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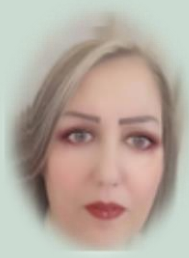
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Iraq's food security between implementation reality and implementation constraints after 2003

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Abstract

The problem of food security has worsened for many years, and has caused many challenges for many countries. Because of the inability of some States to secure food for their people, the problem of food security was one of the most serious problems in most political systems. Because these do not pose a challenge to the economic system, but to all the social, political and security systems of the State, The lack of adequate food for the population of any country leads to an actual crisis. security, political and food instability ". Iraq is one of the countries concerned with food security. Iraq's origin is an agricultural country, so it has all the possibilities and capabilities to reach self-sufficiency. But the wars that have been going through and the internal and external conflicts over three decades have made Iraq a scene of war and liquidation of the political wishes of both the great Powers and the regional States. Instead of being an arena for the development and development of the agricultural sector, Those conflicts generated a collapse in most infrastructure, leading to food security deficits. The research found weak competitiveness of agricultural crops in domestic markets versus imported agricultural commodities, as most national agricultural commodities are characterized by high prices due to high production costs and poor quality.

Keywords: Food security, self-sufficiency, food gap.

Introduction

Food security is an important issue of great global concern that is growing day after day as a result of many of the factors surrounding food supply and demand. Food is no longer just economic, but is mixed and overlapped with political trends, strategies and international repercussions.

This global food security dilemma emerged in the early 1970s when the world was alerted to the risk of a growing gap between food demand and production rates. a gap that suffers primarily from the countries of the developing world, Among them are, of course, the Arab countries, and the issue of food security is in fact part of Arab national security, especially after the expansion of the concept of security and its transition from the traditional approach based on the military concept, which was viewed primarily from the perspective of national power by both decision makers and strategists to a broader concept to include the dimensions: economic, human political, and food.

Iraq is one of the developing countries that has been facing the food crisis and its problems since the early 1970s, despite enormous agricultural potential and resources, especially abundant water, fertile soil, vast plains, many manpower at that time, etc.

However, the mismanagement of these capabilities and resources has prevented its investment in achieving Iraq's lost food security, which is the basis of the research problem and the misinvestment of oil revenues in agricultural development and development, It has led rural

people to migrate to cities, leaving their fields and villages for jobs in the service sector and emerging light industries and the provision of services lost in the countryside such as schools, health centres, paved roads, quality housing and high and guaranteed income.

Research Problem: -

The problem of research is determined by the existence of challenges in Iraq's food security structure in the absence of its basic components in the Iraqi economy.

Research Objective: -

The research aims to focus on the causes of degradation in dietary requirements locally, and the causes of food security problems in Iraq by studying many internal, external and environmental factors.

Research hypothesis: -

Iraq's food security faces great challenges. Its achievement requires the search for the best possible solutions to major internal, external and environmental problems and challenges through a strategic development vision that mobilizes all available capacities and capabilities.

Research methodology: -

The study relied on combining the two extractive approaches with the descriptive analytical approach to the fact that the nutritional phenomenon required a description when studied, and to demonstrate the relative weight of the nutritional factor, as well as that some of the study's issues needed to be analysed.

1st. conceptual framework

1. Food security concept and its determinants:

There are many concepts that have addressed the issue of food security that vary according to the tendencies of their authors. Food security is a concept that helps to promote an integrated approach to solving food and nutrition problems.

However, the widely accepted definition at present, as it reflects the spirit of the concept, which was put forward by the World Bank in 1986: "Food security is the access of all people, at all times, to adequate food for an active and healthy life." (Mansour Al-Rawi ,1993:75) Its elements are essential: food abundance, food attainment capacity and therefore food security is the lack of food attainment capacity have put forward several versions of this concept, which differ slightly in interpretation, but there seems to be consensus on the basic principles of food security, and these principles, as embodied in the World Bank's definition, can distinguish as follows:

- Emphasize the collection of food, not its offer.
- Affirming the attainment of food by all people, including that the overall outlook is insufficient, and that the situation of vulnerable individuals and social groups is critical.
- The definition refers to the abundance of food, and the ability to obtain it.

However, this definition does not indicate how this food is obtained from national production, or through international exchange, nor does it take into account one country's level of economic development.

The definition shows that, in the International Foundation's approach to resisting the subjectivity of the concept of food security and pushing increasingly for the liberalization of international trade, this is the role now being played by the World Trade Organization (WTO) as a distortion of international trade. (Daniel Mohsen, et al, 2009:110)

The second definition of food security: the ability of the production apparatus to secure a basic food ration for the entire population, taking into account society's level of development. While developed countries consider that the amount of food produced exceeds the amount necessary to maintain existing habits and patterns, developing countries consider that: it is sufficient to provide food of all kinds, which is commensurate with their level of guaranteeing minimum survival. (Muhammad Ali, 1985:13)

At this level, food security relates to the level of economic development as a whole and the capacity of the national agricultural production apparatus, without forgetting the country's financial capacity to cover the deficit through import.

2. Food security indicators

In addition to the concept of food security, several concepts have emerged that are linked to the issue of food security. (Al-Quraishi, et al, 1993: 20-34)

- Concept of self-sufficiency:

This concept consists of the situation in which food self-sufficiency is achieved locally, based on the community's ability to provide for the needs of all its inhabitants of goods and foodstuffs through national production, to the extent required, and of the different types of multi-source, and on the dates when such substances are required. Self-sufficiency is measurable by the ratio of domestic production to national consumption as follows:

Self-sufficiency = **National food production/available food X100**

The concept of self-sufficiency can therefore be viewed as a narrower concept than food security, where the former seeks not to resort to the outside world. and attempting to abandon imports, while the second sought the State's ability to provide adequate food to its citizens through national production, or import, and there are examples of such cases as India and Indonesia and Saudi Arabia, where they have only produced nationally, especially in the grain field in the first case and Japan, For example, in the latter case, Norway has high food security, even though it has local food production. Thus, self-sufficiency is often not a guarantee of food security, more a political than an economic concept.

3. Food Gap Concept:

is the difference between domestic production and net imports of various food commodities, the reasons for which are the result of higher demand growth rates than production rates, and the fact that consumption rate is about twice as high as production has resulted in a widening food gap,

decreased self-sufficiency rates and increased dependence on external markets to secure food needs.

Available for consumption = only domestic product + imports - exports

Food gap = available for consumption - domestic production. Or it = imports - exports

A. Agricultural economic efficiency.

It is an indicator of the importance of agricultural activity's contribution to GDP, measured by the breakdown of agricultural output from GDP/employment in agriculture from total employment. The higher the share of agriculture's contribution to GDP, and the lower the proportion of agricultural employment in total labour, the higher the value of agricultural economic efficiency.

B. Food security determinants:

The quantities and quality of food supply are affected by many determinants affecting the performance of the agricultural sector, including:

- Food demand is rising due to the rapid increase in the population in most countries, and is estimated to grow by 3% annually, which exceeds the growth rate of the world's population by 1% and the growth rate of the population of developed countries by 2%.
- Natural determinants (water, drought): The Arab country is characterized by scarcity, low rainfall and inadequate surface water resources, which have adversely affected the quantities and quality of groundwater resources in many Arab States.
- Economic policies: Since their liberalization, many developing countries, especially in the 1960s and 1970s, have adopted models of development that prioritize industry and urban populations, believing that industry is the sector that makes economic progress investment expenditures ", while agriculture was neglected within its domestic, or regional, framework in terms of both the proportion of investment expenditures allocated to it social services ", or in terms of pricing policies for agricultural and food goods, or in terms of the provision of social and economic services in rural areas.

2nd. The reality of Iraq's food security crisis

This research focuses on analysing some of the manifestations of Iraq's food crisis, focusing on the low level of self-sufficiency, the size and development of the food gap and the volume of food aid, as well as the causes of the crisis by focusing on factors, nature and economic development options and their impact on the escalation of the crisis.

1. Iraq's food security reality

Developing countries, including Iraq, were exporters of foodstuffs in the first half of the twentieth century, owing to the small size of the internal market and the colonial policy that depended on their colonies to meet their food needs. as well as the fact that most of these countries' inhabitants are rural people who provide their own food. But after the independence movements and freedom from colonial domination, significant economic structural changes have

occurred as a result of political, economic and social reasons, One of the most noteworthy is the farmer's freedom from disruption and to move towards city centres where there are jobs in trade and light industries and the availability of services as well as expulsion factors in rural Iraq, which were overburdened by the manifestations and factors of underdevelopment and service and cultural degradation, During the 1950s and 1960s, a large abandonment to the cities led to a large vacuum in the countryside, the source of food. food demand in cities has increased dramatically, giving rise to the food problem within its broad framework, so that the Iraqi State is losing its ability to produce the most important food commodities and is beginning to rely on the outside to meet its food needs, especially strategic ones, such as cereals.

The agricultural sector has been severely shaken by the Iraqi State's exposure to unstable security, political and economic conditions after 2003 due to the disruption of the US occupation forces which demolished the Iraqi State's fragility and did not destroy the former regime's security and intelligence structure which caused the occupying forces to make grave mistakes that were recognized by United States officials after 2005, since they did not plan well for the post-occupation or so-called reconstruction of Iraq (economic, political, development, etc.).

This exacerbated the problem of terrorism after the two Americans planned to confront terrorism in Iraq and nowhere else in the world. security conditions, paid for by the Iraqi people whose social and economic life had been affected in all its details The agricultural sector has been neglected because of the occupation's preoccupation with the implementation of its plans, Instead of importing fertilizers, pesticides, machinery, equipment and modern irrigation devices, the borders were opened wide to import food and agricultural goods from (vegetables, fruits, legumes, tuberculosis, etc.) are cheap prices and good quality compared to local goods that have lost value because of their production, storage, packaging and transportation process, as well as their high market price, as well as their poor quality due to their lack of disease control and poor quality seeds.

It should be noted that Iraqi society has negative dietary habits, most notably waste, mismanagement, excessive disposal of food. This is reflected in the fact that large quantities of food are damaged and diverted unfit for consumption. Excessive eating is not done on the basis of reasonable limits.

The depth of Iraq's food security problem is reflected in the difficulty of natural and human challenges facing the agricultural sector. under the difficult political, economic and social conditions of the Iraqi State, Economic shifts towards a market economy, and the State does not possess weapons on this path. This requires a carefully considered gradual transition so that agriculture and other economic sectors do not face external competition to prepare for and kill them in the absence of the protectionist role that a State in its most vulnerable situation should play.

In a report prepared by FAO and WFP in Iraq s Food Programme (WFP) Country Manager in Iraq (5) confirmed that Iraq has some 6.4 million Iraqis suffering from food insecurity and that some 930 thousand Iraqis face a very significant problem of food shortage, and this report confirms that last year's indicators are (2007) indicates an improvement in acute malnutrition rates and a slight change in chronic nutrition rates, but there are still stunting rates among

children in many areas of Iraq. The report also underscores the suffering of some 1.5 million migrants in Iraq's interior who are experiencing a real problem of food shortages and access.

2. Food security constraints in Iraq

There are many factors and constraints that have contributed to the emergence of Iraq's food problem:

A. Climatic Conditions:

In the light of global climate changes, Iraq's location in subtropical regions and in the warm temperate zone, Provide an opportunity for a large number of crop varieties if they have water Because more than 75% of Iraq's area is desert and semi-desert areas and the remaining area is marginal or humid areas, The amount of rainfall ranges from 400 to 1000mm and most of this area is a suitable place for rainy agriculture in wet years. The rest of Iraq depends on irrigation for agriculture. The changes in the world's climate, caused by global warming, make climatic conditions a major challenge to Iraqi food security.

B. Desertification:

Desertification emerged as a serious global problem in the 1960s and 1970s land and arable land, transformed into desertified and arid areas owing to irrational investment of land resources, Desertification is defined as the desert's susceptibility and desert and semi-desert conditions from stretching across its borders, sweeping green and fertile belts and transforming them into arid and megabudget.10 and defined by the United Nations as land degradation in arid, semi-arid and dry and semi-arid areas, Producers of various factors, including irresponsible and considered human activities (11) land ", desertification could be defined as any conversion of arable land to arable land or decrease in its productive capacity and degradation of arable land.

Ecosystems, as a result of human activities and natural factors that have led to soil drift and erosion, or as a result of soil salinization or the creep of dunes or the extension of desert conditions over wet and non-desert areas.

The total area of Iraq is estimated at 174.020,000 dunums, the area of water bodies 4404,000 dunums The area of arable land up to the fourth item is a problem about 26% of the total area of Iraq, distributed according to the type of soil and its suitability for agriculture as follows

- Storming class for agriculture 283,800 dunums constitutes 0.6% of the total arable area.
- The good variety of agriculture and its determinants are simple and its area is 17509892 and represents 38.7% of the total arable area.
- The average quality item and the determinants of the quality are severe and the area of 19455436 dunums constitutes 43% of the total arable area.
- The item with limited agriculture potential is 8008400 dunums and is 17.7%. (Ministry of Planning)

Water scarcity.

Water is the source of life and the backbone of agricultural activity everywhere. Water is increasingly important and influential in desert and semi-desert areas, where rainfall is scarce, and where evaporation and plant disposal rates are high, making the quantity and quality of water available a factor in Iraq's agricultural production.

The problem of future waters will be the greatest obstacle to Iraq's food security, decreasing its quantity and deteriorating its quality threaten a great risk that can only be avoided through the following actions:

- Coordination with neighbouring countries, especially Turkey, to ensure the flow of quantities required for Iraq's development in accordance with international law and the division of quotas between countries bordering the Djilal and Wafra rivers. Not only does it require further coordination with Turkey by bridging strong economic relations so that Turkey is supplied with cheap sources of oil and natural gas from which billions of cubic metres are breached and without benefit, To remove part of Turkey's pretexts in its desire to provide the electricity that causes reservation of river water in southeastern Turkey because Turkey does not rely heavily on water reserved for irrigation, It also has a huge surplus of water pouring into adjacent seas. Turkey's association with Turkey with economic relations and interests will not make it think of using water as a political weapon against Iraq.
- The waste of water used in agriculture due to practically primitive irrigation and transportation is more than 23.1 billion cubic meters (15), which requires the adoption of modern methods of irrigation and water transport to reduce water wastage, and these methods have important economic food returns, because the productivity of dunums, which adopt modern methods of irrigation, is higher than the productivity of dunums, which is watered by rudimentary methods of water waste. (16) In this regard, the State must take down all its weight and potential by supporting the private sector to manufacture spray irrigation and drip equipment, tools and pipes by supporting these industries and exempting them from taxes.
- Treatment and recycling of wastewater and agriculture in economic fields again in agriculture or watering of artificial plants to combat desertification... etc.

C. Low agricultural economic efficiency.

It is an indicator of the importance of agricultural activity's contribution to GDP, measured by the breakdown of agricultural output from GDP/employment in agriculture from total employment.

The higher the share of agriculture's contribution to GDP, and the lower the proportion of agricultural employment in total labour, the higher the value of agricultural economic efficiency, unless it indicates Iraq's agricultural economic efficiency during the years 2004-2015, accounting for about 0.57 per cent in 2004. It rose slightly and reached about 1.14% in 2015. It continues to be an indicator of low agricultural economic efficiency.

Interestingly, Iraq's countryside has become a food consumer, and much of it is unable to meet its own basic and secondary food needs. as a result of the neglect of this vital sector, as well as the difficult natural and human conditions faced by the agricultural productive process s disadvantaged agricultural work at all stages of its production, as well as the flooding of the Iraqi market with various types of foreign food goods and goods.

The agricultural sector is an important productive sector that drives Iraq's economy as an important influence on income diversification and the provision of food commodities to the population, as well as the provision of raw materials to the industrial sector, as well as the inclusion of a large proportion of farmers and farmers in Iraq's population, which is one of the

main employment-generating sectors, Iraq's agricultural employment is estimated at about 20% of the total labour force .(Ministry of Planning and Development ,(2013-2017),:55)

Iraq's agricultural capacities and potential, if fully exploited, would be encouraged by the transformation of Iraq from a food-importing country into a source of food. It would promote the realization of the agricultural sector by means of production from a wide land, whether it be a dynamic or rainy, as well as by the presence of good quantities of water sources with other human and material potential:

A. Natural resources.

- Agricultural land: the arable area is estimated to be approximately (44.46) million dunums, of which no more than 1 million dunums is used (29.7%) of the arable area, i.e. (70.3%) of which is not independent, This gives the potential for widespread exploitation of plant production with a diverse crop composition that contributes significantly to the country's food security In addition to this large area, there is a variety of agricultural land. land ", there is clay, sandy and mixed land, as each type of land is suitable for specific and different varieties of agricultural crops. (Ministry of Planning and Development ,(2010-2014),:54)
- Water resources: Good potential from Iraq's main water sources is the surface water of the Tigris and Euphrates rivers and their tributaries and its quantities are estimated at 35 billion cubic metres, of which (27.5) billion cubic meters, from the Tigris River and its tributaries and the rest (7.5) billion cubic meters, from the Euphrates River and groundwater and rainfall, on which most of the land in northern and north-eastern Iraq depends and groundwater is a source of wealth and natural aquifer that can be used for economic and human development.(Kazem:23)
- Climatic nature: Iraq has a varied climate throughout the year, making it suitable for the cultivation of various types of crops. Each region is characterized by the cultivation of certain types of agricultural crops according to the appropriate climatic conditions. The northern regions are characterized by the cultivation of grains, vegetables and fruits, while the central regions are characterized by the cultivation of the majority and variety of crops.(Ministry of Planning and Development ,(2010-2014):70)

B. Human resources: The labour force is one of the important components on which the agricultural sector relies as a factor of production, and Iraq's 2014 population is estimated to be around 36 million people make up 30% of Iraq's total population. In this regard,(Ministry of Planning,2015:5) it should be noted that a significant proportion of these resources amount to approximately (30%) of Iraq's population is not used to engage in agricultural activity in an efficient manner, with the need to develop and rehabilitate for developing and sustainable agricultural activity with efficient agricultural scientific capacities.(Arab Organization,2015:2)

C. Livestock: a major source of agricultural production along with the provision of raw materials to local industries Iraq possesses a large and varied herd of animal varieties, most notably cows, buffalo, sheep, goats and camels, which are an essential source of animal protein, as well as possibilities for the development of poultry and fish husbandry, the production of table eggs, Especially since the experience of previous decades, it has

achieved important results in the field of poultry breeding and egg production, There are also foundational pillars of the agricultural sector's legislation and regulations, which need to be developed and modernized to keep pace with a future comprehensive agricultural renaissance, in which the private sector is instrumental.

Table 1 shows some indicators of Iraq's agricultural sector. The agricultural sector accounts for a modest proportion of GDP, as they do not correspond to the strategic importance of this sector. Perhaps one of the main reasons for this decline is the agricultural sector's reliance on traditional methods, despite attempts in Iraq to introduce technology for this sector, it remains modest, particularly in the area of statistical techniques, improved seeds and chemical fertilizer.(Ministry of Planning, (2010-2014):70)

Table 1
Some indicators of Iraq's agricultural sector for 2004-2015

Cultivated Area (Elf Dunum)	Agriculture Contribution %to GDP	Value of output in the agricultural sector million 1) (dinars	GDP Current Prices million 1) (dinars	Year
13643	10.9	4521	41607.8	2004
14701	13.7	5939.6	43438.8	2005
14059	12.9	6195.9	47851.4	2006
14249	9.2	4479.7	48510.6	2007
14237	7.5	3889	51716.6	2008
10517	7.3	4020.7	54721.2	2009
12043	7.0	4063.7	57751.6	2010
13023	7.4	4739.7	63650.4	2011
12746	6.9	4941.4	71680.8	2012
14055	6.6	5017.8	75685.8	2013
15526	6.9	5036.2	72736.2	2014
6255	6.8	4835.3	70990.3	2015

Sources:

- Ministry of Planning, Central Statistical Organization, National Accounts, for different years.
- Ministry of Agriculture, Department of Planning and Follow-up, Department of Agricultural Statistics, annual statistical data of agricultural activity for different years.

Agricultural production, which is the most important source of human food and plays a significant role in achieving self-sufficiency, can be identified through an account of developments in plant and animal production as follows:

1. **Plant production:** Plant production is of great economic importance and this importance is derived from the importance of agricultural crops included in plant production by contributing to the daily food ingredients available for consumption and production of Iraq's

most important plant-based crops can be reviewed through the table (2), which does not meet Iraq's need for these crops, shows that the overall reality of production of these crops remains volatile and below the required level. Despite Iraq's natural and human resources and potential, their levels are fluctuating. (Khalaf& et al, 2016:10)

Table 2
Production of vegetable crops in Iraq for the period 2004-2015 (1,000 tons)

oil crops	industri al crops	fodder crops	Tuber s and bulbs	fruits	vegeta bles	legum es	Grain crops			year
							the rice	barle y	wheat	
74	37	---	769	1361	4099	45	250	805	1832	2004
82	43	1789	1062	877	4276	47	328	754	2228	2005
69	38	1842	941	1211	4195	52	363	919	2286	2006
57	29	1902	779	897	3746	49	392	748	2203	2007
34	12	1698	502	1004	3543	29	248	404	1255	2008
29	24	1668	298	1045	3442	20	173	502	1700	2009
31	45	1406	306	1128	3496	23	155	1137	2749	2010
38	45	1747	662	1185	3746	23	235	820	2809	2011
21	37	1611	722	1287	3758	20	361	832	3062	2012
17	36	1872	785	1418	3736	23	452	1003	4178	2013
9	10	1987	484	1374	4099	14	403	1278	5055	2014
3	12	707	187	965	4276	7	109	330	2645	2015*
39	31	1519	625	1146	3868	29	289	794	2667	average period

Source: Ministry of Planning, Central Bureau of Statistics, Directorate of Agricultural Statistics, for different years. The governorates (Nineveh, Salah al-Din and Anbar) were not included for the year 2015 due to the ISIS invasion.

D. Livestock production: Livestock production is the second branch of agricultural production, as well as its importance in agricultural national income and plays a significant role in strengthening the Iraqi economy as a vital complement to plant production in achieving and providing population food by providing raw materials for manufacturing industries and livestock production in Iraq includes the production of white and red meat, table eggs, marine and river fishing, etc., and through consideration of the table (3) which reflects fluctuating production of white meat, fishing and eggs, averaging production during the study period (99.4), (55.6) and (878.4) respectively, and red meat production is on the rise, averaging 149.6 tons during the study period. (Ali, 2012:19)

Table 3
Iraq's production of red and white meat, table eggs and fish for the period 2004-2015

Fishing (1000 tons)	Eggs (1 million)	White Meat (1000 tons)	Red Meat (1000 tons)	Year

	eggs)			
18.4	964	64.7	132	2004
34.7	1034	94.3	134	2005
56.8	932	112.4	136	2006
54.4	808	94.7	139	2007
47.9	916	84.8	150	2008
53.0	705	87.1	152	2009
55.9	926	108.7	155	2010
48.8	1019	135.9	158	2011
67.9	1104	153.0	161	2012
110.5	1194	101.1	163	2013
84.0	374	70.2	166	2014
34.7	565	86.4	---	*2015
55.6	878.4	99.4	149.6	Average period

Source: Ministry of Planning, Central Statistical Agency, Directorate of Agricultural Statistics, for various years.

* The governorates (Nineveh, Salahuddin and Al-Anbar) were not included in 2015 due to the incursion.

Table 4 shows that Iraq remains below the level of self-sufficiency for strategic crops. (spelt, rice), legumes and fruits, also for animal production (red meat, white meat, fish, table egg) and that the decline in agricultural production in both vegetation and livestock, was clearly reflected in the inability of the agricultural sector to meet the population's food needs which requires the application of sound economic policies, the provision of more modern agricultural production requirements and the adaptation of scientific progress to serve the development and improvement of production, Raising the level of self-sufficiency, and obtaining at least self-sufficiency in agricultural products is of the utmost importance, helping to achieve food security, which is necessary to avoid any variable, externally or internally. This is in order to close the gap between available consumption and domestic production in order to achieve food security.

Table 4

Self-sufficiency rate and food gap for some crops in Iraq for plant and animal production
Period (2004-2015)

Food Gap	Self-sustainment ratio	Available consumption	Local Food Production	Crops
1153	70%	3820	2667	Spigot
301	48%	590	289	Rice

20	%59	49	29	Legumes
324	%77	1470	1146	Fruits
1	%99	150	149	Red Meat
78	%55	177	99	White Meat
812	%51	1690	878	Table eggs

Sources: Prepared by researchers based on:

- Ministry of Planning, Central Bureau of Statistics, National Accounts, for different years.
- Arab Organization for Agricultural Development, Annual Book of Agricultural Statistics, for various years.
- Calculated according to the following equation ((self-sufficiency ratio = $\frac{\text{domestic food production}}{\text{available consumption}} * 100$

((available consumption = domestic food production + net foreign trade (exports - imports))

Food Gap = Available for Consumption - Local Food Production

Conclusions

1. Weak competitiveness of agricultural crops in domestic markets versus imported agricultural commodities. Most national agricultural commodities are characterized by high prices due to high production costs and poor quality.
2. Weak financial, technical, technological, informatics and marketing potential of the private agricultural sector, which constitutes the largest proportion of total agricultural activity.
3. A significant deficit in food security insurance as production remains below the level of self-sufficiency for strategic crops (wheat, rice) and also for livestock production.
4. Iraq's reliance on foreign markets to supply most of its production inputs from agricultural machinery, pesticides, fertilizers and improved seeds, which are difficult to obtain due to financial and technical considerations and high prices, as well as the reluctance of international companies to export them to Iraq under the principle of protecting intellectual property rights.
5. A large proportion of agricultural land has been affected by the problem of salinization and sunken groundwater, particularly in the southern and central regions. Statistics indicate that 75% of traffic land suffers from salinity owing to poor operation and maintenance and the lack of an integrated miscellaneous system. This has had a negative impact on the quantity and quality of production.

Recommendations

1. All available means should be undertaken to develop a strategic plan to introduce the elements of modern agriculture using mechanization, fertilizer, pesticides and modern irrigation methods in order to increase the productivity of dunums, and to work on vertical

rather than horizontal expansion to reduce expenditures on the infrastructure of the added areas of agriculture.

2. The Ministries of Agriculture and Water Resources should provide a database on climatic conditions, water resources and desertification, food production and self-sufficiency ratios, and data on goods entering the country, quantities and quality. This information will make those responsible for food safety aware of the developments of this file, which is not accurate in the data available, making it difficult to diagnose the problem and its real dimensions.
3. Protection and support for the agricultural sector should be provided. Because high agricultural production costs raise the prices of domestic agricultural goods and commodities, making them unable to compete with foreign agricultural goods, support should be provided for all types of crops, especially those with ideal conditions. Support should be gradually reduced when the private sector is able to stand on its feet and produces good quality and low-priced agricultural goods and goods.
4. The need to practise sonic farming, especially in marginal areas where rainfall is scarce, because it reduces desertification, saves water and provides 50% of the peasant's efforts in traditional farming.

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