

Agricultural Transformation Through Agricultural Product Marketing Education in Wae Moto Village, Nusa Tenggara Timur

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ABSTRACT

Indonesia is one of the largest archipelagic countries in the world with 17,504 islands stretching from Sabang to Merauke. Thousands of islands in Indonesia store land wealth with thousands of benefits, one of which is in the agricultural sector. Broadly speaking, agriculture can be divided into two types, namely subsistence agriculture and commercial agriculture. However, there are remote areas in Indonesia that do not quite understand the concept of commercial agriculture. Therefore, this service aims to educate the people of Wae Moto Hamlet, Compang Liang Ndara Village, Mbeliling District, West Manggarai Regency, NTT, about marketing agricultural products in order to transform subsistence agriculture into commercial agriculture. The methods used were participatory, workshop, and education. The results of the service in Wae Moto include increased agricultural diversification, increased knowledge of natural pesticides, and an increased understanding of marketing agricultural products.

Keywords: Agricultural; Marketing; Agricultural Products; Transformation; Service; Wae Moto

1. Introduction

Astronomically, Indonesia is located at 6° North Latitude – 11° South Latitude And 95° East Longitude – 141° East Longitude (Widiatama et al., 2016). This location makes Indonesia passed by the equator, thus affecting the climate, season, and soil conditions in Indonesia. The tropical climate makes Indonesia sunny almost every year. In addition, as a country with a tropical climate, Indonesia has two seasons, namely dry and rainy. Indirectly, tropical climate conditions with rainy and dry seasons have a positive impact on soil fertility in Indonesia.

Indonesia is one of the largest archipelagic countries in the world with 17,504 islands stretching from Sabang to Merauke (Lailissaum, 2017). Thousands of islands in Indonesia store a wealth of land with a thousand benefits. One of them becomes agricultural land to meet national food needs. Based on data from the Ministry of Agriculture, the area of

non-rice field agricultural land in Indonesia reached 29,353,138 Ha in 2019. (Kementrian Pertanian, 2020). This number makes agriculture a leading commodity in Indonesia.

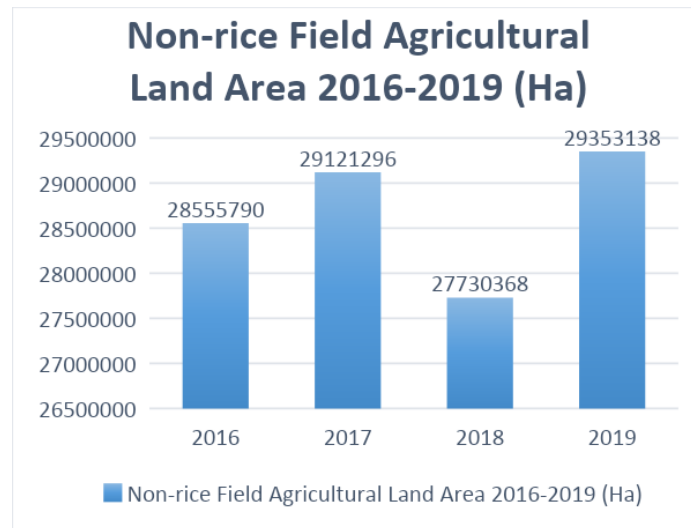


Figure 1 : Area of Non-rice Field Agricultural Land in 2016-2019

Broadly speaking, there are two types of agriculture: subsistence agriculture and commercial agriculture. Both system have different orientations. According to Mubyarto (1989) cited in Hariyanto (2017), subsistence agriculture is a farming system where the main purpose of a farmer is to fulfill the needs of his life and his family (Hariyanto, 2017). These agricultural goals are inversely proportional to the goals of commercial agriculture. Commercial agriculture is a market-oriented and economically viable farming management system (Yudiarini, 2011). Since commercial agriculture systems have a positive impact on society, agricultural transformation is a must.

Although commercial agriculture has great benefits for the community, not all people understand the concept. For example, the people of Wae Moto Village still tend to implement a subsistence agriculture system, even though most of them have their own farms. Most of the crops they grow are vegetables, such as mustard greens, pumpkins, chicory, cassava, etc. Considering the potential and problems in Wae Moto Village, Edusantara Foundation organized a community service program in the village.

The community service named Edusantara 1 took place on August 4-10, 2023 in Wae Moto Village, Compang Liang Ndara Village, Mbeliling District, West Manggarai Regency, NTT. This service has three divisions, namely education, health, and economy-tourism-environment (Ekoparling). The ekoparling division has a work program called "Marketing Education for Agricultural Products" which has three activities, namely agricultural diversification through planting seven vegetable and fruit seeds, a workshop on making natural pesticides, and marketing education for agricultural products. The work program departs from the problems that arise, namely the lack of community knowledge about agricultural diversification, natural pesticides, and marketing of agricultural products. In addition, most of the agricultural products are still for family consumption and have not generated economic value for them. The aim of the three activities is not only to provide new knowledge, but also to become a bridge for the transformation from subsistence agriculture into commercial agriculture.

2. Literature Review

2.1 Agriculture Transformation

Transformation is a process of gradual change until it reaches the ultimate stage, changes that are made by responding to the influence of external and internal elements that will direct changes from previously known forms through the process of repeating or multiplying (Zaeny, 2016). In general, the definition of agriculture is a human activity that includes farming, animal husbandry, fisheries and forestry (Maiti & Bidinger, 1981). Agricultural transformation is a process of change in various aspects of agriculture. The changes in question are not only in technology but furthermore in the economic and social institutions of agriculture (Fikriman, 2017). Thus, the definition of agricultural transformation in this paper is a gradual change in the field of agriculture in the people of Wae Moto Village.

2.2 Education

Education or education according to Decsa (2021), is the process of changing the attitudes and behavior of individuals or groups of people to mature humans through all situations, events, or efforts in education and training (Li & Teori, 2009). The definition of education according to Heri Gunawan in Oliver (2021) is all conditions, things, incidents, events, or about a process of changing the attitudes and behavior of a person or group of people in an effort to mature themselves through a system of learning and training (Oliver & dalam Zeithml., 2021). Thus, in this paper, education is defined as a process of changing attitudes and behaviors through education and training regarding the marketing of agricultural products in Wae Moto Village.

2.3 Agricultural Product Marketing

Marketing is a process of activities to interact between individuals and groups to get what they need and want by creating, offering, and freely exchanging products and services of value with others (*Politeknik Wilmar Bisnis Indonesia*, n.d.). According to KBBI, result is income; acquisition; fruit (*Hasil Pencarian - KBBI Daring*, n.d.). The definition of agriculture in a narrow sense is farming (Kusmiadi, n.d.). Thus, marketing of agricultural products can be interpreted as the activity of exchanging products from producers to consumers in the form of income from farming activities in Wae Moto Village.

3. Research Methodology

The method of implementing this service is participation, workshops, and education. According to Siti in Wahyuni, Participation is the mental and emotional involvement of a person in a group situation that encourages them to support the achievement of goals in the group's goals and take responsibility for the group (Wahyuni, 2014). This service tries to make the people of Wae Moto Village as subjects, not objects. Workshop is a gathering place for a number of people who have the same background, who discuss a problem by giving ideas/opinions about the problem which is carried out to exchange knowledge and experience among participants who have the same profession or expertise (Sulaiman, 2020). The workshop in this service is not only limited to exchanging ideas between volunteers and the people of Wae Moto Village, but also practicing how to make natural pesticides. Education is a process of learning activities for each individual or group whose purpose is to improve the quality of mindset, knowledge and develop the potential of each individual (Finthariasari et al., 2020). This method is used to be able to provide knowledge about marketing agricultural products to the people of Wae Moto Village.

4. Result

The service carried out in Wae Moto Village has three activities, namely agricultural diversification, a workshop on making natural pesticides, and education on marketing agricultural products. All three lead to one thing, namely the understanding that the transformation from subsistence agriculture to commercial agriculture starts from simple things. If depicted in a chart, it would look like this:

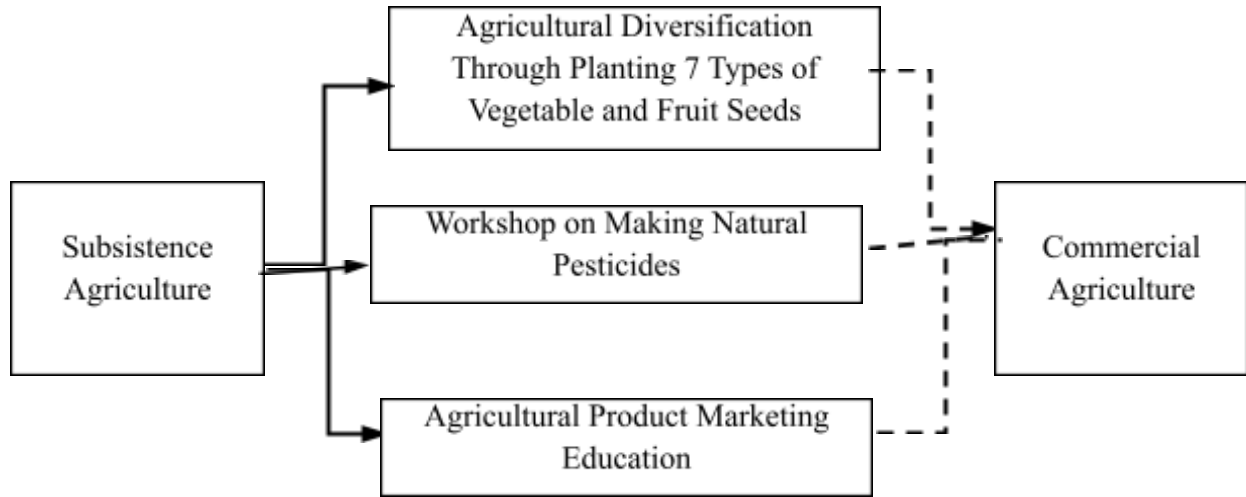


Figure 2. Agricultural diversification, natural pesticide-making workshops, and agricultural product marketing education as a bridge for indirect transformation from subsistence agriculture to commercial agriculture.

5. Discussion

5.1 Agricultural Diversification

Agricultural diversification is the first step in supporting the economy of farmers. The World Bank (2008) says that the development of the agricultural sector is crucial to escape the poverty trap in many developing countries (Pratiwi, 2021). So, not only does it improve the economy, but agricultural diversification is also a gateway out of poverty.

Agricultural diversification has a very broad meaning. Diversification is a way to procure more than one type of goods/commodities consume (Wahyuningsih, 2008). Agricultural diversification is a complex and extensive effort to improve the agricultural economy through commodity diversification efforts in the production, consumption and distribution subsystems at both the regional and national farm levels towards achieving structural transformation of the agricultural sector towards resilient agriculture (Wahyuningsih, 2008). This agricultural diversification not only has a positive impact on crop diversity. However, there is also a high correlation between farm diversification and farmers' income (Abdullah et al., 2014).

This agricultural diversification is carried out by involving the people of Wae Moto Village in all processes. The community becomes the subject (program actor), not just the object (program target). This activity begins with preparing soil for planting media. The planting media used is not only pure soil, but also mixed with rice husks and fertilizer. Rice husk is very good as a mixture of planting media, because according to Maryati (2003) in Fiona (2010), states that the addition of husk charcoal to the growing media will be beneficial, because it can improve soil properties, streamline fertilization, improve soil physical properties (porosity, aeration), nutrient binders (when excess nutrients) and release nutrients slowly according to plant needs/slow release (Fiona, 2010).

The soil mixed with rice husk and fertilizer was then put into 100 polybags. All community members actively participated in this filling. After the filling was complete, the seven seeds

of tomato seeds, melon seeds, celery seeds, leek seeds, carrot seeds, chili seeds, and watermelon seeds were planted into the soil as deep as a human's little finger. The community is very skillful when planting seeds, because it is their daily work. Finally, 100 polybags that had been planted with seeds were distributed to the community to be planted in their respective gardens. This aims to be able to disseminate new types of plants in Wae Moto Village, so that they can be used for family needs or commercialized.



Figure 3. Planting Seven Vegetable and Fruit Seeds Together With Wae Moto Village Community

5.2 *Natural Pesticide Making Workshop*

Pesticides are unfamiliar to the people of Wae Moto Village, even though they have been farmers for years. So, the introduction of pesticides is very important to them. However, pesticides cause several problems, one of which is that the green revolution has failed due to farmers' dependence on chemicals, damaging the balance of the soil ecosystem in Indonesia.(Pratiwi, 2021). Therefore, the natural pesticide making program is an urgency in Indonesia, especially in Wae Moto Village.

Natural pesticides are pesticides made from natural ingredients, and are easily available. (*Sistem Informasi B3 & POPs*, n.d.). Natural pesticides can be made with various ingredients found in nature. Among them are ginger, garlic, and tobacco. All three have properties to repel pests from plants. Ginger has ingredients that are suitable for pesticides, such as oleoresin compounds that give ginger a spicy taste, and essential oil compounds that contain many components, including zingiberene, zingiberol, kaemferol, and bisabolene (Asfi et al., 2015). Garlic contains compounds that can function as insecticides, such as alkaloids, allicin, flavonoids, saponins, tannins and sulfur (*UJI BIOAKTIVITAS EKSTRAK BAWANG PUTIH (Allium Sativum L.) TERHADAP HAMA Plutella Xylostella Linn. (LEPIDOPTERA: PLUTELLIDAE)*, n.d.). While tobacco contains nicotine which can inhibit fleas as one type of pest (Fitri & Migunani, 2014). Because these three ingredients have high efficacy as natural pesticides, they are the main raw materials in the natural pesticide making workshop in Wae Moto Village.

The workshop on making natural pesticides started by preparing all the materials and tools, namely 3 cloves of garlic, a clove of ginger, a pinch of tobacco, 600 ml water, and a 600 ml mineral bottle. All the ingredients are mixed together in a 600 ml mineral water bottle. After

everything is done, let it sit for 2 weeks until the natural pesticide is ready to use. This natural pesticide can be used once a week or according to the condition of the plants. The Manufacturing of this natural pesticide is quite interesting from all activities. Because, the people of Wae Moto Village do not use pesticides, not even a few who are unfamiliar with the word pesticide. The purpose of the implementation of this activity is that the community can apply the knowledge in the future, so that plants can be protected from pests.



Figure 4. Making Natural Pesticides with the People of Wae Moto Village

5.3 *Agricultural Product Marketing Education*

The transformation process from subsistence to commercial agriculture is not enough to diversify agriculture and know how to make natural pesticides. However, it is also important to know about the marketing of agricultural products, because good marketing will increase high sales. The higher the sales, the higher the economy of the farmers of Wae Moto Village. Marketing education for agricultural products is the last activity of the service series. After the community received seven kinds of new seeds and learned to make natural pesticides, then marketing education was conducted. This education is very important because of their lack of knowledge about marketing in general, especially marketing agricultural products. Marketing education for agricultural products uses pamphlets. The pamphlet contains marketing materials, including definition, function, components, channels, and digital marketing. This education was carried out with two-way communication. Education participants exchanged ideas about the agricultural and marketing system in Wae Moto Village with the system in the hometown of the education facilitators. There is one interesting fact, that out of many people, only one person has practiced digital marketing through Facebook, namely Bang Binus. Departing from that fact, the urgency of marketing education for agricultural products is getting higher.



Figure 5. Marketing Education for Agricultural Products with the People of Wae Moto Village

6. Conclusion

Indonesia is located in a tropical climate and passed by the equator, as well as being a country that has a very large land. This makes Indonesia one of the countries with the largest non-rice field agricultural land in the world. However, the large area of non-rice field agricultural land is not balanced with the knowledge of some farmers about commercial agriculture systems. This has become a high urgency in several regions in Indonesia.

The results obtained from the service in Wae Moto Village can be concluded to be excellent. Because, there are significant changes between before and after the service took place. Before the service, the types of plants owned by the people of Wae Moto Village were less diverse, only a few people knew and used pesticides, and very few knew the science of marketing agricultural products. Praise be to God, after collaborating with the community, a lot of progress was seen from these three problems. For Instance, vegetables and fruits that have been planted last August, are thriving until now. Nonetheless, there are still many issues that need to be improved and require more attention from the local government, so that the expected agricultural transformation becomes more realistic.

References

- Abdullah, M., Puji, H. K., & Parida, A. (2014). Pengaruh Diversifikasi Pertanian Terhadap Pendapatan Masyarakat di Desa Belawang Kecamatan Belawang Kabupaten Barito Kuala. *Jurnal Pendidikan Geografi*, 1(3), 8–20.
- Asfi, S. H., Rahayu, Y. S., & Yuliani. (2015). Uji Bioaktivitas Filtrat Rimpang Jahe Merah (*Zingiber officinale*) terhadap Tingkat Mortalitas dan Penghambatan Aktivitas Makan Larva *Plutella xylostella* secara In-Vitro. *Lentera Bio*, 4(1), 50–55. <http://ejournal.unesa.ac.id/index.php/lenterabio>
- Fikrman. (2017). Jurnal Agri Sains. *Transformasi Pertanian Dan Pembangunan Pedesaan*, 1(02), 1–11. <https://ojs.umb-bungo.ac.id/index.php/JAS/article/view/151/251>
- Finthariasari, M., Febriansyah, E., & Pramadeka, K. (2020). Pemberdayaan Masyarakat Desa Pelangkian Melalui Edukasi Dan Literasi Keuangan Pasar Modal Menuju Masyarakat Cerdas Berinvestasi. *Jurnal Pengabdian Masyarakat Bumi Raflesia*, 3(1).

<https://doi.org/10.36085/jpembr.v3i1.763>

- Fiona, F. (2010). *Pemanfaatan Arang Sekam untuk Memperbaiki Pertumbuhan Semai Jabon (Anthocephalus cadamba (Roxb .) Miq) pada Media Subsoil.*
- Fitri, M., & Migunani, S. (2014). Pembuatan Pestisida Menggunakan Tembakau. *Inovasi Dan Kewirausahaan*, 3(2), 68–71.
- Hariyanto, C. B. (2017). Analisis Pengaruh Transisi Pertanian Subsisten Ke Pertanian Komersial Terhadap Penyerapan Tenaga Kerja Di Kota Batu. *Jurnal Ilmiah.*
- Hasil Pencarian - KBBI Daring. (n.d.). Retrieved October 10, 2023, from <https://kbbi.kemdikbud.go.id/entri/hasil>
- Ii, B. A. B., & Teori, L. (2009). *No Title.* 8–15.
- Kementerian Pertanian. (2020). Pusat Data dan Sistem Informasi Pertanian Sekretariat Jenderal-Kementerian Pertanian Center for Agriculture Data and Information System Secretariat General-Ministry of Agriculture 2020. *Statistik Lahan Pertanian Tahun 2015-2019*, 30, 30. <http://epublikasi.setjen.pertanian.go.id/arsip-perstatistikan/167-statistik/statistik-lahan/719-statistik-data-lahan-pertanian-tahun-2015-2019>
- Kusmiadi, I. E. (n.d.). *Pengertian dan Sejarah Perkembangan Pertanian.*
- Lailissaum, A. (2017). Berapa Jumlah Pulau di Indonesia? *Kompasiana.*
- Maiti, & Bidinger. (1981). Sektor Pertanian. *Journal of Chemical Information and Modeling*, 53(9), 1689–1699.
- Oliver, R., & dalam Zeithml., dkk 2018). (2021). Edukasi. *Angewandte Chemie International Edition*, 6(11), 951–952., 2013–2015.
- Politeknik Wilmar Bisnis Indonesia.* (n.d.).
- Pratiwi, K. E. (2021). Keputusan Diversifikasi Tanaman Untuk Mengejar Pembangunan Pertanian Di Indonesia. *Jurnal Litbang Sukowati : Media Penelitian Dan Pengembangan*, 5(1), 63–77. <https://doi.org/10.32630/sukowati.v5i1.240>
- Sistem Informasi B3 & POPs.* (n.d.). Retrieved October 10, 2023, from <https://sib3pop.menlhk.go.id/index.php/articles/view?slug=pembuatan-pestisida-organik-atau-bio-pestisida>
- Sulaiman, S. (2020). Peningkatan Kinerja Guru Dalam Menetapkan Kriteria Ketuntasan Minimal (Kkm) Belajar Melalui Workshop Di Sekolah Menengah Pertama. *SEUNEUBOK LADA: Jurnal Ilmu-Ilmu Sejarah, Sosial, Budaya Dan Kependidikan*, 7(1), 80–92. <https://doi.org/10.33059/jsnbl.v7i1.2254>
- UJI BIOAKTIVITAS EKSTRAK BAWANG PUTIH (Allium sativum L.) TERHADAP HAMA Plutella xylostella Linn. (LEPIDOPTERA: PLUTELLIDAE).* (n.d.).
- Wahyuni, S. (2014). Analisis Partisipasi Masyarakat dalam Memanfaatkan Program Kemitraan dan Bina Lingkungan PT. Perkebunan Nusantara V di Kelurahan Sei Pagar. 9–37.
- Wahyuningsih, S. (2008). Diversifikasi Pertanian Menuju Pertanian Tangguh Dalam Upaya Memantapkan Struktur Ekonomi Pedesaan. *Fakultas Pertanian Universitas Wahid Hasyim*, 4(1),

1–11. <https://publikasiilmiah.unwahas.ac.id/index.php/Mediagro/article/view/897/1009>

Widiatama, I. P. A., Hidayat, B., & Malinda, Y. (2016). Klasifikasi Jenis Kelamin Manusia Melalui Pengolahan Citra Digital Sidik Rugae Palatina Dengan Menggunakan Metode Wavelet Transform Dan K-nearest Neighbor (k-nn). *EProceedings of Engineering*, 3(2).

Yudiarini, N. (2011). Perubahan Pertanian Subsisten Tradisional Ke Pertanian Komersial. *Ejournal.Undwi*, 2(1), 1979–3901.

Zaeny. (2016). *Transformasi Perilaku*. 13–67.