Food and Agriculture Organization of the United Nations

THE SUDAN

Agricultural livelihoods and food security in the context of COVID-19

Monitoring report
June 2021

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Rome, 2021

REQUIRED CITATION

FAO. 2021. *The Sudan | Agricultural livelihoods and food security in the context of COVID-19: Monitoring report – June 2021*. Rome. https://doi.org/10.4060/cb5535en

ISBN 978-92-5-134671-6

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Abbreviations and acronyms

CFSAM	Crop and Food Supply Assessment Mission
COVID-19	Coronavirus disease 2019
FAO	Food and Agriculture Organization of the United Nations
FEWS NET	Famine Early Warning Systems Network
FPMA	Food Price and Monitoring Analysis
GDP	Gross domestic product
GIEWS	Global Information and Early Warning System
IPC	Integrated Food Security Phase Classification
NDVI	Normalized Difference Vegetation Index
OCHA	Office for the Coordination of Humanitarian Affairs
USAID	United States Agency for International Development
WFP	World Food Programme

Key highlights

- In April 2021, at the end of winter harvest season in the Sudan, the Food and Agriculture Organization of the United Nations (FAO) conducted a second food security and agricultural livelihood impact assessment, taking into account the effects of coronavirus disease 2019 (COVID-19). A total of 468 extension officers from the Ministry of Agriculture in all 18 states were interviewed. The findings are complemented with secondary data.
- During the assessment period, the food security situation in the country continued to be severely affected by skyrocketing inflation, ongoing conflict and displacement, and macroeconomic instability.
- Restrictions related to mitigating the spread of COVID-19 in the first quarter of 2021 were much less prevalent than in 2020: 270 out of the 468 respondents reported no COVID-19 restrictions in their areas of jurisdiction.
- The 2020/21 harvest is forecast to exceed that of last year and the five-year average (FAO, 2021a). For both the summer and winter harvest seasons, approximately half the respondents reported expecting higher production.
- Extension officers reported crop pests and diseases, labour shortages, flooding and lack of access to fuel and seeds as the greatest difficulties facing farmers. The COVID-19 pandemic and related restrictions were reported as a difficulty only in Khartoum, North Kordofan and Red Sea states. The most reported difficulties related to accessing seeds were high seed prices, insufficient availability from vendors or farmers' own production, and low seed quality.
- Of 165 extension officers surveyed, 74 (45 percent) expected a decrease in production of main livestock species this season. This expected decrease in production was most prominent in the states of Aj Jazirah, Gedaref, Khartoum, Red Sea, Sennar, South Darfur and West Darfur.

- The most reported difficulties in livestock production during the past three months were: difficulty purchasing feed, constrained access to water, difficulty accessing veterinary inputs or services, constrained access to pasture and livestock diseases. Constraints related to COVID-19 or associated restrictions were only reported by nine respondents.
- Of 165 respondents in the livestock sector, 107 reported that households had been destocking their animals over the past three months – more than usual for that time of the year. This was mainly for the purpose of smoothing both food and non-food consumption, and in response to a lack of pastures and feed.
- More than half of the extension officers reported that prices were more than 50 percent higher than usual at this time of the year. Prices of staple cereals reached record or near-record levels in February 2021.
- Of all extension officers interviewed, 76 percent reported that they had received guidance on how to manage COVID-19 at work. However, nearly 54 percent reported receiving no protective equipment such as masks, sanitizers or gloves.
- Considering the upcoming planting season, access to seeds was the greatest need reported by all crop production experts, followed by tools and machinery, pesticides and cash assistance. In the livestock sector, veterinary inputs topped the list of needs, followed by animal feed, veterinary services and access to water. Special attention needs to be given to transport difficulties, which stem from issues related to fuel.
- Close monitoring of progress with the main summer harvest season is needed. The results will be critical for identifying the most vulnerable areas and population groups to assist.
- To ensure that food supply chain actors are not at risk of COVID-19 transmission, dedicated local-level awareness raising efforts should be undertaken.
- Revised modalities for agricultural extension and protocols to comply with hygiene and safety measures during planting, harvesting and selling need to be implemented. To ensure the safety of extensions officers during the ongoing COVID-19 pandemic, guidelines for working during the pandemic and basic protective equipment such as masks must be made available to them.

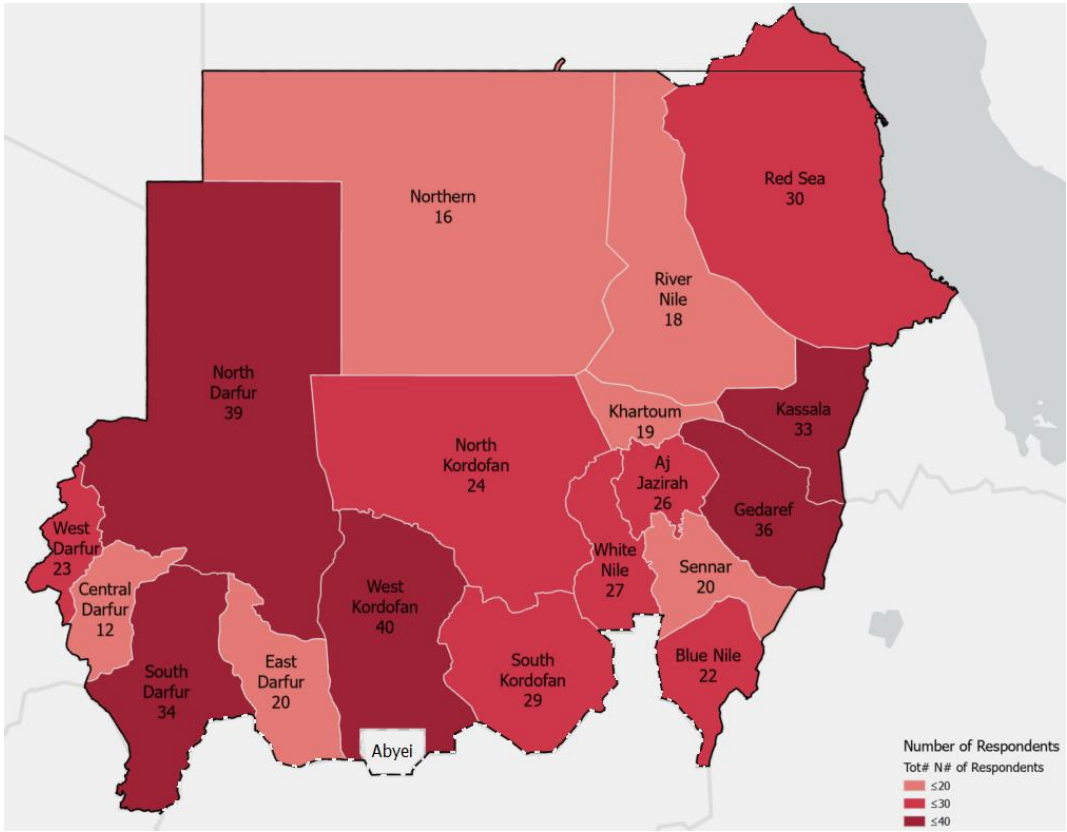
Methodology

With financial support from the United States Agency for International Development (USAID), FAO has led the establishment of a data and analysis facility in the context of COVID-19 and other shocks. The objective of the facility is to improve decision making in support of the food security and livelihoods of all actors in key agricultural, livestock and fisheries value chains in high-priority food crisis countries – with a focus on producers.

Within this monitoring system, data are collected every three to seven months – mainly through computer-assisted telephone interviews. The first-round assessment in the Sudan was conducted during July and August 2020, during the peak of the lean season (FAO, 2021a).

This second-round assessment was conducted from 5 to 19 April 2021 at the end of the winter harvest season. The Food Security Technical Secretariat coordinated data collection. Similar to the first-round assessment, computer-assisted telephone interviews of extension officers were conducted using an established questionnaire. The sample comprised 468 extension officers of the Ministry of Production and Economic Resources across all 18 states of the Sudan (Figure 1). Except for the states of Central Darfur, South Darfur and South Kordofan, the number of respondents per state is roughly proportional to the number of localities in each state. The extension officers interviewed included 283 crop production specialists, 165 livestock production specialists and 20 fisheries experts. Out of the 468 respondents, 335 were men and 133 were women.

Figure 1. Number of respondents per state included in the second-round assessment



The final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined.
The final status of the Abyei area is not yet determined.

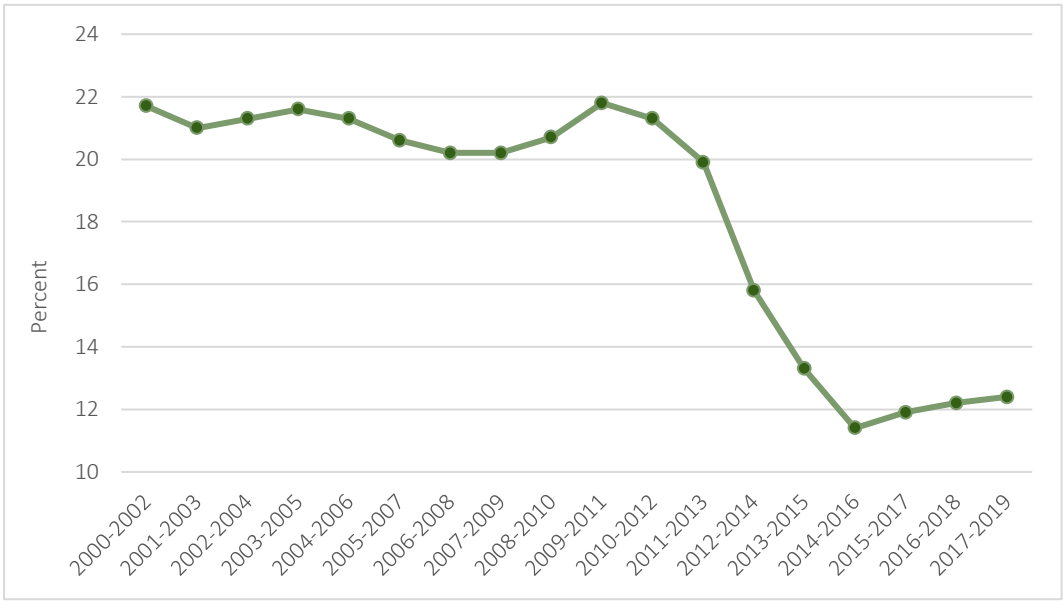
Source: Office for the Coordination of Humanitarian Affairs (OCHA), Humanitarian Data Exchange, 2020; modified using FAO assessment results, June 2021

Background

Sharing borders with seven countries, the Sudan is geographically located at the crossroads of sub-Saharan Africa and the Middle East and stretches along the Red Sea. Agriculture contributes to between one fifth and one third of the country's gross domestic product (GDP), and employs around 80 percent of the population, while the country's export profile is dominated by the extractive sector. High inflation, conflict and displacement in the Darfur region and eastern Sudan, and political instability are affecting the economy.

Livestock raising dominates the agricultural landscape, comprising 65 percent of the agricultural sector's contribution to GDP, followed by crop production (33 percent of agricultural GDP); the contribution of fisheries is marginal (according to the 2020/21 Crop and Food Supply Assessment Mission (CFSAM) (FAO, 2021b). The agricultural sector is hampered by drought, environmental degradation, conflict and under-investment. Approximately 12 percent of the population is estimated to be undernourished (2017–2019 average) and 38 percent of children under five are stunted.

Figure 2. Prevalence of undernourishment in the Sudan, three-year averages



Source: FAO, 2021c

Consumer prices have risen drastically each year since 2016, and the International Monetary Fund has projected average consumer prices to be 197 percent higher in 2021. According to the International Monetary Fund, the Sudan's already shrinking economy shrunk by an additional 4 percent (real GDP growth) in 2020 amidst the COVID-19 pandemic, reduced investment and large deficits. Skyrocketing inflation along with conflict, instability and the impacts of the pandemic have exacerbated food insecurity.

According to the latest Integrated Food Security Phase Classification (IPC) analysis published in May 2021 (IPC, 2021), 7.3 million people (16 percent of the assessed population) were estimated to be severely food insecure (IPC Phases 3 and 4) during April and May. The greatest concentration of people facing Crisis levels of food insecurity (IPC Phase 3) was reported in the Darfur region, the southern part of the country and in Gedaref state, where the main drivers of food insecurity are compounded by inter-communal violence and displacement. In these areas, 17–25 percent of the population is estimated to be severely food insecure. The localities of Hala'ib and Jabet-El-ma'aadin in Red Sea state are facing Emergency levels of food insecurity (IPC Phase 4). In Khartoum state, 14 percent of the population is estimated to face food insecurity, indicating limited purchasing power of market-dependent urban households. The share of household food expenditures spent on food has risen to 81 percent in Khartoum.

COVID-19 and other risk factors in the country

Since the start of the COVID-19 pandemic in mid-March 2020, more than 33 600 people have contracted the virus, including 2 365 who had died from the disease as of 4 May 2021 (Federal Ministry of Health, 2021). Cases peaked in two waves in May and June 2020, and from November 2020 to January 2021. Most confirmed cases were reported in urban areas, with approximately 70 percent in Khartoum, followed by Aj Jazirah state. The Government immediately put in place urgent measures to curb the spread of COVID-19, including curfews, closures of airports and borders, a ban of public gatherings and restrictions on internal population movements. During this time, most economic activities continued, while weak public compliance was observed for government-imposed restrictions and containment measures.

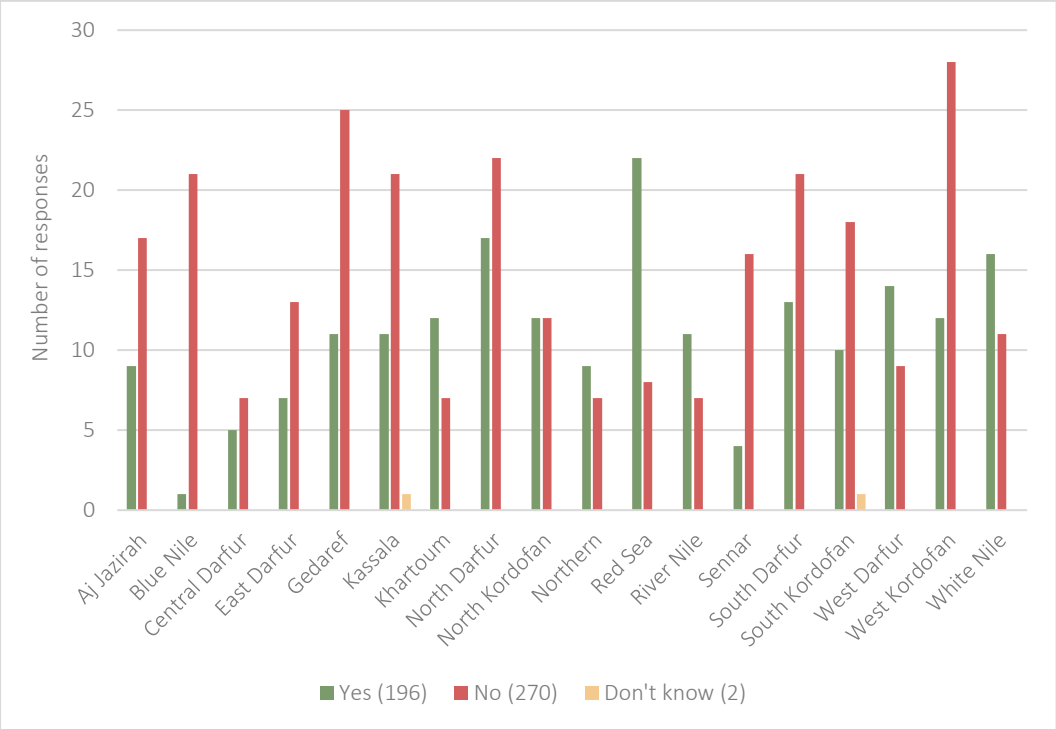
In July, public spaces and businesses officially reopened. In mid-October 2020, land borders also opened, with precautionary measures still in place for movement. New restrictions were imposed in May 2021 (Sudan News Agency, 2021) after the completion of the second-round assessment.

The lockdown measures in 2020 affected food supply chains due to transport restrictions and caused labour shortages resulting from travel restrictions. Income generation through casual labour was also affected (IPC, 2020). Despite the pandemic, annual cereal production was higher in 2020 than in previous years and the volume of exports of agricultural commodities from January to September 2020 was 15 percent higher than in the same period in 2019 (FAO, 2021a).

COVID-19-related restrictions were relaxed in the first quarter of 2021, as evident from responses of extension officers in the first- and second-round assessments: fewer restrictions were reported by extension officers in their areas of jurisdiction in the second round than in the first. Of all 468 respondents, 270 (58 percent) reported no COVID-19 restrictions in their areas of jurisdiction in the second round (while some restrictions remain in place in all states, their extent depends on the locality).

The most-reported restrictions were: restrictions on gatherings affecting labour; partial movement restrictions (i.e. movement being allowed only within localities); food markets or shops partially functioning; and social activities forbidden (Figure 3). Restrictions on food markets, veterinary services, abattoirs and the opening of agricultural input markets were seldom reported. There were no reports of public transport restrictions.

Figure 3. Presence of COVID-19 restrictions reported by extension officers, by state



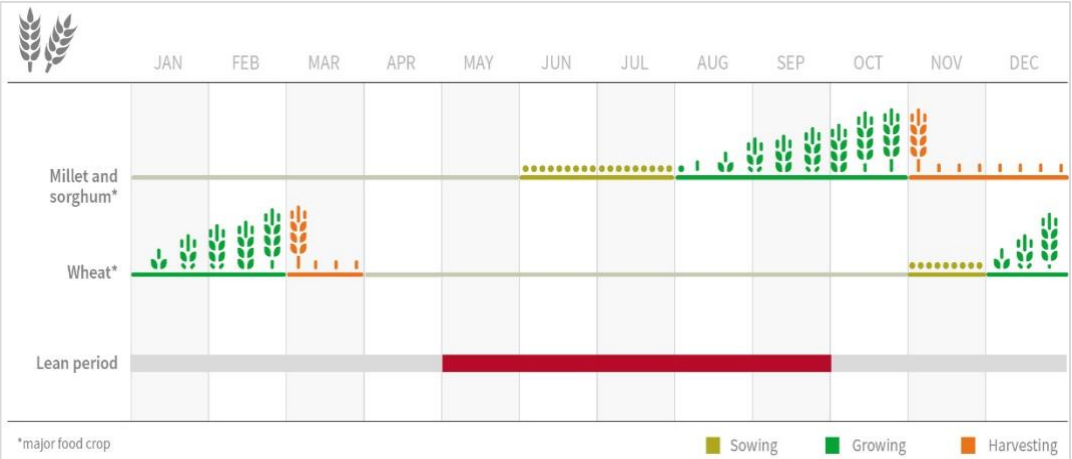
Source: FAO, 2021; FAO assessment results, April 2021

Agricultural production

Crops

The Sudan has two cropping seasons: the main summer season (May–September), and the mostly irrigated winter season (November–March/April) (Figure 4). The winter seasons starts with land preparation in November, planting in December and harvest in March/April. The current round of the assessment was conducted at the end of the winter harvest. In winter, the main cereal crop produced is wheat, followed by sesame, groundnut, sorghum and millet.

Figure 4. The Sudan crop calendar

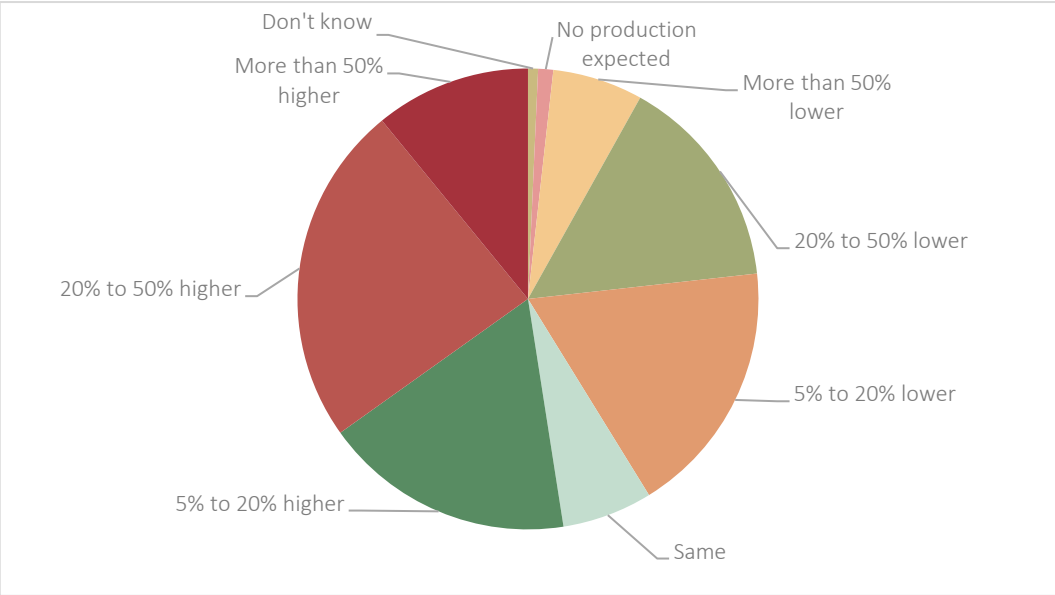


Source: FAO, 2021d

The 2020/21 harvest is expected to yield a higher volume than last year and the five-year average (FAO, 2021a). The respondents were asked about expected production in both the summer 2020 and winter 2021 seasons compared to the previous cropping seasons. For both seasons, approximately half of the respondents reported expecting higher production (Figures 5 and 6).

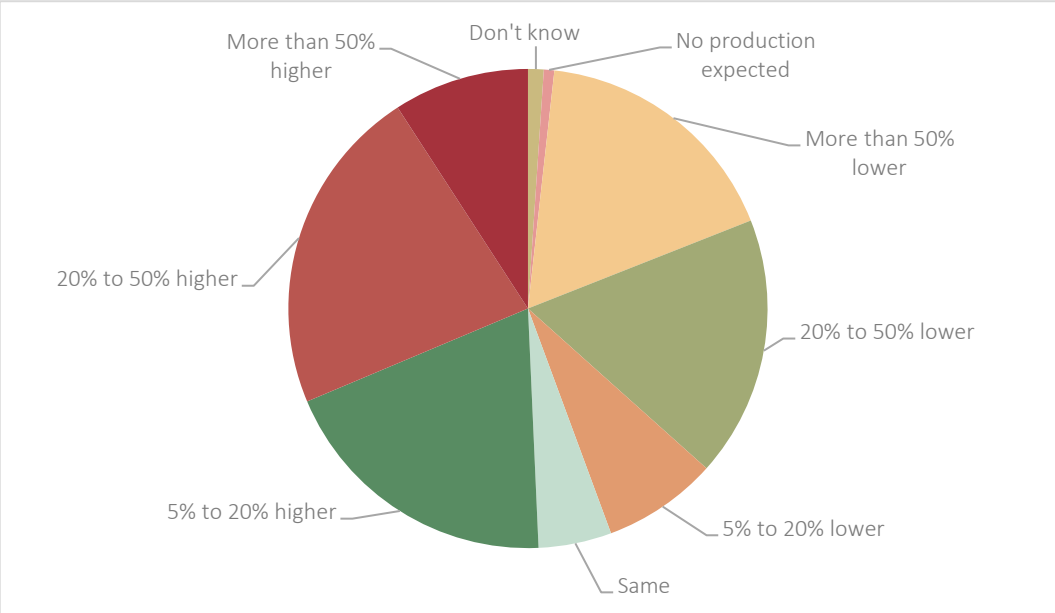
According to the annual CFSAM carried out in December 2020 and January 2021, aggregate cereal production for 2020 was estimated at 12 percent (FAO, 2021a). Driven by increased sorghum output, this total was higher than 2019 and about 20 percent higher than the five-year average. Farmers expanded the area planted as a response to high market prices of grains, and the effects of flooding were partially mitigated by an unexpected longer rainy season, which enabled farmers to replant their crops.

Figure 5. Expected production in the summer 2020 growing season



Source: FAO, 2021; FAO assessment results, April 2021

Figure 6. Expected production in the winter 2021 growing season



Source: FAO, 2021; FAO assessment results, April 2021

When asked about the difficulties faced by farmers, the most frequently reported were crop pests and diseases, followed by hiring labour, flooding, and access to fuel and seeds (Table 1). In addition, the presence of locusts was recorded in East Darfur, Kassala, North Darfur, North Kordofan, Red Sea, South Darfur, South Kordofan and West Kordofan states (the locusts are reported to have been effectively controlled by the Plant Protection Department). Insecurity and conflict were reported in Gedaref, North Darfur, North Kordofan, South Darfur, South Kordofan, West Darfur, West Kordofan and White Nile.

Table 1. Difficulties experienced in last two cropping seasons (summer and winter) (number of respondents)

	Crop production	Access to seeds
Most reported	Crop pests and diseases (103)	Prices of seeds higher than usual (140)
Second most reported	Expensive labour or income insufficient to hire labour (70)	Seeds unavailable or insufficiently available from vendors (88)
Third most reported	Heavy rains/flooding (67)	Available seeds of low quality (73)
Fourth most reported	Lack of fuel (56); Difficulty accessing seeds (55)	Seeds unavailable or insufficiently available from own production (49)

Source: FAO, 2021; FAO assessment results, April 2021

The COVID-19 pandemic and related restrictions were reported as a difficulty only in Khartoum, North Kordofan and Red Sea states. According to the 2020/21 CFSAM, government-implemented measures to curb the spread of the pandemic affected crop production – mainly at the beginning of the season – while the phasing out of some restrictions in August 2020 benefited agricultural operations (FAO, 2021a).

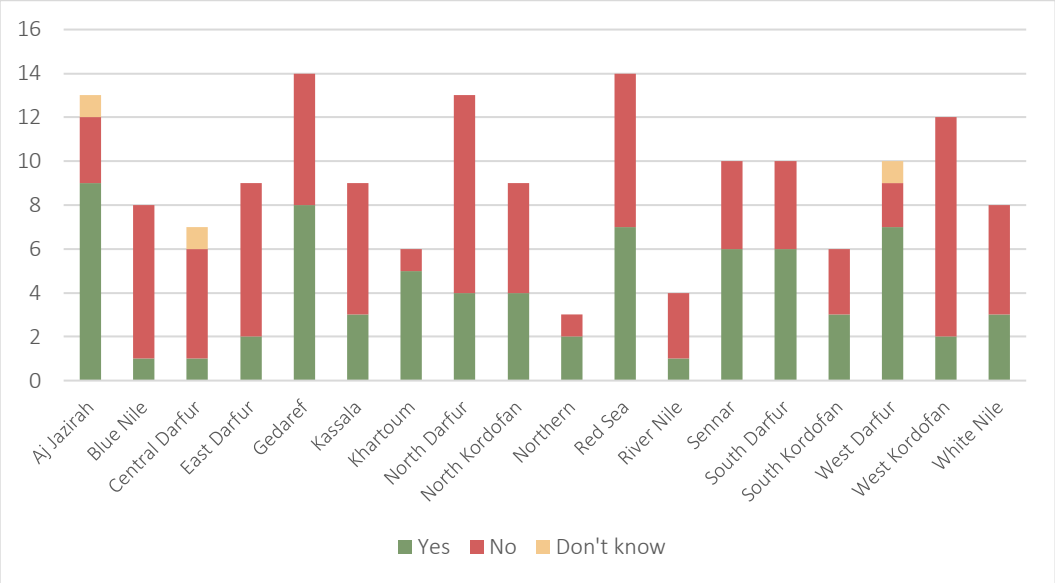
Market closures resulted in shortages of some agricultural inputs, and movement restrictions caused labour shortages and increased costs. In the winter season assessment, extension officers reported that seasonal agricultural labour was available in most states, but there were fewer labour opportunities reported in the last two cropping seasons than in previous seasons.

Given the importance of accessing seeds for the upcoming summer planting season, the extension officers were specifically asked about difficulties related to seed access. The most reported difficulties were related to the high price of seeds, insufficient availability from vendors or farmers' own production, and low seed quality.

Livestock

The main livestock present in the Sudan are cattle, sheep, goats and camels, which are mostly raised by nomadic or semi-nomadic pastoralists who engage in transhumance movements within the Sudan and to neighbouring countries.

Figure 7. Expected decrease in main animal production (number of respondents by state)



Source: FAO, 2021; FAO assessment results, April 2021

Of 165 extension officers surveyed, 74 (45 percent) responded that they expect a decrease in main animal production this season. Expected decreases in production were most prominent in the states of Aj Jazirah, Gedaref, Khartoum, Red Sea, Sennar, South Darfur and West Darfur (Figure 7).

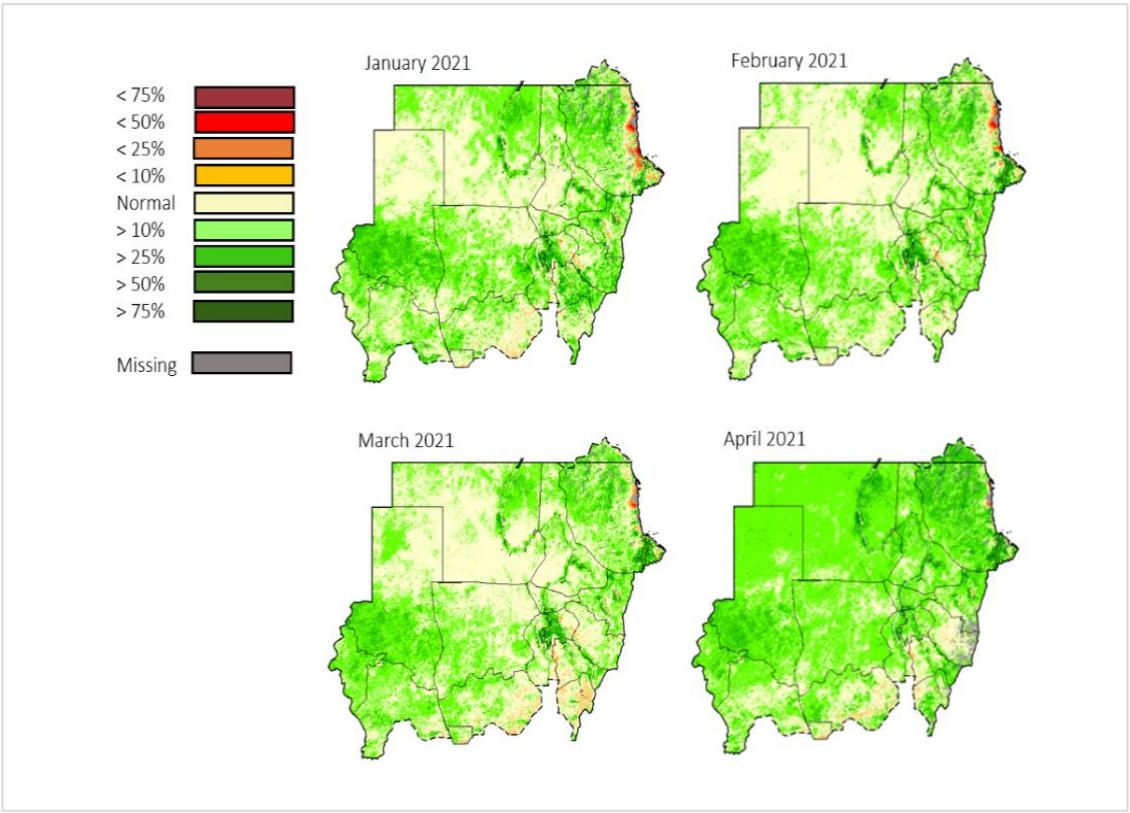
As of April 2021, the most reported difficulties in livestock production in the past three months were: difficulty purchasing feed (57 respondents); constrained access to water (48); difficulty accessing veterinary inputs (40) or services (37); constrained access to pasture (39); and livestock diseases (31). Constraints to accessing water or pasture during the winter season are also expected as rainfall dries up, and with it, vegetation.

Difficulties due to conflict and insecurity were reported by 13 respondents from the Darfur region and Blue Nile, Gedaref, and Sennar states. Constraints to seasonal movements of transhumant pastoralists and their animals due to tribal clashes in the Darfur region in western Sudan, and border tensions in eastern Sudan along traditional animal migratory routes were reported in the Sudan Food Security Outlook (Famine Early Warning Systems Network [FEWS NET], 2021).

Constraints due to the COVID-19 pandemic and associated restrictions were reported by only nine respondents in the states of Aj Jazirah, Khartoum, North Darfur, North Kordofan, South Darfur, South Kordofan, West Darfur, and White Nile.

The Normalized Difference Vegetation Index (NDVI) measures the "greenness" of ground cover and is used as a proxy indicator of the density and health of vegetation (Figure 8). From January to April 2021, vegetation was less green than the long-term average.

Figure 8. Maps of the NDVI in the Sudan (January 2021–April 2021)



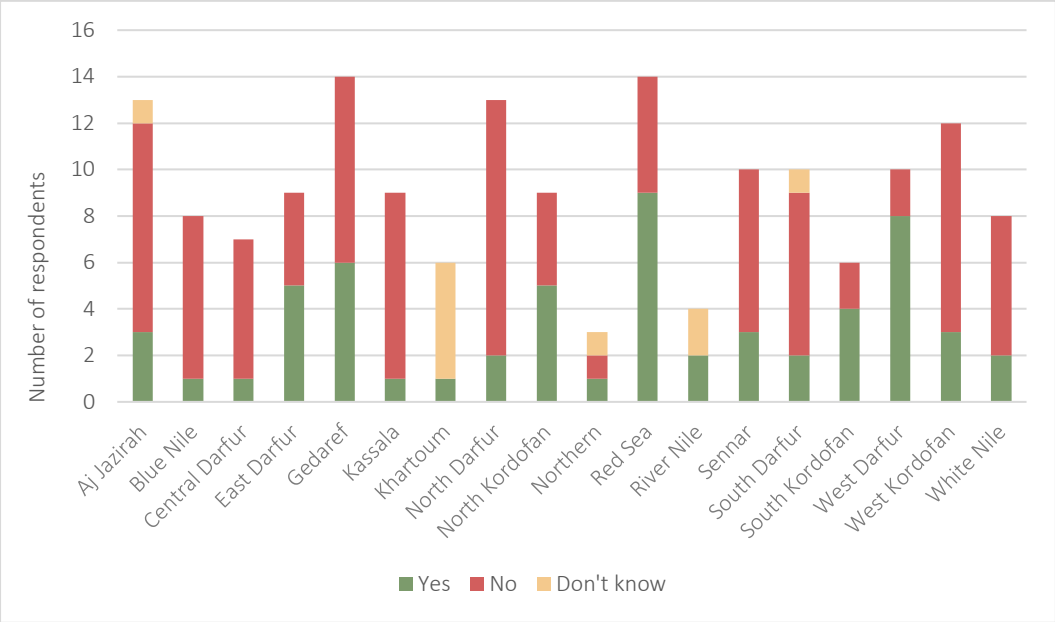
Source: FAO, 2021g

According to the 2020/21 CFSAM conducted in December 2020 and January 2021, livestock-rearing activities were affected by restrictive measures imposed because of the COVID-19 pandemic – mainly through shortages of medicines and vaccinations – and constraints to accessing pastures (FAO, 2021a). There were also disruptions in transhumance patterns due to COVID-19-related movement restrictions. As restrictions due to COVID-19 are eased, it is expected that their impacts on livestock rearing will be decreased.

Of the 165 respondents, 107 reported that households were destocking their animals over the past three months – more than usual for that time of the year. The main reasons for household livestock destocking were: household consumption; smoothing both food and non-food household consumption; and a lack of pastures and feed.

Unusual livestock migration patterns were reported by 50 respondents (Figure 9) – the main reasons were a lack of pasture and water (reported by all 50 respondents). Other reasons included economic disruptions (including a lack of input and fuel supply), difficulties getting to market, a lack of income and economic losses, conflict and insecurity (most reported in West Darfur).

Figure 9. Unusual livestock migration patterns; number of respondents, by state



Source: FAO, 2021; FAO assessment results, April 2021

Fisheries

Interviews were conducted with 20 fisheries experts from seven states (Blue Nile, Gedaref, Khartoum, Red Sea, River Nile, Sennar, White Nile). In these areas, most fishing is in lakes, ponds and rivers; coastal sea fishing or open sea fishing are practiced to a lesser extent.

When asked about expected production in the past three months, respondents from different states gave diverse responses (Table 2). However, 16 of the 20 respondents reported higher prices for fish this season. Many also reported difficulties in the past three months – mostly related to fuel (especially in Khartoum and Red Sea state), and a lack of fishing materials/inputs.

The total number of respondents reporting each difficulty was as follows:

- lack of fuel (11);
- high price of fuel (8);
- lack of fishing material and/or inputs (8);
- high price of inputs (4); and
- lack of storage capacity (4).

COVID-19 movement restrictions – the most reported difficulty in the first round – were reported only in the state of Khartoum in the second round.

Table 2. Percentage change in the amount of fish caught (summer and winter seasons), by state, in the past three months

Percentage change	Blue Nile	Gedaref	Khartoum	Red Sea	River Nile	Sennar	White Nile	Total
Up to 25% decrease	0	0	0	0	2	0	1	3
Over 50% increase	1	0	0	0	0	1	0	2
Over 50% decrease	0	1	1	0	0	0	0	2
25% to 50% increase	0	0	1	1	1	0	0	3
25% to 50% decrease	0	0	1	1	0	0	0	2
Same as usual	1	2	0	1	1	1	1	7
Up to 25% increase	0	0	0	1	0	0	0	1
Total	2	3	3	4	4	2	2	20

Source: FAO, 2021; FAO assessment results, April 2021

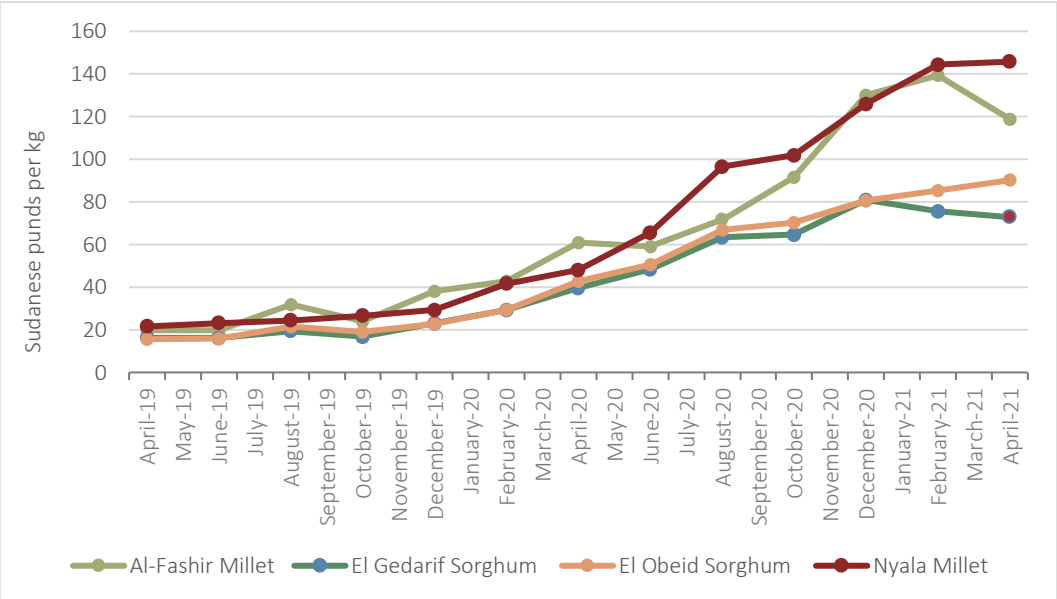
Food supply and markets

This section reports on food price and food availability in markets, issues related to the marketing of products and the coping strategies adopted by households.

Food prices have been extremely high in the Sudan – largely due to inflation. All respondents (except for two livestock-production experts in Red Sea state and 16 crop-production experts across the country) reported higher prices of live animals in markets. More than half of all extension officers (68 percent of the livestock experts and 53 percent of crop-production experts) reported that prices were more than 50 percent higher than usual for this time of the year.

These findings concur with latest GIEWS country brief (FAO, 2021d), February 2021 FEWS NET Food Security Outlook (FEWS NET, 2021) and FAO GIEWS Food Price Monitoring and Analysis (FPMA) Bulletin (FAO, 2021f). Prices of staple cereals like sorghum, millet and wheat have been on the rise since late 2017 and increased at an even higher rate during 2020. In February 2021, they reached three times the previous year's already elevated price. The main reasons are a weak currency and soaring prices of fuel and agricultural inputs, which have inflated production and transportation costs (FAO, 2021e). While prices of locally grown sorghum and millet recovered in March following the devaluation of the Sudanese pound, prices of wheat (mostly imported), continued to increase in March, reaching record highs (Figure 10).

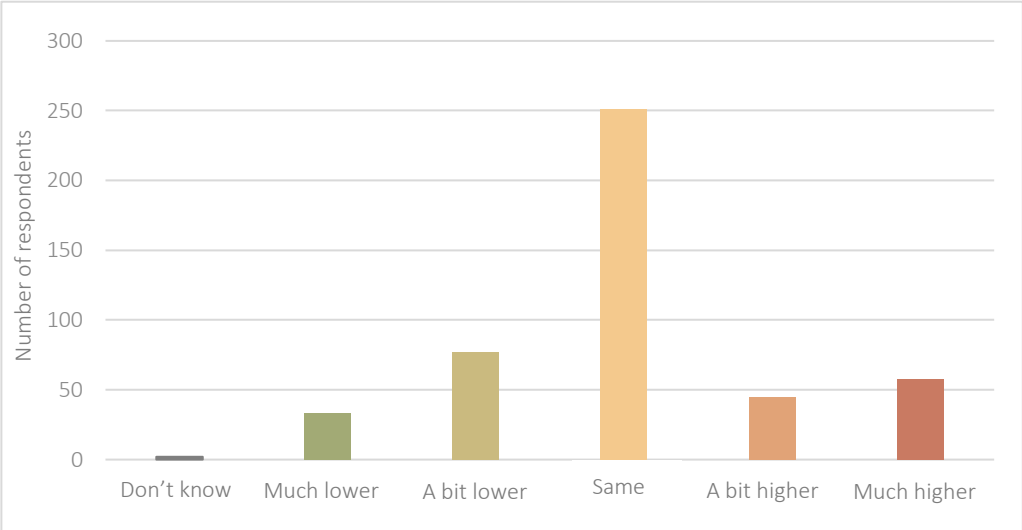
Figure 10. Wholesale prices of selected cereals in the Sudan (April 2019–April 2021)



Source: FAO, 2021h

In terms of food availability, 24 percent of respondents reported a lower level of food available in their area than in the same period last year (Figure 11). This represents a decrease from the first round, in which 63 percent reported lower levels of food availability than one year ago (the first round was conducted during the peak of the lean season).

Figure 11. Level of food availability compared to the same period last year



Source: FAO 2021; FAO assessment results, April 2021

The localities in which lower food availability was reported are dispersed across all 18 states, except for East Darfur. A full list of the localities for which respondents reported lower or much lower food availability than in the same period last year are provided in the Annex (Table 4).

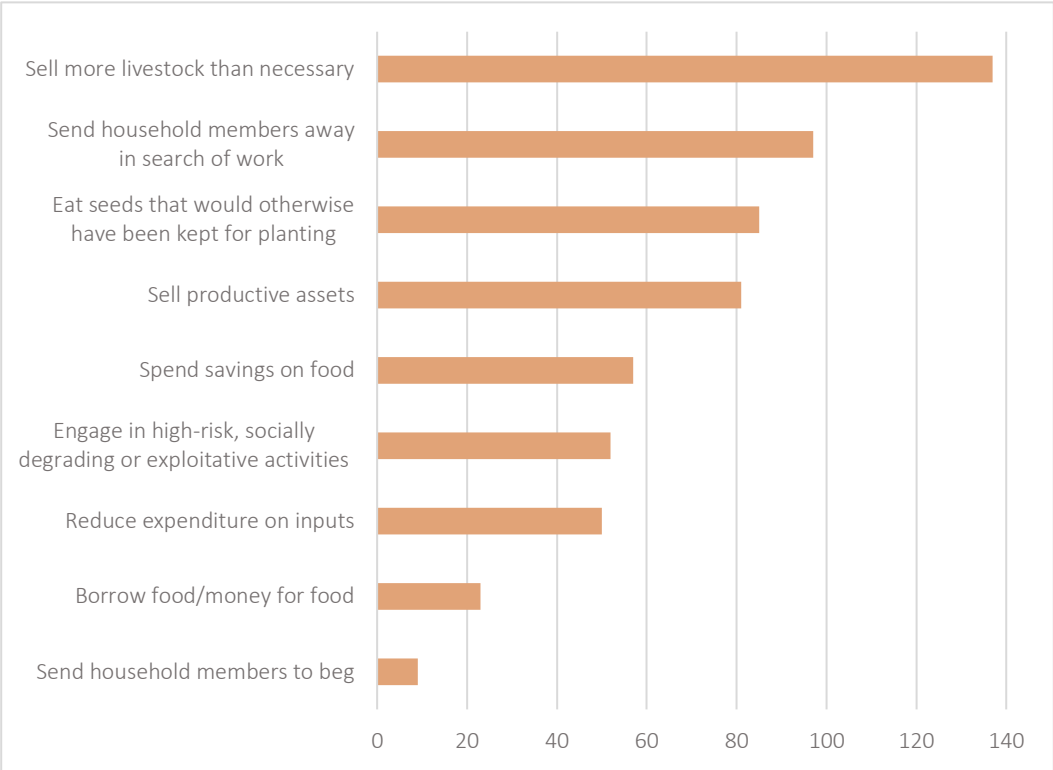
Half of the respondents reported issues with market production (crops, livestock or fisheries). The most reported marketing difficulties included: high transportation costs (159); constrained access to markets; a lack of transport/distant markets (145); lower-than-usual demand (49); limited storage capacity (35); and constrained access to markets due to conflict or insecurity (31 – mainly in west, south and north Darfur).

Similar to the first round, transport constraints were a major issue. The main transport difficulties reported were related to fuel, including: high fuel costs; increased transport costs due to inflation; a downturn in the economy; and the unavailability of fuel. These issues were reported throughout all states.

Of those interviewed, 52 percent reported that most affected farmers and livestock keepers had resorted to coping strategies because they did not have enough food or money to feed household members. The extension officers were asked to choose from a list of coping strategies adopted by farmers and livestock keepers in the past 30 days (Figure 12; details provided in Table 5 in the Annex). The most frequently reported coping strategies include:

- selling more livestock than necessary (most often reported in Gedaref, North Kordofan, Red Sea, Sennar, West Darfur and White Nile states);
- sending household members away in search of labour (most often reported in North Kordofan and White Nile states);
- eating seeds that would otherwise have been kept for planting (most often reported in North Kordofan, West Darfur, and White Nile states); and
- selling productive assets (most often reported in Gedaref, Red Sea and West Darfur states).

Figure 12. Strategies adopted by farmers and livestock keepers in the past 30 days (number of responses)



Source: FAO 2021; FAO assessment results, April 2021

Most affected population groups and needs

Existing assistance

Although the COVID-19 pandemic affected agricultural production in 2020 – both directly and indirectly – only 149 of 468 key informant interview respondents (32 percent) reported receiving increased or new assistance in response to the pandemic. The assistance provided was mostly in the form of food assistance (cash, vouchers or in kind). Disruptions in assistance were most often reported in states of Kassala, North Darfur, North Kordofan, Red Sea and South Darfur.

COVID-19 and the work of extension officers

Sixty-three percent of the extension officers interviewed reported that their work was not disrupted by the pandemic, while another 25 percent reported that it was sometimes disrupted. The majority of those reporting disruptions were in the Darfur region and the states of Khartoum and Red Sea. Despite the disruptions, most respondents reported being able to adapt in order to provide support to farmers by phone, while a few reported visiting farmers less frequently or having farmers visit them at their duty stations. Of all respondents, 76 percent reported that they had received guidance on how to manage the COVID-19 pandemic at work; those who reported receiving no guidance were disbursed across all states. Nearly 54 percent reported receiving no protective equipment such as masks sanitizers or gloves.

Most affected groups

When asked about which farmers were most affected by the pandemic, respondents listed women-headed households, small ruminant keepers, rainfed farmers, and youth. Household surveys conducted in the Sudan during the pandemic indicate that access to food has been most constrained in urban and particularly semi-urban areas (World Bank, 2020; Haneef, forthcoming).

Needs

Respondents were asked about the needs within their respective sectors in the upcoming months. Considering the upcoming planting season, almost all crop-production experts (236 out of 283 respondents) from all states indicated the need for seeds. Other needs listed included tools and machinery (across all states), followed by pesticides (most often reported in Blue Nile, Gedaref, North Kordofan, South Kordofan states), and cash assistance (most often reported in Central and East Darfur). In the first round, the most-reported need was fuel.

In the livestock sector, veterinary inputs topped the list of needs (in the first round, the most commonly reported need was for animal feed). Other needs, in order of number of responses, included animal feed, veterinary services and access to water (Table 3). Special attention also is needed regarding transport difficulties, which stem from fuel-related issues and a lack of market access.

Table 3. Main needs reported for upcoming season by extension officers for the upcoming agricultural season (number of respondents)

Sector	First main need	Second main need	Third main need	Fourth main need
Crops	Seeds (236)	Tools/machinery (165)	Pesticides (72)	Cash assistance (68)
Livestock	Veterinary inputs (116)	Animal feed (89)	Veterinary services (78)	Access to water (70)

Source: FAO 2021; FAO assessment results, April 2021

Conclusion

Key prospects

This second-round assessment indicates that the effects of the COVID-19 pandemic and related restrictions, which aggravated the already fragile food security situation in the Sudan during 2020, were much less severe in the first quarter of 2021. This was expected since movement restrictions were relaxed and there was a boost in production during the main cropping season and shorter winter season, which ended in March.

Despite the less-severe effects of COVID-19 during the first quarter of 2021, it remains uncertain how the pandemic will evolve in the coming months or what restrictions will be in place to curb the spread. After decreasing in January and February 2021, COVID-19 cases have been increasing since March 2021. In May, new restrictions were imposed in anticipation of a future surge in COVID-19 cases. These include: the closure of schools and universities for one month; a ban on social gatherings and religious events; a reduced number of workers in public and private institutions; a ban on the entrance of travellers from India; COVID-19 testing of travellers arriving from Egypt and Ethiopia; and the enforcement of face-mask wearing in public areas (Sudan News Agency, 2021).

In March 2021, the Sudan cleared its arrears with the International Development Association signalling its re-engagement with the World Bank and International Monetary Fund. The government is expected to access USD 2 billion in new development financing from the World Bank Group and discussions on debt relief are ongoing under the Enhanced Heavily Indebted Poor Countries initiative. Nevertheless, the Sudan is expected to continue facing macroeconomic difficulties and high inflation in 2021.

As a result of inflation, crop prices are expected to remain drastically high throughout 2021 and to increase further in the coming months due to the May–September lean season. While livestock prices are expected to decrease seasonally as households de-stock during the lean season, they are projected to remain much higher than average.

High crop and livestock prices may seem beneficial for net producers since they receive high prices for their produce from the market. But for net buyers – especially in urban areas – high prices deteriorate household food security. When high crop prices are accompanied by high prices of agricultural inputs and fuels (as is currently the case), agricultural investments decrease. Due to increased cost of production, rainfed farmers may rely on seeds from their own production instead of buying from vendors in the upcoming rainy season.

The IPC analysis (IPC, 2021) has projected that an estimated 9.8 million people (21 percent of the assessed population) will face high levels of acute food insecurity (IPC Phase 3 and above) during the May–September 2021 lean season.

Recommendations

Considering the upcoming planting season, access to seeds was the utmost need reported by all crop production experts, followed by tools and machinery, pesticides and cash assistance. In the livestock sector, veterinary inputs topped the list of needs, followed by animal feed, veterinary services and access to water. Special attention also needs to be given to transport difficulties, which stem from issues related to fuel and market access.

Apart from the needs mentioned by the extension officers; close monitoring is needed of seasonal progress towards the summer main harvest season. These data will be critical to identify the most vulnerable areas and population groups to assist.

In order to ensure that food supply-chain actors are not at risk of COVID-19 transmission, dedicated local-level awareness raising should be undertaken. Revised modalities for agricultural extension, and protocols to comply with hygiene and safety measures during planting, harvesting and selling need to be implemented. To ensure the safety of extensions officers during the ongoing pandemic, guidelines and basic protective equipment such as masks need to be made available to them. In addition, support to the implementation of sanitary and phytosanitary measures throughout the value chain should be strengthened.

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Annex

Table 4. Localities in which extension officers reported lower food availability compared to the same period last year

State	Locality	Level of food availability in locality compared to the same period last year
Aj Jazirah	Medani	Much lower
	Medani Al Kubra	Much lower
	Al Kamlin	Much lower
	Al Hasahisa	A bit lower
	Sharg Al Jazirah	Much lower
	Al Kamlin	Much lower
Blue Nile	Wad Al Mahi	A bit lower
Central Darfur	North Jabal Mara	Much lower
Gedaref	Butana	Much lower
	Guresha	A bit lower
	Bsunda	A bit lower
	Mafaza	A bit lower
	W.Galabat	A bit lower
	Alrahad	Much lower
Kassala	Reifi Wad Elhilaiw	A bit lower
	Reifi Aroma	A bit lower
	Halfa Aj Jadeedah	Much lower
	Reifi Telkok	A bit lower
	Reifi Shamal Ad Delta	A bit lower
Khartoum	Karari	Much lower
	Khartoum	A bit lower
North Darfur	Kernoi	A bit lower
	Um Kadadah	A bit lower
	Kutum	A bit lower
	As Serief	Much lower
North Kordofan	Sheikan	A bit lower
	Um Dam Haj Ahmed	A bit lower
	Soudari	Much lower
	Sheikan	Much lower
Northern	Aldaba	A bit lower
Red Sea	Haya	A bit lower
	Hala'ib	Much lower
	Al Ganab	A bit lower
River Nile	Ad Damar	A bit lower
Sennar	Elsuki	A bit lower
South Darfur	Gereida (3 respondents)	A bit lower (1)/much lower (2)
	Kas	A bit lower
	Sharg Aj Jabal	Much lower
	Damso	Much lower
	Nyala Janoub	A bit lower

South Kordofan	Habila	A bit lower
	Delami	A bit lower
	Rashad	A bit lower
	Abugibeha	A bit lower
	At Tadamon	A bit lower
	Abu Kershola	A bit lower
	Kadugli	A bit lower
West Darfur	Habila	Much lower
	Kulbus	A bit lower
	Kereneik (2 respondents)	A bit lower (2)
	Jebel Moon	A bit lower
West Kordofan	Al Lagowa	Much lower
	Alfulla	A bit lower
	Alkhiuai	A bit lower
	Wad Bandah	A bit lower
	Keilak	A bit lower
	Ghubaish	A bit lower
White Nile	Tandalti	Much lower
	Guli (2 respondents)	A bit lower (2)

Source: FAO 2021; FAO assessment results, April 2021

Table 5. Coping strategies reported by extension officers, by state

State	Sell more livestock than necessary	Sell productive assets	Send household members away in search of labour	Eat seeds that would otherwise have been kept for planting	Reduce expenditure on inputs	Engage in high-risk or exploitative activities	Send household members to beg	Spend savings on food	Borrow food/money for food	Total respondents per state
Aj Jazirah	6	6	6	2	1	8	2	6	5	26
Blue Nile	4	3	5	1	5	0	0	1	0	22
Central Darfur	0	0	0	1	1	1	0	0	0	12
East Darfur	6	3	2	3	0	1	1	3	0	20
Gedaref	15	16	13	10	2	2	1	7	0	36
Kassala	2	1	4	1	3	1	1	1	3	33
Khartoum	6	4	6	2	8	4	1	6	2	19
North Darfur	6	2	2	1	1	3	1	2	5	39
North Kordofan	12	5	12	10	7	6	0	5	0	24
Northern	3	0	4	0	0	1	0	3	3	16
Red Sea	19	12	8	8	9	7	0	4	0	30
River Nile	2	0	0	0	0	1	0	1	0	18
Sennar	7	1	0	2	2	0	0	7	0	20
South Darfur	8	12	10	8	2	6	0	4	3	34
South Kordofan	5	3	5	4	3	1	0	2	1	29
West Darfur	12	11	7	10	3	0	0	0	1	23
West Kordofan	5	0	1	7	0	6	0	0	0	40
White Nile	19	2	12	15	3	4	2	5	0	27
Total	137	81	97	85	50	52	9	57	23	468

Source: FAO 2021; FAO assessment results, April 2021

This report is made possible by the support of the American People through the United States Agency for International Development (USAID). The contents of this report are the sole responsibility of Food and Agriculture Organization of the United Nations and do not necessarily reflect the views of USAID or the United States Government.

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CB5535EN/1/07.21