

The Role of Parents in Farmer Regeneration in Cianjur and West Bandung Regencies, West Java, Indonesia

Lukman Effendy¹; Arif Prasetyanto²; Suherlan³

^{1,2,3}Sustainable Agricultural Extension Study Program Bogor Agricultural Development Polytechnic Jl. Aria Surialaga, Cibalagung, Bogor, West Java

Publication Date: 2026/08/19

Abstract: Indonesia currently faces the challenge of low interest among the younger generation in pursuing agriculture as a career. A series of studies conducted in Cianjur and West Bandung Regencies aimed to: [1] describe the role of parents in supporting farmer succession; [2] analyze factors influencing this parental role; and [3] formulate strategies to enhance the parental role in farmer succession. The study participants consisted of 120 heads of households—selected purposively from four districts (30 per district)—and data were collected through face-to-face interviews using a structured questionnaire that had undergone validity and reliability testing. The data were analyzed using multiple linear regression. The results showed that: [1] the majority of respondents (64.43%) perceived the parental role as adequate; extension activities (X_1) were rated by most respondents as insufficiently aligned with needs, and supporting factors (X_4) were rated as providing insufficient support, whereas environmental factors (X_3) were rated as providing adequate support; [2] extension activities influenced ($p < 0.05$) the parental role (Y_1) in Cianjur, while environmental and supporting factors had a highly significant influence ($p < 0.01$) in both Cianjur and West Bandung. The parental role (Y_1) had a highly significant influence ($p < 0.01$) on the success of farmer succession (Y_2); and [3] strategies to enhance the parental role include setting an example and showing respect for their children, transferring resources and social capital, providing motivation and encouragement, conducting outreach and knowledge transfer, collaborating on extension and education/training activities, and building a positive image of agriculture.

Keywords: Role, Parents, Regeneration, Farmers, Cianjur, Bandung Barat.

How to Cite: Lukman Effendy; Arif Prasetyanto; Suherlan (2026) The Role of Parents in Farmer Regeneration in Cianjur and West Bandung Regencies, West Java, Indonesia. *International Journal of Innovative Science and Research Technology*, 11(8), 934-943. <https://doi.org/10.38124/ijisrt/26aug332>

I. INTRODUCTION

Generational renewal among farmers has become a critical issue, given the advanced age of many current farmers; such renewal is essential to ensuring the sustainability of the agricultural sector. Currently, the number of farmers in Indonesia stands at 38.77 million, down from 42.46 million a decade ago (BPS 2024)—a decline of 3.68 million people (8.69%). This trend is somewhat concerning, particularly as the country is currently experiencing a demographic bonus, with approximately 65 percent of the population within the productive age range (15–64 years). This situation necessitates strategies to empower young people (Gen Z and Gen Y) within the agricultural sector. According to the 2023 Agricultural Census, there are 6,183,009 young farmers (Millennials) aged 19–39, representing approximately 21.93 percent of Indonesia's 28,192,693 farmers. In West Java, the number of individual agricultural enterprises (UTP) totals 3,292,120 units (11.22%)—the third-highest figure after East Java and

Central Java—with 543,044 millennial farmers, accounting for approximately 8.78 percent of the total. On the other hand, West Java has the highest number of urban farming households (3,213 or 24.87%) compared to East Java and Central Java, which have 18.95% and 15.07 percent, respectively. According to Wiyono (2015), parents exert the greatest influence (70%) on their children becoming entrepreneurs. This strong parental encouragement stems from the fact that agriculture holds significant value and offers favorable economic returns; parental influence serves as an effective factor in shaping their children's entrepreneurial choices. Furthermore, individuals raised in agricultural environments acquire a sense of responsibility, work strategies, independence, initiative, and problem-solving skills, while also gaining access to the agricultural environment and their parents' professional networks. Consequently, the challenges facing farmer succession include: (1) low interest among the younger generation in agriculture, driven by factors such as persistent negative stigmas—perceptions of the work as dirty or associated with

poverty—as well as massive land-use conversion, limited access to capital, high risk, and unstable income; (2) the suboptimal role of parents in encouraging their children to become farmers; and (3) a lack of policies that integrate families into succession programs. The research aims to: (1)

II. RESEARCH METHODS

This study employs an ex-post facto research approach, observing events that have already occurred through quantitative data collection methods supplemented by qualitative data. The research is scheduled to take place over a six-month period (March–September 2026) across several regencies in West Java, covering both areas participating in the YESS Program and those that are not. The study population consists of heads of households (fathers/mothers) from sub-districts where the YESS Program is implemented, as well as a comparison group of heads of households from sub-districts where the program is not implemented.

A quota sampling method is used to select 30 respondents from each of the two YESS-participating sub-districts and two non-participating sub-districts, resulting in a total sample size of 120 respondents. The data collected in this study consist of both primary and secondary data. Primary data are derived from respondents' answers regarding the selected variables, whereas secondary data come from sources that do not provide information directly to the enumerator—such as through third parties or existing documents (Sugiyono 2020). Accordingly, primary data were obtained through direct interviews using a questionnaire that had undergone validity and reliability testing. Secondary data were obtained indirectly from agencies or institutions relevant to the study, such as district and village monographs and other documents. A questionnaire served as the data

enhance parental involvement as motivators, role models, and facilitators of farmer succession; (2) ensure the sustainability of rice self-sufficiency by increasing the number of young farmers; and (3) build a modern, competitive family-based agricultural ecosystem.

collection instrument, designed to capture data on the variables under study; it comprised closed-ended questions or statements with predetermined response options in the form of numerical scores ranging from 1 to 4 (categorized as: 1 = very poor, 2 = poor, 3 = adequate, and 4 = good). Prior to use, the questionnaire underwent validity and reliability testing; the results demonstrated good validity and high reliability, confirming its suitability as a data collection tool.

The collected data were analyzed using two methods: descriptive analysis to examine the profiles or characteristics of the research variables, and multiple linear regression analysis to determine the extent of the influence exerted by each variable.

III. RESULTS

➤ Respondent Characteristics (X_1)

The respondents consisted of 120 farmer household heads distributed across four selected districts: Pacet and Cipanas in Cianjur Regency, and Cipatat and Sindangkerta in West Bandung Regency. Descriptive analysis results indicate that the respondents were predominantly in the 51–60 age group (37.50%); the majority had 6–9 years of education—meaning they had completed elementary and junior high school (56.67%); a significant proportion (44.17%) possessed 10–20 years of experience; and the majority (50.83%) had 2–3 family dependents, as detailed in Table 1.

Table 1 Description of Respondent Characteristics (X_1)

No	Indicator	Group	Amount	Percentage (%)
1	Age	28 – 40 year	22	18.33
		41 – 50 year	28	23.33
		51 – 60 year	45	37.50
		61 – 75 year	25	20.84
2	Education	< 6 year	3	2.50
		6 – 9 year	68	56.67
		10 – 12 year	34	28.33
		>12 year	15	12.50
3	Experience	< 10 year	12	10.00
		10 – 20 year	53	44.17
		21 – 30 year	40	33.33
		>30 year	15	12.50
4	Family Dependents	< 2 soul	8	6.67
		2 – 3 soul	61	50.83
		4 – 5 soul	46	38.34
		>5 soul	5	4.16

Based on Table 1 above, it is evident that the majority of the respondent farmers fall into the older age category (51–60 years old), possess low levels of education (primary and junior high school), have substantial farming experience ranging from 10 to 20 years, and support a family of two to three dependents. Consequently, these findings regarding the

farmers' characteristics can serve as a basis for consideration in efforts to enhance the role of parents in the process of farmer succession.

➤ *Extension Activities (X₂)*

The extension activities in question encompass extension intensity, content, methods, and media. Descriptive analysis results indicate that the majority of respondents

(52.73%) rated these extension activity variables—comprising intensity, content, methods, and media—as falling into the "less suitable" category, as shown in Table 2.

Table 2 Description of Extension Activity Variables (X₂)

No	Indicator	Category (%)			
		It is not in accordance with	Not Quite Suitable	Suitable	Highly Suitable
1	Extension Intensity	3,36	53,78	33,61	9,24
2	Extension Content	5,04	30,25	52,10	12,61
3	Extension Methods	12,61	28,57	58,82	0,00
4	Extension Media	1,68	98,32	0,00	0,00
	Average	5.67	52.73	36.13	5.46

Table 2 above suggests that the respondent farmers perceive extension activities as inadequate—particularly regarding the role of farmer succession—indicating a general need to improve extension efforts focused on this issue within farming households. Key aspects requiring specific attention are the extension media used and the frequency of the activities; since the majority of respondents (98.32% and 53.78%) rated these as inadequate, there is a need to ensure consistent scheduling of visits to farming families and the broader community, while utilizing media that are engaging and easily understood by the target audience.

➤ *Environmental Factors (X₃)*

The environmental factors examined in this study include public perception, norms and values held by the community, resources, and available public facilities. Descriptive analysis results indicate that the supporting variables—comprising public perception, local community norms and values, resources, and the availability of public facilities—were rated as "supportive" by a portion of the respondents (34.87%), as shown in Table 3.

Table 3 Description of Environmental Factor Variables (X₃)

No	Indicator	Category (%)			
		Does Not Support	Weakly Supports	Supports	Strongly Supports
1	Public Perception	1,68	98,32	0,00	0,00
2	Norms and Values	7,56	26,05	63,87	2,52
3	Resources	54,62	6,72	38,66	0,00
4	Public Facilities	54,62	3,36	36,97	5,04
	Average	29,62	33,61	34,87	1,89

Table 3 above indicates that environmental factors—comprising societal norms and values, resource availability, and the availability of public facilities—were rated by a portion of the respondent farmers (34.87%) as supportive of efforts to enhance the role of parents in the generational renewal of farmers. An environmental aspect requiring attention is community perception; all respondent farmers (100%) rated it as unsupportive, with the vast majority (98.32%) specifically rating it as lacking in support.

➤ *Faktor Pendukung (X₄)*

The supporting factors in question consist of: government support, ease of access to information sources, available facilities and infrastructure, and community support. Descriptive analysis results indicate that these supporting factors—comprising government support, ease of access to information sources, the availability of facilities and infrastructure, and support from community figures—were rated by a portion of respondents (41.39%) as falling into the "insufficiently supportive" category, as shown in Table 4.

Table 4 Description of Supporting Factor Variables (X₄)

No	Indicator	Category (%)			
		Does Not Support	Weakly Supports	Supports	Strongly Supports
1	Government Support	8,40	36,97	42,86	11,76
2	Information Sources	4,20	37,82	45,38	12,61
3	Facilities and Infrastructure	7,56	42,86	41,18	8,40
4	Community Leaders	7,56	47,90	32,77	11,76
	Average	6,93	41,39	40,55	11,13

Table 4 above indicates that environmental factors—comprising government support, ease of access to information sources, the availability of facilities and infrastructure, and support from community leaders—were rated by a portion of the respondent farmers (41.39%) as

falling into the "less supportive" category. Key aspects requiring attention in efforts to enhance the role of parents in farmer regeneration include support from community leaders—rated as "less supportive" by the largest share of respondents (47.90%)—followed by the availability of

facilities and infrastructure, which 42.86% of respondents also rated as "less supportive." Similarly, other environmental factors, such as ease of access to information and government support, also warrant attention in the context of increasing the role of parents in farmer regeneration.

➤ Parental Role (Y_1)

The parental support expected in the process of farmer succession includes acting as a source of inheritance, a motivator, and a behavioral role model. Descriptive analysis results indicate that the majority of respondents (64.43%) assessed this support as falling within the "playing a role" category, as detailed in Table 5.

Table 5 Description of the Parental Role Variable (Y_1)

No	Indicator	Category (%)			
		No Role	Minor Role	Significant Role	Major Role
1	Inheritance	2,52	0,84	94,12	2,52
2	Motivator	3,36	34,45	49,58	12,61
3	Behavioral Model	5,88	33,61	49,58	10,92
	Average	3,92	22,97	64,43	8,68

Based on Table 5, it can be interpreted that the role of parents in the farmer succession program is already quite good, as the majority of respondent farmers (64.43%) agree that they have played a role. Aspects requiring attention to enhance parental involvement include their roles as motivators and as behavioral models (or agents of socialization), given that only a portion of respondents (49.58% in each case) felt that this role was adequately fulfilled.

➤ Regeneration Success (Y_2)

The success of farmer regeneration is assessed based on two aspects: the increase in the number of millennial farmers and the widespread adoption of modern agriculture. Descriptive analysis results indicate that the majority of respondents (55.88%) agree that farmer regeneration has been less than successful, as shown in Table 6.

Table 6 Description of Regeneration Success Variables (Y_2)

No	Indicator	Category (%)			
		Unsuccessful	Less Successful	Successful	Highly Successful
1	Number of Millennial Farmers Increases	5,88	53,78	33,61	6,72
2	Agricultural Modernization	7,56	57,98	22,69	11,76
	Average	6,72	55,88	28,15	9,24

Table 6 indicates that the majority of respondents (55.88%) rated the success of the generational renewal process as poor; this implies that they perceive a lack of increase in the number of millennial farmers—at least within their own communities—and have not yet observed tangible changes regarding the adoption of modern agriculture.

➤ Factors Influencing the Parental Role

• Combination of Two Regencies

The results of the multiple linear regression analysis combining the two regencies indicate that the significant variables are environmental factors and supporting factors ($p < 0.01$), with coefficients of 0.429 and 0.392, respectively, as detailed in Table 7.

Table 7 Factors Influencing the Role of Parents

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	,237	,271		,873	,384
	Characteristics (X_1)	,030	,050	,033	,587	,558
	Extension Activity (X_2)	,094	,093	,104	1,011	,314
	Environmental Factors (X_3)	,429	,125	,373	3,420	,001 **
	Supporting Factors (X_4)	,392	,089	,410	4,384	,000 **

a. Dependent Variable: The Role of Parents R^2 0,666

Table 7 shows that two variables have a significant influence ($p < 0.01$) on the role of parents—namely, environmental factors (X_3) and supporting factors (X_4)—with a constant of 0.237 and $R^2 = 0.666$. These results can be illustrated by the following equation:

$$Y = 0.237 + 0.429X_3 + 0.392X_4$$

• The Equation Above Can be Explained as Follows:

- ✓ The research results yielded a constant value of 0.237, meaning that if the research variables—specifically X_3 and X_4 —are zero or absent, the value of the parental role (Y) is 0.237; thus, this study contributes to the findings, particularly regarding the enhancement of the parental role in the generational renewal of farmers;

- ✓ The environmental factor (X_3) has a coefficient value of 0.429, which implies that if the supporting factor (X_4) is zero, every one-unit increase in the environmental factor (X_3) will increase the parental role (Y) by 0.429;
- ✓ The supporting factor (X_4) has a coefficient value of 0.392, which implies that if the environmental factor (X_3) is zero, every one-unit increase in the supporting factor (X_4) will increase the parental role (Y) by 0.392;
- ✓ The research results yielded an R^2 (adjusted R-square) value of 0.666, which can be interpreted to mean that the variables selected for this study contribute 66.6 percent to the parental role or the research outcome.

• *Factors Influencing the Success of Farmer Regeneration Across Two Regencies*

Hasil analisis regresi linier berganda gabungan dua kabupaten terdapat variabel yang berpengaruh langsung secara signifikan terhadap keberhasilan regenerasi petani, yaitu faktor lingkungan ($p < 0.05$) dan faktor pendukung ($p < 0.01$), dengan masing-masing koefisien sebesar 0.309 dan 0.610.

Table 8 Factors Influencing Farmer Regeneration

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.157	.341		-.462	.645
	Characteristics (X_1)	.090	.064	.089	1.418	.159
	Extension Activity (X_2)	.026	.117	.025	.219	.827
	Environmental Factors (X_3)	.309	.158	.239	1.960	.050*
	Supporting Factors (X_4)	.610	.113	.566	5.421	.000**
a. Dependent Variable: Regeneration Success (R^2 0,583)						

Table 8 shows that two variables significantly influence the parental role: environmental factors (X_3) [$p < 0.05$] and supporting factors (X_4) [$p < 0.01$], with coefficients of 0.309 and 0.610, respectively. The coefficient of determination (R^2) is 0.583, and the constant is -0.157. These results can be expressed by the following equation:

$$Y = -0.157 + 0.309X_3 + 0.610X_4$$

• *The Equation above Can be Explained as Follows:*

- ✓ The research results yielded a constant value of -0.157; this means that if the research variables—specifically X_3 and X_4 —are zero or absent, the value of parental role (Y) is -0.157. Thus, this study contributes to the findings, particularly regarding the enhancement of successful farmer regeneration;
- ✓ The environmental factor (X_3) has a coefficient value of 0.309; this implies that if the supporting factor (X_4) is zero, every one-unit increase in the environmental factor (X_3) will increase the success of farmer regeneration (Y) by 0.309;

- ✓ The supporting factor (X_4) has a coefficient value of 0.610; this implies that if the environmental factor (X_3) is zero, every one-unit increase in the supporting factor (X_4) will increase the parental role (Y) by 0.610;
- ✓ The study obtained an R^2 (adjusted R-square) value of 0.583; this can be interpreted to mean that the variables selected for this study contribute 58.3 percent to the success of farmer regeneration (or the research outcome), while 41.7 percent is attributable to factors outside the scope of this study.

➤ *The Influence of Parental Role (Y_1)*

• *On the Success of Farmer Succession (Y_2)*

✓ *Combined Data from Two Regencies*

This study is also expected to reveal implications regarding the role of parents in the success of farmer succession. Based on the analysis results, the role of parents has a significant effect ($p < 0.01$) on the success of farmer succession, as presented in Table 9.

Table 9 Influence of Parental Roles on the Success of Farmer Succession.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.063	.186		.337	.736
	The role of parents (Y_1)	.933	.058	.830	16.138	.000**
a. Dependent Variable: Regeneration Success (R^2 0,686)						

Based on Table 9, it can be inferred that the role of parents has a direct influence on farmers' success, with a coefficient of 0.933, a constant of 0.063, and an R^2 of 0.686. Meanwhile, the role of parents is directly influenced by environmental and supporting factors; therefore, to enhance the success of generational renewal, efforts should be made to strengthen the role of parents while simultaneously improving environmental and supporting factors.

• *Factors Influencing the Role of Parents in West Badung Regency*

The multiple linear regression analysis for West Bandung Regency revealed that the supporting factor was a significant variable ($p < 0.01$), with a coefficient of 0.511. Detailed analysis results are presented in Table 10.

Table 10 Factors Influencing the Role of Parents in West Bandung Regency.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	-,041	,429	-,095	,925
	Characteristics (X ₁)	,081	,087	,937	,353
	Extension Activity (X ₂)	,105	,153	,684	,497
	Environmental Factors (X ₃)	,333	,198	1,685	,098
	Supporting Factors (X ₄)	,511	,117	4,371	,000**
a. Dependent Variable: The role of parents (R ² 0,550)					

Table 10 shows that two variables have a significant influence ($p < 0.01$) on the role of parents in West Bandung Regency: the supporting factor (X₄), with a coefficient of 0.511, a constant of -0.041, and $R^2 = 0.550$. These results can be illustrated by the following equation: $Y = -0.041 + 0.511X_4$

• *The Equation above Can be Explained as Follows:*

- ✓ The research results yielded a constant value of -0.041, meaning that if the research variable—specifically X₄—is zero or absent, the value of the parental role (Y) is -0.041; thus, this study contributes to the findings, particularly regarding the enhancement of successful farmer succession;
- ✓ The supporting factor (X₄) has a positive effect of 0.511 on the parental role, meaning that every one-unit increase

in the environmental factor results in a 0.511 increase in the parental role;

- ✓ The study obtained an R^2 value of 0.550, indicating that the variables examined in this research contribute 55 percent to the parental role or the research outcome.

• *The Influence of the Parental Role (Y₁) on the Success of Farmer Succession (Y₂) in West Bandung Regency*

This study is also expected to reveal implications regarding the role of parents in the success of farmer succession. Based on the analysis results, the role of parents has a significant influence ($p < 0.01$) on the success of farmer succession in West Bandung Regency, with a coefficient of 0.927, as presented in Table 11.

Table 11 Influence of Parental Roles on the Success of Farmer Succession

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	,110	,210	,523	,603
	The role of parents (Y ₁)	,927	,068	13,553	,000**
a. Dependent Variable: Regeneration Success (R ² 0,543)					

Based on Table 11, it can be inferred that the role of parents directly influences the success of farmer succession, with a coefficient of 0.927, a constant of 0.110, and an R^2 of 0.543. Since the role of parents is, in turn, directly influenced by supporting factors, efforts to enhance succession success should focus on strengthening the parental role while simultaneously bolstering these supporting factors—such as government support, ease of access to information, the availability of facilities and infrastructure, and increased support from community leaders.

• *Factors Influencing the Role of Parents in Cianjur Regency*

Hasil analisis regresi linier berganda Kabupaten Cianjur diperoleh bahwa variabel yang berpengaruh signifikan, yaitu kegiatan penyuluhan ($p < 0.05$) dan faktor lingkungan ($p < 0.01$), dengan masing-masing koefisien sebesar 0.209 dan 0.691. Rincian hasil analisis disajikan pada Tabel 12.

Table 12 Factors Influencing the Role of Parents in Cianjur Regency.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	,455	,324	1,404	,166
	Characteristics (X ₁)	,012	,061	,193	,848
	Extension Activity (X ₂)	,209	,117	1,782	,050*
	Environmental Factors (X ₃)	,691	,169	4,096	,000**
	Supporting Factors (X ₄)	-,031	,158	-,197	,844
a. Dependent Variable: The role of parents (R ² 0,630)					

Table 12 shows that two variables have a significant effect: extension activities ($p < 0.05$) and environmental factors ($p < 0.01$), with coefficients of 0.209 and 0.691, a constant of 0.455, and $R^2 = 0.630$. These results can be

illustrated by the following equation: $Y = 0.455 + 0.209X_2 + 0.691X_3$

• *The Equation Above Can be Explained as Follows:*

- ✓ The research results yielded a constant value of 0.455; this means that if the research variables—specifically X_4 and X_3 —are zero or absent, the value of the parental role (Y) is 0.455. Thus, this study contributes to the findings, particularly regarding the enhancement of successful farmer succession;
- ✓ Extension activities (X_2) have a positive effect of 0.209 on the parental role; this means that a one-unit increase in extension activities leads to a 0.209 increase in the parental role, assuming the environmental factor (X_3) is zero;
- ✓ The environmental factor (X_2) has a positive effect of 0.691 on the parental role; this means that a one-unit

increase in extension activities leads to a 0.691 increase in the parental role, assuming the environmental factor (X_2) is zero;

- ✓ The research results yielded an R^2 of 0.630, meaning that the variables examined in this study contribute 63 percent to the parental role or the research outcome.

• *The Influence of the Parental Role (Y_1) on the Success of Farmer Succession (Y_2) in Cianjur Regency.*

This study is also expected to reveal implications regarding the role of parents in the success of farmer succession. Based on the analysis results, the role of parents has a significant influence ($p < 0.01$) on the success of farmer succession in Cianjur Regency, with a value of 1.020, as presented in Table 13.

Table 13 Influence of Parental Roles on the Success of Farmer Succession.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-,257	,397		-,648	,520
	The role of parents (Y_1)	1,020	,118	,751	8,649	,000**

a. Dependent Variable: Regeneration Success (R^2 0,556)

Based on Table 13, it can be inferred that the role of parents directly influences the success of farmer succession, with a coefficient of 1.020, a constant of -0.257, and an R^2 of 0.556. Meanwhile, the role of parents is directly influenced by extension activities and environmental factors; therefore, to enhance the success of succession, measures should be taken to strengthen the role of parents while simultaneously improving extension activities—specifically regarding intensity, content, media, and methods—and addressing environmental factors such as community perceptions, local norms and values, resource availability, and the availability of public facilities.

IV. DISCUSSION

➤ *The Impact of Extension Activities on Parental Roles*

Research findings (Table 12) indicate that the role of parents was significantly influenced ($p < 0.05$) by extension activities in Cianjur Regency, whereas the influence was not significant in West Bandung Regency. These extension activities encompassed the frequency (intensity) of sessions, as well as the content, methods, and media employed. Descriptive analysis revealed that the majority of respondents (52.73%) rated the extension activities as "less than adequate." The aspects rated most poorly were the extension media and the frequency of sessions, followed by the content and methods. In contrast to Cianjur, extension activities in West Bandung Regency did not significantly influence the parental role in the farmer regeneration program. Several factors likely account for this difference: West Bandung was not included in the Youth Entrepreneurship and Employment Support Services (YESS) program—a Ministry of Agriculture initiative designed to foster young farmers through various stimulating interventions—whereas Cianjur was a selected regency. Consequently, Cianjur benefited from training, mentoring, internships, and financial assistance, leading to more intensive engagement with the community regarding the farmer regeneration program. These results

indicate that extension activities have not yet succeeded in enhancing the role of parents in the farmer regeneration program; this implies that the media used to convey information about the program were not well-suited to the parents, and the frequency of extension sessions was insufficient to build the confidence needed for them to accept the program. Similarly, respondents felt that the extension materials were not well-aligned with the farmer regeneration program, and the methods employed were likewise unsuitable for them. It can be concluded that while extension activities do enhance farmers' capacity to receive information and innovations, the specific elements of the program in this instance fell short of effectively engaging parents in the farmer regeneration initiative. These findings align with Azzahra (2025), who stated that extension activities—encompassing materials, media, methods, and frequency—significantly influence ($p < 0.01$) farmers' capacity to adopt modern agriculture. They also concur with Effendy et al. (2020), who concluded that extension activities determine youth interest in the agricultural sector.

➤ *The Influence of Environmental Factors on the Role of Parents*

Research findings (Table 12) indicate that in Cianjur, environmental factors significantly influence ($p < 0.01$) the role of parents. This means that in Cianjur Regency, the parental role in farmer succession is shaped by community perceptions, ease of access to information sources, resource availability, and the availability of public facilities; conversely, in West Bandung, environmental factors do not have a significant impact on the parental role. This situation may be attributed to Cianjur Regency's participation in the YESS program—as previously outlined—an initiative by the Ministry of Agriculture designed to foster young farmers through various stimulating interventions. As a selected regency, Cianjur benefited from activities such as training, mentoring, and internships, as well as financial assistance; consequently, there was more intensive community

engagement regarding the farmer succession program, and the public in Cianjur—particularly in the Pacet and Cipanas districts—became generally aware of the program. These results align with the findings of Nurlita (2025), who concluded that environmental factors—such as the availability of infrastructure and facilities, ease of access to information sources, government programs, and community perceptions—significantly influence ($p < 0.01$) the role of parents in supporting the next generation of farmers in Malangbong, Garut. Similarly, research by Hikmah (2025) indicates that environmental factors—comprising infrastructure availability and institutional support for farmers—help determine the success of the paddy field pump irrigation program. Furthermore, environmental aspects—including community perceptions, ease of access to information sources, and group support—also influence the role of agricultural extension workers in the adoption of agricultural innovations (Alif, 2025). Meanwhile, external support—consisting of infrastructure, group support, information access, and government assistance—impacts the capacity of millennial farmers (Effendy & Rumono, 2021). Likewise, Effendy et al. (2022) reported that external factors—including agricultural extension services, infrastructure, and community support—play a role in shaping the interest of young people in agriculture. Based on the preceding explanation, it can be concluded that environmental factors play a significant role in shaping how parents act, behave, and provide the motivation and encouragement needed to interest their children in agricultural ventures. These parental actions and behaviors often arise after observing the children of neighbors, relatives, or kin who have ventured into—and even succeeded in—agriculture; this suggests that the parents in question have undergone a process of horizontal learning, or "horizontal transmission learning" (Effendy, L. 2023).

➤ *The Influence of Supporting Factors on the Role of Parents*

Research findings (Table 10) indicate that supporting factors have a significant influence ($p < 0.01$) on the role of parents in West Bandung, whereas in Cianjur Regency, the influence of supporting factors is not statistically significant. This can be explained by the fact that government support, ease of access to information sources, the availability of facilities and infrastructure, and support from community leaders play a crucial role in bolstering the parental role. When viewed alongside the descriptive analysis, which reveals that a portion of respondents (41.39%) rated supporting factors as inadequate—a higher proportion than for other support aspects—it can be concluded that the respondent farmers perceive a lack of support regarding these specific elements. Several other studies align with these findings; for instance, Effendy et al. (2023) concluded that government support significantly influences the empowerment of farmer group associations. Furthermore, government support—manifested through program availability, sustainability, program utility, and human resource development—impacts institutional performance and agricultural extension services in the context of increasing rice production (Effendy et al., 2023). Similarly, Effendy et al. (2022) found that support from agricultural

extension workers, extension activities, and family support influence the interest of millennial farmers, while Effendy et al. (2023) noted that the competence of millennial farmers in highland vegetable farming communities in Cianjur is determined by program support, training, favorable policies, and career development opportunities. These results highlight a key challenge: to enhance the role of parents in the process of farmer succession, stakeholders must pay attention to and strengthen these supporting factors.

➤ *The Influence of Parental Roles on the Success of Farmer Succession*

Factor analysis results (Tables 11 and 12) indicate that the role of parents has a highly significant influence ($p < 0.01$) on the success of farmer regeneration programs in both Cianjur Regency and West Bandung Regency. Descriptive analysis reveals that the majority of respondents (64.43%) stated they had already played a role in farmer regeneration. The roles they performed regarding the transfer of their farming occupation to their children included: *inheritance* (gifting or transferring resources such as land, livestock, plantations, etc.); *encouragement/motivation* (urging their children to continue the farming profession); and *modeling* (demonstrating appropriate behavior and practices within the community regarding agricultural business operations). Thus, the parental role emerges as a key determinant of the program's success. These findings support the research of Nurlita (2025), which stated that parental roles determine the success of farmer regeneration in Malangbong District, Garut Regency. They also align with Setiawati, Effendy, and Mayangsari (2026), who reported that program success is determined by supporting factors—such as the roles of mentors, young facilitators, and Agricultural Extension Centers—as well as environmental factors, including community acceptance, ease of access to information and technology, support from relevant institutions, and social or community involvement. The same source suggests that program success is also influenced by program governance, encompassing planning, organizing, implementation, and supervision (Setiawati, 2026). Furthermore, the parental role in farmer regeneration is influenced by the level of involvement or participation; as noted by Nurlaela et al. (2020), such participation is determined by socio-cultural norms.

➤ *Strategies to Enhance the Role of Parents*

This study examines the role of parents—acting as agents of inheritance, motivators, and behavioral role models—in the process of farmer regeneration. The findings and discussion reveal several aspects influencing this parental role, including: (1) environmental factors, such as community perceptions, societal norms and values, resource availability, and the availability of public facilities; (2) supporting factors, such as government support, easy access to information and technology, adequate infrastructure and facilities, and support from community leaders; and (3) extension activities, covering the frequency of activities, as well as the content, media, and methods employed. Based on these factors, practical strategies can be formulated to enhance the role of parents in farmer regeneration:

- **Setting an Example & Fostering Respect:** Parents should demonstrate that farming is a noble profession rather than merely low-status work, while instilling pride in the farming profession through success stories, harvest results, and contributions to food security.
- **Inheritance of Assets & Social Capital:** Gradually transferring farmland to children to foster a sense of responsibility, and providing access to social networks (farmer groups, cooperatives, extension workers) so children do not feel isolated.
- **Motivation & Encouragement:** Encouraging children to view agriculture as a modern business opportunity rather than just traditional labor, and linking farming to a millennial lifestyle—incorporating technology, digitalization, and export opportunities.
- **Socialization & Knowledge Transfer:** Involving children in family farming activities from an early age—from planting to marketing the produce—and teaching practical skills such as organic fertilizer use, modern irrigation

systems, or digital marketing.

- **Collaboration with Extension Services & Education:** Encouraging children to participate in training, extension programs, or agricultural vocational schools, and utilizing extension media (videos, apps, digital brochures) to make innovations easier to understand.
- **Building a Positive Image of Agriculture;** Shifting the narrative from "dirty work" to a "promising green business" and highlighting tangible economic opportunities—such as horticulture, online agribusiness, or trending organic farming.

Through a combination of leading by example, asset succession, motivation, and technological support, parents can serve as the primary drivers of generational renewal in farming. Children will be more inclined to engage if they view agriculture as a modern, profitable, and meaningful profession. This is illustrated in Figure 1.

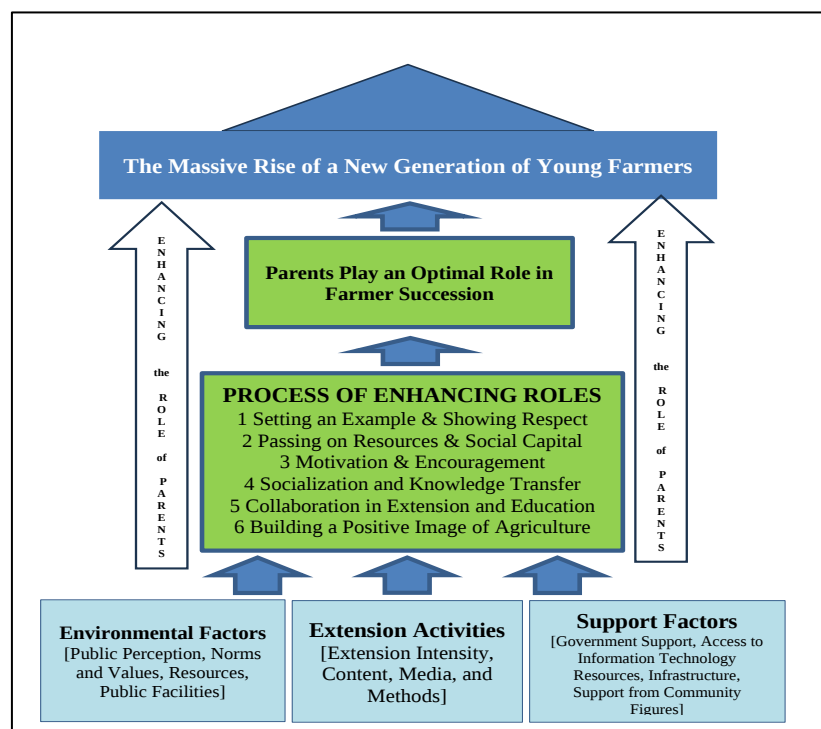


Fig 1 Model for Enhancing Parental Roles

V. CONCLUSIONS

➤ *Based on the Results and Discussion, the Following Conclusions Can be Drawn:*

- Regarding the role of parents in farmer succession, the majority of respondents (64.43%) assessed this role as "sufficient"—meaning it is not yet fully realized and still requires improvement. The majority of respondents were male (90%), with only 12 respondents (10%) being female. The 51–60 and 61–75 age groups predominated (58.34%); educational attainment was mostly in the 6–9 year range (graduates of elementary and junior high school); and 50.83 percent of respondents had 2–3 dependents. Extension activities (X_1) were rated by the

majority of respondents as "less than suitable," and supporting factors (X_4) were rated as "less than supportive," whereas environmental factors (X_3) were rated as "sufficiently supportive."

- Factors influencing the parental role (Y_1) included extension activities ($p < 0.05$) in Cianjur Regency, while environmental and supporting factors showed a highly significant influence ($p < 0.01$) in both Cianjur and West Bandung Regencies. The parental role (Y_1) had a highly significant influence ($p < 0.01$) on the success of farmer succession.
- Strategies to enhance the parental role include setting an example and showing respect for their children, transferring resources and social capital, providing motivation and encouragement, conducting socialization

and knowledge transfer, collaborating on extension and education/training activities, and building a positive image of agriculture for their children.

➤ Closing

Generational renewal in farming cannot rely solely on government policy. Parents are key stakeholders who must be empowered through integrated policies. With the support of regulations, incentives, education, and social campaigns, the process of renewing the farming workforce in West Java can be accelerated and made sustainable. In concluding this article, the author wishes to express gratitude to all those who provided assistance, particularly the leadership of Polbangtan Bogor, specifically the Research and Community Service Unit (UPPM).

REFERENCES

- [1]. Alif, D.F., Maryani, A., and Effendy, L. 2026. The Role of Agricultural Extension Workers in the Utilization of Agricultural Innovations among Wet-Land Rice Farmer Communities in Garut Regency. Polbangtan Bogor: Final Project Report.
- [2]. Azzahra, F., Effendy, L., and Pury, T.P. 2025. Farmer Capacity in Adopting Modern Agriculture among Rice Farmer Communities in the BPP Jalaksana Working Area, Kuningan. Polbangtan Bogor: Final Project Report.
- [3]. Indonesia is set to experience a demographic bonus in the coming years. 2020. <https://www.kemennpppa.go.id/lib/uploads/list/9acde-buku-profil-generasi-milenia.pdf>
- [4]. Effendy, L., Maryani, A., & Azie, A.Y. 2020. Factors Influencing Rural Youth Interest in Agriculture in Sindangkasih District, Ciamis. *Jurnal Penyuluhan Pertanian* Vol 16(2):277-288.
- [5]. Effendy, L., Lastri, H., & Widyaastuti, N. (2022). The Millennial Farmers' Interest in Succeeding the Family Agriculture for Hydroponic Application in Garut District, West Java Indonesia. *Universal Journal of Agricultural Research*, 10(3), 266–274. <https://doi.org/10.13189/ujar.2022.100308>.
- [6]. Effendy, L., & Rusmono, M. (2021). Factors Affecting the Capacity of Millennial Farmers in Chili Farming Community in Garut Regency. *International Journal of Innovative Science and Research Technology*, 6(5), 8 pages. <https://www.ijisrt.com/assets/upload/files/IJISRT21MAY175.pdf>
- [7]. Effendy, L., & Yunandar, D.T. Parawansa, I. Agusabti, Sujarwo, Humaedah, U. 2023. Institutional Performance of Agricultural Extension on the Rice Plant Production Improvement and Sustainable Food Security in West Java. Indonesia. *Universal Journal of Agricultural Research* 11(1).p. 208-216. <https://doi.org/10.13189/ujar.2023.110121>.
- [8]. Effendy, L., Husna, A.R. Musyarofah, N. 2023. An Interest of Santri in agriculture in Vegetable Farming Communities in Taragong Kidul Garut, West Java, Indonesia. *Universal Journal of Agricultural Research* 11(4).p. 723-730. <https://doi.org/10.13189/ujar.2023.110406>.
- [9]. Effendy, L. 2023. Extension: Education for Farmers for Sustainable Food Security. Professorial Inaugural Address in Agricultural Extension, Bogor Agricultural Development Polytechnic. February 17, 2023. 60 pages.
- [10]. Effendy, L., Widyaastuti, N., Lastri, H. 2022. The Millennial Farmers' Interest in Succeeding the Family Agriculture for Hydroponic Application in Garut District, West Java, Indonesia. *Universal Journal of Agricultural Research* 10(3), pp. 266-274. <https://doi.org/10.13189/ujar.2022.100308>
- [11]. Effendy, Lukman. 2020. The Strategic Role of Millennial Farmers in Agricultural Development during the COVID-19 New Normal Era. Paper presented at the TEFA Webinar, Sustainable Agricultural Extension Study Program, Bogor Agricultural Development Polytechnic, June 19, 2020. 7 pages.
- [12]. Effendy, L., Rusmono, M. 2021. Factors Affecting the Capacity of Millennial Farmers in Chili Farming Community in Garut Regency. *International Journal of Innovative Science and Research*. Eldya, M.T. Effendy, L. and Pury, T.P. 2026. Keefektifan Program Luas Tambah Tanam dalam Upaya Peningkatan Produksi Padi di Kecamatan Terisi, Indramayu. Polbangtan Bogor: Laporan Tugas Akhir
- [13]. Haryanto, Y., Effendy, L., & Yunandar, D. T. (2021). Characteristics of Millennial Farmers in Rice Production Hubs in West Java. *Jurnal Penyuluhan*, 18(01), 25–35. <https://doi.org/10.25015/18202236982>
- [14]. Hikmah, K., Effendy, L., & Maryani, A. (2025). Success of the Paddy Field Water Pumping Program in Malangbong District, Garut. Polbangtan Bogor: Final Project Report.
- [15]. Nurlaela, S., Hariadi, S. S., & Raya, A. B. (2020, November). The Role of Parents in Developing Entrepreneurial Behavior among Young Horticulture Farmers in the Special Region of Yogyakarta. In *Proceedings of the National Seminar on Agricultural Development and Vocational Education* (Vol. 1, No. 1, pp. 223-232).
- [16]. Nurlita, S., Effendy, L., & Maryani, A. (2025). The Role of Parents in Supporting Farmer Regeneration in Malangbong District, Garut. Polbangtan Bogor: Final Project Report.
- [17]. Setiawati, R., Effendy, L., & Mayangsari, R. (2026). Success Level of the Youth Entrepreneurship and Employment Support Services (YESS) Program in Purabaya District, Sukabumi Regency. *Jurnal Penyuluhan*, 22(01), 14-25. <https://doi.org/10.25015/22202664940>
- [18]. Sugiyono. (2020). *Quantitative, Qualitative, and R&D Research Methods*. Bandung: Alfabeta.
- [19]. Wijono, Sutarto. (2015). *Industrial and Organizational Psychology*. Jakarta: Kencana. Triatna, Cepi, 2015. *Organizational Behavior*, Bandung: PT Remaja Rosdakarya.