

THE AGRICULTURE POTENTIAL DEVELOPMENT IN THE REPUBLIC OF IRAQ

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Abstract

The agricultural potential (terrestrial resources) is represented by the varieties of traditional cultures in Iraq, which has evolved over a period of over thousands of years. Agriculture in the North of Iraq depends on rain, rivers and groundwater, while the cultivation of lands in Central and Southern parts of the country is mainly dependent on only the waters of rivers. The country has a high potential for agricultural development, with reference to the total surface area of approximately 43.5 million hectares, but only 11 million hectares can be fit to the arable land.

This paper makes an analysis of the main indicators of the agricultural potential of the Republic of Iraq, through areas under cultivation, irrigation potential, GDP, production made, etc. As a result of this analysis, we can say that the agricultural potential of the Republic of Iraq has as the main drawback the arid land for the vegetal sector, and also the reduced rainfall and soils with salt. There are necessitates who once carried out could raise agricultural potential among which stands out the increase in the technical-material basis of agriculture.

Key words: agriculture, development, Iraq

INTRODUCTION

Raising the agricultural potential implies: ensuring the water for irrigation availability; measures to reduce the salinity of large areas of land; increase of the agricultural inputs needed for cultivation of plants and for the livestock, quantitatively and qualitatively, such as certified seeds, fertilizers and agricultural mechanization.

In the context of the reconstruction of Iraq, the FAO proposals, submitted by the Iraqi Government, include: the elimination of subsidies that distort the market prices; increasing the productivity in the agricultural sector through investment in new varieties of seeds, irrigation methods and enhanced market mechanisms; the establishment of demonstration agricultural farms along Iraq to revive the production of crops and animals, reinvigorating Iraqi agriculture in areas such as fisheries in wetlands, new varieties of plants and care towards the environment, expansion of extension services[7].

MATERIALS AND METHODS

In the paper we used the following indicators: arithmetic mean, standard deviation, mean square deviation, coefficient of variation, confidence limits for a given risk, average annual growth rate, the limits amplitude for a given risk towards the average and statistical significance of these indicators.

The formulas used to calculate these indicators are presented,[3]

For the arithmetic mean $\bar{x} = \frac{\sum x_i}{n}$;
where:

\bar{X} = the arithmetical mean; X_i = The average production values for a number of years (i);

n = number of years taken into account

The average annual rate of growth [1]

$= r_{2008-2013} = \sqrt[n]{\prod (p_1/p_0) - 1}$; where:

$r_{2008-2013}$ = average annual growth rate;

$\prod p_1/p_0$ = entangled growth indicators

RESULTS AND DISCUSSIONS

Geographic location. The Republic of Iraq is situated in Southwest Asia and constitutes the

Eastern Arab region, bordered by Turkey to the North and Iran to the East, by Syria, Jordan and Saudi Arabia to the West and the Arabian Gulf, Kuwait and Saudi Arabia to the South, extends between latitudes 29°5 and 37°22 North, and between longitudes 38 ° 45 and 48 ° 45 East. The surface is by 434,924 km², of which a large portion of the land is desert or wasteland. The mountains in the Northeast are an extension of the Alpine system that runs eastward from the Balkans, in southern Turkey, Northern Iraq, Iran, Afghanistan, and finally the Himalayas[6].

The territory of present-day Iraq is known since antiquity under the name Mesopotamia which has been the cradle of some brilliant civilizations such as the Sumerian, Akkadian, Assyrian, Babylonian. Iraq is currently made up of 18 provinces .

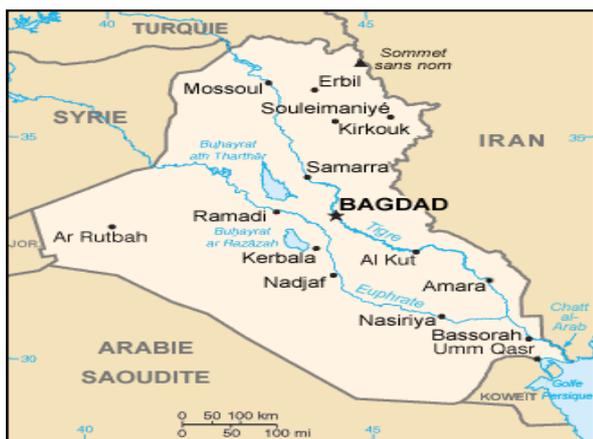


Fig 1. Administrative map of Iraq (source: http://www.pecad.fas.usda.gov/highlights/2008/05/images/Iraq_wheat_barley_maps_may08.jpg)

About 97 percent of the country are arid lands with low precipitation. In most parts agriculture suffers from high rates of evapotranspiration that exceed the rainfall. The temperature varies greatly (10-40 ° C) during the breeding season, most notably in desert regions. The grassland covers 75 percent of Iraq and contribute a large part to the herbivore wealth. These lands which are not suitable for farming due to the dry climate, poor soils and rugged topography, and other factors, make up most of the land in Iraq.

1. The natural potential. The relief is characterized by 4 natural regions[11]: *a*) the plain Tiger-Euphrates, which occupies a vast lowland area drained by the Euphrates (2,800

km) and Tiger (1,850 km) that unite to form the Shatt al Arab which empties into the Persian Gulf. This plain (ancient Mesopotamia) looks dull, with arms outstretched, wasteland and wetlands; *b*) desert plains in the West are crossed by dry valleys (Wadi Hauran, Wadi Tubal, Sha' ib Hisb), the area in question being the home of the Bedouin and camels; *c*) The north Piedmont (the ancient Assyria), the higher area, with rich deposits of oil, precipitation are richer (400 mm/an); *d*) Kurdistan National Mountains that occupy the North-East of the country, the area is traversed by valleys with deep gorges and defiles of the tributaries on the left of Tiger (Zab al Kabir, Zab of Asfal, Diyala).

Climate. Iraq is located in the northern region with a moderate continental climate and subtropical. Precipitation occurs in winter, spring and fall, but not in the summer season. It has a high subtropical climate aridity (summers are scorching, without precipitation, wind «shamal» raising temperatures up to 49 ° and causing in desert sand storms; the winters are milder). Actually, the pluviometric regimen for about 5.54 million hectares, is making up to 49.8% of total arable land.

Table 1. The distribution of precipitation areas by relief type in Iraq

Types of land/relief	Surface		Precipitation (mm/an)
	thousand hectares	%	
Plain	13,250.0	30.0	50-200
Hills	4,200.0	10.0	250-450
Mountains	9,200.0	21.0	400-1,000
Desert	16,855.2	24.2	50-200
Total	43,505.2	100.0	

Dost Muhammad, and colab. 2011, The profile was edited in May/June 2011[2] <http://www.fao.org/ag/agp/AGPC/doc/Counprof/Iraq/Iraq.html>

The flow irrigation areas and irrigation system are 29.9% pumps and 20.4%, respectively, of 5,575,000 ha (49.8% of total arable land), which have potential for irrigation from surface water sources. The rest of the 49.7%, it is now unsuitable for cultivation because of the lack of irrigation facility. The climate of Iraq can be divided into three types: i) Mediterranean climate, in the northern

region; II) Climate steppes, which represents a transitional climate between the mountainous region in the North; III) The desert hot climate in the South.

Vegetation consists of the plants in the form of bushes (North and East) and halophyte plants and xerophyte (South and West). The Woods occupy reduced surfaces (3.5%) and meet only in the Kurdistan Mountains.

Fauna, is adapted to the environment, including wild cats, jackals, gazelles, turtles and monitor turtles.

Water resources. The main sources of water in Iraq are represented by surface water and a small part the waters through the ground. Iraq's main rivers are the Euphrates, Tigris, Diyala, Shatt al Arab and their tributaries. The agriculture in the northern region depends on rain, rivers and groundwater, while the cultivation of lands in Central and southern parts of the country, is mainly dependent on only the waters of rivers.

Table 2. The classification of lands regarding the potential for irrigation

Type of land		thousand hectares	%
Suitable for agricultural production		32,970	74.2
Irrigation by flooding	Excellent for irrigation by flooding method	1,700	2.4
	Good for irrigation by flooding method	2,400	5.4
	Moderately suitable for irrigation by flooding	1,700	2.4
Non-irrigated land	Excellent land for farming	250	0.4
	Excellent for farming and production of irrigated crops where water can be provided	1,290	1.8
	Good and moderate for agriculture	1,070	2.4
Woods and pastures		3,070	4.3
Total		44,450	100.0

Source: Planning Authority, The Central Statistics Agency. 2001-2005. Annual Statistics Report.[14]

The realization of irrigation potential in Iraq will depend on the development of the planned irrigation in the upstream, alongside the existence of water management projects. Poor management of irrigation systems, with reference to the levels of charges, bring into question the continuation of the soils with high salinity, for which there is no effective program at national scale.[13]

Economy. Iraq is a country with a developing economy, but it is one of the important

producers and exporters of oil. From historical point of view, the economy of Iraq was characterized by massive dependence on oil exports, which is why the accent was placed on the development by a centralized planning. The economy of Iraq remains dominated by the petroleum sector, which currently provides about 90% of foreign exchange earnings. At the same time the country holds significant quantities of natural gas, salt, sulfur, gypsum, copper, chromium and phosphates. It is a major producing country of persimmon.

3.The demographic potential and its influence on the national economy.

Iraq's Population, after recent data, is of 33.37 million inhabitants, from which 18.7 million (59%) aged 15 years and less, a young population, as it is specific to other countries in the area of MENA [6] (fall territory of Middle East and North Africa). It is the capital and largest city of the country, having 3,326,000 inhabitants.

The rural population presents an increase from 7,657 thousand persons in 2000 to 11,350 thousand persons in 2013, but the active population in agriculture is declining, from 535 thousand persons in 2000 at 1,408 thousand people in 2013.

Table 3. Trends in total population by area and occupation in Iraq, period 2000-2013

Population	UM	2000	2005	2011	2013	Average/Rhythm
Total population	Th. P.	23,801	27,377	31,837	33,765	28,522
	%	100.0	115.0	133.8	141.9	X
	%		1.03	1.03	1.03	2.73
Rural population	Th. P.	7,657	9,023	10,676	11,350	9,440
	%	100.0	117.8	139.4	148.2	X
	%		1.03	1.03	1.03	3.07
Active population in agriculture	Th. P.	535	479	419	408	465
	%	100.0	89.5	78.3	76.3	X
	%		0.	0.	0.99	-2.06

FAO, the State,2014,

<http://faostat.fao.org/site/459/DesktopDefault.aspx?PageID=459#ancor>[4]

The causes can be evidenced by the many forms that are specific to the rural environment, which may be by socio-economic order. Thus it can be shown that the average family consists of 6 members (7.4 in rural areas). As regards the studies ,the situation remained difficult, illiterates

representing 38%, primary and medium education provide about 50%, and 11% university studies.

Hence a knowledge of the evolution of the

GDP, is relevant. According to the figures in *table 4* on the evolution of GDP per capita and total from Iraq, we can find the following:

Table 4. Trends in total GDP and per capita in Iraq during the period 2003-2012

Specification	UM	2003	2005	2007	2009	2011	2012	Average/Rhythm
Gross Domestic Product	MIL \$	22,535	36,268	40,503	45,688	53,143	58,613	42,283.7
	%		1.04	1.01	1.06	1.10	1.10	11.21
Gross investment	MIL \$	3,453	6,917	3,245	5,561	8,140	11,450	6,673.8
	%		2.65	0.39	0.72	0.88	1.41	14.25
Population	MIL place	26.0	27.37	28.75	30.17	31.84	32.78	29.20
	%		1.03	1.02	1.03	1.03	1.03	2.62
GDP/capita	USD/capita	868.1	1325.0	1409.0	1514.6	1669.3	1788.3	1432.5
	%		1.02	0.99	1.03	1.07	1.07	8.36

Source: FAO [http://faostat3.fao.org/download/O/OA/F\[8\]](http://faostat3.fao.org/download/O/OA/F[8])

- at national level the value of GDP in 2003, from mil \$ 22535 reaches mil \$ 422,833 in 2012, with a growth rate of 11,21%, being greater than the rate of increase in the GDP per capita which is 8,36%.

3. The agricultural potential (terrestrial resources). Iraq is the center of primary and secondary domestication for many crops, such as wheat, barley, lentils, and chick peas. It is considered a cradle of civilization and agriculture on Earth. The variety of traditional cultures in Iraq, which has evolved over thousands of years, is not only inheritance and legal interests of Iraqi farmers, but also to the whole world. One of the trends is the increase in tracking Iraqi farmers agriculture, especially through large quantities of ancient grains and cultures.

The actual land area is about 434,000 km².

Table 5 summarizes the structure of these lands, for which, from the analysis of the annual growth rate 1990-2009 pursuant to the following:

- areas of arable land are decreasing. In 2009, a decrease of manifest-22.4% in relation to 1990 10.0% from 2000. At the same time, it should be noted that the area under cereal cultivation has in possession approximately 95% of arable land;

- the non agricultural land is a category which, in Dynamics, is increasing, so that relative to 1990, growth in 2009 is + 7.3%.

Iraq has a high potential for agricultural development, with reference to the total surface area of approximately 43.5 million hectares, but only 11 million hectares can be fit to the arable land (commonly used)[9].

Table 5. Developments in the areas of agricultural land by category of use during the period of 1990-2012 in Iraq

Specification	UM	1990	1995	2000	2005	2010	2012
Arable land and permanent crops	thousand hectares	5,230	5,100	4,300	5,390	4,210	4,210
	With respect to 1990 (%)	100.0	97.5	82.2	103.1	80.5	80.5
	With respect to 2000 (%)			100.0	125.3	97.9	97.9
Total agricultural	thousand hectares	9,230	9,100	8,300	9,390	8,210	8,210
	With respect to 1990 (%)	100.0	61.3	55.9	101.7	55.2	55.2
	With respect to 2000 (%)			100.0	113.1	98.9	98.9
Nonagricultural field	thousand hectares	34,602	34,732	35,532	34,347	35,314	35,314
	With respect to 1990 (%)	100.0	100.4	102.7FM	99.3	102.1	102.1
	With respect to 2000 (%)			100.0	96.7	99.4	99.4
Land surface	thousand hectares	43,832	43,832	43,832	43,737	43,524	43,524

Source: FAO, State <http://faostat3.fao.org/home/index.html> # DOWNLOAD_STANDARD[4]

There is an economic and geographical designation " the Cornucopia", considered to be the area with the most ancient agricultural traditions in the world, where is falling also Iraq. It was the center of domestication for a remarkable range of primary agricultural

crops and animal breeding. Crops of wheat, barley, lentils, ovine and caprine species were initially brought under human control around 8000 b.c. Iraq is where wild wheat had, at a specific date his origin and many varieties of cereal from this country have been exported

and adapted into existing areas worldwide[5]. Currently, on about 2.8 million hectares is used the wetting by rain, "fed up with the rain", which is known to be structured on three different types of land, according to the areas affected by the level of annual rainfall such as[9]: the level of 450 mm/year (on approx. 0.1 million hectares); level 250-450 mm/year (for approx. 0.7 million hectares); the level of 200-250 mm/year (approx. 2 million hectares).

It can be said that Iraq has in the agricultural sector in the world, a standard of producing food of good quality.

4. Material and its use in the agricultural system of production in Iraq

The importance of supporting agricultural production for Iraq's agriculture is based also on the supply of materials (import), especially the seeds, fertilizers, machines. The Government of Iraq has encouraged the development of national agricultural production by paying high prices for goods produced at local level[13]. Attention has been given to *various forms of mechanization and fertilization*.

The role of fertilizers was followed by ensuring rapid growth of plants, as the main effect, but with a number of undesirable side effects,. One of the most serious effects of the excessive use of chemical fertilizers occurs due to the phenomenon of washing the nutrients in and on the soil by rain or irrigation water and infiltrating them into underground waters, contributing to enhance the process of eutrophication of water courses, along with the existence of a process of salting the soil.

Another phenomenon produced in Iraq due to the use of chemical fertilizers in excess for overeating plants, was that of the proliferation of diseases and parasites, whose development is more on excessively fattened crops with nitrogen. Effect of applying those fertilizers was looked into Iraq's agriculture through knowledge of quantities consumed of nitrogen (N) and phosphorus (P), expressed as the total amounts of nutrients active substance (s). Table 3.35 presents this situation in the dynamics of the period 2004-2010, rhythms and comparisons that can be played by the following:

Table 6. The quantities of fertilizers evolution used in agriculture in Iraq during the period 2004-2011

Specification	UM	2004	2006	2008	2009	2010	2011
Nitrogen fertilizers	thousands to a.s. N	102.7	167.0	164.1	171.8	108.0	138.3
	%	100.0	162.6	159.8	167.3	105.1	134.7
Fertilizer with phosphorus	thousands to a.s. P2O5	6.9	55.0	63.6	46.4	24.4	24.4
		100.0	795.0	919.9	670.3	352.4	352.4
Fertilizer with potassium	thousands to a.s. K2O	46.4	4.8	5.4
					100.0	10.4	11.6

FAO State, [http://faostat3.fao.org/home/index.html#DOWNLOAD_STANDARD\[4\]](http://faostat3.fao.org/home/index.html#DOWNLOAD_STANDARD[4])

- in the fertilizers with nitrogen (N) application, is registered a significant increase in 2005-2006 to 2008-2009 and in years 2007 and 2010 fertilizer nitrogen consumption is declining;

- the chemical phosphatic fertilizers quantities applied (P₂O₅), reflects the same variation, manifests itself through a ceiling on the maximum considered in the period 2005-2008 (levels being between 55,000 to a.s., and 63,640 to a.s.), followed by a decrease in this level (who arrives in 2010 at 24,380 to a.s.).

5. The system of agricultural production and the level of development in Iraq. Agriculture is in Iraq the second greatest economic sector (after oil sector). However, despite its

abundant resources, earth and water, Iraq is a net importer of food.

The cultivated area . Constitute the potential plant production, being played in the *table7*, highlight the areas being cultivated from Iraq. For the period 1995-2010 dynamic, we have the following:

- the total cultivated land in the dynamic outlines a reduction in 2010 relative to 1990 (from 6,090.0 thousand hectares to 4,750.0 hectares, which represents a decrease by-22%);

-of the total land cultivated, the cereal crop group is preponderant (53.5%), and from these wheat (19.4%), barley (31.6%), and maize (1.1%). From these main crops in the

analysis there is a dynamic upward trend for wheat and maize crops, along with a decrease in barley.

Table 7. The crops structure in Iraq during the period 1990-2012

Specification	1990		2000		2010		2012	
	thousand hectares	%						
Wheat	1,180.6	22.6	1,200.0	27.9	1,383.3	32.9	1,200.0	28.5
Barley	1,922.1	36.8	1,110.0	25.8	1,005.8	23.9	600.0	14.3
Corn	69.3	1.3	72.8	1.7	113.1	2.7	130.0	3.1
Dates	123.5	2.4	110.0	2.6	123.0	2.9	124.6	3.0
Fresh vegetables	29.0	0.6	30.0	0.7	18.6	0.4	22.0	0.5
Vita de vie	18.8	0.4	13.0	0.3	10.0	0.2	11.0	0.3
Total main crops	3,355.4	64.2	2,549.3	59.3	2,683.5	63.7	2,122.7	50.4
Other cultures (pastures, meadows)	1,874.6	35.8	1,750.7	40.7	1,526.5	36.3	2087.3	49.6
Total (ha)	5,230.0	100.0	4,300.0	100.0	4,210.0	100.0	4,210.0	100.0
1990 (%)	100.0	X	82.2	X	80.5	X	80.5	X

Source: FAO, State <http://faostat3.fao.org/home/index.html> # DOWNLOAD_STANDARD [8]

The animal breeding. Livestock during 1990-2011 presents a sharp decline from 10.06 LSU/ha in 1990 to 6.05 LSU/ha in 2011, when it represents only 60.10 % from the livestock.

Table 8. The structure of animals load per cultivated hectare in Iraq during 1990-2011

Specification	1990		2000		2010		2011	
	UVM	%	UVM	%	UVM	%	UVM	%
Cattle	0.18	1.8	0.18	4.48	0.23	4.13	0.23	3.83
Sheep and goats	1.21	12	0.99	25.1	1.16	21	1.19	19.65
Poultry	8.67	86.2	2.77	70.4	4.14	74.9	4.63	76.52
Total	10.06	100	3.94	100	5.53	100	6.05	100
	100.0	x	39.2	X	55.0	x	60.1	x

UVM (Vita Units); FAO State <http://faostat3.fao.org/home/index.html> # DOWNLOAD_STANDARD [4]

The main decrease is found in birds from 8.67 LSU/ha in 1990 to 2.77 LSU/ha in 2000, to 4.14 LSU in 2010 and to 4.63 LSU in 2011. The main reason is the massive importation of poultry, favored by the political events that took place in Iraq.

6. The national policy on the seed system structure. In Iraq, it was recognized the importance of ensuring with seeds from the year 1927, from which was adopted a law through which it is encouraged the use of seeds of good quality especially for cotton production.

A major development in seeds have been found in 1968, when the Government established the quantity of seed used by farmers and found that the quantities of seed assured/used constitutes a necessity.

All at the same time, in the sector of agriculture and food, was initiated a project registration/insurance of seed production[11]. This was followed by a five-year plan (1969-1974), which was aimed to improve the production of seed of wheat, barley, rice,

corn, cotton and other crops. From 1975 there was a national law and regulations in order to be examined the products falling within the category of seeds, and the adoption of their registration.

In 1995, was founded the National Council of Seeds(NCS), which is chaired by the Minister of agriculture, to advise the Government on matters of grains.

Through the National Council of Seeds shall be determined the political guidelines and "Alemraaqbih", performed by agricultural research institutes such as the Institute of Agricultural Research (IPARC), State Council for Agricultural Research (SBAR) and Agricultural Research Center (ABRC)[15].

Commercial seed producers are verified are selected by the *State Council for Examination and Certification of Seeds (SBSTC)*, having a permanent collaboration with companies producing and marketing of seeds. Agricultural Research Institute (IPARC) is responsible for the improvement and development of new varieties of agricultural

crops, such as cereals (barley, wheat, rice and maize), legumes (lentils, chickpeas and beans), but also of industrial plants (nuts, soya, sunflower). State Council for Agricultural Research (SBARC) is responsible for grain, vegetables, and cotton. Center for Agricultural and Biological Research, (ABRC) pursues the development of varieties of cereals and industrial plants. Agricultural colleges play a less

important role in the amplification of seeds quantities[11].

7. The significant results in Iraq's agriculture between 2003 and 2012.

In the period studied the gross value added in agriculture (Table 10) has had an annual rate of increase of 2.81%, lower than the national GDP that was 11,21%.

Table 9. The Evolution of gross value added in agriculture for the period 2003-2012

Specification	MU	2003	2005	2007	2009	2011	2012	Average/ Rhythm
The added value in agriculture	MIL \$	2,230	3,440	2,595	2,329	2,745	2,862	2,701.6
	%		1.31	0.72	1.03	1.17	1.04	2.81
Share in national GDP	%	9.90	9.49	6.41	5.10	5.17	4.88	X

This made that the share of gross value added in agriculture to show a decrease from 9.90% in 2003 to 4.88% in 2012.

From the evolution analysis of certain agricultural products for the period 2003-2012, notes the following:

- the total production of wheat, with the

exception of year 2009, is maintaining a high average annual growth rate of 3.09%, mainly due to the increase in average yields level/ha;
 - total production of barley shall be maintained at a level of 750-850 thousand tons annually, but has a tendency to decrease, with an annual rate of -0.38%;

Table 10. The evolution of the total production of certain agricultural products for the period 2003-2012

Specification	UM	2003	2005	2007	2009	2011	2012	Average/ Rhythm
Wheat	thousands to	2,329	2,228	2,203	1,700	2,809	3,062	2225.3
	%		1.22	1.06	1.35	1.02	1.09	3.09
Barley	thousands to	861	754	748	502	820	832	778.2
	%		0.94	0.81	1.24	0.72	1.01	-0.38
Grain maize	thousands to	233	401	384	238	336	503	346.5
	%		0.96	0.96	0.83	1.26	1.50	8.94
Figs	thousands to	868	404	431	507	619	655	540.9
	%		0.90	1.00	1.06	1.09	1.06	-3.07

FAO, <http://faostat3.fao.org/download/Q/QV/F>

- The corn for grains through the cultivation of more drought-resistant hybrids and the use of chemical fertilizers pose a significant increase from 233 thousand tons in 2003 to 503 thousand tons in 2012, with an annual average rate of 8.94%;

- Figs also present a decrease from 968 thousand tons in 2003 to 540.9 tons in the year 2012, with an annual average rate of -3.07%.

CONCLUSIONS

Agriculture remains an essential part of Iraqi heritage, this even under conditions of

extreme aridity and pedo-climatic unfavorable, which are characterized by low rainfall and high soil salinity.

Natural and geographical conditions for Iraq have a particular influence on agricultural production. These conditions have influenced the diversity of traditional crops in Iraq, based on the total surface of approximately 435,200 km², but nearly 11 million hectares can be fit to the arable land.

In Iraq, of the total cultivated land (2010), the group of cereals is prevalent (53.5%), from which one can mention the wheat (19.4%), barley (31.6%), and maize (1.1%). Of field crops crop rotation is limited to crops of

wheat, barley, grain maize and sunflowers.

Areas from arable land that can be irrigated are 49.8% or 5,575,000 hectares. The rest of areas are unsuitable for cultivation due to lack of rainfall. Irrigation is done by furrows, and areas irrigated with modern systems (aspersion and drip) is 0.58% of the irrigated area.

In Iraq the State shall ensure the necessary crop varieties and hybrids. The importance of supporting agricultural production for Iraq's agriculture is based also on the supply of raw materials (import), especially the seeds, fertilizers, machines. The Government of Iraq has encouraged the development of national agricultural production by paying high prices for local products. Attention has been given to different forms of mechanization and fertilization.

From the analysis of animal production: annual variation in the number of animals from herds of camels and goats, which retain a relatively uniform; livestock of cattle and buffaloes recorded both increases and decreases, but in birds, sheeps and goats are found decreasing trends.

The trade balance in agricultural products is characterized by imports of agricultural products, which exceed the exports. For Iraq, the importation of agricultural products is a priority. Iraq's main trading partners are the United States of America, the European Union and Syria. For this reason, the Government of Iraq has implemented new laws to strengthen its trade ties.

It is relevant the rhythm of growth of the GDP total, whose level is higher than the rate of growth of GDP per capita. With respect to these indicators for agriculture can be said that agriculture is represented currently by approximately 8% of the national GDP and 20% of the employment, the trend being in support of the rural population.

In the period studied the gross value added in agriculture has had an annual rate of increase of 2.81% annual growth rate, lower than the national GDP that was 11,21%. This has done that the share of gross value added in agriculture to show a decrease from 9.90% in 2003 to 4.88% in 2012.

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