DEVOTION
Journal of Research and Community Service
Volume 4, Number 9, September 2023
e-ISSN: 2797-6068 and p-ISSN: 2777-0915

FARMERS' BEHAVIOR IN UTILIZATION SOURCES OF SHALLOT AGRIBUSINESS INFORMATION (*Allium ascalonicum*)

Heru Adittiyan, Taufik Nurhadiatna, Yusuf Islahudin Arif, Achmad Faqih*
Faculty of Agriculture, Universitas Swadaya Gunung Jati, Indonesia
Email: achmad.faqih@ugj.ac.id*

KEYWORDS
behavior; farmers; information sources; agribusiness

ABSTRACT

This study aims to find out farmers' Behavior in Utilization Sources of Shallot Agribusiness Information (*Allium ascalonicum*). The research design and techniques used quantitative methodswith a descriptive approach and correlational data analysis. Data collection techniques collected are primary data and secondary data. The data analysis method collected in this study was first tabulated and then analyzed using two approaches, namely the qualitative approach and the quantitative approach. The research results show (1) The highest level of utilization of shallot agribusiness information sources, both the percentage of the number of farmers and the intensity of exposure of shallot plant information as well as the use of information, is through interpersonal channels followed by print media and electronic media. (2) Agribusiness information that is most needed by shallot farmers is information on farming subsystems (methods of shallot farming) and support (finding and using capital). The next sequence is information on downstream subsystems (information on prices of production products), information on upstream subsystems (medicines, types and prices of production facilities). (3) Factors that are significantly related to the behavior of using information sources are age, education level, farming scale, income level, farming experience, cognitive motivation, availability of information, information needs on upstream subsystems and supporting subsystems. While the factors that are not significantly related to the behavior of the utilization of information sources are the information needs of the farming subsystem and downstream subsystem.

INTRODUCTION

There are three components that influence human behavior, namely affective, cognitive, and conative components (Komariyah & Farhan, 2020). The affective component is the emotional aspect. The cognitive component is an intellectual aspect, which is related to what is known to humans. The conative component is an aspect related to habits and willingness to act (Rachmat, 2011).

In addition, the general and fundamental obstacles faced in the development of horticulture agribusiness, the most important of which is the small scale of most agribusiness enterprises with a low level of human resource capability (Aisyah et al., 2023; Syahza, 2013). These constraints gave resulting; low ability to take advantage of market opportunities and expand market access, weak capital structure and farmers' limited access to formal sources of capital, weak mastery of and access to technology and information, weak organization and business management, as well, and limited business networks and business cooperation among fellow farmers or small entrepreneurs and between farmers or small entrepreneurs and more advanced and successful entrepreneurs.

According to Pambudi (2000), agribusiness behavior can be measured from: (1) aspects of production technical behavior, namely: the five elements of agricultural business, (2) aspects

of agribusiness management behavior, namely: agribusiness planning, utilization of agribusiness resources, increasing efficiency, increasing productivity, continuously improving product quality, carrying out production technical engineering, carrying out agribusiness institutional functions, and always prioritizing service accuracy and speed, and (3) aspects of the behavior of agribusiness system relations, namely: establishing a relationship of togetherness and interdependence with other agribusiness companies, cooperating harmoniously, and actively communicating agribusiness information.

Information is an important resource for individuals and organizations. In the cognitive paradigm, information is seen as something subjective, individual and untouchable, which occurs through a construction process within humans. The main key to the cognitive paradigm is the individual user. In this case, information is something that is created (constructed or created) by individual users (Jahi, 2013).

In addition, information delivery by information sources is based on the availability of shallot agribusiness information. The agribusiness information is in the form of up-stream agribusiness subsystems, cultivation subsystems or on-farm agribusiness subsystems, downstream agribusiness subsystems and supporting agribusiness.

Moreover, based on the background of study, the study research aims to; (1) find out the level of utilization of agribusiness information sources by shallot farmers in Karangwangun Village, (2) find out the information needed by shallot farmers so that this information can be used as a source of information for the development of shallot agribusiness in Karangwangun Village, and (3) the factors related to the behavior of shallot farmers in utilizing information sources of shallot agribusiness in Karangwangun Village.

Hypothesis

Based on the above framework, the following hypotheses can be put forward:

1) The level of utilization of agribusiness information sources by shallot farmers in Karangwangun Village, namely the level of interpersonal channels, is higher than that of the mass media.
2) Information on agribusiness subsystems, namely the upstream subsystem, farming subsystem, downstream subsystem and supporting subsystem as a source of information needed by farmers in the development of shallot agribusiness in Karangwangun Village.
3) There are several factors related to the behavior of shallot farmers in utilizing information sources of shallot agribusiness in Karangwangun Village.

RESEARCH METHODS

Location, Time, and Research Object

This research was conducted from May 2023 to June 2023 in Karangwangun Village, Babakan District, Cirebon Regency with the consideration that most farmers are engaged in red bottom farming. This research is a survey conducted on one population, namely farmers who control land for farming and have access to sources of information.

Research Design and Techniques

The research uses a descriptive quantitative method, with a qualitative approach and data analysis is descriptive correlational. Independent variable and dependent variable.

Variable Operationalization

Table 1. Operational Variables, Research Measurement Indicators and Scales

No	Variable	Indicator	Scale
1	Demographic Characteristics	Age	Intervals
		Formal education level	Intervals
		Farming scale	Ratio
		Income level	Ratio
		Farming experience	Intervals
2	Utilization of Information Sources	Resources	Ordinal
		Information Utilization	Ordinal
		Cognitive Motivation	Ordinal
		Availability of Information on Information Sources	Ordinal
3	Information Needs	Upstream subsystem	Ordinal
		Farming subsystem	Ordinal
		Downstream subsystem	Ordinal
		Support subsystem	Ordinal

Sampling technique

The population in this study were all shallot farmers in Karangwangun Village, Babakan District, Cirebon Regency.Nasution and Usman (2007) suggests that if the population is less than 100 then the population is used as a sample or is called a saturated sample. So, in this study all populations were sampled by 25 respondents.

Data collection technique

The data collected consisted of two sources, namely primary data and secondary data.

Data analysis method

The data collected in this study were first tabulated and then analyzed using two approaches, namely:

1) A qualitative approach, namely conducting a descriptive analysis of the data and observations.Descriptive analysis is to analyze each variable that affects the use of information on shallot farmers.
2) Quantitative approach, namely by usingnon parametric statistical test. To see the relationship between variables, the "Rank Spearman (rs)" statistical test is used with the following formula (Siegel, 2017):

$$rs = 1 - \frac{6\,\Sigma\, di^2}{n\,(n^2 - 1)}$$

If there are the same observed values, the statistic (rs) is calculated by the formula:

$$rs = \frac{\Sigma x^2 + \Sigma y^2 - \Sigma di^2}{2\sqrt{\Sigma x^2 \Sigma y^2}}$$

Information :
rs = Rank Spearman Correlation Coefficient
in = The difference between the two rankings

x = Age, education level, farming scale, income level, farming experience, cognitive motivation, availability of information, upstream subsystem, farming subsystem, downstream subsystem, support subsystem.
y = Utilization of information sources

To test the significance level of rs, the formula is used:
Formula:

$$t\ count = rs\sqrt{\frac{n-2}{1-(rs)^2}}$$

To facilitate data analysis, the SPSS 17.0 program is used with the following criteria:

- If the significance value is less than the significant level (α) 0.05, it can be concluded that there is a real relationship.
- If the significance value is greater than the significant level (α) of 0.05, it can be concluded that there is no real relationship.

The measurement category on demographic characteristics according to age, education level, farming scale, income level and farming experience, can be measured using class intervals using the Jogiyanto (2014) formula:

$$i = \frac{R}{I}$$

Information:
i = class intervals
R = Range (largest data – smallest data)
I = Number of class intervals

RESULTS AND DISCUSSION

Utilization of Information Sources

As a form of action in finding and utilizing information sources that contain information about shallot crop agribusiness in Karangwangun Village, shallot farmers have maximally utilized all types of information.

Information Understanding

Table 2. Farmers' Understanding of Shallot Agribusiness Information and Sources of Information

No	Type of Information Source	Understanding Shallot Information Sources	
		Total (Respondents)	Percentage (%)
1	Type of Information Source required:		
	- Print media, electronic media, interpersonal channels	25	100
	Amount	25	100
2	Print media:		
	- Magazine, Brochure	5	20
	- Brochure	20	80
	Amount	25	100
3	Electronic Media:		
	- Television, cellphone, internet	1	4
	- Television, cell phone	18	72

No	Type of Information Source	Understanding Shallot Information Sources	
		Total (Respondents)	Percentage (%)
	- Television	6	24
	Amount	25	100
4	Interpersonal Channels:		
	- Field Agricultural Counseling (PPL), friends/neighbors, farm shops/suppliers, community leaders	2	8
	- Field Agricultural Counseling (PPL), friends/neighbors, farm shops/suppliers	20	80
	- Friend/neighbor, farm/supplier shop	3	12
	Amount	25	100
5	Importance of Information Sources:		
	- Very important	25	100
	Amount	25	100

Information Utilization

Table 3. Utilization of Information presented by Information Sources.

No	Information Utilization	Resources		
		Print media	Electronic Media	Interpersonal Channels
1	PCS	3 (12)	2 (8)	25 (100)
2	PC	9 (36)	0 (0)	0 (0)
3	P	13 (52)	23 (92)	0 (0)
Total (Respondents)		25(100)	25(100)	25(100)

Information

PCS = Increase farmers' knowledge, try it, pass it on to friends/other farmers

PC = Increase knowledge, try

P = Just to add knowledge

Numbers in brackets show percentages

Table 3 shows that most of the information obtained through print and electronic media is used only to increase knowledge, followed by adding knowledge and trying it out. Farmers who aim to increase knowledge, try and then convey it to friends or other farmers very little. In contrast to the treatment of information obtained through interpersonal channels, that the majority of the treatment of information utilization is to increase knowledge, tried and conveyed to other farmers.

Cognitive Motivation for Utilizing Information Sources

The incentives that arise from within the farmers to increase their knowledge about shallot farming in utilizing information sources, hereinafter referred to as cognitive motivation, are classified by the respondent farmers into three categories, namely the desire to develop themselves to become successful/successful shallot farmers, the desire to just adding experience and trying, and the desire just curious in obtaining information.

Table 4. Cognitive Motivation for Utilizing Information Sources

No	Information Utilization	Resources		
		Print media	Electronic Media	Interpersonal Channels
1	Success	2 (8)	2 (8)	25 (100)
2	Experience	12 (48)	0 (0)	0 (0)
3	Want to know	11 (44)	23 (92)	0 (0)
Total (Respondents)		25(100)	25(100)	25(100)

Information:
Success = Desire to develop oneself into a successful shallot farmer
Experience = Desire to simply add experience and be tried
Want to know = Desire just curious in obtaining information
Numbers in brackets show percentages

Utilization of sources of information through print media is largely due to the desire to simply gain experience and be tried, followed by the desire to simply be curious in obtaining information and the desire to develop oneself into a successful shallot farmer.

Availability of Information on Information Sources

Table 5. Availability of Information on Information Sources

No	Information Utilization	Resources		
		Print media	Electronic Media	Interpersonal Channels
1	st	0 (0)	2 (8)	23 (92)
2	TS	22 (88)	23 (92)	2 (8)
3	TTS	0 (0)	0 (0)	0 (0)
4	TT	3 (12)	0 (0)	0 (0)
Total (Respondents)		25 (100)	25 (100)	25 (100)

Information:
st = Highly Available
TS = Available
TTS = Not Available
TT = Don't know
Numbers in brackets show percentages

Table 5 shows that of the total number of farmers who used printed media information sources, those who gave the assessment that those provided by the available information sources had the greatest number, the ratings highly available were not much different from farmers who gave the assessments that were not available, while the assessments did not know the least.

Information Needs

Table 6. Upstream Subsystem Information Needs

No	Information Type	Farmer (Person)				Score
		SD	DB	TB	TT	(%)
1	Upstream Subsystem:					
	a. Seeds/seedlings	0	23	2	0	20,28
	b. Fertilizer	0	24	1	0	20.56
	c. Drugs (herbicides, pesticides, etc.)	0	25	0	0	20,83
	d. Equipment/machinery	0	9	16	0	16.39
	e. Types and prices of production facilities	4	21	0	0	21.94

No	Information Type	Farmer (Person)				Score
		SD	DB	TB	TT	(%)
2	Amount	4	102	19	0	100
3	Average Score	0.8	20,4	3,8	0	20

Information:
SD = Much needed
DB = Needed
TB = Not needed
TT = Not Sure

Table 6 shows that the need for upstream subsystem information is generally at the required level. Types and means of production are types of information that are needed by shallot farmers with only 4 people. In terms of equipment/machinery, quite a lot of farmers answered that they did not need it compared to the answers needed. This was because the average shallot farmer respondent already had equipment/machinery. The average score on the upstream subsystem is 20% with a total score of 360.

Table 7. Farming Subsystem Information Needs

No	Information Type	Farmer (Person)				Score
		SD	DB	TB	TT	(%)
1	Farming Subsystem:					
	a. How to cultivate shallots	0	25	0	0	32.89
	b. Time and how to harvest	0	4	21	0	23.69
	c. Plant maintenance/IPM	24	1	0	0	43,423
2	Amount	24	30	21	0	100
3	Average Score	8	10	7	0	33,33

The information needs of the farming subsystem are presented in table 7. The type of information that is needed in the farming subsystem is plant maintenance/IPM for 24 people. The majority of shallot farmer respondents need shallot farming methods, while the time and method of harvesting the majority are not needed because on average they already know when to harvest and how to harvest. The average score on the farming subsystem is 33.33% with a total score of 228.

Table 8. Information Needs of Shallot Plant Agribusiness Downstream Subsystem

No	Information Type	Farmer (Person)				Score
		SD	DB	TB	TT	(%)
1	Downstream Subsystem:					
	a. Means/channel sales of production results	12	13	0	0	23,12
	b. Place of sale of products	11	14	0	0	23,12
	c. The price of the crop	25	0	0	0	26,88
	d. The role of the middleman	25	0	0	0	26,88
2	Amount	73	27	0	0	100
3	Average Score	18.25	6.75	0	0	25

From the research results in table 8, the majority of shallot farmers really need downstream subsystem information. This shows that the information needs of shallot crop agribusiness in the downstream subsystem is very important and feels very lacking for farmers

because it concerns the continuation of shallot crop production, whether the shallot crop they cultivate has good market value, is profitable and has prospects to be cultivated continuously. continuously.

Table 9. Information Needs of Shallot Plant Agribusiness Supporting Subsystems

No	Information Type	Farmer (Person)				Score
		SD	DB	TB	TT	(%)
1	Supporting Subsystems:					
	a. Finding and using capital	12	8	5	0	31.78
	b. Find and use services	1	24	0	0	29,46
	c. Research results (Balitsa, BPTP, PT)	25	0	0	0	38,763
2	Amount	38	32	5	0	100
3	Average Score	12,6	10,6	1,6	0	33,33
4	Subsystem Total Score Mean					27,91

The supporting subsystem in table 9 is the final priority for information needs for farmers. Even though information about seeking and using capital is urgently needed, there is a tendency for farmers not to increase their capital in shallot farming. This is due to the feeling of being haunted and the experience that when they got capital, farmers were unable to repay the loan. Another explanation is why farmers do not increase in size, farmers will not plant or cultivate shallots on a large scale because the price of shallots has a high risk.

Factors Associated with the Behavior of Using Information Sources

Table 1. The Relationship between Demographic Characteristics and Utilization of Information Sources

correlations

			Age	Utilization
Spearman's rho	Age	Correlation Coefficient	1,000	-.463*
		Sig. (2-tailed)	.	.020
		N	25	25
	Utilization	Correlation Coefficient	-.463*	1,000
		Sig. (2-tailed)	.020	.
		N	25	25

Table 2. Level of education

correlations

			Education	Utilization
Spearman's rho	Education	Correlation Coefficient	1,000	.541*
		Sig. (2-tailed)	.	005
		N	25	25
	Utilization	Correlation Coefficient	.541*	1,000
		Sig. (2-tailed)	005	.
		N	25	25

The results showed that the education level of shallot farmers in Karangwangun Village was very low, the majority were in the range of less than seven years. If it is related to the

utilization of information sources, farmers who are in the high, medium and low education level groups mostly make use of the three sources of information. Even lower education seeks to interact with sources of information to meet their information needs.

This is according to the results of Wardhani (1994) and Purnaningsih (1999) where the education level of breeders and vegetable farmers in Cianjur Regency is significantly related to the use and use of information sources (Azizah & Airilza, 2023).

Table 3. Farming Scale

correlations				
			Wide	Utilization
Spearman's rho	Wide	Correlation Coefficient	1,000	.545*
		Sig. (2-tailed)	.	005
		N	25	25
	Utilization	Correlation Coefficient	.545*	1,000
		Sig. (2-tailed)	005	.
		N	25	25

Analysis with SPSS obtained the value of the Spearman Rank Correlation Coefficient between farming scale and utilization of information sources of 0.545 with a two-party test probability of 0.005. Because this probability value is smaller than the significant level, it can be concluded that there is a significant correlation between the scale of farming and the utilization of information sources. This is the same as the results of research conducted by Mulyandari (2011) and Kelvin (1995) where the scale of livestock and farming business is significantly related to the utilization of information sources (Tuwainella et al., 2023).

Income Level

The explanation above is proven by the results of Spearman's rank correlation analysis, namely 0.527 and the probability of a two-party test of 0.007. Because the probability value is smaller than the real level, there is a significant relationship between income levels and the utilization of information sources.

Table 4. Income Level

correlations				
			Income	Utilization
Spearman's rho	Income	Correlation Coefficient	1,000	.527*
		Sig. (2-tailed)	.	007
		N	25	25
	Utilization	Correlation Coefficient	.527*	1,000
		Sig. (2-tailed)	007	.
		N	25	25

Farming Experience

The results of Spearman's rank correlation test were -0.580 with a probability for a two-party test of 0.002. Because this probability value is smaller than the significant level, there is a significant relationship between farming experience and the use of information sources.

The research results obtained are the same as the research that has been carried out by Tamba (2007) farming experience associated with the utilization of information sources. The correlation value is negative, this means that those with low farming experience tend to use more information sources.

Table 4. Farming Experience

correlations				
			Experience	Utilization
Spearman's rho	Experience	Correlation Coefficient	1,000	-.580*
		Sig. (2-tailed)	.	002
		N	25	25
	Utilization	Correlation Coefficient	-.580*	1,000
		Sig. (2-tailed)	002	.
		N	25	25

The Relationship between Cognitive Motivation and Utilization of Information Sources

Table 5. Cognitive Motivation and Utilization of Information Sources

correlations				
			cognitive	Utilization
Spearman's rho	cognitive	Correlation Coefficient	1,000	.915*
		Sig. (2-tailed)	.	.000
		N	25	25
	Utilization	Correlation Coefficient	.915*	1,000
		Sig. (2-tailed)	.000	.
		N	25	25

The results of Spearman's rank analysis between cognitive motivation and utilization of shallot agribusiness information sources amounted to 0.915 with a probability for a two-party test of 0.000. Because this probability value is smaller than the significant level, there is a significant correlation between cognitive motivation and the use of information sources. The research results obtained are in line with the research conducted by Wardhani (1994) where the cognitive motivation of breeders and vegetable farmers is related to the utilization and use of information sources (Nurlina et al., 2011).

The Relationship between the Availability of Information and the Utilization of Information Sources

Table 6. Availability of Information and the Utilization of Information Sources

correlations				
			Availability	Utilization
Spearman's rho	Availability	Correlation Coefficient	1,000	.763*
		Sig. (2-tailed)	.	.000
		N	25	25
	Utilization	Correlation Coefficient	.763*	1,000
		Sig. (2-tailed)	.000	.
		N	25	25

The results of Spearman's rank correlation analysis show that there is a significant relationship because this probability value is smaller than the significant level at α = 0.05, the relationship between the availability of information and the utilization of information sources is shown by Sig (t test) = 0.763 with the probability for a two-party test of 0.000. Variations in the assessment of the level of availability of information presented by information sources tend to vary in the use of information sources by shallot farmers.

The Relationship between Information Needs and the Utilization of Information Sources

Upstream Subsystem

Table 7. Upstream Subsystem

correlations				
			upstream	Utilization
Spearman's rho	upstream	Correlation Coefficient	1,000	-.399*
		Sig. (2-tailed)	.	048
		N	25	25
	Utilization	Correlation Coefficient	-.399*	1,000
		Sig. (2-tailed)	048	.
		N	25	25

The results of the analysis present the value of the Spearman Rank Correlation Coefficient of -0.399 and the probability of a two-tailed test (2-tailed Significance) of 0.048. Because this probability value is smaller than the significant level, it can be concluded that there is a significant relationship between the upstream subsystem and the utilization of information sources.

Farming Subsystem

Table 8. Farming Subsystem

correlations				
			farming	Utilization
Spearman's rho	farming	Correlation Coefficient	1,000	-.278
		Sig. (2-tailed)	.	.178
		N	25	25
	Utilization	Correlation Coefficient	-.278	1,000
		Sig. (2-tailed)	.178	.
		N	25	25

The results of the Spearman Rank Correlation Coefficient analysis between farming subsystems with utilization of information sources is -0.278 with a probability for a two-party test of 0.178. Because this probability value is greater than the significant level, it can be concluded that there is no significant relationship between the farming subsystem and the utilization of information sources.

Downstream Subsystem

Table 9. Downstream Subsystem

correlations				
			Downstream	Utilization
Spearman's rho	Downstream	Correlation Coefficient	1,000	-.220
		Sig. (2-tailed)	.	.292
		N	25	25
	Utilization	Correlation Coefficient	-.220	1,000
		Sig. (2-tailed)	.292	.
		N	25	25

The results of Spearman's rank correlation test were -0.220 with a probability for a two-party test of 0.292. Because this probability value is greater than the significance level, there is no significant relationship between farming experience and the use of information sources.

Supporting Subsystem

Table 10. Supporting Subsystem

correlations				
			Support	Utilization
Spearman's rho	Support	Correlation Coefficient	1,000	-.520**
		Sig. (2-tailed)	.	008
		N	25	25
	Utilization	Correlation Coefficient	-.520**	1,000
		Sig. (2-tailed)	008	.
		N	25	25

The results of Spearman's rank correlation analysis show that there is a significant relationship because this probability value is smaller than the significant level at α = 0.05, the relationship between the availability of information and the utilization of information sources is indicated by Sig (t test) = -0.520 with a probability for a two-test party of 0.008.

CONCLUSION

After analyzing the results of the research, it can be concluded that; (1) the level of utilization of shallot agribusiness information sources in Karangwangun Village, Babakan District, Cirebon Regency, is the highest, based on percentage, number of farmers, understanding of shallot plant information, cognitive motivation and availability of information on information sources is through interpersonal channels followed by print media and the media electronic, (2) agribusiness information that is needed by shallot farmers is information on farming subsystems (plant maintenance/IPM) and supporting subsystems. The next sequence is downstream subsystem information (the role of middlemen), upstream subsystem information (types and prices of production facilities), and (3) factors that are significantly related to the behavior of utilizing information sources are age, education level, farm scale, income level, farming experience, cognitive motivation, availability of information on the information needs of the upstream and supporting subsystems. While the factors that are not significantly related to the behavior of the utilization of information sources are the information needs of the farming subsystem and downstream subsystem.

REFERENCES

Aisyah, S., Faqih, A., Putra, A. A., Rahayu, S. R., & Yahya, R. T. (2023). The Relationship Between Farmer Competence and Shallot Farm Income (Allium Ascalonicum L.). *Eduvest-Journal of Universal Studies*, *3*(8), 1415–1423.

Azizah, S., & Airilza, Q. A. (2023). Utilization Of Social Media By Daily Cattle Farmers During The Covid-19 Pandemic. *Jurnal Sosial Humaniora Dan Pendidikan*, *2*(1), 1–12.

Jahi, A. (2013). *Komunikasi massa dan pembangunan pedesaan di negara-negara dunia ketiga: suatu pengantar*.

Jogiyanto. (2014). *Statistik Dengan Program Komputer*. Andi Offest.

Komariyah, F., & Farhan, A. (2020). Pengaruh persepsi masyarakat terhadap keputusan menjadi nasabah Bank Syariah studi kasus pada masyarakat kota Sidoarjo dan surabaya. *Media Mahardhika*, *18*(3), 341–344.

Mulyandari, R. S. H. (2011). Perilaku petani sayuran dalam memanfaatkan teknologi informasi. *Jurnal Perpustakaan Pertanian*, *20*(1), 22–34.

Nasution, M. E., & Usman, H. (2007). Proses penelitian kuantitatif. *Jakarta: Lembaga Penerbit Fakultas Ekonomi Universitas Indonesia*.

Nurlina, L., Harlia, E., & Karmilah, D. (2011). Hambatan Sosiologis Peternak Sapi Potong pada Program IbW dalam Pemanfaatan Limbah Menjadi Pupuk Organik Padat (The Sociological Barriers of Small holders Beef Cattle Farmer on IbW Programme to Utilize Manure for Solid Organic Fertilizers). *Jurnal Ilmu Ternak Universitas Padjadjaran*, *11*(2).

Pambudy, R. (2000). *Peranan Ilmu Penyuluhan dalam Pengembangan Agribisnis*.

Purnaningsih, N. (1999). *Pemanfaatan sumber informasi tentang usahatani sayuran oleh petani*.

Rakhmat, J. (2011). *Psikologi komunikasi*.

Suwandi & Azirin, A. (1995). Pola usahatani berbasis sayuran dengan berwawasan lingkungan untuk meningkatkan pendapatan petani. *Prosiding Ilmiah Nasional Komoditas Sayuran Balitsa, Lembang*.

Syahza, A. (2013). *Strategi pengembangan daerah tertinggal dalam upaya percepatan pembangunan ekonomi pedesaan*.

Tuwainella, M. R., Matatula, M. J., & Tatipikalawan, J. M. (2023). Peran Usaha Ternak Sapi Bagi Pendapatan Masyarakat Urban Di Kecamatan Salahutu Provinsi Maluku. *Jurnal Pertanian Agros*, *25*(2), 1706–1715.

Wardhani, A. C. (1994). *Hubungan karakteristik demografis dan motivasi kognitif peternak dengan penggunaan suber-sumber informasi tentang ayam buras di desa Cisontrol, Kabupaten Ciamis*. IPB (Bogor Agricultural University).