THE INTERNATIONAL JOURNAL OF SCIENCE & TECHNOLEDGE

The Model of Rural Youth Empowerment through Red Chili Farming in Sindangkasih Sub-district of Ciamis, Indonesia

Dr. Lukman Effendy

Associate Professor, Department of Agriculture,
Bogor Polytechnic of Agricultural Development, Indonesia

Wida Pradiana

Lecturer, Department of Agriculture,
Bogor Polytechnic of Agricultural Development, Indonesia

Risna Rahmawati

Assistant, Department of Agriculture,
Bogor Polytechnic of Agricultural Development, Indonesia

Abstract:

Number of farmers massively decreased over years. In fact, BPS data shows an average decreasing value of 1.1 percent per year during the period 2010-2017. This study was intended to grow a new generation of farmers and was conducted in several villages that also became red chili production centers in Sindang Kasih Subdistrict of Ciamis. This survey research was aimed to: (1) Describe youth empowerment level in red chili farmer community, (2) Determine factors affecting youth empowerment, and (3) Formulate the strategy of youth empowerment. A total of 91 respondents in this study were selected from a population of 91 people according to Slovin formula. Data collection was done through closed-ended questionnaire that has been tested for its validity and reliability. Descriptive statistics and multiple linear regression were applied to analyze the data. Results of this study were included: (1) Youth empowerment level was categorized as moderate, (2) Factor that affected empowerment was youth involvement in agricultural program (X3) with coefficient of 0.581 ($p \leq 0.01$), while internal characteristic (X1) and external characteristic (X2) did not significantly affect empowerment, (3) Empowerment strategy could be started by increasing youth involvement in the existing agricultural development program.

Keywords: Empowerment, youth, red chili farming

1. Introduction

Decreasing number of farmers for the last ten years tended to obviously massively increase. According to Statistics of Indonesia (Badan Pusat Statistik, BPS), there was annual decline of 1.1 percent during the period 2010 – 2017. In term of farmer age, it is worrying that most farmers are currently ageing. Result of Agricultural Census (Sensus Pertanian) in 2013 showed that 61.8 percent of farmers were older than 45 years, and it was only 12.2 percent of farmers aged below 35 years. This situation is inline with the result of study of People Coalition for Food Sovereignty or (Koalisi Rakyat Kedaulatan Pangan (KRKP, 2016) which showed that 54 percent of horticultural farmers' children did not want to be a farmer, while higher percentage of 63 percent was obtained from the children of rice field farmers. Hence, this reason is quite enough to prove that our country of farmers in particular and crisis of human resources in general.

To prevent the declining number of people working in agricultural sector, such anticipatory effort is required and possibly conducted through program of capacity building and assistance to increase rural community involvement in agricultural program which further will grow their interest and improve empowerment of farmer. Empowerment is an effort to improve the skill of community, either individual or group through activity/program that is designed according to their needs.

Rural youth empowerment is applied to increase interest and skill of young people to be familiar with agricultural sector. In this context of empowerment, the commodity selected is strategic commodity that also becomes the major commodity in the region. Red chili is one of strategic commodities widely grown in Sindangkasih Subdistrict, Ciamis Regency. Therefore, rural youth empowerment through red chili farming is necessary to perform in order to increase youth awareness and interest in agriculture.

Based on the explanation above, the focus of problem in rural area is the low level of youth empowerment in red chili farming, thus effort in the form of empowerment is required. Subsequently, problem formulation in this study included: (1) To what extent is the level of rural youth empowerment through chili farming in Sindangkasih Subdistrict?, (2) What factors affecting rural youth empowerment through chili farming in Sindangkasih Subdistrict?, and (3) What

empowerment model should be applied to rural youth in performing red chili farming?. This study was aimed to: (1) To describe the level of rural youth empowerment through chili farming in Sindangkasih Subdistrict, (2) To identify factors affecting rural youth empowerment through chili farming in Sindangkasih Subdistrict, (3) To develop the model of rural youth empowerment in chili farming community.

Individual characteristic is a typical trait within an individual that is different from one person to another. Several studies showed that characteristic of a person could influence one's behavior. Result of different study conducted by Effendy, L (2009) revealed that individual characteristics affected the performance of guide farmers and agricultural extension workers. Similar result was also found in term of external factors. Several researches affected the dependent variable. Result of study carried out by Effendy, L (2016) showed that external factors such as perspective of community and technology availability influenced a person's behavior, particularly guide farmers. Participation is individual involvement in an activity, both mental and physical involvement.

Some study results indicated that involvement of a person determined the success of a program. Oktaviansyah, R. and Effendy, L (2019) found that farmer participation in using superior variety was influenced by environmental characteristics, such as: transportation availability, crop variety availability, and positive perception of community. It is in accordance with the result of study performed by Sudiro and Effendy, L (2019) that participation was affected by the availability of facility and infrastructure. Thus, variables examined in this study is schematically presented in Figure 1 below:

Figure 1: Research Framework

2. Research Methods

The study was conducted from 22 April - 26 July 2019, located in three villages, namely; Sukamanah Village, Sukaraja Village, and Budiharja Village which were chili production areas in Sindangkasih Subdistrict, Ciamis Regency, West Java.

Population included were all youth of age between 15 - 24 years old who lived in the three selected villages to represent Sindangkasih Subdistrict, amounted to 891 people. Sample was determined by following Slovin formula, thus a total of 90 people was selected as samples. Detail information about sample from each village is presented in Table 1 below:

No	Village	Population	Sample
1	Sukamanah	303	31
2	Sukaraja	315	32
3	Budiharja	273	27
	Total	891	90

Table 1: Number of Sample from Each Village

The instrument used in this research was in the form of closed-ended questionnaire that contained questions or statements related to variables and indicators of research. Before being used to collect data, questionnaire was previously tested for its validity and reliability. This test was conducted on 20 young people from the three selected villages, who were not the prospective respondents. According to Effendy, L. (2014) to confirm the reliability of an instrument before data collection, several steps should be fulfilled, namely: (1) Performing test on non-respondent sample, but sample should have a relatively similar characteristics to respondent; (2) Referring to *Cronbach Alpha* indicator, where instrument is categorized as consistent and reliable if coefficient obtains a value of 0.6 – 1.

Reliability test per variable resulted in value for external factor of 0.723, rural youth involvement of 0.909 and rural youth empowerment of 0.957. This result showed that *Cronbach Alpha* of each variable > 0.6. Thus, questionnaire designed in this study was considered consistent and reliable to be used as instrument of data collection.

Data collected were in the form of primary and secondary data. Primary data were obtained through interview and direct observation performed on the selected respondents, while secondary data were collected from documents, such

as reports and programs in the Agricultural Extension Office in Sindangkasih Subdistrict. The data collected were further analyzed through descriptive statistics and inferential statistics, i.e. multiple linear regression analysis.

Descriptive analysis was applied to describe the role of variables and indicators of research, while regression analysis was done to determine the effect of each research variable on youth empowerment, with regression equation $Y = a + b_1X_1 + b_2X_2 + b_3X_3$

3. Results and Discussion

Sindangkasih Subdistrict consists of nine villages, namely; Sindangkasih, Gunungcupu, Budiharja, Budiasih, Sukaraja, Sukaresik, Sukamanah, Sukasenang, and Wanasigra. This subdistrict is located in an area of 2,200.4 hectare and rice field of 800 hectare. Value of soil pH varied between 4.5 – 6.5 with elevation ranges about 430 - 700 m above sea level. Characteristics of respondents in this study included; age, education level, organizational experience, and training in agriculture. Data of respondent based on those characteristics are listed in tables as follow:

No	Category	Number (people)	Percentage (%)
1.	Male	40	43.96
2.	Female	51	56.04
	Total	91	100

Table 2: Number of Respondents by Gender

Table 2 shows that number of female respondent (56.04% or 51 people) was higher than male respondent of 40 people (43.96%). This situation occurred since more young people worked in urban area. Data of age distribution of respondents are presented in the table below:

No	Age (years)	Number (people)	Percentage (%)
1.	≤15	24	26.37
2.	16-18	18	19.78
3.	19-21	27	29.67
4.	> 21	22	24.18
	Total	91	100

Table 3: Number of Respondents by Age

Table 3 above illustrates that age range of respondents was between 15 – 21 years and was dominated by the age group of 19 – 21 years old (29.67%). This result was obtained since respondents of young people have just graduated from senior high school (SMA), they were not yet working, and currently studying in the university. Moreover, distribution of respondent based on the level of formal education, as presented in the following table:

No	Education (years)	Number (people)	Percentage (%)
1.	8-9 (Elementary/SD)	22	24.18
2.	10-12 (Junior High/SMP)	17	18.68
3.	13-14 (Senior High/SMA)	33	36.26
4.	≥14 (Higher Education/PT)	19	20.88
	Total	91	100

Table 4. Number of Respondents by Formal Education

Based on Table 4, most respondents completed senior high school or SLTA (36.26%) with length of study ranged of 12 – 13 years. Furthermore, distribution of respondents by organizational experience is listed in the table as follows:

No	Organization	Number (people)	Percentage (%)
1.	Low	12	13.19
2.	Moderately Low	13	14.28
3.	Moderate	30	32.97
4.	High	36	39.56
	Total	91	100

Table 5: Category of Organizational Experience

Based on Table 5, the level of organizational experience of respondents was considered high with total of 36 people (39.56%), indicating that most respondents have experienced in rural organization. In fact, young respondents have been actively participating in organization during their school years or in rural community. They had quite a long organizational experience and have participated various organizations. Moreover, distribution of respondents by training in agricultural sector is presented in the table below:

No	Training (Days)	Number (people)	Percentage(%)
1.	Low	48	52.75
2.	Moderately Low	27	29.67
3.	Moderate	16	17.58
4.	High	0	0
Total		91	100

Table 6: Category of Attending Training in Agricultural Sector

Based on data of training in agricultural sector (Table 6), the frequency of attending agricultural training by the majority of respondents or 48 people (52.75 %) was categorized as low. It was caused by the fact that young people in Sindangkasih Subdistrict rarely or never received any agricultural training or seminar during study or within the community.

External factor is aspect derived from personal characteristics that is expected to affect empowerment and youth empowerment process. External factors in this study consisted of; availability of information source, family support, and peer cohesiveness. Average value of external factors is depicted in figure below:

Figure 2: Average Value of External Factor Support

Figure 2 above shows that average value of all external factors was 2.226 and categorized as moderate. Moreover, each indicator obtained an average of 2.101 – 2.323. Biggest support was found to be provided by peer cohesiveness, while family support was considered small. This means that peer association could provide positive contribution to grow youth interest which in turn will contribute to empowerment process. Rural youth involvement is defined as mental, physical, and material involvement in an agricultural development activity or program. The indicator of involvement included involvement in planning, implementation, and evaluation of agricultural activity or program. Average value of youth involvement in agricultural development program is illustrated in the following figure:

Figure 3: Average Value of Youth Involvement

Based on the figure above, it is seen that rural youth involvement in agricultural development program was categorized as low (1.809). Involvement was tended to be high in evaluation activity, while involvement in planning and implementation was found to be lower. It indicated that involvement or participation of young people in agricultural program in Sindangkasih Subdistrict was still low.

Empowerment is a process of capacity building for young people, both individual and group capacity. In this study, youth capacity included; (1) technical capacity in red chili farming, (2) production marketing capacity, and (3) capacity/capability within the group. Average value of rural youth empowerment is presented in the figure below:

Figure 4: Average Value of Youth Capacity

Figure 4 above shows that rural youth capacity in red chili farming was categorized as *moderate* with average value of 2.086. However, technical capacity to perform red chili farming was considered very low with average value of 1.964, thus youth capacity in conducting red chili farming should be increased.

Regression analysis performed on research variables showed that simultaneously research variables significantly affected ($p \leq 0.01$) youth empowerment in accordance with the equation $Y = 0.442 + 0.064X_1 + 0.168X_2 + 0.581X_3$ (Table 10). However, in term of individual (partial), it was only the variable of *youth involvement* (X_3) that significantly affected ($p \leq 0.01$) youth empowerment with coefficient of 0.581, while variables of *individual characteristics* (X_1) and *external factors* (X_2) provided a not significant effect (Table 7). Detail result of regression analysis is listed in the following table:

No	Variable	Coefficient	Significance
1.	<i>R Square</i>	0.341	
2.	Constant	0.442	0.267 ^{ns}
3.	Individual Characteristics (X_1)	0.064	0.363 ^{ns}
4.	External Factors (X_2)	0.168	0.247 ^{ns}
5.	Involvement (X_3)	0.581	0000 ^{**}

Table 7: Coefficient of the Effect of Variables on Empowerment

Table 7 above informs that variables significantly affected empowerment was youth involvement (X_3) with coefficient of 0.581 ($p \leq 0.01$), while the other two variables, namely individual characteristics (X_1) and external factors (X_2) did not have a significant effect. The table above also shows *R square* of 0.341, denoting that variables in this study contributed to an effect of 34.1 percent to youth empowerment. Hence, regression model simultaneously resulted from this study was $Y = (0,442) + (0,064)X_1 + (0,168)X_2 + (0,581)X_3$, while partial model that provided a significantly different effect was $Y = (0,442) + (0,581)X_3$. Moreover, according to the model, if factor of youth involvement remains constant, youth empowerment will increase by 0.442 unit, and if constant value is increased by one unit, youth involvement in agricultural development activity will further increase by 0.581 unit.

Based on the result of study on youth characteristics, it was found that education level of respondents was quite high as most respondents have completed senior high school (SLTA) with a high organizational experience, yet their level of participating in training was still low. Similarly, support of external factor was considered moderate, while involvement factor was categorized as low. This depicts that increasing youth participation should be done first to further increase youth empowerment in agricultural development activity in Sindangkasih Subdistrict. Thus, higher level of youth involvement in the planning, implementation, and evaluation of an agricultural development program will also result in a high youth empowerment. This finding was in line with the study conducted by Yunita (2011) that improvement of empowerment process could be achieved through a joint planning of a program by holding a meeting or deliberation between the community and local government. Joint planning means providing bigger opportunity to the community to contribute to the planning, implementation, and evaluation of a development program. Sudiro dan Effendy, L (2019) also concluded that participation in the implementation of balanced fertilizer application technology was affected by individual characteristics and external factors. Similarly, study by Oktaviansyah, R. and Effendy, L (2019) also found that farmer participation in using superior variety was influenced by environmental factor and government support. Moreover, Effendy, L. (2019) reported that external factors such as farmer institutional support affected the decision making in adopting the technology of integrated rice crop management. Therefore, program of youth empowerment in Sindangkasih Subdistrict is directed to increase participation in order to not only increase chili production, but also increasing youth empowerment.

As previously described in the discussion part, this study succeeded to determine variable that significantly affected youth empowerment, namely youth involvement in agricultural development activity (X_3), while youth characteristics (X_1) and external factors (X_2) did not show any significant effects (Table 7) with regression equation $Y = (0,442) + (0,581)X_3$. This finding leads to strategy to increase youth empowerment through agricultural development activity in rural area, particularly in Sindangkasih Subdistrict, Ciamis Regency, that is by increasing youth participation in each stage of agricultural development activity, starting from the stage of planning, implementation, and evaluation of

activity. In fact, young people should be directly involved in obtaining the benefit or enjoying the outcome of program. Furthermore, strategy to empower young people in rural area through red chili farming in Sindangkasih Subdistrict is presented in figure below:

Figure 5: Model of Youth Empowerment in Sindangkasih Subdistrict

Description:

----- : Not Significantly Affected

———— : Significantly Affected

4. Conclusion

Based on the result of this study, it is concluded that: (1) Youth empowerment level in Sindangkasih Subdistrict belonged to the *moderate category*, with average value of 2,226 (scale 1 – 4), (2) Factors of youth involvement (X_3) provided a significant effect ($p \leq 0.01$) with coefficient of 0.581, while youth characteristics (X_1) and external factors (X_2) did not significantly affect youth empowerment in agricultural development activity in Sindangkasih Subdistrict, (3) Strategy to empower rural youth concerning agricultural development could be started by increasing youth participation in every stage of program, from planning, implementing, until enjoying the outcome or benefit of the program.

5. Recommendation

Based on the conclusion obtained, several recommendations concerning the model of rural youth empowerment through red chili farming are made as follow: (1) To increase rural youth empowerment level, it is necessary to conduct training in agricultural sector which is designated to grow interest, increase skill and capacity of rural youth in agricultural sector, (2) Variables examined in this study contributed to a relatively low effect on rural youth empowerment (34.1%), thus further study is required to perform by changing the variables of youth characteristics and external factors to other variables.

6. Acknowledgement

The authors would like to express gratitude, particularly to colleagues, those are lecturers of Study Program of Sustainable Agricultural Extension for their encouragement and help, hence this study could have been completed. Furthermore, I am extremely grateful to Risna Rahmawati for her help in conducting this study. Later, I would also like to thank the Director of Bogor Polytechnic of Agricultural Development for the opportunity and financial support through the Unit of Research and Community Service.

7. References

- i. Andriaty, E dan Setyorini, E. 2012. Ketersediaan Sumber Informasi Teknologi Pertanian di beberapa Kabupaten di Jawa (*Availability of Agricultural Technology Information Source at Several Districts in Java*) Jurnal Perpustakaan Pertanian Vol. 21 No. 1. Bogor : Pusat Perpustakaan dan Penyebaran Teknologi Pertanian.
- ii. (Badan Pusat Statistik) Badan Pusat Statistik Kabupaten Ciamis. 2017. Sindangkasih dalam Angka. Ciamis. ciamiskab.bps.go.id
- iii. Deviyanti, D. 2013. Studi tentang Partisipasi Masyarakat dalam Pembangunan di Kelurahan Karang Jati Kecamatan Balikpapan Tengah. *eJournal Administrasi Negara* Vol. 1 No. 2. Samarinda : Universitas Mulawarman.
- iv. Effendy, Lukman. 2009. Kinerja Petani Pemandu dalam Pengembangan PHT dan Dampaknya pada Perilaku Petani di Jawa Barat.
- v. Effendy, Lukman. 2014. Bahan Ajar Metode Pengkajian Penyuluhan. Bogor : Sekolah Tinggi Penyuluhan Pertanian Bogor.

- vi. Effendy, Lukman dan Apriani, Yetsi. 2018. Motivasi Anggota Kelompok dalam Peningkatan Fungsi Kelompok. Jurnal Ekonomi Pembangunan. STIE Muhammadiyah Palopo. Vol.4 Nomor 1. Hal. 10 - 24
- vii. Effendy, Lukman dan Meko, Felix. 2019. Pengaruh Jiwa Kewirausahaan terhadap Pendapatan Petani Kakao di Kecamatan Lio Kabupaten Ende. Jurnal Teknologi. Nomor 1.
- viii. Effendy, Lukman. 2019. Peran Kelembagaan dan Atribut Inovasi pada Adopsi Teknologi Pengelolaan Tanaman Terpadu Padi Sawah di Kabupaten Bandung Barat dan Sumedang. Proseding Seminar Nasional 'Penyuluhan, Komunikasi Pembangunan dan Pemberdayaan Masyarakat. Program Pascasarjana Universitas Andalas, Padang, 2 Mei 2019. Hal. 198 - 208
- ix. Hendri, M dan Wahyuni, E S. 2013. Persepsi Pemuda Pencari Kerja Terhadap Pekerjaan Sektor Pertanian dan Pilihan Pekerjaan di Desa Cihideung Udik Kecamatan Ciampea, Kabupaten Bogor (*Perception on Agriculture Jobs and Job Preference Among Youth Unemployed in Cihideung Udik, Ciampea District, Bogor Regency*). Jurnal Penyuluhan Vol. 9 No. 1. Bogor : Institut Pertanian Bogor.
- x. Humaedah, Ume, Yulianti, Astrina, Sirnawati, Enti. Dan Effendy, Lukman. 2016. Model Peningkatan Kapasitas Penyuluh dalam Pemanfaatan Informasi Iklim di Kabupaten Indramayu dengan Pendekatan Analisis Keberlanjutan. Jurnal Informasi Pertanian, Vol. 25 Nomor 1 Tahun 2016. Hal. 131 - 144
- xi. Ningsih, F dan Sjaf, S. 2015. Faktor-Faktor yang Menentukan Keterlibatan Pemuda Pedesaan pada Kegiatan Pertanian Berkelanjutan (*Determine Factors of Rural Youth Involvement on Sustainable Agriculture Activities*). Jurnal Penyuluhan Vol. 11 No. 1. Bogor : Institut Pertanian Bogor.
- xii. Oktaviansyah, Reza dan Effendy, Lukman. 2019. Model Peningkatan Partisipasi Petani dalam Penggunaan Varietas Unggul Baru (VUB) Padi Sawah di Kecamatan SindangKasih Ciamis. KIPA: Polbangtan Bogor
- xiii. Sanchaya, G A dan Susilawati, P A. 2014. Hubungan antara Dukungan Sosial Keluarga dengan *SelfEsteem* pada Remaja Akhir di Kota Denpasar. Jurnal Psikologi Udayana Vol. 1, No. 3. Bali : Universitas Udayana.
- xiv. Sudiro dan Effendy, Lukman. 2019. Model Peningkatan Partisipasi Petani dalam Penerapan Pemupukan Berimbang Padi Sawah di Kecamatan Cikoneng Ciamis. KIPA: Polbangtan Bogor
- xv. Sugiyono. 2013. Metode Penelitian Kuantitatif Kualitatif dan R&D. Bandung : Alfabeta.
- xvi. (UU RI) Undang-Undang Republik Indonesia Nomor 40 Tahun 2009. Kepemudaan. Jakarta : Kementerian Pemuda dan Olahraga.
- xvii. Yunita. 2011. Strategi Peningkatan Kapasitas Petani Padi Sawah Lebak Menuju Ketahanan Pangan Rumah Tangga. Disertasi. Bogor: Sekolah Pascasarjana Institut Pertanian Bogor