



Food and Agriculture
Organization of the
United Nations

Lebanon

Data in Emergencies Monitoring (DIEM-Monitoring) brief – round 1

Results and recommendations
January 2022

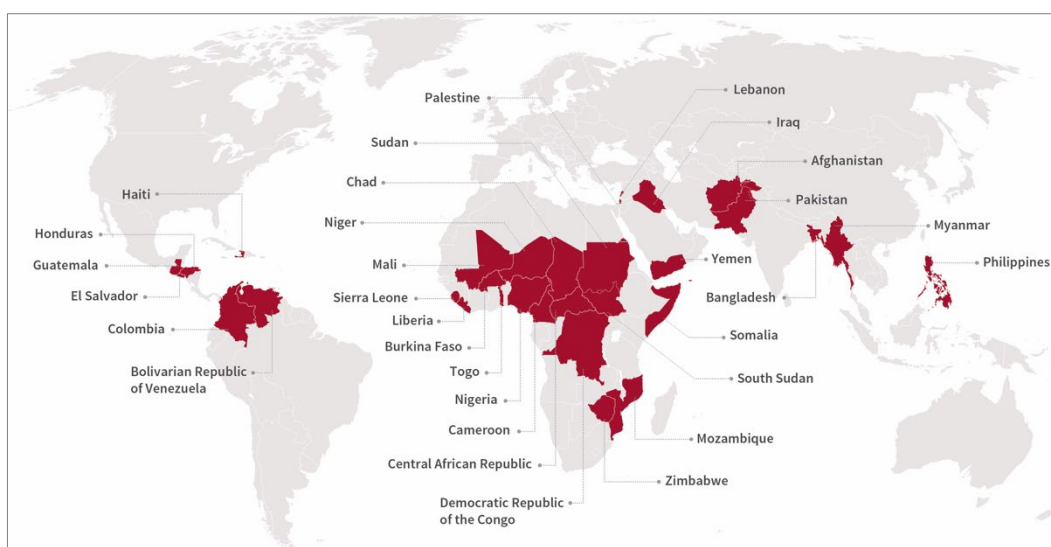
Data collection 16 August to 16 September 2021

Methodology

The Food and Agriculture Organization of the United Nations (FAO), in partnership with Lebanon's Ministry of Agriculture, conducted a household survey using computer-assisted telephone interviews in August and September 2021. This first-round survey targeted the agricultural population using the Lebanon Agricultural Production Survey – a large survey of farming households that draws on the Agricultural Census Survey – as a sample frame.

Across seven governorates, 150 households were targeted in each governorate with probability proportional to their weight in the Agricultural Production Survey. Of the 1 050 surveys completed, 98 percent of respondents identified as agricultural households. Data were weighted in order to ensure that farm size and regional population distribution were adequately represented.

Figure 1. Countries with established DIEM-Monitoring System



Source of map: United Nations. 2020. *Map of the World* [online]. [Cited 6 December 2021]. www.un.org/geospatial/content/map-world

About DIEM-Monitoring

FAO has established the Data in Emergencies Monitoring (DIEM-Monitoring) System to collect, analyse and disseminate data on shocks, livelihoods and food security in countries prone to multiple shocks. DIEM-Monitoring aims to inform decision making by providing regularly updated information on how different shocks are affecting livelihoods and food security.

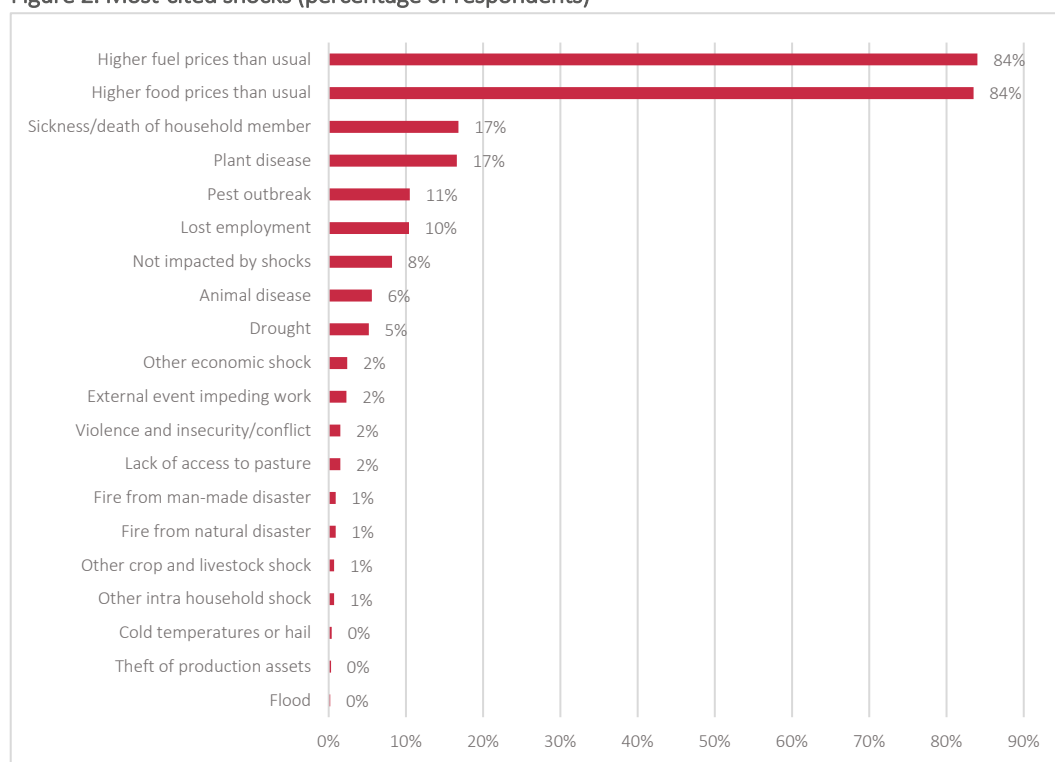
At the core of the DIEM-Monitoring System are country-level dashboards. Readers are encouraged to explore these dashboards to gain more insights on the context in Lebanon and other countries.

> Learn more at <https://data-in-emergencies.fao.org/pages/monitoring>

Income and shocks

Lebanon is in the midst of a multi-faceted economic crisis. At the household level, the consequences of this crisis include unprecedented increases in food and fuel prices. Among the households surveyed, 92 percent reported experiencing a shock, with high fuel and food prices the most common: each was cited by 84 percent of households (Figure 2).

Figure 2. Most-cited shocks (percentage of respondents)

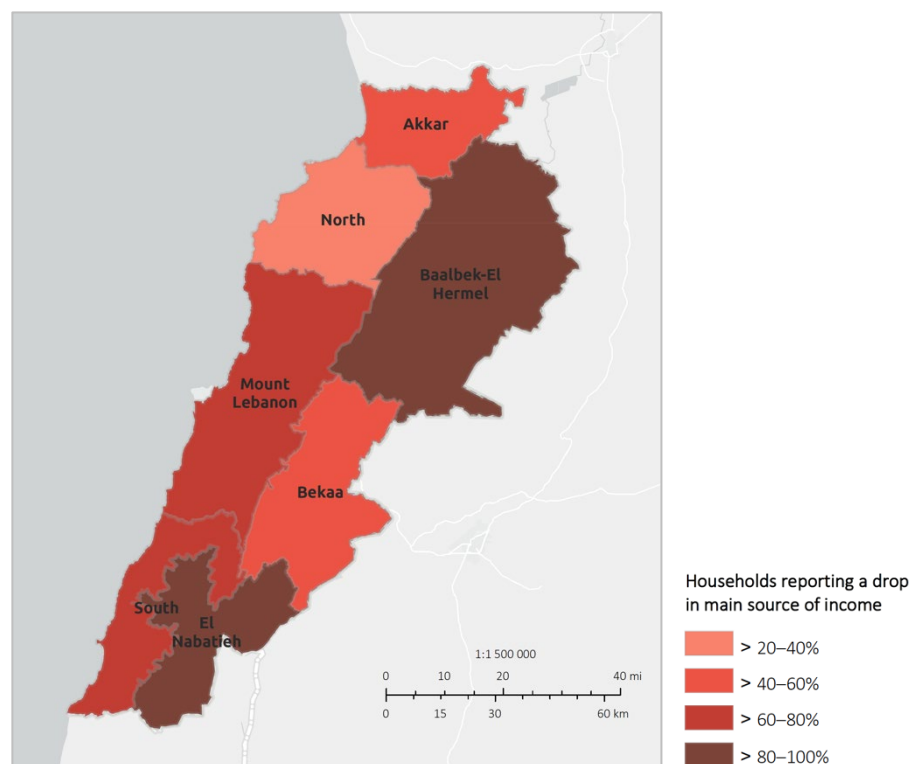


Source of data: FAO. 2021. Lebanon: DIEM-Monitoring assessment results (August–September 2021).

These shocks, along with loss of employment (affecting 17 percent of the surveyed population) were significantly associated with reports of being affected by restrictions related to the COVID-19 pandemic. Movement restrictions for imported goods likely exacerbated the increase in food, fuel and agricultural input prices caused by the devaluation of Lebanon's currency, even though these restrictions had been lifted in the three months prior to the survey.

On average, 62 percent of households reported a decline in their main income source over the previous three months. However, this varied geographically, ranging from 26 percent in North governorate to more than 80 percent in El Nabatieh and Baalbek-El Hermel (Figure 3). Among agricultural producers, livestock keepers and staple-crop farmers were the most likely to report decreased income. In terms of land size, larger landholders were more likely than smallholders to report a decrease in income.

Figure 3. Households reporting a drop in main source of income, by governorate (percentage of respondents)



Source of data: FAO. 2021. Lebanon: DIEM-Monitoring assessment results (August–September 2021).

Source of map: Esri, HERE, Garmin, FAO, NOAA, USGS. 2018. *Map of Lebanon* [online]. [Cited 17 January 2022].
<https://data-in-emergencies.fao.org/pages/explore>

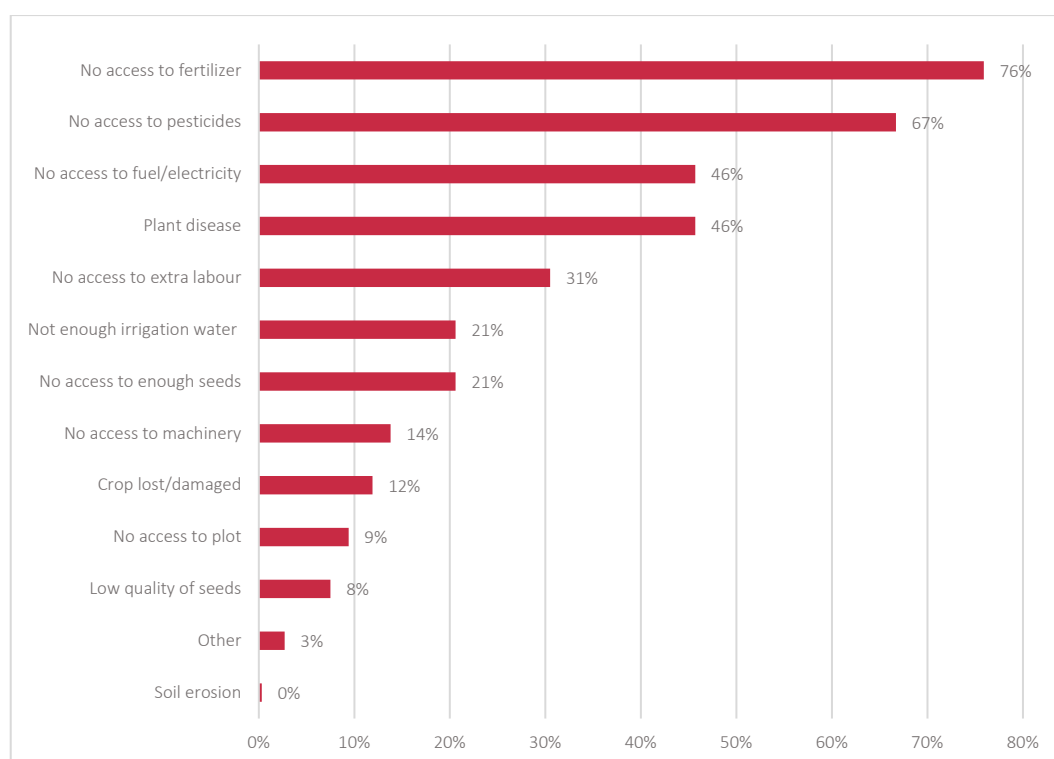
Crops

While 83 percent of survey respondents reported engagement in crop production, three quarters cultivated a land area of less than 1 hectare. The most commonly produced crops were olives (37 percent of crop producers), wheat (13 percent) and apples (10 percent).

Production difficulties were reported by 86 percent of crop producers. The most common challenges were related to accessing agricultural inputs such as fertilizers (reported by 76 percent), pesticides (67 percent) and fuel or electricity (46 percent) (Figure 4). These access issues were likely driven by an increase in the price of imported agricultural inputs as the Lebanese pound lost value against the United States dollar. Possibly as a result of limited access to inputs due to their high costs, plant diseases were also reported as a challenge by 46 percent of crop producers.

More than half of surveyed crop producers were anticipating a decreased harvest, driven by rainfall anomalies and reduced access to agricultural inputs. In addition, 44 percent of crop producers reported difficulties selling their production. This was attributed to increased marketing costs and lower demand. Prices received for crops varied however, with large farmers more likely to report lower prices than smallholders.

Figure 4. Crop-production difficulties (percentage of respondent crop producers)



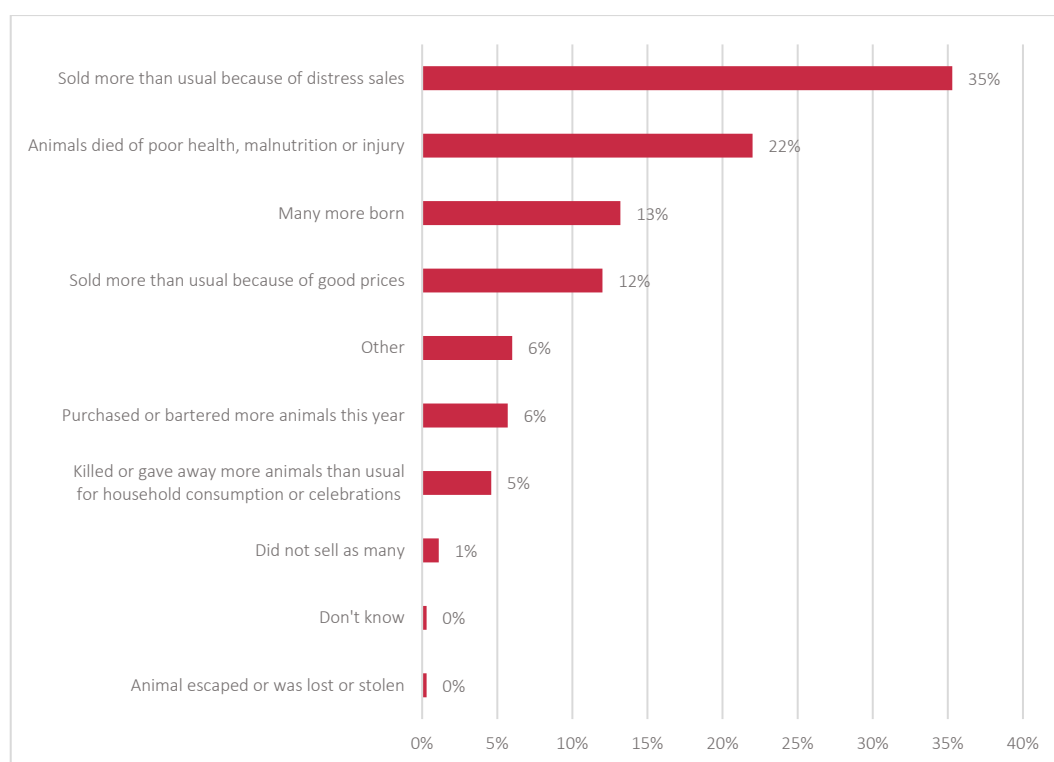
Source of data: FAO. 2021. Lebanon: DIEM-Monitoring assessment results (August–September 2021).

Livestock

Of the 37 percent of the sample that produced livestock, more than four in five reported facing difficulties. For 85 percent of livestock producers, purchasing feed was a key constraint. Many livestock producers also faced challenges in accessing veterinary services and inputs (40 percent and 55 percent respectively).

Among livestock producers, 57 percent reported a decrease in the number of animals they owned compared to the previous year. This could be explained by distress sales (reported by 35 percent) and animal death from disease or malnutrition (22 percent) (Figure 5). Livestock prices increased for more than half of respondents compared to the three-year average – probably reflecting rampant inflation. Many livestock producers also encountered difficulties selling their products – especially higher marketing costs and lower demand.

Figure 5. Reasons for change in number of livestock (percentage of respondent livestock producers)



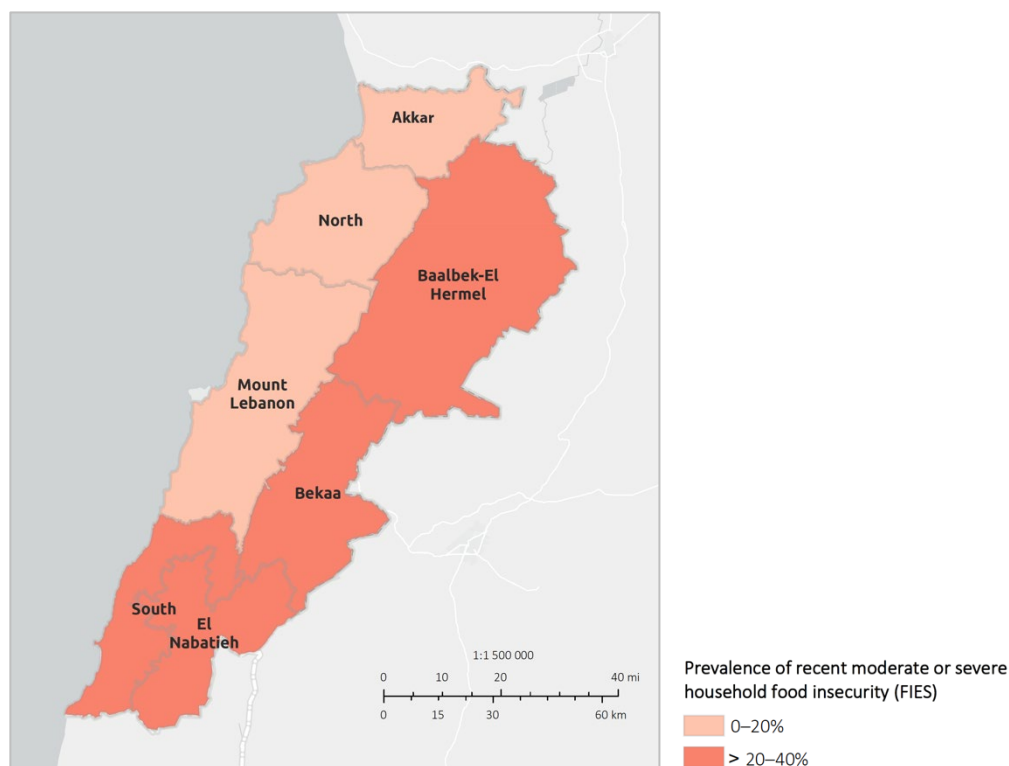
Source of data: FAO. 2021. Lebanon: DIEM-Monitoring assessment results (August–September 2021).

Food security

The prevalence of recent moderate or severe food insecurity based on the Food Insecurity Experience Scale (FIES) was estimated at 23 percent of the surveyed population; Baalbeck-El Hermel, Bekaa, El Nabatieh and South recorded the highest prevalence in the governorates surveyed (Figure 6). Among these households, 70 percent worried about not having enough food and more than one in four indicated that they had skipped a meal in the last 30 days because of a lack of money or other resources.

The adoption of coping strategies in order to access food was widespread, and included spending savings, borrowing money or food, purchasing food on credit, and reducing expenditures on agricultural inputs. Close to 80 percent of households reported employing Crisis-level coping strategies and 15 percent adopted Emergency-level coping strategies (including one third of households in Bekaa governorate).

Figure 6. Prevalence of recent moderate or severe food insecurity (FIES), by governorate (percentage of respondents)



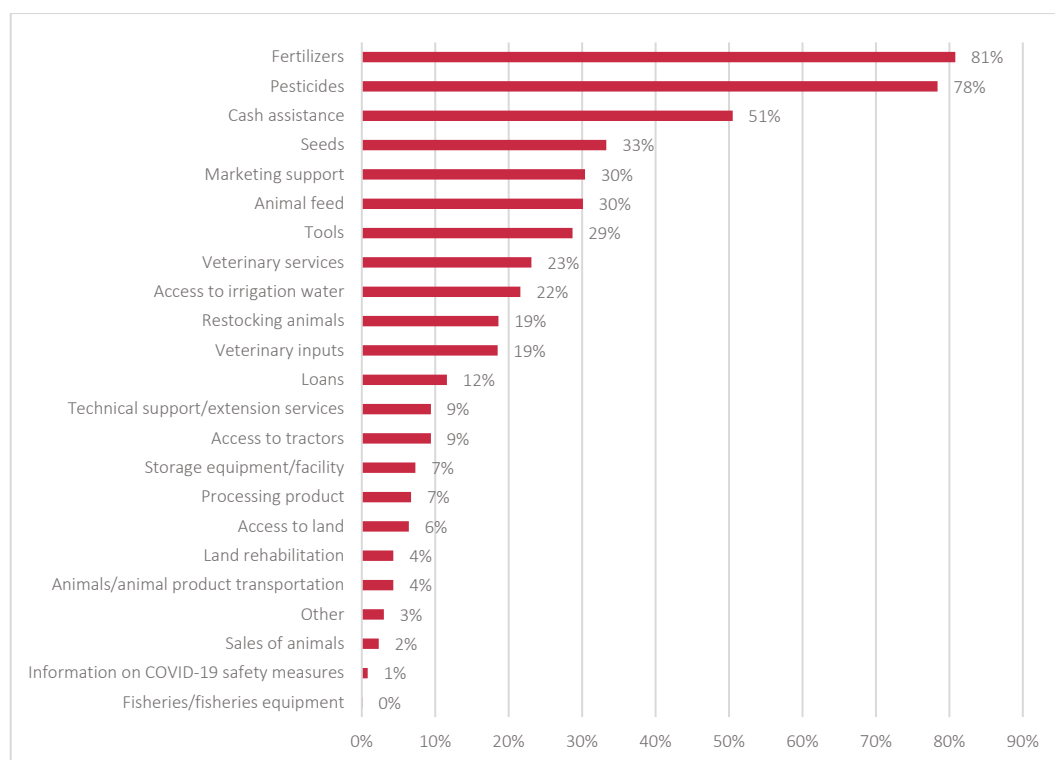
Source of data: FAO. 2021. Lebanon: DIEM-Monitoring assessment results (August–September 2021).

Source of map: Esri, HERE, Garmin, FAO, NOAA, USGS. 2018. *Map of Lebanon* [online]. [Cited 17 January 2022]. <https://data-in-emergencies.fao.org/pages/explore>

Needs

Nearly all agricultural households surveyed indicated a need for assistance in the coming six months. The needs of each livelihood group were aligned with their production difficulties: more than 80 percent of respondents expressed the need for fertilizers and 78 percent reported that they required support with accessing pesticides (Figure 7). Livestock producers primarily indicated the need for support with accessing feed, veterinary services and inputs. Half of all respondents also expressed the need for cash support.

Figure 7. Most-cited needs for assistance (percentage of respondents)



Source of data: FAO. 2021. Lebanon: DIEM-Monitoring assessment results (August–September 2021).

Recommendations

- > With challenges accessing inputs reported by many crop producers, more than half were anticipating a decreased harvest. Cash assistance and subsidies are required to assist farmers with purchasing agricultural inputs.
- > Increased marketing costs and lower demand led nearly 45 percent of respondent crop producers to report difficulties selling their production. In order to address this challenge, technical assistance should be provided in crop aggregation, producers' integration into markets and productive alliances for increased price bargaining power.
- > Purchasing feed was a key constraint for most livestock producers, and many also faced challenges in accessing veterinary services and inputs. Critical support is needed to enhance livestock producers' access to the inputs and services they need to sustain their herds – reducing their vulnerability to livelihood shocks.
- > Given the prevalence of recent moderate and severe food insecurity, and the adoption of coping strategies, surveyed households may be at risk of further deterioration in food security if their coping capacity is exhausted over time. Targeted food and cash assistance should be provided to farmers in need.



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Food and Agriculture
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Lebanon

DIEM – Data in Emergencies Monitoring brief, round 2

Results and recommendations
June 2022

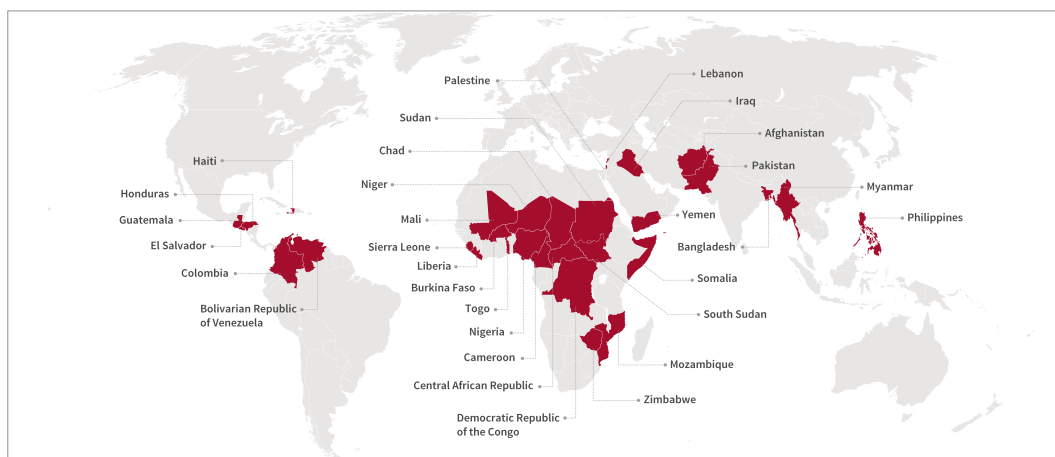
Data collection 23 March to 13 April 2022

Methodology

The Food and Agriculture Organization of the United Nations (FAO), in partnership with Lebanon's Ministry of Agriculture, conducted a household survey using computer-assisted telephone interviews from 23 March to 13 April 2022.

The survey targeted agricultural households using contact information from the Lebanon Agricultural Production Survey, a large survey of farming households drawn from the Agricultural Census. It took place across seven governorates – Akkar, Baalbeck El Hermel, Bekaa, El Nabatieh, North, Mount Lebanon and South – with 150 households selected in each governorate using probability-proportional-to-size based on the Agricultural Production Survey. A total of 1 050 interviews were completed, in which 99 percent of respondents identified as agricultural households. Data were weighted at the analytical stage to ensure that farm size and regional population distribution were adequately represented.

Figure 1. Countries with established DIEM-Monitoring Systems



Source of data: FAO. 2022. *DIEM-Monitoring*. Rome. Cited 6 April 2022. <https://data-in-emergencies.fao.org>

Source of map: United Nations. 2020. *Map of the World*. Cited 6 April 2022. un.org/geospatial/content/map-world

Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties. Final boundary between the Sudan and South Sudan has not yet been determined. Final status of the Abyei area is not yet determined.

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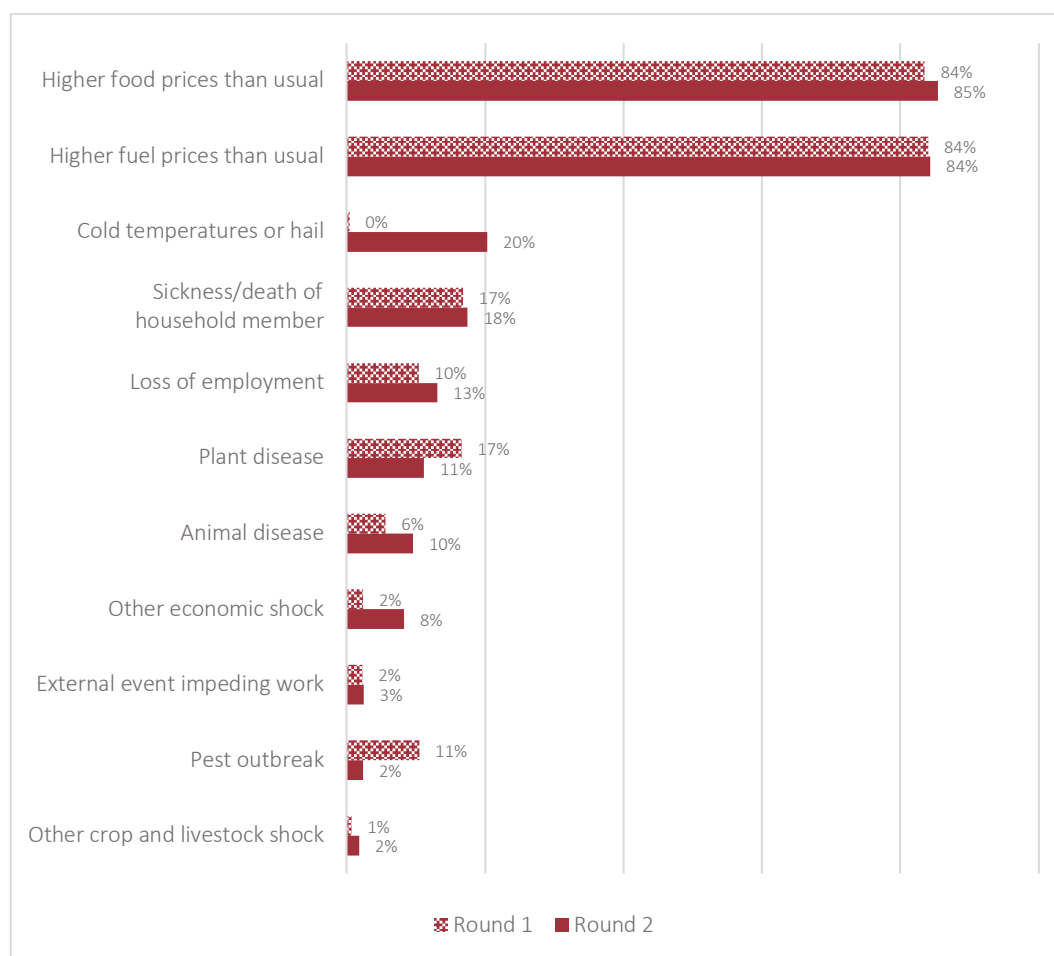
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Income and shocks

Approximately 93 percent of households surveyed reported facing at least one shock in the three months preceding the survey. Eighty-five percent of respondents cited much higher than usual fuel and food prices (Figure 2). These findings, which are similar to those from the first-round survey conducted in August and September 2021, are a result of the ongoing economic and financial crisis in Lebanon, which has been exacerbated by COVID-19 and the 2020 Beirut port explosion.

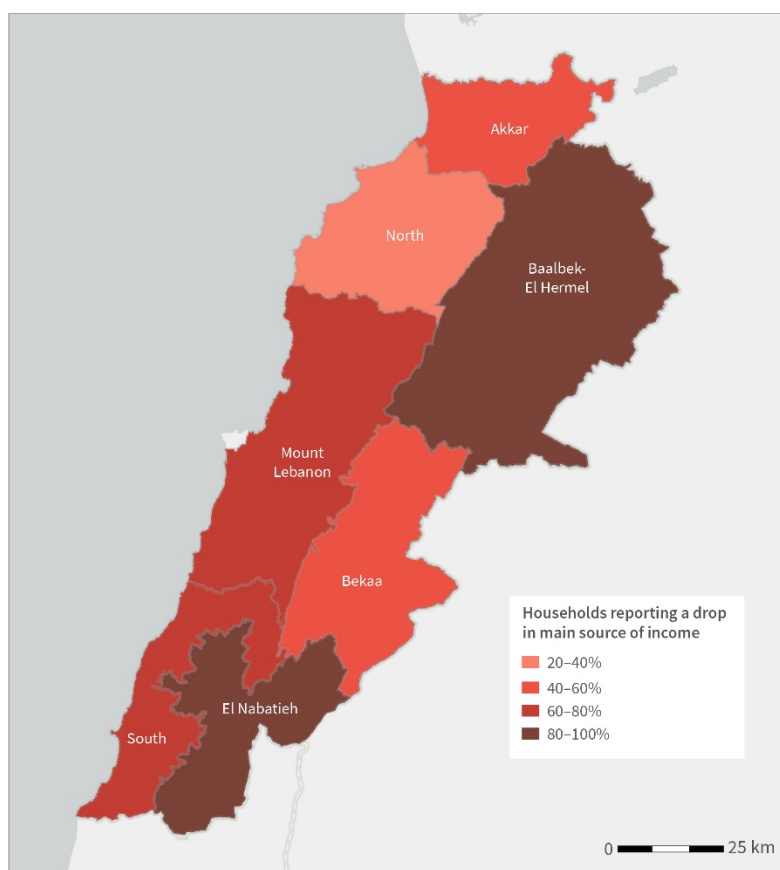
Figure 2. Main shocks experienced (percentage of respondents)



Source of data: FAO. 2022. Lebanon: DIEM-Monitoring assessments results (August–September 2021 and March–April 2022).

The surging inflation and large dependency on imports have driven an exponential increase in food and fuel prices. Agricultural production was cited as the main source of income by approximately one-third of the households surveyed. Compared to the same period in a typical year, the main income decreased for 80 percent of all surveyed households. Households in Baalbek El-Hermel reported the greatest decline (Figure 3). About 33 percent of the surveyed households reported the continued effects of COVID-19 restrictions in the three months preceding the survey.

Figure 3. Percentage of households reporting a drop in main source of income



Source of data: FAO. 2022. Lebanon: DIEM-Monitoring assessment results (March–April 2022).

Source of map: Esri, HERE, Garmin, FAO, NOAA, USGS. 2018. *Map of Lebanon*. Cited 22 June 2022.
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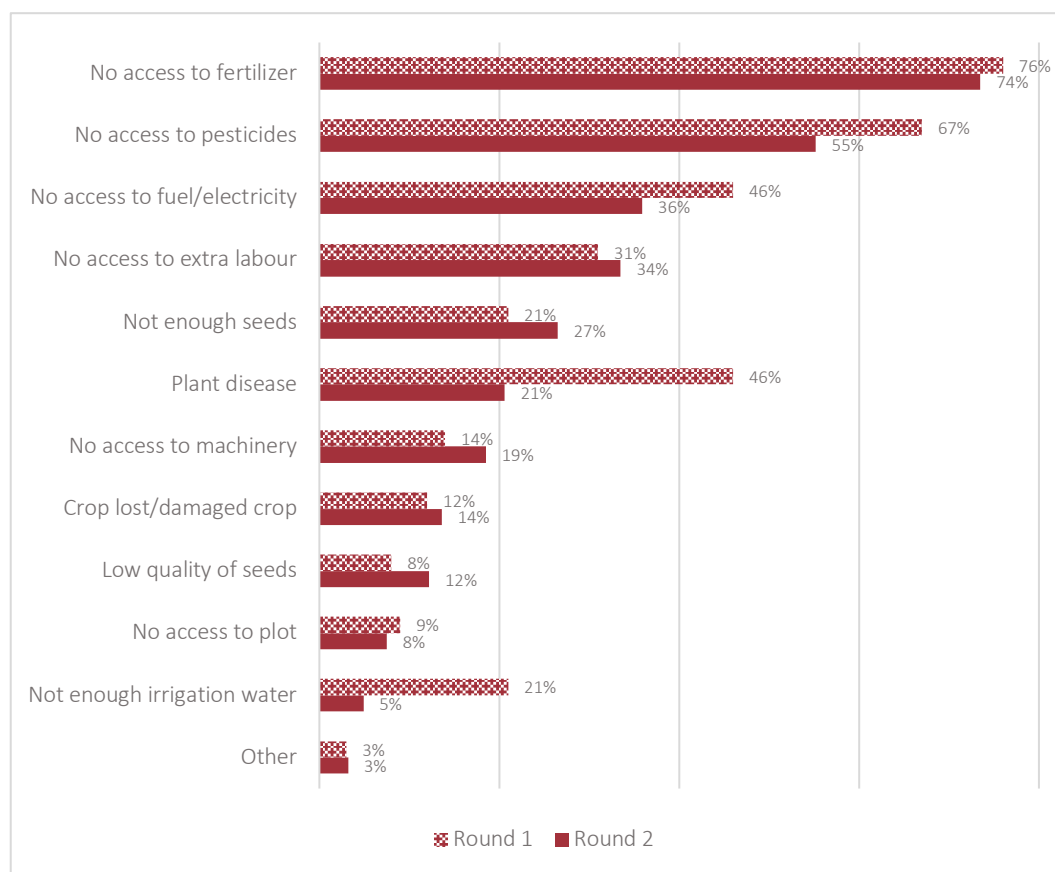
Crops

Over 80 percent of respondent households were engaged in crop production, with most (70 percent) being smallholder farmers with a cultivated land size of less than one ha. Difficulties with crop production were experienced by approximately two-thirds of these households. The lack of access to agricultural inputs such as fertilizers (74 percent) and pesticides (55 percent), and to fuel or electricity (36 percent) were the main reasons cited for the low expected harvest with 54 percent of households expecting a harvest lower than that of a typical year (Figure 4).

Crop area decreased for 26 percent of agricultural households, who were using less costly inputs to maintain agricultural activities. Crop sale difficulties affected 44 percent of crop producers who attributed the difficulties to increased marketing costs (70 percent), lower prices (55 percent) and lower demand (44 percent). Crop production and sale difficulties were primarily driven by the depreciation of the Lebanese pound (and resulting hyperinflation crisis) combined with the country's large dependency on imports, including the import of agricultural inputs.

Fluctuations in crop sale prices from round 2 and round 1 cannot be compared because some sales prices were collected in nominal values during round 1 while others were collected in real values.

Figure 4. Main crop production difficulties (percentage of respondents)



Source of data: FAO. 2022. Lebanon: DIEM-Monitoring assessments results (August–September 2021 and March–April 2022).

Livestock

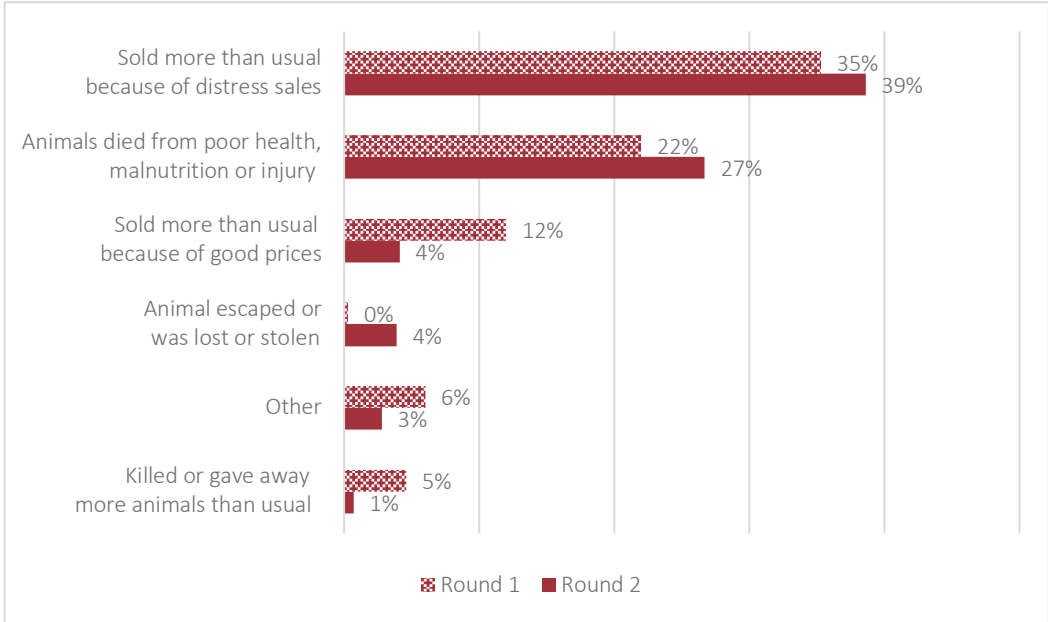
Most livestock producers cited difficulties purchasing feed (85 percent) and accessing veterinary inputs (63 percent) and services (53 percent) over the three months preceding the survey. Poultry producers reported more difficulties than cattle producers.

Approximately 62 percent of livestock producers reported a decrease in the number of animals they owned compared to the previous year mostly as a result of distress sales (39 percent) and animals dying from disease or malnutrition (27 percent). Distress sales were predominantly reported by cattle (47 percent), goat (32 percent) and sheep (21 percent) producers.

The most cited difficulties for marketing animal products were lower prices (73 percent), smaller profits (60 percent) and low demand (55 percent). The North and South governorates reported the highest decreases in sale prices. The sale difficulties were likely a consequence of high marketing costs and the declining purchasing power of consumers. Livestock prices decreased for 63 percent of respondents compared to the three-year average due to the continued depreciation of the Lebanese pound.

Fluctuations in livestock sale prices from round 2 and round 1 cannot be compared because some sales prices were collected in nominal values during round 1 while others were collected in real values.

Figure 5. Main reasons for the decrease in number of livestock (percentage of respondents)

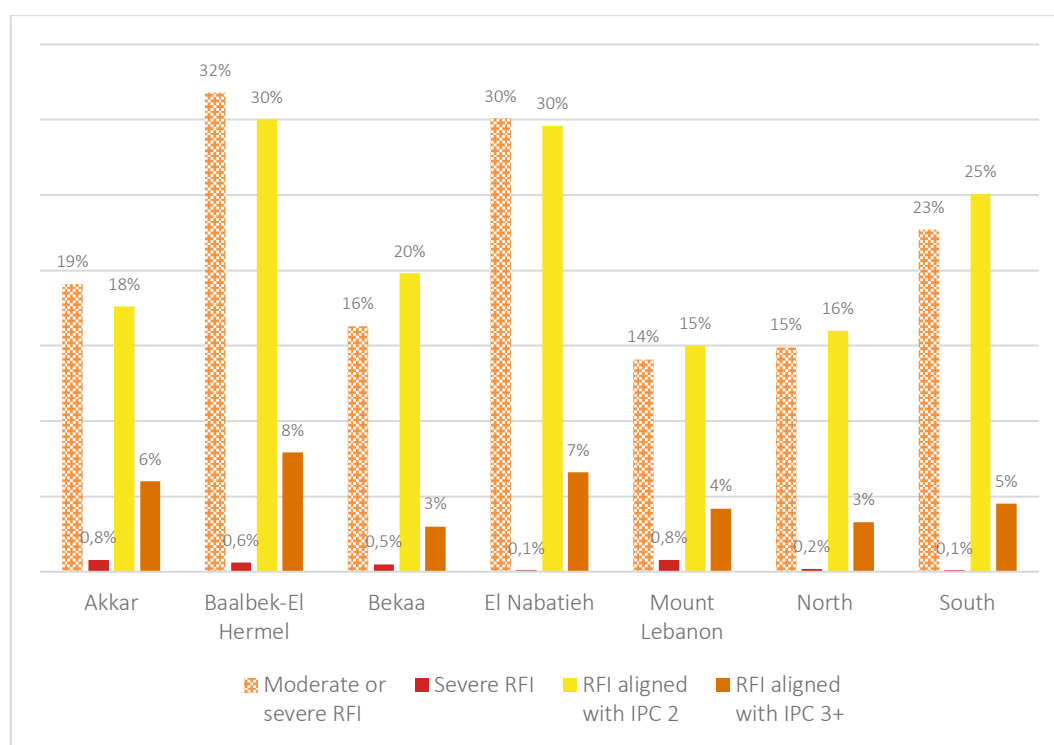


Source of data: FAO. 2022. Lebanon: DIEM-Monitoring assessments results (August–September 2021 and March–April 2022).

Food security

The prevalence of recent moderate or severe food insecurity (RFI), assessed with the food insecurity experience scale (FIES), was around 21 percent. By governorate, it was the highest in Baalbeck-El Hermel, El Nabatieh and the South. The prevalence of RFI with severity levels equivalent to IPC Phase 3 or more was 5.2 percent (± 1.9 % margin of error). Overall, above 90 percent of households experienced little to no hunger.

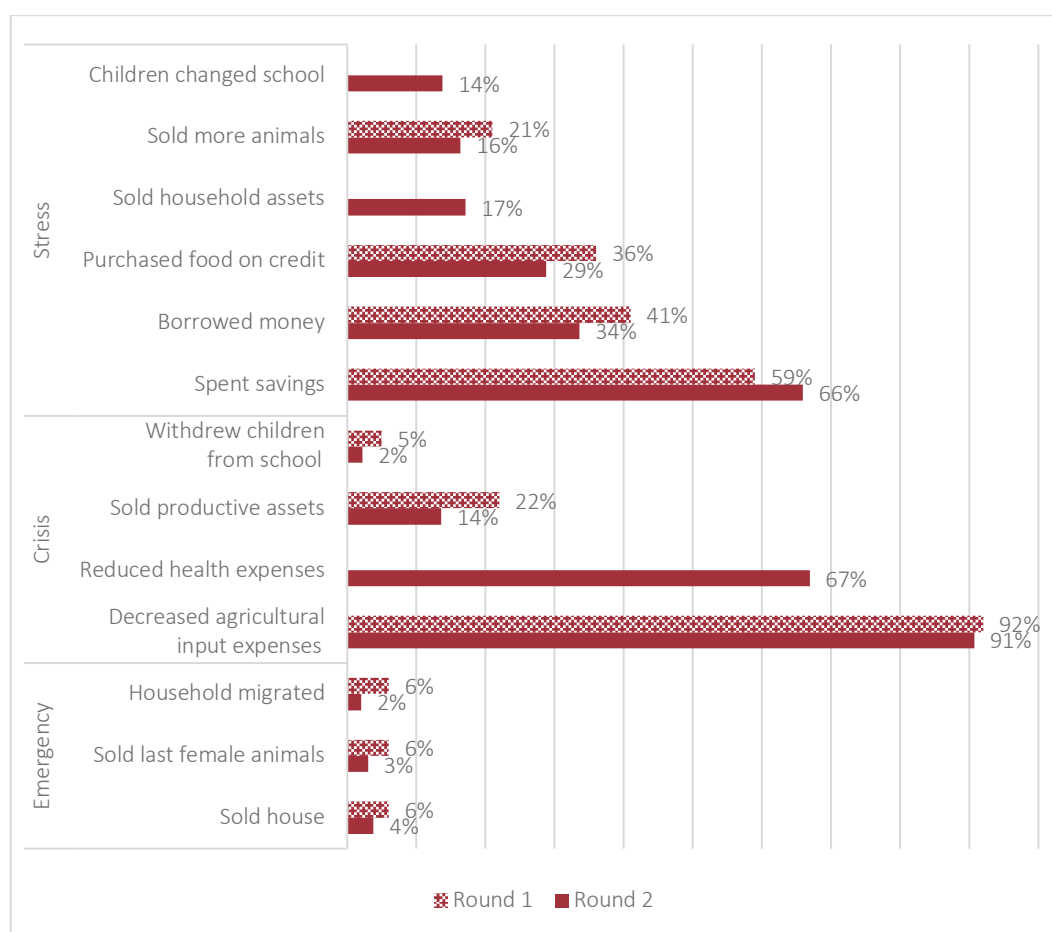
Figure 6. FIES estimates of recent food insecurity (over a thirty-day period)



Source of data: FAO. 2022. Lebanon: DIEM-Monitoring assessment results (March–April 2022).

Nearly all households adopted coping strategies to access food, with the most common being decreased expenses on agricultural inputs (91 percent), reduced health expenses (67 percent) and spent savings (66 percent). The most common coping strategies were highly associated with the increase of fuel, food prices and loss of employment. Close to 86 percent of households reported employing crisis-level coping strategies and 9 percent reported employing emergency-level coping strategies. Respondents from Baalbeck-El Hermel and Akkar, two governorates with limited sources of income and job opportunities, recorded the lowest Household Dietary Diversity Score (25 percent and 20 percent respectively). Low dietary diversity was highly associated with the increase of food prices.

Figure 7. Coping strategies adopted (percentage of households)



Source of data: FAO. 2022. Lebanon: DIEM-Monitoring assessments results (August–September 2021 and March–April 2022).

Needs

Nearly all households surveyed (92 percent) indicated a need for assistance in the coming three to six months. The needs of each livelihood group were aligned with the production difficulties reported. Fertilizer (75 percent), pesticides (69 percent) and seeds (40 percent) were the most common needs indicated by crop producers, while animal feed (34 percent), veterinary services (27 percent) and inputs (26 percent) were reported by livestock producers. Moreover, half (50 percent) of the respondents expressed a need for cash support. About 22 percent of households received assistance in the three months preceding the survey, and the most frequent types of assistance received were cash vouchers (10 percent) and food (9 percent).

Recommendations

Short-term recommendations (1–6 months)

- > Increase the supply of crop inputs (seeds, fertilizer, etc.) by providing cash, vouchers or in-kind assistance. Strengthen the capacity of existing agricultural extension services to improve yields.
- > Provide cash, vouchers or in-kind assistance to support the supply of livestock feed and veterinary inputs. Strengthen the capacity of existing agricultural extension services to improve prevention and control of the spread of animal diseases.
- > Target food and/or cash assistance to vulnerable agricultural households in collaboration with ongoing food assistance programmes. Continue to closely monitor the food security status of agricultural households and support the development of a food security surveillance system.

Medium/long-term recommendations (6 months and beyond)

- > Provide technical and financial assistance and support programmes designed for small to medium holders (including but not limited to the promotion of good agricultural practices, grant schemes, etc.) to increase outcomes and agricultural productivity, and to improve food availability and access.
- > Encourage farmers to transition to solar energy and decrease their reliance on fossil fuels. Support the adoption of good agricultural practices and modern technology in agricultural production.
- > Adopt good agricultural practices and modern technology in livestock production.



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Results and recommendations, June 2022. Rome. <https://doi.org/10.4060/cc0932en>

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Food and Agriculture
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Lebanon

DIEM – Data in Emergencies Monitoring brief, round 3

Results and recommendations
September 2022

Data collection 17 July to 8 August 2022

Methodology

The Food and Agriculture Organization of the United Nations (FAO), in partnership with Lebanon's Ministry of Agriculture, conducted a household survey using computer-assisted telephone interviews from 17 July to 8 August 2022.

The survey targeted the agricultural population using contact information from the Lebanon Agricultural Production Survey, a large survey of farming households drawn from the Agricultural Census. It took place across seven governorates – Akkar, Baalbeck El Hermel, Bekaa, El Nabatieh, North Lebanon, Mount Lebanon and South Lebanon – with 150 households selected in each governorate using probability proportional to size. A total of 1 050 interviews were completed, in which 98 percent of respondents identified as agricultural households. Data were weighted at the analytical stage to ensure that farm size and regional population distribution were adequately represented. Two previous surveys using the same methodology were carried out between 16 August and 16 September 2021 (Round 1), and 23 March and 13 April 2022 (Round 2).

Figure 1. Countries with established DIEM-Monitoring System



Source of data: FAO. 2022. DIEM-Monitoring. In: *FAO Data in Emergencies Hub*. Rome. Cited 6 April 2022. <https://data-in-emergencies.fao.org>

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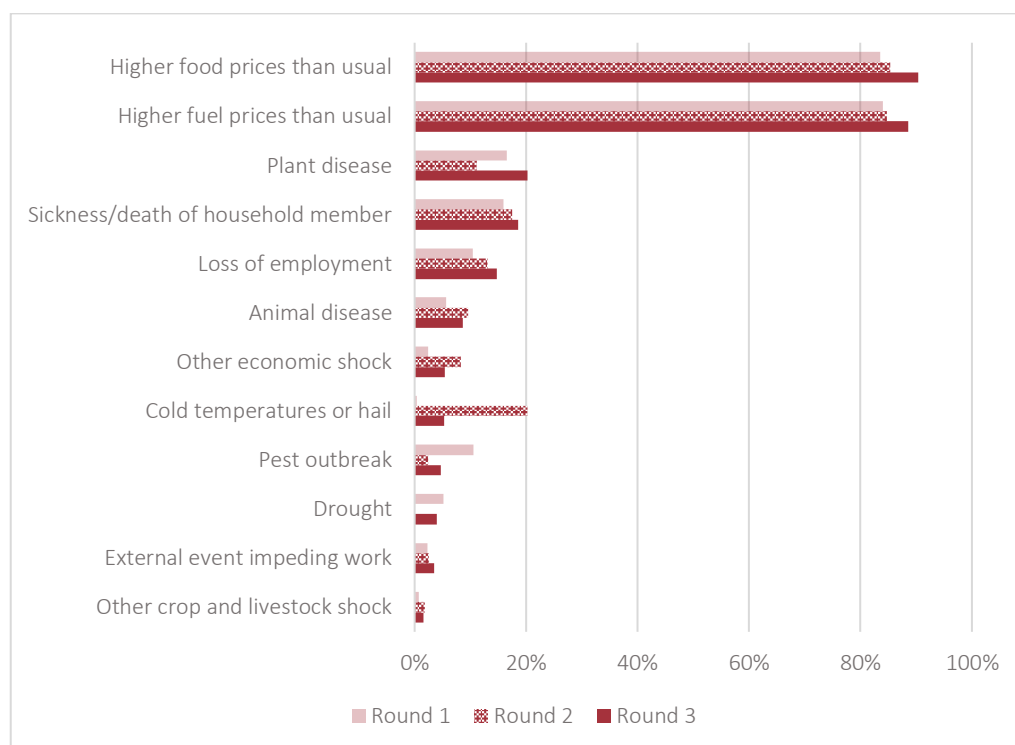
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Income and shocks

Around 96 percent of respondents reported experiencing shocks in the three months prior to the survey. High food and fuel prices were the most common shocks cited (90 percent and 87 percent respectively) (Figure 2). These findings are significantly higher than those reported in previous rounds. Inflation in Lebanon topped 200 percent in August 2022.

Figure 2. Main shocks experienced (percentage of respondents)

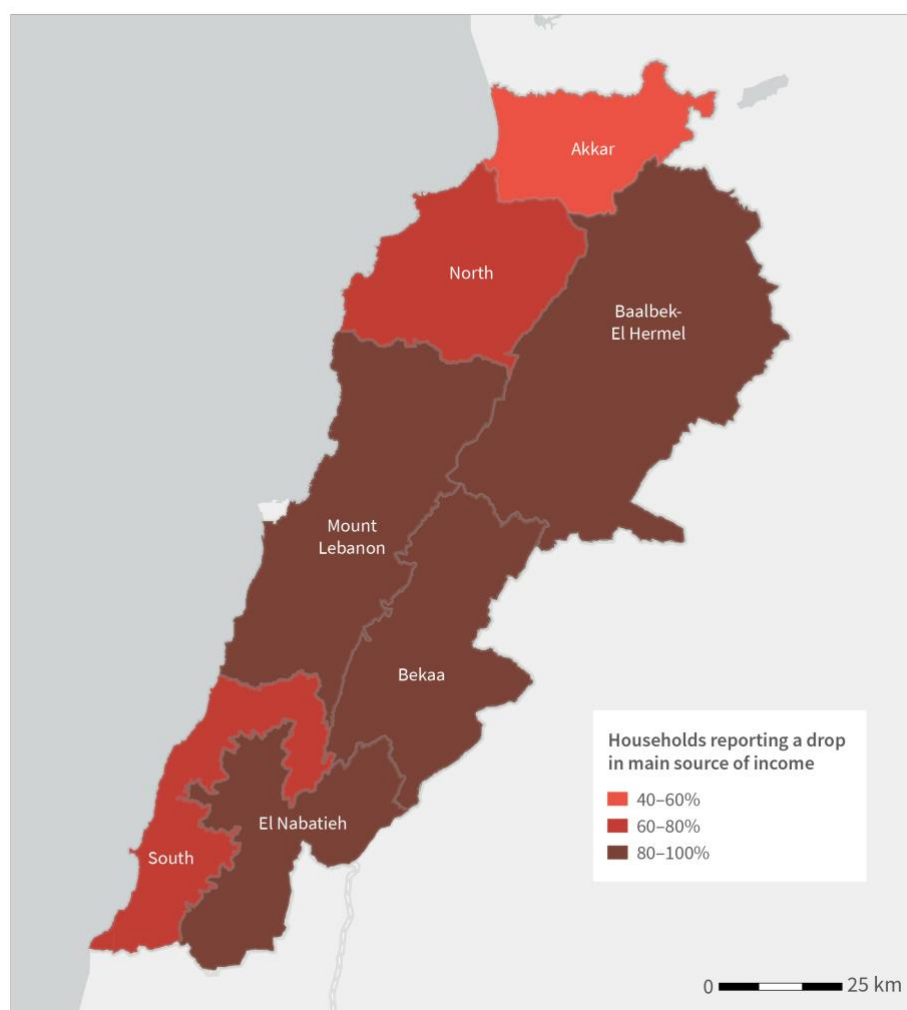


Source of data: FAO. 2022. Lebanon: DIEM-Monitoring assessments results (August–September 2021; March–April 2022 and July–August 2022). In: *FAO Data in Emergencies Hub*. Rome. Cited 12 September 2022. <https://data-in-emergencies.fao.org>

About 80 percent of the surveyed households (and over 90 percent of female-headed households) reported a decrease in their primary income source in the three months preceding the survey (Figure 3). Households in Akkar fared better than households in other governorates, possibly because farmers were able to sustain or slightly increase their income from the sale of

olive oil and earlier crop production and sales (potatoes, tomatoes and other vegetables). Only 12 percent of households still reported being affected by COVID-19 restrictions.

Figure 3. Percentage of households reporting a drop in main source of income



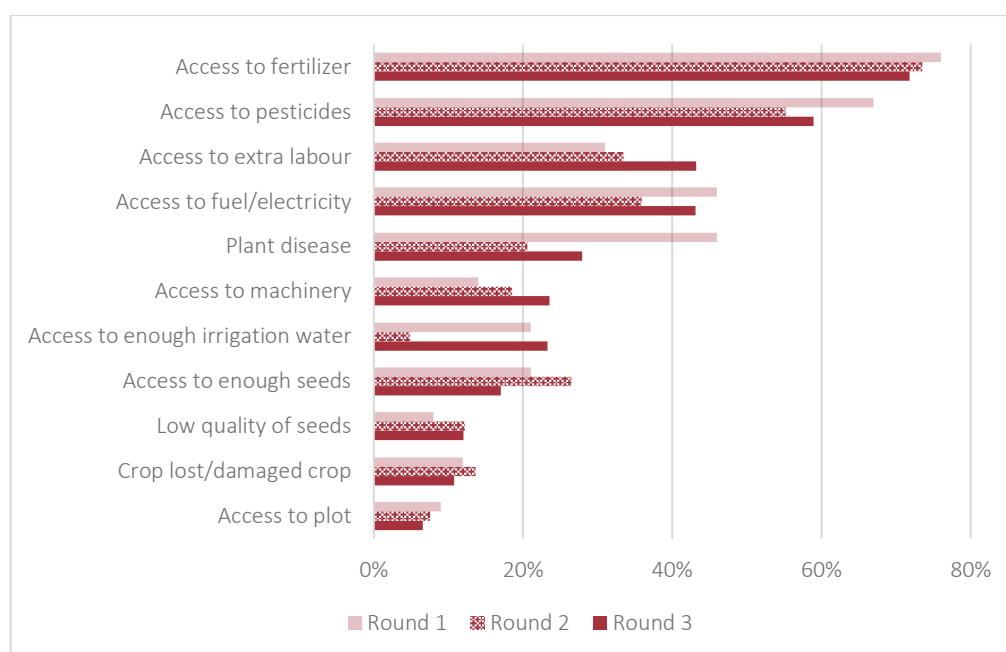
Source of data: FAO. 2022. Lebanon: DIEM-Monitoring assessment results (March-April 2022). In: *FAO Data in Emergencies Hub*. Rome. Cited 12 September 2022. <https://data-in-emergencies.fao.org>

Source of map: Esri, HERE, Garmin, FAO, NOAA, USGS. 2018. *Map of Lebanon*. Cited 22 June 2022. <https://data-in-emergencies.fao.org/pages/explore>

Crops

Over 89 percent of the surveyed households involved in agricultural activities were engaged in crop production. Seventy percent of whom were smallholder farmers with land size less than 1 hectare. Over 80 percent of crop producers faced production difficulties, with the most common difficulties being access to fertilizer (72 percent), pesticides (59 percent) and labour (43 percent) (Figure 4). These findings are similar to those of previous rounds as well as the continued reported decline in the expected harvest (by over half of the crop producers) compared to a typical year. The most common crop production difficulties were identical for male and female-headed households.

Figure 4. Main crop production difficulties (percentage of respondents)



Source of data: FAO. 2022. Lebanon: DIEM-Monitoring assessments results (August–September 2021; March–April 2022 and July–August 2022). In: *FAO Data in Emergencies Hub*. Rome. Cited 12 September 2022. <https://data-in-emergencies.fao.org>

Crop area decreased for 18 percent of agricultural households, who were also using less costly agricultural inputs to maintain agricultural activity. The prices of agricultural inputs have been increasing gradually, in parallel with the depreciation of the local currency, increased prices on international markets since early 2022, and increased prices of fuel on the Lebanese market following the withdrawal of government subsidies.

Around 72 percent of crop producers reported difficulties in crop sales as a result of lower prices (80 percent), increased marketing costs (70 percent) and lower demand (27 percent). The higher marketing costs, which are due to higher transportation costs, have constrained farmers to market their crops through intermediaries or to sell them in nearby markets. Crop sales prices were the lowest reported of previous data collection rounds due to the increase in market supply during the spring-summer season and the decrease in exports of agricultural produce.

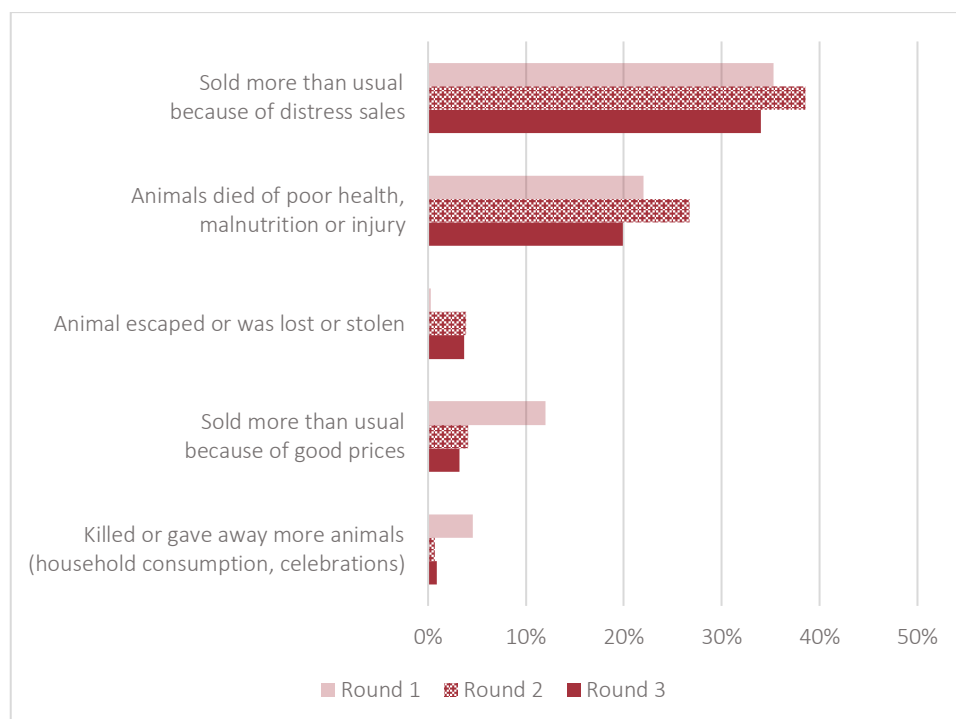
Livestock

Over 86 percent of livestock producers reported production difficulties namely, to purchase feed (87 percent), access veterinary inputs (61 percent) and veterinary services (62 percent). These difficulties are a consequence of increased prices due to inflation or imports. Most feed and veterinary inputs are imported and sold in U.S. Dollar (USD), or the equivalent based on market exchange rates.

Approximately two-thirds of livestock producers reported a decrease in the number of animals they owned compared to the previous year, primarily because of distress sales (34 percent) as in previous data collection rounds (Figure 5). Distress sales were predominantly reported by cattle (45 percent), goat (44 percent) and sheep (42 percent) producers. The most common livestock sales difficulties were lower prices (79 percent), smaller profits (40 percent) and low

demand (35 percent). Over 70 percent of the producers reported a decrease in selling prices, mostly in the North Lebanon and South Lebanon governorates. Livestock production and sales difficulties remained mostly consistent with those reported by livestock producers in previous data collection rounds, they were also similar between male and female-headed households.

Figure 5. Main reasons for the decrease in number of livestock (percentage of respondents)



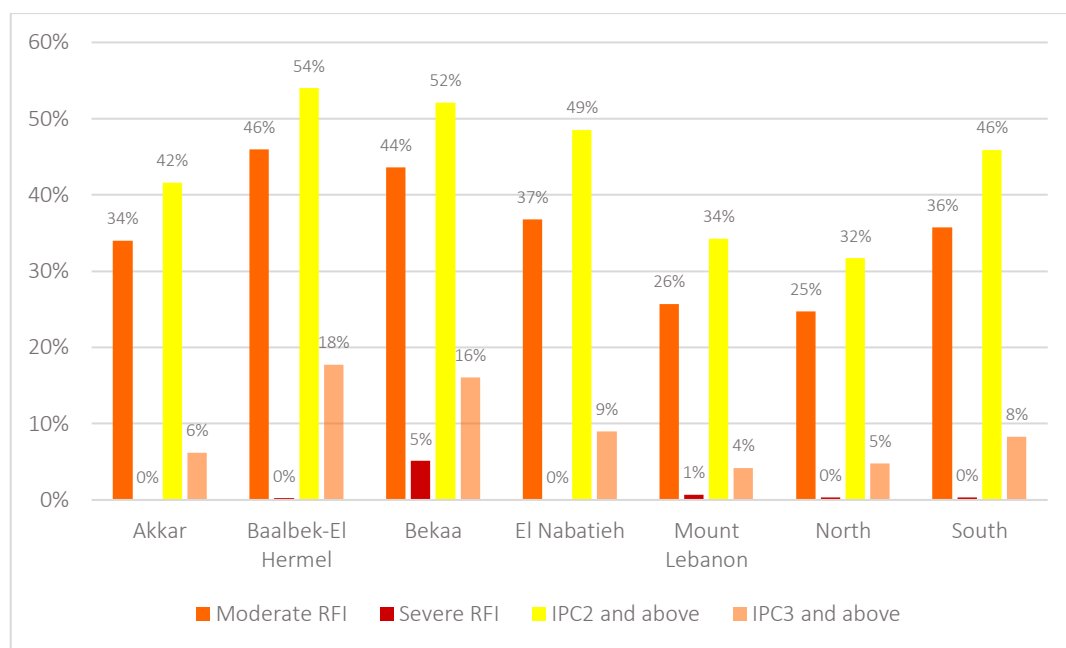
Source of data: FAO. 2022. Lebanon: DIEM-Monitoring assessments results (August–September 2021 and March–April 2022). In: *FAO Data in Emergencies Hub*. Rome. Cited 12 September 2022. <https://data-in-emergencies.fao.org>

Food security

The prevalence of moderate or severe recent food insecurity (RFI), assessed with the Food Insecurity Experience Scale¹ (FIES), was around 34 percent, significantly higher than that reported during the previous data collection round (21 percent). Bekaa (44 percent), Baalbeck-El Hermel (46 percent) and El Nabatieh (38 percent) showed higher than average RFI prevalence (Figure 6 shows the FIES estimates based on the 30-day period preceding the survey). The prevalence of recent household food insecurity with severity levels equivalent to Integrated Food Security Phase Classification (IPC) Phase 3 (Crisis) or more was 9 percent (± 2.6 percent margin of error). Overall, more than 93 percent of households experienced little to no hunger.

¹ FIES results are subject to change. The country scale will continue to evolve over additional rounds of data collection allowing for more consistent comparability across rounds.

Figure 6. RFI as measured by FIES



Source of data: FAO. 2022. Lebanon: DIEM-Monitoring assessment results (July–August 2022). In: *FAO Data in Emergencies Hub*. Rome. Cited 12 September 2022. <https://data-in-emergencies.fao.org>

Nearly all (99 percent) respondents adopted coping strategies to meet their food needs, with the most being decreased expenses on agricultural inputs (93 percent), reduced health expenses (78 percent) and spent savings (57 percent). These most common coping strategies, as measured with the Livelihood Coping Strategies Index, were highly associated with increased fuel and food prices and loss of employment. A higher percentage of respondents resorted to crisis-level coping strategies compared to previous rounds. Overall, only 5 percent of respondents had low Household Dietary Diversity Scores (HDDS). Baalbeck-El Hermel had the highest percentage of respondents reporting low HDDS (13 percent). Low HDDS was highly associated with increased food prices. In parallel, over 80 percent of respondents reported an acceptable food consumption score (FCS). Households surveyed in South Lebanon, Mount Lebanon and Akkar reported the poorest FCS.

Needs

Nearly 95 percent of the surveyed agricultural households indicated a need for assistance in the 3–6 months post-survey. Overall, over half of the respondents expressed a need for cash support. Crop producers reported a need for fertilizer (80 percent), pesticides (75 percent) and seeds (40 percent), whereas livestock producers reported a need for animal feed (33 percent), veterinary services (28 percent) and veterinary inputs (25 percent). Female-headed households had similar needs to male-headed households. These findings are in line with those of previous data collection rounds. Only about 13 percent of households received assistance in the three months preceding the survey, primarily as food (7 percent) and cash vouchers (2 percent).

Recommendations

Short-term recommendations (1-6 months)

- > Support the supply of crop inputs (seeds, fertilizer, etc.) by providing cash, vouchers or in-kind assistance. Strengthen the capacity of existing agricultural extension services to improve yields.
- > Support the supply of livestock feed and veterinary inputs by providing cash, vouchers or in-kind assistance. Strengthen the capacity of existing agricultural extension services to improve the prevention and control of the spread of animal diseases.
- > Support targeted food aid and/or cash assistance to the vulnerable agricultural households in collaboration with ongoing food assistance programmes. Continue to closely monitor the food security status of agricultural households and support the development of a food security surveillance system.

Medium/long-term recommendations (6 months and beyond)

- > Provide technical and financial assistance and support programmes designed for small to medium holders (including but not limited to the promotion of good agricultural practices, grant schemes, etc.) to increase outcomes/agricultural productivity and generally improve food availability and access.
- > Support and encourage farmers to transition to solar energy and decrease reliance on fossil fuels. Support the adoption of good agricultural practices and modern technology in agricultural production.



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Food and Agriculture
Organization of the
United Nations

Lebanon

DIEM – Data in Emergencies Monitoring brief, round 4

Results and recommendations
January 2023

Data collection 24 October to 19 November 2022

Key highlights

- > High food and fuel prices were the most common shocks cited by agricultural households, over 70 percent of which also reported a drop in their main source of income in the three months preceding the survey. Households from Baalbek-El Hermel and El Nabatieh fared better than those from other governorates. In these two governorates, October and November is a post-harvest period where many profitable crops are sold, resulting in higher incomes.
- > The high costs of agricultural inputs and lack of labour were the main reported crop and livestock production difficulties while higher transportation costs, lower sale prices and lower demand were the most cited sales challenges by both crop and livestock producers.
- > The prevalence of household food insecurity was moderate across all surveyed areas. Both the Household Dietary Diversity Score (HDDS) and household hunger scale (HHS) did not indicate food consumption gaps. However, the livelihood coping strategies index (LCSI) showed that 88 percent of households have adopted crisis coping strategies.
- > These findings suggest a need for immediate support to agricultural households in the form of inputs and veterinary services, and longer-term technical and financial assistance to promote cost-effective and environmentally friendly agricultural practices to increase agricultural productivity and improve food availability.

Methodology

The Food and Agriculture Organization of the United Nations (FAO), in partnership with Lebanon's Ministry of Agriculture, conducted a household survey in Lebanon through the Data in Emergencies Monitoring (DIEM-Monitoring) System to monitor agricultural livelihoods and food security. The survey targeted the agricultural population using the Lebanon Agricultural Production Survey, a large survey of agricultural households drawn from the Agricultural Census, as a sample frame. This fourth-round survey reached the same cohort of 1 050 agricultural households that has been surveyed since the first round of DIEM-Monitoring in Lebanon. Some household substitutions were made where necessary. The survey targeted seven governorates – Akkar, Baalbek-El Hermel, Bekaa, Mount Lebanon, El Nabatieh, North and South – with 150 households selected in each governorate using probability proportional to size based on the Agricultural Production Survey.

Interviews for this fourth-round survey were conducted from 24 October to 19 November 2022 through computer-assisted telephone interviews. Data were weighted at the analytical stage to ensure that farm size and regional population distribution were adequately represented. The third-round survey was conducted between 17 July and 8 August 2022, the second-round survey was conducted between 23 March and 13 April 2022, and the first-round survey was conducted between 16 August and 16 September 2021. These three rounds have been drawn from to make comparisons throughout this brief.

Figure 1. Countries with established DIEM-Monitoring Systems



Source of data: FAO. 2022. DIEM-Monitoring. In: *FAO Data in Emergencies Hub*. Rome. Cited 3 November 2022. data-in-emergencies.fao.org

Source of map: United Nations. 2022. *Map of the World*. Cited 3 November 2022. un.org/geospatial/content/map-world

The final boundary between the Sudan and South Sudan has not yet been determined. Final status of the Abyei area is not yet determined. The dotted line represents, approximately, the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties.

About DIEM-Monitoring

FAO established the DIEM-Monitoring System to collect, analyse and disseminate data on shocks and livelihoods in countries prone to multiple shocks. DIEM-Monitoring aims to inform decision making by providing regularly updated information on how different shocks are affecting the livelihoods and food security of agricultural populations.

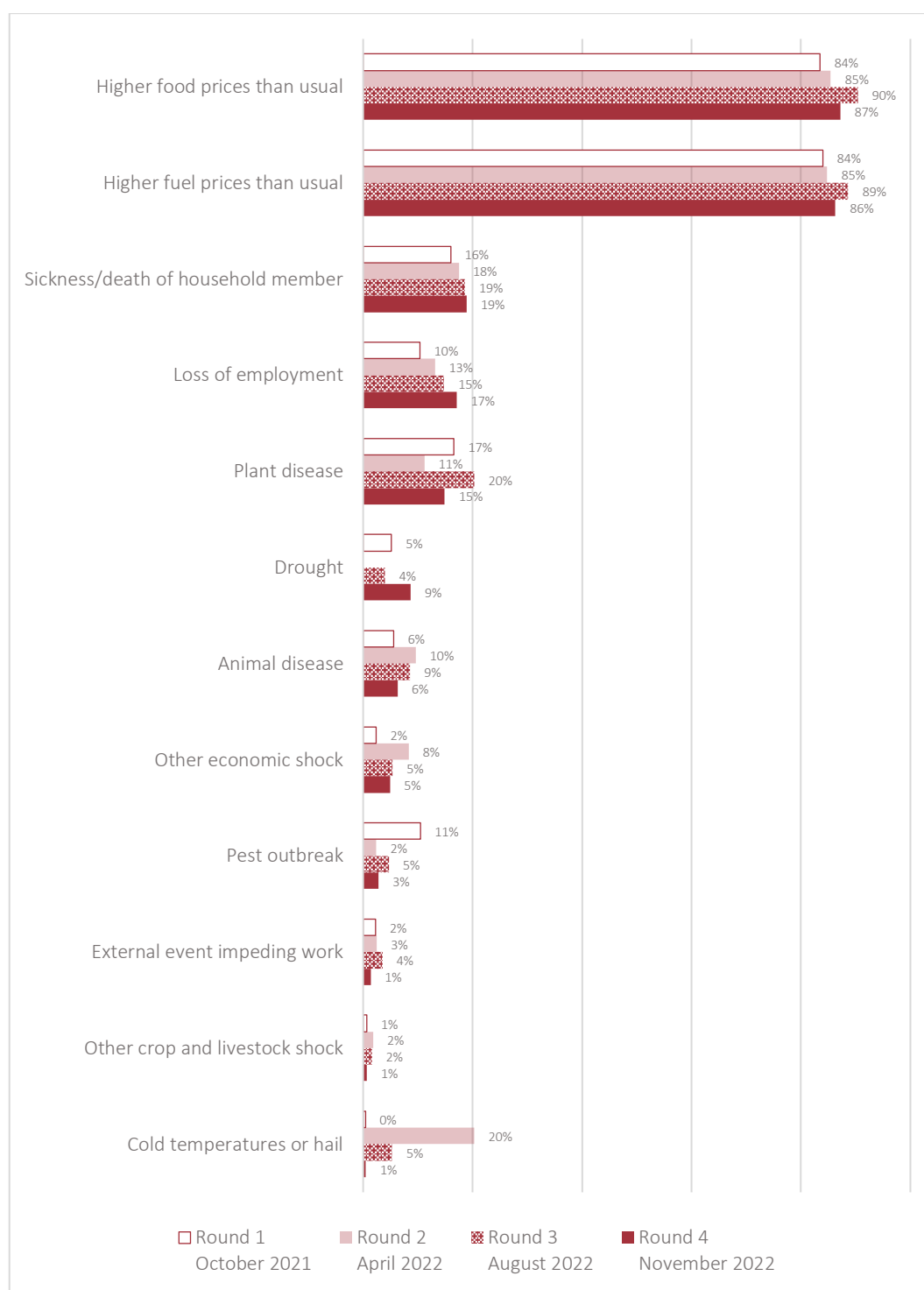
At the core of the DIEM-Monitoring System are country-level dashboards. Readers are encouraged to explore these dashboards to gain more insight into the context of Lebanon and other countries.

> Learn more at data-in-emergencies.fao.org/pages/monitoring

Income and shocks

Around 91 percent of respondents reported experiencing shocks in the three months preceding the survey. High food and fuel prices were the most common shocks, as in previous rounds, and were cited by 87 and 86 percent of the households, respectively (Figure 2). Female-headed households reported similar shocks as male-headed households. A significantly higher percentage of households reported loss of employment or work and drought, compared to previous data collection rounds.

Figure 2. Main shocks reported (percentage of households)

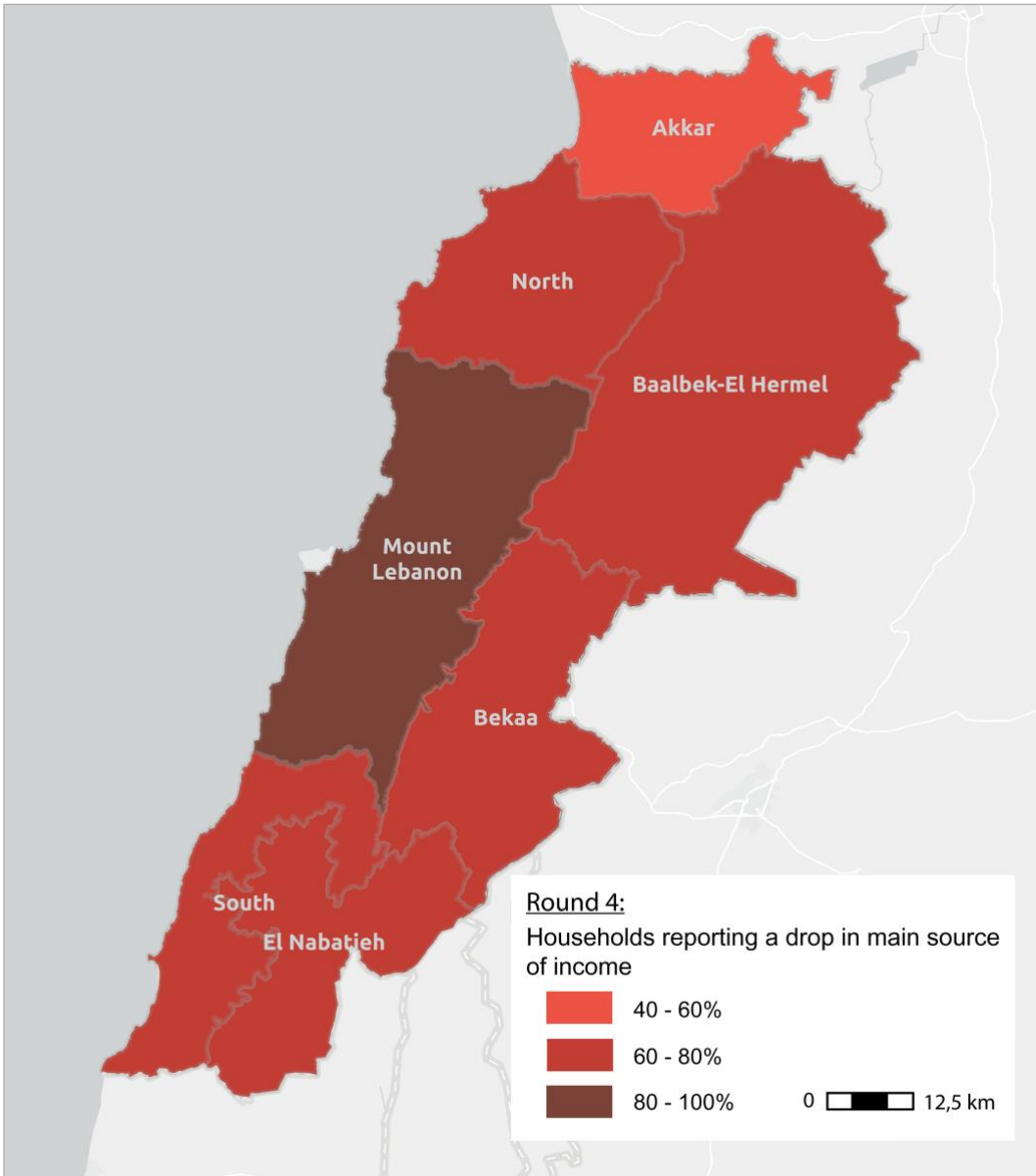


Source of data: FAO. 2023. Lebanon: DIEM-Monitoring assessments results (October 2021, April 2022, August 2022 and November 2022). In: *FAO Data in Emergencies Hub*. Rome. Cited 3 January 2023. data-in-emergencies.fao.org

Over 70 percent of households, including over 80 percent of households in Mount Lebanon, reported a drop in their main source of income (Figure 3). However, less households in Baalbek-El Hermel and El Nabatieh reported a significant decrease in their income when compared to the previous rounds. In these two governorates, October and November is the post-harvest period when many profitable crops are sold, resulting in higher incomes. Only

6 percent of households were affected by COVID-19 restrictions compared to an average of 34 percent in the previous data collection rounds.

Figure 3. Households reporting a drop in the main source of income

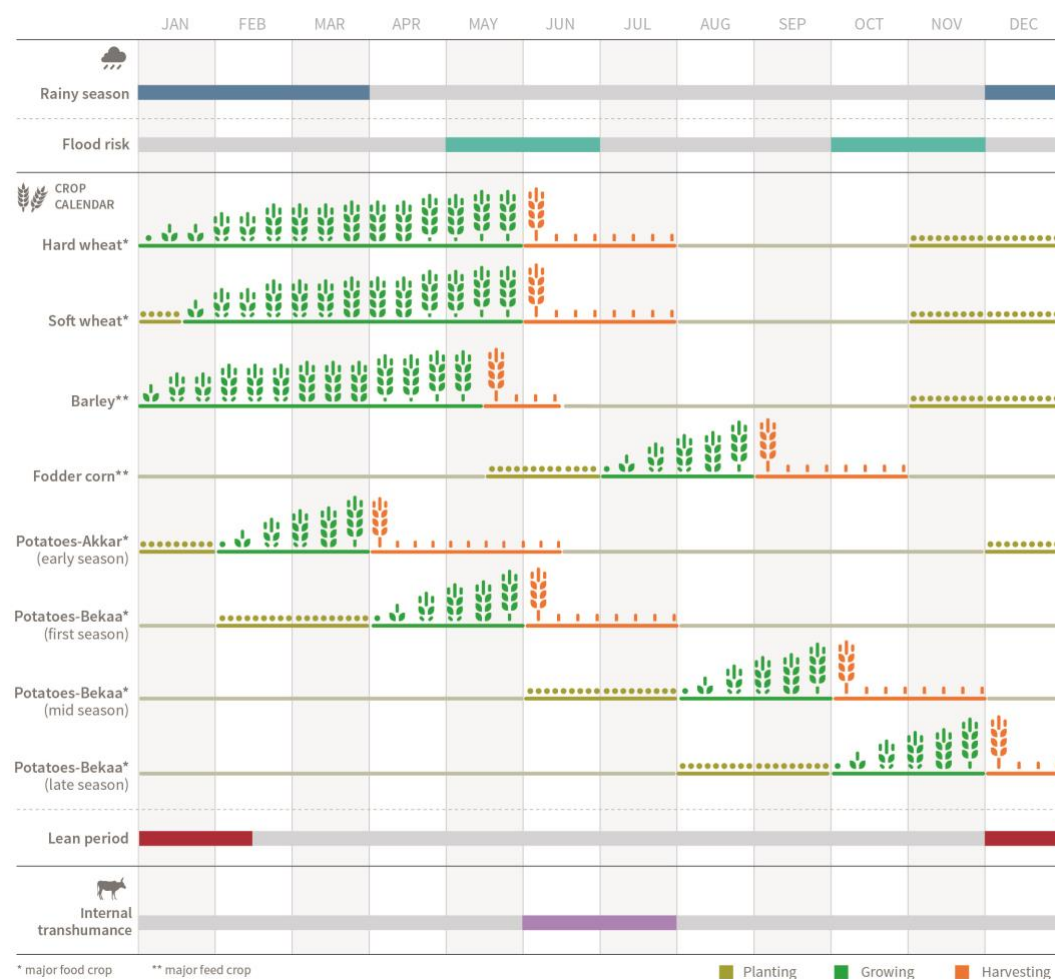


Source of data: FAO. 2023. Lebanon: DIEM-Monitoring assessments results (November 2022). In: *FAO Data in Emergencies Hub*. Rome. Cited 3 January 2023. data-in-emergencies.fao.org

Source of map: Esri, HERE, Garmin, FAO, NOAA, USGS. 2018. Map of Lebanon. Cited 3 January 2023. data-in-emergencies.fao.org/pages/explore

Crops

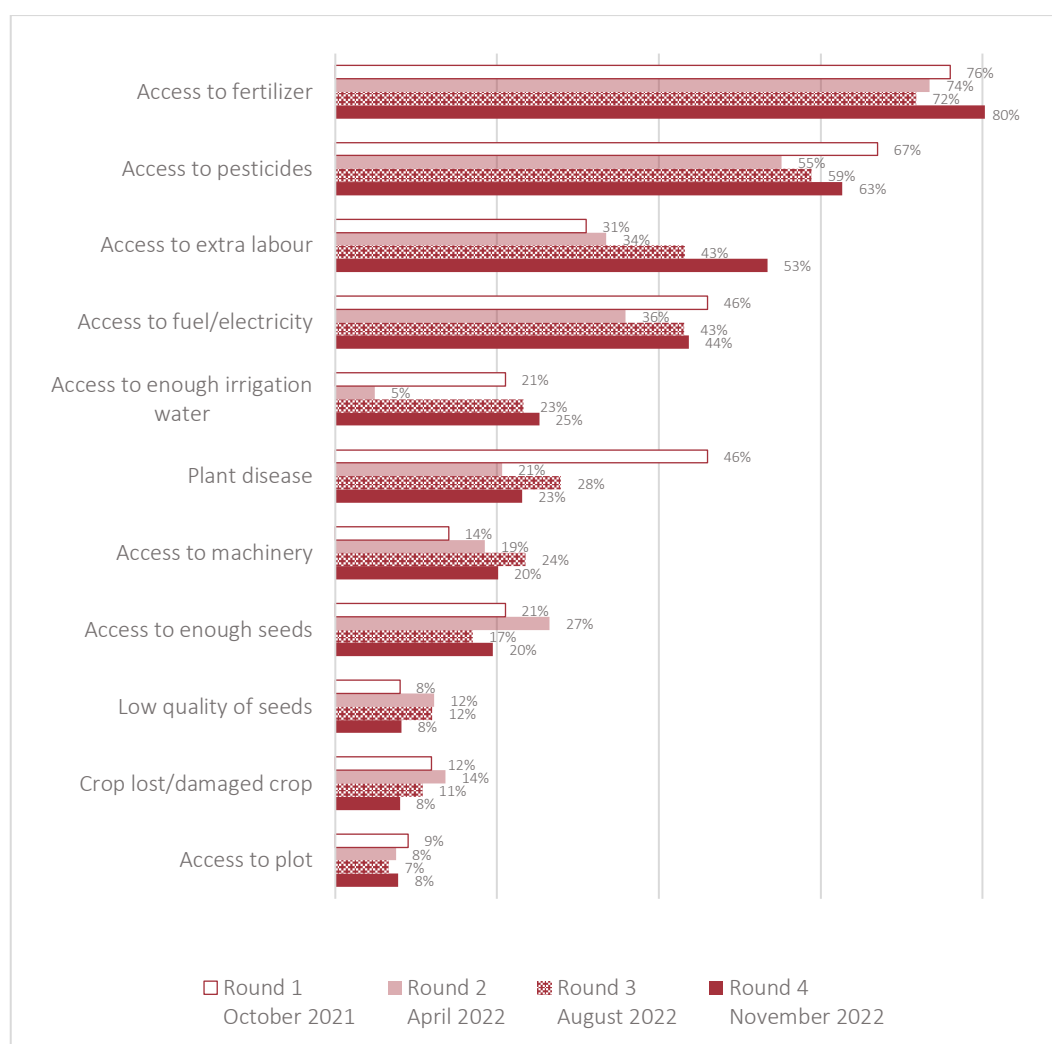
Figure 4. Lebanon agricultural calendar



Source of data: FAO. 2023. GIEWS – Global Information and Early Warning System: Country briefs – Lebanon. In: *Food and Agriculture Organization of the United Nations*. Rome. Cited 17 January 2023. fao.org/giews/countrybrief/country.jsp?code=LBN

Over 89 percent of the households involved in agricultural activities reported being engaged in crop production. Around 48 percent of the total were smallholder farmers with a land size less than 1 hectare. Over 84 percent of the crop producers reported facing production difficulties. The most common difficulties were access to fertilizer (80 percent) and pesticides (63 percent) both imported and sold in USD, and access to labour (53 percent) (Figure 5). Access to labour, as a reported production difficulty, increased significantly during this round compared to previous data collection rounds due to the shortage of agricultural farm labour and/or labour requesting higher daily wages. Similarly, lack of water for irrigation significantly increased compared to previous rounds, as water scarcity was a major constraint during the months preceding the survey. The most commonly reported crop difficulties did not differ between female and male-headed households, except for difficulty accessing fertilizer which was significantly higher for female-headed households.

Figure 5. Crop production difficulties (percentage of crop producers)



Source of data: FAO. 2023. Lebanon: DIEM-Monitoring assessments results (October 2021, April 2022, August 2022 and November 2022). In: *FAO Data in Emergencies Hub*. Rome. Cited 3 January 2023. data-in-emergencies.fao.org

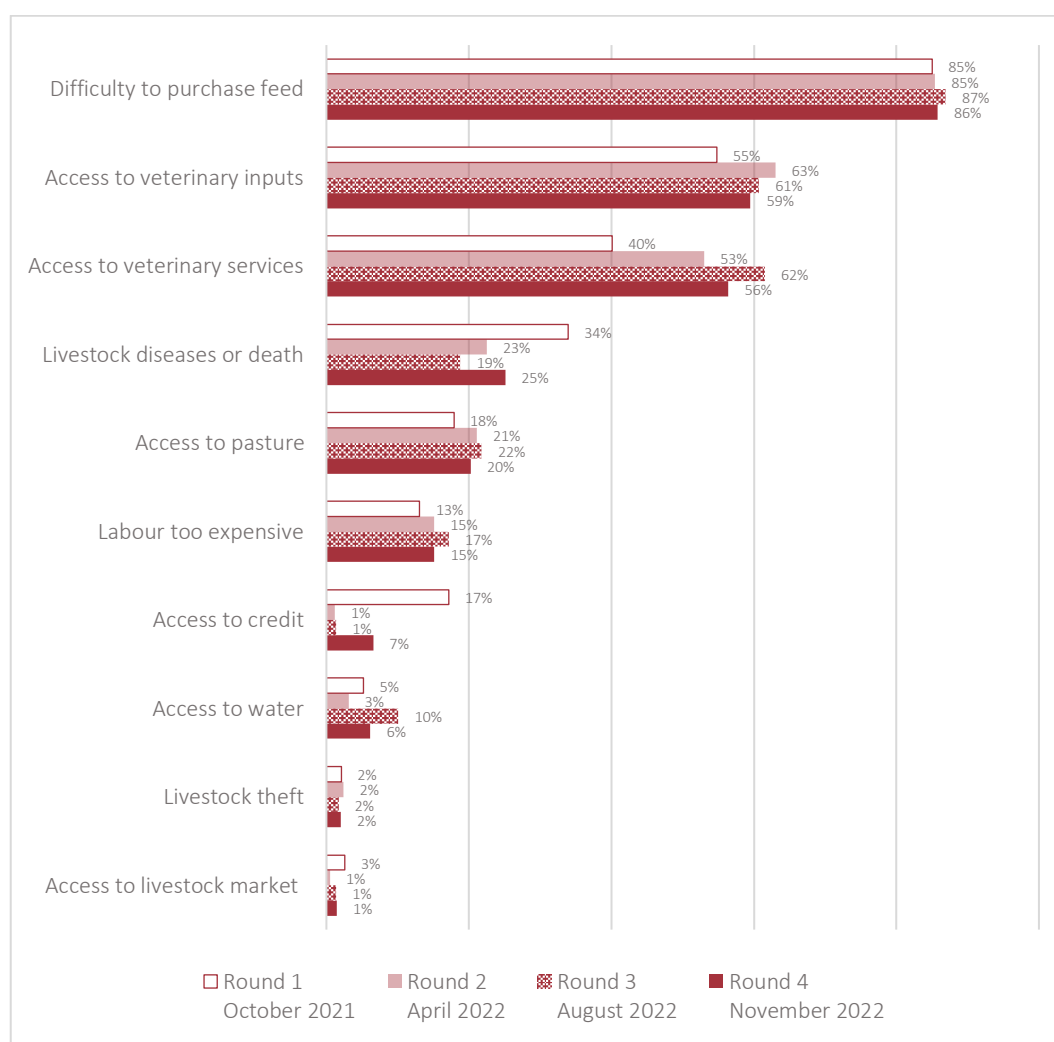
Around 41 percent of households expected a decrease in harvest, given that they were using low cost and lower quantities of agricultural inputs because of the increase in the cost of agricultural inputs – which are mostly imported. However, less households expected a decrease in harvest compared to previous rounds. During the data collection period for the fourth round, some of the main crops produced were being harvested, particularly olives whose production this year was better than last year's.

Approximately 64 percent of crop producers reported difficulties selling their products because of increased marketing costs (75 percent), lower prices (61 percent) and demand (52 percent). Overall, 58 percent reported a decrease in selling prices. The highest number of households reporting a decrease in crop selling prices were in Mount Lebanon (73 percent), mainly due to the low prices of apples. The lowest number of households reporting a decrease in crop selling prices were in the Akkar and El Nabatieh governorates (47 and 48 percent respectively), due to farmers receiving similar or higher prices for olive oil.

Livestock

Over 85 percent of livestock producers reported production difficulties mainly to purchase feed (86 percent), access veterinary inputs (59 percent) and veterinary services (56 percent) (Figure 6). Access to veterinary inputs and services seems to have improved in this data collection round although it is still cited among the top livestock production difficulties. This could be due to veterinary inputs being more available on the market and to more farmers being able to cover related costs due to better returns from selling their livestock products. The most common livestock production difficulties faced by female-headed households were similar to those faced by male-headed households, with the exception of difficulty accessing veterinary services which was significantly higher for female-headed households.

Figure 6. Livestock production difficulties (percentage of livestock producers)



Source of data: FAO. 2023. Lebanon: DIEM-Monitoring assessments results (October 2021, April 2022, August 2022 and November 2022). In: *FAO Data in Emergencies Hub*. Rome. Cited 3 January 2023. data-in-emergencies.fao.org

Half of the respondent livestock producers reported a decrease in the number of animals they owned compared to previous years, which was mostly attributed to distress sales (26 percent) and animals dying of poor health, malnutrition or injury (17 percent). These responses are similar to previous data collection rounds. The reported percentage of distress sales has, however, slightly decreased this round potentially due to slightly better returns from livestock product sales. Cattle owners reported higher rates of distress sales (38 percent) followed by

sheep owners (34 percent), whereas poultry owners reported a high rate of death from poor health/malnutrition (17 percent), followed by goat owners (15 percent).

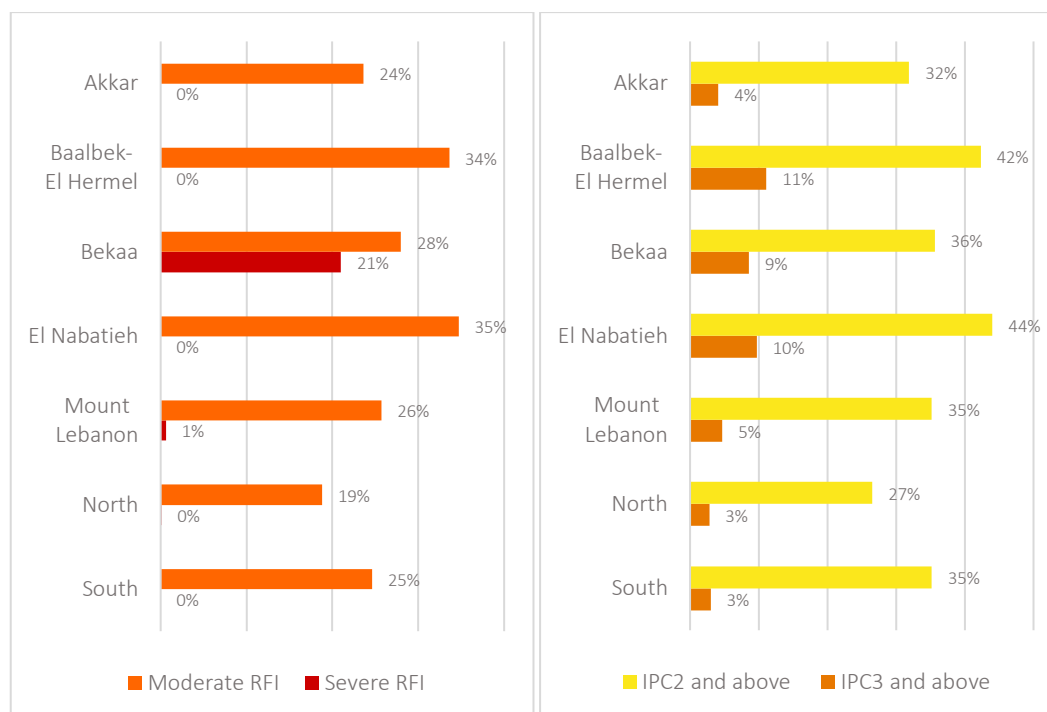
The most common livestock sales difficulties were lower prices (68 percent), smaller profits (62 percent) and low demand (56 percent). Over 60 percent of the producers reported a decrease in selling prices compared to 67 percent in the previous rounds, although these figures are not significantly different statistically. The improvement in selling prices might be due to lower market supply of sheep and goat milk because sheep and goat milk production considerably reduces towards the end of summer and early fall with an increased demand during this same period.

Food security

The prevalence of recent moderate or severe household food insecurity (RFI) assessed with the Food Insecurity Experience Scale (FIES)¹ was around 27 percent which is not significantly different compared to previous rounds. El Nabatieh (35 percent), Baalbek-El Hermel (34 percent) and Bekaa (28 percent) showed the highest prevalence of RFI (Figure 7). Over 95 percent of households experienced little to no hunger, 4 percent experienced slight hunger and 1 percent experienced moderate hunger. No households reported experiencing severe hunger. These results are similar to those reported in previous rounds. A high prevalence of households (86 percent) reported high dietary diversity based on the Household Dietary Diversity Score (HDDS). Baalbek-El Hermel had the highest percentage of respondents reporting low HDDS (8 percent). Nearly all the respondents (97 percent) adopted coping strategies to meet their food needs, with the most common being decreased expenses on agricultural inputs (94 percent), reduced health expenses (78 percent) and spent savings (57 percent).

¹ FIES results are subject to change. The country scale will continue to evolve over additional rounds of data collection allowing for more consistent comparability across rounds.

Figure 7. Prevalence of recent moderate or severe household food insecurity by location measured with FIES (left) and IPC (right)



Source of data: FAO. 2023. Lebanon: DIEM-Monitoring assessments results (November 2022). In: *FAO Data in Emergencies Hub*. Rome. Cited 3 January 2023. data-in-emergencies.fao.org

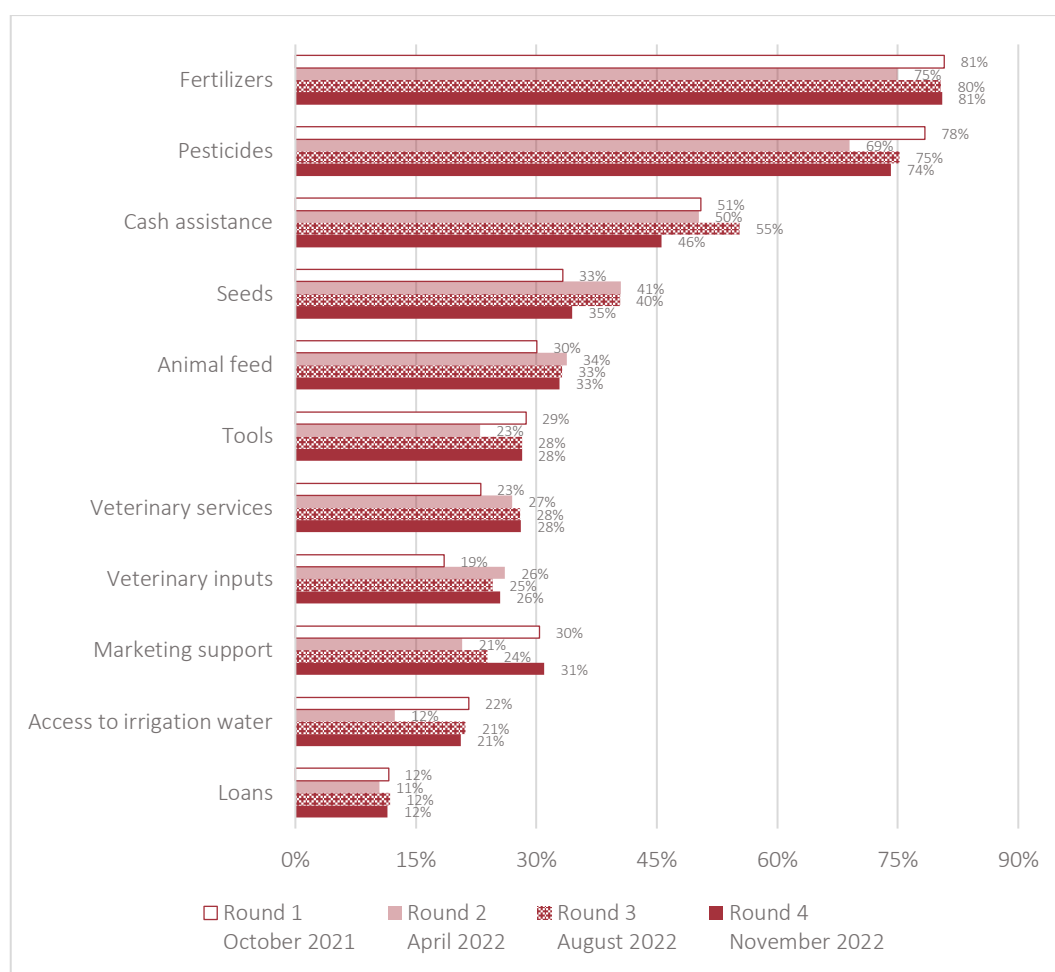
Most respondents (88 percent), significantly more than in previous rounds, have resorted to crisis coping strategies. The increasing adoption of coping strategies might be reducing the food consumption gaps temporarily, explaining the high percentages of high dietary diversity and little to no hunger in the household hunger scale results. However, coping strategies could soon be exhausted leading to the gradual deterioration of food security.

Needs

Nearly 94 percent of the respondent agricultural households indicated a need for assistance in the three to six months following the survey. Overall, 46 percent of the respondents expressed a need for cash support. Crop producers reported a need for fertilizer (81 percent) and pesticides (74 percent), whereas livestock producers reported a need for animal feed (33 percent), veterinary services (28 percent) and veterinary inputs (26 percent) (Figure 8).

Female-headed households had similar needs when compared to male-headed households. These findings are in line with those of previous data collection rounds. Only about 8 percent of households received assistance in the three months preceding the survey, compared to 16 percent in the previous rounds, mainly as food assistance (4 percent) and cash vouchers (2 percent).

Figure 8. Reported needs for assistance (percentage of households)



Source of data: FAO. 2023. Lebanon: DIEM-Monitoring assessments results (October 2021, April 2022, August 2022 and November 2022). In: *FAO Data in Emergencies Hub*. Rome. Cited 3 January 2023. data-in-emergencies.fao.org

Recommendations

Short-term recommendations

- > Provide and support crop producers with fertilizer, pesticides and seeds resistant to drought and disease.
- > Provide veterinary services and support the implementation of vaccination programmes to prevent and control animal pests and diseases.
- > Provide fodder (alfalfa, maize, etc.) and veterinary inputs to livestock producers.
- > Support vulnerable agricultural households with food and cash support in collaboration with ongoing assistance programmes.

Medium and long-term recommendations

- > Provide technical and financial assistance to promote good agricultural practices to increase agricultural productivity and improve food availability. This can include training farmers on the importance of crop rotation and climate-smart agriculture, on biogas production (transforming waste from the farm to heat), on-farm composting methods, and using cost effective and environmentally friendly agricultural practices.
- > Support the construction of small and medium-sized hill lakes to increase the availability of irrigation water and support the adoption of modern irrigation systems to increase the efficiency of water use and reduce the water scarcity faced by farmers.
- > Encourage and support the adoption of solar power systems instead of fossil fuels for irrigation.



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