

## THE RELATIONSHIP BETWEEN SUSTAINABLE FOOD HOUSE (KRPL) AREA PROGRAM ACTIVITIES AND EMPOWERMENT OF FARMER WOMEN

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### ABSTRACT

National food production capacity is constrained by competition in land use, extreme climate change, phenomena of degradation of natural resources and the environment, and limited support for agricultural infrastructure. Therefore, it is necessary to empower agriculture, one of which is the strategy of utilizing yards to support food security and family food self-sufficiency. The study aims to relationship between sustainable food house (KRPL) area program activities and empowerment of farmer women. The study used a quantitative research design with descriptive survey techniques. The research was carried out from May to June 2023 in the Flower Farmer women's group in Grogol Village, Kapetaka District, Cirebon Regency with a total sample of 30 people. Data collection techniques using interview techniques. Research data were analyzed using Spearman level correlation coefficient test. The results showed 1) there was a significant relationship between the use and arrangement of the yard and the empowerment of female farmers in Grogol Village, Kapetakan District, Cirebon Regency, 2) There was a significant relationship between the development of village nurseries (KBD) and the empowerment of female farmers in Grogol Village, Kapetakan District, Regency Cirebon.

**KEYWORDS** KRPL; Women Farmer Empowerment; Grogol Village



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### INTRODUCTION

The development of food security is faced with the main problem of growing demand for food faster than growth in production. Nationally, the fast growth in demand for food in terms of quantity, quality and variety is caused by several factors including: population growth, industrial growth, people's purchasing power,

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and changes in consumer preferences. The world food and agriculture organization (Food and Agriculture Organization/FAO) estimates that around 65 developing countries will face the risk of losing 280 tons of cereal production as a result of the impact of global climate change on food security in Indonesia stated by Arifin (2009) that global climate change will reduce food production by up to 20 percent. Therefore, empowerment is needed in the agricultural sector.

Empowerment is a form of social change that contains aspects of relations as a social layer in society. Change from a less empowered society to a more empowered society. In the context of social relations, there is a transfer of individual functions which were originally objects to become subjects, so that existing social relations are only characterized by relations between subjects and other subjects (Priyono & Pranarka, 2005). The empowerment approach that is considered quite effective is the group approach. In the group approach, a "dialogical encounter" occurs which fosters and strengthens awareness of group solidarity, recognizes their common interests which gradually grows individual and group self-sufficiency (Friedman, 2013).

Empowerment is directly related to implementing organizational behavior in the process of delegating tasks and developing responsibilities (Luthans, 2015). A sense of responsibility and a sense of belonging to an organization and the desire to compete are prerequisites for successful empowerment (Chaterin, 2017). Women are often involved in development programs that lead to reducing poverty, expanding social opportunities and contributing to economic performance. Helping them means let's make a big contribution to reducing poverty. In addition, women also have an economic influence on future generations through their attitudes, education and health, and empowerment is more related to a bottom-up approach than a top-down approach (Clevers, 2016).

Productive business activities in the agricultural sub-sector always involve women in farming, especially family farming. Efforts to involve women in food farming are one of the efforts to increase the family economy and efficiency in the utilization of local resources as well as increase the status of women in sectoral activities (Mustafa, 2015). Women's participation in farming activities is able to make a financial contribution in forming an increase in family income. As family members, women are also able to control production assets. This situation is very different from the participation of women in subsystem farming activities where they act solely as laborers on land that is fully controlled by men. The characteristics of agriculture in these developing countries include having a small scale of farming, narrow land, small capital, and other limitations (Hadisapoetra, 2012).

Several studies related to the empowerment of women farmers in the agricultural sector were carried out by Safuri (2019) examines the empowerment of women farmers through strengthening learning networks. The results of Safuri's research are that the empowerment of women farmers who are the subject of empowerment in general feel the benefits of participating in learning activities, including starting to have the courage to visit health facilities, being able to understand the importance of maintaining personal hygiene and health for family members and the surrounding environment.

According to Mubayto (2018), land as one of the factors of production which is the factory of agricultural products has a considerable contribution to farming. The size of production from farming is influenced, among other things, by the narrow area of land used. The larger the area of agricultural land cultivated, the more female labor is allocated, which indicates the variety and variety of activities and the quantity of female time/labor. The lower the economic level of a farming household, the greater the time/labor of women in generating family income (Elizabeth, 2007). Related to this Yard land to support food security and family food self-sufficiency is seen as a strategic step to create national food self-sufficiency.

Nationally, the area of yards is around 10.3 million ha or 14 percent of the total area of agricultural land (Agricultural Research and Development Agency, 2011). The Ministry of Agriculture takes advantage of this potential to realize food self-sufficiency and improve family welfare, both for rural and urban households through the development of a Sustainable Food Home Area Model (M-KRPL) and its replication into a Sustainable Food Home Area (KRPL). The principle of M-KRPL as stated in the 2011 Perdum is that it is built from household associations that are able to realize food self-sufficiency through the utilization of the yard, can make efforts to diversify food based on local resources and at the same time preserve food crops for the future, as well as increase household welfare.

The area concept is designed for the development of M-KRPL/KRPL in a relatively concentrated area so as to facilitate management, assistance, and provide economic value to the community because it produces marketable food products. Meanwhile, the sustainable concept was designed with the development of village nurseries (KBD) and main nursery gardens (KBI) in each AIAT so that this program can be sustainable (Agricultural Research and Development Agency, 2011).

The Ministry of Agriculture through the Agricultural Research and Development Agency developed a Sustainable Food House Area Model (M-KRPL) and its replication called KRPL to optimize the use of yard land, mainly through the use of various innovations that have been produced by the agricultural R&D agency. The M-KRPL/KRPL program has been raised to a national program, in 2011 each BPTP developed 1-2 locations, and in 2012 an average replication was carried out for 4 locations in each province. Meanwhile, several provinces have budgeted for the development of KRPL 2-3 groups/villages per district by referring to the M-KRPL pilot initiated by BPTP. However, considering that the M-KRPL and KRPL concepts are based on only one very small-scale trial, efforts to continue to evaluate for the continuous improvement of the concept and implementation of M-KRPL and KRPL must be carried out so that this program can produce the expected results.

The area of national yards is around 10.3 million ha or 14 percent of the total area of agricultural land. Yard land is one of the potential sources of providing food with nutritional value, reducing household expenses, and increasing sources of income. Yards have multiple functions including the preservation of natural resources and the environment, protection of germplasm or biodiversity resources, economic functions, social functions, and most of these lands are still not utilized as planting areas for various agricultural commodities, both for grain, tubers, vegetables, fruits, biopharmaceutical plants, as well as livestock and fish.

Grogol Village has abundant natural resource potential. The availability of various types of food and spices, various types of food plants such as grains, tubers, legumes, vegetables, fruits and foods of animal origin are common. However, the realization of public consumption is still below the recommendations for fulfilling nutrition. Therefore, one of the efforts to improve family food security and community nutrition must begin with the utilization of available and available resources in their environment. The effort is to utilize the yard managed by the family. The activity of the Sustainable Food Home Area (KRPL) is expected to optimize the use of yards.

In order to achieve the utilization of the household yard, there are several main activities that must be carried out, including the establishment of a Village Nursery Garden (KBD) and the introduction of assistance in the application of vegetable cultivation technology. The location of the Village Nursery must be strategic to facilitate seed distribution and dissemination to the community. Near the location of the saung, a pilot planting model of vegetable beds with mulch was made. In addition, there are several mother plants to produce plant seeds. In the process of making KBD, KWT Orchid plays an active role in planting and maintaining vegetable seeds before they are distributed to the community.

Besides being used as a vegetable nursery, the KBD is also a meeting and training center for vegetable cultivation and planting media. The main commodities developed are kale, salam, corn, lime, lime, cucumber suri, and vines such as pariah, long bean, and oyong. The community takes vegetable seeds from the KBD to plant in their yards. The community uses used buckets with holes in the bottom for planting media.

It is hoped that the Grogol Village KRPL can be realized in helping fulfill household nutrition by consuming local food from their own yard, thus reducing the dependency rate on rice and increasing food participation for other non-rice commodities that are obtained independently through the KRPL program. Therefore, researchers made observations from the aspect of consumption patterns and nutrition in one of the Cikulak Village KRPL. The study aims to relationship between sustainable food house (KRPL) area program activities and empowerment of farmer women.

## **RESEARCH METHOD**

The research design used in this study is to use a quantitative research design. For quantitative research design used research techniques in the form of descriptive surveys. The research was conducted on a group of female flower farmers in Grogol Village, Kapetaka District, Cirebon Regency. The research was conducted from May to June 2003. The object of her research is the Flower Farmer women's group in Grogol Village because it is one of the villages that has a Women Farmer group that is active in playing a role in the community. Determination of the sample in this study was done purposively (purposive) with a total of 30 members.

Collecting data using interview techniques using a list of questions (questionnaire) that has been prepared. The data collected in this study consisted of primary and secondary data. To determine the relationship of variables in this study Spearman level correlation coefficient test ( $r_s$ ) was used. Meanwhile, to

determine the level of closeness of the relationship between variables in the Rank Spearman correlation, interpretation guidelines are used (Sugiyono, 2019).

## RESULT AND DISCUSSION

Empowerment emphasizes that people acquire sufficient skills, knowledge, and power to influence their lives and the lives of others they care about. In this case, the institutions related to the empowerment movement act based on public awareness. In empowerment, internal and external factors must be considered, namely external factors such as the role of government, NGOs, assistants, cooperatives, etc. As well as internal factors such as self-awareness, women's self-concept and motivation (Susilo, 2010).

### **The relationship between the use and arrangement of yards and the empowerment of women farmers**

Based on the results of the calculation of the Spearman rank correlation coefficient, it shows that there is a significant relationship between the use and arrangement of yards and the empowerment of women farmers. For more details, the relationship between the use and arrangement of the yard with the empowerment of women farmers can be seen in Table 1 as follows.

**Table 1. The relationship between the use and arrangement of yards and the empowerment of women farmers**

X variable	Y variable	Rs	tcount	t0.05	category rs
Utilization and arrangement of the yard	Empowerment of women farmers	0.674	4,827*	0.478	Strong correlation

Description: \* Significantly different

Source: Primary Data 2023

Based on Table 1 above, it shows that there is a significant relationship between the use and arrangement of yards and the empowerment of women farmers, with a value of  $rs = 0.674$ , the coefficient value is included in the strong category. The strong correlation is reflected in the clear relationship that exists between the use and arrangement of the yard and the empowerment of women farmers. The relationship is clear, one variable appears to be influenced by other variables. This means that there is a relationship between the use and arrangement of the yard with the empowerment of women farmers of 0.674. From the results of the significance test obtained tcount 4.827 greater than t0.05 0.478 at the 5% significance level, meaning that there is a real relationship between the use and arrangement of yards with the empowerment of women farmers.

According to the [Ministry of Agriculture \(2011\)](#), the use of yards for planting crops for family needs has been carried out by the community for a long time and continues to this day, but has not been properly designed and developed systematically, especially in preserving resources. Therefore, the government's commitment to involve households in realizing food self-sufficiency through food

diversification based on local resources, and the conservation of food crops for the future need to be actualized in reviving the culture of planting in their yards, both in urban and rural areas.

**The relationship between the area of the yard and the empowerment of women farmers**

Based on the results of the calculation of Spearman's rank correlation coefficient, it shows that there is a significant relationship between the area of the yard and the empowerment of women farmers. For more details, the relationship between the area of the yard and the empowerment of women farmers can be seen in table 2 as follows.

**Table 2. The relationship between the area of the yard and the empowerment of women farmers**

X variable	Y variable	Rs	tcount	t0.05	category rs
Yard area	Empowerment of women farmers	0.422	2,464*	0.478	Moderate Correlation

Description: \* Significantly different

Source: Primary Data 2023

Judging from the table above, it shows that there is a significant relationship between the area of the yard and the empowerment of women farmers, with a value of  $rs = 0.422$ , the coefficient value is in the medium category. Correlation is being drawn on the real relationship between the area of the yard with the empowerment of women farmers. This relationship is sufficient to affect one variable which is influenced by other variables. This means that there is a relationship between the area of the yard with the empowerment of women farmers of 0.422. From the results of the significance test obtained tcount 2.464 greater than t0.05 0.478 at the 5% significance level, meaning that there is a real relationship between the area of the yard with the empowerment of women farmers.

In accordance with Suganda (2021), which suggests farmers with a narrow land area face many obstacles in improving farming, especially when faced with the use of innovation or new technology. Saragih (2011) argues farmers who have a narrow land area tend to make technological changes, with the intention of increasing farming production.

**The Relationship between Commodity Selection and the Empowerment of Women Farmers**

Based on the results of the calculation of Spearman's rank correlation coefficient, it shows that there is a significant relationship between commodity selection and the empowerment of women farmers. This can be seen in Table 3 as follows.

**Table 3. Relationship Between Commodity Selection and Women Farmer Empowerment**

X variable	Y variable	Rs	tcount	t0.05	category rs
Commodity selection	Empowerment of women farmers	0.831	7,910*	0.478	The correlation is very strong

Description: \* Significantly different

Source: Primary Data 2003

Based on Table 3 above, it shows that there is a significant relationship between commodity selection and the empowerment of women farmers, with a value of  $r_s = 0.831$ , the coefficient value is in the very strong category. A very strong correlation is illustrated in the clear, real relationship between commodity selection and the empowerment of women farmers. From the results of the significance test,  $t_{count}$  is 7.910 greater than  $t_{0.05}$  0.478 at the 5% significance level, meaning that there is a significant relationship between commodity selection and the empowerment of women farmers.

The results of Spearman's rank correlation calculations show that there is a significant relationship between commodity selection and the empowerment of women farmers, because members of farmer groups are active in seeking information about the types of commodities that can be planted in the area of their yards. Besides that, farmer members are active in group activities with the aim of being able to share information with other group members regarding the types of commodities that can be developed. This is what makes the relationship between the selection of commodities and the empowerment of women farmers because women farmers will be able to become the main actors in utilizing the environment and develop their abilities in efforts to select types of commodities with the hope that the commodities planted can be considered according to aspects of need.

According to [Mardikanto \(2013\)](#) the selection of commodities to be planted in the yard, is determined by considering the fulfillment of family food and nutrition needs, food diversification based on local food sources, and the possibility of area-based commercial development.

#### **The relationship between the function of the yard and the empowerment of women farmers**

Based on the results of the calculation of Spearman's rank correlation coefficient, it shows that there is a significant relationship between the function of the yard and the empowerment of women farmers. This can be seen in Table 4 as follows.

**Table 4. The relationship between the function of the yard and the empowerment of women farmers**

X variable	Y variable	Rs	tcount	t0.05	category rs
Yard Function	Empowerment of women farmers	0.114	0.607*	0.478	Very low correlation

Description: \* Significantly different

Source: Primary Data 2022

Based on Table 4 above, it shows that there is a significant relationship between the function of the yard and the empowerment of women farmers, with a

value of  $r_s = 0.114$ , the coefficient value is in the very low category. This means that there is a real relationship between the function of the yard with the empowerment of women farmers of 0.114. From the results of the significance test,  $t_{count} 0.607$  is greater than  $t_{0.05} 0.478$  at the 5% significance level, meaning that there is a real relationship between the function of the yard and the empowerment of women farmers.

The results of Spearman's rank correlation calculations show that there is a real relationship between the function of the yard and the empowerment of women farmers because women farmers as the main actors have started to be able to utilize the yard as its function. Women farmers are able to be creative in utilizing their yards and are able to make their yards as a medium for growing plants that can provide additional income. In Erwin (2011) which suggests the function of the yard will be better and more comfortable, if we have a medium or smaller house with a large yard. Thus the occupants of the house will be more creative in utilizing the yard, it will even provide additional income that is not intentional or unexpected, because in the yard every householder can do anything.

### **Relationship between Village Nursery Development (KBD) and Women Farmer Empowerment**

Based on the results of the calculation of Spearman's rank correlation coefficient, it shows that there is a significant relationship between the development of village nurseries (KBD) and the empowerment of women farmers. It can be seen in Table 5 as follows.

**Table 5. Relationship Between Village Nursery Development and Women Farmer Empowerment**

X variable	Y variable	Rs	tcount	t0.05	category rs
Nursery development (KBD)	Empowerment women farmers	of 0.249	1,361*	0.478	Low correlation

Description: \* Significantly different

Source: Primary Data 2023

Based on Table 15 above and Appendix 10, it shows that there is a significant relationship between the development of village nurseries and the empowerment of women farmers, with a value of  $r_s = 0.249$ , the coefficient value is in the low category. The low correlation is reflected in the lack of clarity that exists between the development of village nursery gardens and the empowerment of women farmers. This means that there is a relationship between the development of village nurseries and the empowerment of women farmers of 0.249. From the results of the significance test,  $t_{count} 1.361$  is greater than  $t_{0.05} 0.478$  at the 5% significance level, meaning that there is a significant relationship between the development of village nursery gardens and the empowerment of women farmers.

Spearman's rank calculation results show that there is a real relationship between the development of village nurseries and the empowerment of women farmers because the development of village nurseries aims at availability which will



be distributed to women as members of farmer groups so that they can be managed for personal and group interests and success. Group members are jointly required to be able to develop a village nursery as a key to success in achieving the success of the KRPL program. The availability of village seeds/seeds is the key to the success of the KRPL program in the early stages and maintaining its sustainability (Palm, 2012). The role of women is more dominant in managing plant cultivation. Adult male workers and young workers generally take care of plant cultivation.

**The Relationship between the Roles and Functions of the Village Nursery (KBD) and the Empowerment of Women Farmers**

Based on the results of the calculation of Spearman's rank correlation coefficient, it shows that there is a significant relationship between the role and function of the village nursery and the empowerment of women farmers. Can be seen in Table 6 as follows.

**Table 6. The relationship between the role and function of the nursery and the empowerment of women farmers**

X variable	Y variable	Rs	tcount	t0.05	category rs
The role and function of the nursery	Empowerment women farmers	of 0.311	0.731*	0.478	Low correlation

Description: \* Significantly different

Source: Primary Data 2023

Based on Table 6 above, it shows that there is a significant relationship between the role and function of the village nursery and the empowerment of women farmers, with a value of  $r_s = 0.311$ , the coefficient value is in the low category. The low correlation is reflected in the lack of clarity that exists between the roles and functions of nursery gardens and the empowerment of women farmers. This means that there is a relationship between the role and function of the village nursery with the empowerment of women farmers of 0.311. From the results of the significance test, it was obtained that  $t_{count} 0.731$  was greater than  $t_{0.05} 0.478$  at the 5% significance level, meaning that there was a significant relationship between the roles and functions of village nursery gardens and empowering women farmers.

Based on the calculation above, the correlation relationship category  $r_s$  is included in the low category because in reality, in the field, members of the farmer group are only limited to having a village nursery, but have not been able to use it as intended. According to Arningsih and Rahman (2008) one of the activities that plays an important role in village nursery activities, the role and function of village nursery gardens can be interpreted as a land either village land or owned by community members, located not far from settlements that are used for farming with the main objective of producing seeds that will be distributed to group members and village communities.

**The Relationship between the Village Nursery Development Approach and the Empowerment of Women Farmers**

Based on the calculation results of Spearman's rank correlation coefficient, it shows that there is a real relationship between the village nursery approach and the empowerment of women farmers. This relationship can be seen in Table 7 as follows.

**Table 7. The relationship between the village nursery development approach and the empowerment of women farmers**

X variable	Y variable	Rs	tcount	t0.05	category rs
Village nursery development approach	Empowerment of women farmers	0.774	6,467*	0.478	Strong correlation

Description: \* Significantly different

Source: Primary Data 2023

Based on Table 7 above, it shows that there is a significant relationship between the village nursery development approach and the empowerment of women farmers, with a value of  $rs = 0.774$ , the coefficient value is included in the strong category. The strong correlation is reflected in the clear relationship that exists between the village nursery development approach and the empowerment of women farmers. This means that there is a relationship between the nursery development approach and the empowerment of women farmers of 0.774. From the results of the significance test, it was obtained that tcount was 6.467 greater than  $t_{0.05} 0.478$  at the 5% significance level, meaning that there was a significant relationship between the village nursery development approach and the empowerment of women farmers.

Spearman's rank calculation results show that there is a real relationship between village nursery development and empowering women farmers because female farmers as the main actors have had experience in farming activities for 5-10 years. This experience makes members mature in carrying out their farming activities. Based on experience, members will be better prepared and will have careful planning of what will be done so that it will encourage the success of the farming business itself. According to Cecco (2013) states that the seedling development approach will affect the level of maturity which greatly determines the readiness of farmers to carry out their activities.

## CONCLUSION

Based on the results of the research and discussion that has been described, the following conclusions can be drawn: (1) there is a real relationship between the use and arrangement of yards with the empowerment of women farmers in Grogol Village, Kapetaka District, Cirebon Regency. There is a significant relationship between the size of the yard and the empowerment of women farmers in the medium hospital category. There is a real relationship between commodity selection and the empowerment of women farmers with a very strong rs category. There is a significant relationship between the function of the pekarangan and the empowerment of women farmers in the very low RS category, and (2) there is a

real relationship between the development of Village Nurseries (KBD) and the empowerment of women farmers in Grogol Village, Kapetaka District, Cirebon Regency. There is a significant relationship between the role and function of the village nursery and the empowerment of women farmers in the low RS category. There is a real relationship between the village nursery development approach and the empowerment of women farmers in the strong rs category.

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