



SYRIA

Agriculture and Food Security Monitoring System (AFSMS)

Bi-Monthly Bulletin

July – August 2021



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INTRODUCTION

The Bi-monthly Agriculture and Food Security Monitoring System (AFSMS) Bulletin is a FAO-Syria product, which regularly collects climatic, agricultural and food security contextual information, including the situation on crop, livestock, pasture, water supply and food security from various districts in the observed governorates and communities. The information is collected on a bi-monthly basis (i.e. once every two months), through discussions with key informants and input from FAO technical field staff. The AFSMS information portrays the prevailing situation in the community at the time of each bi-monthly AFSMS data collection cycle. The monitoring also and helps FAO and the sector better understand the agriculture situation and seasonal performance and outlook, including preliminary insights on food availability, access and coping mechanisms being adopted by the majority of households, due to lack of adequate food.

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HIGHLIGHTS



Syria does not normally have rainfall during summer, and if it does rain in summer, the rain falls in limited and scattered geographical locations, especially in the coastal and western regions. The impact and significance of this rainfall is quite limited on the agricultural seasons. Limited and varying amounts of rainfall were observed and recorded in several governorates during the second week of August 2021.



Temperature recorded for July and August 2021 was significantly higher than the long-term averages (LTAs) across all governorates, unlike in June 2021 where it was close to the LTA, either being slightly below or above the LTA.



In terms of water supply, the major water sources across the monitored sites are wells, dams, lakes and rivers. In July – August 2021, the water level in most water sources decreased from one region to another, compared to previous months. Compared with the same period last season, the water levels are generally lower across all governorates. North-eastern governorates continue to witness an acute water crisis due to the significant decline in the Euphrates River flow and increased depletion of water from wells and lakes whose level has decreased due to lack of rain.



Most food commodities namely legumes, vegetables, chicken meat, rice, eggs, sugar and vegetable oil were generally available but most households in the community are facing challenges in terms of accessing the available food items, including wheat flour. The major constraint is that the food items are available but expensive, limiting access especially for vulnerable smallholder farmers (VSFs) especially considering that the national average price of WFP's standard reference food basket increased by four percent between July and August 2021, reaching SYP 173,634 (USD 69 at the official exchange rate of SYP 2,500/USD). There was limited availability of subsidized bread recorded in most governorates.



Livestock activities remain an essential part of the farming system in Syria and an important source of household income. The health status and nutritional condition of most livestock, namely sheep, cattle, poultry and goat, is quite moderate. There was reported limited availability of veterinary services and low availability of pastures and animal feed for livestock consumption across all the monitored Governorates. The limited availability of green pastures, combined with the limited access to livestock feed observed in July and August 2021, compared to the same period last year, will most likely lead to an increase in demand and reliance on fodder. The livestock feed sold within the local markets and from farmer-to-farmer is quite costly for most vulnerable livestock keepers, considering the prevailing economic difficulties. The subsequent limited access to fodder and scarcity in some locations will most likely affect livestock condition, particularly animal health and nutrition. This will reduce the livestock market value and even milk and meat productivity. Furthermore, the prevailing shortage of livestock fodder is resulting in the distress sell of animals, in order to purchase feed for the remaining herds. During the monitoring period, there have been no reports of livestock mortality due to starvation or dehydration and FAO will continue to closely monitor the situation as it evolves.

1. GENERAL AGROMETEOROLOGICAL CONDITIONS

A. Precipitation;

Syria does not normally have rainfall during the summer months and if it does rain, it is mostly in the coastal and western governorates with limited rainfall amounts and impact on the summer agricultural season. In Syria, rainfall onset is usually at the beginning of September, with rainfall cessation usually expected end of May across most of the governorates and stability zones. In some seasons, rainfall usually continues until the end of June in the coastal governorates and the mountainous areas of some governorates, especially the western ones.

It was observed that from July – August 2021, there was no precipitation across all governorates during July 2021, while varying amounts of rainfall were recorded during the second dekad of August 2021 in some locations and governorates. The rainfall recorded is as follow; As-Suwayda (1.5 mm), Hama (between 3 and 13 mm), Tartous (between 5 and 23 mm), Lattakia (between 1 mm and 53 mm) and in Aleppo Governorate (between 2 and 17 mm).

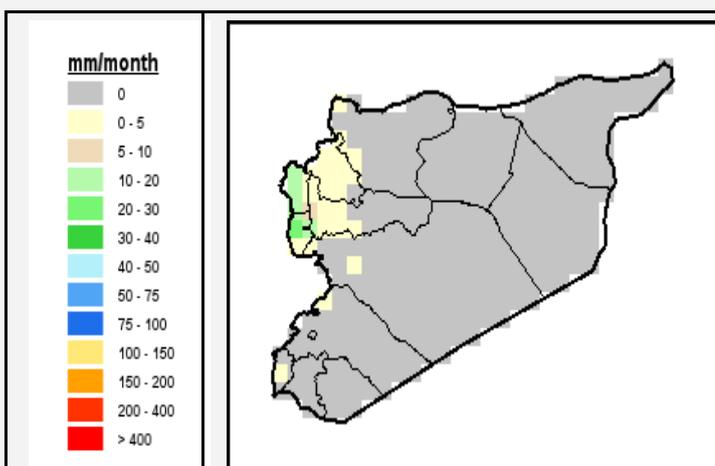


Fig 1: Precipitation amounts in millimeters for August 2021.

B. Temperature:

The ongoing monitoring of climatic indicators shows that temperature recorded for July and August 2021 was significantly higher than the long-term averages (LTAs) across all governorates, unlike in June 2021 where it was close to the LTA, either being slightly below or above the LTA.

All governorates witnessed three severe heat waves during July 2021. The first heat wave was experienced during the first week of July 2021, with the second being experienced in the third week of July 2021 and the third during the last week of July 2021. The temperature recorded across all governorates exceeded long-term averages by about 2.2 degrees Celsius (C°). In the western northern Governorates, the temperature

was quite severe and rose to 3.0 C° above the LTA. The least severe was in Damascus, where it was 1.3 C° higher than the LTA (figure 2).

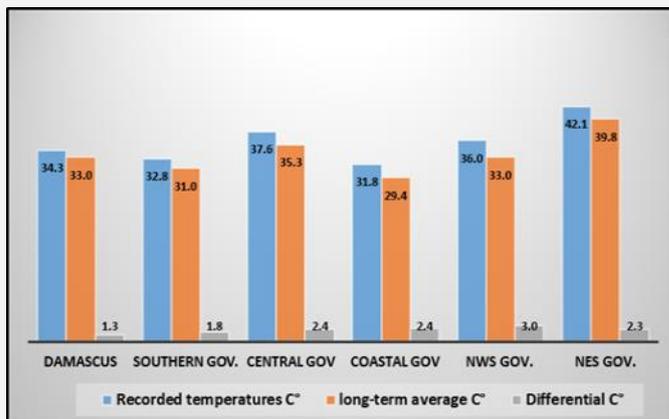


Fig 2: A comparison of temperature recorded in July 2021 with the LTA and its deviation from the averages.

In August 2021, there were two main heat waves in all governorates. The first heat wave was experienced during the first week of August 2021 and the second during the last week of August 2021. These two heat waves were characterized by a longer duration and were more severe compared to July 2021. The temperature observed across all governorates exceeded the LTAs by about 2.0 C°. It was most severe in the Coastal governorates reaching 2.6 C° above LTA¹. The heat wave was least severe in the western northern Governorates and was 1.3 C° higher than the average (figure 3).

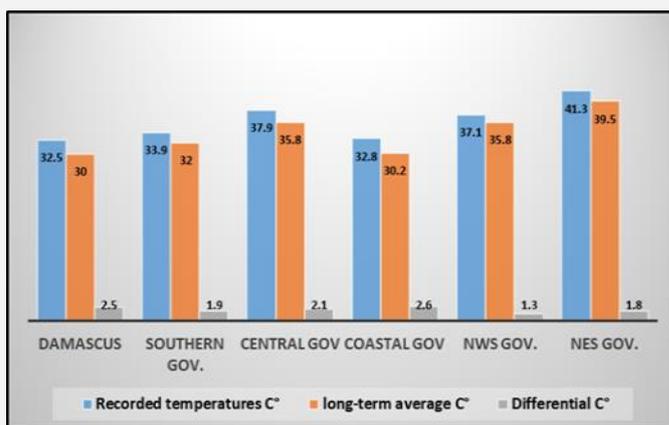


Fig 3: A comparison of temperature recorded in August 2021 with the LTA and its deviation from the averages.

1- In Coastal governorates, the severity of heat waves and temperature rise above LTA is one of the contributing factors to the spread of wild fires, as it is an important indicator for predicting fires in coastal areas.

2. PROGRESS ON THE 2021 SUMMER CROPPING SEASON:

After an erratic 2020/2021 agricultural season and prevailing water crisis, prospects for a good summer cropping season is not looking better especially for the intensified summer crops such as cotton, maize, soybeans, potatoes, summer vegetables, okra and mallow, olives and various fruits of all kinds (except citrus).

By the end of August 2021, the cotton crop planted reached the stage of maturity and harvesting is expected in September and October 2021. Most Sesame and sunflower crops were also reported to have reached physiological maturity by end of August 2021 and harvesting commencing in September up to October 2021. Soybeans, sugar beans groundnut and yellow corn growth stages ranged from grain filling, maturity and harvest, depending on the date of planting. For fruit trees, harvesting of almonds, grapes, walnuts and apples has been ongoing since July 2021, while olives were approaching maturity as observed during the July to August 2021 monitoring period.

The effects of the critical climatic conditions that prevailed during the 2020/2021 agricultural season have affected crop and livestock productivity during the summer season. The unfavorable climatic conditions resulted in increased demand for irrigation water in a context characterized by chronic water deficit in some governorates. The low water level for most of the irrigation sources, especially rivers and lakes, combined with the lack of and limited access to diesel has worsened the water situation. These prevailing challenges continue to increase production costs for irrigated cropping.

Obtaining irrigation water for summer crops and vegetables has become the most prominent challenge for farmers. At least 30% of land planted with vegetables in As-Sweida went out of production due to lack of availability of water. This was despite the farmers having planted seedlings. Furthermore, an estimated 50% of farmers in the northeastern regions, namely Al-Hasakah and Deir-ez-Zor, were unable to cultivate their land for summer cropping due to the low level of the Euphrates River and the water in the nearby dams. Okra, olives and beans crops in the southern and northeastern governorates were also affected by heatwaves, however, this did not significantly affect crop growth, development and overall production.

In terms of agriculture input markets, the continued increase in the prices of agricultural inputs continues to result in the escalation of production costs. The FAO Agriculture Input and Commodity Bulletin for July 2021 indicates that 18 out of 30 agricultural inputs recorded varied increases in prices². The rise in fuel prices, particularly diesel, not only affected water supplies, but also had a significant impact on agricultural operations namely ploughing, –fertilizer application, –pest management and harvesting. Furthermore, the prevailing fuel

shortages continued to affect transportation and marketing of products. This is resulting in an increase in overall production costs and subsequent rise in the prices of most agricultural foodstuffs.



Picture 1: Reducing soil moisture loss through mulching in Deir-ez-Zor governorate.

As for agricultural pests, the most prominent pests of economic importance observed during the monitoring period are the bollworm on cotton (*L. Helicoverpa armigera*), especially in the eastern regions and the Fall Army Worm (*L. Spodoptera frugiperda*) in maize and sorghum. Very few incidences of aphids (*L. Aphidoidea spp*) and whiteflies (*L. Aleyrodidae spp*) were reported and the pest population was quite low to result in any economic injury³. Wilt, spider mites and thrips also affected soybean production but the pest population density of red spider mites and thrips was quite low to cause any economic injury. There were also some reports of various fungal diseases affecting summer vegetables but the fungal spores carried over from previous infections and seasons were within the normal limits and did not pose any significant threat.

2-<https://fscluster.org/search?text=agriculture+input+and+commodity+bulletin+syria>
3-Economic-injury Level (EIL) is the lowest population density of a pest that will cause economic damage.

3. LIVESTOCK SITUATION AND CONDITION:

The prices of fodder are still rising, with the availability of pastures only coming from the dry crop residue. Due to the prevailing and deepening water crisis and erratic 2020/2021 season, the prices of crop residues including wheat and barley straw, have also risen sharply due to limited supply versus demand and most livestock keepers continue to face difficulties in securing fodder, especially in Dará, As-Sweida and the northern governorates⁴. For poultry breeders, the prices of feed for chickens also increased significantly in addition to the energy costs for cooling and lighting. This has resulted in most poultry farmers temporarily stopping production due to the high production costs, particularly diesel.

Veterinary services are available in most areas though the quality of the public veterinary services continue to operate below their pre-conflict capacity. Furthermore, the costs for accessing veterinary costs remain very high and many breeders have to depend on their expertise or on a telephone consultation. The telephone consultations are sometimes not free in some locations but a better option for most vulnerable smallholder farmers (VSFs) compared to the costs of bringing a veterinarian on site. Veterinary medicines are generally available but the cost is also generally high. This is resulting in limited access among most vulnerable livestock keepers. Fish farmers highlighted that they lack access to the necessary veterinary drugs that are specific for fish-related ailments and have to rely on poultry medicines.

The nutritional status of livestock herds ranges from moderate to weak in all the monitored locations, since most of the breeders began reducing the feed ration.

To cope with the shortage of and limited access to feed, livestock breeders are relying more on non-concentrated low quality feed and these drastic changes in the feed regimen will likely result in the emergence of diseases in livestock due to weakened immunity.

Due to the dire situation and worsening crisis, most livestock breeders are unfortunately left with no option, but to sell-off part of their herd in order to buy fodder. The depletion of livestock assets among vulnerable smallholder breeders is their resilience and eroding their capacity and ability to cope with the worsening food security and economic crisis.

4. NORMALIZED DIFFERENCE VEGETATION INDEX (NDVI):

Based on FAO Global Information and Early Warning System (GIEWS) satellite imagery, there is a noticeable improvement in the vegetation cover during August 2021 compared to June and July 2021 in most of the governorates. This observation was quite evident especially in the northern and coastal regions and this is attributed to vegetative growth of the various summer crops and vegetables. Despite the noticeable improvement, there is a general significant decline in vegetation compared to the previous season across most of the monitored governorates, especially for August 2021. This seems more evident in the northwestern regions, the northeastern governorates and Rural Damascus and As-Sweida. It is noteworthy that the Badia regions witnessed a clear decline in vegetative growth during the current season compared to the previous season, especially in Deir ez-Zor, Raqqa and Rural Damascus Governorates.

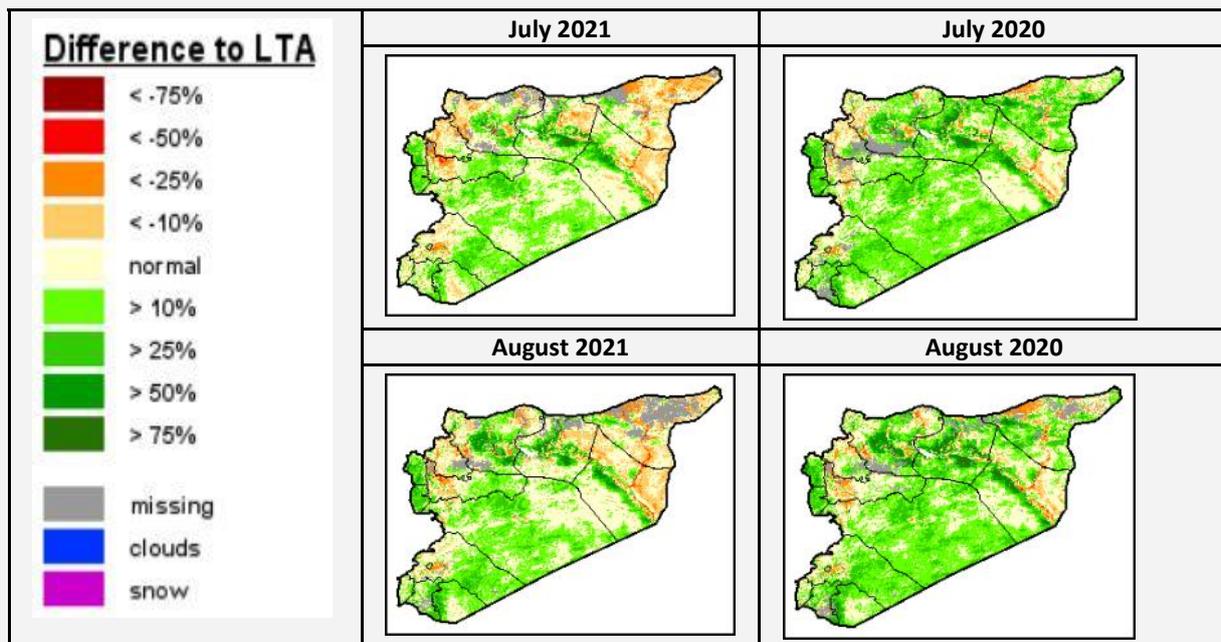


Fig 4: A comparison NDVI to the LTA for July 2020 and July 2021.

4- Refer to FAO's agriculture input and commodity bulletin for a detailed analysis of the price trends.

5. WATER SUPPLY SITUATION

In Syria, the major supply of water is from underground sources, rivers and reservoirs like lakes and dams. The current level of water storage for most water supply sources continued to decrease significantly from May to August 2021. This was the case especially in dams, where the water storage levels in most observed governorates decreased significantly. In August 2021, the water level in most dams decreased by almost 14 percent, on average, compared to June 2021 where a 23 percent decrease was noted in the coastal governorates. This was followed by Quneitra and the central governorates, which recorded a 20 percent decrease in the dam water levels. The lowest decrease in dam water level, of at least 5 percent, was recorded in Al-Hasakah governorate.



Picture 2: The reduced flow of water in Al-Khabour River (Al-Hasakah governorate) July 2021.

A comparison of the current level of water in most dams in Syria to the same period last season, there is an indication that the water level is, on average, 15% lower than last season. The most notable decline is in Al-Hasakah governorate, with an estimated percentage reduction of up to 25 percent, followed by the coastal governorates (23 percent). The lowest decrease from last season was in Ar-Raqqa (8 percent) and Aleppo (9 percent) as shown in the chart below.

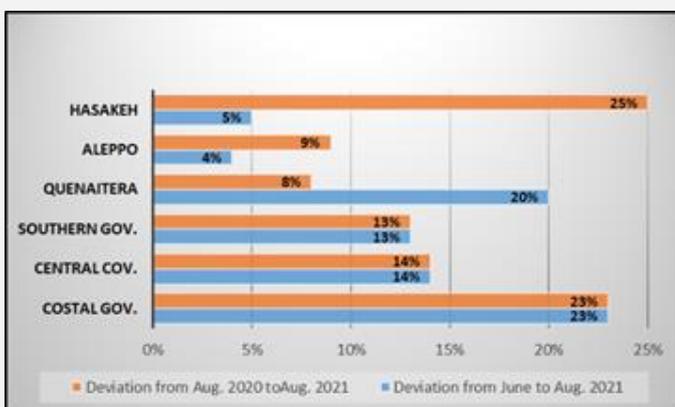


Fig 5: A comparison of the dam stock and water level during the 2020 and 2021 season

It is noteworthy that the southern governorates, namely Rural Damascus, Dará and As-Suwayda, suffer from a chronic shortage of water resources, and this deficit has been exacerbated during the current season. The current stock of water in dams is below 20% of the average storage capacity. This is due to the early cessation of rainfall in April 2021, the scarcity of snow, seasonal rivers running dry earlier than usual and severe heat waves that increased evaporation combined with the need for more irrigation water. Lattakia Governorate was affected this season by significant decreases in the level of water in wells and the severe decrease in the flow of rivers and springs. Northeastern governorates are also facing a severe acute water crisis due to the decline in the Euphrates River flow, reaching critical levels slightly above 200 cubic meters (m³)/second in July and August 2021. There were also reports of increased depletion of water from wells and lakes due to lack of rain. This has resulted in the deterioration of water quality due to increased salinity and pollution of water and the costs for accessing water for irrigation have risen sharply.

6. FOOD SECURITY AND COPING STRATEGIES

For the period July – August 2021 and in general, most families in the monitored communities mentioned that they were facing challenges in terms of accessing the available food items. The major reason cited is that the food items are quite expensive in the local markets. As mentioned under section 2, the high cost of agricultural inputs, for both crop and livestock production, has significantly affected the price of most agriculture food commodities, and this is worsening food access and dietary diversity, especially among vulnerable families who have no source of livelihoods or income.

The continued depreciation of the exchange rate of the dollar versus the Syrian pound (SYP), reaching just around SYP 3,350/USD in August 2021, coupled with energy shortages, water scarcity, a poor 2020/2021 agriculture season that resulted in food production losses, increased intensity and frequency of extreme weather events due to climate change, the limited availability and supply of electricity, gasoline, diesel and gas, continues to worsen the already dire food security situation elaborated in the 2021 Food Security Sector Humanitarian Needs Overview (HNO). Furthermore, the high production costs are also having knock-on effects on food prices, including bread, rice, eggs, chicken meat and vegetable oil even during the summer season. The continued and gradual increase of food prices due to the abovementioned contextual drivers continues to make food access more difficult.

The AFSMS for July – August 2021 concludes that food availability across Syria will require close monitoring and deeper analysis, especially considering the significant agricultural losses during the 2020/2021 season.

FAO is finalizing the limited Crop and Food Security Assessment (CFSAM-like) and the report will be disseminated once it is cleared officially by FAO management and relevant authorities.

Furthermore, based on routine field monitoring conducted by FAO, food access remains a key concern since most vulnerable families lack adequate financial resources or income to buy the food that is available in the market. Livelihoods have been adversely affected by the prevailing and protracted economic crisis and other contextual shocks and households were reported to be adopting various and desperate coping mechanisms (i.e. strategies), to deal with the worsening food availability and access. From the four regions (i.e. hubs) monitored by FAO, namely South, Homs/Hama, Northeast and Aleppo, there were reports of families mainly relying on various food-based reduced coping strategies (i.e. rCSI) to cope with the dire situation. Ranked according to significance, most families were relying on less preferred and less expensive foods, limiting portion size at mealtime and reducing the number of meals eaten in a day.

Disclaimer: The information contained herein, is based on FAO's Global Information and Early Warning System (GIEWS), collection of bi-monthly Agriculture and Food Security Monitoring System (AFSMS) data and triangulation of local weather periodicals. The data presented herein also captures results from field monitoring of crops, livestock and water resources done by FAO field staff. While FAO Syria strives to provide accurate and timely early warning information, there may be slight unintended technical or factual inaccuracies. Decisions based on information contained herein are the sole responsibility of the reader.

For more in-depth statistics and trends:

- FAO is finalizing an assessment on agriculture production for the 2020/2021 season and the key findings will be disseminated
- Refer to FAO Monthly Agriculture Input and Commodity Bulletins and WFP Syria Price Bulletins for information on detailed price trends for both agriculture inputs and food commodities.