilizer that comes from the decay of plants, animals, humans and animal waste (Harlis, *et. al.,* 2019).

In Bringala Village, the amount of rubbish in the village increases every day. However, this waste has never received proper handling by the authorities or parties who are interested in being reprocessed. This waste is usually collected in waste collection tanks and then disposed of at the final disposal site (TPA). When the author comes to observe the pile of rubbish located at the Bringala Village landfill, we will more or less feel the temperature is quite hot and the stench is quite strong. The rather hot temperature and strong stench actually come from the pile of organic waste at the bottom which has undergone an anaerobic decomposition process (Puger, 2018).

According to Wardhana (2010), organic waste that accumulates in landfills and does not receive proper handling will cause an anaerobic fermentation process at the bottom of the pile. Anaerobic fermentation of organic waste will produce gas which, when it reaches the atmosphere, acts as a greenhouse gas (GHG) and waste as a result of protein decomposition. If the gas produced in the anaerobic fermentation process still accumulates

in final disposal sites, it can increase the temperature at that location. This is what causes the temperature at the final disposal site to usually be higher when compared to outside the final disposal site. Likewise, waste from the decomposition of organic waste proteins can cause a foul smell at the landfill site.

When the author carried out his service in Biringala Village, Barombong District, Gowa Regency, South Sulawesi. The author encountered problems experienced by residents in Bonto Biringala Village, namely the lack of information and socialization that the use of Organic Waste can realize sustainable development in Biringala Village, Barombong District, Gowa Regency, South Sulawesi.

Therefore, the author believes that by holding outreach regarding the use of organic waste in villages, it is useful to prevent the accumulation of waste that was previously useless and becomes beneficial for the community in Biringala Village, Barombong District, Gowa Regency, South Sulawesi.

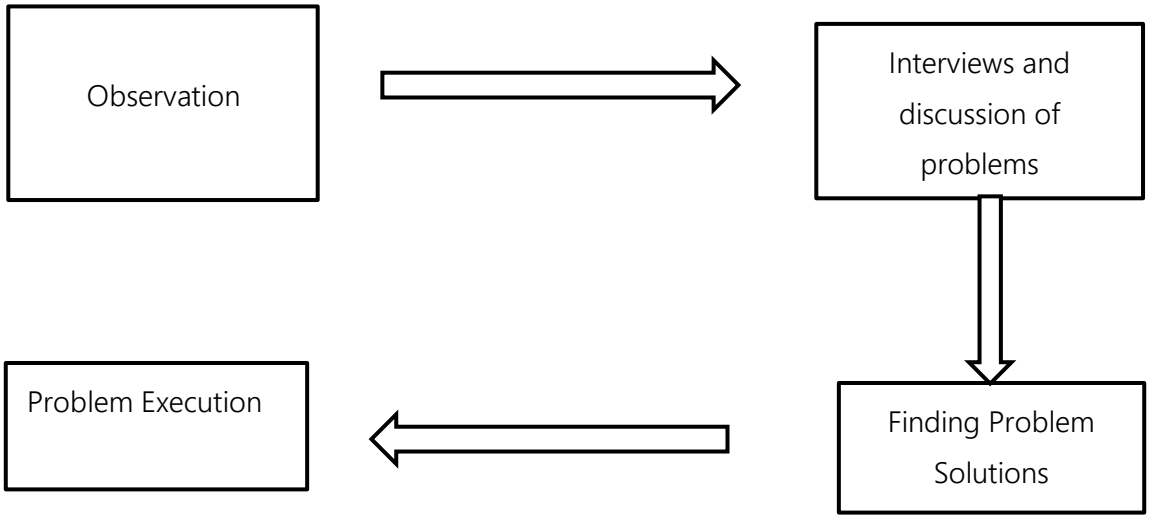
RESEARCH METHOD

During discussions with Biringala Village Officials, South Sulawesi, the method of activity carried out was theory and direction to residents and introducing and providing direction to the community regarding the benefits of organic waste to realize sustainable development in Biringala Village, Barombong District, South Sulawesi. From the observations made, it can be concluded that residents and village officials do not fully know that organic waste can be beneficial for residents in Biringala Village, South Sulawesi. The problems presented in this method are such as:

1. Benefits of Organic Waste
2. Solutions on how to utilize organic waste so that sustainable development can be achieved in Biringala village, South Sulawesi

The important role of using organic waste in realizing sustainable development in the village properly and optimally, so that it can provide knowledge and input regarding the use of organic waste, so that village residents do not carelessly throw away rubbish and can reuse it into something useful.

Table 1 Problem discovery and problem solutions



RESULT AND DISCUSSION

The Waste is leftover material resulting from daily activities originating from households, agriculture, industry, building demolition, trade and offices (Suhendar, 2021). According to Sugiardi *et. al.* (2021), waste is divided into 3 types, namely:

1. Organic Waste,

   This is waste that rots easily, such as vegetable scraps, fruit scraps, leaves, etc.
2. Inorganic Waste,

   Is waste that does not rot easily such as cans, plastic, iron, metal, rubber, etc.
3. Dangerous Waste

This is waste that is dangerous to health, such as waste originating from industry and hospitals (batteries, used syringes, chemical toxic waste, nuclear waste), etc.

Waste is something that must be managed so that it has added value, can be reused and does not pollute the environment. Historically, waste management has been identified with engineering functions. Increased production has created problems that require landfills (Mahyudin, 2014). Waste management is the process of using waste from start to finish, including collection, transportation, processing, and finally, including monitoring and maintenance of waste management (Aminah, *et. al.,* 2021). According to (Law Number 18 of 2008), waste management is a systematic, comprehensive and sustainable activity which includes reducing (limiting, recycling, reusing) waste and handling (sorting, collecting, transporting, processing, final processing) waste. Waste managed consists of household waste, waste similar to household waste, and specific waste. Household waste comes from

daily activities in the household, excluding feces and specific waste. Waste management aims to improve public health and environmental quality and turn waste into a resource.

The Organic Waste Utilization Program in Biringala Village, South Sulawesi has 4 stages, namely the first is the Counseling stage, the second is the Education stage, the third is the Training and Implementation stage. As in the interview conducted by the author with the Head of Biringala Village, South Sulawesi, namely, community knowledge regarding household waste processing and the environment in general is not yet known by the local community and is not yet recognized as an important factor that greatly influences household waste recycling activities. Furthermore, the community is trained to process waste in various activities, such as sorting types of waste, processing compost and making crafts. Once they have the skills, the community implements the activities they have been trained for every week.

Participation of the surrounding community is a form of community involvement in carrying out the Organic Waste processing program to build and empower the community so that the community can take part in all processes in the Organic Waste utilization program (Ratiabriani *et.al.,* 2016). In waste bank construction activities, the 3R concept (Reduce, Reuse and Recycle) is applied, which is a method for processing waste and can overcome problems caused by the accumulation of household waste. Reduce means reducing everything that can cause a buildup of waste. Reuse means using waste that can still be used. Meanwhile, recycling means reprocessing waste into goods that are useful and have selling value (Nisa *et.al.,* 2021).

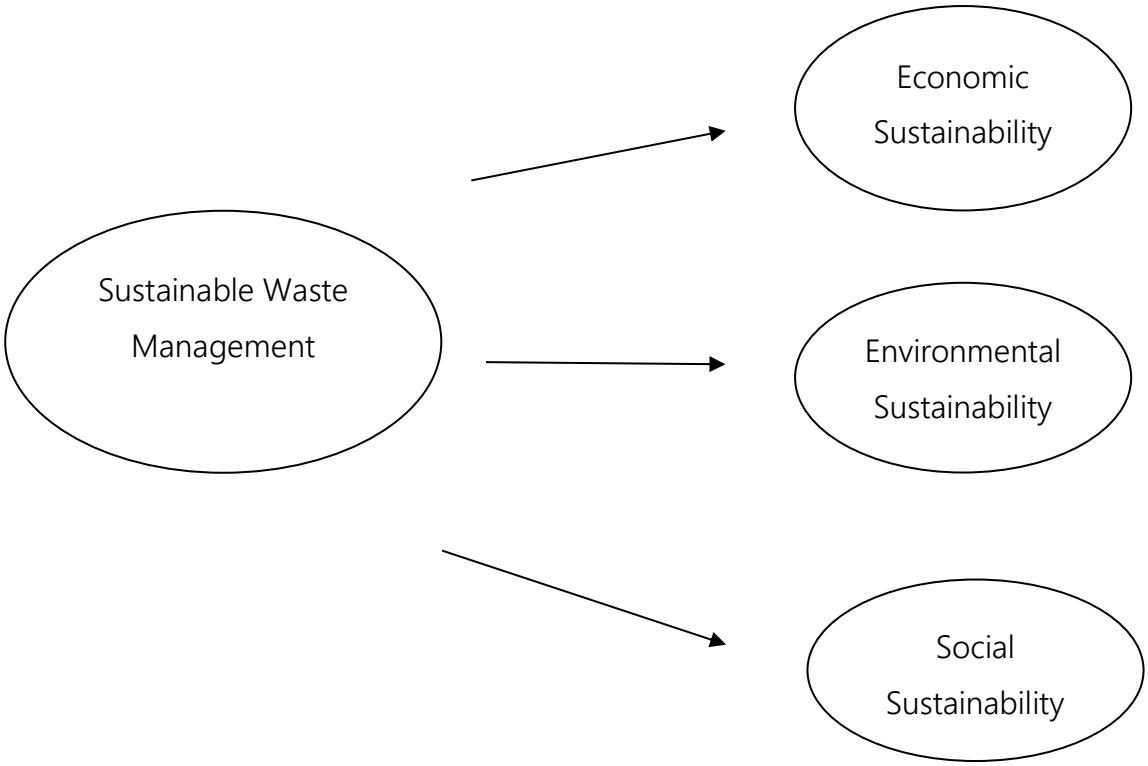
The characteristic of organic waste management is that it tries to reuse existing waste into something useful. Waste management is a process of implementing the zero waste concept (Andini, *et.al.,* 2022). The zero waste concept generally uses the 3R principle (reduce, reuse, recycle) or the 4R principle by adding replace and the 5R principle, namely: refuse, reduce, reuse, recycle, replant. return). (Suryawan *et. al.,* 2021).

Sustainable organic waste management is an effort to manage waste in urban and rural areas that uses the principle of utilizing waste into useful things to meet the needs of society in terms of consumption and preserving the environment through effective waste collection, processing, resource conservation and recycling processes (Chang , 2015). According to Puspa (2017) The organic waste management process can involve several steps, starting with waste collection in containers at the producer followed by temporary storage, transportation, and finally processing and recycling at a facility that can use composting, burning, landfilling, or other methods.

The idea of management is a unique process consisting of planned actions organized, activated and controlled to establish and fulfill predetermined goals by utilizing human and other resources. The management concept is a unique process consisting of planning, organizing, moving and directing actions to establish and achieve predetermined goals using human and other resources. The aim of management is to increase the value of a good or service, create profits, prevent losses caused by a decrease in the value of goods, repair an object, and organize things in a more useful way (Utami, *et. al.,* 2017).

According to Ilafiah, *et. al.* (2023), there are three ways to understand the concept of sustainability, namely:

Table 2 Concept of sustainable organic waste management



1. Economic Sustainability

Economic sustainability can be defined as development that can produce goods and services to maintain government continuity and avoid sector collapse which can damage agricultural and industrial production. Waste management with the right technology can help develop the regional economy and the strength of local communities. Good waste management creates economic benefits, apart from positive environmental benefits, recycling also has a positive impact on society, recycled waste can be converted into products with economic value. In fact, managing organic waste requires an important role from the community, especially in reducing the amount of waste and managing the type of

waste so that the waste is useful. Using organic fertilizer is useful for maintaining healthy roots and making plant roots grow easily.

2. Environmental Sustainability

Environmental sustainability is an ongoing process that can maintain stable resources, avoid exploitation of natural resources and environmental compliance activities. This concept also influences the assessment of various factors, the stability of the atmosphere and other environmental services that are not included in the field of economic resources, maintaining stable resources, avoiding exploitation of natural resources and the absorption function of the environment. Environmental development management is important for environmental sustainability. This can be done by preventing environmental pollution, rehabilitating and restoring damaged ecosystems and natural resources, increasing the productive capacity of the environment and human development.

According to Jufri, *et. al.* (2020) There are three important factors to maintain the integrity of the environment, namely carrying capacity, assimilative capacity and sustainability of the resources obtained. Carrying capacity, the ability of the environment to support human life and other living creatures, the ability to assimilate a property right from the environment and the ability to accommodate a particular activity without causing unacceptable impacts, resources, the environment as a resource is a resource that may be needed to improve the welfare of society.

3. Social Sustainability

Social sustainability is defined as a process that can achieve equality, providing social services including health, education, gender and politics. Implementing social stability requires strong political commitment, community awareness and participation, strengthening work and the status of women, improving quality, efficiency and the family environment. Empowerment is part of efforts to invite the community to participate in waste management.

When the author carried out his service in Biringala Village, Barombong District, Gowa Regency, South Sulawesi. The author found a problem experienced by the people in this village, namely the lack of knowledge and information regarding the use of organic waste, which resulted in the waste in the village not being used properly and properly. To increase the maximum use of household waste and waste around the village. Efforts to Utilize Waste are one of the breakthroughs that can create a Sustainable Economy by using waste into something that is valuable and can produce a new product that has selling value, and can

be a benefit for economic development for the community in Biringala Village, Barombong District, Gowa Regency, South Sulawesi.

CONCLUSION

Based on the explanation above, it can be concluded that this Community Service Activity has increased the insight of local village residents in knowing that the implementation of organic waste production is able to create a sustainable economy in Biringala Village, Barombong District, Gowa Regency, South Sulawesi, although there are several things that still need to be improved for the progress of the community. in Biringala Village. The implementation of organic waste utilization in Indonesia currently still has many obstacles such as:

1. The lack of knowledge and information regarding the benefits of organic waste has resulted in the waste in the village not being utilized properly and optimally
2. The lack of awareness from the community in utilizing organic waste that can be recycled so as to create work that can become an income in Biringala Village, Barombong District, Gowa Regency, South Sulawesi. Organic waste that can be recycled again so as to create work that can become income in Biringala Village, Barombong District, Gowa Regency, South Sulawesi.

REFERENCES

Aminah, N. Z. N., Muliawati, A., 2021."Pengelolaan Sampah dalam Konteks Pembangunan Berkelanjutan (Waste Management in the Context of Waste Management)". Hmgp.geo.ugm.ac.id : https://hmgp.geo.ugm.ac.id/2021/08/27/pengelolaan-sampah-dalam-konteks-pembangunan-berkelanjutan-waste-management-in-the-context-of-waste-management/.

Andini, S., Saryono, Fazriah, A. N., Hasan, 2022. Strategi Pengolahan Sampah dan Penerapan Zero Waste di Lingkungan Kampus STKIP Kusuma Negara. *Jurnal Citizenship Virtues*, 2(1), 273-281.

Anggraini, T., Syahriza, R., Selviana, D., 2023. Analisis Peran Bank Sampah Dalam Mewujudkan *Green Economy* yang Berkelanjutan di Desa Sumber Melati Diski: Studi Kasus Bank Sampah Diski Mandiri Kabupaten Deli Serdang. Jurnal *Kajian Ekonomi dan Bisnis Islam*. 5(4),1535-1552.

Chang, N. B., Pires, A., 2015. Sustainable Solid Waste Management. Amerika : IEEE Press Editorial

Disperkimta,2018. "Sampah". Disperkimta.bulelengkab.go.id: https://disperkimta.bulelengkab.go.id/informasi/detail/artikel/sampah-71.

Harlis, H., Yelianti, U, Budiarti, R.S. and Hakim, N., 2019. Pelatihan Pembuatan Kompos Organik Metode Keranjang Takakura sebagai Solusi Penanganan Sampah di Lingkungan Kost Mahasiswa. DEDIKASI: Jurnal Pengabdian Masyarakat. 1(1): 1-8.

Ilalfiah, L., Agustina, I. F., 2023. Pengelolaan Berkelanjutan Sampah Organik Sebagai Upaya Mendukung Sustainable Development Goals (SDG's) Desa. *Jurnal Ilmiah UMS*,1-10.

Jufri, N. N., Djatmiati, T. S., Pudjiastuti, L., 2020. Pengelolaan Lingkungan Hidup Dalam Pengalihan Fungsi Kawasan Hutan Untuk Usaha Pertambangan. *Jurisprudentie*, 7(1), 1-13.

Mahyudin, R. P., 2014. Strategi Pengelolaan Sampah Berkelanjutan. *Enviro Scienteae*, 10, 33-40.

Nisa, S. Z., Saputro, D.R., 2021. Pemanfaatan Bank Sampah Sebagai Upaya Peningkatan Pendapatan Masyarakat di Kelurahan Kebon Manis Cilacap. *Bantenese Jurnal Pengabdian Masyarakat*.3(2), 89-103.

Puger, I, G, N., 2018. Sampah Organik, Kompos, Pemanasan Global, dan Penanaman Aglaonema di Pekarangan. *Agro Bali (Agricultural Journal)*, 1(2), 127-136.

Puspa, B. B., 2017. Life Cycle Inventory Untuk Pengelolaan Sampah yang Berkelanjutan di Kota Pekanbaru. *Jurnal Planologi Unpas*, 4(3), 819-826.

Ratiabriani, N. M., Purbadharmaja, I. B. P. 2016. Partisipasi Masyarakat dalam Program Bank Sampah: Model Logit. *Jurnal Ekonomi Pembangunan Fakultas Ekonomi Dan Bisnis Universitas Udayana*, 9(1), 54.

Sugiardi, S., dan Ellyta, 2021. Zero Waste dengan Pengolahan Sampah Basah Rumah Tangga Menjadi Kompos. *MAREN: Jurnal Pengabdian dan Pemberdayaan Masyarakat*, 2(1), 1-7.

Suhendar, D., 2021. Efektivitas Program Kang pisman (Kurangi, Pisahkan, dan Manfaatkan Sampah) Dalam Meningkatkan Kesadaran Masyarakat Mengurangi Produksi Sampah. *Jurnal Ilmiah "Neo Politea" FISIP Universitas Al-Ghifari*, 2(2), 1-15.

Suryawan, I. G. P., Atmika, I. G. N. A., 2021. Pengelolaan Sampah Berbasis Zerowaste No Landfill Sebagai Upaya Pelestarian Lingkungan Berkelanjutan. *Jurnal Bakti Saraswati*, 10(2), 138-145.

Undang Undang Republik Indonesia Nomor 18 Tahun 2008 Tentang Pengelolaan Sampah.

Utami, P. R., Mardiana, R., 2017. Hubungan Partisipasi Masyarakat Dengan Keberlanjutan Ekologi, Sosial-Budaya dan Ekonomi Dalam Ekowisata Bahari. *Jurnal Sains Komunikasi dan Pengembangan Masyarakat*, 1(4), 509-522.

Wardhana, W.A., 2010. Dampak Pemanasan Global. Yogyakarta: Andi Offse

Wiryono, B., Muliatiningsih, Dewi, E. S., 2020. Pengelolaan Sampah Organik di Lingkungan Bebidas. *Jurnal Agro Dedikasi Masyarakat*. 1(1), 15-21.

Zulkifli, L., Indriani, N., Siswandi, M. I., Septiawan, R. T., Febriani, D., Jannaturroyani, Ispaniah, Pratama, H. Y., Aliyatri, N., Estiana, Hidayatullah, B. S., 2022. Pemanfaatan Sampah Organik Rumah Tangga Menjadi Pupuk Kompos Bokashi dan Pupuk Organik Cair (POC) Di Desa Sengkol, Kecamatan Pujut, Kabupaten Lombok Tengah. *Jurnal Pengabdian Magister Pendidikan IPA*, 5 (3): 105-112