

The Geographical Distribution of the Population in Dhi Qar Governorate and its Relationship to Rural Development

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Abstract

The research aims to highlight primarily the population distribution in the rural areas of Dhi Qar Governorate for the year 2024, including numerical, relative, and environmental distribution, as well as density distribution (rural density and agricultural density), and the extent of the relationship between the distribution of the rural population and the development process, as the countryside constitutes the food basket for the city due to its inhabitants practicing agricultural activity primarily. Moreover, the countryside supplies the city with cheap labor. The research reached a number of results, the most important of which is the decline in the percentage of the rural population of the total population for the year 2024 compared to their percentage for the year 2014, and that the rural areas of Dhi Qar Governorate, despite the decline in their population, possess a human resource that represents one of the most important components of rural development in the study area.

Introduction

The study of populations and their distribution in the places where they live occupies a prominent place in population studies. The size of the population and the way it is distributed are closely related to development. Population factors are one of the most important components and fundamental pillars of development. Because human resources are the ones who plan and implement development programs, and because the population represents the workforce in various economic activities, the population is also the target and primary goal of development, as development programs are designed to achieve societal well-being by providing services and raising the standard of living.

1- Research problem

The research problem is represented by a main question: Is there a relationship between population distribution and rural development in Dhi Qar Governorate for the year 2024?

2- Research hypothesis

The research hypothesis can be formulated as follows: There is a relationship between population distribution and rural development in Dhi Qar Governorate for the year 2024.

3- Importance of the research

The importance of the research stems from the importance of the topic of population distribution and its impact on rural development, and the results that the research reaches and their positive reflection on the study area.

4- Research objective

The research aims to reveal how the rural population is distributed and the extent of its relationship Rural development in Dhi Qar Governorate for the year 2024.

5- Research structure

The research required that it include three main topics: the numerical and relative distribution of the rural population of Dhi Qar Governorate for the year 2024, as well as the density distribution and the environmental distribution. These topics are preceded by an introduction, and the research concludes with a set of results and suggestions.

First-The geographical distribution of the population in the rural areas of Dhi Qar Governorate

The study of population distribution is of paramount importance in the study of population geography because a window through which it can be identified. Based on the way the population is distributed in a place and the extent to which they are affected by and influence it. Since place is the essence of geographical study, population distribution is one of the phenomena that shape place based on its characteristics and weak or active relationships that reveal the reality of the population towards dispersion or scattering.⁽ⁱ⁾

Geographical distribution of the population and its relationship to rural development

Undoubtedly, the availability of data on the geographical distribution of the population provides planners with the necessary indicators to provide infrastructure and community services, as well as to identify potential settlement areas for the establishment of development projects that rely primarily on human capital. The main use of the geographical distribution of the population is to identify rural and urban areas to assess the effectiveness of development measures implemented to reduce the gap between rural and urban areas and transform rural areas into developed cities that play their appropriate role in the process of building and progress. ⁽ⁱⁱ⁾ There are several reliable measures that can be used to study population distribution:

1- Numerical and proportional distribution: It refers to the population counted in a specific area at a given time, and this concept is based on a quantitative foundation. Essential for classifying and ranking regions without giving importance to the percentage that this number represents of the total population of that region. Relative distribution refers to the percentage of the total population that a particular region possesses. It's worth noting that relative data provides a more standardized visual perception than absolute numbers, which is of great importance⁽ⁱⁱⁱ⁾. The paramount importance of population size in a country lies in its economic, political, and military dimensions. The production of goods and services depends primarily on the size and quality of the workforce, and the availability of this workforce depends fundamentally on the size, age, and education of the population. The standard of living depends on the extent of popular participation in production. Furthermore, population size is of great importance in relation to other factors of production such as natural resources, the availability of capital, natural barriers, and so on. ^(iv) The numerical and proportional distribution of the population is a reliable tool for developing effective and efficient rural development plans that balance economic growth with improving living standards.^(v)

In fact, the population distribution in the study area varies from one administrative unit to another during the period (2014-2024). It is noted from the data of Table (1) and Map (1) that the center of Al-Rifai district topped the rest of the administrative units according to population estimates for the year 2014 with a population size of (83,637) people and a percentage of (11.6%) of the total rural population in Dhi Qar Governorate. Al-Gharraf sub-district came in second place with a population size of (71,322) people and a percentage of (9.9%). The center of Al-Shatra district came in third place with a population size of (64,305) people and a percentage of (8.9%). Ur sub-district came in fourth place with a population size of (57,621) people and a percentage of (8%). As for the last place, it was the share of (Al-Tar sub-district, the center of Al-Jubayish district and Al-Manar sub-district) with a population size of (15,593, 7,632, 1,682) people for each of them respectively percentages of (2.2%), (1.1%), and (0.2%) respectively, the results for 2024 yielded the following results: The Al-Rifai district center ranked first with a population of 101,612, representing 11.6% of the total rural population in Dhi Qar Governorate. Al-Gharraf sub-district came in second with a population of 86,650 (9.9%), followed by Al-Shatra district center in third place with 78,126 (8.9%). Ur sub-district ranked fourth with a population of 70,005 (8%). Finally, Al-Jubayish district center and Al-Manar sub-district tied for last place with populations of 9,272 and 2,043, respectively. (1.1%), (0.2%) for each of them respectively. From the above data, it is noted that the countryside of Dhi Qar Governorate possesses a large human capital, which is one of the basic components of rural development in any region.

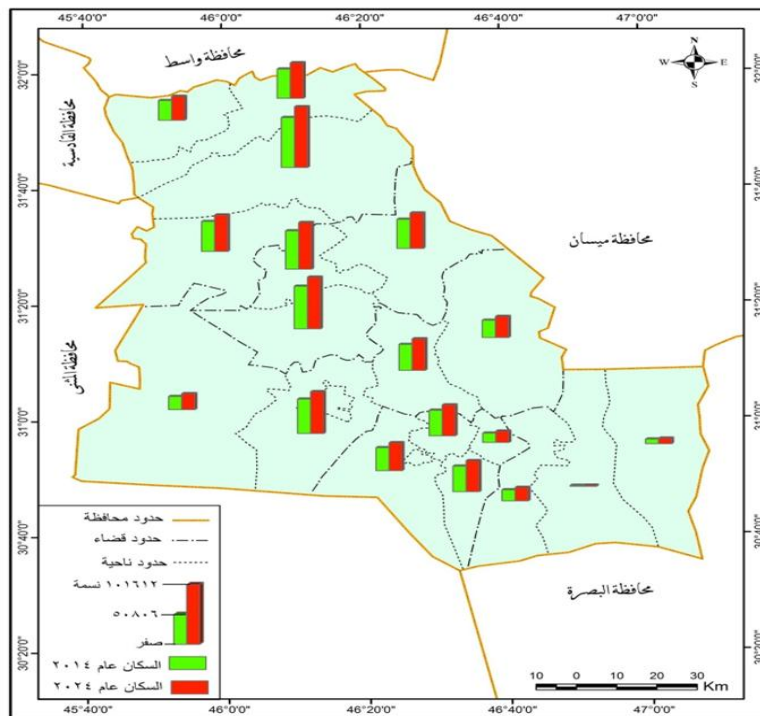
By providing cheap labor that can be employed in various economic activities such as the agricultural and industrial sectors, or by joining the ranks of the armed forces.

Table (1) The numerical and relative distribution of the population in the rural areas of Dhi Qar Governorate for the period (2014-2024)

Population in 2024			Population in 2014			Units Administrative
Rank	%	number	Rank	%	number	
--	--	--	--	--	--	Nasiriyah
4	8	70005	4	8	57621	Ur
11	4	35205	11	4	28978	Al-Islah
12	3.1	26762	12	3.1	22028	Al-Bathaa
7	6	52767	7	6	43433	Sayyid Dakhil
1	11.6	101612	1	11.6	83637	Al-Rifai
5	7	61075	5	7	50271	Al-Nasr
6	6.8	59445	6	6.8	48929	Qalat Sukkar
10	4.6	39915	10	4.6	32854	Al-Fajr
--	--	--	--	--	--	Suq Al-Shuyukh
8	5.9	51821	8	5.9	42653	Al-Akaika
9	5.3	46575	9	5.3	38336	Al-Fadhiliya
7	6	52049	7	6	42841	Karmat Bani Saeed
14	2.2	18944	14	2.2	15593	Al-Tar
15	1.1	9272	15	1.1	7632	Al-Jubayish
16	0.2	2043	16	0.2	1682	Al-Manar
13	2.6	22486	13	2.6	18509	Al-Fahoud
3	8.9	78126	3	8.9	64305	Al-Shatra
2	9.9	86650	2	9.9	71322	Al-Gharraf
6	6.8	59429	6	6.8	48916	Al-Dawaya
--	100	874181	--	100	719540	total

The researcher relied on:

- 1- Republic of Iraq, Ministry of Planning, Central Statistical Organization, Dhi Qar Statistics Directorate, Population Estimates for 2014.
- 2- Republic of Iraq, Ministry of Planning, Central Statistical Organization, Dhi Qar Statistics Directorate, Population Estimates for 2024.



Map (1) Population distribution in rural areas of Dhi Qar Governorate for the years (2014 and 2024)

2- Environmental distribution:

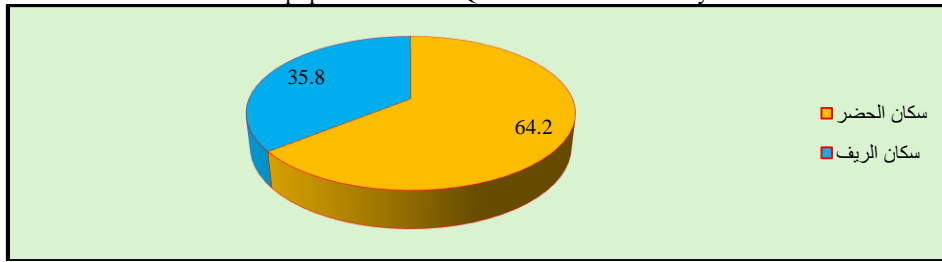
The study represents the environmental distribution of the population is of great importance in population studies. Because It gives us a clear picture of the relationship between the population and the characteristics of the land they live on. Therefore, geographers have shown a clear interest in studying it and consider it one of the most important geographical topics today. The criteria used by researchers and governments to distinguish between urban and rural areas vary. Some rely on philosophical criteria, while others use demographic criteria. In Iraq, according to the Municipalities Administration Law No. (165) of 1964, the administrative factor is used to differentiate between urban and rural areas, and under this law, areas located outside municipal boundaries are considered rural areas⁽¹⁾. It is one of the governorates in Dhi Qar where the percentage of rural population is high, despite their numbers declining in recent years for several reasons. According to population estimates for 2024, the rural population reached (874,181) people, representing (35.8%) of the total population. As for the urban population, its number reached (1,566,706), representing (64.2%) of the total population of the governorate, which is (2440887) It is noted that the rural population in Dhi Qar Governorate constitutes more than a third of the population in the governorate, and this percentage of the population deserves to have its developmental reality studied, to highlight the problems it suffers from, and to find appropriate solutions for it. As for the level of administrative units, it is noted that there is a disparity in the environmental distribution of the population from one administrative unit to another.

Table (2) Environmental Distribution of Population in Dhi Qar Governorate for the year 2024

%	number	Population by environment
64.2	1566706	urban population
35.8	874181	rural population
100	2440887	the total

The researcher relied on: Republic of Iraq, Ministry of Planning, Central Statistical Organization, Dhi Qar Statistics Directorate, Population Estimates for the year 2024.

Figure (1) Relative distribution of urban and rural population in Dhi Qar Governorate for the year 2024



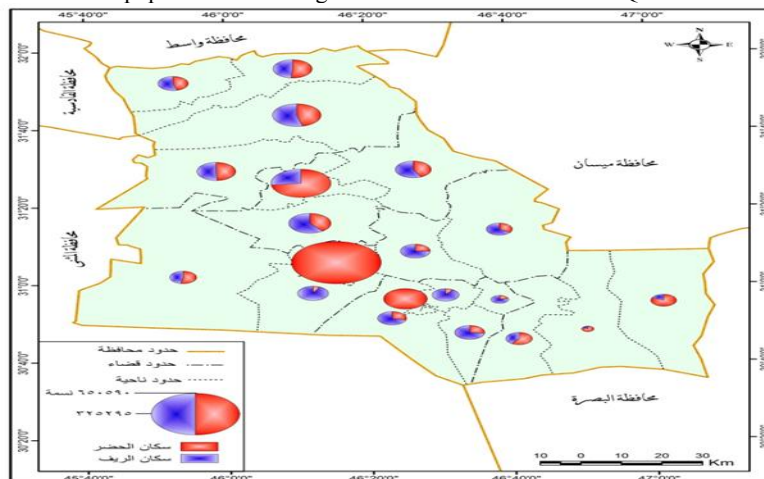
As shown in Table (3) and Map (2), the Nasiriyah district center has the largest population at (650,590). The urban population constitutes (100%) of the total population of the district center and (41.5%) of the governorate's population, as the Nasiriyah district center is classified as an urban area. The Shatra district center came in second place with a population of (290,360). The urban population constitutes (73.1%) of the district's total population and (13.5%) of the governorate's population, while the rural population constitutes (26.9%) of the district's total population and (8.9%) of the governorate's total population. The Rifa'i district center came in third place with a population of (188,532). The urban population constitutes (46.1%) of the district's total population and (5.5%) of the governorate's total population, while the rural population constitutes (53.9%) of the district's total population and (11.6%) of the governorate's total population. The district center of Suq al-Shuyukh ranked fourth with a population of (153,286) people, and the percentage of urban residents is (100%) in the district center, as it is classified as an urban area. The smallest population size was represented in the sub-districts of Al-Tar and Al-Manar. In the sub-district of Al-Tar, the population reached (24,099) people, the percentage of urban residents was (21.4%) of the total population of the sub-district, and (0.3%) of the population of the governorate. Meanwhile, the percentage of rural residents was (78.6%) of its population, and (2.2%) of the total population of the governorate. In the sub-district of Al-Manar, the percentage of urban residents was (82.3%), and (0.6%) of the total population of the governorate, while the percentage of rural residents was (17.7%) of the total population of the sub-district, and (0.2%) of the total population of the governorate.

Table (3) Environmental distribution of the population according to administrative units in Dhi Qar Governorate for the year 2024

the total		rural population		urban population			UnitsAdministrative
%	number	% of the administrative unit	% of the governorate	number	% of the administrative unit	% of the governorate	
100	650590	--	--	--	100	41.5	Nasiriyah
100	75831	92.3	8	70005	7.7	0.4	Or
100	53818	65.4	4	35205	34.6	1.2	Reform
100	56849	57.1	3.1	26762	52.9	1.9	Al-Bathaa
100	70612	74.7	6	52767	25.3	1.1	Mr. Dakhil
100	188532	53.9	11.6	101612	46.1	5.5	Al-Rifai
100	120599	50.6	7	61075	49.4	3.8	Victory
100	121618	48.9	6.8	59445	51.1	4	Sugar Castle
100	73381	54.4	4.6	39915	45.6	2.1	dawn
100	153286	--	--	--	100	9.8	Sheikhs Market
100	57171	90.6	5.9	51821	9.4	0.3	The cake
100	65935	70.6	5.3	46575	29.4	1.2	Al-Fadhliya
100	71681	72.6	6	52049	27.4	1.3	Karamah Bani Saeed
100	24099	78.6	2.2	18944	21.4	0.3	Tar
100	52695	17.6	1.1	9272	82.4	2.8	Al-Jubayish
100	11560	17.7	0.2	2043	82.3	0.6	Al-Manar
100	55502	40.5	2.6	22486	59.5	2.1	Cheetahs
100	290360	26.9	8.9	78126	73.1	13.5	Al-Shatra
100	143218	60.5	9.9	86650	39.5	3.6	The graph
100	103550	57.4	6.8	59429	42.6	2.8	inkwell
100	2440887	--	35.8	874181	--	64.2	total

The researcher relied on: Republic of Iraq, Ministry of Planning, Central Statistical Organization, Dhi Qar Statistics Directorate, Population Estimates for the year 2024.

Map (2) Environmental distribution of the population according to administrative units in Dhi Qar Governorate in 2024



After an initial reading of the above data, it is noted that there is an increase in the percentage of urban residents compared to a decrease in the percentage of rural residents in Dhi Qar Governorate recently, knowing that the rural population in the governorate used to exceed the urban population in the middle of the last century. This is considered evidence and an indicator of the deterioration of the reality of services of all kinds in the countryside compared to urban areas, in addition to the clear impact of the factors of drought and water scarcity, which led to the deterioration of agricultural production, which is the economic activity in which the rural population works, which led to an increase in the rates of internal migration from rural areas towards cities. This decline in the rural population leaves negative effects on the development reality in the study area.

3- Density distribution:

The absolute distribution of population numbers does not give a clear picture of the relationship between the population and the land they live on, or between the population and the economic resources in a place. Therefore, researchers resort to population density to measure this relationship, i.e., the ratio of the number of people to the land area^(vii). The relationship between population density and development is evident when a country's population density is high compared to its limited natural resources. Similarly, a low population density in a country rich in natural resources indicates weak economic capacity, while a population density that is in harmony with available natural resources indicates a better foundation for development.^(viii).

Researchers have traditionally used several measures of population density, most notably the following:

3-1- Rural density:

This measure is limited to rural areas, which are defined according to specific criteria that distinguish them from urban areas that have their own uses and functions, far removed from agricultural activity^(ix). It is calculated by dividing the rural population by the total area they inhabit, revealing variations in rural population density between regions. This provides evidence of the type and size of agricultural land in each area.^(x). According to the data in Table (4), the rural population density in the rural areas of Dhi Qar Governorate for the year 2024 was (138.2 people/km²).

To determine the reality of rural density at the administrative unit level, the study area was divided into four levels in which the values of rural density vary from one administrative unit to another, as follows:

Level 1 (more than 150 people/km²)

According to map (3), this level included Al-Karma sub-district, where the rural density reached (1341.5 people/km²), Al-Tar sub-district, where the rural density reached (505.2 people/km²), the center of Al-Shatra district, where the rural density reached (363.4 people/km²), Al-Gharraf sub-district, where the rural density reached (339.3 people/km²), Suq Al-Shuyukh district (Al-Akaika and Al-Fadhiliya), where the rural density reached (232.9 people/km²), and Al-Nasr sub-district, where the rural density reached (155.1 people/km²). The rural density in the administrative units within this level is high either due to the smallness of their agricultural area or due to the increase in the number of rural people in them.

Level Two (101 - 150 people/km²)

It includes the Sayyid Dakhil district, where the rural population density reached (138.8 people/km²), and the Al-Fajr district, which reached. The rural density in it is (136.4 people/km²), and the rural density in Qalat Sukkar district reached (134 people/km²), and the rural density in Al-Fahoud district reached (119.9 people/km²), and the rural density in Ur district reached (117.5 people/km²), and the rural density in Al-Dawaya district reached (111.8 people/km²), and the rural density in Al-Rifai district reached (104.8 people/km²).

Level three (50-100 people/km²)

It includes the Al-Islah district, where the rural density reached (59.5 people/km²), and the Al-Bathaa district, where the rural density reached (55.8 people/km²).

Level 4 / (less than 50 people/km²)

It includes the center of Al-Jubayish district, where the rural density reached (24.1 people/km²), and Al-Manar sub-district, where the rural density reached (18.9 people/km²). The density values decrease within this level due to the small number of people in the first place.

The variation in rural density values from one administrative unit to another is due to the variation in the area of agricultural land on the one hand, and the variation in the number of rural residents between administrative units on the other hand. It can be said that the low rural density values are due to the high rates of rural migration towards cities.

Table (4) Rural density in the rural areas of Dhi Qar Governorate for the year 2024

Rural population density inhabitants/km ²	Agricultural land area/km ² *	Agricultural land area/dunum	rural population	Administrative units
--	--	--	--	Nasiriyah
117.5	595.9	238373	70005	Or
59.5	591.2	236466	35205	Reform
55.8	480	192000	26762	Al-Bathaa
138.8	380.3	152134	52767	Mr. Dakhil
104.8	970	388000	101612	Al-Rifai
155.1	393.7	157485	61075	Victory
134	435.9	174376	59445	Sugar Castle
136.4	298.5	119384	39915	dawn
232.9	422.5	169000	98396	Sheikhs Market
1341.5	38.8	15500	52049	Karamah Bani Saeed
505.2	37.5	15000	18944	Tar
24.1	385	154000	9272	Al-Jubayish
18.9	108.2	43292	2043	Al-Manar
119.9	187.5	74981	22486	Cheetahs
363.4	215	86016	78126	Al-Shatra
339.3	255.4	102172	86650	The graph
111.8	531.8	212700	59429	inkwell
138.2	6327.2	2530879	874181	total

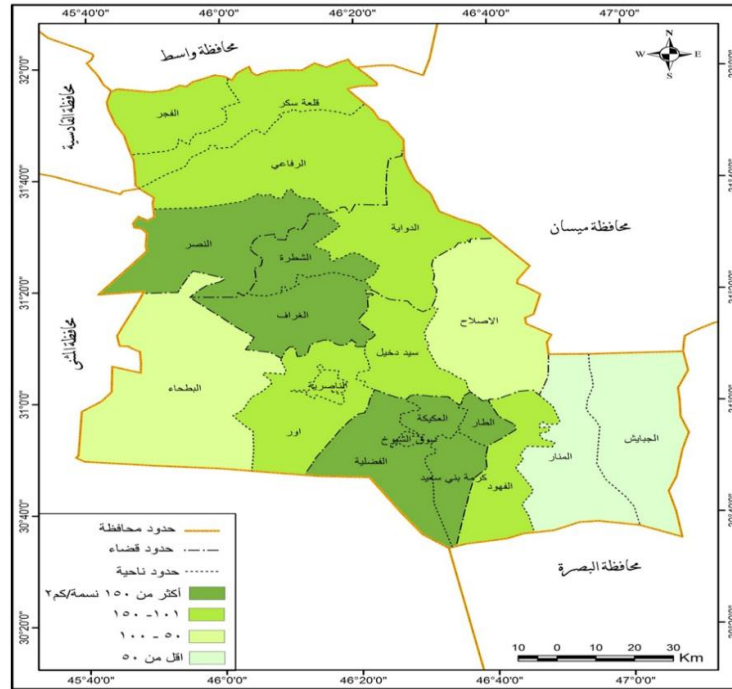
The researcher relied on:

1- Republic of Iraq, Ministry of Planning, Central Statistical Organization, Dhi Qar Statistics Directorate, Population Estimates for 2024, Unpublished Data.

2- Republic of Iraq, Ministry of Agriculture, Dhi Qar Agriculture Directorate, Land Department, 2024, Unpublished Data.

(*) Areas were converted from dunams to square kilometers by dividing by (400).

Map (3) Rural density in Dhi Qar Governorate in 2024



3-2- Agricultural density

Agricultural density expresses the ratio between the number of people employed in agriculture in a given area and the actual cultivated land. It takes into account the function of the population as well as the function of the land. This density is suitable for countries with agricultural economies. Conversely, it does not provide a clear picture for countries whose populations depend on activities other than agriculture, such as industry and trade. This density is calculated by dividing the agricultural workforce by the cultivated area (2).

The data in Table (5) indicates that the agricultural density in the rural areas of Dhi Qar Governorate for the year 2024 reached (26.2 people/km²). To understand the reality of rural density at the administrative unit level, the study area was divided into four levels where agricultural density values vary from one administrative unit to another, as shown on the map, as follows:

Level 1 (more than 50 people/km²). Map (4) shows that this level includes the Suq al-Shuyukh district center (al-Akaika and al-Fadhiliya), with an agricultural density of 95.4 inhabitants/km², al-Fahoud sub-district with an agricultural density of 91.7 inhabitants/km², and Karma Bani Saeed sub-district with an agricultural density of 87.6 inhabitants/km². The agricultural density values within this level are higher compared to other administrative units due to the increased number of people working in the agricultural sector.

Level Two (31-50 people/km²) This level included the Ur district, where the agricultural density reached (44.4 people/km²), the center of the Al-Jubayish district, where the agricultural density reached (41.2 people/km²), and the Sayyid Dakhil district, where the agricultural density reached (37 people/km²). Level three (10-30 people/km²)

It includes the districts of Al-Nasr and Al-Gharraf, whose agricultural density reached (22.3 people/km², 20.6/km²) respectively, and the center of Al-Shatra district with an agricultural density of (14.8 people/km²), and the district of Qalat Sukkar, whose agricultural density reached (12.4 people/km²).

Table (5) Agricultural density in the rural areas of Dhi Qar Governorate for the year 2024

Agricultural density people/km ²	Cultivated land area/km ²	Cultivated land area/dunum	Number of people working in agriculture	Administrative units
--	--	--	--	Nasiriyah
44.4	31.4	12550	1395	Or
7.9	117.3	46919	921	Reform
9.7	37.2	14892	362	Al-Bathaa
37	30.7	12285	1135	Mr. Dakhil
6.7	79	31612	533	Al-Rifai
22.3	23.3	9332	520	Victory
12.4	35.6	14242	441	Sugar Castle
8.5	44.9	17937	382	dawn
95.4	54.9	21944	5240	Sheikhs Market
87.6	38.4	15375	3363	Karamah Bani Saeed
41.2	6.7	2685	276	Al-Jubayish
91.7	6.4	2570	587	Cheetahs
14.8	38.2	15283	566	Al-Shatra
20.6	42.6	17026	879	The graph
4.3	57.6	23034	250	inkwell
26.2	644.2	257686	16850	total

The researcher relied on:

- 1- Republic of Iraq, Ministry of Agriculture, Dhi Qar Agriculture Directorate, Statistics Department, 2024.
- 2- Republic of Iraq, Ministry of Agriculture, Dhi Qar Agriculture Directorate, Plant Production Department, 2024.
- 3- Republic of Iraq, Ministry of Planning, Central Statistical Organization, Dhi Qar Statistics Directorate, Agricultural Statistics Department, 2024.

Map (4) Agricultural density in the rural areas of Dhi Qar Governorate in 2024

