

THE PROJECTS EVOLUTION FOR FOOD SECURITY ENSURING IN THE ARAB REPUBLIC OF SYRIA

Al Mohammad JEGHAYEF¹, Raluca NECULA^{1,2}, Manea DRAGHICI¹

¹University of Agronomic Sciences and Veterinary Medicine of Bucharest, 59 Marasti Blvd., District 1, 011464, Bucharest, Romania, Phone: +40213182564, Fax:+40213182888, Mobile:+40744 6474 10, Emails:hagihagi93@yahoo.com, raluca_nec@yahoo.com, dmprofesor@yahoo.com

²The Bucharest University of Economic Studies, Faculty of Agrifood and Environmental Economics, 5- 7 Mihail Moxa Street, 1st district, Postal code: 010961, Bucharest, Romania, Email: raluca_nec@yahoo.com

Corresponding author: raluca_nec@yahoo.com

Abstract

The purpose of this study is to capture the rural development programmes of the Governments that have succeeded in conquering Syria's independence so far. The paper analyzes the laws and decrees that have endorsed the reforms in agriculture, difficulties in the application thereof. Research on the way in which they have carried out agrarian reforms in Syria are numerous and are contained in the Reports of the economic and agronomic studies published by the universities and international organizations (ONU and FAO, mainly), and studies of the diplomatic service of the United States, France and the United Kingdom. All these are valuable sources for understanding the major problems modernization of the Syrian agriculture. Are highlighted the main achievements, failures and some aspects of the current state of crisis, in which is the Arab Republic of Syria. For a more systematic study, the entire period of time analyzed has been divided into three parts: the first period from the conquest of independence until the year 2000; the second period from the year 2000, the year of the start of economic reforms until year 2010, and the third period from the year 2011, the year of the crisis start until present.

Key words: crisis, evolution, livestock, production, projects

INTRODUCTION

The right to food is contained in the Universal Declaration of human rights from 1948, and was reiterated in various occasions: the World Conference relating to Nutrition since 1974 and the World Summit on food since 1996.

Food security is defined by three issues: availability (sufficient quantity); access (there are enough economic and physical resources) in order to have adequate food to individual diet; use (to be have sufficient information about nutrition, water and proper hygiene) [14].

Syria, along the time, included in the country's development projects, agricultural development projects, which sometimes were the priority.

These projects included the use of agricultural production factors (especially water, soil, and labor), ensuring the production of agrifood products (wheat, barley, sugar beet, cotton), and import and export of agrifood products, as well as its distribution to consumers.

MATERIALS AND METHODS

The indicators used have targeted agricultural areas, average and total agricultural production, total and rural population, and the main crops and animal species.

In the study we used the evolution of indicators characterizing the food security, for 3 periods characterizing the recent history of Syria.

The periods analyzed were: the first period from winning the independence by the year 2000, characterized by the application of Decree-Law No 161 of 27 September 1958 concerning land reform; The second period, 2000-2010, of economic liberalization measures application, characterized by decision No 83 of 16 December 2000, which provides the division of the farms in batches of 3 ha in irrigated and 8 hectare in non-irrigated; The third period of crisis after year 2010 characterized by the debut in 2010 of the **National Food Security Project (PNFS)** and

the crisis after 2011.

As econometric methods we used the average, the indicators of fixe and chain base, standard deviation, coefficient of variation, the annual growth rhythm and the polynomial equation of second degree to find the trend.

RESULTS AND DISCUSSIONS

Studies show that Syria in its brief existence since 1946 and until present has taken into account all the time the observation so current Julian Cribb, that: " in the first place, we must accept that investments in agriculture are actually defense expenditures. (...) If we want to prevent wars, refugees and a food crisis, then we have to renew the global investments in agriculture and agricultural science" [5].

Brief overview of the Syria's history.

Syria is one of the ancient form of civilization in the Middle East. With approximately 10000 B.C., Syria was the Centre of the Neolithic culture, where it appeared farming and cattle breeding for the first time in the world. In antiquity it suffered cultural influences from Sumerians, Assiro-Babylonians, Egyptians, Phoenicians, Greeks, and Armenians.

In the year 64 A.C., Syria was conquered by the Romans and transformed into a Roman province. Starting in the 4th century A.C., was part of the Byzantine Empire.

In the 7th century came under the dominion of the Arabs. In the 11th-13th centuries, some parts of the country were included by the feudal states created by Crusaders in this area. Between years 1260-1526, was under the rule of the Egyptians, and from 1526 to 1918, was a province of the Ottoman Empire. In 1920 he joined the League of Nations mandate, which has entrusted it to the France administration.

During the Second World War, Syria was occupied by British and French troops who, in September 1941, proclaimed the Independent Republic of Syria. The prerogatives of power were handed over to the Syrian Government as late as January 1944, and the real and full independence was achieved on 17 April 1946. Between years 1946 and 1956, Syria changed 20 leadership and has drafted four constitutions.

For a short period of time, between Egypt and

Syria States there has been a political Union of the United Arab Republic. The Union began on 22 February 1958 and ceased to exist on 28 September 1961. In March 1963, at the helm of the country came the Socialist Baas Arab Party that has initiated a policy of structural reforms (land reform, nationalization of large industrial enterprises, etc.) [17].

One of the most important elements which influenced the evolution of trade between Romania and Syria, is determined by the evolution of the crisis affecting this country and the successive imposition of several sets of sanctions on the part of the EU against Syria which clearly aligns our country, in terms of EU membership [16].

The period from winning independence by the year 2000

After gaining independence, competitive aid systems for modernization took place on behalf of the major powers, but the desire to retain sovereignty has led Syria to seek a model that would give the State's initiative and monitoring of economic projects.

The State has considered agriculture as an economic and social priority, following the independence. In agriculture, still unprofitable and unproductive, worked almost three quarters of the population. In a reformer purpose, the Government tried to change the Syrian peasant mentality through various forms of education which has sought Western model application for increase in production, as an opportunity for the Syrian State[9]. In the same time it was considered that the West had to accept all the consequences of the war policy to ensure a stable Syria on the agricultural market, worldwide. It resulted from de factor role that Syria had during the war [6]. But it has not happened because of the political conditions of the Western countries put to Syria that have not been accepted by the governments what came immediately after independence. The land reform from Syria constitutes a rural development project, which aimed at solving the food security and development of rural communities. This project was an essential issue for Syria, immediately after independence, under the accelerated

population growth and inadequate agricultural production. To be noted that in the country was the unfairness manifest of some monopoly owners: regarding the land cultivation for a second crop, on choosing crops and dependence of the owners in relation to traders, that delivered the production to the export. To resolve this issue, in order to increase agricultural production, it took a triple action: latifundia expropriation, the distribution channels nationalization and a loan guarantee for the peasants who worked the land at an accessible interest [3].

Decree-Law 161 of 27 September 1958, promulgated the first agrarian reform in Syria and has been signed by the President of the United Arab Republic, Nasser. In order to apply and organize further were given more 8 Law-Decrees that focused on mortgage loans contracted by the owners of expropriated lands, credit operations and advances to reform beneficiaries, guaranteeing loans for farmers.

During September 1961 to March 1963, the two Governments have delayed the implementation of Decree Law 161 since September 1958, initially through its suspension in November 1961 by Kouzbari and then by the profound changes brought to law after the coup of April 4, 1962.

Beginning with March 1963, the Baas Party, of government, gave again in Syria a Socialist orientation. Regarding the Agrarian Reform, was passed to the application of Decree Law 167/1958 in order to achieve redistribution of agricultural properties and the reorganization of production through State planning. To mention: 88 Legislative Decree of 23 June

1963 amendment of restrictions regarding the owners; Decree No. 1109 of 22 September 1963 on the implementing regulation of the law of Agrarian Reform; 172 law of 15 May 1967, which simplifies and streamlines the operations of land distribution; Legislative Decree No. 163 of 09 December 1967 merging the Ministry of Agriculture and the establishment of other regulations.

The laws have been supplemented by a series of texts for the organization of the sector of agricultural production and which can be grouped in several positions: relations with the agriculture; the development of rural society; cooperatives; State farms, Agricultural Bank and agricultural production. One of the projects of safe agricultural production insurance for Syria is Euphrates Project, started in 1969, through the construction of the dam Assad. This project has ensured irrigation of 640,000 hectares, of which 450,000 ha as non-irrigated lands from the steppe and 160,000 ha irrigated already located along the Euphrates valleys, Balikh and Khabur [1]. Arranging the dam did made to disappear 64,000 ha of alluvial productive land, 56 locations and caused the displacement of 60,000 persons. In contrast, the irrigated areas doubled in this part of Syria, achieving increased agricultural production, vegetal and animal, required for food population (but also for exports), have created a stability and food security, and a massive increase in the agro-industrial production [4]. In the meantime the Euphrates project provides to Syria important hydropower sources: about half of the total value of renewable resources.

Table 1. The size and evolution of the main categories of land use, for the period 1961-2000

Specification	Mu	1961	1970	1980	1990	2000
The total area	thousand hectares	18,518	18,518	18,518	18,518	18,518
Glitter water	thousand hectares	140	140	140	140	140
Of which:	thousand hectares				372	432
(Natural forests)	thousand hectares				197.3	197.8
(Planted Forests)	thousand hectares				174.7	234.2
	%				100.0	118.7
Other lands	thousand hectares				4511	4235
Agricultural surface	thousand hectares	14,941	13,459	14,062	13,495	13,711
Permanent meadows and pastures	thousand hectares	8,560	7,550	8,378	7,869	8,359
Permanent crops	thousand hectares	235	258	454	741	810
	%	100.0	109.8	193.2	315.3	344.7
Arable land	thousand hectares	6,146	5,651	5,230	4,885	4,542
Landscape with irrigation system	thousand hectares	558	451	539	693	1,211
	%	100.0	80.8	96.6	124.2	217.0

Source: FAO,2016, <http://faostat3.fao.org/download/FB/FBS/F>

They were built also three hydro-energetic dams: the dam Al Thawra at Tabqa; Tishreen dam, upstream; Al-dam, downstream. Euphrates project ensures drinking water for major conurbations as Aleppo, Raqqa and Deir Ez-Zor, and numerous contiguous localities.

Hydropower facilities allow an electricity production of 2.5 billion kWh/year.

In the period 1961-2000 it is found that agricultural area had a fall from 14,941

thousand hectares at 1371 thousand hectares, which was mainly due to the decrease in both natural pasture and grassland as well as decrease of arable surfaces (Table 1).

Irrigated area increased during the same period with 217% from 558 thousand hectares at 1,211 thousand hectares in 2010. They followed a sharp increase given by the equation Y (irrigated surface) thousand ha = $0.9754 t^2 - 3,847.4 t + 4,000,000$, which is statistically significant ($R^2 = 0.9864$) (Fig. 1).

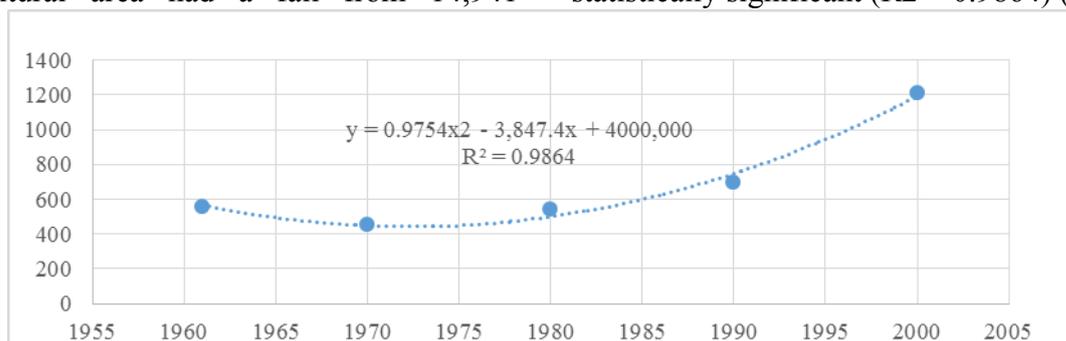


Fig. 1. The evolution of landscaped land in the irrigation system in the period 1961-2000 (thousand hectares)

Parallel with this agricultural production factor growth, the population of Syria, in the period 1950-2000, grew 4 times, and in 2010 increased 6 times from 3,413 thousands persons in 1950 at 20,721 thousands persons in 2010. In the same time the rural population

grew by 3.4 times, in 2000 relative to 1950 and 4.1 times in 2010, from 2,297 thousands persons in 1950 at 9,544 thousands persons in 2010. The share of rural population has a decrease from 67.3% in 1950 to 48.1% in 2000, and 46.1% in 2010 (Table 2).

Table 2 Total and rural population evolution during the period 1950-2000, in Arab Republic of Syria

Specification	MU	1950	1960	1970	1980	1990	2000	2010	
Total population	Total	thousands	3,413	4,593	6,379	8,956	12,452	16,354	20,721
	Compared to the 1950s	%	100	134.6	186.9	262.4	364.8	479.1	607
	Average annual growth	thousands		118	179	258	350	390	437
Rural population	Total	thousands	2,297	2,902	3,614	4,773	6,359	7,867	9,544
	Compared to the 1950s	%	100	126.3	157.3	207.8	276.8	342.5	415
	Average annual growth	thousands		61	71	116	159	151	168
	Towards the total population	%	67.3	63.2	56.7	53.3	51.1	48.1	46.1

Source: FAO,2016, <http://faostat3.fao.org/download/FB/FBS/F>

The tendency of population increase is represented by a polynomial equation Y (thousands persons) = $3.3755x^2 - 13,076 tx + 10,000,000$, with a significance $R^2 = 0.9997$. (Figure 2)

This increase in population has put a very strong pressure upon food consumption, and on Governments to ensure that agricultural production.

So if we look at the main crops production in this period, 1961-2000, we observe that the wheat production has grown fourfold, from 757 thousand tons in 1961 at 3,105 thousand

tons in the year 2000, with an annual growth rate of 3.69%. (Table 3)

Very high increases are found in corn by 19 times, at potatoes 1.7 times, sugar beet 2.3 times and at apple 1.5 times, grapes of 1.17 times. These total production increases have taken place, in particular on account of increases in average productions at ha.

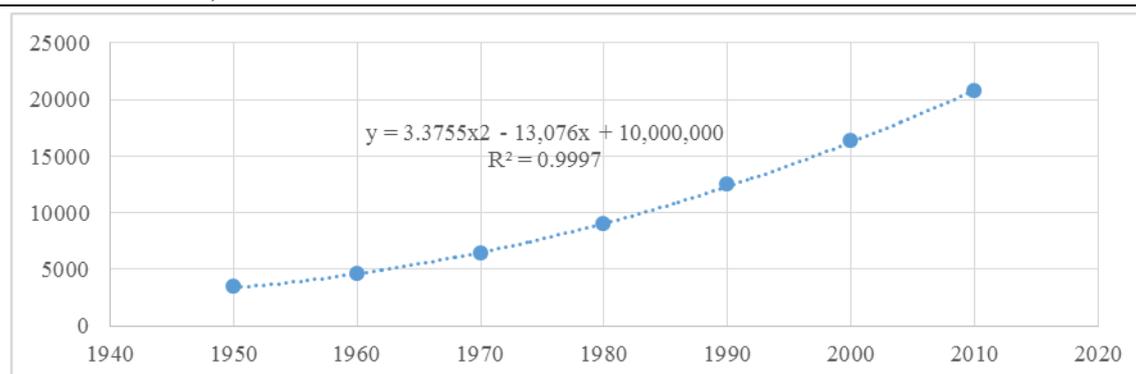


Fig. 2. The total population evolution for the period 1950-2010, in Arab Republic of Syria (thousands persons)

Table 3. The main indicators evolution of the main crops total production during the period 1961-2000

Culture	MU	1961	1970	1980	1990	2000	Average	Annual rhythm	Standard Deviation	Coef. of variation (%)
Wheat	thousands tons	757	624	2,225	2,070	3,105	1,861	3.69	1,034	55.57
	%	100.0	82.4	293.9	273.4	410.2	x	X	x	x
Barley	thousands tons	3,350	2,349	15,872	8,459	2,118	8,132	-1.17	5,424	66.69
	%	100.0	70.1	473.8	252.5	63.2	x	X	x	x
Corn	thousands tons	98	77	481	1,799	1,905	858	7.91	904	105.46
	%	100	78.6	490.8	1,835.7	1,943.9	x	X	x	x
Potatoes	thousands tons	301	653	2,922	3,982	4,847	2,395	7.39	1,598	66.73
	%	100	216.9	970.8	1,322.9	1,610.3	x	X	x	x
Sugar-beet	thousands tons	857	2,275	5,039	4,218	11,753	5,539	6.94	4,639	83.74
	%	100	265.5	588	492.2	1,371.4	x	X	x	x
Apple	thousands tons	100	175	892	2,046	2,867	1,269	8.99	1,043	82.17
	%	100	175	892	2,046	2,867	x	X	x	x
Grapes	thousands tons	2,428	2,065	3,557	4,231	4,094	3,450	1.35	1,180	34.19
	%	100	85	146.5	174.3	168.6	x	X	x	x

Source: Faostat, accessed 15.12.2015, <http://faostat3.fao.org/download/FB/FBS/F>

Thus we note that the reforms that have taken place during this period led to the superior productions in 2000 compared to year 1961, wheat (3% annual rhythm), corn

(annual rate of 7.8%), potato (1.4% annual rate), sugar beets (annual rate of 2%) (Table 4).

Table 4. The main indicators evolution of the main crops average productions for the period 1961-2000

Culture	MU	1961	1970	1980	1990	2000	Media	Standard Deviation	Coef. of variation (%)	Annual rhythm
Wheat	kg/ha	575	466	1,536	1,544	1,850	1,319	622.8	47.21	3.04
	%	100.0	81.0	266.9	268.3	321.5	X	X	X	X
Barley	kg/ha	460	208	1,311	310	161	668	347.9	52.10	-2.66
	%	100.0	45.2	285.0	67.4	35.0	X	X	X	X
Corn	kg/ha	178	140	870	3,254	3,444	1,551	1,635.2	105.44	7.89
	%	100.0	78.7	488.8	1,828.1	1,934.8	X	X	X	X
Potatoes	kg/ha	12,040	11,117	15,503	17,619	21,278	14,903	3,431.3	23.02	1.47
	%	100.0	92.3	128.8	146.3	176.7	X	X	X	X
Sugar-beet	kg/ha	19,494	25,210	22,822	19,710	42,780	28,665	9,239.4	32.23	2.04
	%	100.0	129.3	117.1	101.1	219.5	X	X	X	X
Apple	kg/ha	5,000	2,249	3,742	6,295	7,564	5,653	2,768.0	48.97	1.07
	%	100.0	45.0	74.8	125.9	151.3	X	X	X	X
Grapes	kg/ha	3,498	3,141	3,580	3,882	5,909	4,097	1,356.0	33.10	1.35
	%	100.0	89.8	102.3	111.0	169.0	X	X	X	X

Source: Faostat, accessed 15.12.2015, <http://faostat3.fao.org/download/FB/FBS/F>

Significant growths were noted for this period, 1961-2000, also for the livestock. Such, sheep increased by 4.6 times from 2,901 thousand heads in 1961 at 8,946 thousand heads in 2000 (annual rate 21.2), bovine herds by 2.3 times, herds of goats by

2.3 times, flocks of hens by 7.5 times, the number of hives, 6.3 times. (Table 5).

These increases in agricultural productions have been the result of economic reforms that have taken place and the structural changes in agriculture of Syria.

The period from year 2000 until year 2010

After year 2000, a series of economic reforms have been started in Syria. In agriculture they have endorsed a reform of land owned by the

State, greater initiative in the choice of crops and a reduction in agricultural production planning by the State.

Table 5. Livestock developments during the period 1961-2000 in the Arab Republic of Syria

Species	Year	1961	1970	1980	1990	2000	Media	Annual rate	Abat standard	Coef of variation (%)
Sheep	thousands head	2,901	6,046	9,301	14,509	13,505	8,946	21.20	4,083	45.65
	Compared to 1961	100	208.4	320.6	500.1	465.5	X	X	X	X
Cattle	thousands head	421	528.4	767.9	787	984.4	674	11.20	180	26.74
	Compared to 1961	100	125.5	182.4	186.9	233.8	X	X	X	X
Goats	thousands head	439	774	1025.5	999.7	1,049.5	900	11.51	205	22.78
	Compared to 1961	100	176.3	233.6	227.7	239.1	X	X	X	X
Hens	thousands head	2860	3669	13849	14794	21,629	11,308	28.78	6,750	59.70
	Compared to 1961	100	128.3	484.2	517.3	756.3	X	X	X	X
Bee hives	thousands	54.4	77.6	134.7	137	345.1	156	25.98	113	72.36
	Compared to 1961	100	142.6	247.5	251.7	634	X	X	X	X

Source: FAOSTAT, accessed 15.12.2015, <http://faostat3.fao.org/download/FB/FBS/F>

Thus, decision No 83 from 16 December 2000 stipulates the division of State farms in batches of 30 donums (3 ha) irrigated and in 80 donums (8 hectares) non-irrigated for a priority distribution to the former owners and beneficiaries of the agrarian reform, agricultural workers and holders of exploitation contracts. Is granted through this decree a right to use land for ten years, after which the beneficiary acquires the full property. In this period it was prohibited the

sale or lease of land. It is considered that it has created some confusion because it was not accompanied by measures to undo the previous Decrees 1971 and 1983 (No. 1033) regarding the division of property (M. Ababsa, 2016).

During this period the land for irrigation continued to increase from 1,211 thousand hectares in 2000 to 1,428 thousand hectares in 2009 and at 1,310 thousands hectares in 2010. (Table 6).

Table 6. The size and evolution of major categories of land use, for the period 2000-2013

Specification	UM	2000	2002	2005	2007	2010	2011	2012	2013
The total surface	thousand hectares	18,518	18,518	18,518	18,518	18,518	18,518	18,518	18,518
Glitter water	thousand hectares	140	140	161	154	155	155	155	155
Of which:	thousand hectares	432	443.6	461	473	491	491	491	491
(Natural forests)	thousand hectares	197.81	197.51	197.05	197.15	197.29	197.29	197.29	197.29
(Planted Forests)	thousand hectares	234.19	246.09	263.95	275.85	293.71	293.71	293.71	293.71
	%	100.0	105.1	112.7	117.8	125.4	125.4	125.4	125.4
Other land	thousand hectares	4,235	4,175.4	4,068	3,994	3,964	3,957	3,951	3,951
Agricultural surface	thousand hectares	13,711	13,759	13,828	13,897	13,908	13,915	13,921	13,921
Pastures and meadows	thousand hectares	8,359	8,338	8,266	8,214	8,212	8,199	8,190	8,188
Plantations of vineyards and fruit trees	thousand hectares	810	828	887	947	1,009	1,054	1,066	1,071
	%	100.0	102.2	109.5	116.9	124.6	130.1	131.6	132.2
Arable land	thousand hectares	4,542	4,593	4,675	4,736	4,687	4,662	4,665	4,662
Landscaped with irrigation system	thousand hectares	1,211	1,333	1,428	1,396	1,341	1,399	1,428	1,310
	%	100.0	110.1	117.9	115.3	110.7	115.5	117.9	108.2
Annual crops	thousands hectares		3,763	3,985	3,773	3,784	3,526	3,428	3,139
	%		100.0	105.9	100.3	100.6	93.7	91.1	83.4

Source: FAO, 2016, <http://faostat3.fao.org/download/FB/FBS/F>

The population has continued to grow from 16,354 thousands persons in 2000 at 20,721 thousand persons in 2010, with an increase of 25%, i.e. the population grew up in a single decade with a quarter of the population. (Table 7).

Analyzing the total productions increase in

the same period, 2000-2010, we note that wheat production had large oscillations (coefficient of variation 23,06%), barley knows a huge increase, characterized by an annual rate of increase by 12.37% , the corn presented some decreases, being the plant that react most to the drought, the potato had an

annual rate of increase of 3.34%, sugar beets at an annual rate of increase of 2.42%, an annual rate of increase for apples of 3.21% and grapes have presented a significant drop

in production, with an annual rate of -2.26%. (Table 8). The same trend can be observed also from Figure 3.

Table 7. The total and rural population evolution in the period 2000-2010, the Arab Republic of Syria

Specification		MU	2000	2002	2004	2005	2007	2008	2009	2010
Total population	Total	thousands	16,354	16,998	17,672	18,133	19,426	20,097	20,567	20,721
	Compared to the 1950s		100.0	103.9	108.1	110.9	118.8	122.9	125.8	126.7
	Average annual growth	thousands		321.7	337.2	460.9	646.4	671.5	469.8	153.7
population	Total	thousands	7,867	8,042	8,234	8,396	8,895	9,174	9,403	9,544
	Compared to the 1950s		100.0	102.2	104.7	106.7	113.1	116.6	119.5	121.3
	Average annual growth	thousands		87.5	96.0	162.0	249.5	279.0	229.0	141.0
	Compared to the total population	%	48.1	47.3	46.6	46.3	45.8	45.6	45.7	46.1

Source: FAO,2016, <http://faostat3.fao.org/download/FB/FBS/F>

Table 8. The total productions main indicators evolution of the main crops during the period 2000-2010

Culture	MU	2000	2005	2007	2010	Average	Annual rate	Standard Deviation	Coef. of variation (%)
Wheat	thousands tons	3,105	4,668	4,041	3,083	4,058	-0.07	935	23.05
	%	100.0	150.3	130.1	99.3	x	X	x	x
Barley	thousands tons	2,118	7,673	7,845	6,797	8,394	12.37	4,797	57.14
	%	100.0	362.3	370.4	320.9	x	X	x	x
Corn	thousands tons	1,905	1,872	1,770	1,330	1,996	-3.53	399	19.99
	%	100.0	98.3	92.9	69.8	x	X	x	x
Potatoes	thousands tons	4,847	6,083	5,701	6,731	5,782	3.34	924	15.98
	%	100.0	125.5	117.6	138.9	x	X	x	x
Sugar-beet	thousands tons	11,753	10,964	13,664	14,929	12,334	2.42	2,239	18.15
	%	100.0	93.3	116.3	127.0	x	X	x	x
Apple	thousands tons	2,867	2,960	2,802	3,931	3,177	3.21	553	17.41
	%	100.0	103.2	97.7	137.1	x	X	x	x
Grapes	thousands tons	4,094	3,063	2,730	3,256	3,246	-2.26	498	15.34
	%	100.0	74.8	66.7	79.5	x	X	x	x

Source: Faostat, accessed 15.12.2015, <http://faostat3.fao.org/download/FB/FBS/F>

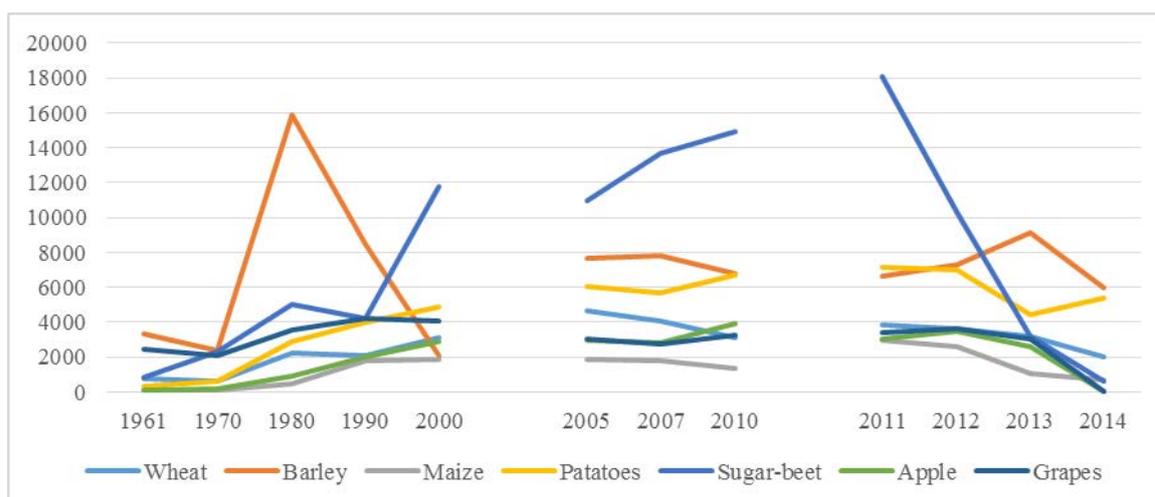


Fig. 3. Total productions evolution of the main crops, for the period 1961-2014

Average productions for the period 2000-2014, have a high annual rate of increase for the crops of barley (8.31%), grapes (0.80%), and decreases for wheat (-1.16%), corn (-1,66%), sugar beet (-0.36%), apple

(-3.40%), wheat (-1.16%), grain corn (0.41%). But analyzing all the period we see a random constant of agricultural productions in conditions quite harsh that came forward in the past decade. (Table 9).

Table 9. The average productions main indicators evolution of the main crops during the period 2000-2010

Culture	MU	2000	2002	2005	2007	2010	2011	2013	2014	Mean	Standard Deviation	Coef. of variation (%)	Annual rhythm
Wheat	kg/ha	1,850	2,844	2,452	2,423	1,928	2,537	2,316	1,572	2,332	444.4	19.1	-1.16
	%	100.0	153.7	132.6	131.0	104.2	137.1	125.2	85.0	X	X	X	X
Barley	kg/ha	161	745	578	576	445	516	721	492	627	322.9	51.5	8.31
	%	100.0	463.1	359.4	357.8	276.8	320.6	448.3	305.6	X	X	X	X
Corn	kg/ha	3,444	4,192	3,678	3,515	3,510	5,048	3,647	2,725	3841	531.2	13.8	-1.66
	%	100.0	121.7	106.8	102.1	101.9	146.6	105.9	79.1	X	X	X	X
Potatoes	kg/ha	21,278	21,294	20,624	18,343	19,513	20,234	19,685	18,060	20,156	1,057.3	5.2	-1.16
	%	100.0	100.1	96.9	86.2	91.7	95.1	92.5	84.9	X	X	X	X
Sugar-beet	kg/ha	42,780	51,448	42,171	48,473	54,291	69,393	49,540	40,666	47,051	7,531.8	16.0	-0.36
	%	100.0	120.3	98.6	113.3	126.9	162.2	115.8	95.1	X	X	X	X
Apple	kg/ha	7,564	6,165	8,872	8,671	7,760	5,946.2	4,825.4	X	8,279	1,990.4	24.0	-3.40
	%	100.0	81.5	117.3	114.6	102.6	78.6	63.8	X	X	X	X	X
Grapes	kg/ha	5,909	6,520	5,676	4,982	6,237	7,300	6,551	X	6,153	901.1	14.6	0.80
	%	100.0	110.3	96.1	84.3	105.5	123.5	110.9	X	X	X	X	X

Source: Faostat, accessed 15.12.2015, <http://faostat3.fao.org/download/FB/FBS/F>

It is interesting to found that during this period, 2000-2010, livestock pose significant increases. Thus the sheep herds have increased from 13,505 thousands heads in 2000 to 15,511 thousands heads in 2010, cattle from 984.4 thousands heads to 1,010

thousands heads, at goats from 1,050 thousands heads at 2,250 thousands heads, for chickens from 345.1 thousands heads to 25,401 thousands heads, and the number of hives from 345.1 thousands to 630.8 thousands (Table 10).

Table 10. The livestock evolution during 2000-2014

Species	UM	2000	2005	2010	2011	2012	2013	2014	Average	Annual rate	Standard Deviation	Coef. of variation (%)
Sheep	thousands head	13,505	19,651	15,511	18,071	18,063	18,019	17,858	17,449	3.5	2,966	17.00
	Towards 2000	100	145.5	114.9	133.8	133.7	133.4	132.2	X	X	X	X
Cattle	thousands head	984.4	1,083	1,010	1,111.7	1,108.5	1,113.2	1,091	1,060	1.29	91	8.61
	Towards 2000	100	110	102.6	112.9	112.6	113.1	110.8	X	X	X	X
Goats	thousands head	1,050	1,296	2,057	2,294	2,293	2,294	2,286	1,785	10.2	576	32.30
	Towards 2000	100	123.5	196	218.6	218.5	218.6	217.8	X	X	X	X
Hens	thousands head	21,629	23,795	25,401	26,203	25,024	19,187	16,601	23,619	-3.2	3,808	16.12
	Towards 2000	100	110	117.4	121.1	115.7	88.7	76.8	X	X	X	X
Bee hives	thousands	345.1	463	630.8	631.5	597.9	544.8		516	6.74	109	21.20
	Towards 2000	100	134.2	182.8	183	173.2	157.9		X	X	X	X

Source: Faostat, accessed 15.12.2015, <http://faostat3.fao.org/download/FB/FBS/F>

The trend of increase in livestock is suggestive in Figure no. 4. It follows this growth for the two studied periods that preceded the crisis that began in the year 2011.

To those shown in paragraphs 3.2 and 3.3, it is found that population growth was supported by the increased agricultural production.

The period after 2010

Events of the Arab spring took by surprise the whole international community because objective economic and social indicators presented a progressive improvement of the economies in those parts of North Africa and Middle East, namely: economic growth,

reasonable prices of agri-food products, the rate of absolute poverty decreasing, inequality level quite low and with middle-incomes, declining infant mortality rates, life expectancy in increase [7].

After year 2010, we find drastic decreases for the total productions. Thus in relation to 2010, in year 2014 total production fell to the wheat crop to 65%, the barley crop at 88.3%, corn culture 50.4%, potato crop at 80.2%, the cultivation of sugar beet at 4.4%.

The total apple production at 65.3% and grapes production at 95.2% in 2013. (Table 11).

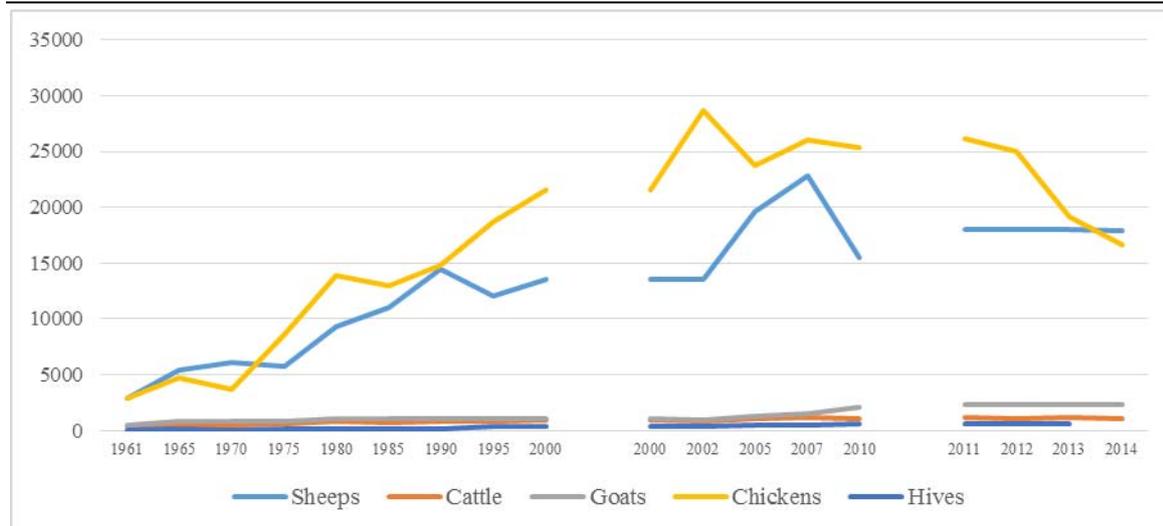


Fig. 4. The livestock evolution, for main animal species, for the period 1961-2014 (Th.)

Table 11. The total productions main indicators evolution of the main crops during the period 2010-2014

Culture	UM	2010	2011	2012	2013	2014	Average	Annual rate	Standard Deviation	Coef. of variation (%)
Wheat	thousands to	3,083	3,858	3,609	3,182	2,024	3,151	-9.99	705	22.36
	%	100.0	125.1	117.1	103.2	65.7	X	X	x	x
Barley	thousands to	6,797	6,667	7,280	9,109	6,001	7,171	-3.07	1,176	16.40
	%	100.0	98.1	107.1	134.0	88.3	X	X	x	x
Corn	thousands to	1,330	2,983	2,576	1,091	670	1,730	-15.75	997	57.64
	%	100.0	224.3	193.7	82.0	50.4	X	X	x	x
Potatoes	thousands to	6,731	7,152	6,981	4,417	5,396	6,135	-5.38	1,184	19.29
	%	100.0	106.3	103.7	65.6	80.2	X	X	x	x
Sugar-beet	thousands to	14,929	18,051	10,279	3,168	653	9,416	-54.27	7,442	79.03
	%	100.0	120.9	68.9	21.2	4.4	X	X	x	x
Apple	thousands to	3,931	3,077	3,491	2,566		3,266	-13.25	583	17.84
	%	100.0	78.3	88.8	65.3		X	X	x	x
Grapes	thousands to	3,256	3.79	3,624	3,067		3,332	-1.97	233	7.01
	%	100.0	103.8	111.3	94.2	0.0	X	X	x	x

Source: Faostat, accessed 15.12.2015, <http://faostat3.fao.org/download/FB/FBS/F>

It is interesting to found that during this period, 2012-2014, livestock presents insignificant decreases. Thus the sheep herds have increased by 32%, 17,858 heads in 2010 thousands to 13,505 heads in 2014 (annual rate of growth of 3.5%). Herds of cattle have had an annual growth rate of 1.29%. Herds of goats increased from 1,050 thousands heads in 2010 to 2,286 thousands heads in 2014, with an annual growth rate of increase of 10.2% (Table 10)

By the end of 2013, the total economic losses since the beginning of the conflict has been estimated at \$ 143.8 billion, which is equivalent to 276 % of 2010's GDP in constant prices. Capital stock damaged of 64.10 billion \$ accounted for 45% of this loss[18].

Syria, however, continues to be a place where

many thousands of activists are fighting against violence, resist in the name of self-determination, freedom, citizenship, equal opportunities and social justice.

The events that followed in Syria after 2011, there were complex especially by internal conflict, militarization and its internationalization. This fact has determined ONU that in January 2013 to declare the crisis from Syria at level three (L3), being the highest level of humanitarian crisis ever launched by the United Nations[13]. The commune analysis of the three bodies aims to provide a common understanding of the situation, ready to use, to save time for the evaluation teams and to avoid activities duplication. The work of the three bodies materialized in the "Report Commissioned IASC by the Inter-Agency Humanitarian

Evaluations Steering Group as part of the Syria, Syria Crisis Common Context Analysis”, edited in May 2014[10].

The report reviews the history of the Syrian territories after World War I, and how these territories were divided by the San Remo Conference of 1920, which granted France the mandate for North Syria "(Lebanon and Syria), and Great Britain a mandate for" Southern Syria "(today's Israel, the Palestinian territories, Jordan and Iraq)[10].

In 1920, the French authorities have created other States: Lebanon (Lebanon), Damascus, Aleppo, Alawite. In 1921 they also created the State of Jabal and Alexandretta, which was transferred to Turkey and became the province of Hatay, where today many Syrians refugees fled recently.

In 1943, when the Arab Republic of Syria won formal independence, it was the result of a merger between the progressive States of Damascus, Aleppo, the Alawite and Jabal Druzes.

The report describes a mosaic of peoples of Syria which has been enriched by the smaller ethnic communities, such as Circassians, Turkmen, Armenians and Syrians, and according to different religious professions, such as the Twelver Shia, Druze, Ishmaelites, Melkites Christian, Maronites, Chaldeans, Copts, Protestants and Jews. There were also significant populations of refugees from neighboring countries and who worked in Syria. A population of 500,000 Palestinians have lived in different communities. A smaller population and more recent refugees almost 63,000 Iraqis have been integrated in the Syrian cities.

The report considers the 2011 crisis from Syria, as a political crisis in a highly developed country in relation to most of the countries in the region, but that has been vulnerable economically and politically. The drought in 2010, had an adverse impact, who had been warned by the The United Nations, concerning the 2.3 million Syrians are being affected by the poverty extreme "[11]. In this case migration was not the only from the rural toward the periphery of the city, but also from the city center into the suburbs. Many of the Sunni bourgeoisie families were no longer

able to sustain the standard of living in the city, where rents have increased in competition with new Iraqis refugee [2].

It is worth noting that in response to the requirements of democratization in spring 2011 was abolished the martial law (April 2011). The President of Syria, has indicated its intention to launch a "national dialogue" (May 2011) and promised "reforms". These included a new electoral law (July 2011), a new press law (august 2011) and a new Constitution (February 2012)[12].

However, these steps have not resolved the crisis. The Civil Uprising became militarized in autumn 2011, with the creation of the Syrian Free Army (FSA) made up of deserters, mostly Sunni from Governmental Army, who fled to Jordan and Turkey. Initially, these groups have used guns taken from the raids against the Government army. Subsequently pro-Western regional powers have begun to organize and support many different FSA parts, with weapons and money [15].

Another report points out that the international military interventions have been proven not to be a support to a democratic, representative and effective change. The human and economic cost of such intervention was not justified by the results that have emerged in many cases around the world, the most recent example being Iraq. The exacerbated sanctions have caused economic and social losses, including the damage to Syrian household welfare and especially to poor and vulnerable families. Moreover, the sanctions have hindered Syria's development and progress, mainly through restrictions on trade and financial transactions, including imports of vital goods [8].

CONCLUSIONS

1.Positive effects resulting from the agricultural policies and development plans

-Government programmes applied in Syria have done to grow areas taken into cultivation and irrigated areas.

-The realization of strategic stocks of crops (wheat, corn, cotton), most fruits and

vegetables (olives and olive oil) and others and a surplus for export.

-The completion of important steps to improve living conditions in rural areas and in the city, the increase of food goods food components per capita, for example, the increase in the number of calories per capita from 2,350 calories/day in 1970 to around 3,200 calories per day in recent years.

-The increase in the contribution of primary and processed agricultural products for export.

-Development of infrastructure in rural areas to ensure services for the agricultural sector (agricultural roads, electricity, water, communications, transport and storage, etc.).

-Development of educational services and for consultancy that addresses the agricultural sector (education, guidance, vocational training, health and veterinary protection, etc.).

2.The negative effects resulting from the agricultural policies

-Significant reduction in fertility by area pollution of soil and water resources.

-Reduction of water resources, in particular groundwater as a result of random drilling of wells and unbalanced or unscheduled pumping.

-Natural pasture degradation and the desert advancing as a result of plowing, irrigation, of the random machinery movement.

-Fragmentation of agricultural properties up to exploitation and automation prevention limit.

3.Issues and challenges that the agricultural sector faces

-Limitation of the main natural and agricultural resources (water and land) and their impact on environmental factors and climate.

-Demographic development and employment occupancy in the agricultural sector.

-Fragmentation of agricultural properties.

-Reduced volume of financial resources and the fear of investors moving towards the agricultural sector due to the big term of investment recovery and the crisis in which the country is in

-The Subsidies for agricultural products in other countries, what is causing the increase in competition?

-Issues related to policies affecting directly or indirectly the agricultural sector (such as financial policies, exchange rates and tariff policies)

4.The effects of the crisis on the country's development

-Political Dissension have made their mark on some projects of great importance for the economy of Syria, such as the association agreement between Syria and the EU, whose negotiation process was completed in December 2003 and was initiated in October 2004 but has not been implemented, because at the request of France, the ratification procedure has been frozen as a result of the assassination of former Lebanese Prime Minister Rafik Al Hariri; Syria's adherence project to OMC, which opposed the United States, which argued that Syria does not recognize the State of Israel.

-It is considered that 28.3% (6.8 billion dollars) of the total GDP in 2011 and 2012 loss was due to the impact of sanctions ^[23].

-The applied financial sanctions on Syria as a result of internal upheaval that took place starting in spring 2011.

-Internationalization of the conflict following the intervention of the region states and the international powers had devastating effect on economic and social activities and whose solution is hard to predict.

REFERENCES

- [1]Ababsa Myriam, 2016, Contre-réforme agraire et conflits fonciers en Jazîra syrienne (2000-2005)
- [2]Balanche, F., 2012, Géographie de la révolte syrienne, in «Outre-terre», 29, 3, 2012, pp. 437-458; Ahmad Taysir, Limadha shta'lat ath thawra fi rif Dimashq?, in «Orient-News», October 15, 2012 (<http://goo.gl/PWYw9>)
- [3]Bianquis Anne-Marie, 1989, La réforme agraire dans la Ghouta de Damas, <http://books.openedition.org/ifpo/5109>
- [4] Bejan, M., Bălan I., Bejan B., 2010, Amenajarea Eufratului în Siria , <http://stiintasiinginerie.ro/wp-content/uploads/2014/01/7-AMENAJAREA-EUFRATULUI-ÎN-SIRIA.pdf>
- [5]Cribb, J., 2011, O noua amenintare: Securitatea globala in fata insecuritatii alimentare, <http://2blackjack1.wordpress.com/criza-alimentara-mondiala/o-noua-amenintare-securitatea-globala-in-fata-insecuritatii-alimentare/>
- [6]Duckham,1945, British Archives, SUP/OA/310 F,

Middle East Agricultural Council, Syria and Lebanon Agricultural Policy, Minute on the letter from Dr K.H.A. Murray to Spear's Mission by Mr. Duckham, 16 janvier 1945.

[7]Ianchovichina Elena, et al., 2015, Économie en croissance, bonheur en déclin: le paradoxe du monde arabe,

<http://blogs.worldbank.org/arabvoices/fr/developing-growing-less-happy-what-explains-paradox-arab-world>

[8]Rabie, N., Zaki, M., Khalid Abu, I., 2013, Socioeconomic Roots and Impact of Syrian Crisis, The Syrian Center for Policy Research, socioec-impavct-ian2013.pdf-Adobe Acrobat Reader DC

[9]Romain de Tarlé, 2014, La Syrie à la recherche d'un modèle de développement: la question agricole, de l'indépendance aux premières réformes agraires (1946-1958), p. 33-58,

<http://books.openedition.org/ifpo/6543>

[10]Slim, H., Trombetta, L., 2014, Syria Crisis Common Context Analysis, United Nations Office for the Coordination of Humanitarian Affairs, New York 2014, United Nations Headquarters, New York, NY 10017

[11]Starr, St., 2012, Revolt in Syria. Eye-witness to the uprising, Hurst & Company, London

[12]Zein, D., 2011, The 'New' Syrian Media Law is Nothing New, in Committee to protect journalists (Cpj), September 7, 2011 at

<http://cpj.org/blog/2011/09/the-new-syrian-media-law-is-nothing-new.php>

[13]***ALNAP (Active Learning Network for Accountability and Performance); UNEG The United Nations Evaluation Group (UNEG); OECD Development Assistance Committee (DAC), the appeal is available at <http://fts.unocha.org> adoptata de Adunarea Generala a Organizatiei Natiunilor Unite la 10 de septembrie 1948

[14] ***Declaratia Universala a Drepturilor Omului, <http://legislatie.resurse-pentru-democratie.org/legea/declaratia-universala-a-drepturilor-omului.php>

[15]***Local Coordination Committees, "Messages to the Syrians", August 29, 2011 (<http://goo.gl/HFQZ9>).

[16]***MAE, 2013, Îndrumar de afaceri Republica Araba Siriana 2013, <http://www.mihailovici.ro/archives/4070>

[17]***Siria, leaganul civilizatiilor, 2010, <http://www.daciccool.ro/locuri/de-pretutindeni/1384-siria-leaganul-civilizatiilor?start=4>

[18] ***Syria, Squandering Humanity Socioeconomic Monitoring Report on Syria, Combined third and fourth quarter report (July – December 2013).