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# The Impacts of the Department of Agriculture's Plant, Plant, Plant Program (DA's 4Ps) in Facing Covid 19 Pandemic in Fishing Communities

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**ABSTRACT**

The present study aims to assess the impacts of the Plant, Plant, Plant Program(4Ps) of the Department of Agriculture on the fishing and non-fishing communities in Surigao del Sur in facing the COVID-19 Pandemic. The impact was gauged thru the determination of the productivity, acceptance, response, expectations, beliefs, issues, and concerns and how the program affects the thinking in facing the COVID 19 pandemic; the difference in the response of fishing and non-fishing communities on the program; and identification of the extent to which the communities participate in the program. Results clearly manifested that responses of the communities were all strongly agreed that they were all benefited from this program that increases their needs for food in times of pandemic. Therefore it is concluded that the program gives a positive impact on the fishing and non-fishing communities in Surigao del Sur.

**KEYWORDS**

Social research study, impact assessment of 4Ps, validated semi-structured questionnaire, Surigao del Sur, Philippines

## INTRODUCTION

The Department of Agriculture (DA) has been implementing nationwide the Duterte administration's "Plant, Plant, Plant Program" or "Ahon Lahat, Pagkaing Sapat (ALPAS) Laban sa Covid-19" program to benefit farmers, fishers, and consumers. The program has been implemented not only in Luzon, where the enhanced community quarantine is being enforced but also in Visayas and Mindanao. The purpose of the program is to increase the country's food adequacy level during the emergency situation resulting from the Covid-19 pandemic thru the "Whole of Nation" approach as a guide advocated by President Duterte (Sec. William D. Dar).

The Department of Agriculture led the provision of planting materials, other farm inputs, and technologies necessary for food production. To increase national agri-fishery output, DA intensified the use of quality seeds, appropriate inputs, and modern technologies to increase levels of productivity across all commodities and thus ensure food productivity, availability, accessibility, and affordability amidst the threat of the Covid-19 pandemic. Rice Resiliency Project is also in line with the DA's 4Ps that aimed at producing more rice to increase its sufficiency level from the present 87 percent to 93 percent. Farmers are urged to plant more areas by providing quality seeds, fertilizers, and appropriate technical assistance (Sec. Dar).

While the whole Caraga Region, both farming and non-farming in rural and urban communities had participated in the 4Ps program with the help of local government units and regional and provincial agriculture and fishery councils (RAFCs and PAFCs). Farming and non-farming communities of the province of Surigao del Sur are among the recipients of farm production inputs provided by the Department of Agriculture for the program.

The DA's 4Ps program has provided the necessary inputs to produce food amidst the COVID pandemic. However, there is no study conducted on its impact on the communities in the province of Surigao del Sur as to the productivity, acceptance, response, expectations, issues, and concerns and how this program affects their thinking in facing the COVID 19 pandemic.

Hence, this study is conducted. Results of the study will gauge the success of the DA's 4Ps program. The data will serve as a guide to improve the program so that food sufficiency will be attained not only in the province of Surigao del Sur but for the whole country as well.

## OBJECTIVES OF THE STUDY

The general objective is to determine the impact of DA's 4Ps in facing the COVID 19 pandemic in Surigao del Sur. The specific objectives are: (1) to determine the impacts of 4Ps as to the productivity, acceptance, response, expectations, beliefs, issues, and concerns and how the program affects the thinking in facing COVID 9 pandemic; (2) to determine the difference on the response of fishing and non-fishing communities on the program; and (3) to identify the extent to which the communities participate in the program.

## METHODOLOGY

### Research Design

The study employed a survey research design to assess the impact of DA's 4Ps in facing the COVID 19 pandemic in Surigao del Sur. According to Creswell (2008), a survey is a popular design in descriptive research using questionnaires to collect data from a sample to describe the practices, attitudes, opinions, behaviors, and characteristics of the population.

### Research Locale and Selection of Respondents

This study was conducted in randomly selected municipalities of Surigao del Sur. The respondents were randomly selected from the recipients of inputs provided by the Department of Agriculture in implementing the 4Ps program in the province. The respondents of the study were selected from the list of recipients from the Department of Agriculture Caraga Regional Office.

### Research Instrument

The questionnaire was used to gather essential data on the productivity, acceptance, response, expectations, issues and concerns and how DA's 4Ps program affects their thinking in facing COVID 19 pandemic. Validity is the extent to which research instruments provide the information

needed to address research questions. Through expert judgment, the researcher critically looked into the content of research instruments against research questions and subsequent hypotheses. Corrections were made accordingly to suit the need of the research questions. Reliability, on the other hand, means the extent to which research findings can be replicated and, if repeated, will yield similar results (Merriam, 2009). Methodological triangulation was employed through the use of multiple instruments of data collection. To ensure the acceptable reliability of the questionnaire, a pilot study was conducted. A reliability test for 40 items that will identify the productivity, acceptance, response, expectations, issues, and concerns and how DA's 4Ps program affects their thinking in facing COVID 19 pandemic was run through Statistical Package for Social Sciences. Cronbach's Alpha of 0.88 for the respondents was established, implying that the questionnaire items are highly reliable.

**Research Procedures**

Research is intricate and involves human rights. Thus, anonymity, confidentiality, and privacy need should be highly maximized, especially during the data collection. Mugenda and Mugenda (2003) argue that "since researchers are genuinely concerned about other peoples' quality of life, they must be people of integrity who will not undertake research for personal gains or research that will have a negative effect on others." Following this advice, the researchers took measures to ensure conformity to research ethics. Before collecting data, the researchers obtained clearance from the Municipal Mayors of selected Municipalities in Surigao del Sur. In filling out the questionnaires, respondents did not write their names. The researchers treated the confidentially of the data and only for the intended purpose.

**Statistical Tools**

In the analysis and treatment of data, the researcher employed the following statistical tools to answer the problems stated in the study.

**Thematic Approach.** This statistical tool was used to code, analyze, and arrange data from interview and observation schedules.

**Descriptive statistics.** This statistical tool was used to determine the mean scores with subsequent Standard Deviations, and significant differences were analyzed through a t-test.

## RESULTS AND DISCUSSION

### Demographic Characteristics of Respondents

The respondents who participated in this study were described in two categories for fishers and non-fishers, hence the demographic characteristics. These demographic characteristics include gender, education level, and age of respondents. The gender, age, and educational distribution of the research participants are presented in Table 1. Sixty percent (n = 72) of the participants were male, 45 from fishers and 27 from non-fishers. The highest age range in both categories is 46-55 years old for both fishers and non-fishers, with a total percentage of 52.5 (n = 120).

Table 1. Demographic characteristics of fishers and non-fishers respondents (N=120)

| Demographic Characteristics | Fishers | Non-Fishers | Total | % |
|---|---|---|---|---|
| Gender | | | | |
| Male | 45 | 27 | 72 | 60.0 |
| Female | 30 | 18 | 48 | 40.0 |
| Age | | | | |
| 25 and below | 4 | 0 | 4 | 3.3 |
| 26-35 | 10 | 9 | 19 | 15.8 |
| 36-45 | 19 | 9 | 28 | 23.3 |
| 46-55 | 36 | 27 | 63 | 52.5 |
| 56 and above | 6 | 0 | 6 | 5.0 |
| Educational Level | | | | |
| Never been to school | 2 | 2 | 4 | 3.3 |
| Elementary | 20 | 11 | 31 | 25.80 |
| Secondary | 53 | 27 | 80 | 66.70 |
| College | 0 | 5 | 5 | 4.2 |

Only 3.3% of the participants were between 25 years of age and below. Farmer level of education is indicated to be highest at the secondary level with 66.67% among all respondents both fishers (56) and non-fishers (27). The majority of the farmers interviewed (66.67%, n = 80) had completed the standard secondary level. Only 3.3% (n=4) and 4.2% (n=5) had never been to school and college level, respectively (Table 1).

**Impacts of 4Ps as to the productivity, acceptance, response, expectations, beliefs, issues, and concerns and how the program affects the thinking in facing the COVID 9 pandemic**

As shown in Table 2, various vegetables were the major crops grown by both fishers and non-fishers. Some of the respondents were planting corn and sweet potato. This showed that fishers and non-fisher respondents responded and participated in the program as they planted the given vegetables seeds from the 4Ps of the Department of Agriculture during the pandemic.

**Table 2. Productivity of recipients of 4Ps as indicated in their crops grown (N=120)**

| Crops Grown | Fishers | Non-Fishers | Total | % |
|---|---|---|---|---|
| Corn, tomatoes, beans, okra, ginger | 2 | 7 | 9 | 7.5 |
| Tomatoes, ginger, pichay, beans | 4 | 19 | 23 | 19.2 |
| Tomatoes, ginger, pichay, eggplant, beans | 25 | 16 | 41 | 34.2 |
| Beans, ginger, okra and eggplant | 11 | 3 | 14 | 11.7 |
| Ampalaya, okra and beans | 7 | 0 | 7 | 5.9 |
| Corn and legumes | 8 | 0 | 8 | 6.7 |
| Eggplant, legumes, and sweet pepper | 2 | 0 | 2 | 1.7 |
| Ginger, onions and legumes | 9 | 0 | 9 | 7.5 |
| Legumes, tomatoes and sweet potato | 7 | 0 | 7 | 5.8 |

As indicated in Table 3, 50.8% (n = 61) of the participants interviewed had claimed to understand very well the 4Ps; whereas 22.5% (n = 27) had some understanding of the program and the remaining participants (26.7%, n = 32) had no idea about the meaning of 4Ps.

Table 3. Recipients' acceptance, response and beliefs to 4Ps (N=120)

| Acceptance, response and beliefs | Fishers | Non-Fishers | Total | % |
|---|---|---|---|---|
| Understanding of the DA's 4Ps Program | | | | |
| Have no idea about DA's 4Ps Program | 14 | 18 | 32 | 26.7 |
| Have some understanding of DA's 4Ps Program | 20 | 7 | 27 | 22.5 |
| Understand very well the DA's 4Ps Program | 41 | 20 | 61 | 50.8 |
| Received inputs from 4Ps program | | | | |
| Yes | 65 | 37 | 102 | 85.0 |
| No | 10 | 8 | 18 | 15.0 |
| Know the source of inputs | | | | |
| Yes | 67 | 38 | 105 | 87.50 |
| No | 8 | 7 | 15 | 12.5 |
| Affiliation to farmers' group in your area | | | | |
| Yes | 10 | 16 | 26 | 21.70 |
| No | 65 | 29 | 94 | 78.3 |
| Knowledge on farm assistance/advice about crops and livestock in the area | | | | |
| Yes | 54 | 30 | 84 | 70.0 |
| No | 21 | 15 | 36 | 30.0 |
| Where the assistance for crops and livestock is coming from | | | | |
| DA | 70 | 38 | 108 | 90.0 |
| DAR | 2 | 3 | 5 | 4.2 |
| DSWD | 2 | 2 | 4 | 3.3 |
| Others | 1 | 2 | 3 | 2.5 |
| Members of the family who do the planting | | | | |
| Father | 45 | 31 | 76 | 63.3 |
| Mother | 15 | 5 | 20 | 16.7 |
| Both (A & B) | 14 | 9 | 23 | 19.2 |
| All members of the family | 1 | 0 | 1 | 0.8 |

Further results are indicated in Table 3, 85% of the respondents received inputs from the program, while 87.5% knew where the inputs are coming from. Only 21.7% of the respondents were affiliated with the farmers' group in the community. In comparison, 70% of them have knowledge on farm

assistance and advice about crops and livestock in the area or knew where to get agricultural advice in case they needed it for their farms. The majority of the assistance (90%) came from the Department of Agriculture, while the rest were from DAR (4.2%), DSWD (3.3%), and others from non-government agencies (2.5%). The majority of the fathers of the family did the farming/ planting activity (63.3%), while 19.2% and 16.7% did by both reported that both parents and did by mother alone respectively.

The percentage of the responses of the respondents as to their expectations, perceptions, issues and concerns are presented in Table 4. The farmers' perceptions and views about the usefulness of the program to the respondents and their families, 44.2% and 35.8% answered very useful and useful, respectively, in improving food production for their families in times of pandemic. In terms of the availability of the program agent in times they need in improving their production, 52.5% and 30.5 % answered strongly agree and agree, respectively. In addition, 56.7% of the respondents strongly agreed, while 24.2% agreed that 4Ps is very timely in producing the necessary food in times of pandemic. Furthermore, in terms of the quality of services of DA in the implementation of 4Ps, respondents responded as excellent (40%), good (39.2%) and fair (16.7%). More than half of the respondents (51.5%) strongly agreed while 22.5% agreed that the government played an essential role in helping the respondents produce their own food thru 4Ps. Seventy five percent of the respondents strongly agreed and 23.4% agreed that the program offered what they need in times of pandemic. The respondents' positive response and perceptions of the DA program made 100% of them responded to encourage others in adopting such program even after pandemic. Fifty- five percent of the respondents rated very effective and 43.3% effective in terms of the implementation of the program (Table 4).

Table 4. Recipients expectations, perceptions, issues and concerns on 4Ps (N=120)

| Expectations, perceptions, issues and concerns | Fishers | Non-Fishers | Total | % |
|---|---|---|---|---|
| Usefulness of inputs of the 4Ps program of DA to you and your family | | | | |
| Very Useful | 40 | 13 | 53 | 44.2 |
| Useful | 20 | 15 | 35 | 29.2 |
| I don't know | 10 | 8 | 18 | 15.0 |
| Somehow useful | 4 | 3 | 7 | 5.8 |
| Not Useful | 1 | 6 | 7 | 5.8 |
| The Program provides good ideas that help me in improving my crop and livestock production. | | | | |
| Strongly Agree | 32 | 24 | 56 | 46.7 |
| Agree | 25 | 18 | 43 | 35.8 |
| I don't know | 11 | 3 | 14 | 11.7 |
| Disagree | 6 | 0 | 6 | 5.0 |
| Strongly Disagree | 1 | 0 | 1 | 0.8 |
| The program agent is readily available (can easily be reached) to help me. | | | | |
| Strongly Agree | 40 | 23 | 63 | 52.5 |
| Agree | 21 | 16 | 37 | 30.8 |
| I don't know | 10 | 4 | 14 | 11.7 |
| Disagree | 3 | 2 | 5 | 4.2 |
| Strongly Disagree | 1 | 0 | 1 | 0.8 |
| The program is timely that provided source of food amidst COVID 19 pandemic. | | | | |
| Strongly Agree | 43 | 25 | 68 | 56.7 |
| Agree | 19 | 10 | 29 | 24.2 |
| I don't know | 12 | 10 | 22 | 18.3 |
| Disagree | 1 | 0 | 1 | 0.8 |
| The quality of your of the services of DA in the implementation of the program in your area. | | | | |
| Excellent | 30 | 18 | 48 | 40.0 |
| Good | 31 | 16 | 47 | 39.2 |
| Fair | 13 | 7 | 20 | 16.7 |
| Poor | 1 | 4 | 5 | 4.2 |

| Expectations, perceptions, issues and concerns | Fishers | Non-Fishers | Total | % |
|---|---|---|---|---|
| The government plays an important role in helping farmers through this program. | | | | |
| Strongly Agree | 40 | 29 | 69 | 57.50 |
| Agree | 20 | 7 | 27 | 22.5 |
| I don't know | 15 | 9 | 24 | 20.0 |
| Disagree | 0 | 0 | 0 | 0.0 |
| Strongly Disagree | 0 | 0 | 0 | 0.0 |
| The program offers what we really need in terms of input for food production amidst COVID 19 pandemic. | | | | |
| Strongly Agree | 60 | 30 | 90 | 75.0 |
| Agree | 15 | 13 | 28 | 23.4 |
| I don't know | 0 | 2 | 2 | 1.2 |
| Disagree | 0 | 0 | 0 | 0.0 |
| Strongly Disagree | 0 | 0 | 0 | 0.0 |
| Would you encourage one of your friends to adopt the program in your area? (Give a reason for your response) | | | | |
| Yes | 75 | 45 | 120 | 100.0 |
| No Reason | 0 | 0 | 0 | 0.0 |
| Rate on the implementation of the program in the area in helping to improve farmers' wellbeing through agricultural production. | | | | |
| Very effective | 40 | 26 | 66 | 55.0 |
| effective | 31 | 18 | 52 | 43.3 |
| Less effective | 1 | 1 | 2 | 1.7 |

**Difference on the response of fishing and non-fishing communities of the program**

T-test was used to compare the perceptions of the respondents categorized as fishers and non-fishers. Perceptions of the respondents were determined using Likert Scale. The mean scores (based on a Likert-type scale in which 1 = strongly agree, 2 = agree, 3 = I don't know, 4 = disagree, and 5 = strongly disagree) of the respondents perceptions on the 4Ps implemented by the Department of Agriculture amid COVID-19 pandemic. As shown in Table 5, the mean score of respondents' perceptions on DA's 4Ps program

in improving way of farming/productivity were 1.2294 and 1.2872 for fishers and non-fishers. These mean scores indicated that they strongly agreed that 4Ps program helped in improving way of farming/productivity. The t-test was used to identify differences in perceptions between them. With the p value of .582 which is higher than .05, there is no significant difference shown as to the perception between fishers and non-fishers to this aspect of the program.

Table 5. Differences in the perceptions of fishers and non-fishers to 4Ps

| Responses | Means | | |
|---|---|---|---|
| | Fishing | Non-Fishing | Sig. |
| DA's 4Ps program helps in improving way of farming/productivity. | 1.2294 | 1.2872 | .582 |
| DA's 4Ps program helps increase my income from the farm amidst COVID 19 pandemic. | 1.3001 | 1.2827 | .621 |
| DA's 4Ps program gives our family fresh vegetables from the farm amidst COVID 19 pandemic. | 1.2687 | 1.2243 | .562 |
| DA's 4Ps program helps divert our worries because COVID 19 pandemic to an exciting and productive farming activities. | 1.2323 | 1.2511 | .729 |
| The program provides continuous support to help me apply and implement the information that was taught even after the COVID 19 pandemic. | 1.2984 | 1.3036 | .900 |
| I believe that program helps farmers to improve their production/yield. | 1.3252 | 1.3576 | .673 |

When the respondents were asked on is DA's 4Ps program helps increase their income from the farm amidst COVID 19 pandemic, the mean scores were both lesser than 2 (1.3001 and 1.2827) for fishers and non-fishers, respectively with a p-value of .621 which further indicated no significant difference. For the rest of their perceptions on the DA's 4Ps program gives their family fresh vegetables from the farm amidst COVID 19 pandemic; DA's 4Ps program helps divert their worries because COVID 19 pandemic to an exciting and productive farming activities; the program provides continuous support to help them apply and implement the information that was taught even after the COVID 19 pandemic; and they believe that program helps farmers to improve their production/yield all of the mean scores of their responses were lesser than 2 which certainly means that the respondents strongly agreed to the above statements regarding 4Ps. The p-values

were all more than .05 which further indicated no significant differences on the perceptions of fishers and non-fishers to 4Ps of the Department of Agriculture (Table 5).

**Extent to which the communities participate in the program**

The mean scores (based on a Likert-type scale in which 1 = strongly agree, 2 = agree, 3 = I don't know, 4 = disagree, and 5 = strongly disagree) of the respondents views on the extent to which the communities participate in the program are presented in Table 6. The respondents were asked on the motivations of their participation which could be the bases on the extent of the participation of the communities. The mean scores of respondents' motivations in participating the program as to 4Ps program helps in improving way of farming/productivity; 4Ps program helps increase their income from the farm amidst COVID 19 pandemic; 4Ps program gives thier family fresh vegetables from the farm amidst COVID 19 pandemic; 4Ps program helps divert our worries because COVID 19 pandemic to an exciting and productive farming activities; provides continuous support to help them apply and implement the information that was taught even after the COVID 19 pandemic; and they believe that program helps farmers to improve their production/yield were all lesser than 2 which means majority of the respondents both fishers and non-fishers very much agreed that they were motivated to participate in the implementation of the program (Table 6).

**Table 6. Respondents' motivation in participating the program**

| Motivation in Participation | N | Minimum | Maximum | Mean | SD |
|---|---|---|---|---|---|
| Participating in DA's 4Ps program helps in improving way of farming/ productivity. | 120 | 1.00 | 2.00 | 1.2583 | 0.52499 |
| Participating in the 4Ps program helps increase my income from the farm amidst COVID 19 pandemic. | 120 | 1.00 | 2.00 | 1.2914 | 0.44555 |
| Participating in the 4Ps program gives our family fresh vegetables from the farm amidst COVID 19 pandemic. | 120 | 1.00 | 2.00 | 1.2465 | 0.67873 |

| Motivation in Participation | N | Minimum | Maximum | Mean | SD |
|---|---|---|---|---|---|
| Participating in the 4Ps program helps divert our worries because COVID 19 pandemic to an exciting and productive farming activities. | 120 | 1.00 | 2.00 | 1.2417 | 0.60803 |
| Participating the program provides continuous support to help me apply and implement the information that was taught even after the COVID 19 pandemic. | 120 | 1.00 | 2.00 | 1.3010 | 0.48065 |
| I believe that program helps farmers to improve their production/yield. | 120 | 1.00 | 2.00 | 1.3414 | 0.54689 |

## CONCLUSIONS

Results manifested that responses of the communities were all strongly agreed that they were all benefited from this program that increases their needs for food in times of pandemic. Therefore, it is concluded that the program gave a positive impact on the fishing and non-fishing communities in Surigao del Sur.

## RECOMMENDATION

It is recommended that studies on its sustainability will be conducted to determine if the program is still effective beyond pandemic and how previous participants responded to the same questions in times when pandemic is over.

## LITERATURE CITED

Cresswell, J.W. (2008). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches.* (3rd ed.; Los Angeles, CA: Sage, 2009, 251 pages. Retrieved from http://www.drbrambedkarcollege.ac.in/sites/default/files/Research-Design_Qualitative-Quantitative-and-Mixed-Methods-Approaches.pdf

Merriam, S. B. (2009). *Qualitative research: A guide to design and implementation.* San Francisco, CA: Jossey-Bass. Retrieved from

https://www.scirp.org/(S(i43dyn45teexjx455qlt3d2q))/reference/ReferencesPapers.aspx?ReferenceID=757189

Mugenda, O. M. & Mugenda, A. G. (2003). *Research methods: Quantitative and qualitative Approaches.* Nairobi: African Centre for Technology Studies. Retrieved from https://www.scirp.org/(S(351jmbntvnsjt1aadkposzje))/reference/ReferencesPapers.aspx?ReferenceID=1917785 https://www.scirp.org/(S(351jmbntvnsjt1aadkposzje))/reference/ReferencesPapers.aspx?ReferenceID=1917785

Dar, W.D. (2020). DA's "Plant, Plant, Plant Program" to benefit all farmers, fishers, consumers nationwide. By Noel Ocampo Reyes. Retrieved from https://www.da.gov.ph/das-plant-plant-plant-program-to-benefit-all-farmers-fishers-consumers-nationwide/

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