

Syria's Agricultural Development. Current realities and historical roots

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Agriculture in the Syrian Economy

Agriculture has long been a cornerstone of the Syrian economy. Despite a devastating drought that started from 2006 and lasted in some respects to 2010, leading to mass rural urban migration, the rural population of Syria remained just under 50%. Agriculture made up as much as 27% of the GDP in 2001. Remarkably despite falling to 17% of GDP in 2010 it still made up more than twice the share of manufacturing which contributed 7% of total Syrian GDP in 2010 and employed more people (793,000 workers in manufacturing; 655,000 in agriculture). The impressive resilience of the Syrian economy despite the crisis can be attributed in large part to the agricultural sector. Even by late 2014 the sector continues to provide food and income to a substantial sector of the Syrian population preventing further displacement.

Over the past decades, Syria's key crops were cotton, wheat, sugar beets, barley, and olives (with olives and cotton being key commodity exports). Syria was the world's fifth largest olive exporter in the world prior to 2011, and the crop covered 65% of area planted by fruit trees. Despite an image as a desert country, with around 0.22 hectares of arable land per person, and its 25% of arable landmass, Syria is more fecund on both indicators than countries such as the United Kingdom, China, or Colombia². The latest estimates (pre-2011) showed that 36% of Syria's land is arable while other areas are considered non-arable and steppe suitable for sheep grazing. The latter is considered one of Syria's most important agricultural activities. There are estimates of 15 million heads of sheep even today with the famous and expensive Oweis sheep trade being a big source of foreign exchange, bringing in an annual USD 450 million annually and employing 150000 families in the Al-Badia steppe region.

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² World Bank Databank

At the same time, cycles of wet and dry years form a structural part of the Eastern Mediterranean climate. From 1900 until 2005, there were six droughts of significance in Syria: the average monthly level of winter precipitation during these dry periods was approximately one-third of average levels. All but one of these droughts lasted only one season; the exception lasted two. Historically, the effects of these droughts on rural populations have been mixed. On the one hand, farmers have been able to cushion the blow of drought periods through government subsidies and secondary resources such as wells; on the other hand, livestock losses of up to 80% and urgent food shortages have also been reported³.

Whatever comparative indicators one uses, there can be no doubt that the recent drought has impacted Syria on a scale unlike anything recorded in the last century: beginning in 2006 and continuing until the present, the drought has lasted eight seasons, with most of the country receiving just half of the precipitation of an average year⁴. As of 2010, over 75% of Syria's agriculture sector experienced total crop failure, and wheat and barley yields have dropped by 47 and 67 percent, respectively⁵.

The drought and consequential food and employment crisis wrought social and economic devastation, especially on the areas that were already the least equipped to mitigate its effects. Al-Hasakeh, Al-Raqqa, Rural Aleppo, and Deir Ez-Zor are the top four wheat-producing provinces, accounting for three-fourths of production, and were also some of the poorest regions of Syria well before the current drought⁶. A 2010 UN report from last year estimated two to three million people had been driven into extreme poverty, driving tens of thousands of rural Syrians to leave the countryside every month to seek work in the already-crowded metropolises of Damascus, Aleppo, and Homs⁷.

Difficulties in accessing the farms, destruction of the production machinery such as tractors, harvesters etc., irregular irrigation schedules due to large water and power cuts, increased prices of the raw materials and lack of routine drugs, vaccines and veterinarians affected to a great extent the agriculture sector.

There have been steep declines in production, investment and trade. Output is also way down, including of wheat, barley, and fruits and vegetables. Syria already experienced a severe drought from 2006 to 2010, leading [some to make a link](#) between climate change, water shortages,

³ Mohtadi, Shahrzad. "Climate Change and the Syrian Uprising." Bulletin of the Atomic Scientists. August 2012. <http://thebulletin.org/climate-change-and-syrian-uprising>; De Chatel, Francesca. "The Role of Drought and Climate Change in the Syrian Uprising: Untangling the Triggers of the Revolution." Middle Eastern Studies. 2014. <http://www.tandfonline.com/doi/pdf/10.1080/00263206.2013.85007>

⁴ Gladstone, Rick. "Syria: Drought Adds to Woes, U.N. Says." New York Times. June 2014. http://www.nytimes.com/2014/06/07/world/middleeast/syria-unesf-says-drought-adds-to-safe-water-woes.html?_r=0

⁵ Erian, Wadid et al. "Drought vulnerability in the Arab region: Special case study: Syria." Global Assessment Report on Disaster Risk Reduction. 2011. http://www.preventionweb.net/english/hyogo/gar/2011/en/bgdocs/Erian_Katlan_&_Babah_2010.pdf

⁶ Erian, Wadid et al. 2011.

⁷ "Syria: Drought driving farmers to the cities." IRIN news. 2009. <http://www.irinnews.org/report/85963/syria-drought-driving-farmers-to-the-cities>

and the uprisings there and elsewhere in the Arab world. Yet others, such as Francesca de Châtel, argue that these discussions distract from the [long-term mismanagement and overexploitation](#) of the region's water resources, particularly since the 1990s.

Wheat yields, long a major source of food security, have shrunk over the last several years by 30-50 percent and in 2012 were estimated to disappoint the already low expectations by 40 percent. The livestock and poultry sectors have suffered badly, according to a June 2012 UN Food and Agriculture Organization report, fueling a rise in the prices of meat, milk, chicken and eggs by as much as 300 percent in some areas. The FAO concluded then that the "household-level food security of about 30 percent of the rural population," not to mention the families of internally displaced now living in and around the cities, was perilously compromised. All told, the UN agency said, about [3 million people](#) required urgent assistance to put enough food on the table.

The World Food Programme (WFP) warned that this year's rainfall is less than half the annual average. The resulting drought -- particularly in the northwest of the country -- could place about [2.3 million Syrians in need](#) of emergency food aid. That number would be in addition to the 4.2 million already dependent on aid, for a total of 6.5 million.

Either way, the food security policy that was a hallmark of the Syrian regime is unlikely to survive the war. After being the only country in the region that was self-sufficient in food production, the state is now [a net importer of wheat](#). Before the uprising Syria had a "strategic reserve" of wheat estimated at around 3.5 million tons, roughly equivalent to one year's consumption, and mostly stored in areas now outside regime control. In 2013, the government is reported to have imported about [2.4 million tons of wheat](#). These changes imply a bleak future for the Syrian countryside and suggest that the millions who have been displaced from the rural areas may never return there.

Rural Origins and Regime Policy

The rural origins and orientation of the Syrian regime can be traced back to the emergence of the first agrarian party in Syria's history which coincides very nicely with the periodization in the title of this workshop. The party that would later be renamed the Arab Socialist party, was founded in 1939 as Hizb-ish-Shabab or the Youth party. Its agrarian orientation was affirmed by 1943 when its motto became "Hatu al-Quffah wal Kurek lina'sh al Agha wal Bek" (Fetch the basket and the shovel for the burying of the Agha and the Bey.) The party's origins were in Hamah and its surroundings the town even then boasted a long history of dissent dating back to the 18th century when the town destroyed the House of Qarnas in a bloody rebellion.

Led by Akram Hurani, it was the Arab Socialist Party (renamed from Youth Party in 1950) and not the Ba'ath Party which initially radicalized the country side in Syria and carried with it the anti-oligarchic and Arab nationalist fervor (Batatu claims that of the 1200 Syrian guerrilla force that crossed from Syria to Palestine in 1948, 800 were from the Youth Party).

Not only did the Ba'ath Party not have deep roots in the countryside (its first Congress in 1947 of about 217 participants had only one laborer and one farmer) but all members of the Executive Bureau until the merger with Hawrani's ASP hailed from Syria's main cities. After the

merger of the Ba'ath and the ASP in 1952, the peasant constituency of the Ba'ath continued to grow and the influx of Druze, Alawi, Ismaili, and Christian students from (relatively well off) peasant origin also increased. (Batatu 1999)

Parallel to the rise of the Party and more decisive in terms of holding power was the rise of military officers from peasant and religious minoritarian backgrounds throughout the 1940s, 50s, and 60s, particularly Alawi officers starting in the mid-1950s. That the situation of the rural sector in Syria up to the mid-20th century's reform era was deplorable has been well documented. At least 60 percent of the rural population did not own any land and a further 20 percent owned individual landholdings of less than 10 hectares. Wage labor and sharecropping prevailed but the tenancy system was deplorable as contracts were terminated at will by landlords. The feudal landlords power and wealth was vast, and prior to 1958 holdings of 100 hectares or more comprised 50% of land under cultivation (with 25% of 500+ hectares) (Ahsan 1984).

The negative economic conditions of peasants were also worse for some such as the Alawi peasants, and some had taken in the early 20th century to selling or hiring out their daughters to indentured servitude of affluent (mostly Sunni and Christian) city and townspeople. Reforms initiated during the UAR and subsequent Ba'ath era changed this landscape in many important ways. The September 1958 Agrarian reform laws set maximum landholdings of 80 hectares of irrigated land and 300 hectares of non-irrigated land. By the end of 1961, 670, 212 hectares had been expropriated and 148,000 redistributed resulting in 15000 additional families becoming owners of land.

The process of expropriation and redistribution continued as the Ba'ath came to power in 1963 as limits on private landholdings were lowered and differentiated by quality, location, and productivity. About 303,000 hectares were redistributed over the next decades but only 40% of expropriated land was eventually redistributed with much of the remaining land converted into state farms. Much of redistributed land granted usufructuary and inheritable rights to farmers but not formal land ownership. Many appropriations targeted Kurdish areas, particularly the Arab Belt project begun in 1973 which appropriated Kurdish land in Hassakeh and settled Arab cooperatives there instead.

Food Security and The Syrian Population

International organizations such as the World Bank have pointed to the Syrian population boom coupled with the Assad regime's insistence on "food security" as the pipe dream that brought about an untenable situation in Syria's countryside: "Food independence is impossible for a country like Syria to achieve. With 22-million population Syria requires about 22 billion m³ of water annually to grow its food needs. Syria can provide only 15 billion m³ from irrigation and rain combined. The difference is being imported in the form of foodstuffs quietly without fanfare. The gap will get bigger as Syria's population grows."

This Malthusian analysis of Syria's drought however, seems dubious on two accounts: first, it seems to assume that the 15 billion m³ being used in Syria currently is being used *efficiently*, and secondly, it seems to ignore the myriad other factors which have contributed to the current

agricultural crisis in Syria which have less to do with a scarcity of resources, than they have to do with inequalities in their distribution and use.

Strategic Crops

Cotton is Syria's premier cash crop, providing for all domestic demand, as well as exported for textile production in Italy, Taiwan, and Turkey. It provides some form of employment to around one in five Syrians who are involved in either through its production, processing, or by-products; additionally, it is a crucial source of hard currency as Syria's largest export after oil. In the mid-1960s the Agriculture Cooperative Bank under the newly installed Baath regime would push Syria hard in the direction of increased cotton cultivation. The bank, which was the single source for direct production credits to farmers, confined itself almost completely to short-term financing, the bulk of which went to cotton farmers, in the form of seeds, pesticides, and fertilizers at subsidized prices. There was insufficient credit through the 1960s and early 1970s for farmers who did not grow cotton and for long-term loans for such needs as machinery or capital improvements. Until 1974, when it was superseded by oil as the largest Syrian export, cotton accounted for about one-third of Syria's total exports. The emphasis continues to the current day. By the late 1990s, cotton accounted for almost 50 percent of the agricultural sector's contribution to GDP. In the 200s, of Syria's agriculture subsidies (which account for a 4% of GDP), 65% goes to subsidized diesel fuel (for pumping water to irrigation, and 22.5% goes to direct cotton subsidies⁸.

The rest of the MENA region has seen growing share of cultivation of fruits and vegetables, often after the urging of international financial organizations like the IMF and World Bank, who argue that these "cash crops" are better suited to the climate, but Syria's movements towards the this production have been more reluctant.

Irrigation Practices

Syria's strategic crops tend to be highly water dependent and require intensive irrigation. For the entirety of Baathist rule in Syria, the government has exerted a huge amount of effort and money on large-scale projects to create more irrigated land, primarily using the Euphrates, but this spending sped up rapidly in the 1980s despite declining oil profits to fund such irrigation schemes. Between 1988 and 2000 alone, \$15 billion was spent on irrigation projects⁹, with land reclamation cost was estimated at around \$25,700 per hectare¹⁰.

The most famous of Syria irrigation projects is the Tabqa Dam, whose construction began in 1968. Located around 40 kilometers from ar-Raqqa, it was supposed to increase by 2000 the irrigated surface in the Euphrates Basin by 640,000 hectares. By 2000 however, only 124,000 hectares, or 19 percent of the target had been achieved in this salt-affected and drainage-poor

⁸ World Bank Data (data.worldbank.org)

⁹ Elhadj, Elie. *Experiments in Achieving Water and Food Self-Sufficiency in the Middle East*. London University. 2005

¹⁰ Saleeby, Suzanne. "Sowing the Seeds of Dissent: Economic Grievances and the Syrian Social Contract's Unraveling." *Jadaliyya*. 2012. http://www.jadaliyya.com/pages/index/4383/sowing-the-seeds-of-dissent_economic-grievances-an

Basin. Gypsum in the soil caused the irrigation networks to collapse. 43 percent of the land was identified by the World Bank as having drainage problems or potential to develop problems in the future. Furthermore, the dam meant that 25% amounts of the Euphrates water resources, which accounts for 65% of Syrian freshwater, were lost to evaporation. The losses are estimated 1.6 billion m³ annually, equivalent to the entire household water needs of the Syrian population¹¹.

The government has done little to incentivize any modernization of the irrigation types used in farms. Though the amounts of loans needed from for more efficient drip irrigation may vary from just from SYP 5,000 (US\$100) to SYP 18,000 (\$360) for small plots, government loans were difficult for farmers to acquire for a number of reasons: they had to have licensed wells, prove land ownership, and have a guarantor for the sum they were looking for. Furthermore, subsidies of diesel fuel costs in farming favored the continued use of outdated energy intensive irrigation techniques. In one non-governmental project where farmers in Salamieh region were offered small loans to modernize their farming techniques, farmers reduced their water usage by 30 percent and fuel usage by 64 percent. Productivity increased as farmers cut their work time in half, and yet increased yields by 60 percent¹².

Corruption in Agricultural Sector

Historically during droughts, lack of precipitation was mitigated by the use of water from wells and other underground sources, with few negative consequences. However, growing privatization of the agriculture sector, in the form of sales of large tracts of land to private agribusiness groups, has resulted in an inability to regulate water consumption on the part of these businesses. Although the state imposed a law in 2005 that prohibited the drilling of illegal wells, such forms of water supply abound despite ever-diminishing groundwater reserves. The water supply itself has become increasingly privatized as well. With forty-seven percent of wells going out of service in the ar-Raqqah region [source], for example, farmers must often rely on private contractors for water, the latter of which often undergoes insufficient treatment. "A lot of powerful people don't abide by the regulations, and nobody can tame them," said Nabil Sukkar, a Damascus-based economic analyst.¹³

The result has been a disastrously high level of water withdrawals, with freshwater being extracted at a rate of 229.32% of renewable resources in 2002, four years before the drought, a rate just under double that of the MENA region as a whole, and 27 fold that of the world average.¹⁴

Government Response to the Drought

¹¹ Saleeby, Suzanne. 2012.

¹² Starr, Stephen. "Syria: Ray of hope for drought-affected farmers." IRIN News. 2010.
<http://www.irinnews.org/report/88750/syria-ray-of-hope-for-drought-affected-farmers>

¹³ World Bank Databank. Worth, Robert. "Earth is Parched Where Syrian Farms Thrived." New York Times. 2010.
<http://www.nytimes.com/2010/10/14/world/middleeast/14syria.html?adxnnl=1&adxnnlx=1330449407-yAiPXrD1kQsKbG2Bb5A61A&pagewanted=1>; "Syria: Why the water shortages?" IRIN News. 2010.

<http://www.irinnews.org/report/88554/syria-why-the-water-shortages>

¹⁴ World Bank Data

The Syrian government's response to the drought has been inadequate. By 2010, four years in, it was reported to have developed a national drought plan that had not yet been put in place. Subsidies on irrigation heavy projects like cotton and wheat continued steadily. The drought was added to the lists of taboo subjects, with foreign journalists forbidden from reporting on the rural camps of farmers driven into destitution, or speaking with officials at the agricultural agency¹⁵. Chatel explains that the government began to aggressively push a narrative of Syria as an arid country, in which the government was in a tough fight against nature and needed time to 'modernize' its water technologies.¹⁶

In 2008, as revealed by Wikileaks, Syria's U.N. food and agriculture representative, Abdullah bin Yehia sought \$20.23 million in assistance from the U.N. to provide "seed and technical assistance to 15,000 small-holding farmers in northeast Syria," and emergency food assistance. Without such assistance (which was not provided), Yehia predicted that the household heads of thousands of farmers would be forced to leave the US, and "this social destruction would lead to political instability."¹⁷

Conclusions

This paper has provided a brief overview of the history and current realities of the agricultural sector in Syria. Moving forward there are several possible areas for further research. One is more historical research on specific agricultural projects through which one has the chance of illuminating larger themes for comparative purposes. One example is the Tabqa Dam whose story reveals the intersection of history, political economy, geopolitics in addition to use and misuse of agricultural knowledge. Another is focusing on particular themes. Syria had a relatively productive agricultural producer and was a center for knowledge production on agriculture with the unique International Center for Agricultural Research in Dry Areas (ICARDA) centered in Aleppo (until recently moving) which was established in 1977. Research on the impact of this knowledge production might shed more light on how the old international research funding schemes played a role in disseminating a certain type of knowledge. Similarly bringing insights from political economy research regionally or in other regions such as that on Green Revolution in India and surrounding environmental debates. Finally, a third option would be a critical reappraisal of decade leading up to the 'dignity revolts' in the Arab world and observing more closely the re-privatization schemes and agri-business approaches that began taking hold in Syria.

Appendix

Table 1: Top Agricultural Exports, Syria (in 1000s of USD) source: IMF, FAO

¹⁵ Forth, Robert. 2010.

¹⁶ De Chatel, Francesca. 2014.

¹⁷ "2008 UN Drought Appeal for Syria." Wikileaks. November 2008.
http://www.wikileaks.org/plusd/cables/08DAMASCUS847_a.html

Commodity	1990	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010
Cotton lint	152,900	170,330	194,308	170,126	273,078	194,920	186,507	164,341	170,675	77,839	123,664
Tomatoes	8853	9,753	51,875	45,675	78,045	76,778	34,230	28,650	152,924	124,456	179,715
Potatoes	10,033	70,369	18,732	13,412	--	10,033		--	--	32,575	51,604
Pistachios	---		24,131	40,707	12,394	6,416	----	--	--	--	--
Sugar Confectionary	7583	5575	10,002	10,151	6,012	5,527	7,070	10,069	30,977	47,277	98,935
Wheat	--	--	--	58,146	94,635	--	115,727	125,200	180,171	--	--
Grapes	--	--	14,313	13,483	17,830	14,254	18,425	--	--	--	--
Apples	--	--	--	--	8,073	7,738	6,714	10,453	76,302	49,067	72,951
Anise, Badian, Fennel, Corian	6,365	12,135	36,532	19,359	16,457	19,000	96,483	28,430	164,269	63,033	52,197
Olive Oil	--	--	--	16,103	--	--	10,096	37,673	167,461	147,469	65,225
Lentils	24,290	10,135	22,464	53,637	32,481	10,170	6,194	27,871	36,461	69,551	60,771

Imports over Time (in 1000s of USD)

Table 2: Top Agricultural Imports, Syria (in 1000s of USD) Source: IMF, FAO

Commodity	1990	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010
Sugar Products*	144,881	99,519	137,601	184,360	144,493	82,411	140,527	203,297	235,958	314,632	740,552
Maize	60,140	16,747	54,301	46,287	74,070	107,002	97,147	118,582	169,013	258,235	420,719
Cigarettes	--	--	51,157	26,327	8,798	8,397	25,928	58,324	73,523	44,864	299,496
Wheat Products**	266,636	103,475	48,650	--	--	--	--	19,865	23,324	80,183	232,206
Soybeans	24,471	33,270	53,389	56,361	94,492	56,674	73,020	132,952	124,487	232,628	403,620
Food Products***											
Y Milk****	4184	10830	17374	22878	31135	37,492	34,740	25,423	63,738	196,009	103,744
Pananas	--	--	150,879	20,274	20,283	21,850	16,632	25,690	37,208	56,697	89,627
Tea	30,096	3,298	36,283	40,587	34,542	36,485	55,128	58,727	53,799	70,125	69,758
Caté	5,699	6,997	13,370	15,985	14,233	63,092	13,743	15,351	--	--	--
Flower Oil	--	12,100	17,000	21,700	17,000	14,000	11,528	21,262	23,226	33,885	67,235

*Refined Sugar and Centrifugal Raw Sugar

**Wheat and Flour of Wheat

*** Soybeans, "Cake of Soybeans, Soybean Oil
***Whole and skimmed

[Source: <http://faostat.fao.org/site/342/default.aspx>]