

Marketing behavior of vegetable growers in Al-Qassim district Babil province, Iraq

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ABSTRACT

Marketing behavior of vegetable farmers play critical role in maximization of their crops profit. Studying marketing behavior for vegetable growers can help to predict the ways those use for supplying their agricultural products in the market . The study was conducted in Al-Qassim district Babylon Province, Iraq; to analysis marketing behavior among vegetable growers. Two hundred of vegetable growers were randomly selected. About three – quarters of the vegetable growers had a medium marketing behavior. Plastic bags and Net /Mesh bags was the most mode used for packing vegetable crops. Majority of the respondents sell their produce in the district vegetable market, to the wholesaler, immediately after harvest, using a rental vehicle, and received full payment (spot payment). Neighbors/ relatives and progressive farmers ranked first among marketing information sources for vegetable growers. Respondents within the least years of experience had higher mean scores on the marketing behavior scale. An effective strategy is needed to enhance the marketing behavior of vegetable growers.

Keywords: local market; packing; price; selling; smallholder farmers.

Introduction

Vegetables are the key component of balanced human diet and also the main drivers in achieving global nutritional security by providing nutrients, vitamins and minerals (Jena et al.,2018). Vegetable cultivation presumably supports livelihood primarily through food provision, income generation, and employment because vegetables are preferred cash crops(Rai et al., 2019).

Growing populations and increased incomes, especially in urban areas, are already creating a rise in demand on vegetable crops, so, expansion of vegetable production is an obvious first step to meet this demand.(Schreinemachers et al., 2018)

Vegetable development depends not only on production but also on marketing system.(

Maratha & Badodiya, 2017). The level of profitability of vegetable crops depends upon the manner in which farmers market their produce, time of sale, prices at which they sell, and the agency through whom they sell (Rashmita et al., 2020b). Marketing behavior

includes all activities involved in the flow of goods and services from production till it reaches the ultimate consumer (Rai & Dubey, 2018). Maximization of agricultural profit is a factor of production and the marketing behavior of the producer (Aliyi, et al., 2021; Jegan et al., 2021). The marketing behavior of vegetable growers in different regions of the world has been studied (Srinivas et al., 2016; Maratha & Badodiya, 2017; Phukan et al., 2018; Rai & Dubey, 2018; Raahinipriya & Rani, 2018; Shailesh et al., 2018; Sivaraj et al., 2018; Modi et al., 2019; Sakthivel, 2019; Vineetha et al., 2019; Marbaniang et al., 2020; Pongere & Jha, 2020; Rajkala & Jansirani, 2020; Rashmita et al., 2020a; Rashmita et al., 2020b; Sakthivel & Srikanth, 2020; Baraker et al., 2021; Kowsalya et al., 2021),). These studies concluded that the patterns of marketing behavior are different and varied according to the type of cultivated crop, marketing facilities and the characteristics of farmers, most vegetable farmers sold their

produce immediately after harvest, in a nearby market, used plastic crates for packing, received full payment, and acquired market information from neighbors/relatives and progressive farmers.

Vegetable marketing in Iraq can be characterized by lack of stability due to absence of infrastructure, institutions and marketing facilities (FAO, 2019, 2021), which negatively affect marketing behavior of vegetable growers. An understanding of farmers marketing behavior helps to predict the quantities and method of supplying their agricultural products in the market, so, it is essential to develop appropriate agricultural marketing policy.

Despite the importance of marketing behavior, there are very few studies that dealt with marketing behavior of vegetable growers in Iraq in general and in the research area in particular. Therefore, there is a need to know about marketing behavior of vegetable growers, which sources of market information they use. The study was undertaken to determine marketing behavior of vegetable producers and determine factors affecting marketing behavior

differences in farmer marketing behavior based on socio-economic characteristics.

Material and methods

The study was carried out in AL-Qassim District in Babylon Province, located in south central Iraq, between 32.7° and 33.8° N and 43.42° and 45.50° E. Babylon Province is located in the Middle of Euphrates provinces, a fourth vegetable producing province (CSO, 2021). Commonly cultivated crops in the district are okra (*Abelmoschus esculentus* L.), onion (*Allium cepa* L.), cucumber (*Cucumis sativa* L.), eggplant (*Solanum melongena* L.), cowpea (*Vigna unguiculata* L. Walp), squash, (genus *Cucurbita*), melon (*Cucumis melo* L.), watermelon (*Citrillus lanatus* L), and Lettuce (*Lactuca sativa*). There is no farmer specialized in the cultivation of a particular crop, but each farmer cultivate more than one crop during the year.

The population for this study consisted of 513 vegetable growers in the district. Of these 10 were chosen for testing the questionnaire's reliability, and from the 503 remaining, 200 (about 40% of the population) were randomly selected to respond to the questionnaire from 1-20 July 2021.

The instrument used was a two-part questionnaire comprising socio-economic characteristics and marketing behavior. The socio-economic characteristics included age, education level, years of experience in vegetable cultivation, and area cultivated with vegetables. The marketing behavior of vegetable growers identified seven-marketing aspects, with 26 sub-aspects: mode of packing (4 sub-aspect), place of sale (4 sub-aspect), time of sale (2 sub-aspect), mode of transport (3 sub-aspect), mode of sale (4 sub-aspect), payment pattern (3 sub-aspect) and source of market information (6 sub-aspect). Respondent can choose one or more sub-aspect from each aspect.

Content validity of the questionnaire was established by a panel of experts in fields of agricultural marketing, economic and extension. A pilot study was conducted to establish reliability of the instrument. Cronbach's alpha (a reliability coefficient of 0.93) was established, indicating the instrument used was reliable and valid.

Scores were assigned to the respondent on each sub-aspect chosen in overall marketing behavior, each respondent had scores ranging from (1 to 26). Based on these scores, respondents were assigned to categories according to their level of marketing behaviour, as follows: low (1– 9), medium (10 – 18), and high (19 – 27). Data were analyzed using frequency, percentage, mean (M), standard deviation (SD), using SPSS ver. 22, (SPSS Inc., Chicago, IL).

Result and discussion

Overall marketing behavior

Overall marketing behavior of vegetable growers varied (Table 1). The majority of respondents (70.5%) had medium level of marketing behavior, followed by 17% had high level and only 12.5% had low level of marketing behavior, on a scale ranging from

(1-26) score. It seems that those that had medium marketing behavior were young with medium farm size, well-educated and had a high years of experience in vegetable cultivation, and they try to maximize the return of vegetable crops, this leads them to be more proficient in their marketing behavior. This findings are in accordance with the result of Maratha and Badodiya, 2017; Rai & Dubey, 2018; Raahinipriya & Rani, 2018; Sakthivel, 2019; Vineetha et al., 2019; Pongere & Jha, 2020; Rashmita et al., 2020a.

Marketing behavior of vegetable growers

Packing is one of the important practices in vegetable marketing, it is facilitate and avoid damage at loading and unloading process of vegetable crops. Vegetable growers used more than one mode for packing their produce. All respondents used plastic bags for tomato, okra and squash. Net /mesh bags were used to packing melon, cowpea, cucumber, onion, and watermelon, 87% of vegetable growers used this mode. Okra, eggplant, cucumber and squash can be packed in plastic crates. Melon, watermelon, onion and lettuce, with large production volume, can be marketed without packing.

Choosing the appropriate place to marketing agricultural products is related to the nature of the markets, the quantity of production and the marketing capabilities available to the farmer. Result in table 2 revealed that (80%) of the respondents sold their produce in the district vegetable market, this is due to the presence of a large market for vegetables in the district, and consumer preference for locally produced crops. 21.5% of vegetable growers how produce large quantities and have a vehicle sell their produce in other state/ district, while 12.5%, 5% of the respondents sell their produce in the village and their field respectively.

Most vegetable crops are characterized by being perishable quickly; farmers have to sell them immediately after harvest, especially with the lack of storage facilities. All respondents sold their crops immediately after harvest, such as; cucumber, tomato and

lettuce.15% of vegetable growers sold their crops after initial storage like onion.

Vegetable growers used more than one mode to transported crops to market. The mostly common mode was a rental vehicle which used by 70% of respondents whom produce large quantities. 35% of respondents have their own vehicle that can be used to transport their products, while 25% of them whom produce small quantities use public transport to move crops to market like okra, cucumber and cowpea.

Concerning to whom does vegetable growers sell their products, result in table 2 indicate that majority of respondents (73.5%) sell their products to the wholesaler, especially when the production is large and requires large of money that are only available at wholesalers, while 40% sell their products to a vegetable store, 17.5% sell directly to the consumer, and 4.5% sell to the village level middleman.

The majority (88%) of vegetable growers received full payment (spot payment) after sale their crops, followed by (23%) advanced payment and (9.5%) delayed payment.

Marketing information is essential in the success of vegetable marketing process, so, vegetable growers must access to these information. Some recent studies indicate that lake access to the marketing information is a constraint of vegetable production (Kshash, 2019). Result in table 2 indicate that neighbors/ relatives were the common market information source used by most vegetable growers (65%), followed by progressive farmers (59%) and local market center (35%).

Factors affecting marketing behavior

Results in Table 3 indicate that there were significant differences between mean scores of marketing behavior scale based on education, years of experience and cultivated area.

Respondents within < 20 years of experience had higher mean scores on the marketing behavior scale (M= 20.8), because they are younger, have small farms and produce

medium quantities of vegetable crops, and they try to maximize the return on production, this leads them to have improved marketing behavior. Respondents with the lowest education level (<Secondary) had the lowest mean scores on the marketing behavior scale (M= 8.9) (Table 3), because of their limited thinking. Education plays an important role in enhancing the thinking capabilities and it widens horizons of the individuals, so it is a very crucial and important variable and it is responsible for better marketing behavior (Maratha & Badodiya, 2017).

Conclusion and recommendations

About three – quarters of the vegetable growers had a medium marketing behavior. Plastic bags and Net /Mesh bags was the most mode used for packing vegetable crops. Majority of the respondents sell their produce in the district vegetable market, to the wholesaler, immediately after harvest, using a rental vehicle, and received full payment (spot payment). Neighbors/ relatives and progressive farmers ranked first among marketing information sources for vegetable growers. Respondents within the least years of experience had higher mean scores on the marketing behavior scale.

There is a need to organize and develop the marketing of vegetable crops. An effective strategy is needed to enhance the marketing behavior of vegetable growers.

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Table 1: Distribution of respondents according to overall marketing behavior.

Marketing behavior level	F	%	M	SD
Low (1- 9)	20	10.0	7.4	1.17
Medium (10- 18)	146	73.0	16.0	1.44
High (19- 27)	34	17.0	21.0	1.18
Total (1-26)	200	100	14.8	3.4

Table 2. Categories wise distribution of respondents according on their marketing behavior (n= 200)

Marketing aspect	Sub aspect	F*	%
Mode of packing	Plastic bags	200	100
	Net /Mesh bags	174	87.0
	Without packing	163	81.5
	Plastic crates	82	41.0
Place of sale	District vegetable market	160	80.0
	Other state/ District	43	21.5
	In the village	25	12.5
	Field itself	10	5.0
Time of sale	Immediately after harvest	200	100
	After initial storage	30	15.0
Mode of transport	Rental vehicle	140	70.0
	Personal vehicle	70	35.0
	Public vehicle	50	25.0
Mode of sale	To the wholesaler	147	73.5
	To the vegetable store	80	40.0
	Directly to the consumer	35	17.5
	To village level middleman	9	4.5.0
Payment pattern	Spot payment	176	88.0
	Advance payment	46	23.0
	Delayed payment	19	9.5
Source of market information	Neighbors/ relatives	130	65.0
	Progressive farmers	119	59.5

Local market center	70	35.0
Commission agents	53	26.5
Contractors	28	14.0
Retails	11	5.5

* multiple choices(Each respondent can choose more than one sub-subject in each subject)

Table 3: Characteristics of respondents and marketing behavior

Variable	Categories	%	Marketing behavior				
			(n=200)	Low %	Medium %	High %	M
Age M= 43.8, SD= 9.6	< 30	23.5	0.0	74.0	26.0	17.5	1.435 N.S
	30 – 50	65.0	14.0	69.0	17.0	15.7	
	> 50	11.5	30.0	70.0	0.0	11.2	
Education	<Secondary	18.5	57.0	35.0	8.0	8.9	8.157*
	Secondary	58.0	3.0	92.0	5.0	15.6	
	University	23.5	0.0	47.0	53.0	19.9	
Years of experience M= 24.7, SD= 4.9	< 20	7.0	0.0	29.0	71.0	20.8	7.427*
	20 – 30	59.5	4.0	87.0	9.0	11.6	
	> 30	33.5	30.0	51.0	19.0	12.0	
area cultivated with vegetable(h) M= 4.7, SD= 1.9	< 2	17.5	51.0	49.0	0.0	9.9	7.892*
	2 – 4	53.0	7.0	85.0	8.0	14.0	
	> 4	29.5	0.0	58.0	42.0	20.5	

N.S,* not significant or significant at 0.05 level of F test.