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# THE RELATIONSHIP BETWEEN FARMER PARTICIPATION AND THE PROGRAM SPECIAL EFFORTS TO INCREASE SWEET POTATO PRODUCTION

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## Abstract

This study aims to find out: (1) farmer participation in planning with special efforts programs to increase sweet potato production, 2) the relationship of farmer participation in implementation with special efforts programs to increase sweet potato production, (3) the relationship of farmer participation in monitoring and evaluation with special efforts programs to increase sweet potato production, (4) the relationship between farmer participation in yield utilization and special efforts to increase programs sweet potato production, and (5) the relationship between farmer participation and special efforts to increase sweet potato production. The research method used in this study is a quantitative method with a survey approach and a sample of 88 farmers. Primary data collection was obtained through interviews, and secondary data were obtained from agencies related to this study. To determine the relationship between research variables, the Spearman level correlation test was used. The results showed that: (1) there was a low and real relationship between farmer participation in program planning with sweet potato special efforts with a value of  $r_s = 0.375$  and a calculated value of 3.023, (2) there was a low and real relationship between farmer participation in program implementation with a value of  $r_s = 0.335$  and a calculated value of 2.658, (3) there is a low and real relationship between farmer participation in program monitoring and evaluation with sweet potato special efforts with a value of  $r_s = 0.341$  and a calculated value of 2.719, (4) there is a low and real relationship between farmer participation in the utilization of program results with sweet potato special efforts, with a value of  $r_s = 0.344$  and a calculated value of 2.738, and (5) there is a low and noticeable relationship between farmer participation and sweet potato special efforts, with a value of  $r_s = 0.526$  and a calculated value of 4.627.

**keywords:** participation; special efforts program; sweet potato

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# The Relationship Between Farmer Participation and The Program Special Efforts to Increase Sweet Potato Production

## INTRODUCTION

Indonesia is an agricultural country which means that most of the population works as farmers (Syuaib, 2015). The large number of Indonesians who depend on agriculture shows the huge role of the agricultural sector in supporting the economy and has important implications for future economic development (Fauzi & Dukat, 2021). The agricultural sector is a sector that has a broad scope and can be classified into several subsectors based on the characteristics possessed by the agricultural business activities (Faqih, 2016).

In the period 2017–2022 the agricultural sector is still faced with various obstacles, including (Yadav et al., 2022): increasing population, environmental damage and climate change, limited infrastructure (irrigation networks, farm roads, production roads, ports equipped with warehousing), insufficient availability of quality superior seeds/seeds, fertilizers, feed, pesticides/medicines, agricultural tools and machinery up to the farm level, conversion of productive agricultural land to uncontrolled non-agricultural use, dependence on rice consumption, competition for water use and land tenure status.

The Food Law of the Republic of Indonesia Number 18 of 2012 states that food administration is carried out to meet basic human needs that provide benefits fairly, equitably, and sustainably based on food sovereignty, food independence, and food security. As an effort to realize food sovereignty and security, the Ministry of Agriculture describes through agricultural development policies in the Food Self-Sufficiency program (Agung et al., 2022).

Sweet potato is a food crop commodity that has a main role as meeting domestic food needs which every year the need for food tends to increase along with population growth and the development of the food industry so that in terms of national food security its function becomes very important and strategic.

The active participation and involvement of farmers as members of farmer groups in special efforts to increase sweet potato production will determine success in achieving their goals as expressed by Husodo, (2020) suggesting that participation will be effective if carried out collectively in a group forum. This will result in synergies which in turn will produce economic benefits that can be enjoyed by all parties. The forms of participation that can be given by members of farmer groups in an activity are: ideas / ideas, skills, energy, property, and money (Krisnawati et al., 2018).

Each farmer group member who actively participates in activities in the farmer group will make different contributions as expressed by Daniel et al., (2016) that the level of farmer participation as a member of the farmer group is not the same depending on the extent of the farmer's involvement in solving the problems faced. To assess whether a program is said to be successful or not, it is determined as a whole by the achievement or failure of the farmer group's own goals according to the participation of its members.

Sweet potato production in Kuningan Regency in 2019 was 139,820 tons, in 2020 it was 106,123 tons and in 2021 it was 121,978 tons (Asmarantaka, 2017). The data shows fluctuations in production each year. Departing from these conditions, the participation of farmers and the role of field agricultural extension workers are needed in determining the success of this activity. The participation of farmers and the role of agricultural extension workers are important positions in efforts to increase sweet potato production because active involvement and cooperation carried out both with fellow members and group administrators will determine the success of these activities.

The active participation and involvement of farmers as members of farmer groups in special programs to increase sweet potato production will determine success in achieving their goals as expressed by Husodo, (2020) who suggests that participation will be effective if carried out collectively in a group forum. This will result in synergies which in turn will produce economic benefits that can be enjoyed by all parties. The forms of participation that can be given by members of farmer groups in an activity are: ideas, skills, energy, property, and money (Chuzaimah & Lastinawati, 2022).

Each farmer group member who actively participates in activities in the farmer group will make different contributions as expressed by Handani & Trimo, (2021) that the level of farmer participation as a member of the farmer group is not the same depending on the extent of the farmer's involvement in solving the problems faced. To assess whether a program is said to be successful or not, it is determined as a whole by the achievement or failure of the farmer group itself according to the participation of its members.

The purpose of this study is to determine the relationship between farmer participation in planning, implementation, monitoring and evaluation as well as utilization of results with special efforts to increase sweet potato production.

## **METHODS**

The research was conducted in Cirendang Village, Kuningan District, Kuningan Regency. The study was conducted from November to December 2022. This research design is quantitative research, with descriptive survey research techniques. The object of his research was in Gapoktan Mulya Mukti Kelurahan Cirendang, Kuningan District, Kuningan Regency with a total of 88 farmers. The determination of sample farmers in this study was carried out by census, where all members of the population were sampled and the sampling area was carried out deliberately by considering certain reasons in accordance with the purpose of the study (Tarsito, 2014).

Data collection is a procedure for procuring data in accordance with standards for research purposes. The required data (Tedesco et al., 2023) type consists of primary data and secondary

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data. Primary data are data obtained directly from the object of research through direct observation and interviews. While secondary data is data obtained from libraries and agencies / agencies related to the problem studied.

Data Analysis techniques carried out include: descriptive analysis and Spearman level correlation coefficient test ( $r_s$ ) which is used to determine the relationship between farmer participation variables (X) as independent variables with sweet potato upsus programs (Y) as bound/non-free variables (Gainau, 2016).

### RESULTS AND DISCUSSION

The Sweet Potato UPSUS program based on Tertiary Irrigation Network Rehabilitation (RJIT) in Cirendang Village is classified as quite good category with an average score of 5.98 (74.69%). Most farmers that the rehabilitation of the Tertiary Irrigation Network is quite good as many as 70 people (83.75%), the good category as many as 14 people (13.75%), and the rest are classified as poor category as many as 4 people (2.50%). The UPSUS program based on the Provision of Agricultural Tools and Machinery (Alsintan) in Cirendang Village is classified as a good category with an average score of 6.14 (76.72%). Most farmers said that the provision of agricultural tools and machinery (Alsintan) was quite good as many as 65 people (76.25%), classified as good categories as many as 21 people (22.50%), and the rest were classified as bad categories as many as 2 people (1.25%).

The UPSUS program based on the provision and use of superior seeds in Cirendang Village is classified as quite good category with an average score of 5.98 (74.69%). Most farmers said that the provision and use of superior seeds was quite good as many as 65 people (76.25%), classified as good categories as many as 20 people (21.25%), and the rest were classified as bad categories as many as 3 people (2.50%). The UPSUS program based on the provision and use of balanced fertilizers in Cirendang Village is classified as a fairly good category with an average score of 5.89 (73.59%). Most farmers said that the UPSUS Program based on the provision and use of balanced fertilizers was quite good as many as 72 people (85%), good categories as many as 13 people (10%) and the rest were classified as bad categories as many as 5 people (5%).

The Upsus Sweet Potato program based on the arrangement of the planting season in Cirendang Village is classified as quite good with an average score of 5.99 (74.84%). Most farmers said that the Sweet Potato UPSUS Program based on the regulation of the planting season was quite good as many as 71 people (83.75%), the good category was 14 people (13.75%) and the rest were classified as good categories as many as 3 people (2.50%). The Sweet Potato UPSUS program based on the integrated planting management movement in Cirendang Village is classified as a good category with an average score of 6.00 (77.50%). Most farmers said that the Sweet Potato Upsus Program based on the integrated planting management movement was quite

good as many as 57 people (66.25%), the good category was 28 people (31.25%) and the rest were classified as good categories as many as 3 people (2.50%).

The Sweet Potato UPSUS program based on the expansion of planting areas in Cirendang Village is classified as a good category with an average score of 5.80 (72.50%). Most farmers said that the sweet potato UPSUS Program based on the expansion of planting areas was quite good as many as 57 people (66.25%), the good category was 28 people (31.25%) and the rest were classified as good categories as many as 3 people (2.50%). The sweet potato UPSUS program aims to improve land optimization in Cirendang Village classified as good category with an average score of 5.93 (74.06%). Most farmers said that the sweet potato UPSUS Program based on improved land optimization was quite good as many as 57 people (66.25%), the good category was 28 people (31.25%) and the rest were classified as good categories as many as 3 people (2.50%).

**The Relationship of Farmer Participation in Planning with the Sweet Potato UPSUS Program**

Based on the calculation results of the Spearman Rank Correlation statistical test, a correlation coefficient (rs) value of 0.375 was obtained. This means that the relationship between farmers' participation in planning and the Sweet Potato UPSUS program is 0.375, classified as a moderate level of closeness. For more details, the results of calculating the correlation coefficient between farmer participation in planning and programs can be seen in Table 3.

**Table 1. Relationship of Participation in planning with Sweet Potato UPSUS Program**

Variabel X <sub>1</sub>	Variabel Y	rs	rs <sup>2</sup>	t <sub>hitung</sub>	t <sub>0.05 (80-2)</sub>
Participation in planning	Sweet Potato UPSUS Program	0,375	0,141	3,023	1,999

Remarks: rs = correlation coefficient rs<sup>2</sup> = determination coefficient

The value of the coefficient of determination (rs<sup>2</sup>) is 0.141, meaning that farmers' participation in planning has an influence on the sweet potato UPSUS program of 0.141 (14.10%), and the remaining 83.90% is influenced by other factors that are not included in the model. From the results of the significance test (t-test), a tcount of 3.023 was obtained greater than t0.05 of 1.999 at a real level of 5%, meaning that the relationship between farmer participation in planning and the sweet potato UPSUS program was significantly different.

**The Relationship of Farmer Participation in Implementation with the Sweet Potato UPSUS Program**

Based on the calculation results of the Spearman Rank Correlation statistical test, a correlation coefficient (rs) value of 0.344 was obtained. This means that the relationship between participation in implementation and the sweet potato UPSUS program is 0.335, classified as a low level of closeness. For more details, the results of the calculation of the correlation coefficient between farmer participation in implementation and the program can be seen in Table 4.

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**Table 2. Relationship of Participation in Implementation with the Sweet Potato UPSUS Program**

Variabel X <sub>2</sub>	Variabel Y	rs	rs <sup>2</sup>	t <sub>hitung</sub>	t <sub>0,05 (80-2)</sub>
Participation in planning	Sweet Potato UPSUS Program	0,335	0,112	2,658	1,999

Keterangan : rs = koefisien korelasi    rs<sup>2</sup> = koefisien determinasi

The value of the coefficient of determination (rs<sup>2</sup>) is 0.112, meaning that farmer participation in the implementation has an influence on the sweet potato UPSUS program of 0.112 (11.20%), and the remaining 88.80% is influenced by other factors that are not included in the model. From the results of the significance test (t-test), a tcount of 2.658 was obtained greater than t0.05 of 1.999 at a real level of 5%, meaning that the relationship between farmer participation in implementation and the sweet potato UPSUS program was significantly different.

**The Relationship of Farmer Participation in Monitoring and Evaluation with the Sweet Potato UPSUS Program**

Based on the calculation results of the Spearman Rank Correlation statistical test, a correlation coefficient (rs) value of 0.341 was obtained. This means that the relationship between participation in monitoring and evaluation with the Sweet Potato UPSUS program is 0.341, classified as a low level of closeness. For more details, the results of the calculation of the correlation coefficient between farmer participation in implementation and the program can be seen in Table 5.

**Table 3. Relationship of Participation in Monitoring and Evaluation with Sweet Potato UPSUS Program**

Variabel X <sub>3</sub>	Variabel Y	rs	rs <sup>2</sup>	t <sub>hitung</sub>	t <sub>0,05 (80-2)</sub>
Sweet Potato UPSUS Program	Sweet Potato UPSUS Program	0,341	0,116	2,719	1,999

Keterangan : rs = koefisien korelasi    rs<sup>2</sup> = koefisien determinasi

The value of the coefficient of determination (rs<sup>2</sup>) is 0.116, meaning that farmer participation in monitoring and evaluation has an influence on the sweet potato UPSUS program of 0.116 (11.60%), and the remaining 88.40% is influenced by other factors that are not included in the model. From the results of the significance test (t-test), a tcount of 2.719 was obtained greater than t0.05 of 1.999 at a real level of 5%, meaning that the relationship between farmer participation in monitoring and evaluation with the Sweet Potato UPSUS program was significantly different.

**The Relationship between Farmer Participation in Yield Utilization with the Sweet Potato UPSUS Program**

Based on the calculation results of the Spearman Rank Correlation statistical test, a correlation coefficient (rs) value of 0.344 was obtained. This means that the relationship between

participation in the utilization of results and the Sweet Potato UPSUS program is 0.344, classified as a low level of closeness. For more details, the results of the calculation of the correlation coefficient between farmer participation in product utilization and programs can be seen in Table 6.

**Table 4. The Relationship of Participation in Utilization of Results with the Sweet Potato UPSUS Program**

Variabel X <sub>4</sub>	Variabel Y	rs	rs <sup>2</sup>	t <sub>hitung</sub>	t <sub>0.05 (80-2)</sub>
Partisipasi dalam pemanfaatan hasil	Program Upsus Ubi jalar	0,344	0,118	2,738	1,999

Keterangan : rs = koefisien korelasi    rs<sup>2</sup> = koefisien determinasi

The value of the coefficient of determination (rs<sup>2</sup>) is 0.118, meaning that farmers' participation in the utilization of results has an influence on the Sweet Potato UPSUS program of 0.118 (1.80%), and the remaining 88.20% is influenced by other factors that are not included in the model. From the results of the significance test (t-test), a tcount of 2.738 was obtained greater than t0.05 of 1.999 at a real level of 5%, meaning that the relationship between farmer participation in the utilization of results with the sweet potato UPSUS program was significantly different.

**The Relationship between Farmer Participation and the Sweet Potato UPSUS Program**

Based on the calculation results of the Spearman Rank Correlation statistical test, a correlation coefficient (rs) value of 0.526 was obtained. This means that the relationship between farmer participation and the Sweet Potato UPSUS program is 0.526, classified as a moderate level of closeness. For more details, the results of calculating the correlation coefficient between farmer participation and the program can be seen in Table 7.

**Table 5. The Relationship between Farmer Participation and the Sweet Potato UPSUS Program**

Variabel X	Variabel Y	rs	rs <sup>2</sup>	t <sub>hitung</sub>	t <sub>0.05 (80-2)</sub>
Partisipasi petani	Program Upsus Ubi jalar	0,526	0,277	4,627	1,999

Keterangan : rs = koefisien korelasi    rs<sup>2</sup> = koefisien determinasi

The value of the coefficient of determination (rs<sup>2</sup>) is 0.277, meaning that farmer participation has an influence on the sweet potato UPSUS program of 0.277 (22.70%), and the remaining 77.30% is influenced by other factors that are not included in the model. From the results of the significance test (t-test), a tcount of 4.627 was obtained greater than t0.05 of 1.999 at a real level of 5%, meaning that the relationship between farmer participation and the sweet potato UPSUS program was significantly different.

In participatory development, the community is required to participate in self-development activities. Therefore, to achieve development success, community participation is an inseparable element in the development process. Participation means participating in an activity, participation

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or participation in an activity, active or proactive participation in an activity. Husodo (2020) suggests that participation will be effective if carried out collectively in a group forum. This will result in synergies which in turn will produce economic benefits that can be enjoyed by all parties. The forms of participation that can be given by Gapoktan members in an activity are: ideas / ideas, skills, energy, material possessions, and money (Mardiharini et al., 2016). Each member of the Association who actively participates in activities in the Association will make different contributions as expressed by Herawati & Pulungan, (2006) that the level of participation of farmers as community members is not the same depending on the extent of involvement of these farmers in solving the problems faced.

### **CONCLUSION**

Based on the results of research and discussion that have been described in advance, the following conclusions can be drawn There is a low and noticeable relationship between farmer participation in program planning and sweet potato special efforts, with a value of  $r_s = 0.375$  and a calculated value of 3.023. The higher the level of farmer participation in program planning will be followed by the better the Sweet Potato Special Effort. There is a low and real relationship between farmer participation in program implementation and sweet potato special efforts, with a value of  $r_s = 0.335$  and a calculated value of 2.658. The higher the level of farmer participation in the implementation of the program will be followed by the better the Sweet Potato Special Effort. There is a low and noticeable relationship between smallholder participation in program monitoring and evaluation and sweet potato Special Efforts, with a value of  $r_s = 0.341$  and a calculated value of 2.719. The higher the level of farmer participation in program monitoring and evaluation will be followed by the better the Sweet Potato Special Effort. There is a low and real relationship between farmer participation in the utilization of program results and sweet potato special efforts, with a value of  $r_s = 0.344$  and a calculated value of 2.738. The higher the level of farmer participation in the utilization of the program will be followed by the better the sweet potato special effort. There is a low and real relationship between farmer participation and sweet potato special efforts, with a value of  $r_s = 0.526$  and a calculated value of 4.627. The higher the level of farmer participation will be followed by the better the Sweet Potato Special Operation.

### **REFERENCES**

- Agung, I. D. G. N. S., Putra, M. N. T., Cholil, M. F., & Pakro, A. F. J. (2022). Juridical Study Of Food Criminal Action Based On Law Of The Republic Of Indonesia No. 18 Of 2012. Legal Brief, 11(5), 2717–2726.
- Asmarantaka, R. W. (2017). Efisiensi Dan Prospektif Usaha Tani Ubi Jalar (Studi Kasus Desa Petir,



- Dramaga, Jawa Barat, Indonesia). *Jurnal Pangan*, 26(1), 29–36.
- Chuzaimah, C., & Lastinawati, E. (2022). Analisis Marjin Dan Farmer's Share Komoditi Pepaya (Studi Kasus Di Desa Ulak Kapal Kecamatan Tanjung Lubuk Kabupaten Ogan Komering Ilir). *Societa: Jurnal Ilmu-Ilmu Agribisnis*, 11(1), 37–42.
- Faqih, A. (2016). Peranan Penyuluh Pertanian Lapangan (Ppl) Dalam Kegiatan Pemberdayaan Kelompok Terhadap Kinerja Kelompok Tani. *Agrijati Jurnal Ilmiah Ilmu-Ilmu Pertanian*, 26(1).
- Fauzi, Y. A., & Dukat, D. (2021). Hubungan Partisipasi Petani Dengan Program Upaya Khusus Peningkatan Produksi Padi, Jagung Dan Kedele (Upsus Pajale)(Kasus Di Desa Kubangpari Kecamatan Kersana Kabupaten Brebes). *Agrijati Jurnal Ilmiah Ilmu-Ilmu Pertanian*, 34(1), 61–68.
- Gainau, M. B. (2016). Pengantar Metode Penelitian. Pt Kanisius.
- Handani, W. L., & Trimo, L. (2021). Daya Saing Agribisnis Ubi Jalar Cilembu Di Desa Cilembu, Kecamatan Pamulihan, Kabupaten Sumedang, Jawa Barat Competitiveness Of Cilembu Sweet Potato Agribusiness In Cilembu Village, Pamulihan District, Sumedang Regency, West Java. *Jurnal Pemikiran Masyarakat Ilmiah Berwawasan Agribisnis*. Januari, 7(1), 676–694.
- Herawati, H., & Pulungan, I. (2006). Faktor-Faktor Yang Berhubungan Dengan Partisipasi Kontaktani Dalam Perencanaan Program Penyuluhan Pertanian (Kasus Wkupp Nyalindung, Kabupaten Sukabumi). *Jurnal Penyuluhan*, 2(2).
- Husodo, S. (2020). Partisipasi Petani Dalam Kegiatan Dafep Di Kabupaten Bantul (Farmer's Participation In Dafep Project). *Jurnal Ilmu-Ilmu Pertanian*, 2(1), 10.
- Krisnawati, E., Suman, A., & Saputra, P. M. A. (2018). Kajian Pengaruh Program Nasional Upaya Khusus Peningkatan Produksi Padi Terhadap Kemiskinan Perdesaan Di Wilayah Barat Dan Timur Indonesia. *Jurnal Ilmu Ekonomi Dan Pembangunan*, 18(1), 14–33.
- Mardiharini, M., Taufik, M., & Sudaryanto, T. (2016). Studi Diagnostik Pengembangan Usahatani Kedelai Di Desa Karyamukti, Kabupaten Karawang.
- Syuaib, M. F. (2015). Anthropometric Study Of Farm Workers On Java Island, Indonesia, And Its Implications For The Design Of Farm Tools And Equipment. *Applied Ergonomics*, 51, 222–235.
- Tarsito, S. (2014). Metode Penelitian Kuantitatif, Kualitatif Dan R&D. Alfabeta. Bandung.
- Tedesco, D., De Almeida Moreira, B. R., Júnior, M. R. B., Maeda, M., & Da Silva, R. P. (2023). Sustainable Management Of Sweet Potatoes: A Review On Practices, Strategies, And Opportunities In Nutrition-Sensitive Agriculture, Energy Security, And Quality Of Life. *Agricultural Systems*, 210, 103693.
- Yadav, V. S., Singh, A. R., Gunasekaran, A., Raut, R. D., & Narkhede, B. E. (2022). A Systematic Literature Review Of The Agro-Food Supply Chain: Challenges, Network Design, And Performance Measurement Perspectives. *Sustainable Production And Consumption*, 29, 685–704.

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