

Participation of Youth in Integrated Crops of Corns and Tapioca in Kelantan: Pre-Test

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Abstract. This study is aimed to identify the level of effectiveness of cultivation of integrated crops of corns and tapioca in Kelantan beside to determine the participation of youth in integrated crops of corns and tapioca in Kelantan. A self-administered survey was conducted using a structured questionnaire to collect data from the survey respondents. 78 respondents were involved in this study. A random sampling technique was applied in collecting data. The data were then analyzed using SPSS version 21.0. The descriptive analysis was used to analyses the information gathered from the questionnaires. The results illustrate that respondents have high level of effectiveness of cultivation of integrated crops of corns and tapioca in Kelantan. The findings also revealed that respondents participate in cultivation of integrated crops of corns and tapioca in Kelantan because they want to generate their second income sources and to become entrepreneurs.

INTRODUCTION

Corn (*Zea mays* L.) belongs to the Gramineae family along with rice, wheat and sugarcane. This crop is a very popular short-term crop grown in Malaysia because it has a lucrative income with a yield of production of 70 days to harvest. Statistics in Malaysia in 2015 corn crop was 9,480 hectares with a production value of RM 174,888,000 [1]. Corn stems can be used as a silage for ruminant livestock and it sells can increase side income in addition to corn fruit as an alternative food for ruminant animals because it can save RM 3.2 billion if planted 300- 400 thousand hectares of maize in this country to achieve 100 percent self-sufficiency. Most of the corn in the country is imported from Argentina, Taiwan and Thailand with low import dependence at 6.9% in 2015 [2].

Tapioca is a starch developed from the root of cassava [3], which is located between the Tropic of Cancer and the Capricorn Tropic in equatorial regions. It consists of nearly pure carbs, with very little protein, fiber, or nutrients. Cassava plant names vary according to region: yuca (Central America), mandioca or manioca (Brazil), tapioca (India and Malaysia), and cassada or cassava (Africa and Southeast Asia) [4]. Beside that, the tapioca have many varieties product based on tapioca which is flour tapioca and tapioca pearls. Tapioca starch's most diverse applications are in the food industry. The native and improved tapioca starch was commonly used as an ingredient in foods [4]. Tapioca starch can be acquired as flour, or as instant flakes; it is opaque before cooking, but after hydration it is transparent. Tapioca pearls and powders are most often white or off-white but the pearls, also used in desserts, can be colored to just about any color [5].

Participation of youth in cultivation of integrated crops of corns and tapioca is less satisfying as they are facing many obstacle that prevent them to participate. There are some problem that can be related regarding to their participation in cultivation of integrated crops of corns and tapioca. Lack of interest about agriculture products is one of problem that can be related with their participation in cultivation of integrated crops of corns and tapioca. This can be seen when only 15% of youth become agricultural entrepreneurs [6]. As the youth, they should be exposed with the agriculture as it can give profitability if they have knowledge about agriculture. The government agency such as Agricultural Research and Development Institute (MARDI) must have initiatives to encourage and motivate youth to be agricultural entrepreneurs especially in tapioca based products.

Next problem related to participation of youth in cultivation of integrated crops of corns and tapioca is inadequate capital to running the agriculture business. Youth can often come up with winning ideas or strategies but their execution would be hindered by lack of funding [7]. There are a few of youth are interest to become agricultural entrepreneurs but they do not have capital for start-up the business. This is because each entrepreneur needs to begin with a certain amount of seed capital to pay for the cost of renting premises, buying, marketing and hiring staff. Thus, they should apply loan or capital from agricultural finance such as FELDA and Agrobank that responsible to help them to start-up the business.

Lastly is limited marketing strategies contributed to low participation of youth in cultivation of integrated crops of corns and tapioca. A good marketing strategy can help the business to grow at high level. Customer may never know about their business contributions without marketing, and their business may not be allowed the chance to gain ground and succeed. Social media platform is one of marketing strategies to establish brand identity and awareness of their products [8]. Thus, it can strengthen increase sales of products and get more profits.

MATERIALS AND METHODOLOGY

This study used the data collected from a survey which was conducted among the participants of youth in integrated crops of corns and tapioca in Kelantan. This study conducted in order to identify the level of effectiveness of cultivation of integrated crops of corns and tapioca in Kelantan beside to determine the participation of youth in integrated crops of corns and tapioca in Kelantan. A random sampling technique was applied and a total 78 answered the structured questionnaires given. The data were then analysed using SPSS version 21.0. The descriptive analysis was used to analyse the information gathered from the questionnaires.

RESULTS AND DISCUSSION

Demographic Information

The descriptive analysis was used in getting the analysis for demographic profile as shown in Table 1. Majority of the respondents were female with 73.1%. The most of respondents aged between 21 to 25 years old take part in this study with 88.5% and all of respondents were single. For education level, majority of the respondents have either degree, master or PhD with 83.3%. Besides that, most of respondents take course of agricultural science. About 87.2% of the respondents were Islam and Malay. Most of the respondents were students with 96.2%. The household income for most of respondents were below than RM1,000 with 46.2%. For integrated crops, about 76.9% of respondents chose corns and the rest chose tapioca. Lastly, majority of the respondents get the sources of information from their lecturers with 42.3%.

TABLE 1. Demographic information of the respondents.

Variable	Frequencies	Percentage (%)
Gender:		
Male	21	26.9
Female	57	73.1
Age:		
18-20 years old	7	9.0
21-25 years old	69	88.5
26-30 years old	2	2.6
Marital Status:		
Single	78	100.0
Married	0	0.0
Education Level:		
SPM	0	0.0
STPM/STAM	9	11.5
Diploma	4	5.1
Degree/Master/PhD	65	83.3

TABLE 1. Demographic information of the respondents. (Cont...)

Variable	Frequencies	Percentage (%)
Courses		
Literature	2	2.6
Science	24	30.8
Agriculture Science	48	61.5
Food Security	1	1.3
Applied Science	1	1.3
Aquaculture	1	1.3
Animal Husbandry	1	1.3
Religion		
Islam	68	87.2
Christian	1	1.3
Hindu	4	5.1
Buddhist	5	6.4
Race		
Malay	68	87.2
Chinese	5	6.4
Indian	4	5.1
Orang Asli	1	1.3
Occupation		
Student	75	96.2
Self-employed	3	3.8
Household Income		
> RM1000	36	46.2
RM1001 – RM3000	28	35.9
RM3001 – RM5000	6	7.7
< RM 5001	8	10.3
Integrated Crops		
Corns	60	76.9
Tapioca	18	23.1
Sources of information on this program		
Friends	22	28.2
Lecturer	33	42.3
University	20	25.6
Advertisement	3	3.8

Level of Effectiveness of Cultivation of Integrated Crops of Corns and Tapioca in Kelantan

For this part, the questionnaire asked about the information and knowledge of respondents on the cultivation of integrated crops of corns and tapioca in order to identify the level of effectiveness of cultivation of integrated crops of corns and tapioca in Kelantan. Table 2 showed the result of mean score of level effectiveness of cultivation of integrated crops of corns and tapioca in Kelantan. The descriptive analysis applied to get the result of mean score. Most of respondents have lack of knowledge on cultivation of integrated crops of corns and tapioca before participating this program. They have inadequate market information of integrated crops of corns and tapioca besides the hardness to do the integrated crops of corns and tapioca. They also do not know who they need to refer regarding the integrated crops of corns and tapioca. Before participating this program, the respondents do not know anything about cultivation of integrated crops of corns and tapioca, and they have no interest in the cultivation of integrated crops of corns and tapioca. Based on the results, the mean score of level effectiveness of cultivation of integrated crops of corns and tapioca in Kelantan was 3.83 which in high level.

TABLE 2. Mean score of level effectiveness of cultivation of integrated crops of corns and tapioca in Kelantan.

Statement	Percentage (%)					Mean	Level
	1*	2*	3*	4*	5*		
I have lack of knowledge on cultivation of integrated crops of corns and tapioca before participating this program.	1.3	1.3	25.6	44.9	26.9	3.95	High
I do not know anything about the cultivation of integrated crops of corns and tapioca before participating in this program.	5.1	7.7	30.8	35.9	20.5	3.59	Moderate
I have inadequate market information of integrated crops of corns and tapioca in Kelantan before participating this program.	0.0	2.6	25.6	42.3	29.5	3.99	High
Before participating in this program, I have no interest in the cultivation of integrated crops of corns and tapioca.	2.6	9.0	39.7	29.5	19.2	3.54	Moderate
I think it is hard for me to do the integrated crops of corns and tapioca before participating this program.	0.0	0.0	34.6	38.5	26.9	3.92	High
Before participating in this program, I do not know who I need to refer to the integrated crops of corns and tapioca.	1.3	1.3	25.6	38.5	33.3	4.01	High
Total mean score						3.83	High

*Indicator: 1. Strongly Disagree; 2. Disagree; 3. Average; 4. Agree; 5. Strongly Agree

Notes: mean values correspond to 1.0-2.33: low; 2.34-3.66: moderate; 3.67-5.0: high

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Table 3 below showed the result of participation of youth in integrated crops of corns and tapioca. Based on the result, the respondents want to join the integrated crops of corns and tapioca because they believe that can improve the knowledge and skills. Besides that, they want to create their second income source by participating integrated crops of corns and tapioca besides they want to become entrepreneur. They also believe that by participating in this integrated crop of corns and tapioca, they can create awareness on importance of integrated crops of corns and tapioca. However, the respondents believe that this integrated crops of corns and tapioca cannot help them to improve the economic status of their family. This is may be due to the occupation of every person in their family or the commitment of the family's members.

TABLE 3. Result of participation of youth in integrated crops of corns and tapioca.

Statement	Percentage (%)					Mean	Level
	1*	2*	3*	4*	5*		
I want to join the integrated crops of corns and tapioca.	0.0	5.1	17.9	44.9	32.1	4.04	High
I believe that this integrated crops of corns and tapioca can help me to improve the economic status of my family.	5.1	94.9	0.0	0.0	0.0	1.95	Low
I think that this integrated crops of corns and tapioca can help me to improve the knowledge and skills of integrated crops of corns and tapioca.	0.0	0.0	7.7	47.4	44.9	4.37	High
I want to create my second income sources after participating in this integrated crop of corns and tapioca.	0.0	2.6	14.1	37.2	46.2	4.27	High
I join this program because I want to become an entrepreneur of integrated crops of corns and tapioca.	0.0	5.1	23.1	30.8	41.0	4.08	High
This program able to create my awareness on the importance of integrated crops of corns and tapioca.	0.0	0.0	16.7	38.5	44.9	4.28	High

*Indicator: 1. Strongly Disagree; 2. Disagree; 3. Average; 4. Agree; 5. Strongly Agree

CONCLUSION

As the conclusion, the level effectiveness of cultivation of integrated crops of corns and tapioca in Kelantan was high with the value of 3.83. Besides, all of the respondents want to participate in cultivation of integrated crops of corns and tapioca in Kelantan because they want to generate their second income sources and to become entrepreneurs. This cultivation of integrated crops of corns and tapioca can help in increasing the agricultural sector to the food sector which has not yet been fully achieved and still depends on the import bills in agricultural products. Furthermore, this cultivation of integrated crops of corns and tapioca can help in increasing the socio-economic income among farmers using the commercial agriculture and reducing traditional farmers through agri-entrepreneurship among former higher education students i.e. public universities.

REFERENCES

1. N. M. Nor, N. N. M. Masdek and M. K. H. Maidin, *Eco. Tech. Manage. Rev.* 10, 47-55 (2015).
2. N. Mohammad Yunus, *J. Econ.* 7, 1-7 (2017).
3. Information on <https://www.healthline.com/nutrition/tapioca#section1>.
4. W. F. Breuninger, K. Piyachomkwan and K. Sriroth, "Tapioca/Cassava Starch: Production and Use in Starch" (Elsevier Inc. New York, 2009).
5. Information on <https://www.thespruceeats.com/about-us-4776236#about-dotdash>
6. H. Sharif, *Res. Vet. Sci.* 2, 67-80 (2014).
7. Information on <https://followthemoney.com/robert-kiyosaki-why-the-ultimate-stock-market-crash-will-begin-in-2016/>
8. B. Il-Hyun and Y. Z. Muhammad Faisal, *Int. J. Bus. Soc.* 19, 851-869 (2018).