



Human Resource Development to Achieve Agricultural Sustainability in Bubakan Village, Tulakan District, Pacitan Regency

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Abstract

According to the theory, human resource development is an activity carried out by the organization to facilitate employees to have the knowledge, skills, and attitudes needed to handle current or future jobs. For agriculture in Bubakan Village to remain sustainable for future generations, various activities are provided in the form of training and education on fertilizers, joint farmer group discussions, and agricultural extension. But these activities and efforts have no effect on agricultural sustainability because farmers still use chemical fertilizers and choose to work in the non-agricultural sector. The research objectives are to analyze agricultural sustainability in Bubakan Village, analyze efforts to realize agricultural sustainability through human resource development in Bubakan Village, and analyze the impact of human resource development on agricultural sustainability in Bubakan Village. This research uses a qualitative method through a descriptive approach. The type of research is field research. Data collection techniques were interviews, observation, and documentation. The results of the research can be concluded that: 1) agricultural sustainability in Bubakan Village has been maintained and running (sustainable) because it fulfills 5 indicators out of a total of 7 indicators; 2) human resource development through education and training, farmer group discussions (Gapoktan) and agricultural counseling; 3) The impact of human

	resource development can be seen from the knowledge, skills, and sustainability of the agricultural sector.
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INTRODUCTION

Agriculture can be defined as an activity where there are activities such as farming, livestock, and forestry by involving or utilizing living things (plants, animals, and plants) (Shafaruddin, 2019). Meanwhile, farmers are people who can produce food, power sources or industrial raw materials and maximize biological resources (Purba et al., 2020).

Indonesia is a country where most of the population works as farmers and produces a variety of agricultural products. East Java Province is one of the producers of food staples, livestock, fisheries, and horticulture. In 2020, according to bps, rice production was 10,022,387 tons while the Pacitan Regency area was 83,378 tons. Even in 2022, East Java is still the largest contributor to food security in Indonesia with a total of 9.91 million tons (BPS, 2023).

To support the sustainability of agriculture so that it can survive from now to the future. Where it can meet current needs without having to sacrifice future generations (Mawara, 2017). The sustainability of agriculture also has rules such as minimizing the use of chemicals so that we as much as possible do not use excessive chemicals, if using chemicals in eradicating pests using pesticides, make sure to use only enough or use more organic materials. Soil and water conservation, ecosystem balance, and being able to maintain production stability in a sustainable manner.

Agricultural sustainability can also be interpreted as meeting current food needs as well as possible, while maintaining the stability of the condition of the planting land so that it can still be utilized until the future or generations after us (Rossano, 2016). To support sustainable agriculture, it is necessary to develop human resources so that farmers know how to take steps so that their agricultural sector can survive for an indefinite period. Human resources are not only seen as a mere resource, but rather as capital or assets for an industry or organization. Human resources can be seen from two aspects, namely quality and quantity. Human resources are actors in the agricultural sector that can determine the success of the company according to its goals. objectives. Human resources must be maintained and developed to make an optimal contribution to sustainable agriculture.

According to Benjamin, Tasman and Abdul, human resource development is all activities carried out by organizations in facilitating employees to have the knowledge, skills and attitudes needed to handle current or future jobs (Bukit et al., 2017). Development in terms of human resources must be carried out on an ongoing basis. Development can affect the mindset of an

individual so that their quality of life is guaranteed or prosperous. The resulting thinking includes various ways of utilizing the opportunities that exist in the agricultural sector. So that it has the strength or ability to reach opportunities or productive sources so that it can meet basic needs and increase income (Rahmawati, 2022).

Human resource development can be through education or training, Gapoktan discussions, and extension workers. Education and training are assistance to improve work abilities (knowledge, skills, and attitudes) to produce optimal performance (Siregar, 2018). Farmer group discussions are efforts made to improve business efficiency because there is cooperation between farmers in meeting their needs in terms of capital, seeds, technology, and both material and other non-material needs (Ratna et al., 2012). Meanwhile, counseling is an effort to improve farmers' skills through guidance so that they are more useful (Faisal, 2020).

Based on researchers' observations in Bubakan Village, Tulakan Subdistrict, there is a gap in the use of chemicals rather than organic materials. Whereas agricultural sustainability must pay attention to the stability of the land so that it remains useful for future generations and protects the environment (Lumbanraja, 2018). This is supported by an interview from one of the farmers in the agricultural sector to fertilize plants using chemical fertilizers and prevent pests using pesticides. The continuous use of chemical fertilizers can cause damage to the land ecosystem, so the necessity of human resource development so that farmers are aware of the importance of maintaining the existing ecosystem so that the agricultural sector can be maximally utilized in an unlimited period.

Based on this, the Bubakan Village government has made various efforts or activities carried out in the form of training and education on fertilizers, joint farmer group discussions and agricultural counseling. However, the results of farmer interviews show that these activities and efforts have not fully sustained the agricultural sector because farmers still use chemical fertilizers and choose to work in the non-agricultural sector. This agricultural situation needs special attention to how the sustainability of agriculture for the future. Considering that farmers are more dependent on chemicals or inorganic materials in the agricultural sector, making the stability of land agriculture so that the stability of the land is disrupted and the level of natural resource stability decreases. Based on the above problems, the researcher is interested in studying specifically so that the author raises the title "Development of Human Resources to Realize Agricultural Sustainability in Bubakan Village, Tulakan District, Pacitan Regency."

METHOD

This type of research is field research, applying descriptive qualitative research, where data will be analyzed in the form of descriptive events or phenomena and not in the form of

numbers (Arikunto, 1989). The main subjects in this study were farmers in Pageran Hamlet, Tulakan District, Pacitan Regency.

In this study using primary and secondary data sources. Primary data in the study were farmers in Bubakan Village, Tulakan District, Pacitan Regency. Data collection techniques using interviews, observation, and documentation (Sugiyono, 2014). Processing data into categories, breaking down units, organizing into patterns, choosing which ones to study, and making conclusions that are easily understood by yourself or others. Data analysis uses data reduction, presents data, and concludes. While data validity uses the source triangulation method.

RESULT AND DISCUSSION

Agricultural Sustainability in Bubakan Village, Tulakan Sub-district, Pacitan Regency in utilizing agricultural land, we have an obligation to maintain both in terms of human resources and natural resources. Therefore, in the process, we must still pay attention to the cause and effect of what we do. The same applies to agriculture in Bubakan Village.

The majority of Bubakan villagers work as farmers, with 3607 people working in the agricultural sector. Village farmers generally farm with a traditional view where they generally farm only to fulfill their basic needs so that food security every year. Even so, with the advancement of the times, the people of Bubakan Village have become aware of the need for change. When viewed from the agricultural sector that is managed, Bubakan has implemented agricultural sustainability, this can be seen from interviews with several farmers in Bubakan Village using indicators of sustainable agriculture according to Dankelman and Davidson (Dankelman & Davidson, 1988):

1. Able to maintain soil loss at a rate below the rate of soil formation, or at a tolerable soil loss level

Based on farmer interviews, in maintaining soil loss farmers use 2 ways which are using chemical and organic fertilizers. Farmers prefer to use chemical fertilizers as the main one while organic fertilizers as a complement or with a percentage of 50:50, this is because if using organic fertilizers, the plant growth rate is slower and takes a long time, while chemical fertilizers are faster. while chemical fertilizers are faster. The use of chemicals and organic materials results in loss of soil quality, due to the use of chemicals in terms of fertilizers and pesticides. So, the percentage in maintaining the level of soil loss is considered balanced, but there still needs to be special attention to farmers in the use of more organic materials than chemicals so that the level of soil loss is lower, and the soil will remain usable for decades to come.

2. Able to increase farmers' income

Based on farmer interviews, Bubakan Village in planting rice plants in a year can harvest 2-3 times. So that farmers can produce more rice with the capacity of one harvest around tens

of sacks of grain. In addition, income is also supported by secondary crops that have been planted in the dry season, as an additional optimal income from land utilization.

3. Acceptable to the community and able to replicate the application of technology (replicable) continuously without dependence

Based on interviews, farmers have applied technology continuously to their agricultural land, this application only applies to plowing fields or processing land using tractors and rice mills, does not apply to harvesting because in rural areas when the harvest comes, they still use traditional methods and prioritize mutual cooperation between residents. Based on this, the community in general has applied technology in a sustainable manner.

4. Development of cropping patterns, food land processing methods, and food supply storage methods

Based on interviews, farmers use cropping patterns according to the existing season, in order to optimize land utilization. Rice crops during the rainy season and secondary crops during the dry season. In addition, in adapting cropping patterns, people easily adopt new ones if the results of the previous crop are not satisfactory, then farmers will change to other types of plants. Land management by plowing using technology or hoeing, because in the dry season, the land is difficult to plow using technology, so the land is easier to hoe. When the main harvest comes after the rice has been drying in the sun, it is then stored in a dry place, and usually underneath it is given a strong and sturdy base to maintain its quality, namely, the rice is not easily damaged.

5. Increase the level of diversification to ensure flexibility in cropping patterns

Based on farmer interviews, rice and secondary crops are vulnerable to pests such as grasshoppers, leafhoppers, rice caterpillars, rats, and birds. Therefore, farmers use pesticides to eradicate rice and leafhoppers or rice caterpillars so that the plants can grow well, and the pests will die. As for birds

Generally, the rice plants will be guarded by the farmers themselves so that the risk of crop failure is lower. These efforts are made by farmers so that these agricultural products become good for the presentation of the level of diversification to ensure the flexibility of cropping patterns.

6. Maintaining soil fertility through organic matter recycling

Based on farmer interviews, in ensuring soil fertility farmers choose to use organic fertilizer as a complement. This is based on the level of plant fertility, plants on farmers' farms use chemical fertilizers only, and some use chemical and organic fertilizers. Fertilizing plants is done so that plants grow fertile, fertilizing using organic fertilizers is not very effective, so farmers add chemical fertilizers so that plants quickly grow fertile. Based on this, the presentation of maintaining soil fertility is not yet complete, because farmers still use chemical fertilizers, organic fertilizers, and pesticides, while there are also farmers who use chemical fertilizers and pesticides.

7. Utilizing water and energy sources as precisely as possible.

Based on farmer interviews, there are two seasons in Bubakan Village: the rainy season and the dry season. Because the rainy season has abundant water, farmers plant rice according to the water content so that the plants are fertile. But when the dry season comes with limited water availability, farmers choose to plant secondary crops, because these plants can live with limited water while producing good yields. So, the percentage of utilization of water sources and energy sources is appropriate according to the existing season.

Based on the 7 indicators above, agriculture in Bubakan Village is sustainable because there are 5 indicators that have been well met including increasing farmers' income, being able to repeat the application of technology in a sustainable manner, being able to develop cropping patterns, land processing methods and food storage methods, being able to increase diversification or risk management to ensure the flexibility of cropping patterns, and being able to utilize water and energy sources appropriately. While the other 2 indicators need further improvement or attention, including the level of soil loss and soil fertility through the recycling of organic materials.

The forms of agriculture that exist in Bubakan Village based on interviews and observations from farmers are:

1. Agroforestry

A combination of tree crops and agricultural crops with a short production period (Suryani, 2012). On dry land there are various kinds of plants from coconut trees, guava trees, coffee trees and banana trees. While the plants around the house are coconut trees, sengan trees, bamboo trees, vegetable plants and chili peppers. From the results of this data, it can be concluded that the agricultural plants in Bubakan Village are included in the form of agroforestry agricultural sustainability.

2. Mix Cropping

In an area or agricultural land covers several crop commodities with the aim of optimizing existing land (Kuheba et al., 2016). Based on the interview, the crops in question are rice, corn, sweet potatoes and cassava as food crops, ginger, nuts and vegetables as horticultural crops and grass as livestock crops that can be annual or annual as feed reserves. Based on the data above, from food crops, horticultural crops and livestock crops, the sustainability of this farm is included in the form of mixed cropping.

3. Integrated Farming

Integrated farming systems focus on biological recycling in addition to the combination of agricultural crops (Mukhlis et al., 2016). Based on interviews, agricultural crops such as rice, porang, grass and sengan trees are a good combination with manure fertilization to save the use of chemical fertilizers which makes this a biological recycling. Where livestock eat from grass and leaves from tree crops and continued with the provision of

fertilizer from the results of existing manure. So, it can be concluded that this combination of crops is integrated farming.

4. Three-strata system

The three strata system includes three zones, namely *Legimonisa*, shrubs and trees; the purpose of these three zones is to provide feed every year (Biyatmoko, 2015). Based on farmer interviews, the plants for zone 1 are cassava trees, secondary crops, *porang*. Zone two has fodder grass, while zone 3 includes wood plants, *sengon* plants and other tree plants. So, it can be concluded that this combination of crops covering three zones is a three-strata system.

Efforts to Achieve Agricultural Sustainability through Human Resources in Bubakan Village, Tulakan Subdistrict

Based on interviews and observations of farmers in Bubakan Village in maintaining agricultural sustainability, several efforts were made to realize agricultural sustainability through human resource development including education and training, Gapoktan discussions and agricultural extension.

1. Education and Training Methods

Education is an activity to increase knowledge so that it can solve problems (Bariqi, 2020), while training is an activity in understanding practical knowledge and how to apply it to improve skills (Siregar, 2018, p. 155). The results of interviews with farmers said that in Bubakan Village there was already training and education. This training and education are measured using existing indicators, including (Harahap, 2018):

a. The material taught or the content of education and training

Based on farmer interviews the material taught is in accordance with the needs of farmers, namely farmers are still dependent on subsidized fertilizers from the government so that the need for training and education in making fertilizers.

b. Methods used in education and training

Role-Playing, based on farmer interviews the method used by explaining and showing how appropriate agricultural cultivation by demonstrating an event with the explanation of the speaker and fellow farmers, this is in accordance with the role-playing education model.

Coaching and Counseling, based on farmer interviews that parents and friends indirectly whether they are aware or not that they have taught their expertise to their children and friends by connecting conversations through discussions or others, therefore this behavior is included in the coaching and counseling education method. Because in addition to questions and answers or exchanging ideas in the discussion there is also direct practice.

On the Job Training, based on farmer interviews, there is direct training in the field as a place for them to learn while their companions in this training process

are parents. Therefore, it can be concluded that the training they do refers to on-the-job training.

Visitable, based on farmer interviews, that the training followed in the agricultural sector organized by the government in the local environment.

Demonstrations and examples, based on farmer interviews in the application of training they are given examples of problems and how we solve these problems. The conclusion from the above data is on how to manage, as well as given examples in accordance with business commodities then this training is included in demonstrations and examples.

Based on the data above, it can be concluded that the methods used in education and training by farmers include role playing, coaching, and counseling, on the job training, visitable, and demonstrations and examples.

c. *Facilities or supporting facilities*

Based on interviews with farmers, the facilities used include adequate, supporting facilities in training and education are spacious and comfortable places, with facilities for loudspeakers, tables and chairs and snacks and transportation money.

d. The ability of the instructor

Based on interviews with farmers that the instructor in education and training is friendly, can master the atmosphere and cool material makes trainees more enthusiastic in learning about this agricultural sector.

Based on the data above, Bubakan Village farmers who participate in training and education have fulfilled the four indicators of training and education, including appropriate educational material or content, methods used in education and training (role playing, coaching, and counseling, on the job training, visitable, and demonstrations and examples), facilities or supporting facilities and the ability of qualified or good instructors.

2. Discussion of Farmer Group Association (Gapoktan)

Gapoktan discussion is a collection of several farmer groups that work together to increase economic reach and business efficiency, so that through this mediator forum farmers can meet material and non-material needs (Ratna et al., 2012). Based on the results of interviews and observations, the discussion of the farmer group association (Gapoktan) in Bubakan Village has fulfilled 2 indicators of output and outcome. Where the output of the Gapoktan discussion has conducted regular meetings for discussions related to the agricultural sector. Meanwhile, the outcome of the Gapoktan discussion provides facilities for agricultural equipment such as plowing tools and rice mills. As for capital access facilities where if farmers need capital, they can apply through UPK, KUD and banks.

3. Agricultural extension

Agricultural extension is the dissemination of information to farmers so that they know the information (Faisal, 2020). Based on the results of interviews and observations of farmers in Bubakan Village, there have been agricultural extension efforts. From this agricultural extension effort, it is then studied using existing indicators, including (Mengun, 2021):

- a. The development of agricultural extension programs at the BPP/District level in accordance with the needs of farmers. Based on farmer interviews, extension workers are here as facilitators of all information related to agriculture, such as technological developments, human resources, government policies, and the transfer of subsidies to money.
- b. Compilation of the performance of agricultural extension workers in their respective working areas. Based on farmer interviews, the performance of extension workers in conveying all information related to agriculture has been effective because it uses technological developments.
- c. The compilation of location-specific superior commodity area maps, the area in Bubakan Village has food commodities such as corn, soybeans, and rice.
- d. The availability of agricultural information and technology evenly and in accordance with the needs of farmers. Based on farmer interviews, agricultural information, and technology in Bubakan is available and delivered, although the process takes time to reach farmers.
- e. Empowerment and independence of farmers, farmer groups, farmer businesses/associations and formal businesses (cooperatives and other institutions). Based on interviews with farmers, they do not have optimal independence or formal businesses because they are still dependent on the government.
- f. The realization of business partnerships between farmers and entrepreneurs is mutually beneficial. Based on interviews, farmers do not yet have business partnerships between farmers and entrepreneurs that are mutually beneficial because they are still oriented towards the fulfillment of food reserves.
- g. Increased income and welfare of farmers in each working area. Based on interviews, the income of farmers in Bubakan Village continues to increase every year because farmers easily accept new innovations and, in a year, can produce 2-3 harvests. Increased farm productivity means an increased level of farmer opinion, a better quality of life with the availability of staple foods and food reserves.
- h. Increased agribusiness productivity of superior commodities in each working area. Based on farmer interviews, the productivity of superior commodities in each region has increased due to the ease with which farmers can adapt to planting patterns.
- i. Implementing the realization of farmers' access to financial institutions, information, agricultural production facilities and marketing. Based on farmer interviews, access

to information can be through farmer groups, while in the fulfillment of agricultural capital farmers can apply for loans to financial institutions such as cooperatives and banks where there are special loans for farmers in which there is an interest subsidy borne by the government.

Based on this it can be concluded that there are 6 indicators that have been achieved well although new developments and innovations are still needed to be better and optimal in empowering farmers including the creation of agricultural extension programs, the implementation of agricultural performance, regional agricultural commodities, information and agricultural technology evenly and in accordance with the needs of farmers, farmers' access to financial institutions, information, agricultural production facilities and easier marketing, increased productivity of superior commodities and the level of income and welfare of farmers. While there are 3 indicators that need special attention that have not been achieved optimally or are still lacking, including information and agricultural technology that is not evenly distributed and in accordance with the needs of farmers, empowerment and independence of farmers, farmer groups, businesses / farmer associations and formal businesses (cooperatives and other institutions), and do not yet have business partnerships between farmers and entrepreneurs that are mutually beneficial.

The Impact of Human Resource Development on Agricultural Sustainability in Bubakan Village, Tulakan Sub-district, Pacitan Regency

1. Impact of Education and Training, Gapoktan Discussions and Agricultural Counseling

- a. Knowledge, based on interviews from farmers, the results of the training and education conducted are increased knowledge of the agricultural sector, information on new government policies, fertilizer subsidies and fertilizer production, selection of quality seeds, pest prevention, adoption of cropping patterns, and access to capital and agricultural technology.
- b. Skills are farmer skills also obtained from training from farmer interviews. The skills possessed can apply technology repeatedly, easily adopt new innovations to the agricultural sector and can make organic fertilizer.

2. Sustainable Human Resource Development on Indicators of Agricultural Sustainability

- a. Maintaining the level of soil loss or at an acceptable level, farmers who have participated in the development apply fertilizer according to the provisions that can affect the soil. So that later it can fertilize plants and not increase the level of soil loss due to the use of appropriate fertilizers.
- b. Acceptable and able to repeat the application of technology, easy access to technology so that farmers always use a plow when cultivating land. Extension workers provide information about agricultural technology so that farmers take advantage of this to be applied to farmers' fields to facilitate the production process.

- c. Development of cropping patterns and land processing. This expertise can be obtained from asking questions to fellow farmers or parents through education/training, discussions or from related information. In discussions, farmers who fail to harvest will look for solutions to their problems, which causes farmers to use new cropping patterns according to the results of the discussion.
- d. Increasing the level of diversification of cropping patterns because farmers use pesticides in the eradication of pests.
- e. Appropriate water and energy management because in the adoption of planting patterns farmers will adjust to the existing season so that it has a good impact on crop yields to increase farmers' income.

Based on the data above, the development of human resources through education and training, Gapoktan discussions and agricultural counseling has an impact on farmers' knowledge and skills, while when viewed from the indicators of agricultural sustainability, the impact of human resource development can maintain the level of soil loss or at an acceptable level, be able to repeat the application of technology, develop cropping patterns and land cultivation, and increase farmers' income. cropping patterns and land processing, and increase the level of diversification of cropping patterns, because farmers use pesticides in pest control. So, it can be concluded that the impact of human resource development on agricultural sustainability is already sustainable.

CONCLUSION

1. The sustainability of agriculture in Bubakan Village has been maintained and is sustainable because it meets 5 indicators including increasing farmers' income, being able to repeat the application of technology in a sustainable manner, can develop cropping patterns, land processing methods and food storage methods, can increase diversification or risk management to ensure the flexibility of cropping patterns, and can utilize water and energy sources appropriately. While the other 2 indicators need further improvement or attention include the level of soil loss and soil fertility through the recycling of organic materials. The forms of agriculture include agroforestry, mixed cropping, integrated farming, and the three-strata system.
2. Human resource development through:
 - a. Education and training, meeting the four indicators of training and education, including appropriate educational materials or content, methods used in education and training (role playing, coaching, and counseling, on the job training, visitable, and demonstrations and examples), supporting facilities and the ability of qualified or good instructors.

- b. Discussion of farmer group associations (Gapoktan), fulfilling two indicators with output and outcome
- c. Agricultural extension, meeting 6 indicators that have been well achieved, including the creation of agricultural extension programs, the implementation of agricultural performance, regional agricultural commodities, information and agricultural technology evenly and in accordance with the needs of farmers, farmers' access to financial institutions, information, agricultural production facilities and easier marketing, increased productivity of superior commodities and the level of income and welfare of farmers. Meanwhile, there are 3 indicators that need special attention that have not been achieved optimally, including information and agricultural technology that is not evenly distributed and in accordance with the needs of farmers, empowerment and independence of farmers, farmer groups, businesses / farmer associations and formal businesses (cooperatives and other institutions), and not yet having a business partnership between farmers and entrepreneurs that is mutually beneficial.
- d. The impact of human resource development can be seen from the knowledge and skills of farmers and has been sustainable because it has met the indicators of agricultural sustainability which include being able to maintain the level of soil loss or at an acceptable level, being able to repeat the application of technology, develop cropping and land management patterns, and increase the level of diversification of cropping patterns.

REFERENCES

- Arikunto, S. (1989). *Prosedur Penelitian Suatu Pendekatan Praktik*. Bina Aksara.
- Bariqi, M. D. (2020). Pelatihan Dan Pengembangan Sumber Daya Manusia. *Jurnal Studi Manajemen dan Bisnis*, 5(2), 64–69.
- Biyatmoko, D. (2015). Upaya Meningkatkan Ketersediaan HMT dan Kapasitas Tampung Ternak Melalui Penanaman Hijauan Sistem Tiga Strata. *Zira'ah*, 40(3).
- BPS. (2021). *Produksi Padi dan Beras Menurut Kabupaten/ Kota di Provinsi Jawa Timur, 2019 dan 2020*. <https://jatim.bps.go.id/statictable/2021/09/06/2238/produksi-padi-dan-beras-menurut-kabupaten-kota-di-provinsi-jawa-timur-2019-dan-2020.html>
- BPS. (2023). *Luas Panen, Produksi, dan Produktivitas Padi Menurut Provinsi 2020-2022*. <https://www.bps.go.id/indicator/53/1498/1/luas-panen-produksi-dan-produktivitas-padi-menurut-provinsi.html>
- Bukit, B., Malusa, T., & Rahmat, A. (2017). *Pengembangan Sumber Daya Manusia Teori, Dimensi Pengukuran dan Implementasi Dalam Organisasi*. Zahr Publishing.

- Dankelman, I., & Davidson. (1988). *Women and Environment in the Third World*. Earthscan Publication.
- Faisal, H. N. (2020). Peran Penyuluhan Pertanian Sebagai Upaya Peningkatan Peran Kelompok Tani (Studi Kasus di Kecamatan Kauman Kabupaten Tulungagung). *Jurnal Agibisnis*, 6(1).
- Harahap, S. S. (2018). *Analisis Kritis Atas Laporan Keuangan*. Raja Grafindo Persada.
- Kesejahteraan Masyarakat di Desa Daramista. *Prosiding Universitas Wiraraja Sumenep*. Shafaruddin, A. (2019). *Hilangnya Ketertarikan Remaja Akan Profesi Petani Dalam Tinjauan*
- Kuheba, J. A., Dumais, J. N. K., & Pangemanan, P. A. (2016). Perbandingan Pendapatan Usahatani Campuran Berdasarkan Pengelompokan Jenis Tanaman. *Agri-Sosioekonomi Unsrat*, 12(2A), 77.
- Lumbanraja, P. (2018). *Sistem Pertanian Berkelanjutan*. Mawara, J. M. (2017). Potensi Karakteristik Lahan untuk Pengembangan Sistem Pertanian Berkelanjutan di Pulau Lembeh Kota Bitung. *Prosiding Seminar Nasional 2017 Fakultas Pertanian UMJ*.
- Mengun, A. (2021). *Tingkat Keberhasilan Penyuluh Dalam Pelaksanaan Kegiatan Penyuluhan (Studi Kasus di Kelompok Tani Tunggul Batu Kota Tarakan)*. Universitas Borneo.
- Mukhlis, Noer, M., Nofiandi, & Mahdi. (2016). Sistem Pertanian Terpadu Padi dan Sapi. *Politeknik Pertanian Negeri Payakumbuh*.
- Purba, D. W., Thohiron, M., Surjaningsih, D. R., Sagala, D., Ramdhini, R. N., Gandasari, D., Wati, C., Purba, T., Herawati, J., Sa'ida, I. A., Amruddin, Purba, B., Wisnujati, N. S., & Manullang, S. O. (2020). *Pengantar Ilmu Pertanian* (1st ed.). Yayasan Kita Menulis.
- Rahmawati, Y. (2022). Strategi Pemberdayaan Keripik Tempe Melalui Media Sosial di Sukoharjo. *Amaluna: Jurnal Pengabdian Masyarakat*, 1(1).
- Ratna, D. P., Er, N. D., & Wuraji. (2012). Pemberdayaan Petani Melalui Gabungan Kelompok Tani (Gapoktan). *Diklus*, 16(2).
- Rossano, G. S. G. (2016). *Sustainability Petani Tebu Gondanglegi Malang*. Universitas Brawijaya.
- Rusnani. (2012). Analisis Potensi Sumber Daya Manusia Dalam Upaya Peningkatan
- Siregar, E. (2018). Faktor-Faktor Yang Mempengaruhi Manajemen Pendidikan Dan Pelatihan (Diklat) Dalam Upaya Pengembangan Sumber Daya Manusia (SDM). *Jurnal Dinamika Pendidikan*, 11(2),
- Sugiyono. (Alabeta). *Metode Penelitian Kualitatif*.
- Suryani, E. (2012). Peningkatan Produktivitas Tanah Melalui Sistem Agroforestry. *Jurnal Sumberdaya Lahan*, 6(2).
- Teori Perubahan Sosial Emile Durkheim Di Desa Jolotundo Kecamatan Jetis Kabupaten Mojokerto*. UIN Sunan Ampel.