



Strategy of Agricultural Extension Agents Implementation to Increase Rice Productivity

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Abstract

The purpose of this study was to analyze the conditions of agricultural extension activities in Pati Regency, analyze problem agricultural extension agents face in increasing their role, and analyze the implementation strategies of agricultural extension agents to increase the level of wetland paddy productivity. The research method used is qualitative descriptive method with SWOT analysis. The subjects of this study were 43 agricultural extension officers and 3 key persons. The results showed that the condition of the extension activities in Pati District was running quite well. The obstacles faced by extension workers include: Policies that often clash with extension activities and the farmers themselves; Efforts to increase human resources of agricultural extension agents through training are still lacking; and The proportion of field agricultural extension agents to the assisted farmer groups is still too unequal. The following strategies for implementing agricultural instructors to increase lowland rice productivity in Pati Regency are: Online consultation services; Testimonials of successful implementation of extension; Breakthrough alternative fertilizers and treatments; Incentives based on length of work; and Management of counseling and evaluation time.

Keywords: Strategy of Implementation, Agriculture Extension, SWOT Analysis

Abstrak

Tujuan penelitian ini adalah untuk menganalisis kondisi kegiatan penyuluhan pertanian di Kabupaten Pati selama ini dan apa saja yang dihadapi oleh penyuluh pertanian dalam meningkatkan perannya. Metode penelitian yang digunakan dalam penelitian ini adalah metode deskriptif kualitatif dengan analisis SWOT. Narasumber dari penelitian ini adalah 43 penyuluh pertanian di enam BPP kecamatan yang ada di Kabupaten Pati dan 3 penyuluh dinas. Hasil penelitian menunjukkan bahwa kondisi kegiatan penyuluhan di Kabupaten Pati sudah berjalan cukup baik. Kendala yang dihadapi penyuluh diantaranya kebijakan yang seringkali berbenturan dengan kegiatan penyuluhan maupun petani itu sendiri, upaya peningkatan SDM penyuluh pertanian melalui pelatihan masih dirasa kurang, dan umur dari penyuluh rata-rata 45 sedangkan upaya regenerasi masih dirasa sulit. Dengan analisis SWOT, strategi implementasi penyuluh pertanian untuk meningkatkan produktivitas padi sawah di Kabupaten Pati adalah layanan konsultasi daring, testimoni keberhasilan penerapan penyuluhan, terobosan alternatif pupuk dan perawatan, insentif berdasarkan lama kerja, manajemen waktu penyuluhan dan evaluasi.

Kata Kunci: Strategi Implementasi, Penyuluh Pertanian, Analisis SWOT

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INTRODUCTION

One of the main sectors that support people's lives is agriculture. Most Indonesians use the agricultural sector as their livelihood. In other words, agriculture is one of the supporting national economy. The important role of the agricultural sector should be the driver of economic activities. In addition, the agricultural sector itself in its application is divided into various sub-sectors. The agricultural sector in Indonesia is divided into five, namely food crop sub-sectors, plantations, horticulture, animal husbandry, and fisheries. Therefore, the need for agricultural extension activities that are able to meet the needs of farmers in terms of agricultural activities.

Agricultural counseling is a non-formal education for farmers that includes activities in expert knowledge and skills from extension workers to farmers and their families that take place through the teaching and learning process (Mardikanto, 2009:12). Agricultural extension must be a truly competent agricultural expert, in addition to providing guidance to farmers, extension workers must also be able to provide motivation, present information and increase awareness of farmers so as to encourage the interest of learning farmers in solving problems faced in the field.

Farmers are the main actors if associated in agricultural production activities, and become part of the Indonesian society that should be improved human resources and welfare, efforts to improve the quality of human resources can be carried out one of them through counseling activities. It is expected that with the role of agricultural extension workers all information related to agriculture that continues to grow can be accepted by farmers, the more knowledge

about agricultural management technology that can be utilized by farmers, the more effective the counseling activities.

The subjects of agricultural development are farmers, farmers communities in general and farmer groups in particular. As one of the components in the agribusiness system, the role of farmer groups determines the success of counseling (Ban, 1999: 267). Although agricultural extension workers have tried with farmers or farmer groups in carrying out development activities in the agricultural sector, but the role of government policies that favor extension workers is also one of the foundations in development efforts in the agricultural sector. In theory the role of farmer groups can increase the level of understanding and participation of the farmers themselves with the exchange of information and insights of others.

The establishment of agricultural counseling institutions is a development effort in the agricultural sector that is basically projected as one of the processes of human resources development change in the agricultural sector that brings changes in the process of distribution of benefits, allocation of economic resources, and accumulation processes that bring increased welfare, production, and income. Extension workers can influence the target through their role as education, facilitation, innovation, consultation, monitoring, supervision, evaluation, or as an advisor to farmers (Mardikanto, 2009:30) in accordance with the characteristics of farmers and regional potentials.

In an effort to increase the effectiveness of agricultural counseling activities and develop the participation of farmers in development efforts in the agricultural sector, it is necessary to foster a group of farmers who have been

formed which later the farmer group is expected to be able to grow and develop into adequate agricultural human resources and able to guide and maintain the welfare of its members. The need for the development of farmer groups to achieve common goals, which can be realized in a series of activities that are structured and have a clear future plan as a whole.

The characteristics of a growing group of peasants are as follows: (1) Fellow members must know, be familiar, and trust each other; (2) In trying to farm have the same vision and interests; (3) There are similarities in settlements or traditions, economic and social status, language, education, business vacuum, business type, and ecology; and (4) Based on mutual agreement perform responsibilities and clear division of duties between fellow members. (Deptan, 2007).

In the development of farmer groups, extension workers need to carry out their roles participatory so that the principles of equality, accountability, responsibility, transparency, and cooperation make counseling efforts in the empowerment of farmers have new contents. A farmer group formed on the basis of common interests among farmers makes the farmer group can exist and have the ability to access all resources such as natural resources, people, capital, information, as well as facilities and infrastructure in developing farming that it does (Jasmal, 2007:2).

The realization of agricultural counseling activities in an effort to develop farmer groups can be seen from how often regular meetings between members of the target farmer group, as well as in mutual assistance activities accompanied by field extension workers. According to Ban (1999:32) through counseling

activities it is expected that the development of farmers has the ability to improve their lives, form healthy opinions, and make effective decisions. In addition, through counseling activities can improve the development of farmer groups both in terms of quality and in terms of quantity, good relations with related agencies, increased production, and finally the occurrence of economic improvement for farmers.

Based on Table 1 attached, Central Java is one of the three provinces categorized in Cluster 1 in terms of supporting national food reserves, participating in East Java and West Java. These provinces contributed greatly to food availability in Indonesia with a total of 35,511,147 tons. The three have supported 45% of the total rice production in Indonesia in 2018 amounting to 78,819,137 tons. The production rate after Java reached 11,052,782 tons with a percentage of 14% in 2018 placing Central Java in the 3rd position east with a production level of 12,367,414 tons, and West Java with 12,090,951 tons.

In Table 2, Production Padi in Central Java in 2018 is still occupied by Cilacap Regency as a rice production motor with a production level of 777,009 tons, accompanied by Grobogan, Demak, Blora, Sragen, and Pati districts that have production levels above 500 thousand tons, each of the districts is the spearhead of Central Java's food reserves. While there are several regencies/cities that rely heavily on the distribution of food reserves such as, the city of Surakarta, Magelang, Tegal, Salatiga, Pekalongan, Semarang, Wonosobo, Temanggung, and Banjarnegara which have rice production levels below 100 thousand tons, and classified as rice production deficit.

Pati regency is one of several rice barns that support food production in Central Java Province. This is because Pati is included in the top six districts that have the highest rice production (BPS Central Java, 2018). Rice

production in Pati regency up to the period of 2018 experienced the highest production rate, namely in 2016 which produced 652,675 tons, with a harvest area of 111,094 ha, and an average production of 58.75 ku/Ha.

Table 2. Rice Production Per Regency / City in Central Java in 2018

No.	Regency/City	Production Rate	No.	Regency/City	Production Rate
1	Cilacap	777.009	19	Jepara	209.121
2	Grobogan	749.608	20	Kudus	191.922
3	Demak	694.346	21	Kendal	188.608
4	Blora	582.925	22	Tegal	184.921
5	Sragen	564.919	23	Purbalingga	174.695
6	Pati	557.196	24	Semarang	172.238
7	Brebes	482.836	25	Batang	158.940
8	Kebumen	462.786	26	Banjarnegara	94.429
9	Wonogiri	443.641	27	Temanggung	86.275
10	Klaten	390.015	28	Wonosobo	72.438
11	Pemalang	361.910	29	Pekalongan	66.160
12	Sukoharjo	343.756	30	Kota Semarang	24.260
13	Banyumas	320.804	31	Kota Pekalongan	8.722
14	Purworejo	269.004	32	Kota Salatiga	4.910
15	Karanganyar	264.943	33	Kota Tegal	2.838
16	Boyolali	242.050	34	Kota Magelang	851
17	Magelang	232.845	35	Kota Surakarta	236
18	Rembang	226.929			

Source: BPS Jawa Tengah 2018

Rice production contributed by Pati Regency to Central Java Province in 2015 reached 631,899 tons from 11,006,570 tons or 5.74% of the total. Rice production in Pati regency as a whole has increased, but there has been a decrease in several years in the period 2010-2018, namely in 2011, 2014, 2017 and 2018, and the highest production rate decreased in 2014, namely rice production of 484,466 tons with a harvest area of 89,208 ha and productivity of 54.31ku/Ha, from the previous year capable of producing 576,909

tons, with a difference of 92,443 tons (BPS Pati Regency, 2018). The table of rice production and average production in Pati 2018 can be seen on table 3.

The number of farmer households in Pati district also decreased as shown at the picture 1. Based on picture 1, it can be seen that there was a decrease in the number of farmer households in Pati Regency in 2018. The number of farmers' houses in Pati in 2017 was recorded at 136,708. Meanwhile, in 2018, the number of farmer households decreased to 129,687. More

specifically, farmers' households with rice farming in 2018 reached 95,084.

Table 3. Rice Production and Average Production in Pati 2010-2017

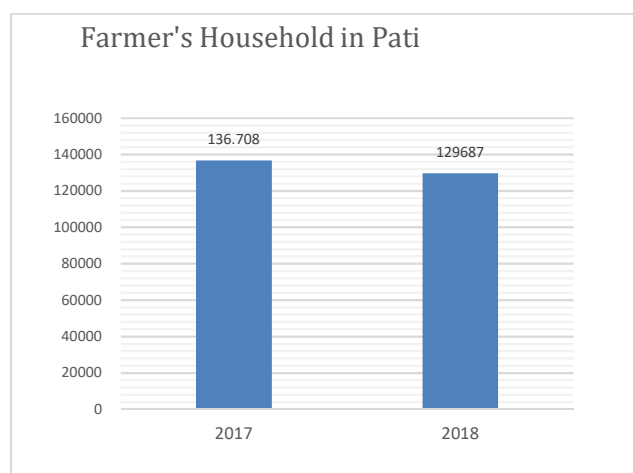
Year	Harvest area (Ha)	Total Production (ton)	Production Average (Ku/Ha)
2017	105.112	620.206	59,00
2016	111.094	652.675	58,75
2015	106.049	631.899	59,59
2014	89.208	484.466	54,31
2013	101.999	576.909	56,56
2012	97.204	565.819	58,21
2011	96.611	512.067	53,00
2010	105.449	588.951	55,85

Source: Pati dalam Angka 2018

With a combination of several production factors, businesses in the rice paddy sector are said to be able to make a profit. But the lack of precisely the composition of the production factors used resulted in low production results. Efficient utilization of production factors can have an effect on increasing production, which means that production output is greater than the production factor applied, or the acceptance rate exceeds the cost of production. The choice of a combination of labor use, seeds, fertilizers, land processing, crop maintenance as well as the proper use of capital and technology will increase the productivity of agricultural land or the right combination of inputs will create a number of efficient production (Sukirno, 2000).

Efforts to improve the quality of agriculture will be better if it improves the ability of farmers to carry out better farming. There are several ways to empower agriculture, among others through education and training,

counseling and mentoring, development of systems and means of marketing agricultural products, consolidation and guarantee of agricultural land area ease of access to science, technology and information, and institutional strengthening of farmers (Rusita Dewi Saputri, 2016). The establishment of agricultural counseling institutions because it is an agricultural development effort that is seen as a transformation process will basically bring changes in the allocation of economic resources, the process of distribution of benefits and the accumulation process that brings increased production, income, and welfare.



Picture 1. Number of Farmer Households in Pati Regency

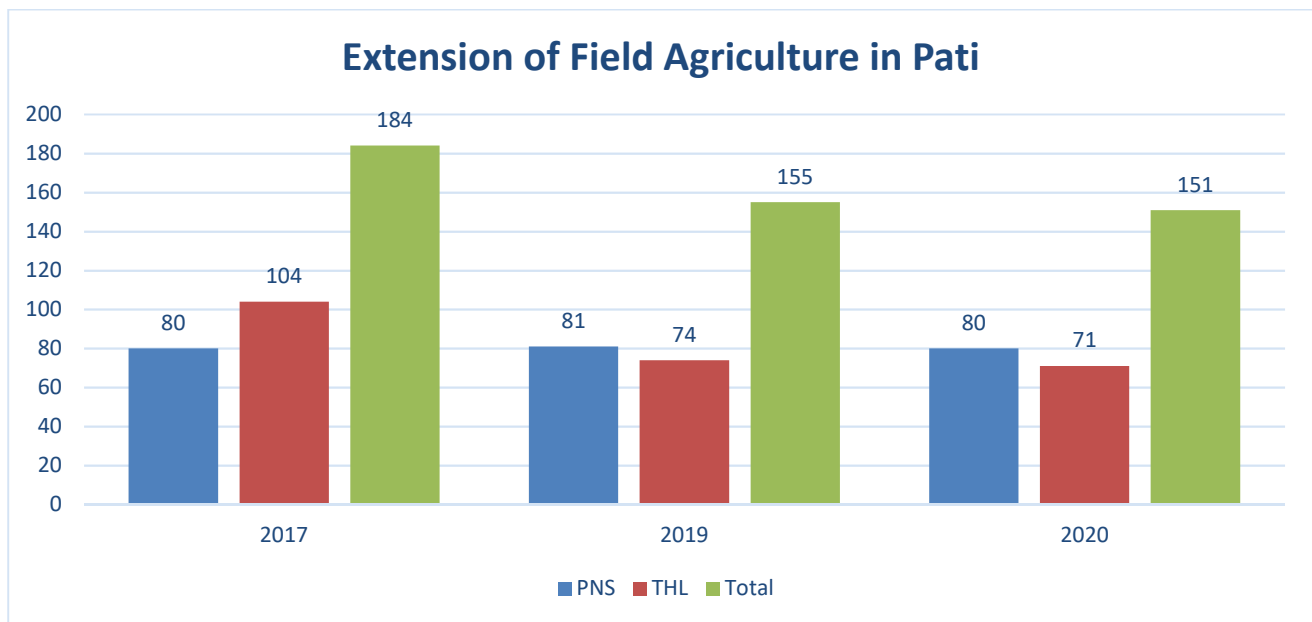
Source: Statistik SDM Pertanian, 2019, data processed

Extension as a non-formal education for farmers and their families, is a process of community participation. Pemandirian is not patronizing, nor is it cartative, but rather requires growing and growing participation or active participation from all parties who will receive the benefits of counseling, especially the farming community itself (Mardikanto,

2009:56). Extension workers must be competent agricultural experts, in addition to being able to communicate effectively with farmers so as to encourage their learning interests and must be oriented towards the problems faced by farmers (Mardikanto, 2009:35).

According to Rivera and Qamar (Ardita, et al, 2017), the role of counsellor is

multidisciplinary. The role of extension workers is to help farmers can run their farming business more effectively and can apply modern agricultural methods, in order to increase the productivity produced. The main task of agricultural extension workers is to be able to help farmers in making the right decisions, adjusting from the problems faced and providing alternative solutions.



Picture 2. Number of Agricultural Extension Agents in Pati

Source: Data Processed, 2020

But in practice, due to the many other tasks imposed on extension workers, so that the counseling process can actually provide direction and educate farmers to be able to make decisions independently of the problems faced, but in the process, counseling activities are more focused on the function of service. Some of the farmers lacked knowledge and insight, making it difficult to map the problems faced and find suitable solutions.

This is one of the important roles of agricultural extension workers, as agents

transfer information about problems and solutions, as well as technical implementation in the field. If the target farmers have not been able to map the problems and solutions independently, then the main objective of agricultural counseling activities is still considered not good.

In picture 2, a graph of the number of agricultural extension workers, especially civil servants and THL extension workers, in Pati district from 2017 to 2020. Clearly there are eighty civil servant extension workers and one

hundred and four THL-TB extension workers in Pati district with a total of 184 extension workers. For 2018, it is regrettable that there can be no detailed data on the number of agricultural extension workers in Pati Regency.

In 2019, the number of civil servants increased by one to 81 people but the number of THL extension workers decreased dramatically to 74 people with a total of 155 people. And for 2020, the number of civil servant extension workers decreased by one to eighty people, as well as THL extension workers reduced to 71 people, bringing the total to 151 people. Thus it can be concluded that the number of civil servants and THL extension workers decreased, so it is necessary to support the workload is increasing.

From some of the data that has been presented, it can be known that rice farming activities in Pati regency are quite worrying. Fluctuations in rice productivity, decrease in harvest area, number of farmer households, and civil servants agricultural extension and THL, become a challenge for the local government to realize the mission contained in the strategic plan of the Agriculture Office of Pati Regency, namely realizing food sovereignty.

Based on this explanation, the objectives to be achieved in this study aim to: (1) analyzing the condition of agricultural counseling activities in Pati regency so far; (2) analyze what agricultural extension workers face in increasing their role; and (3) analyze the implementation strategy of agricultural extension workers to increase the level of rice productivity.

RESEARCH METHODS

Based on the problem formulation that has been prepared, the type of research to be carried out is descriptive qualitative research. The research location is in Pati Regency. The research population is agricultural extension workers in Pati Regency.

Sample selection using purposive sampling techniques. Sugiyono (2016: 126) stated that purposive sampling is a sampling technique with certain considerations. Researchers determined six of the 21 subdistricts in Pati Regency. The six subdistricts referred to by the researchers are Sukolilo, Kayen, Pucakwangi, Jaken, Jakenan, and Winong.

The subjects of the study or respondents included all extension workers of agriculture office and THL in bpp sub-district. The number of respondents reached 43 extension workers from 154 extension workers of civil servants and THL throughout Pati Regency. Meanwhile, the extension coordinator who handled the sample sub-district as many as three research extension workers made a key person. Data retrieval techniques using questionnaires, interviews, and documents.

RESULTS AND DISCUSSION

The agricultural sector is one of the most important sectors for a country, therefore the problems in the agricultural sector must be addressed immediately. One of the ways the government to help solve problems in the agricultural sector in the field is to establish agricultural counseling activities in each village/counseling activities in Pati regency handed directly to agricultural extension workers with each village.

The number of agricultural extension workers in Pati district in 2019 is 412 people, consisting of 81 civil servant extension workers, 74 THL-TB extension workers, and 257 self-help extension workers. While the combined number of farmer groups (gapoktan) there are 406 groups, with each gapoktan consisting of 2325 farmer groups. From the explanation above, on average, each agricultural extension worker still has 5-6 groups of farmers. Based on the data collected from respondents, most of the distance of work areas that must be taken by field agricultural extension workers is 11km or more.

Counseling activities were held in the meeting room of Village Hall. Counseling activities are carried out by the method of lectures and discussions for counseling materials given to farmer groups through leaflets distributed during meetings. Counseling activities are carried out to transfer knowledge and skills obtained from researchers to farmers. Extension of agriculture is a non-formal educational facility for farmers, so that farmers will and are able to improve their skills in the agricultural sector.

With the increasing ability of farmers in the agricultural sector, it will increase the yield of farmers. According to the respondents, the participation rate of assisted farmers in counseling activities is still less active. In addition, agricultural counseling activities are attended by groups of farmers or farmers whose average age is no longer young. This presents a little challenge for the extension workers, because in general the farmers have difficulty in understanding the material provided. On the other hand, the average age of agricultural extension respondents is 45 years.

Due to the limited allocation of funds, facilities and infrastructure owned by agricultural extension workers to support counseling activities in the sub-district are quite limited. Meanwhile, efforts to improve the quality of human resources counseling, one of which is through extension training activities according to respondents are still considered insufficient.

The obstacles faced by agricultural extension workers in Pati regency include: (a) Policies that often clash with the activities of counseling and farmers themselves, where when the implementation of counseling activities have been carried out well and fruitfully positive, often there are price fluctuations and absorption of grain farmers are not maximal; (b) Efforts to increase the human resources of agricultural extension workers through training are still felt less where the allocation of counseling funds is very limited; (c) The average lifespan of extension workers is 45, and regeneration efforts are still difficult; (d) The proportion of field agricultural extension workers to the target farmer group is still too lame; and (e) The average age of farmers built in their 50s, and mastery of information technology is still felt less.

The results of determining the internal condition of agricultural counseling activities of Pati regency are determined four strengths and four weaknesses can be seen on table 4. In table 4, it can be seen that the results of internal factor analysis show that there are four strengths, namely formal education, motivation, supportive government

regulations, and work experience. While the four weaknesses of agricultural counseling activities in Pati include age, allocation of counseling funds, training, and availability of facilities and infrastructure.

The score for the strength factor is 1.45 and the weakness factor reaches

1.12. Clearly known the value of the difference in strength factor is greater than the value of the weakness factor with a difference of 0.33. So it can be concluded that the internal state of agricultural counseling activities of Pati regency is quite good.

Table 4. IFAS Matrices

No	Internal Factor	Scale	Rating	Score (Scale × Rating)
Strength				
1	Formal Education	0.12	3.12	0.37
2	Motivation	0.11	3.02	0.33
3	Supportive government regulations	0.13	2.53	0.33
4.	Work experience	0.12	3.67	0.42
	Total	0.47		1.45
Weakness				
1	Age	0.15	2.40	0.35
2	Allocation of counseling funds	0.13	1.91	0.24
3	Training/ Upgrading	0.12	1.77	0.21
4.	Availability of Facilities and Infrastructure	0.13	2.35	0.31
	Total	0.53		1.12

Source: Data Processed, 2020

The results of determining the external condition of agricultural counseling activities of Pati regency obtained two opportunities and eight threats can be seen on table 5. In table 5, the results of external factor analysis show that there are two opportunities, namely coaching and supervision support and relationships within the organization.

Meanwhile, the threat of agricultural counseling activities in Pati regency includes the award system, the distance of the working area, the number of assisted villages, the number of targeted farmer

groups, the majority of the age of the target farmers, the level of participation of farmers, the level of understanding of farmers about counseling materials, as well as the mastery of information technology of fostered farmers.

The score for the opportunity factor is 0.62 and the threat factor is around 1,559. Clearly known the value of the opportunity factor score is less than the threat factor score score with a difference of 0.939. So it can be concluded that the external state of agricultural counseling activities of Pati regency is classified as not good.

Table 5. EFAS Matrices

No	External Factor	Scale	Rating	Scores (Scale × Rating)
Opportunity				
1	Coaching and supervision support	0,104	3,512	0,3642
2	Relationships within an organization	0,101	2,512	0,256
Total		0,205		0,62
Threat				
1	Recognition system	0,092	1,878	0,174
2	Work Area Distance	0,087	2,372	0,206
3	Number of assisted village	0,085	1,907	0,162
4.	Number of farmer groups built	0,106	1,233	0,13
5	Majority of the age of fostered farmers	0,113	1,953	0,221
6	Farmer participation rate	0,102	2,465	0,251
7	Level of farmers understanding of counseling materials	0,096	1,977	0,19
8	Mastery of information technology built by farmers	0,113	1,977	0,223
Total		0,794		1,559

Source: Data Processed, 2020

Based on table 4 and table 5, the following table 6 summarizes the score values of strengths, weaknesses, opportunities, and threats. It can be seen in table 6, the score or weight multiplied by the strength category rating reaches 1.45, while the weakness score is 1.12. So that it obtained the difference in strength and deficiency value that reaches 0.33 with a superior strength factor.

The summary of external factor score value implementation of counseling activities is as follows. The score was 0.62. This score is lower than the threat score of 1.56. This makes the threat score superior to 0.94 from the score of the pelung. From the description if determined matrix swot position implementation of counseling activities in Pati regency, it can be seen on picture 3.

Table 6. SWOT Position Matrix Determination

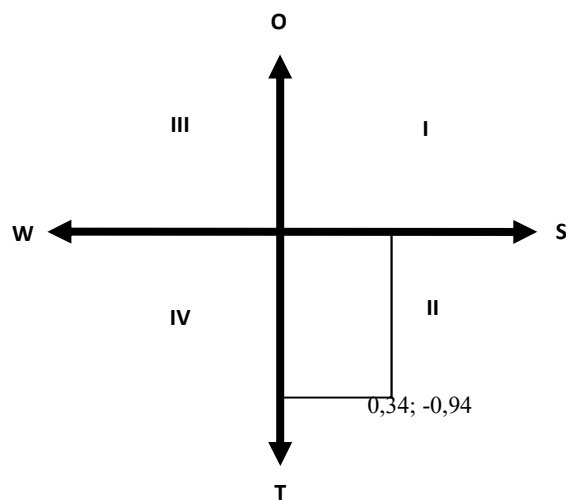
Description	Internal Factor		External Factor	
	Strength	Weakness	Opportunity	Treath
Scale x Rating	1,45	1,12	0,62	1,56
Difference	0,33		-0,94	

Source: Data Processed, 2020

Based on picture 3, the SWOT matrix position is located in quadrant II. Thus, the

strategy of implementation of counseling activities is prioritized using differentiation

strategies. The diversionary strategy in question is a strategy that harnesses the power to alleviate existing threats. The strategy is often called the ST strategy. But this does not close the possibility to use strategies that refer to weaknesses and opportunities.



Picture 3. MATRIC SWOT Positions

Source: Data Processed, 2020

Once the SWOT matrix position is determined, the next step is to create a SWOT matrix. Based on the data obtained, the appearance of SWOT matrix implementation of agricultural activities in Pati Regency can be seen on table 7 attached.

Based on the results of SWOT analysis of internal and external factors of implementation of agricultural counseling activities in Pati regency, it was obtained that the position of agricultural counseling activities in Pati regency to succeed the implementation of counseling activities lies in the second quadrant. The right strategy to be used in the second quadrant is the diversionary strategy. The diversionary strategy in question is a strategy that combines strength and threat.

All strategies in the SWOT analysis matrix can be described as efforts worthy of consideration by the Pati Regency agriculture office to optimize counseling activities in Pati Regency. Based on the data collected and processed, the strategy is prepared according to the conditions of counseling activities in Pati Regency and the priority is the diversionary strategy.

The diversionary strategy in used is the ST strategy. There are some diversionary strategies that have been drawn up. First is online consulting services. Provide online consulting services for farmer groups to get around the distance of the working area and the availability of time for extension workers and farmer groups. The move makes agricultural extension workers able to know and respond to problems faced by farmers more quickly and responsively.

Then testimonials of successful application of counseling. Testimonials of successful application of counseling is very important in convincing the target farmers and other farmers to follow and apply the counseling program provided. In other words, the participation rate of fostered farmers can increase. Next is breakthrough alternative fertilizers and treatments.

Farmers dependence on chemical fertilizers needs to be addressed. In some cases faced by respondents and key persons in the field are farmers in the target area willing to follow counseling if given chemical fertilizers that are needed. Meanwhile, agricultural extension workers whose positions are among the interests of the government and farmers can not do much if the government assistance fertilizer is not in accordance with the list of fertilizer needs that have been

submitted. On the other hand, the use of chemical fertilizers for a long period of time can reduce nutrients in the soil and affect the nutritional content of the harvest.

In this strategy, agricultural extension workers are expected to be able to provide and encourage farmers to be trained in alternative fertilizers and treatments. With advances in technology and information, agricultural extension workers and farmers can obtain information about fertilizer making and swakriya care that is more affordable and environmentally friendly of course. On some social media there are already Indonesian farmer groups where farmers from all over the country can exchange information about agriculture to agricultural counseling materials.

Next is incentives based on length of employment. From the data of the research that researchers processed, the level of education of agricultural extension workers cukup good. Most have received advanced education and have long work experience. There has been the discovery of agricultural extension workers who are close to the age of 50 years with more than 10 years of work experience but still have THL status.

There is also in one BPP most agricultural extension workers have a formal education level D4/S1, but the status as a civil servant extension is only three people. With an incentive strategy based on the length of work is expected to increase motivation, kenarja extension, and provide bright prospects for the career of agricultural extension workers themselves. In addition, it is no stranger if the regeneration of agricultural extension workers and farmers is very slow. Hopefully a career in agriculture juka better.

Next strategies is time management counseling and evaluation. The purpose of this

strategy is to make a fixed schedule of counseling or visits to farmer groups by of course discussing in advance degngan farmer groups built. It is expected that extension workers and farmers will be closer and understand the problems faced by farmers.

Next strategies is promoting the government's program of Farmer Goes to School (FGS) Based on data on the majority of farmers' ages, it is known that most farmers are 44-58 years old. This strategy is expected to introduce and foster the interest of the younger generation in agriculture.

The next strategy is the SO strategy. SO strategy itself is a strategy that combines strength and opportunity. The strategy has another name: aggressive strategy. The SO strategies that have been drawn up are: (a) encourage agricultural counseling schools; (b) increase career level quota; (c) holding a competition between BPP; and (d) socialization and decapitation of Extension Performance Evaluation.

The next strategy is the WO strategy. Wo (Weaknesses-Opportunities) strategy or opportunity-weakness strategy is a strategy that minimizes weaknesses to maximize existing opportunities. The strategy is also known as the turn around strategy. Here are the WO strategies that have been drawn up. First, improving human resources extension with seminars and training. Second, fulfillment of supporting facilities and infrastructure supervision and demonstration. Third, regeneration and cadreization of local youth to become extension workers. Fourth, optimizing the use of evaluation channels. And fifth, multiply plots in each region.

The last alternative strategy is the WT strategy. Weaknesses-Threats is a strategy that

minimizes weaknesses and addresses existing threats. This strategy has another name yaitu defensive strategy. Here's the WT strategy that the authors have successfully devised: (1) Provision of land management facilities and infrastructure in the form of alsintan; (2) Development of direct marketing methods by KUD/Gapoktan in the form of professional partnerships; (3) Subsidies for appropriate fertilizers and seeds and targets; (4) Broad regeneration policy of extension workers and farmers; (5) Stabilizing prices of both farmers and markets; (6) Ensuring the prospect of extension workers and farmers have a good future and minimize negative stigma; and (7) Boosting human resources standards of extension workers and farmers towards industrialization.

CONCLUSION

Based on the discussion of research results on the implementation strategy of agricultural extension workers to increase rice productivity in Pati regency with the help of SWOT analysis gathered from 43 respondents and 3 key persons consisting of field agricultural extension workers at the sub-district and district levels, the authors can draw some conclusions.

The condition of counseling activities in Pati district has been running quite well, namely with the level of formal education, work experience, motivation, government regulations that support, relationships in the organization, as well as support coaching and supervision. But there are also still challenges faced by agricultural extension workers such as, the age of extension workers and farmers, the allocation of counseling funds, the training of extension human resources, the availability

of extension infrastructure, the recognition system, the distance of work areas, the number of assisted villages and farmer groups, the level of participation, the level of understanding of counseling materials, and the mastery of information technology of assisted farmers.

Obstacles faced by agricultural extension workers in increasing their role are policies that often clash with the activities of counseling and farmers themselves; efforts to improve the human resources of agricultural extension workers through training are still felt less; the average lifespan of extension workers is 45, and regeneration efforts are still difficult; and the proportion of field agricultural extension workers to the target farmer group is still too lame.

Strategy for the implementation of agricultural extension workers to increase the level of rice productivity in Pati regency, such as: (a) Online consulting services; (b) Testimonials of successful application of counseling; (c) Breakthrough alternative fertilizers and treatments; (d) Incentives based on length of employment; (e) Time management counseling and evaluation; and (f) Promoting the government's program of Farmer Goes to School (FGS).

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ATTACHMENTS

Table 1. Wet Land Paddy Production by Province 2014-2018

No.	Province	Year				
		2014	2015	2016	2017	2018
1	Aceh	1.796.100	2.301.878	2.180.754	2.478.922	2.502.932
2	Sumatera Utara	3.490.516	3.868.880	4.367.036	4.669.778	4.847.748
3	Sumatera Barat	2.486.049	2.524.775	2.487.929	2.810.425	2.726.075
4	Riau	337.233	345.441	325.826	337.421	359.644
5	Jambi	587.384	485.989	642.095	678.127	757.666
6	Sumatera Selatan	3.506.444	4.106.495	4.881.089	4.807.430	4.971.087
7	Bengkulu	559.829	552.713	629.224	714.017	645.419
8	Lampung	3.170.191	3.496.489	3.831.923	4.090.654	4.254.185
9	Kep. Bangka Belitung	15.148	15.563	23.941	27.395	17.657
10	Kep. Riau	1.403	959	627	638	650
11	DKI Jakarta	7.541	6.361	5.342	4.236	4.183
12	Jawa Barat	11.085.544	10.856.438	12.031.508	11.849.636	12.090.951
13	Jawa Tengah	9.294.475	11.006.570	11.176.039	11.067.247	11.052.782
14	DI Yogyakarta	719.194	746.817	712.285	678.531	665.621
15	Jawa Timur	11.785.464	12.565.824	12.903.595	12.432.793	12.367.414
16	Banten	1.963.461	2.127.671	2.300.595	2.369.731	2.408.964
17	Bali	857.449	853.404	845.396	835.978	848.626
18	NTB	1.904.110	2.210.207	1.915.866	2.189.044	2.296.854
19	NTT	662.365	778.808	751.529	885.703	1.006.096
20	Kalimantan Barat	1.197.984	1.120.426	1.166.392	1.197.643	1.391.880
21	Kalimantan Tengah	709.357	725.755	606.383	659.934	708.726
22	Kalimantan Selatan	1.936.188	1.970.085	2.084.202	2.258.260	2.351.356
23	Kalimantan Timur	346.462	329.999	245.047	334.338	320.348
24	Kalimantan Utara	86.622	55.019	49.585	52.047	47.018
25	Sulawesi Utara	587.009	634.890	635.075	732.042	728.233
26	Sulawesi Tengah	1.006.437	1.001.949	1.086.074	1.128.008	1.138.644
27	Sulawesi Selatan	5.273.288	5.292.152	5.658.725	5.988.416	6.124.408
28	Sulawesi Tenggara	636.028	646.208	676.686	693.688	701.436
29	Gorontalo	303.627	323.384	337.329	342.182	317.13
30	Sulawesi Barat	426.711	442.291	492.122	611.461	663.738
31	Maliku	99.106	115.178	97.451	100.436	121.048
32	Maluku Utara	53.404	55.013	58.634	55.684	68.377
33	Papua Barat	26.104	29.243	26.842	27.953	25.917
34	Papua	183.864	173.637	229.418	256.258	286.355

Source : Badan Pusat Statistik 2018

Table 7. SWOT Matrices

	Strength (S)	Weakness (W)
IFAS / EFAS	<p>formal education</p> <p>Motivation</p> <p>Work experience</p> <p>Supportive government regulations</p>	<p>Age</p> <p>Allocation of counseling funds</p> <p>Training</p> <p>Availability of facilities and infrastructure</p>
Opportunity (O)	SO strategy	WO strategy
Relationships in organizations	To activate agricultural extension schools	Increasing the human resources of extension workers with seminars and training
Coaching and supervision support	<p>Increase the quota for career paths</p> <p>Hold competitions between BPPs</p> <p>Socialization and promotion of the Performance Evaluation of Extension Officers</p>	<p>Fulfillment of supporting facilities and infrastructure for supervision and display</p> <p>Regeneration and regeneration of local youth to become extension agents</p> <p>Optimizing the use of evaluation channels</p> <p>Increase the demonstration plot in each region</p>
Threat (T)	ST strategy	WT strategy
Reward system	Online consulting services	Provision of facilities and infrastructure for land management in the form of agricultural machinery
Work area distance	Testimonials of successful implementation of extension	Development of direct marketing methods by KUD / Gapoktan / in the form of professional partnerships
Number of target villages	Breakthrough alternative fertilizers and treatments	Appropriate and targeted fertilizer and seed subsidies
Number of assisted farmer groups	Incentives based on length of service	Policy for regeneration of extension workers and farmers in general
The majority of the assisted farmers are	Time management outreach and evaluation	Stabilizing prices for both farmers and markets
The level of participation of assisted farmers	Promote the government program	Ensure the prospect of extension workers and farmers have a good future and minimize negative stigma
Farmer's level of understanding	Farmers Enter School (PMS)	Boosting the human resource standards of extension workers and farmers towards industrialization.
Mastery of information technology for assisted farmers		

Source: Data Processed, 2020