

Production of Wheat and Barley Crops in Maysan Governorate for the Period 2014-2018

Rana Sabeeh Abbood^a, ^aUniversity of Misan, Basic Education College, Math Department.

The agricultural sector is of great importance in the progress and development of the country's economy, especially developing countries. It is the first pillar of social and economic development, so it has increased interest in them and the advancement of their reality in most countries. There have been weak contributions both in raw materials and foodstuffs in recent years compared to before 2003, when the Iraqi agricultural sector suffered a significant shortage of local production, especially the production of crops (wheat and barley), which led to the failure of covering the local consumption of individuals and resort to importing, which weakens the budget of the state. The current research dealt with the analysis of the agricultural reality in the province of Maysan to produce wheat and barley crops because the province is one of the governorates that are famous in the cultivation of these crops and know the factors that affect their agriculture.

Keywords: *Wheat, Barley, Production.*

Introduction

Analysis of the Agricultural Status of Wheat and Barley Crops in Maysan Province for the period 2014 to 2018.

The food crisis is threatening most of the world, including Iraq, and is considered a major global crisis. This crisis, according to specialists, cannot be matched by any other crisis, because it is in direct contact with human life and because it directly threatens famine and mass death (Thagil, 2004). At present, Iraq faces significant challenges, the most important features of which are the shortage of its food production to meet its needs of food commodities and crops. The import of agricultural materials, whether food or industrial, burden the country's budget and threaten its economic future (Mohammed, 2016).

Hypotheses

As a result of the problem presented earlier, the hypotheses are as follows:

1. The agricultural sector in Maysan governorate suffers from a clear decline in the agricultural production of the crops (wheat and barley) after 2003, which led to the dependence of the Iraqi individuals on imports to meet their needs.
- 2 - There is a decline in cultivated areas in the province of Maysan during the period 2014-2018 (Al-Shamali, 2003).

Research Importance

Food is of the utmost importance to human life, but it depends on itself to build its mind and body and depends on it to grow fully (Northern, 2003).

Wheat and barley grains contain many important compounds and nutrients that give the body many health benefits. The importance of the current research is to shed light on the agricultural reality of these crops during the period 2014 to 2018 and to know the average cultivated area and the amount of production of these two crops.

Methodology

The present study was based on the descriptive, historical and analytical approach. We relied on data collection from different sources that then was presented statistically to know the agricultural reality of wheat and barley crops in the province of Maysan during the period 2014-2018 and to know the reasons behind the apparent decline in the production of these two crops.

Limits of the Study

We conducted the study in Maysan Province which is located in the southeastern part of the Republic of Iraq. The province takes a north-east-south-west extension bordered to the north and northwest by Wasit province and to the south by Basra province and west by Dhi Qar province and bordered to the east and northeast by Iran. It is 16072 km² and consists of 6 districts (9 districts) and represents the province area equivalent to (3.7%) of the total area of Iraq (435025 km²) map No. (1) (Western, 2004).

Study Literature

Many studies have examined the subject of agriculture for wheat and barley crops, such as Latif Mahmoud Al-Dulaimi' study, entitled "The reality of wheat production in Anbar governorate 1990-2010". The results of the study fluctuated in the amount of wheat crop

space and time, and the decline in the crop area in most areas between the years 1990-2010 (Dulaimi, 2011). The study by Fawzia Gharbi entitled “The reality of grain production in Algeria” examined the area allocated for the cultivation of cereals, the development of the production of the cultivation of some types of cereals in Algeria, including wheat, barley and oatmeal for the period 1985-1999. The study attributed the causes of this deterioration to the relative stability in the cultivated area, the inappropriate climatic conditions for agriculture, and the officials attributed the deterioration to the lack of agricultural equipment (Gharbi, 2004).

The economic analytical study was conducted by Suleiman and Laqi in 2015 entitled “Economic analytical study of the food gap of wheat in Libya during the period 1995-2010”. The problem of the study was the deficit of local production of wheat crops and therefore reflected on the self-sufficiency ratio, and the study dealt with the development of wheat production during the period 1995-2010. The study shows that there is a decrease annually in the amount of production while there was a clear increase in the amount of consumption of this crop (Suleiman and Laqi, 2014).

The Reality of the Performance of the Agricultural Sector in the Governorate

Iraq was famous for the cultivation of various types of fruits, vegetables, grains, dates and others and was not dependent on import from any other countries. It was characterised by a policy of self-sufficiency in production and each province in Iraq was unique to produce a certain crop to achieve revenue and self-sufficiency and the spread of agricultural goods in the Iraqi market.

Agriculture suffered a significant decline after 2003. There were a number of reasons that had a major impact on this decline, including the interruption of government support to finance for farmers and peasants for mandatory requirements as well as the absence of an agricultural plan and organisation.

Wars and migration to cities and the great neglect of the agricultural facility and livestock have all led to the deterioration of agricultural production in which the proportion of imports between 2001 and 2002 ranges between 80% - 100% of the main commodities in the diet of the individual Iraqi (flour, rice, sugar, vegetable oils).

Although the southern governorates were famous for the cultivation of most of these crops (sugar cane, wheat, barley, rice), including the province of Maysan, the Iraqi markets began to rely on the import of agricultural crops and took a large area compared to local production. As a result, the national agriculture is declining day after day until the present when the Iraqi

market is dependent only on foreign goods. The crop area distributed in the province included 35 crops categorised into seven groups.

Table 1: Crop Groups Invested in Maysan Governorate during Agricultural Seasons

Rank	Group relative importance (%)	Area (Acres)	Crop group
First	83.94	424509	Wheat and barley crops
Seventh	0,16	810,4	Oil crops
Fifth	1,51	7681	Legume crops
Fourth	1.60	8100	Sugary crops
Second	9.10	46039,9	Vegetable crops
Sixth	1.2	5931	Forage crops
Third	2,5	12625	Fruit crops and dates
	100	505696.3	Total

As shown in Table 1, the grain group accounted for the largest part of the crop area, which is similar to wheat and barley.

Wheat Crop

Wheat is a genus around the Grassland family. Wheat produces cereals in the form of spikes, which are the staple food of many peoples of the world. Only corn and rice compete in this area. Wheat is characterised as an important commodity that most cities depend on in their economy for strategic importance, given the large trade in the markets and the dependence of individuals on food.

Its origin is in the Middle East and the Ethiopian highlands, but its cultivation is spread all over the world. The estimated global wheat production in 2007 amounted to about 607 million tons. In 2009, the world wheat production reached about 682 million tons and was growing annually. In Iraq, it is cultivated with an area of 20-25 million dunums, and the average wheat crop in Iraq is equivalent to about 1.1 tons annually.

Wheat is grown in most countries around the world once a year, and in some countries, it is grown twice, grown on rainwater for irrigation, and in others, it is grown by means of irrigation.

Production Level of Wheat Crop in Maysan Province

Agricultural production suffers from many problems in the agricultural sector, most notably production problems, whether in the quality of wheat produced or in the labour force. However, many efforts have been made to improve the quality of production or increase the rate of production (Talathi, 2008).

The crop area in the governorate was divided into (35) crops joining in seven groups, as it did not show the cultivation of stimulating crops and fibres in the governorate. We noted that the production rate between 2014 and 2018 reached the highest concentration of production in the eastern district of 32249.8 tons, which was equivalent to 14% of the total production of wheat in an area of 53326 dunums, which is equivalent to 13% of the total area. Invested with wheat crop in the governorate, followed by Ali Al Gharbi area with an area of 46155.2 dunums and the rate of production (28948.8) problem (13% of the total production), followed by the district of Amara district by 25023.6 dunums equivalent to (11) 5% of the total area invested with wheat in the governorate.

We note that there is a clear decline in production in (Al-Kahla, Qal' at Saleh and Al-Khams) where production did not exceed 3% of the province's production by the rate of production 8060.4 for five years (2014-2018).

Table 2: Geographical distribution of the average area invested for wheat crop in Maysan province for the period 2014 - 2018

	2014	2015	2016	2017	2018			
Region	area	area	area	area	area	total	average	Relative importance
Membership	36859	41000	62239	44948	45730	230776	46155.2	11%
Membership	45464	46270	66678	53218	55000	266630	53326	13%
Dun	58356	68383	65675	59150	45000	296564	59312.8	14%
River Saad	11319	10000	13360	10000	11000	55679	11135.8	3%
Center	38537	35540	34000	39000	30000	177077	35415.4	8%
Slasher	15789	9100	13727	13963	3764	56343	11268.6	3%
The ankles	6000	8000	7067	6500	2500	30067	6013.4	1%
Bani Hashem	8500	10000	7550	6500	2700	35250	7050	2%
Saleh Castle	7320	5957	4650	5000	1618	24545	4909	1%
The Azer	18740	21955	16928	24646	14471	96740	19348	5%
Great Hungary	18030	17500	16669	14000	12270	78469	15693.8	4%
Justice	8899	8640	8830	6250	6696	39315	7863	2%
The good	10400	9973	10906	7000	1990	40269	8053.8	2%
Five	7282	7160	6822	5028	1964	28256	5651.2	1%
South goodness	10028	11918	22553	0	0	44499	8899.8	2%
Auspicious	34000	37039	48416	36234	16861	172550	34510	8%
Free Membership	66682	62101	71243	42000	3436	245462	49092.4	12%
Peace	64667	58077	41310	35000	5000	204054	40810.8	10%
Sum	466872	468613	518623	408437	260000	2122545	424509	100%
Average	25937.33	26034.06	28812.39	22690.94	14444.44			

Source: The researcher's work based on the data of the Directorate of Agriculture of Maysan province, Department of Agricultural Statistics, unpublished data 2018.

Table 3: Geographical Distribution of Wheat Yield in Maysan Governorate between 2014 - 2018

	2014	2015	2016	2017	2018			
Region	Production	Production	Production	Production	Production	total	average	Relative importance
Free Membership	20972	18162	44429	31011	30170	144744	28948.8	13%
Free Membership	29814	18400	43400	37663	31972	161249	32249.8	14%
Dun	33204	26100	44632	26876	2198	133010	26602	12%
River Saad	4957	4158	8942	4680	3522	26259	5251.8	2%
Center	17727	13505	23800	17706	19269	92007	18401.4	8%
Slasher	6173	2295	9373	8120	898	26859	5371.8	2%
The ankles	2292	2844	5300	3577	1025	15038	3007.6	1%
Bani Hashem	3825	3400	3397	4777	1514	16913	3382.6	2%
Saleh Castle	2928	2084	1879	3750	833	11474	2294.8	1%
The Azer	12368	6255	11429	18484	8607	57143	11428.6	5%
Great Hungary	9916	6125	13304	7112	8809	45266	9053.2	4%
Justice	4004	2851	5959	3287	4307	20408	4081.6	2%
The good	4992	3490	8997	3556	1117	22152	4430.4	2%
Five	3641	2506	3411	3227	1005	13790	2758	1%
South goodness	6618	2352	11106	0	0	20076	4015.2	2%
Auspicious	11900	13334	32212	22831	2170	82447	16489.4	7%
Free Membership	36675	13931	49790	20800	2920	124116	24823.2	11%
Peace	32333	16826	28217	19902	2659	99937	19987.4	9%
Sum	244339	158618	349577	237359	122995	1112888		100%
Average	13574.39	8812.111	19420.94	13186.61	6833.056			

Source: Table of researcher work based on data of the Directorate of Agriculture of Maysan province, Department of Agricultural Statistics, unpublished data 2018

The researcher noted through the plan of the average area that there is a clear decline in the cultivated areas of the wheat crop in recent years, where the lowest area for 2018 rate (14444.44) and where the crop yield for this year (6833.056) compared with the previous years, which explains the apparent decline In the production rate for the same year.

Barley Crop

Barley is an important agricultural crop in Iraq, occupies the second rank after the wheat crop (production and area) in Iraq and represents the fourth rank after the crop of rice, corn and wheat at the global level (production). This crop is planted in different regions of Iraq where the weather conditions tolerate drought, as it tolerates the relatively high salinity of the soil, and its cultivation in the northern areas depends on rain, while the central and southern regions are irrigated, and the importance of barley is not limited to being human food but the basic livestock and animals to work because it contains a good percentage of protein estimated at 10.7% pre-digested protein and 84% crude protein (Al-Hadithi, 1990, p. 76).

The Production Level of Barley Crop in Maysan Province

We can see from Table 4 and 5, the average production for the years 2014-2018 for barley crop were 44649.6 tons, and the areas invested in this crop varied in the administrative units.

The cultivation was concentrated in the centre of Kumait area with the cultivated area of 20654.2 dunums. The rate of production was 8171.8 tons, equivalent to 18% of production. On the other hand, Ali Al Sharqi came second 15% with the production rate of 6616.2 tons, followed by Ali Al Gharbi with 6185.6 tons, which is equivalent to 14% of the total production. There were areas where the percentage of the cultivated area of this crop were 0% (good, five and southern good) and therefore was free of production for this crop.

Table 4: Geographical distribution of the average area invested for barley crop in Maysan Governorate (2014-2018)

	2014	2015	2016	2017	2018			
Region	area	area	area	area	area	total	average	Relative importance
Free Membership	23551	19950	13330	13000	10970	80801	16160.2	13%
Free Membership	19999	13500	18600	18000	15500	85599	17119.8	14%
Dun	35924	26300	16661	14386	10000	103271	20654.2	17%
River Saad	8760	5500	4340	3000	4000	25600	5120	4%
Center	17310	10000	5800	6000	7750	46860	9372	8%
Slasher	13040	9050	7856	7134	1432	38512	7702.4	6%
The ankles	10689	10000	5880	5000	3138	34707	6941.4	6%
Bani Hashem	4358	2950	1900	1960	1200	12368	2473.6	2%
Saleh Castle	12376	6899	3890	3000	1130	27295	5459	4%
The Azer	1235	250	150	1000	1665	4300	860	1%
Great Hungary	7668	5000	2550	2000	1284	18502	3700.4	3%
Justice	2255	1000	565	1000	510	5330	1066	1%
The good	0	0	0	20	0	20	4	0%
Five	232	205	110	250	166	963	192.6	0%
South goodness	0	0	0	0	0	0	0	0%
Auspicious	17100	14282	8653	5000	12500	57535	11507	9%
Free Membership	16011	10000	6260	5000	2255	39526	7905.2	6%
Peace	13039	8114	5319	7000	2000	35472	7094.4	6%
Sum	203547	143000	101864	92750	75500	616661	123332.2	100%
Average	11308.17	7944.444	5659.111	5152.778	4194.444			

Table 5: Geographical Distribution of Barley Production in Maysan Province (2014-2018)

	2014	2015	2016	2017	2018			
Region	production	production	production	production	production	total	average	Relative importance
Free Membership	8242	5985	5548	6500	4653	30928	6185.6	14%
Free Membership	7199	4030	7200	9000	5652	33081	6616.2	15%
Dun	14369	8400	8219	5236	4635	40859	8171.8	18%
River Saad	2628	1635	1404	1092	1220	7979	1595.8	4%
Center	6231	3000	3422	2898	4518	20069	4013.8	9%
Slasher	4546	2146	2850	2717	300	12559	2511.8	6%
The ankles	3741	2976	2058	1953	1109	11837	2367.4	5%
Bani Hashem	1438	826	807	866	640	4577	915.4	2%
Saleh Castle	3836	2069	724	1350	287	8266	1653.2	4%
The Azer	518	70	75	450	666	1779	355.8	1%
Great Hungary	3067	1500	765	732	521	6585	1317	3%
Justice	856	300	184	366	206	1912	382.4	1%
The good	0	0	0	7	0	7	1.4	0%
Five	92	61	51	105	50	359	71.8	0%
	0	0	0	0	0	0	0	0%
Auspicious	6480	4427	2847	2035	1185	16974	3394.8	8%
Free Membership	6404	960	1715	2250	1127	12456	2491.2	6%
Peace	5215	2134	2250	2961	461	13021	2604.2	6%
Sum	74862	40519	40119	40518	27230	223248	44649.6	100%
Average	4159	2251.056	2228.833	2251	1512.778			

There is a clear decline in cultivated areas and production of barley crop reached the highest percentage of cultivated areas in 2014 (203547) with the production rate of 4159 tons, while 2018 recorded the lowest percentage of cultivated areas in the province reached 4194.444 tons with the production rate of 1512.778 tons. This explains that there is a clear decline in the production in the agricultural sector and the province.

Conclusion

1. This study indicates that the future of the agricultural situation is in danger; there is a clear decline in cultivated areas and production of both wheat and barley crops.
2. The quantities produced for these crops do not meet the needs of the individual, and therefore the country will depend on the import for sufficiency.
3. Some professions of farmers to other professions, which led to the reluctance of agriculture and this is shown by the data for the rate of cultivated areas.
4. There is a lack of awareness by farmers of modern agricultural methods that will raise the rate of production and improve it.

Recommendations

1. The need to educate farmers on the increase in the volume of production of wheat and barley crops in order to achieve the optimum volume of production.
2. Increase the productivity through the use of high productive seeds.



3. The use of modern techniques in agriculture for wheat and barley crop and seedling and the use of mechanisation in the process of harvesting.
4. The use of modern irrigation methods to get rid of the problem of drought and lack of irrigation water such as drip irrigation.
5. Support local production by the state through giving agricultural loans to farmers and encouraging local production.



REFERENCES

- Al-Shamali, K. K. (2003). Land reclamation, irrigation, drainage, fertilisation and management. First Edition, Dar Al-Dhia, Amman - Jordan, 8(71): 201 – 211.
- Dulaimi, L. M. (2011). The reality of wheat production in Anbar province, a geographic study - comparative, Center for Desert Studies, 1(203): 188 – 195.
- Ministry of Agriculture, (2018). Maysan governorate (Directorate, Planning and Follow-up Section, records of the implemented agricultural plans, regarding the statistical tables contained in the research, (unpublished) during the years 2014-2018, 2(16): 139 – 143.
- Mohammed, R. M. (2016). Geographical analysis of the problems of agricultural production in the province of Maysan. Master Thesis, Faculty of Arts, University of Basra, unpublished, 6(51): 174 – 186.
- Suleiman, Abdul, H. T. & Khaled, A.-A. (2014). An economic analytical study of the food gap of wheat in Libya and the possibility of reducing during the period (1995-2010), Libya, Omar Mukhtar University, 6(23): 117 – 123.
- Thagil, A. H. (2004). The geographical distribution of population in Maysan governorate (1977-1997). Ph.D. Thesis, Faculty of Arts, University of Basra, Unpublished, 2(43): 131 -143.
- Western, F. (2004). The reality of grain production in Algeria, published research, Faculty of Economic and Management Sciences, 5(62): 151 – 163.