

The Productive Obstacles in the Process of Marketing Agricultural Vegetables in Fallujah District

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Abstract

The agricultural production of vegetables is an important topic in achieving food security. Therefore, any damage in it will negatively affect the marketing process. The main objective of the research is to identify the productive obstacles in the process of marketing agricultural vegetables in the Fallujah district, as well as arranging the production obstacles in the marketing of agricultural vegetables according to their importance from the standpoint of farmers. The research methodology followed the descriptive approach, using the survey study methods as it is consistent with the nature of this research. The research community included all the agricultural divisions of the Fallujah district, which are of two agricultural divisions. Given the large size of the research community, which reached (1040) farmers, the researcher decided to take a random sample of vegetable farmers represented by (25%) of the community size, therefore the final sample reached (260) farmers. The research results showed that there are serious production obstacles in the marketing of agricultural vegetables, as the weighted mean reached 4.14, with a percentage weight of 82.8%. The research also indicated the need to play the role of marketing extension and provide the necessary services to farmers on how to deal with these products due to their formative nature that requires knowledge and skills of production and marketing.

Keywords: Productive Obstacles, Marketing Agricultural Vegetables, Fallujah District

Introduction

The world population is expected to exceed nine billion by 2050, which requires an increase in agricultural production by 60% over the years 2015/2016 to meet this additional demand for food (Lafta et al: 2016). Vegetable crops are important crops in Iraq and the world, as their importance is no less than strategic crops, as they are complementary to achieving food security and providing additional demand for food (Lafta, 2007). However, vegetable products are one of the most important agricultural products produced by many farmers and a basic source of livelihood, production, and expenses (Lafta et al., 2016). Agricultural marketing is one of the most important stages of the agricultural development process because it is the engine of this development. In general, the marketing reality showed that there is a high percentage of agricultural vegetables lost annually during the production stages in general and marketing especially until the product reaches the final consumer as a result of adopting old and primitive methods. As well as, the lack of agricultural extension in providing the necessary knowledge and skills about production, and how to serve vegetables and methods of marketing them in the best possible way (Saleh et al., 2016). Scientific studies and academic research have recorded an increase in the percentage of loss in vegetable products as a result of insufficient marketing procedures, especially in the field of

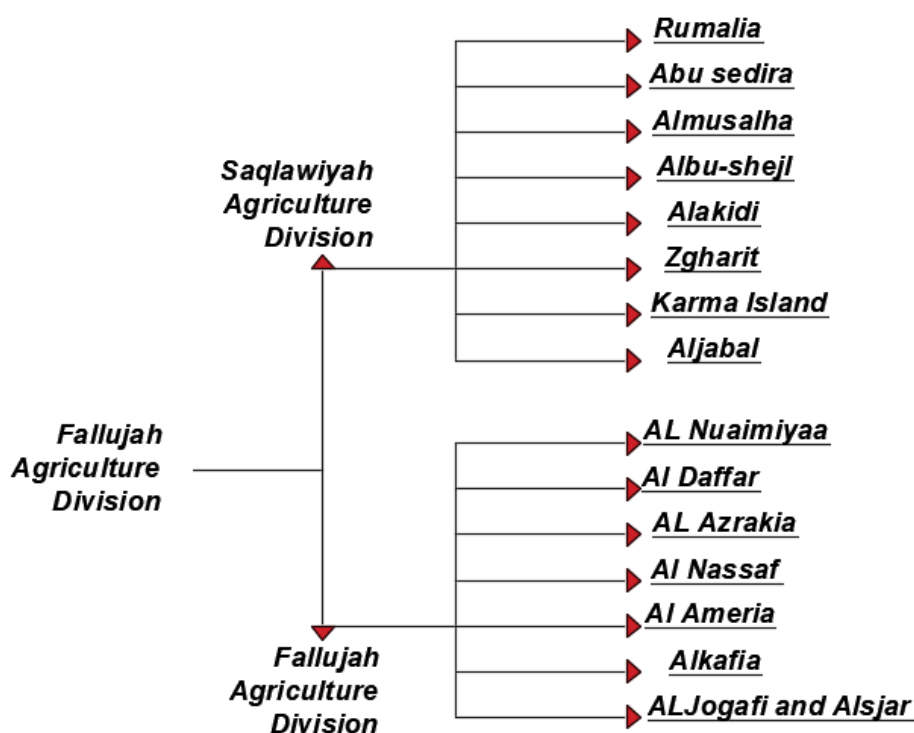
sorting, grading, packaging, transportation, and storage. Coupled with, the lack of sufficient experience among producers to carry out these operations with the necessary efficiency. Besides, the insufficiency of agricultural extension programs in the areas of improving productivity and reducing spoilage, on the other hand, to the loss in various agricultural operations (Mahmoud et al., 2010). Moreover, the inconsistency of the production of most vegetable products in a specific period and the production of large percentages of most products in certain regions, which are sometimes concentrated in a specific province or district, the product is distributed in small production units and dispersed throughout the country. This process required a great effort to collect and transport them to places of consumption and to impose additional burdens and costs on the product (AH Lafta; 2009). Accordingly, the characteristics of many types of vegetables as being perishable and lost and require special methods of packing, storing, and transporting refrigerated, and the remoteness of production areas from cities with relatively high population density makes them vulnerable to spoilage (AH Lafta; 2011). The lack of a production and marketing policy leads to several difficulties and exposes the products to the mechanism of supply and demand in the markets, and thus an imbalance in the marketing of vegetable products (AH Lafta et al., 2021). The productive obstacles in the vegetable marketing process are limited to the low work of most producers due to the lack of experience in the production and the marketing process and bearing the burdens of loss and spoilage in it (Al-Awsi et al., 2008). The lack of interest in the stages of production negatively affects the marketing process, which is concerned with sorting, grading, packaging, storage, packaging, and transportation that directly affects production and the marketing process (Challob et al., 2020). Production is the basis of the marketing process, without production, the agricultural marketing of vegetables cannot take place (Lafta: 2011). Vegetable production in Iraq has also witnessed a noticeable increase in the last two years, which is represented by the presence of large quantities surplus to the need for local consumption on the domestic market after production was limited to meeting local needs (Ridha et al., 2020). Based on the vegetable crop production report for the year (2019), the vegetable production reached (1715) thousand tons in all governorates, with an increase of 333 thousand tons over the production of (2018), where the rate of increase was (24.1%) (Agricultural Statistics Directorate: 2019). Because of these increases in agricultural production and vegetable production, in particular, the absence of internal and external marketing information, as well as the insufficient means of transport for transporting agricultural products, and the multiplicity of marketing channels and intermediaries. This condition has been considered as among the most important obstacles facing vegetable growers in marketing vegetable products in the summer and winter seasons (Lafta: 2016). From the foregoing, the importance of the research problem emerges through pressing questions, that are summarized as, what are the production obstacles in the process of marketing agricultural vegetables from the standpoint of farmers in the district of Fallujah? Identify the arrangement of productive obstacles in the marketing of agricultural vegetables according to their importance from the standpoint of farmers? Arranging the productive obstacles in the marketing of agricultural vegetables according to their importance from the standpoint of farmers?

- **Research aims**

- 1- Identifying the productive obstacles in the process of marketing agricultural vegetables.
- 2- Arranging the productive obstacles in the marketing of agricultural vegetables according to their importance from the standpoint of farmers.

Materials and methods of work

Research methodology: In conducting this research, the researcher relied on the descriptive method, using the method of survey study because it is consistent with the nature of this research. The research community included all the agricultural divisions of the Fallujah district, which numbered two agricultural divisions, are (Fallujah Agriculture Division and Saqlawiyah Agriculture Division) as well as all the districts of the Fallujah and Saqlawiyah Agriculture Division, which are in fifteen districts, as shown in Plan (1)



Plan (1) The agricultural divisions of Fallujah and its districts

- **Research sample:**

The number of vegetable farmers in the Fallujah Agriculture Division reached 638 farmers, while the research community in the Saqlawiya Agriculture Division reached 402. Therefore, the size of the community will be (1040), given the size of the community and in line with the recommendation of (Razzaq et al., 2010) emphasized that the percentage of the sample is logically acceptable when conducting social and human studies is 20%. Accordingly, the researcher's opinion is to take 25% of the total size of the community, as shown in Table (1). Table (2) and Table (3) show the numbers and percentages of the research sample from the total community of all farmers in the Fallujah district and in both the Fallujah and Saqlawiyah divisions.

Table (1) Research sample

Agricultural division	Number of farmers	Sample
Fallujah Agriculture Division	638	159
Saqlawia Agriculture Division	402	101
Total	1040	260

Table (2) The sample of farmers belonging to the districts of the Fallujah Agriculture Division

Districts	Al Nuaimiya	Al Daffar	Azrakia	Al-Nassaf	Al Ameria	Alkafia	Al-Jogafi and Alsjar	Total
Fallujah Agriculture Division								
Community	161	217	72	72	49	13	54	683
Sample	40	54	18	18	12	3	14	159

Table (3) The sample of farmers belonging to the districts of the Saqlawiya Agriculture Division

Districts	Rumaila	Abu Sedira	Almusalha	Albushajl	Alakidi	Zgharit	Karma Island	Aljabal	Total
Fallujah Agriculture Division									
Community	3	51	102	60	73	33	5	75	402
Sample	1	13	26	15	18	8	1	19	101

• Research tool

After reviewing the literature related to the issue of production obstacles in the marketing process, reviewing previous studies and related measures, and based on the above, the researcher began preparing a questionnaire form that included twenty paragraphs representing the measurement of production obstacles in the marketing process. The paragraphs were measured on a 5-point scale composed of five levels (very dangerous obstacle, dangerous obstacle, not constituting obstacle, non-dangerous obstacle, not very dangerous obstacle). Then, the weights were given to these levels (5, 4, 3, 2, 1) respectively for all the paragraphs being all paragraphs measure negative, so the degree of production obstacles in the marketing process ranged between 20 - 100 degrees. It is also known that the best way to measure the questionnaire validity is to present it to many specialized experts and to determine the

validity of the paragraphs for the characteristic to be measured. For that reason, the researcher relied to find out the validity of the questionnaire on a group of experts in the field of agricultural extension and agricultural economics from the faculty members of the Faculty of Agricultural Engineering Sciences / the University of Baghdad. Besides, two researchers from the Agricultural Research Department, and agricultural employees whose experience exceeds (15) years in some agricultural departments. In order to complete the procedures and identify the reliability of the questionnaire, a random sample consisting of (34) farmers (not involved in the research) was selected. The researcher used the Alpha Cronbach test to measure the reliability of the productivity obstacles scale in the marketing of agricultural vegetables, where its value reached (0.89) degree. This value of the reliability coefficient of the scale that used in the questionnaire is scientifically acceptable, as the percentage of 75% is acceptable as the minimum value of the reliability coefficient and is a good indicator of the consistency of questionnaire paragraphs (Naji, 2020: Lectures on Research Methods). Finally, the questionnaire was distributed through the personal interview for the period 7/11/2020 until 23/1/2021, whose total number was (260) respondents. The researcher used the appropriate statistical methods for the research objectives, as the weighted mean, percentages, and the Alpha Cronbach test was used.

Results and discussion

• The first objective: identifying the productive obstacles in the process of marketing agricultural vegetables

The research results showed that vegetable farmers mentioned the existence of twenty obstacles facing production in the process of marketing their agricultural products. Their average importance ranged between 3.75 - 4.56 degrees and a percentage weight between 75-91.2 with an average of 4.14 degrees according to the scale of importance. Furthermore, their numerical value ranges between 1-5 degrees, and this average shows that the productive obstacles in the vegetable marketing process are at an important level, as shown in Table 4.

Table (4) Distribution of respondents according to their answers on the importance of the paragraphs of productive obstacles in the marketing process

Seq. according to the importance	Paragraphs	Very dangerous obstacle	Dangerous obstacle	Not constituting obstacle	Non-dangerous obstacle	Not very dangerous obstacle	Weighted mean	Percentage weight
1	Harvesting and transporting crop at noon or when sunlight is high	156	95	8	1	0	4.56	91.2
2	The harvested fruits remain for several hours until they are transferred	73	171	11	5	0	4.20	84
3	Leave the harvested fruits exposed to rain water	97	122	37	4	0	4.20	84
4	Not leaving a suitable place in the	49	154	48	9	0	3.93	78.6

	farm to collect agricultural vegetables after harvesting							
5	Harvesting the fruits in the early pre-ripening stages	144	93	20	3	0	4.45	89
6	Excessive use of herbicides that treat fruit infestations	124	97	37	2	0	4.32	86.4
7	Using the manual harvest method	78	84	88	10	0	3.88	77.6
8	The harvest of agricultural vegetables was delayed after the completion of ripeness	79	96	82	3	0	3.97	79.4
9	Water scarcity in the post-cultivation and pre-harvest stages	146	102	12	0	0	4.52	90.4
10	Not to sort the vegetables that can be stored or not stored for direct marketing	83	124	53	0	0	4.12	82.4
11	Neglecting industrial and transformative projects, as well as canning plants	106	121	32	1	0	4.28	85.6
12	Not to isolate the affected or damaged vegetables from the healthy ones	106	128	26	0	0	4.31	86.2
13	Putting fruits together without distinguishing between them based on size	81	105	53	21	0	3.95	79

Continued to Table (4) The distribution of respondents according to their answers about the importance of the paragraph of productive obstacles in the marketing process

Seq. according to the importance	Paragraphs	Very dangerous obstacle	Dangerous obstacle	Not constituting obstacle	Non-dangerous obstacle	Not very dangerous obstacle	Weighted mean	Percentage weight
14	Not to use the packages and put them directly in the transport vehicle	87	96	35	17	25	3.78	75.6
15	Putting some types of vegetables in traditional bags that do	94	130	9	27	0	4.12	82.4

	not have ventilation							
16	Putting some types of vegetables in large plastic boxes increases waste	65	124	53	18	0	3.91	78.2
17	Storage in the farm under natural weather conditions	61	119	34	45	1	3.75	75
18	Not to use refrigerated transport means to transport vegetables	161	76	22	1	0	4.53	90.6
19	Not to use hay or some fodder crops to cover vegetables, during and before transporting them	53	160	44	3	0	4.01	80.2
20	The lack of government cold stores and damage due to the wars	69	154	35	2	0	4.12	82.4
The average answer of the respondents							4.14	82.8

It is evident from the Table that the majority of the respondents emphasized the paragraph (Harvesting and transporting the crop at noon or when sunlight is high), and it ranked the first in terms of the level of importance or the respondents' agreement on it. This paragraph achieved a weighted mean of 4.56 degrees and a percentage weight of 91.2 % which is higher than the weighted mean for other paragraphs. This may be due to the influence of agricultural vegetables with sunlight when harvested during the day or when the sunlight is high because they lose their natural properties and reduces the crop quality (Jasim et al., 2015). The paragraph (Storage in the farm under natural weather conditions) ranked the last in terms of the level of importance or the respondents' agreement, as it achieved a weighted mean of 3.75 degrees and a percentage weight of 75%. This may be attributed to the weak interest in storage and leaving the crop vulnerable to climate changes on the farm floor (Saleh et al., 2016).

- **The second objective: Arranging productive obstacles in the marketing of agricultural vegetables according to their importance from the standpoint of farmers**

The research results showed that vegetable farmers emphasized that there are obstacles facing production in the process of marketing their agricultural products, their average importance ranged between 4.56 - 3.75 degrees, and a percentage weight between 75 - 91.2 with an average of 4.14 according to the scale of importance. Moreover, their numerical value ranges between 1-5 degrees, where this average shows that the productive obstacles in the process of marketing vegetables at an important level, and they clarified their arrangement according to their importance, they're obtaining a weighted mean and the percentage weight, as shown in Table (5), they are arranged in descending order.

Table (5) The arrangement of productive obstacles in the marketing process in order of importance, in descending order

Seq. according to the importance	Paragraphs	Very dangerous obstacle	Dangerous obstacle	Not constituting obstacle	Non-dangerous obstacle	Not very dangerous obstacle	Weighted mean	Percentage weight
1	Harvesting and transporting crop at noon or when sunlight is high	156	95	8	1	0	4.56	91.2
2	Not to use refrigerated transport means to transport vegetables	161	76	22	1	0	4.53	90.6
3	Water scarcity in the post-cultivation and pre-harvest stages	146	102	12	0	0	4.52	90.4
4	Harvesting fruits in the early pre-ripening stages	144	93	20	3	0	4.45	89
5	Excessive use of herbicides that treat fruit infestations	124	97	37	2	0	4.32	86.4
6	Not to isolate the affected or damaged vegetables from the healthy ones	106	128	26	0	0	4.31	86.2
7	Neglecting industrial and transformative projects, as well as canning plants	106	121	32	1	0	4.28	85.6
8.5	The harvested fruits remain for several hours until they are transferred	73	171	11	5	0	4.20	84
8.5	Leave the harvested fruits exposed to rain water	97	122	37	4	0	4.20	84
11	Not to sort the vegetables that can be stored or not stored for direct marketing	83	124	53	0	0	4.12	82.4

Continued to table (5), arranging productive obstacles in the marketing process, according to their importance, in descending order

Seq. according to the importance	Paragraphs	Very dangerous obstacle	Dangerous obstacle	Not constituting obstacle	Non-dangerous obstacle	Not very dangerous obstacle	Weighted mean	Percentage weight
11	Putting some types of vegetables in traditional bags that do not have ventilation	94	130	9	27	0	4.12	82.4
11	The lack of government cold	69	154	35	2	0	4.12	82.4

	stores and damage due to the wars							
13	Not to use hay or some fodder crops to cover vegetables, during and before transporting them	53	160	44	3	0	4.01	80.2
14	The harvest of agricultural vegetables was delayed after the completion of ripeness	79	96	82	3	0	3.97	79.4
15	Putting fruits together without distinguishing between them according to the size	81	105	53	21	0	3.95	79
16	Not leaving a suitable place in the farm to collect agricultural vegetables after harvesting	49	154	48	9	0	3.93	78.6
17	Putting some types of vegetables in large plastic boxes increases waste	65	124	53	18	0	3.91	78.2
18	Using the manual harvest method	78	84	88	10	0	3.88	77.6
19	Not to use the packages and put them directly in the transport vehicle	87	96	35	17	25	3.78	75.6
20	Storage in the farm under natural weather conditions	61	119	34	45	1	3.75	75
The average answer of respondents							4.14	82.8

The above Table shows the arrangement of productive obstacles in the process of marketing agricultural vegetables according to their importance from the standpoint of farmers as shown in Table (5). These results showed that the two paragraphs (Harvesting and transporting crop at noon or when sunlight is high) and (not to use refrigerated transport means to transport vegetables) ranked the first and second with a weighted mean of 4.56 and 4.53, with the percentage weight of 91.2 and 90.6% according to a scale of importance that ranges between 1-5 degrees, which enhances its importance according to their standpoint. This may be attributed to the lack of interest in production during its marketing stages, leaving it exposed to sunlight, and neglecting the use of modern refrigerated transport means to transport agricultural vegetables (Lafta et al., 2016). However, the two paragraphs (not to use the packages and placing them directly in the transport vehicle) and (storage in the farm under natural weather conditions) ranked the last with a weighted mean of 3.78 and 3.75 and percentage weight of 75.6 and 75% according to an importance scale ranges between 1 - 5 degree, which enhances its importance according to their standpoint. This may be attributed to the neglecting of using packages that contribute to preserving the agricultural products from spoilage and loss, in addition to the lack of knowing damages caused by leaving the crop on the farmland that affects its quality and thus it's marketing (Mahmoud et al., 2009).

Conclusions and recommendations

The agricultural marketing process faces several productive obstacles, represented by the lack of farmers' awareness of the importance of the risk of not knowing how to deal with vegetables, such as harvesting, sorting, grading, storage, and transport. Therefore, there are set of recommendations about productive obstacles in the marketing process by the necessity of activating the role of agricultural extension through providing the necessary knowledge and skills on how farmers deal with their products and the need to pay attention to all production processes from irrigation, harvesting, storing, sorting, grading and transporting with the contribution of the relevant authorities in this and activating the control role over stores, markets.

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