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PROGRESSIVE FARMERS AS CATALYSTS FOR REGENERATION IN RURAL AREAS THROUGH FARMER TO FARMER EXTENSION APPROACH

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ABSTRACT

Progressive farmers that are labeled as self-help extension workers may play an active role, have control over their own community, take a role in society and be more involved in agricultural development. The results of this study show that currently, the capacity of progressive farmers as self-help extension workers, especially in terms of technical matters, is good enough. Therefore, they have the potential to develop their communities and the opportunity to become independent and equal partners with the government extension workers, not as “government extension assistants” like the current stigma. One of the solutions of compiling a road map for the development of young agropreneurs, is by optimizing the role of progressive farmers as self-help extension workers in encouraging the acceleration of farmer’s regeneration. It has been proven that progressive farmers as self-help extension workers have good communication skills in providing examples and encouraging young farmers to love jobs in the agricultural sector therefore, eroding the bad perception of working in the agricultural sector. In addition, they have good capacity potential in empowering fellow farmers. This is identified from their ability as self-help extension workers in terms of technical assistance, disseminating innovations according to farmers’ needs, providing training to partner farmers, becoming informal leaders and maintaining local wisdom.

Keywords: Progressive Farmer, Farmer to Farmer Extension, Farmer Regeneration

INTRODUCTION

The regeneration of agricultural actors is very important, considering the data which shows that the share of young farmers is much lower compared to older farmers. The results of the 2013 Agricultural Census (BPS 2013) show that the share of agricultural business households based on the age group of farmers, aged over 54, 35-54 and less than 35 years are 32.76%, 54.37% and 12.87%, respectively. Compared to BPS data for 2003 and 2013, there has been a decline of almost 15% of farm households engaged in agriculture in a period of 10 years, indicating that most farmers in Indonesia are elderly. The comparison between elderly and young farmers, shows that the former may not be equaled by the latter the (32.76% versus 12.87%). Secondly, the percentage of farm households decreased by 15 % in the past 10 years. In 2003, the share of farmer households was 55.73% (BPS 2003), which decreased to 40.81% in 2013 (BPS 2013). Therefore, the share of farmers in Indonesia will continue to decline if the analysis of BPS data is not taken seriously. Thirdly, the younger generation has a low interest in agriculture activities. This is in accordance with the study carried out by KRKP (2015) which suggests that the interest of the younger generation in becoming farmers is relatively low. In addition, it shows a relatively low interest of parents in their children carrying out agricultural activities.

Fourth, the younger generation has a bad perception of agriculture. This is in accordance with the results of the study carried out by KRKP (2015), which shows that the majority of the younger generation stated that agricultural

conditions were poor, leading to the low interest in agriculture. If the results of the BPS data are not addressed wisely, it will have an impact on the declining portion of farmers in Indonesia.

The study carried out by Sumardjo (1999) in West Java, reveals that the average farmer is 49 years old and about 80% of them are over 50 years old (Setiawan 2012; Agussabti 2002) and 20% of them are 60-80 years old (Sadono 2012) therefore, it is necessary to regenerate farmers. Ideally, the young generation in agriculture is an empowered generation and the empowered young is a generation equipped when they are involved in agriculture.

Various approaches to regenerating agricultural development actors have been carried out and applied by many parties in many countries, ranging from adaptive, participatory to adoptive approaches. However, the results have not been able to keep up with the increasing rate of migration and have not been able to increase the interest and assessment of young people in the agricultural and rural sectors. This implies that difficulty in developing the agricultural sector because it is not supported by adequate, young, modern, quality and competitive human resources. The results of Setiawan’s (2015) deduction identify that such phenomena are common in transition countries which are on the way to progress. However, China, India, Taiwan and South Korea have succeeded in regenerating agricultural actors in a transitional condition, through innovative efforts, such as applying the brain gain approach.

Conceptually, based on the study carried out by Kupets

(2011), Adebayo (2010), Johnson (2009) and Faiz (2007), it may be concluded that brain gain is the return of quality (educated, innovative, creative and skilled) young workers (human resources) from abroad to within the country (international brain gain) and from urban to rural, hometown or area of origin (internal brain gain) to create, work and be entrepreneurial in the field (on-farm, up-stream, downstream, supporting system and ecosystem) of agribusiness in rural areas, both in agriculture, fisheries, livestock, plantations and forestry.

However, these brain gain patterns may not run well without the support of a catalyst which provides an example of a successful rural agricultural management. The study carried out by Haryanto (2018), shows that progressive farmers are one of the catalysts which trigger brain gain in rural areas. Furthermore, Anwarudin *et al.*, (2016) informed that progressive farmers may be good examples and motivators for young farmers and youth to work in the agricultural sector. This information becomes a reference which indicates that progressive farmers may not only act as agents of change but also as a motivation to the younger generation, to build their interest in working in the agricultural sector. In addition, it should be acknowledged that farmer-to-farmer extensions have the potential of disseminating innovation properly in a cost-effective and generally sustainable manner beyond the life of the project (Lukuyu *et al.*, 2012).

LITERATURE REVIEW

Progressive Farmer

Progressive farmers as one of the catalysts for change in rural areas exist due to the difficulty experienced in reaching all farmers at once therefore, their helps as communicators is needed. Apart from being assistant extension workers, they generally also become active actors in the concept of farmer-to-farmer learning methods. Conceptually, this approach is believed to be more effective.

Furthermore, the approach and involvement of progressive farmers in the farmer learning process differ from country to country with various roles, ranging from project to project, depending on how they are selected to be trainers, whether they work with groups or individuals, are trained as specialists within a single subject or as generalists and whether they work only within their own community (Scarborough *et al.*, 1997). This is because these farmers are individuals with little or no formal education but have the ability to improve themselves therefore, enabling them to become farmer trainers (Selener *et al.*, 1997; Lukuyu *et al.*, 2012).

Currently, there is a need for extension workers that are able to develop participatory communication with farmers and build community-based networks. This is because farmers do not only need extension workers, but a companion loyal and sincere in providing knowledge and is willing to be involved and live together in a farmer community (Syahyuti 2014). The aim of all these, is to build and maintain interactive relationships between the

government, private sector and farmer community.

Currently, progressive farmers that are labeled as self-help extension workers may play an active role, have control over the life of their own community, take a role in society, and become more involved in development (Haryanto 2018). The presence of local figures out of the seven participation typology characteristics (Pretty 1995) are more able to produce interactive participation, where the community plays a role in the analysis process for planning activities and strengthening institutions. Furthermore, they have a role to play in controlling the implementation of decisions taken i.e. it has a role in the overall process of activities.

The manipulative participation towards democratic independent participation (Arnstein 1969) is prevented by the presence of strong local figures. In this context, progressive farmers may become these figures because it is their unique position as a self-help extension worker since they are part of the farmer community itself. In accordance with participation, the concept of empowerment is very political because it is related to power. Therefore, these farmers as part of the community should also be able to build access and political capital. Apart from participatory and political capital, they also have an added value on ownership of social capital. The criteria for self-help extension workers (progressive farmers) that acts as a motivation to young people interested in the agricultural sector are young farmers, head of farmer groups or figures with better technical skills in agriculture compared to other farmers characterized by educated individuals that have a position in the community with a good cosmopolitan level, have an altruistic nature supported by social capital and a learner spirit.

Young Generation of Agriculture

Generally, being an agricultural or agribusiness actor is not the main choice of a youth, including those in the rural area therefore, their involvement in farming and agribusiness may be more of a compulsion. Although, not all of them are true, but in its developing process, many of them have outgrown the main options. The decisions of young actors to choose farming or agribusiness are actually through a process or stages of decision making, which is a common process passed by a generation, both individually and collectively. All decisions made by young actors are surely based on many factors, including internal, pull and driving. Therefore, no matter how simple a decision is, it surely goes through a series of process, considerations, reasons, choices and stages.

In fact, some decisions are made automatically while; others are based on information, considerations (facts, experience, institutions, logic, and analysis) and uncertainty. The process and effectiveness of a decision are influenced by many factors, such as empowerment, the nature of the problem, information, personal characteristics (rationality, motivation, knowledge, experience, creativity, innovativeness, expertise) and the

environment (physical, socio-cultural, technological and institutional). Furthermore, according to Gibson *et al.*, (1996), the decision-making process includes six stages, namely goal setting, problem identification, developing alternatives, choosing alternatives, implementing decisions and controlling or evaluating decisions on an ongoing basis. The decision of a youth to go into agribusiness surely goes through series of stages in the decision-making process although; they are not exactly the same as the aforementioned stages.

Different from the previous generations, the present young generation is in a climate of increasingly sophisticated communication and information technology synonymous with that of C, namely connected, convergence, collaboration, creative and contextual, which is called the internet or digital generation according to Tapscott (2009). Meanwhile, according to Supangkat (2010), a generation has creative characteristics and is responsive to new things, including growing as part of innovation that develop rapidly and continuously. The internet-literate generation, with naturally sensitive and highly adaptive response to collaborative activities, realizes the importance of relationships while, the generation that associate and join the community, recommend new things to others, discuss and express their opinions confidently and straightforwardly. Furthermore, this internet-literate generation is smarter, more agile and tolerant of diversity because they have a culture of empowerment; really care about justice and social issues, including their involvement in community activities. Therefore, in this era, the young generation needs evidence and examples to be willing and interested in working in the agricultural sector. The progressive farmers that represent today's farmers with youthful spirits, relatively good market access and entrepreneurs have succeeded in becoming one of the attractions, making this millennial generation to become partners and competitive in agriculture. This also confirms that farmer-to-farmer extension with young farmer actors is a good catalyst in attracting young people interested in working in the agricultural sector.

RESULTS AND DISCUSSION

Farmer to farmer extension as Regeneration initiation path way

So far, the agricultural extension administration has been carried out predominantly by the government therefore, the extension orientation aims more to define the government authorities and duties. In this case, the approach used still focuses on the group approach, especially those formed not by farmers but by the government through extension workers and other government agencies or agencies which generally aim not for the benefit of farmers, but for that of the government program implementation.

Many of the agricultural development programs and activities launched by the government involving the extension process are felt to be unsustainable because they stop when the contract expires. However, it is different

when the program is monitored and implemented by farmers i.e. the results are sustainable and do not stop because of project contracts (Lukuyu *et al.*, 2012; Kiptot *et al.*, 2014).

In fact, referring to Law Number 16 of 2006 concerning SP3K (Letter of Approval Confirmation on Credit Provision), extension services may be carried out by the main actors and/or community members as government partners. This opportunity should be another form of extension activity more characterized by involving agricultural communities in the development and implementation of programs according to their own needs. Furthermore, Marliati *et al.*, (2008) showed that the shortage of extension workers in the field is currently a separate obstacle, which makes the performance level of government agricultural extension workers in empowering farmers to be relatively poor. One of the reasons for this is due to the limited social interaction factor with farmers because some parts in rural areas have no agents of change who live among farmers. Meanwhile, the involvement of self-help extension workers is still not optimal (Syahyuti 2014), indicating that the empowerment activities have not provided optimal results for farmers.

Although now, farmers may easily get agricultural technology information from virtual media but in reality, they still need the guidance and facilitation of agricultural extension workers. Therefore, efforts need to be developed in order to build agricultural extension based on the self-help implementation from farmers. It is hoped that prominent, advanced and youth farmers as self-help extension workers may encourage its implementation, in order for it to increase self-reliance and become a driving force for the creation of young generations in agriculture.

In current conditions, farmers have a strategic role to play in national development, especially as producers of foodstuffs for all Indonesian people. A lot of changes have been made in the strategic environment for agricultural development, both for farmers at the level of individual, local, regional, national, regional, including challenges to compete in the global market. Therefore, it is expected of the farmers to be reliable in carrying out various roles simultaneously, both as learners, researchers, agribusiness administrators, leaders and facilitators for other farmers (Slamet 2003; Soedijanto 2003).

Self-help extension workers are Farmers with leadership characters that become role models for the main actors and entrepreneurs. They exist as a reaction to the imbalance of top-down roles by extension workers, thereby reducing farmer participation and initiative (Kiptot *et al.*, 2014). This condition causes self-help extension workers to be expected to answer the demands of farmer-to-farmer extension approaches, which enable farmers to become subjects in agricultural development programs starting from the stage of problem identification, planning, implementing to evaluating.

Furthermore, self-help extension workers are individuals

with low or without formal education but have the ability to improve themselves, enabling them become farmer trainers (Selener *et al.*, 1997; Lukuyu *et al.*, 2012). These extension workers have the advantage of carrying out their

role as agents of change in rural areas because they are part of their community and are more trusted by their fellow farmers (Haryanto *et al.*, 2018).

Currently, the existence of self-help extension workers is

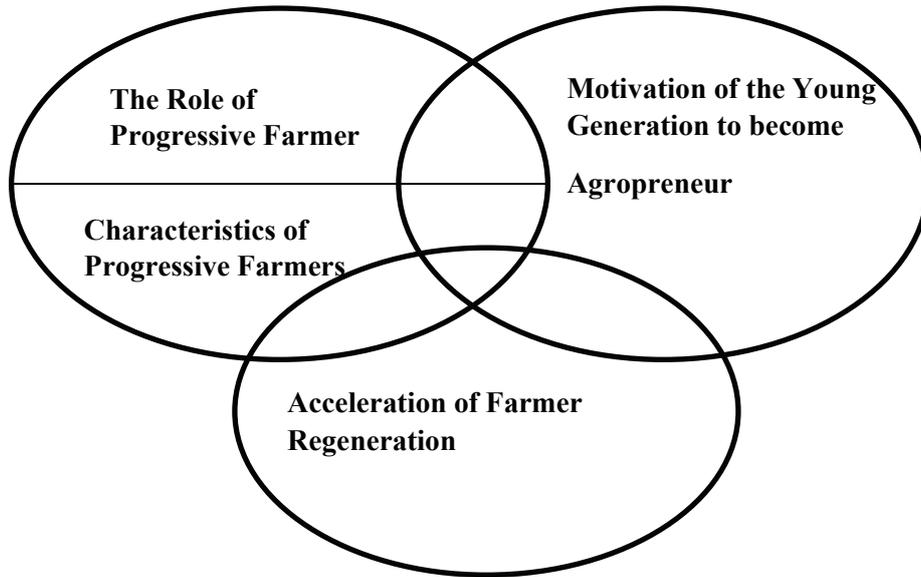


Figure 1. Model of Farmer Regeneration Acceleration through the Role of Progressive Farmers as Self-Help Extension Workers (source SEM results of Haryanto and Anwarudin 2017)

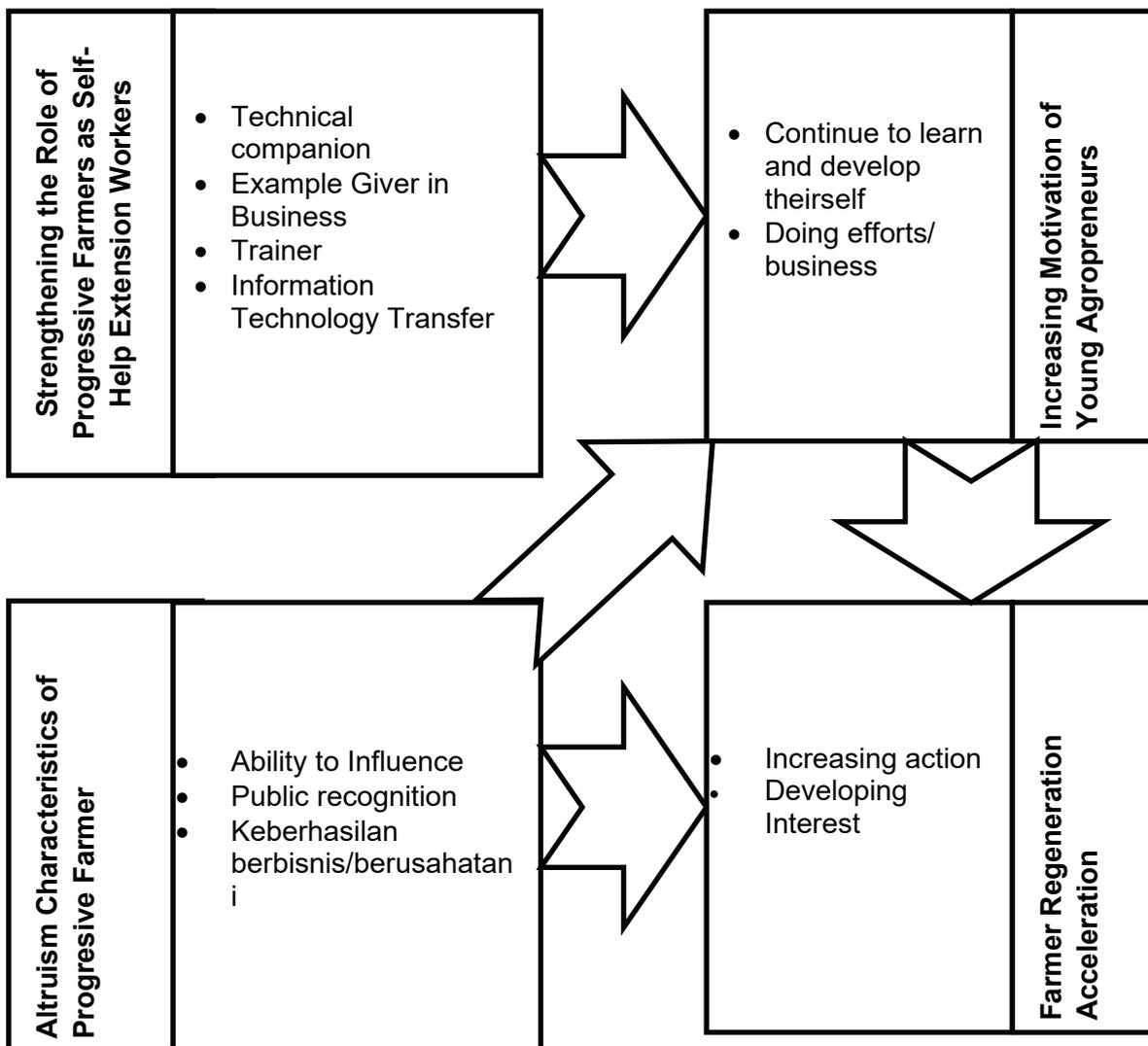


Figure 2. Strategy to Increase the Role of Progressive Farmers as Self-Help Extension Workers in Motivation Agropreneur

being questioned because it is not optimal (Haryanto and Yuniarti 2017). This is carried out in accordance with a large number of self-help extension workers in several countries in Africa that are also unable to show their independence which is allegedly due to lack of good capacity and low social support to achieve sustainability (Jatnika 2006; Kiptot and Franzel 2012; Kiptot *et al.*, 2012; and Batta *et al.*, 2013). Therefore, the optimal role in managing extension from farmer to farmer is determined by the capacity owned and controlled by self-help extension workers.

Generally, Self-help extension workers have the opportunity to learn earlier in understanding and implementing a technological innovation, compared to other farmers, because of the extensive access and information in the possession of their agents. This advantage should be one of the capitals in increasing their capacity to help farmers in their communities. Based on the results of the study carried out by Haryanto (2018) and Haryanto *et al.*, (2018), self-help extension workers may increase the extension effectiveness because they come from their communities therefore, they really understand the farmers' problems, have an intensity of interaction that is partner and sustainable. Because they are generally successful and progressive farmers, the government may continue to develop their potential in order to advance the surrounding farmers as well. These results are in accordance with the study carried out by Semakula and Mutimba (2011) which stated that the presence of self-help extension workers in the community brings about change for farmers, especially in interaction and partners that may advance farmers in their communities.

The following are the several changes expected with the increasing effectiveness of farmer-to-farmer extension, they include the formation of stronger cooperation among farmers to discover and select appropriate information to meet their needs and opportunities and the ability to adapt to innovations in their environment and attract the younger generation to take better action in the agricultural sector. The study results indicate that the existence of local leaders will be more effective in producing interactive participation, where the community plays a role in the analysis process for activity planning and institutional strengthening and in the control of the implementation of decisions taken i.e. they have a role in the overall activities process.

The results of this study are also in accordance with several previous studies that saw the role of self-help extension workers as quite effective in carrying out their job. Selener *et al.*, (1997) and Lukuyu *et al.*, (2012) stated that self-help extension workers may play a role as community activators and trainers among farmers. In addition, Indraningsih *et al.*, (2010) and Riana *et al.*, (2015) stated that the role of facilitators, motivators and dynamics is very good for these workers.

The role of self-help extension workers in promoting and providing agricultural extension services and technology

through community-based extension has a good impact on the adoption process. This is because they act as a companion or partner that is equal to the community therefore, enabling them carry out their role properly and effectively. Furthermore, it is because as community-based extension agents, they have an advantage over government agents in conveying information due to their high level of trust.

The trend of successful dissemination innovation by self-help extension workers for their communities is quite high, especially when they become trainers for farmers (Lukuyu *et al.*, 2012; Kiptot *et al.*, 2014). They do not depend on rewards and government funds to carry out training (Lukuyu *et al.*, 2012), but they receive funds from the sale of their group's businesses and their own businesses (Kiptot *et al.*, 2014). Therefore, they play a very important role in providing counseling to farmers around their community, especially in influencing the adoption of innovation and may become an example for young people in rural areas that are interested in working in the agricultural sector.

This is reinforced by the results of the study carried out by Haryanto *et al* (2020), which states that self-help extension workers have a fairly good capacity in terms of technical assistance, disseminating innovations according to farmers' needs, providing training to partner farmers, becoming informal leaders and maintaining local wisdom. These things may become basic assets as agents of change in rural areas.

Progressive farmer models and strategies in motivating the younger generation

The study carried out by Indraningsih *et al.*, (2013) in three provinces received information that the capacity of self-help extension workers was relatively diverse however, it was sufficient from a technical aspect. Some of them received ability because they attended training from the government and partly because they learned independently from decades of experience in the fields. This condition is almost the same as that of the self-help extension workers in other provinces.

Technically, their farms have average abilities compared to other farmers because they often attend training organized by the government. However, the technical capacity of this self-help extension worker has not been able to transmit it to farmers and other young farmers massively, making the role of the technical assistant not to be optimal.

This is also triggered by the unclear division of extension roles in the field between self-help extension workers and PNS / THL-TBPP agricultural extension workers. Generally, their role is still limited to farmers within groups and at most to farmers in villages. However, some self-help extension workers already provide counseling outside the village and outside the sub-district.

Based on these conditions, self-help extension workers should be given the authority, enabling them carry out their other roles properly and effectively therefore, motivating the younger generation to love jobs in the agricultural

sector. According to Syahyuti (2014), the superiority of self-help extension workers is that they are more able to create participatory extension when compared to government extension workers. This is because they live among farmers, experience their problems directly, become part of the farmers' spirit, and are involved in a participatory manner in agricultural activities in their communities.

The Structural Equation Models analysis (Anwarudin and Haryanto 2017) was used in formulate in a model in an effort to accelerate farmer regeneration by increasing the motivation of the younger generation by strengthening the roles and characteristics of progressive farmers as self-help extension workers. The model is shown in Figure 1.

The model in Figure 1 explains that the acceleration of farmer regeneration happens if there are young farmers (younger generations) to become young agropreneurs that are able to perform well in business due to the support of progressive farmers as self-help extension workers. This support comes in the form of intrinsic motivation that is also proven by their success in managing the farming.

Based on this study, the ideal role of progressive farmers is in terms of disseminating information technology, being a trainer, providing successful business examples and being a companion to solve any problems faced by these young agropreneurs. Figure 2 shows the strategies to increase role of progressive farmers as self-help extension workers based on the model of farmer regeneration acceleration according to the results of a comprehensive analysis and study carried out in the field.

Conducting participatory extension is the Final stage of the strategy needed to increase the role of progressive farmers as self-help extension workers in motivating young agropreneurs with the aim of accelerating the farmer regeneration. This aims to make the young agropreneurs to be able to revive the attractiveness of the agricultural sector and have excellent competitiveness with other countries in food supplies. Based on this study, the strategies formulated include:

1. Strategy to increase the motivation of young agropreneurs by strengthening the role of progressive farmers as self-help extension workers.
2. Strategy to increase the motivation of young agropreneurs by strengthening the altruism characteristics of progressive farmers.
3. Strategy for farmer regeneration acceleration by improving the motivation of young agropreneurs supported by the increasing role of progressive farmers

REGULATION OF MINNING

Nowadays, the biggest challenge is the effort needed to integrate extension managed by the government based on the community needs which may be managed by progressive farmers as self-help extension workers. This is because the best information source came from the farmers themselves. Accordingly, optimizing the role of

progressive farmers may be carried out to realize farmer regeneration. Furthermore, apart from serving as extension workers, progressive farmers are actually active actors in the concept of farmer-to-farmer extension methods. Conceptually, this approach is believed to be more effective because of the easy communication between farmers since they have the same language, problem perceptions and problem-solving methods. In addition, empathy as a condition of communication will be more guaranteed. This strengthens the study results which states that farmer independence may be realized through the central role of self-help extension workers as rural extension workers.

The study carried out by Haryanto *et al.*, (2018) shows that, currently, the capacity of progressive farmer leaders as self-help extension workers, especially in technical matters, is good enough. Therefore, they have the potential to develop their communities, including the opportunity to become self-help extension workers and partners that are equal to government extension workers and no longer as "government extension assistants" like the current stigma. This indicates that the Regulation of the Minister of Agriculture Number 68 of 2008 concerning Guidelines for the Development of Self-help and Private Agricultural Extension needs to be reviewed, especially for self-help extension workers in terms of mechanisms, duties, functions and positions with government extension workers. Subsequently, they are no longer seen as government extension assistants but as colleagues and equal partners in the development of agriculture in rural areas.

One side of the extension new paradigm is a participatory extension and not a one-way extension i.e. extension workers should be able to live among farmers, be present in the farmers' spirit and be participatory in farmer activities. Furthermore, they should not only provide cultivation theory, pest problems, plant diseases but should be able to open up and strengthen farmers to work. This has been shown by progressive farmers as self-help extension workers from the results of the study carried out by Haryanto *et al.*, (2017). In addition, they should have the initiative and strong will to realize their hopes (competitiveness), be able to cooperate with other parties in an equal position and have high filtering power in determining the best choice of action for farmer empowerment activities (Haryanto *et al.*, 2020).

Government policies that still interpret and differentiate between government extension workers in a diametral manner (between government, private and self-help extension workers). In practice, these three types of extension workers converge with each other within self-help extension workers, therefore it is necessary to develop a clearer role authority by the government. In this case, the Ministry of Agriculture is about the division of roles between government and self-help extension workers.

Furthermore, the results show that self-help extension workers are able to act as government extension workers, such as been able to convey innovations, information and

government programs, including being private extension agents because they are able to act as mutually beneficial marketing partners.

Strengthening the position of progressive farmers as self-help extension workers in carrying out their functions as extension workers in rural areas requires equal ability among themselves. Therefore, making them the main driver in mobilizing the young generation in rural areas to be interested in working in the agricultural sector. One of them is by building the prime capacity of progressive farmers/self-help extension workers, in which a synergy is needed for extension institutions, education, and training institutions and higher agricultural education institutions.

This step maybe built by first involving progressive farmers as self-help extension workers as the main companion of the program therefore, they no longer act as extension assistants but as the main figure in the outreach for their communities (farmers) and become an example for young people interested in the agricultural sector. The second step is by conducting simultaneous education and training, carried out by agricultural education and training institutions related to extension methodologies, which so far have not been well worked out.

Furthermore, the third step is to provide opportunities for farmers to take part in seminars, workshops and apprenticeships, including government extension workers with costs borne by the government. The fourth step is by increasing the ability to motivate and mobilize farmer organizations through the involvement of regional extension officers in planning and developing education and training of self-help agricultural extension officers. In addition, the fifth step is by providing funding allocations for the adaptation of agricultural technology testing activities in farming business locations, enabling both progressive and other farmers learn independently with the former acting as facilitators.

Their involvement has not been seen in the development of village extension posts. Therefore, in this case, the government, and Ministry of Agriculture needs to involve progressive farmers that are labeled as self-help extension workers in developing village-level extension institutions that have not been handled properly. This is because self-help extensions are still engaged in the institutional development of the Self-Help Rural Agricultural Training Center, which are generally driven and organized independently by themselves and farmers in their communities because of the desire to learn and share knowledge with one another.

CONCLUSION

From this study, it was observed that an appropriate regeneration effort is a necessity for all parties, including government, private sector and society. Therefore, the three components of this nation should make systematic efforts to facilitate the integration, implementation and evaluation of the plan in empowering agricultural human resources, especially the regeneration patterns that are developed.

One of the solutions of compiling a road map for the development of young agropreneurs is by optimizing the role of progressive farmers as self-help extension workers in encouraging the farmer regeneration acceleration.

Progressive farmers have been proven to be self-help extension workers with good communication skills in providing examples and encouraging young farmers to love jobs in the agricultural sector therefore, eroding the perception that they will work in the gloomy agricultural sector. In addition, they have good capacity potential in empowering fellow farmers. This is identified from their ability as self-help extension workers in terms of technical assistance, dissemination innovations according to farmers' needs, providing training to partner farmers, becoming informal leaders and maintaining local wisdom. All these may be the basic capital needed for extension services in rural areas. Furthermore, progressive farmers as self-help extension workers have an independent high degree because they have high filtering power in determining the best choice of action for farmer empowerment activities, have the initiative and willingness to work optimally in local and market-oriented conditions (competitiveness) and are able to work together in partnerships.

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