



SYRIA

Agriculture and Food Security Monitoring System (AFSMS)

Bulletin

May – June 2023



INTRODUCTION

The Bi-monthly Agriculture and Food Security Monitoring System (AFSMS) Bulletin is an FAO-Syria product and system, which regularly monitors the agricultural and food security situation, including on crop, livestock, pasture condition, water supply and livelihood and its impact on the food security from randomly selected sub-districts and communities. The information is collected on a bi-monthly basis (i.e. once every two months), through discussions with key informants (KIs) and inputs from FAO technical staff in the field.

The AFSMS information portrays the prevailing general situation in the community at the time of each bi-monthly AFSMS data collection cycle and helps FAO and the Food Security and Agriculture (FSA) sector partners understand the prevailing agriculture situation, seasonal performance and outlook, including preliminary insights on food availability, access and coping mechanisms being adopted by the majority of households, due to the difficult economic situation.

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Food and Agriculture Organization

Damascus, Syria

KEY MASSEGES

- In general, the current rainy season was significantly better than the previous two seasons.
- Preliminary field monitoring and information indicate that although crop production for the current season is better than the previous two seasons, still it below the levels of production before the crisis.
- The scarcity of energy, as well as the low quality of agricultural production inputs and their high prices, as well as the destruction of infrastructure, especially irrigation channels, still pose major challenges for farmers to recover the agricultural sector and obtain better agricultural production.
- In addition to the decline in surface and groundwater stocks due to the decrease in rainfall during the previous two seasons, the decrease in the Euphrates River runoff during the critical months of the agricultural season constitutes an additional challenge for farmers in the northern and eastern governorates.
- The continuous change in the exchange rate and the rise in the prices of agricultural production inputs, especially fertilizers, herbicides, transportation fees, and automated operations, led to the failure to use production inputs at the recommended levels or to not use them at all, which reduces crop productivity and production quality,
- In addition, the continuation of high prices leads to a decline in the purchasing power of the majority of the population, and thus their adoption of negative coping strategies about health and food.
- The improvement of pastures in the Badia and marginal regions due to the appropriate rainfall during the season had a positive impact on the condition of livestock in general. With reference to the continued high prices of fodder and poor veterinary services

HIGHLIGHTS



Precipitation

The cumulative rainfall of the 2022-2023 rainy season (September 2022 - June 2023) was relatively low and less than the LTA by 25-35 % in most areas of Idlib, north and northeast of Al-Hasakah. While it ranged between acceptable and good in the rest of the regions and governorates, especially in Raqqa, Deir ez-Zor and most of the Badia regions, where precipitation exceeded the LTA by 30-40%.

In May, the received Rainfall was good and above the LTA by 10 - 40% in the coastal governorates, north of Al-Hasakah, Aleppo, west of Hama, northwest of Rural Damascus, and central and south of Sweida. While it was low and below the LTA by about 15 - 70 % in the rest of the regions and governorates.

In June, rainfall was confined to the western regions of the country and was higher than the LTA by 40 - 60 % in the coastal governorates, the western regions of the central, rural Damascus, and Sewaida governorates, while it was lower than the LTA by 30-60% in Idlib, Aleppo, Quneitra and the rest of the western regions of the country. As for the eastern governorates and the Badia regions, there was no rainfall recorded.



Water supply

During this reporting period, water stocks decreased compared to April 2023, across all governorates by 9 % in southern governorates, 5 % in the central, 10 % in the coastal, 4 % in Aleppo, and 2 % in Al-Hasakeh. (This is due to the regular annual launch of water from the reservoirs of dams and lakes into irrigation canals to irrigate crops, from mid-March to mid-May).

It is important to note that the current water level of the dams in Al-Hasakeh, Hama, Sweida, and Dara is critical, as it is less than 20 % of the dams' capacity storage; this means that the potential for dams to supply crop irrigation water during the summer months in the aforementioned governorates is very limited.

On the other hand, water reserves in June 2023 are lower than it in June 2022 across all governorates by 1% in Aleppo, 2 % in Al-Hasakeh, 8 % in the central, 12 % in the south, and 27 % in the coastal governorates.



Temperature

The daily average temperature recorded in May was about 0.1 C° lower than the LTA, and 0.4 C° in the central and southern governorates, respectively. While it was higher than the LTA by 0.7 C°, 0.8 C°, and 1.3 C° in the northeastern, northwestern, and coastal governorates, respectively.

In June 2023, the average daily temperatures recorded were slightly lower than the LTA in the central governorates, equal to it in southern governorates, while it was higher than the LTA in northwest, northeast, and coastal governorates by 0.5, 0.6, and 0.8 respectively.

It is important to point out that the large differences between day and night temperatures, in addition to the sharp temperature fluctuations during May, led to additional stress on crops and vegetables and affected their growth and productivity, as well as delayed the harvest of wheat and barley in several regions.



PROGRESS OF THE CROPPING SEASON

Preliminary information and field observation indicates that although the harvestable areas, whether for wheat or barley, as well as production are significantly better than last season because the amounts of rainfall were better than the previous two seasons, especially the late rains, however, it is certain that the production of the current season is less than the Pre-Crisis Average production. According to the Ministry of Agriculture and Agrarian Reform (MAAR), the harvested area of wheat crop up to the end of June 2023 for the current season reached about 1.14 million hectares, out of 1.335 million hectares wheat planted.

It is also important to note that most of the farmers across governorates continue to face challenges in terms of accessing fertilizers and fuel, due to the high purchase prices and the low availability of subsidized agriculture inputs. The acute shortage of fuel also presents significant challenges to farmers and has resulted in a continued and unpredictable rise in agricultural inputs prices and overall production costs, including an increase in the cost of farm labor and other field-level operations.

HIGHLIGHTS



Livestock

The good rainfall of April in most of the Badia regions improved pasture during May, and thus increased opportunities for herds of livestock to feed on grass in the safe and accessible areas of the Badia. In addition, the recently increased availability of crop residues. These facts led to an improvement in the nutritional status of most of the herds. However, the prices of some fodder commodities continue to rise, as the prices of Bran, meal, and concentrated poultry feed increased by more than 10% on average. While the prices of the rest of the fodder hay, barley, pastoral yellow corn, and pastoral wheat decreased by more than 10% on average. These price changes might not significantly affect the purchasing power of the livestock (poultry and small ruminants) herders, but at the same time, it leads to a further increase in production costs and, consequently, an increase in the prices of animal food products.

Poultry feed prices have recently risen significantly, including the total production costs, and this is mainly due to the scarcity of energy supplies (i.e. electricity and fuel) and high energy costs.

It is also mentioned that during the reporting period, no spread of communicable diseases or livestock epidemics has been recorded, as well as the sheep and goat breeding season was fairly good without major obstacles.



Food commodities

During the reporting period, a further decline was recorded in the exchange rate of the Syrian pound against foreign currencies and a significant increase in the prices of production inputs, agricultural and food commodities in general, especially basic foodstuffs. This has led to a further deterioration in the purchasing power of the majority of households and the inability to obtain sufficient nutritious food, especially for vulnerable and female-headed households.

Due to the decrease in the number of livestock available for sale resulting from a decrease in the livestock population, and on Eid al-Adha, which coincided with the reporting period, the prices of live livestock, as well as red meat, increased by 30-40 percent, which became out of reach for most families. The same applies to broiler meat and eggs as well, whose prices continue to rise steadily and have become unattainable, despite what used to be a haven for poor and medium families.

It is important also to note that the lack of availability of fuel and its high prices led to an increase in transportation and freight costs, and thus a significant increase in the prices of vegetables, fruits, dairy, and other food commodities, although they are produced locally, and this added another burden on families.

GENERAL AGROMETEOROLOGICAL CONDITIONS

1. Precipitation

1.1. Cumulative Precipitation;

At the end of February 2023, the cumulative rainfall for the 2022-2023 rainfall season (September – February 2023) was good in Ar-Raqqa and exceeded the LTA by 23 percent, and very close to the LTA in the costal governorates. However, it was low to very low in the rest of the governorates, especially in Al-Hasakeh, As-Sweida and most regions of Aleppo, Deir ez-Zor and Idlib governorates where it was 35 %, 30 % and 25 % less than LTA respectively. See figure: 1

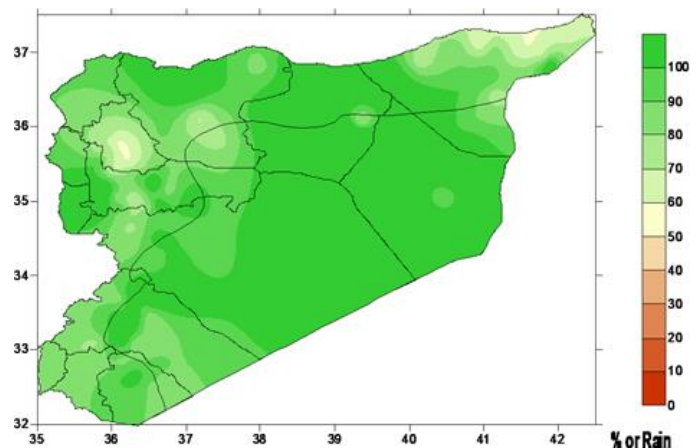


Figure 1: The ratio of cumulative rainfall to the LTA for 2022-2023 season (LTA) from Sep 2022 – June 2023.

Source: Analysis of precipitation data from official daily rainfall bulletins.

1.2. Monthly precipitations

May 2023:

In May 2023, the received Rainfall was good and above the LTA by 10 - 40% in the coastal governorates, north of Al-Hasakah, Aleppo, west of Hama, northwest of Rural Damascus, and central and south of Sweida. While it was low and below the LTA by about 15 – 70 % in the rest of the regions and governorates, especially Raqqa, Deir Al-Zour, Rural Damascus, and the Badia regions.

In the first dekad of May 2023, the recorded precipitation was limited to the coastal governorates and very limited areas in the north of Aleppo, Qunaitera, and the central of Sewaida, where it was good and above the LTA by 10 – 35%. While precipitation was very scarce or did not exist in the rest of the regions and governorates.

In the second dekad the precipitation was also limited to the coastal governorates, the western areas of Idleb, and central governorates, and limited area in Dara governorate,

In the third dekad of May, rainfall prevailed in most of the governorates, where it was heavy and higher than the LTA by 30-60%, while it was scarce or non-existent in most areas of Deir EzZor Governorate, Rural Damascus, and the Badia regions (see Figure 2).

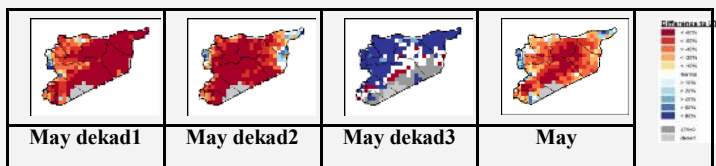


Figure 2: Estimated Precipitation Anomaly during May 2023.
Source: Global Information and Early Warning System on Food and Agriculture (GIEWS)

June 2023:

In June 2023 Rainfall was confined to the western regions of the country and was higher than the LTA by 40 – 60 % in the coastal governorates, the western regions of the central, rural Damascus, and Sewaida governorates, as well as the eastern area of Dara, while it was lower than the LTA by 30-60% in Idlib, Aleppo, Quneitra and the rest of the western regions of the country. As for the eastern governorates and the Badia regions, there was no rainfall recorded.

In the first dekad of June 2023, Rainfall was confined to limited areas in northwest Latakia, north of Aleppo, southwest of Homs, and west of rural Damascus, as it was above the LTA by 50 % in average. While no precipitation was recorded in the rest of the regions and governorates.

During the second dekad, Precipitation in the coastal gover-

norates and the western regions of Idlib, Hama, Homs, and Dara were higher than the LYA by up to 50%, while it was very low in Aleppo, rural Damascus, Quneitra and the rest of the central governorates and Dara. Conversely, there was no precipitation in the northeastern governorates and the Badia regions.

In the third dekad of June 2023, Rainfall was limited to the coastal governorates, Idlib, Quneitra and the western regions of Aleppo and Hama, and it was very low and did not exceed 20% of the LTA, while the rest of the regions and governorates did not receive any rainfall (see Figure 3).

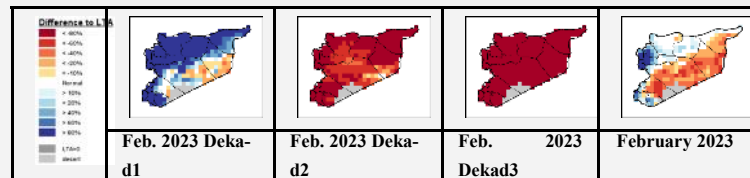


Figure 3: Estimated Precipitation Anomaly during June 2023.

Source: Global Information and Early Warning System on Food and Agriculture (GIEWS)

An overview of the temporal and spatial distribution of rainfall during the 2022-2023 rainy season

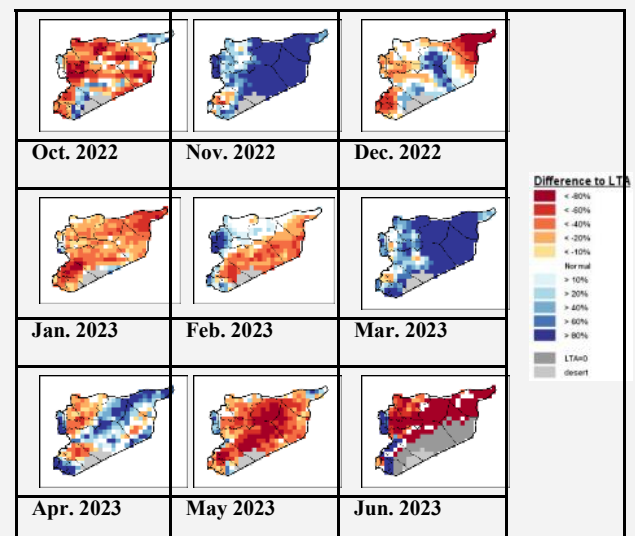


Figure 4: Estimated Precipitation Anomaly during the 2022-2023 rainy season

Source: Global Information and Early Warning System on Food and Agriculture (GIEWS).

Although the amounts of cumulative rainfall for the current season ranged between acceptable and good in most governorates, their temporal distribution was not entirely appropriate (As indicated in Figure 4). As most of the governorates witnessed a significant decline in rainfall during September-October. Note that the aforementioned two months are not among the main months of the rainy season, but their rains are important to improve soil moisture and nourish surface and groundwater reserves, as well as to improve the growth of the roots of grasses and pastoral plants in the Bdia region.

After the high amounts of precipitation that all governorates

governorates by 2.5 – 3 C°. In the third dekad the temperatures were higher than LTA by 2 – 3 C° in al-Hasakeh, the northwest area of Raqqa, and north and south areas of Deir Ezzor, while it was close to the LTA in the rest areas and governorates (see Figure 7 below).

Noting: that the highest daily temperature recorded during June was 44 C° in Al Bukamal/ Deir Ez Zor, and the lowest was 19 C° in Sargaya/Rural Damascus (see Figure 8).

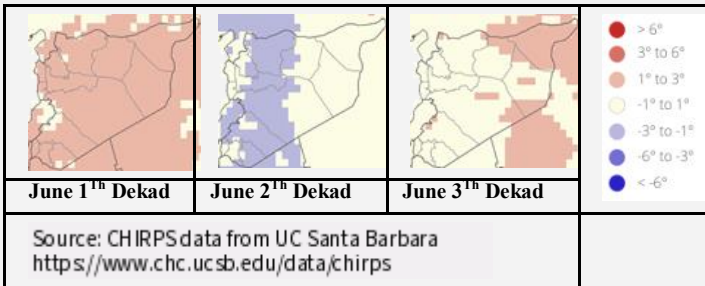


Figure 8: The estimated temperature deviation from its dekadal LTA in June 2023.

An overview of temperature development during the 2022-2023 season

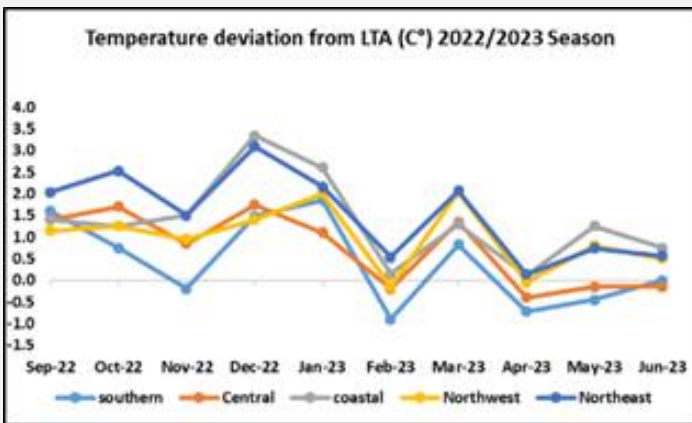


Figure 9: Evolution of diurnal temperatures in the 2022-2023 season
Source: Analysis of the temperature recordings done by FAO technicians based on the official daily weather bulletins.

As indicated in Figure 9, temperatures continued to be higher than the LTA throughout the season in the northeastern and coastal governorates, while they were higher than average in the southern, central, and northwestern governorates for most months of the season, with the exception of February, April, and May, when temperatures were significantly lower than the LTA.

It is noteworthy that the great temperature fluctuations during April and May, the large difference between night and day temperatures, the night frost in most governorates during February and March, and the rapid and sudden transition from cold weather to hot weather and vice versa during the season had a significant impact on the growth of crops and vegetables and their productivity.

SECTION B: NORMALIZED DIFFERENCE VEGETATION INDEX (NDVI)

The vegetative cover naturally declined in most governorates and Badia regions during May – June 2023 compared to April (where vegetation is usually at its peak). In June, the vegetation cover fell below the LTA by 15 – 30 % in most of areas of Al-Hasakeh, east of the Euphrates in Deir Ezzor, Hama, As-Suwayda, and rural Damascus, while it remain close to LTA and higher by 15 - 25 % in the rest of the regions and governorates, especially in the costal governorates and southern regions of Raqqa.

In general, the vegetation cover was acceptable to good in most regions and governorates, and better than the LTA compared to the previous season, throughout the season (see Figure 10).

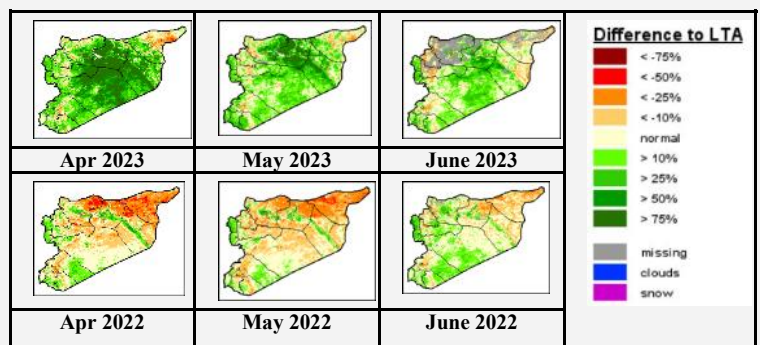


Figure No. 10: The development and presence of live green vegetation during the 2022-2023 agricultural season.
Source: Global Information and Early Warning System on Food and Agriculture (GIEWS)

SECTION C: WATER SUPPLY SITUATION

During this reporting period, water stocks decreased compared to April 2023, across all governorates by 9 % in southern governorates, 5 % in the central, 10 % in the coastal, 4 % in Aleppo, and 2 % in Al-Hasakeh. (This is due to the launch of water from the reservoirs of dams and lakes into irrigation canals to irrigate crops, from mid-March to mid-May).

It is important to note that the current water level of the dams in Al-Hasakeh, Hama, Sweaida, and Dara is critical, as it is less than 20 % of the dams' capacity storage; this means that the possibility of dams providing crop irrigation water during the summer months in the aforementioned governorates is very limited.

On the other hand, water reserves in June 2022 are higher than it in June 2023 across all governorates by 1% in Aleppo, 2 % in Al-Hasakeh, 8 % in the central, 12 % in the south, and 27 % in the costal governorates (see Figure 11).

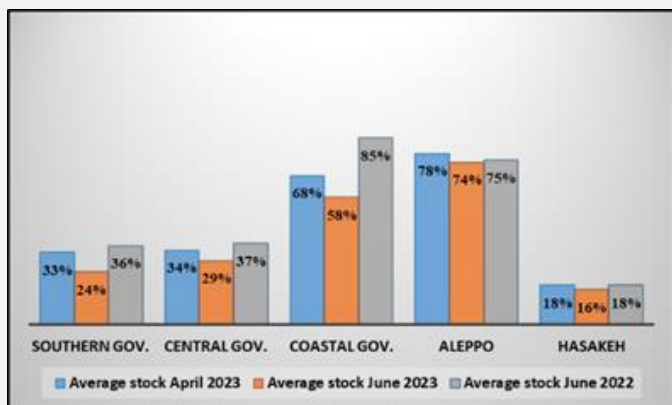


Figure No. 10: Graphical comparison of water stock of dams in the 2021/2022 season and the 2022 / 2023 season.

Source: Analysis of Monthly Bulletin of Drought Monitoring (MBDM) from MAAR.

SECTION D: SUMMARY ON PROGRESS OF 2022/2023 CROPPING SEASON

The barley harvest began in the first week of May in most of the governorates and continued until the end of June, while the wheat harvest began in the last week of May in most of the governorates and is still ongoing up to date of this report.

According to the Ministry of Agriculture and Agrarian Reform (MAAR), the harvested area of wheat crop up to the end of June 2023 for the current season reached about 1.14 million hectares, out of 1.335 million hectares wheat planted which is equivalent to 85% of the area cultivated with wheat. As the harvested area of barley amounted to about 1.11 million hectares, which is equivalent to 88 % of the area cultivated with barley for the current season, which amounts to 1.266 million hectares (see Figure 12).

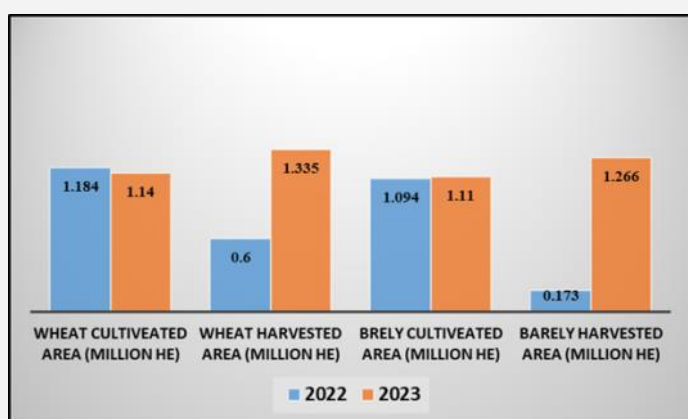


Figure No. 11: Graphical comparison of area planted with Wheat and Barley in the current 2022 – 2023 agricultural season, compared to the previous 2021–2022 season

Source: MAAR and FAO field monitoring reports

The Sunn beast and yellow rust spread in wheat fields in many governorates, especially in Al Hasakeh, Aleppo, rural Damascus, and Hama, where the Plant Protection Directorate teams started to control and limit the spread of infections. Preliminary information and field observation indicates that although the harvestable areas, whether for wheat or barley, as well as production are signifi-

cantly better than last season because the amounts of rainfall were better than the previous two seasons, especially the late rains, however, it is certain that the production of the current season is less than the Pre-Crisis Average production. This is due to several reasons, most notably the high costs of production, as well as the high prices of the agricultural production inputs and, especially fertilizers, pesticides, fuels, mechanical operations, and the inability of the majority of farmers to use them as required. In addition to the decline in the purity and quality of the used seeds, and to the weather conditions, in terms of dry spells December-February, and the inappropriate temporal distribution of the rainfall during the season.



Field mouse in Hama



Sunn on wheat, Deir Ezzor

Considering other crop types, at least 80 913 hectares were harvested out of 89 700 hectares cultivated with lentils, as well as 20 540 hectares were harvested out of 57 600 hectares cultivated with chickpeas.

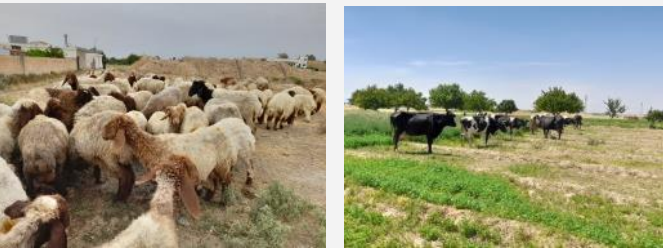
It is essential to mention that the current season witnessed a remarkable spread of the field mouse in several adjacent areas of the Homs and Hama governorates, as well as some areas of Hama adjacent to the Idlib governorate, and it had a significant impact on crops, especially wheat. In addition, the spread of some diseases and insect infestations (*Capnodis tenebrioni*, Olive tree digger, *Zeuzera pyrina*, thrips, mites, whiteflies, powdery mildew, *tuta absoluta*, and aphids), on vegetables, crops, and fruit trees such as apricots, almonds, apples, and olives in Al Hasakeh, Dier Ez-Zor, Homs and Hama, in addition to the prevalence of the Colorado beetle on potatoes and tomatoes and other nightshade vegetables in Al Hasakeh governorate. However, its spread was below the economic threshold for the spread of pests. Also, areas of crops and fruit trees in most governorates (central, coastal, and southern) were exposed to cold, strong winds, and sometimes floods in late May.

It is also important to note that most of the farmers across governorates continue to face challenges in terms of accessing quality fertilizers and fuel, due to the high purchase prices and the low availability of subsidized agriculture inputs, it is noteworthy that

the prices of non-subsidized fertilizers increased by nearly 50% during the reporting period compared to April. The acute shortage of fuel also presents significant challenges to farmers and has resulted in a continued and unpredictable rise in agricultural inputs prices and overall production costs, including an increase in the cost of farm labor and other field-level operations. Please refer to the May 2023 Agriculture Inputs and Commodity Price Bulletins (AICPB) for more detail on market price trends in Syria found here: <https://fscluster.org/search?text=agriculture+inputs+and+commodity>.

SECTION E: LIVESTOCK SITUATION AND CONDITION

The heavy rainfall witnessed in most of the Badia regions last April led to an improvement in pasture during May, and thus increased opportunities for herds of livestock to feed on grass in the safe and accessible areas of the Badia. In addition, the availability of crop residues increased during the reporting period due to the start of harvesting most of the winter crops, especially legumes and barley. These facts led to an improvement in the nutritional status of most of the herds. However, the prices of some fodder commodities continue to rise, as the prices of Bran, meal, and concentrated poultry feed increased by more than 10% on average. While the prices of the rest of the fodder hay, barley, pastoral yellow corn and pastoral wheat decreased by more than 10% on average.



The late rainfall reinforced the conviction of livestock breeders about the possibility of improving pastures and the availability of crop residues, and thus their ability to secure the needs of the herds from pastures and crop residues in a greater way and at a lower cost. In addition to that, due to the sale of large numbers of herds, including ewes during the previous months, the number of animals available for sale decreased and thus increased their prices greatly. However, most breeders still complain about the high costs of production, especially veterinary services, veterinary treatments and medicines, transportation, as well as fodder, in addition to the limited access to all areas of the Badia due to the security situation,

Poultry feed prices have recently risen significantly, including the total production costs, and this is mainly due to the scarcity of energy supplies (i.e. electricity and fuel) and high energy costs.

It is also mentioned that during the reporting period, no spread of communicable diseases or livestock epidemics was recorded, as well as the sheep and goat-breeding season was fairly good without major obstacles.

SECTION F: FOOD SECURITY AND COPING STRATEGIES

During the reporting period, a further decline was recorded in the exchange rate of the Syrian pound against foreign currencies and a significant increase in the prices of production inputs, agricultural and food commodities in general, especially basic foodstuffs. **This has led to a further deterioration in the purchasing power of the majority of households and the inability to obtain sufficient nutritious food, especially for vulnerable and female-headed households.**

Due to the decrease in the number of livestock available for sale resulting from a decrease in the livestock population, and on Eid al-Adha, which coincided with the reporting period, the prices of live livestock, as well as red meat, increased by 30-40 percent, which became out of reach for most families. The same applies to broiler meat and eggs as well, whose prices continue to rise steadily and have become unattainable, despite what used to be a haven for poor and medium families.

It is important also to note that the lack of availability of fuel and its high prices led to an increase in transportation and freight costs, and thus a significant increase in the prices of vegetables, fruits, dairy, and other food commodities, although they are produced locally, and this added another burden on families.

These aforementioned challenges have combined and are burdening the population, further eroding their resilience and pushing most vulnerable families to adopt harmful coping strategies. Furthermore, coping options are becoming limited due to the over-reliance on them over a long period. Some coping measures include relying on less preferred and less expensive foods, limiting portion size at mealtime, and reducing the number of meals eaten in a day. Some families continue to rely on irreversible negative coping strategies, especially selling off their assets to meet basic needs. Furthermore, most families are also resorting to reducing consumption by adults for small children to eat.

Recommendations

- FSA sector partners are called to mobilize more resources to implement urgent and emergency interventions for farmers affected by abnormal weather conditions, especially the distribution of fodder and veterinary services to support livestock and target sheep and goats (i.e. small ruminants), as well as support crop farmers and livelihoods based on agriculture.
- Supporting farmers' access to water for irrigation of summer crops by continuing projects to rehabilitate irrigation canals and enhancing the fuel and energy supply needed to pump irrigation water.
- Farmers are advised to regularly follow agro-meteorological information and weather updates and consult with their local agricultural extension staff for technical advisory. Farmers are also encouraged to obtain information on weather, agro-climatic conditions and climate-related trends, through other communication platforms, which may exist in

their locations. Such platforms may include WhatsApp groups. This will ensure that farmers obtain timely alerts and appropriate technical advice on impending risks, especially for frost and crop diseases.

- The FSA sector partners are called upon to mobilize more resources to implement emergency interventions for vulnerable farmers, for the preparation of the land for the upcoming season, and access to agricultural production inputs, especially seeds, fertilizers, and fuel, as well as support livestock breeders with fodder and veterinary services during the critical autumn and winter months

Sector partners are also encouraged to scale-up efforts in promoting relevant and context specific climate smart agriculture (CSA) approaches in crop and livestock production and water management, as a concerted effort to make food production systems in Syria more resilient to climate-induced shocks. Online trainings on CSA are available on the FAO websites and sector partners may reach out to the FAS Agriculture Working Group (AWG) in HCT for more details.

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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:

- Refer to WFP Syria mVAM Bulletins for September - October 2022.
- Request for the FSA/FSLA factsheets for 2020 from the Food and Agriculture Sector (FAS) for details on food access and food insecurity prevalence by governorate and sub-district.