

SYRIA

Agriculture and Food Security Monitoring System (AFSMS)

Bulletin

November – December 2022



INTRODUCTION

The Bi-monthly Agriculture and Food Security Monitoring System (AFSMS) Bulletin is a FAO-Syria product and system, which regularly monitors the agricultural and food security situation, including on crop, livestock, pasture condition, water supply and 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.

For more information please contact:

Jameson Zvizvai

Agriculture-based Livelihoods
Coordinator

Jameson.Zvizvai@fao.org

Jalal Al-Hamoud

Food Security Specialist/chair
of AWG

Jalal.AlHamoud@fao.org

HIGHLIGHTS

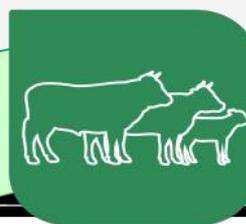


Precipitation

At the end of December 2022, the cumulative rainfall for the 2022-2023 rainfall season, was good in Ar-Raqqa and Deir-ez-Zor and exceeded the Long Term Average (LTA) of precipitation by 76 and 6 percent respectively. However, it was low to very low in the rest of the governorates, especially in Quneitra, As-Sweida and Dar'a where it was 52%, 41% and 83% less than LTA respectively.

In November 2022, the received rainfall was abundant and exceeded the LTA across all governorates, especially in the northeastern governorates, as it exceeded the LTA by 100 percent.

In December 2022, the precipitation was generally below average across most governorates, except in Ar-Raqqa, where the precipitation was slightly above the LTA. In Al-Hasakeh and the southern governorates, the amount of rainfall was below the LTA by 96% and 72% respectively.



Livestock

During the November – December 2022 monitoring and reporting period, livestock - especially sheep and goats - faced a major challenge due to the continued decline of natural pastures and the depletion of crop residues.

In general, the livestock sector (especially sheep and goats); is in need of much support in the coming months, until the natural pastures rejuvenate and improve and grazing becomes available. The urgent short-term support will preserve, protect and improve the livestock situation through sustaining animal nutrition (i.e. provision of quality animal feed and support towards own fodder production) and support to complementary animal health interventions such as provision of veterinary services, especially to lactating ewes and newborns.



Temperature

The recorded temperature in November 2022, was less than the LTA of the temperature in the southern governorates, while it was higher than the LTA in the rest of the governorates.

In December 2022, the daily mean temperatures recorded was higher than LTA across all governorates and ranged from 1.4 C° above the LTA in the northwestern governorates to 3.4C° above the LTA in the costal governorates. The highest daytime temperatures were recorded in Al-Hasakeh governorates, where it was 4.0 C° above the LTA, while the lowest was in Damascus and rural Damascus by 0.5 C° above the LTA,



Water supply

During this reporting period, water level and reserve in lakes, wells and dams compared to last month increased by 1% in Aleppo and central governorates. However, there was a notable decrease of 1% in the costal and southern governorates. While the same levels were maintained in Al-Hasakeh governorate.

It is also important to note that the water stocks observed in December 2022 are less than the stocks of December 2021 in the southern, Aleppo and Al-Hasakeh governorates by 4, 13 and 3 percent respectively. While it was higher than last season in the central and costal governorates by 2 and 6 percent respectively.

HIGHLIGHTS



Food commodities

In addition to the aforementioned factors and conditions, it is important to know that the scarcity of fuel and the continued decline in the exchange rate of the Syrian currency, affected most agriculture supply chains and overall production costs, including transportation costs across most governorates. The difficult and worsening economic situation continues to result in the increase in the prices of most foodstuff, including vegetables and fruits. The protracted crisis in Syria continues to disrupt or affect the ability of most families to access red meat and poultry meat, and other expensive food stuff, especially vulnerable families. Please refer to WFP Syria Country Office Market Price Watch Bulletins found here <https://fscluster.org/search?text=WFP+Syria+Price>, for more detailed analysis on the food price trends and general food access in Syria



PROGRESS OF THE CROPPING SEASON

By the end of December 2022 and according to the Ministry of Agriculture and Agrarian Reform (MAAR), the cultivated area reached about 980 000 hectares for wheat. Of the aforementioned wheat planted area, about 44 percent is under irrigation, while the rest is rainfed. During this reporting period, it is expected that the total cultivated area under winter crops and cereals will continue to increase until the end of January 2023, since some farmers delayed cultivation, and the cumulative total planted area will be updated in the next bi-monthly January – February 2023 AFSMS bulletin.

GENERAL AGROMETEOROLOGICAL CONDITIONS

1. Precipitation

1.1. Cumulative Precipitation;

At the end of December 2022, the cumulative rainfall for the 2022-2023 rainfall season (September – December 2022) was good in Ar-Raqqa and Deir-ez-Zor and exceeded the LTA by 76 and 6 percent respectively. However, it was low to very low in the rest of the governorates, especially in Quneitra, As-Sweida and Dar'a where it was 52%, 41% and 83% less than LTA respectively. See figure 1 below

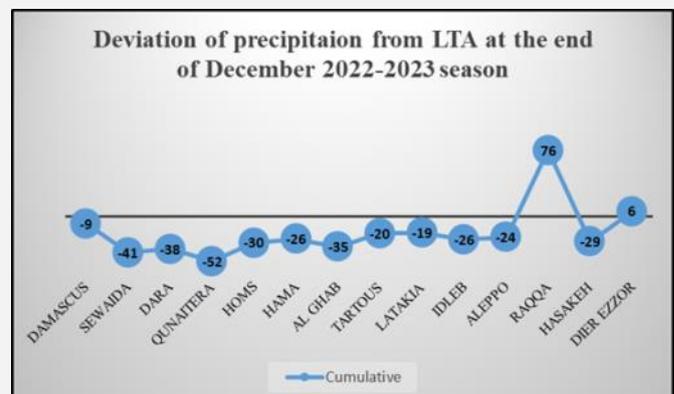


Figure No. 1: Percent (%) Deviation of the cumulative precipitation from Long Term Average (LTA) from Sep - Dec 2022.

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

1.2. Monthly precipitations

1.2.1. November 2022:

In November 2022, the received rainfall was abundant and exceeded the LTA across all governorates, especially in the northeastern governorates, and exceeded the LTA for November by 100 percent. However, the lowest amount of rainfall received was reported in Quneitra, As-Sweida and Al Ghab and was 0%, 4% and 18% above the LTA respectively. While the highest amount of rainfall received was in the northeastern governorates and ranged between 80 – 200% above the LTA.

In the first dekad of November 2022, high amounts of rainfall were recorded in most parts of rural Damascus, Dar'a, Hama, Al Ghab and the coastal governorates. While the rainfall was poor and less than the LTA in northern and northeastern regions, Homs, Quneitra and As-Sweida governorates. In the second dekad, a high amount of rainfall was received in the coastal governorates, Aleppo, Ar-Raqqa and Deir-ez-Zor, while it was poor and below the LTA in the rest of the governorates, especially in the southern, Al Hasakeh, Idleb governorates and AL Ghab region.

In the third dekad of November, the amount of rainfall received was good and several times higher than the LTA across all governorates, especially in Homs, rural Damascus and northeastern governorates (see figure 2 below).

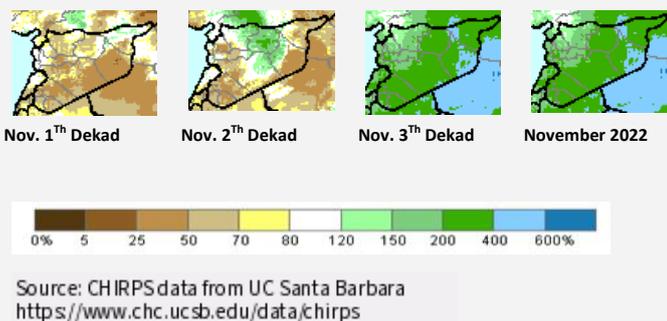


Figure No. 2: Estimated Precipitation Anomaly during November 2022.

December 2022:

In December 2022, high rainfall and slightly above the LTA was received Ar-Raqqa. While the recorded rainfall was low to very low in the rest of the governorates, especially in Al-Hasakeh and the southern governorates, where it was below the LTA by 96% and 72%, respectively. In the first dekad of December 2022, low amounts of precipi-

tation recorded in the Central, coastal and northern governorates, while there was no rainfall in the rest of the governorates. In the second dekad the recorded rainfall was relatively better than the precipitation of the first dekad, and it covered all governorates, but it was low and less than the LTA in general, especially in the northern, southern and northeastern governorates, as the received rainfall there, was less than 10 percent of the LTA.

In the third dekad of December 2022, low amounts of rainfall were recorded in most parts of the southern governorates, Al-Hasakah and Homs. However, rainfall was good in some parts of alBadia region, Deir-ez-Zor and As-Sweida governorates, while it was close to the LTA in the rest of the regions and governorates, especially in Ar-Raqqa and some areas in Aleppo. See figure 3 below.

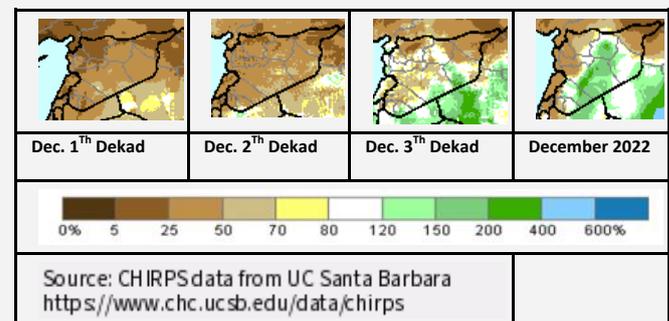


Figure No. 3: Estimated Precipitation Anomaly during December 2022.

2. Temperature

The recorded temperature in November 2022, was less than the LTA in the southern governorates by 0.2 C° below the LTA, while it was higher than the LTA, especially in the second and third dekad of November 2022 in the rest of the governorates, where temperature exceeded the LTA in the northeastern and coastal governorates by 1.5 C°. In contrast, temperature recorded in central and northwest governorates exceeded the LTA by 0.9 C° (see figure 4 and 5).

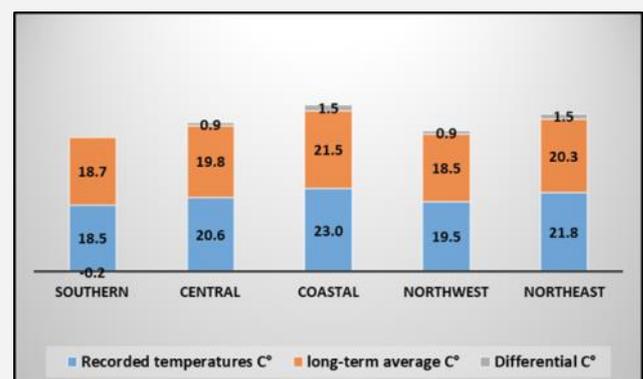


Figure No. 4: Graphical analysis and comparison of the daytime-temperatures recorded in November 2022 compared to LTA .

Source: Analysis of the temperature recordings done by FAO technicians based on the official daily weather bulletins .

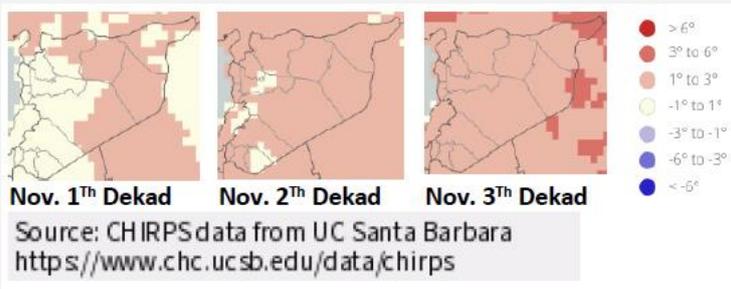


Figure 5: The estimated temperature deviation from its dekad LTA in November 2022

In December 2022 the temperatures recorded were higher than LTA across all governorates especially in the second dekad of the month, and it ranged from 1.4 C° above the LTA in northwest governorates to 3.4. C° above the LTA in coastal governorates. The highest daytime temperatures were recorded in Al-Hasakeh governorate and this was 4.0 C° above LTA. While the lowest was in Damascus and Rural Damascus and was 0.5 C° above the LTA. In the northwestern, southern and central governorates, it was 1.4 C°, 1.5 C° and 1.8 C° higher than LTA respectively. While it was 3.4 C° and 3.1 C° higher than LTA in the coastal and the northeastern governorates respectively. (see figure 6 and 7).

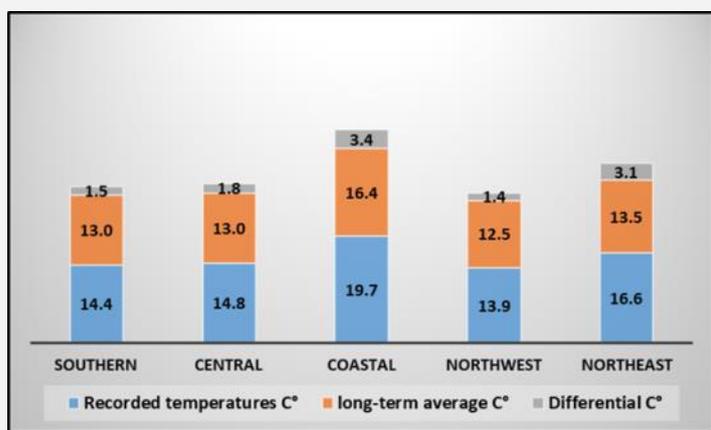


Figure No. 6: A graphical analysis and comparison of daytime-temperatures recorded in December 2022 compared to LTA.

Source: Analysis of the temperature recordings done by FAO technicians based on the official daily weather bulletins.

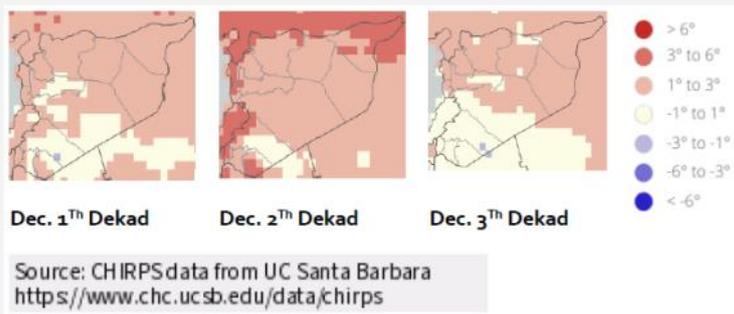


Figure 7: The estimated temperature deviation from its dekadal LTA in December 2022

SECTION B: NORMALIZED DIFFERENCE VEG-ETATION INDEX (NDVI)

In December 2022, the vegetation cover improved compared to November 2022 in several regions in most governorates, especially in the northeastern governorates and the Al-Badia in Deir-ez-Zor and Homs. However, vegetation cover improved slightly in the rest of the regions and governorates, especially in Aleppo, As-Sweida and the eastern regions of Hama, Homs and rural Damascus governorates.

It is noteworthy that the acceptable condition of the vegetation cover shown by the observation in the remote Al-Badia areas of Deir-ez-Zor, rural Damascus and Homs, is due to these areas not being accessible to the herds currently, due to the prevailing insecurity conditions. The vegetation cover in these inaccessible pasture land depicts a semi-natural reserve since less grazing in these locations is happening.

It is important to note that the vegetation cover in November and December 2022 improved significantly compared to the same months of 2021, especially in the Coastal, Idleb, Ar-Raqqa and western areas of Homs and Hama, (see figure 8).

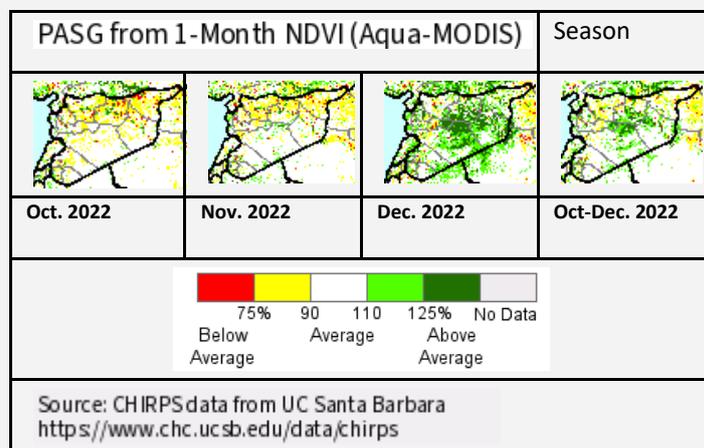


Figure No. 8: The development and presence of live green vegetation during the 2022-2023 agricultural season

SECTION C: WATER SUPPLY SITUATION

During this reporting period, water level and reserve in lakes, wells and dams increased by 1% in Aleppo and central governorates. However, there was a notable decrease of 1% in the coastal and southern governorates. While the same levels were maintained in Al-Hasakeh governorate compared to last month (see figure 9 below).



Figure No. 9: The evolution of dam stocks during the 2022 / 2023 season.
Source: Analysis of Monthly Bulletin of Drought Monitoring (MBDM) from MAAR

It is worth mentioning that the water stocks for December 2022 are less than the stocks of December 2021 in the southern, Aleppo and Al-Hasakeh governorates by 4, 13 and 3 percent respectively. While it was higher than last season in the central and costal governorates by 2 and 6 percent respectively .

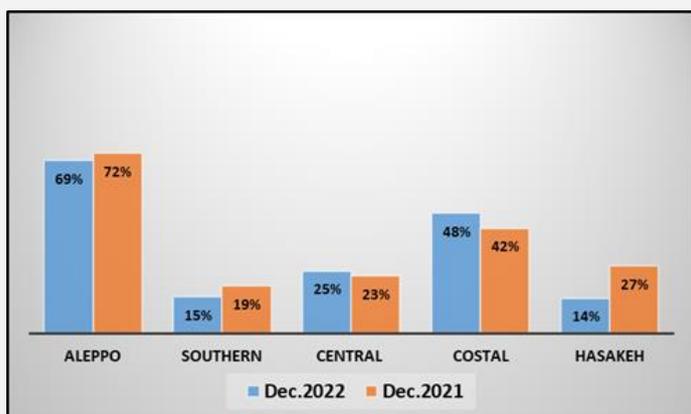


Figure No. 10: Graphical comparison of water stock of dams in the 2021/2022 season and the 2022 / 2023 season .

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

The reason for the decrease in water stocks in the aforementioned governorates is due to the decrease in the amount of precipitation levels received, for the third consecutive season. The reduced stock and water level in dams could also be attributed to the farmer’s reliance on pumping irrigation water from wells and dams, though FAO would need to conduct in-depth natural resource assessments (NRA) to quantify this. Due to the limited rainfall in Syria to date, and in some cases total lack of rainfall in some locations, there has been very limited streamflow in most seasonal channels and this has resulted in very limited flow of water from land into water bodies, especially in rural Damascus and Hama.

SECTION D: SUMMARY ON PROGRESS OF 2021/2022 CROPPING SEASON

By the end of December 2022 and according to the Ministry of Agriculture and Agrarian Reform (MAAR), the cultivated area reached about 980 000 hectares for wheat. Of the aforementioned wheat planted area, about 44 percent is under irrigation, while the rest is rainfed. During this reporting period, it is expected that the total cultivated area under winter crops and cereals will continue to increase until the end of January 2023, since some farmers delayed cultivation, and the cumulative total planted area will be updated in the next bulletin. The area cultivated under barley for the current season, is about 1 010 000 hectares and this exceeds the area planted under barley in the previous 2021/2022 cropping season by about 260 thousand hectares.

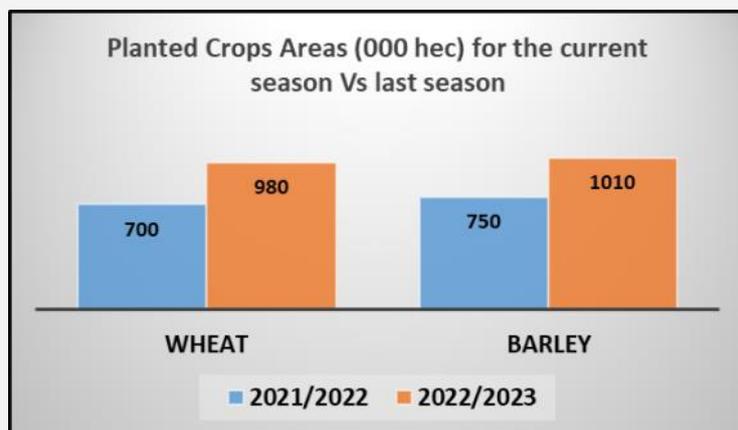


Figure No. 11: Graphical comparison of area planted with Wheat and Barley in the current 2022 – 2023 agricultural season, compared to the previous 2021–2022 season

Source: FAO field monitoring reports

It is important to know that the rainfed winter crops (especially wheat and barley) in the southern governorates are generally in poor condition and this is mainly due to the low amounts of rainfall received, and the early season dry spell following onset and germination, which resulted in retarded growth of the rainfed wheat crop. According to the field observations that some farmers, especially in Dar’a, had to unfortunately replant their rainfed wheat fields. FAO will further verify and quantify this in the coming bulletin. Furthermore, significant area planted under barley has been classified as out of production due to poor rainfall season. In the northeastern governorates, especially in Al-Hasakeh, despite the low rainfall recorded to date, the seasonal performance seems to be relatively better than the previous two seasons, though the crop condition is not completely good. It must be noted that some farmers delayed sowing

winter crops, especially wheat, due to the delayed onset and lack of rainfall, as well as the high prices and limited availability of production inputs.

It is also important to note that as the winter cropping season commences, most of the farmers 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. This is in addition to the unfavorable weather and agro-climatic conditions. The local Syrian pound continued to slide and weaken in November and December 2022 and this is also exerting more pressure on farmers and threatening domestic crop production endeavors, especially in terms of adequate access to agriculture inputs, especially those imported. The acute shortage of fuel also presents significant challenges to farmers and has resulted in continued and unpredictable rise in agricultural inputs prices and overall production costs, including an increase in the cost of farm labour and other field-level operations. Please refer to the November and December 2022 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>. Considering other crop types, at least 57 000 hectares were cultivated under legumes, 5300 hectares under medicinal and aromatic plants and about 8 000 hectares cultivated under autumn potatoes as of December 2022.

Continued harvesting and marketing of winter vegetable crops (leafy vegetables: spinach, Swiss chard, cress, parsley, brassica..., cabbage, cauliflower, radish and carrots) across most governorates. It is noteworthy that the area cultivated under winter vegetables to date, during this current 2022/2023 season is more than 16 000 hectares. Of this area, 27 % is in Al-Hasakeh, 17 % in Aleppo, and less than 10 % is in the rest of the governorates.



During this reporting period, the harvesting and marketing of citrus fruits, apples, Olives and yellow corn continued across most governorates in Syria. However, the extent of marketing agriculture produce across locations or governorates is being affected by the limited availability and access to fuel, combined with the relatively high cost of transporting agricultural products.



SECTION E: LIVESTOCK SITUATION AND CONDITION

The period from mid-autumn to mid-winter is the main critical period for livestock production, especially sheep and goats, in terms of the scarcity of pastures. This is because of the general need for herds, especially pregnant sheep, to be fed with fodder, which could either be concentrates, mixed feeds or crop residues where they are available. Since the calving season for ewes mainly occurs around mid-December, there is need to enhance the nutrition and veterinary care of lactating ewes, as well as the newborns.



Photo from the archive

During the November – December 2022 monitoring and reporting period for the 2022 – 2023 agricultural season, livestock - especially sheep and goats - faced a major challenge due to the decline of pastures and the depletion of crop residues, attributed to the lack of summer crops due to water scarcity and lack of irrigation. This has resulted in limited availability of summer crop residues compared to the same period last season. This

has pushed vulnerable livestock keepers to mainly rely on purchased fodder or stock feed and ready-made fodder. It is also important to note that although the natural pastures are still somewhat weak and below the usual level, they are somewhat better than last season in most areas of the Badia region, especially in Deir-ez-Zor and Homs.

Low feed availability, coupled with very high stock feed prices, medicines and veterinary services, has increased the financial burden on livestock breeders and left most of the flocks in poor health and nutritional status (i.e. body condition). Most of the livestock breeders, especially in the northeastern governorates, were forced to sell a number of their animals to obtain fodder for the rest of the remaining herd. Some breeders have recently resorted to feeding their animals with low or poor quality feed because it is cheaper. This coping strategy will unfortunately affect the nutritional and health status of the remaining and reduced herd.



Photo from the archive

It is important to note that due to the large numbers of livestock sold during the recent months, as well as strictness in preventing the sale of ewes, the number of animals offered for sale in the local market are decreased, which led to an increase in livestock prices in general.

Despite the availability of veterinary services and medicines, to some extent, the cost of treatment and the prices of veterinary medicines remains very high.

Cattle are generally in better condition because they often depend on fodder rather than pastures. However, the continued depreciation and fluctuation of the ex-

change rate of the Syrian currency during the past few months, resulted in further rise of fodder prices, veterinary services, veterinary medicines, and livestock production costs. The above-mentioned factors constitute the major challenges faced by crisis-affected livestock keepers and dairy farmers.

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. On the other hand, the limited purchasing power among most of Syria's population and the difficult economic conditions, has limited the purchase and consumption of eggs and broiler meat (i.e. chicken). This continues to expose many poultry breeders to significant losses and some farmers have actually discontinued poultry production due to economic viability concerns.

Livestock remains a major source of income and nutrition for tens of thousands of families in Syria and the livestock sector, especially sheep and goats, requires urgent attention and support in the upcoming months to protect livestock assets and sustain livestock-based livelihoods systems.

SECTION F: FOOD SECURITY AND COPING STRATEGIES

In addition to the aforementioned factors and conditions, recent and continued depreciation of the domestic currency versus the USD and other currencies, has had a noticeable impact on the flow of some food commodities to the markets, as well as the high prices of most food commodities. This has led to a further decline in the purchasing power of the majority of families, especially the vulnerable and women-headed households.



In addition to the aforementioned factors and conditions, it is important to know that the scarcity of fuel and the continued decline in the exchange rate of the Syrian currency, affected most agriculture supply chains and overall production costs, including transportation costs across most governorates. The difficult and worsening economic situation continues to result in the increase in the prices of most foodstuff, including vegetables and fruits, in both wholesale and retail markets. This is unfortunately pushing a large proportion of the Syrian population to reduce consumption of vegetables and fruits due to access related constraints. The same applies to red meat and poultry meat, which recorded a notable increase in price. The protracted crisis in Syria continues to disrupt or affect the ability of most families to access red meat and poultry meat, and other expensive food stuff, especially vulnerable families. Most families in Syrian, especially the most vulnerable including women headed households (WHH), children and persons with disabilities (PwDs), continue to face several challenges in terms of food security. The challenges include the consequences of the prolonged crisis, severe weather fluctuations and drought-like conditions, water scarcity, exchange rate fluctuations and local currency depreciation, scarcity and high cost of energy and fuel resources. Noting that the winter period is the critical period when the majority of farm expenses have to be met by farming households. Such expenses mainly include land preparation and cultivation, securing various required agriculture inputs, including costs for rearing livestock. This is in addition to the other family's living expenses or basic needs; namely heating costs, education, communication, transport and health. This continues to burden households, with relief only expected when the crop harvesting and marketing season starts.

These aforementioned challenges have combined and are burdening the population, further eroding their resilience and pushing most vulnerable families to adopt negative and harmful coping strategies. Furthermore, coping options are becoming limited due to the over-reliance on them over a long period. Some of 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 in order for small children to eat.

Recommendations:

- ◆ 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**.
- ◆ Mobilizing investment and efforts to enhance farmers' access to water, through **supplementary irrigation for crops** during the coming months in areas that may be subject to low rainfall.
- ◆ 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

Recommendations:

- ◆ **Intensify the veterinary care and nutrition necessary for lactating ewes and newborns during the next two months (the calving season)** through mobile veterinary campaigns and support the animals with intensive nutrients, to ensure the survival and growth of the herds.
- ◆ Implementation of **urgent interventions**, especially emergency **fodder distribution**, to support livestock, targeting sheep and goats (i.e. small ruminants). Where feasible, this must also be linked to **climate-resilient fodder production** in the medium to long-term (e.g. training on good agricultural practices for winter and summer fodder production coupled with provision of fodder seed, which may include barley, alfalfa, corn, soybean production etc) complemented by training on improved animal management and animal feeding. Funds permitting, sector partners may also consider provision of fodder pressing devices and / or small-scale silage making equipment, to help livestock keepers and fodder producers preserve their fodder for later use. This support will ensure that livestock keepers have the ability to cope with future agro-climatic shocks.

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.