

Rice Farmers' Response to The Use of Liquid Organic Fertilizer in Sawakong Village South Galesong District Takalar District

Setiawan Abadi

Fakultas Pertanian, Universitas Muhammadiyah Makassar, Makassar, Indonesia

Article Info

Article history:

Received : Aug 14, 2023
Revised : Sept 18, 2023
Accepted : Oct 10, 2023

Keywords:

Rice Farmer
Paddy
Organic Fertilizer.

ABSTRACT

This research aims to determine the factors that influence the response of rice farmers to the use of organic fertilizer in Sawakong Village, Galesong District, south of Takalar Regency and to determine the response of rice farmers to the use of organic fertilizer in Sawakong Village, Galesong District, south of Takalar Regency. The sample determination in this research was carried out by purposive sampling on 20 rice farmers in Sawakong Village. The data analysis used is analysis using scoring techniques. The research results show that internal factors such as farming experience are in the high category and the farmer's age and formal education are in the medium category. Meanwhile, external factors that influence farmers' responses are the expected benefits, the time interval between the start of use and obtaining the benefits and the energy/sacrifice expended. Meanwhile, there are three responses of rice farmers to the use of organic fertilizer, namely cognitive responses with an average of 3.00, affective responses with an average of 2.25 and conative responses with an average of 2.41. South Galesong District, Takalar Regency, especially in Sawakong Village is one of the villages that has implemented organic farming. Some people in carrying out rice farming activities use organic fertilizer. Farmers' still unfamiliar opinions about organic fertilizers cause differences in their application in the field.

This is an open access article under the [CC BY-NC](#) license.



Corresponding Author:

Setiawan Abadi
Fakultas Pertanian, Universitas Muhammadiyah Makassar
Jl. Sultan Alauddin No.259, Gn. Sari, Kec. Rappocini, Kota Makassar, Sulawesi Selatan 90221
Email: abadisetiawan@gmail.com

1. INTRODUCTION

Agricultural development is directed at increasing agricultural production to meet domestic food and industrial needs. Increasing exports, increasing farmers' income, expanding employment opportunities and encouraging equal distribution of business opportunities (Herdini & Masduki, 2021). Increasing food needs encourages agricultural people to increase crop productivity and increase farmer income. Humans share ways to develop and do not realize that the unwise use of inorganic fertilizers and pesticides (herbicides, insecticides, fungicides) will result in changes in balance, thus having a negative impact on the environment and humans (Budi et al., 2022). Based on these conditions, humans are trying to find planting techniques that are safe and good for the environment and humans, so that organic farming systems emerge.

The results of research on the impact of using chemical fertilizers show that the organic material content in rice fields is <1%. This is categorized as dead land, which no longer has the

capacity to support plant productivity (Suwahyono, 2017). In this case, good and productive soil requires a C - Organic material content of > 2% (Yuniarti et al., 2020). As long as the condition of food production land has not been cured, to maintain food productivity, a gradual increase in fertilizer intake is needed (Suwahyono, 2011). Here there needs to be action to revitalize food production land in a bio-organic manner. Apart from being a source of nutrients, the function of organic matter also plays a role as a soil conditioner.

Organic farming is the answer to the green revolution that was promoted in the 1960s which caused a lack of fertility in the soil and environmental damage due to uncontrolled and excessive use of chemical fertilizers and pesticides (Hamakonda & Mau, 2023). Organic farming in principle recycles nutrients through harvest by returning some of the biomass to the soil and water conservation which can provide higher yields compared to organic rice (Heny Wahyuni, 2020). The need for organic fertilizer and pesticides for organic plants can be obtained by finding and making your own, such as compost.

The use of organic fertilizer in the soil or the provision of organic fertilizer is one thing that can be used as a solution to overcome the impact of high prices of inputs and can also be used to maintain agricultural land so that it remains productive and safe for humans. This organic farming is not only environmentally friendly, the costs for farming are also very low because the fertilizers and pesticides used come from nature around the farmer's environment, then farmers can make it themselves and when purchased the price is relatively cheap, so it is hoped that it can increase the productivity of rice plants. Organic (DENSI, 2022). Some of the advantages of cultivating rice organically are: consumer health, the use of organic fertilizer which restores soil fertility and environmental sustainability and increases farmers' income, because the selling price is higher than conventional rice (Mayrowani, 2012; Sriyanto, 2010; Triyono & Rahmawati, 2018). Therefore, organic rice farming is worth looking at because apart from the expensive selling price, it is good for health and organic products are free from residue compared to inorganic products.

Response is every level of behavior which is essentially a response or reply (response) to a stimulus or stimulus (Nahar, 2016). (Gaol, 2016) A response is a reaction or answer that depends on a stimulus or is the result of that stimulus. as a controller between the stimulus and the response so that what determines the form of an individual's response to the stimulus is the stimulus and individual factors - the person and in some attitudes, feelings and emotions, the influence of the past and so on, ultimately determining the form and behavior displayed. The stimulus-response model is a basic communication model, communication as a very simple action-reaction process. non-verbal, images and actions will certainly stimulate other people to respond in a certain way (statements of affection), as well as behavioral or conative responses (responses in the form of actions and each of these response classifications (Rahmah, 2019). The explanation for each domain is as follows: According to Bloom and friends, the cognitive domain includes knowledge and knowledge, including memories of things that have been learned and stored in memory (Kartini et al., 2022). Knowledge stored in Understanding includes the ability to gain meaning and meaning of the material being studied (Safira, 2022). The affective domain according to the taxonomy of Kratwohl, Bloom and friends includes acceptance and participation. the presence of a stimulus and a willingness to pay attention to that stimulus (Suyadi, 2004). Participation includes the willingness to actively pay attention and participate in an activity. expressed in providing a reaction to a given stimulus. The psychomotor domain according to Simpson's classification includes guided movements and complex movements. Guided movement includes the ability to carry out a series of movements according to the examples given (Prastianto, 2016).

A possible stimulus in a certain situation can be an object. The typical nature of a stimulus is a rather complex concept that can differ from one situation to another which will definitely influence our understanding in the explanation of the stimulation-response concept of the Black-box structure. Therefore, according to this black-box definition, explanation requires observation of input and output but does not require direct experience of the activities in the organism concerned, although it can be done. direct observation of internal processes is indeed possible. Therefore we only observe external behavior and regard it as a manifestation of the internal state of the organism in question. Internally, it is essentially an indirect observation. conclusions from observable behavior usually, the relationship between stimulus and response is colored by a cause and effect relationship. will suggest that organisms produce certain behaviors.

The process that occurs in the brain or the center of the perception process is that the individual is aware of what is received through this process. This is the final process of perception and the response as a result of perception can be taken by the individual in various forms. Individuals do not only have one stimulus, but individuals are subjected to various kinds of stimuli caused by surrounding circumstances. But not all stimuli get individual responses. Individuals receive various kinds of stimuli that come from the environment, but not all stimuli can be responded to. some stimulus that attracts individuals who will respond. selecting which stimulus to respond to. stimulus chosen and accepted by an individual. Individuals are aware of and respond as a reaction to the stimulus. The response given by the individual to a stimulus that is appropriate or interesting to the individual (Walgito, the environment alone is not enough to cause the expected response. This theory argues that the response is not direct to the stimulus, but the response is directed at the stimulus they experience. Interpretation of the environment is not based solely on the existing situation but based on the goals to be achieved, motivation, past experience and the ability of the person learning.

2. METHOD

This research was carried out in Sawakong Village, Galesong-Selatan District, Takalar Regency. Purposive selection of research locations. Choosing Sawakong Village because the community has carried out rice farming using organic fertilizer with the sample selection in this research using purposive sampling. Purposive sampling is a method of sampling that is carried out by selecting subjects based on specific criteria set by the researcher (Sugiyono, 2018).

The sample in this research is lowland rice farmers who have used organic fertilizer In paddy rice farming in Sawakong Village, Galesong-Selatan District, Takalar Regency, there are 20 farmers. The data used in this research uses qualitative data, namely data in the form of words or statements. The data sources in this research consist of primary data and secondary data. Primary data is data obtained directly from the party whose data is needed, while secondary data is data which is not obtained directly from the party whose data is needed. Secondary data is obtained through intermediary media, for example archives or documents. Primary data in this research comes from rice farmers in Sawakong Village, South Galesong District, Takalar Regency, while secondary data comes from the Sawakong Village office, South Galesong District, Takalar Regency and data collection in this research was carried out in three stages. Data collection can be done through observation, interviews and documentation (Alhamid & Anufia, 2019). Observation is the systematic observation and recording of the symptoms being studied. In this observation, the presence of a researcher is really needed with the aim of taking systematic notes regarding what will be studied. An interview is an oral question and answer between two or more people directly. This interview aims to obtain data or information from first hand (primary). The presence of researchers is very necessary with the aim of obtaining detailed information.

Documentation is a technique for collecting data obtained through documents and documenting everything related to research with the aim of strengthening the information obtained. As well as data analysis using the data analysis used in this research, namely descriptive data analysis. Descriptive data analysis is a method that determines and provides an overview of the primary data and secondary data that have been collected. Knowing the factors that influence farmers and the response of rice farmers in using organic fertilizer in this study is categorized into three, namely: (a) good, (b) moderate, and (c) poor, namely good = 3, moderate = 2 and poor = 1.

3. RESULTS AND DISCUSSION

3.1 Research results

Sengka Village is close to the border of Gowa and Takalar, then on the Takalar side and the last village is on the west side of Sawakong Village, namely Sawakong Lolo Hamlet Village which has a male population of 421 people and 468 female people, then there is Kasuaarrang Hamlet which has a population of 149 are men and 249 are women, Bontomattiro Hamlet has a population of 295 men and 313 people, 318 men and 336 women.

The climate for the Sawakong Village area, South Galesong District, Takalar Regency is divided into 2 areas each year, namely: a. Wet climate in the period October – April (Rendangan) b. The climate is dry in the period May – September (gadu). The average rainfall for the last 3

years at BPP Galesong Sealatan, the average monthly weather is 15 mm/year and the monthly rainy season is 9.54 HH, the highest rainfall occurs in January and The lowest rainfall is in August. The air temperature ranges from 30 – 35 degrees Celsius. The highest temperatures occur during the day in the dry season, namely in August and September, with temperatures in the Sawakong Village area, South Galesong District, Takalar Regency ranging between 30 - 35 degrees Celsius. The highest temperatures occur during the day and then in the dry season, namely in August. and in September Population is one of the conditions for the formation of a State and at the same time as an asset or capital for successful development in all areas of life. Therefore, their presence and role are very determining for the development of a region, both on a small scale and on a large scale. To find out the situation of the population of Sawakong Village, South Galesong District, Takalar Regency, it can be seen from gender, education and livelihood.

Table 1. Population by Gender in Sawakong Village, South Galesong District, Takalar Regency

No	Hamlet	Number by Gender		amount	Number of families
		Man	Woman		
1	Sawakong Lolo	421	468	889	210
2	Kasuarrang	235	285	520	130
3	Talakalabua	149	249	398	120
4	Bontomattiro	295	313	608	138
5	Sawakong Toa	318	336	654	144

In this case, Sawakong Village, South Galesong District, Takalar Regency has a government institutional structure, namely the Village Head and the Ward Head or in other words the hamlet head. The function of this institution is that all consequences or village government policies are regulated by the institution itself, namely the village head. and the head of the environment or in other words the head of the hamlet, the government institution of Sawakong Village, South Galesong District, Takalar Regency can be seen in the table below:

Table 2. Sawakong Village Institutions, South Galesong District, Takalar Regency

No	Village Name	Village Name	Name of Hamlet and Head of Hamlet/Environment
1	Sawakong	ABD. AZIS TAWANG	1. Sawakong lolo/ Baco With nai 2. Kasuarrang/Dahlan with Jarung 3. Bontomattiro/ Rama Dg Rawang 4. Talakalabua/ Habali Dg Lira 5. Singing/Sanctuating Crazy

The sources of livelihood for residents in Sawakong Village, South Galesong District, Takalar Regency are Farmers, Farm Workers, Cultivator Owners, Cultivator, Bricklayers, Construction Workers, Entrepreneurs, Traders, Livestock, Porli TNI, Fishermen, Mechanics, Civil Servants. For more details about the livelihoods of the residents of Sawakong Village, South Galesong District, Takalar Regency.

3.1.1 Agricultural Conditions in Sawakong Village, South Galesing District, Takalar Regency

The condition of the area in Sawakong Village, South Galesong District, Takalar Regency, is an area that has the potential to be used as a plantation and agricultural area with various commodities, this is due to the condition of the land being fertile and good enough for several commodities. The data shows that the most types of commodities cultivated by farmers are rice with an area of 6.5 ha, hybrid corn with an area of 7.50 ha, green beans with an area of 9.80 ha, soybeans with an area of 1.2 ha, eggplant with an area of 65.60 ha, small Lombok with an area of 72.00 ha and the last one is water spinach. with an area of 58.40 Ha.

Table 3. Types of Agricultural Commodities and Area of Land Use in Sawakong Village, South Galesong District, Takalar Regency

no	Hamlet	Sawakong Village		
		Planting Area (ha)	Production (Tons)	Productivity (kg/ha)
1	Paddy	362.5	2,465	6.80
2	Hybrid Corn	178.1	1,333.75	7.50
3	Mung beans	2.00	19.6	9.80
4	Soya bean	93	111.6	1.2
5	Eggplant	0.50	32.8	65.60
6	Little Lombok	1.00	72.00	72.00

7

Spinach

0.50

29.2

58.40

Age is the length of time the respondent farmer has lived until the time of the research, which is very influential in responding to something new. Apart from that, age also affects the physical condition of each person or individual, especially in carrying out farming or farming activities, age can also make it easier to respond to new things, from a physical perspective, young age tends to be stronger than old age. Previously and longer involved in farming or farming activities and the age of most of the respondent farmers was 59-69 years, namely 10 people with a percentage of 50%. Meanwhile, the minimum age of the respondent farmers was between 46-58 years, namely 4 people with a percentage of 20%. It was concluded that 50% of the respondent farmers were of productive age.

Apart from age, a farmer's ability to think and manage his farming business is greatly influenced by his level of education. Farmers who have relatively high education will influence the way of thinking which causes farmers to be more dynamic and have a better level of acceptance of new technology to increase the production of the branch of farming they are running (Soeharjo and Patong, 1978).

The farming experience referred to is from starting to carry out farming activities. Farmers' long experience makes farmers' abilities in farming better. A person's farming experience will have a big influence on the success or efficacy of farming, especially in decision making in the farming process. Starting from this farming experience, it can be used as a lesson that in general the more experience, the more influence it will have on increasing the farmer's production and profits.

The number of family dependents is the number of people who live in a farming family and are directly dependent on the farming family. The greater the dependents will encourage farmers to be more active in carrying out activities or managing their farming business, where the number of workers will also be large but on the other hand the needs of farming families will increase.

Internal factors are factors that originate from within an individual that have an influence on responding to stimuli from outside. Internal factors examined in this research include age, education, non-formal education. Internal factors that influence farmers' responses to using liquid organic fertilizer in Sawakong Village, South Galesong District, Takalar Regency.

4. CONCLUSION

Based on the results and discussion that have been presented, it can be concluded that: Factors that influence the response of rice farmers to the use of organic fertilizer are internal factors and external factors. Internal factors such as farmer's age, farmer's formal education and farmer's non-formal education. These internal factors can support the success of rice farming because the farmer's age is classified as productive and the farmer's formal education is in the medium category while experience in rice farming is in the high category. Meanwhile, the external factors that influence the response of rice farmers in Sawakong Village, South Galesong District, Takalar Regency are the expected benefits, the time interval between the start of use and obtaining the benefits and the energy/sacrifice expended. The response of rice farmers to the use of organic fertilizer in Sawakong Village, South Galesong District, Takalar Regency is a cognitive response in the high category, namely with an average of 3.00, an affective response in the medium category, namely with an average of 2.25 and a conative response in the category high, namely with an average of 2.41.

REFERENCES

- Alhamid, T., & Anufia, B. (2019). Resume: Instrumen pengumpulan data. Sorong: Sekolah Tinggi Agama Islam Negeri (STAIN).
- Budi, D. R. I. H. I. S., Mariana, I. H., & Fachruzi, M. P. I. I. (2022). *Pengendalian Hayati Penyakit Padi Beras Merah Keramat di Lahan Basah*. CV. AZKA PUSTAKA.
- DENSI, G. S. (2022). *RESPON PETANI TERHADAP PENGGUNAAN PUPUK ORGANIK (Studi Kasus Didesa Punggul, Kecamatan Abiansema, Kabupaten Badung)*. Universitas Mahasaraswati Denpasar.
- Gaol, N. T. L. (2016). Teori stres: stimulus, respons, dan transaksional. *Buletin Psikologi*, 24(1), 1–11.
- Hamakonda, U. A., & Mau, M. C. (2023). PROSPEK PERTANIAN ORGANIK SEBAGAI SALAH SATU KONSEP PENGEMBANGAN VARIETAS PADI KUSUMA SECARA BERKELANJUTAN DI DESA PAPE KECAMATAN BAJAWA KABUPATEN NGADA. *Jurnal Pertanian Unggul*, 2(1), 28–39.
- Heny Wahyuni, A. (2020). Analisis Usaha Tani Dan Faktor-Faktor Yang Mempengaruhi Produksi Padi Sawah

- Organik Dan Non Organik. *Vegetasi*, 16(2).
- Herdini, F. L., & Masduki, M. (2021). Pengembangan penanganan pascapanen melalui kelembagaan pertanian sebagai upaya pembangunan pertanian dan pedesaan. *Buletin Pemberdayaan Masyarakat Dan Desa*, 1(1), 32–37.
- Kartini, N. E., Nurdin, E. S., Hakam, K. A., & Syihabuddin, S. (2022). Telaah Revisi Teori Domain Kognitif Taksonomi Bloom dan Keterkaitannya dalam Kurikulum Pendidikan Agama Islam. *Jurnal Basicedu*, 6(4), 7292–7302.
- Mayrowani, H. (2012). Pengembangan pertanian organik di Indonesia. *Forum Penelitian Agro Ekonomi*, 30(2), 91–108.
- Nahar, N. I. (2016). Penerapan teori belajar behavioristik dalam proses pembelajaran. *NUSANTARA: Jurnal Ilmu Pengetahuan Sosial*, 1(1).
- Prastianto, F. A. (2016). *Metode Pembelajaran Fiqih pada Ranah Psikomotorik di Mi Nurul Huda Kuta Belik Kabupaten Pematang*. IAIN Purwokerto.
- Rahmah, S. (2019). Pola komunikasi keluarga dalam pembentukan kepribadian anak. *Alhadharah: Jurnal Ilmu Dakwah*, 17(33), 13–31.
- Safira, D. Y. (2022). Penerapan Pertanyaan Pra Pembelajaran pada Penguasaan Materi Kelas V Sekolah Dasar. *Prosiding SEMDIKJAR (Seminar Nasional Pendidikan Dan Pembelajaran)*, 5, 414–424.
- Sriyanto, S. (2010). *Panen Duit dari Bisnis Padi Organik*. AgroMedia.
- Sugiyono, P. D. (2018). Quantitative, qualitative, and R&D research methods. *Bandung: (ALFABETA, Ed.)*.
- Suwahyono, U. (2011). *Petunjuk Praktis Penggunaan Pupuk Organik Secara Efektif & Efisien*. Penebar Swadaya Grup.
- Suwahyono, U. (2017). *Panduan penggunaan pupuk organik*. Penebar Swadaya.
- Suyadi, S. (2004). Domain Afektif, Aspek Yang Terlupakan Dalam Dunia Pendidikan. *Tarjih: Jurnal Tarjih Dan Pengembangan Pemikiran Islam*, 7(1), 135–146.
- Triyono, A., & Rahmawati, W. M. (2018). Adopsi Inovasi Budidaya Padi Organik Pada Petani Di Kelompok Appoli (Aliansi Petani Padi Organik Boyolali). *Prosiding University Research Colloquium*, 417–428.
- Yuniarti, A., Damayani, M., & Nur, D. M. (2020). Efek pupuk organik dan pupuk N, P, K terhadap C-organik, N-total, C/N, serapan N, serta hasil padi hitam (*Oryza sativa L. indica*) pada inceptisols. *Jurnal Pertanian Presisi (Journal of Precision Agriculture)*, 3(2), 90–105.