



Food and Agriculture
Organization of the
United Nations

Guatemala

DIEM – Data in Emergencies Monitoring brief, round 4

Results and recommendations
June 2024

Key highlights

- > The Food and Agriculture Organization of the United Nations (FAO) carried out a household survey through the Data in Emergencies Monitoring (DIEM-Monitoring) System, between 8 May and 22 June 2024, to assess the agricultural livelihoods and food security situation for the rural and urban populations of Guatemala.
- > Seventy percent of farmers produced maize as their main crop in the last production cycle, 6.5 percent produced beans, 5.6 percent produced coffee, and the remaining 18 percent produced other vegetables such as tomatoes, potatoes, onions and bananas.
- > Sixty-two percent of the farmers surveyed experienced difficulties in agricultural production, with the highest reporting in the departments of Totonicapán (71 percent), Izabal (70 percent), Chiquimula (70 percent), Chimaltenango (68 percent), Quetzaltenango and Quiché (66 percent each), Huehuetenango (65 percent) and San Marcos (62 percent).
- > Fifty-six percent of producers experienced insufficient or scarce water for irrigation or irregularities in the water pattern due to delayed rains resulting from El Niño; 35 percent experienced pest attacks; 15 percent had their crops affected by fungal diseases and other microbiological factors; and 10 percent had limited or no access to fertilizer.
- > The reduction of productive areas for agriculture was reported by 50 percent of maize producers nationally.
- > In the last year, 85 percent of families with livestock or agricultural livelihoods raised poultry, 7 percent raised cattle and 5 percent raised pigs as the main species.
- > The strata most at risk of suffering a food emergency in the short term were households depending on agriculture as their main livelihood, as well as female-headed households, households identified as indigenous and those involved in agricultural day labour activities.
- > Among the departments most affected by food insecurity were Alta Verapaz, Huehuetenango and Totonicapán.

Methodology

The Food and Agriculture Organization of the United Nations (FAO) conducted a household survey through the Data in Emergencies Monitoring (DIEM-Monitoring) System between 8 May and 22 June 2024 to assess the agricultural livelihoods and food security situation for the rural and urban populations of Guatemala. Data were collected with a digital questionnaire in the 22 departments of the country and occurred during the first planting season. Data were collected through computer-assisted telephone interviews and the final sample comprised of 4 922 households (250 in each department). Weights were attributed to counteract potential bias due to the sample containing exclusively households who owned a telephone.

The first round of DIEM-Monitoring in Guatemala was conducted in July 2022, the second in February 2023 and the third in January 2024. Comparisons have been made between these earlier rounds and the fourth round throughout this brief. Comparisons consider that the surveys were conducted at different times of the seasonal calendar, which greatly influences the food security situation for households dependent on the agriculture sector.

Figure 1. Countries with an established DIEM-Monitoring System



Note: Refer to the disclaimer on the back cover for the names and boundaries used in this map. 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.

Source of data: FAO. 2024. DIEM-Monitoring. In: *FAO Data in Emergencies Hub*. Rome. [Cited 1 July 2024]. <https://data-in-emergencies.fao.org>

Source of map: United Nations Geospatial. 2023. Map of the World. In: *United Nations*. [Cited 1 July 2024]. <https://www.un.org/geospatial/content/map-world-1>

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 Guatemala and other countries.

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

Income and shocks

Forty percent of households reported having a main income in the three months preceding the survey related to agriculture or livestock, including agricultural work (20 percent) and staple grain production (11 percent). Sixty percent of households reported a non-agricultural main income.

Nationally, 39 percent of households experienced at least one shock, but agricultural households were the most affected (26 percent), mainly due to drought or heat stress. This is likely a consequence of El Niño that prevailed in late 2023 and early 2024. Illness or death of a family member in the three months preceding the survey affected 9 percent of all households. Around 45 percent of agricultural households suffered a reduction in income compared to the previous year, while this was only reported by 30 percent of non-agricultural households.

Ten percent of households had at least one member who had migrated within or outside the country permanently, particularly those whose main source of income was the sale of agricultural food products (17 percent). The departments with the highest rate of recent migration were San Marcos (19 percent), Quetzaltenango (14 percent), Huehuetenango (14 percent) and Retalhuleu (14 percent). Most of those who migrated did so because of unemployment, loss of livelihoods or insufficient livelihoods. No clear link could be established between income or plot size, and migration, however, households which raised bovine as their main species tended to migrate more than households who raised chickens. Thirteen percent of households received remittances, mostly from abroad. As with migration, it was agricultural households who tended to receive remittances, especially those who combined crop and animal production, and, in particular, cattle production.

Thirty-three percent of households had members who worked as day labourers, the vast majority within the community, but 8 percent travelled to another region of the country for a wage generally between 40 and 75 quetzales per day (between USD 5.17 and USD 9.7; conversion rate as at 8 November 2024).

Analysis of the data shows a relationship between livelihoods and self-identifying as indigenous. Indigenous people tended to form agricultural households and especially those combining agriculture and livestock production. It was reported that female-headed households tended to keep only animals.

Indigenous and female-headed households used more severe strategies than other households and were more food insecure according to the household hunger scale. The data shows a relationship between these variables (i.e. it can be shown to be a statistical trend).

Crops

Seventy percent of the farmers produced maize as their main crop in the last production cycle, 6.5 percent produced beans, 5.6 percent produced coffee, and the remaining 18 percent mainly produced other vegetables such as tomatoes, potatoes, onions and bananas.

Among the households whose livelihoods depended on the sale of agricultural products, 40 percent had mainly marketed maize, 8 percent beans and 7 percent coffee.

Figure 2. Guatemala agricultural calendar

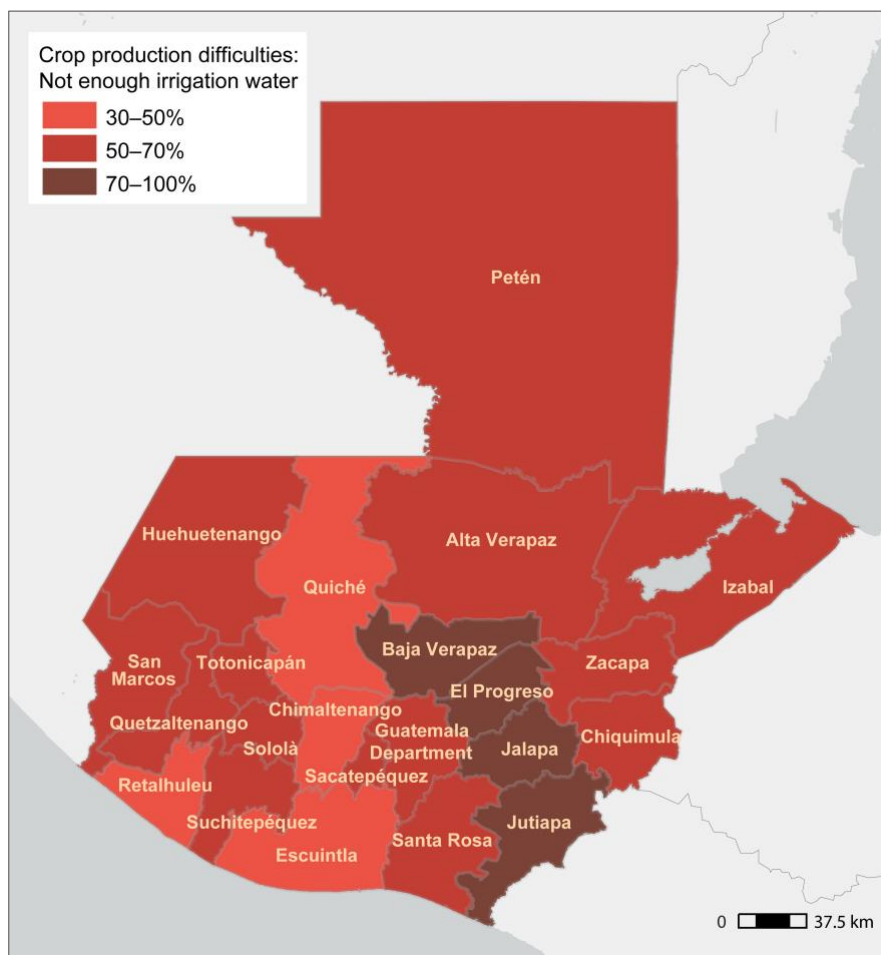


Source: FAO. 2024. GIEWS – Global Information and Early Warning System Country Briefs: Guatemala. In: FAO, 29 April 2024. Rome. [Cited 9 August 2024]. <https://www.fao.org/giews/countrybrief/country.jsp?code=GTM&lang=en>

Around 60 percent of basic grains producers reported changing their planting dates, mostly due to delayed rains, leading to a significant number of households planting in June and even July. This was potentially related to El Niño and the transition to La Niña that delayed the onset of rains, which could explain the differences with previous surveys. The departments in which the most households reported changing their planting dates were Jutiapa (76 percent), Izabal (76 percent), Santa Rosa (74 percent), Retalhuleu (73 percent), Zacapa (71 percent) and Chiquimula (71 percent).

The departments with the highest impacts associated with drought were El Progreso (78 percent), Baja Verapaz (76 percent), Jutiapa (73 percent) and Jalapa (70 percent) (Figure 3).

Figure 32. Crop production difficulties due to lack of irrigation



Note: See disclaimer on back cover for names and boundaries used in this map.
 Source: FAO. 2024. Data in Emergencies: Guatemala assessment results (June 2024). [Accessed on 18 October 2024]. <https://data-in-emergencies-hqfao.hub.arcgis.com/pages/monitoring-country-specific/>. Licence: CC BY-NC-SA 3.0.

The survey found that 62 percent of farmers interviewed experienced difficulties in agricultural production, 56 percent experienced insufficient or scarce water for irrigation, or irregularities in the water pattern, followed by 35 percent who experienced pest attacks.

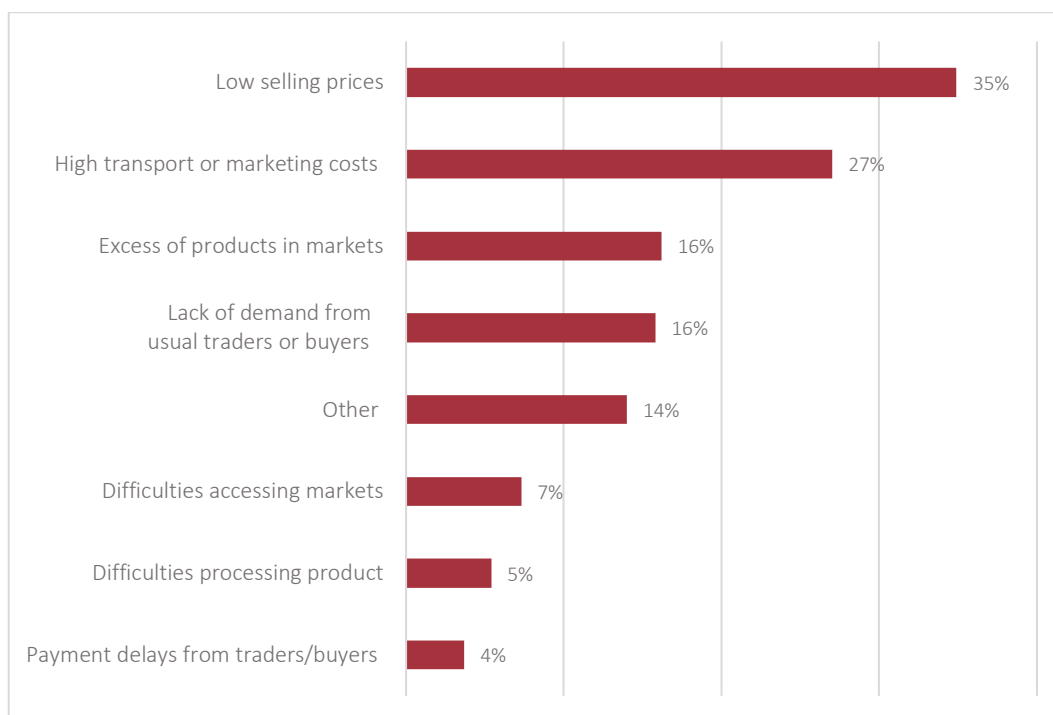
The difficulties identified in agricultural production were closely related to the variation of sown and harvested areas. In this fourth-round survey, 32 percent of producers reduced the planted

area less compared to the previous year, 33 percent reported that they maintained the same area and 17 percent reported reducing the planted area by less than half.

The majority of day labourers worked in their own community, with 8 percent travelling to another region of the country, mainly for basic grains. The departments with the highest numbers of households dependent on day labour were Totonicapán, Huehuetenango, Chiquimula, Baja Verapaz, Chimaltenango and Alta Verapaz.

Regarding the supply dynamics of agricultural products both for producers and for the different population centres of the country, it was identified that farmers had difficulties marketing their products, due to low prices in marketplaces and other marketing spaces (35 percent), high transport or marketing costs (27 percent), and high supply of food products, among other factors (Figure 4).

Figure 4. Difficulties selling agricultural products



Source: FAO. 2024. Data in Emergencies: Guatemala assessment results (June 2024). [Accessed on 18 October 2024]. <https://data-in-emergencies-hqfao.hub.arcgis.com/pages/monitoring-country-specific/>. Licence: CC BY-NC-SA 3.0.

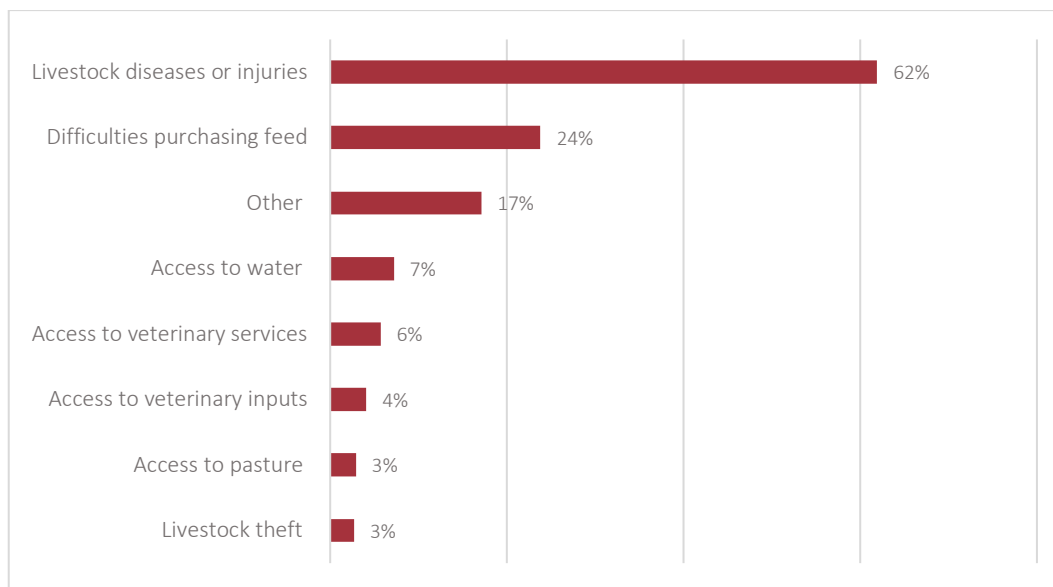
Livestock

Of the total number of households whose main livelihood was livestock production, 85 percent raised poultry as their main species, 7 percent cattle and 5 percent pigs. The remaining 3 percent raised sheep and goats. About half also grew crops, although it should be noted that this was much more prevalent among those who raised bovine.

Forty-four percent of the surveyed livestock producers had one or more difficulties in their production processes, of which 62 percent had difficulties due to livestock diseases or injuries, and 24 percent had difficulties purchasing feed (Figure 5). The departments most impacted by production difficulties associated with livestock diseases and/or injuries were Retalhuleu

(79 percent), Huehuetenango (77 percent), Jalapa (77 percent), El Progreso (77 percent), Baja Verapaz (74 percent) and Santa Rosa (73 percent).

Figure 5. Livestock production difficulties (percentage of livestock producers)



Source: FAO. 2024. Data in Emergencies: Guatemala assessment results (June 2024). [Accessed on 18 October 2024]. <https://data-in-emergencies-hqfao.hub.arcgis.com/pages/monitoring-country-specific/>. Licence: CC BY-NC-SA 3.0.

Fifty-six percent of the households engaged in livestock production experienced a reduction in the number of animals reared compared to last year, while 29 percent reported an increase in the number of animals for production and marketing.

In the three months preceding the survey, households experienced difficulties in marketing due to low prices (31 percent), lack of demand from buyers or traders (22 percent), and 18 percent experienced difficulties in marketing due to the increase in transport costs and/or the cost of marketing products to different markets or distribution centres.

Thirty-four percent of the producers perceived that the price of livestock species has increased slightly for income generation purposes and 15 percent perceived that the market value of the products increased by more than 50 percent compared to the same period in a normal year.

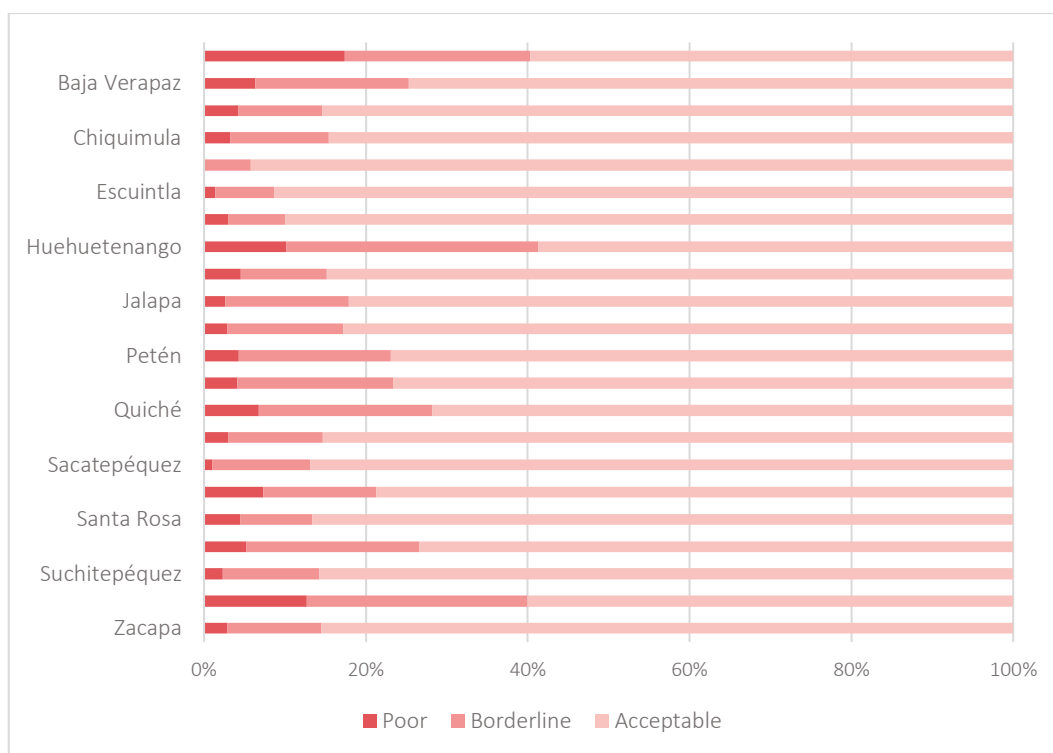
Food security

According to the Food Insecurity Experience Scale (FIES), 45 percent of respondents were classified as experiencing moderate or severe recent food insecurity, and 12 percent were classified as severely food insecure. Livestock producers were the most at risk of food and nutrition insecurity (50 percent), followed by agricultural producers (49 percent). The departments with the highest prevalence of moderate or severe FIES were Alta Verapaz (63 percent), Petén (57 percent), Izabal (57 percent) and Huehuetenango (54 percent).

Regarding food consumption score (FCS) nationally, it was identified that 79 percent of the households assessed were categorized as having acceptable food consumption, 16 percent had moderate consumption and 5.6 percent had poor food consumption. There were variations at

departmental level, and the departments with the highest FCS scores were Alta Verapaz (17 percent), Totonicapán (13 percent) and Huehuetenango (10 percent) (Figure 6).

Figure 6. FCS by department



Source: FAO. 2024. Data in Emergencies: Guatemala assessment results (June 2024). [Accessed on 18 October 2024]. <https://data-in-emergencies-hqfao.hub.arcgis.com/pages/monitoring-country-specific/>. Licence: CC BY-NC-SA 3.0.

Households identifying as indigenous were more food insecure across all indicators. Likewise, female-headed households were more affected by food insecurity than male-headed households. Additionally, households with children under five tended to have more severe food insecurity outcomes. Finally, households which had daily wage labour as one of their main sources of income were found to be more food insecure than households living from the sale of crops, animals or animal products, or from non-agricultural activities.

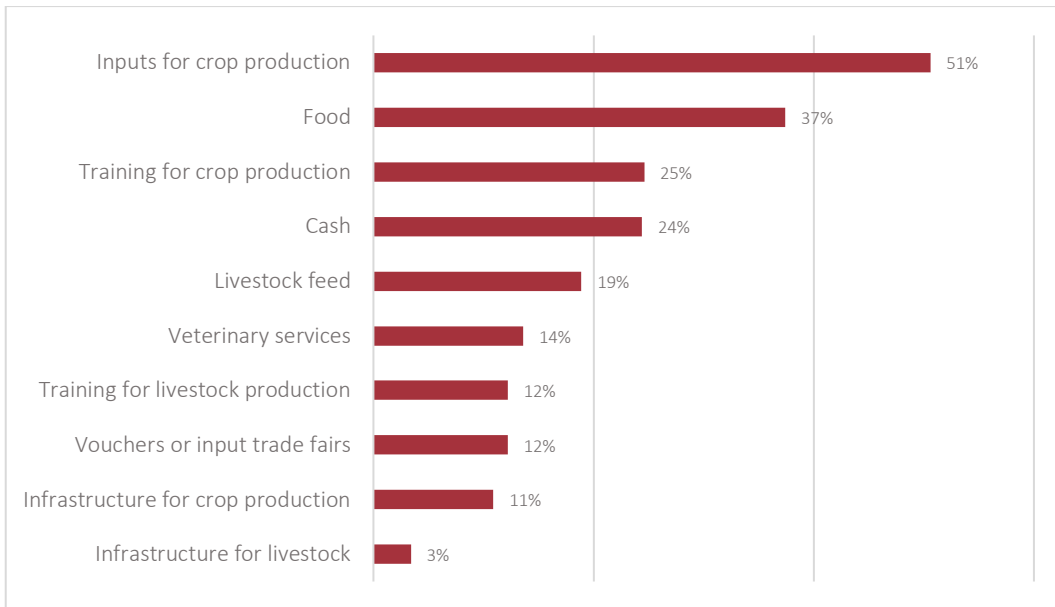
The level of food consumption was sustained at a high cost for many households, as in all departments a significant proportion of households made use of crisis or even emergency strategies, particularly the consumption of seeds and the sale of the last female animal.

Needs

Sixty-five percent of the households assessed needed at least one assistance action for the recovery of their livelihoods, such as the provision of inputs for the recovery of agricultural production units (51 percent), provision of food (37 percent), training and technical assistance in agricultural production (25 percent, respectively) (Figure 7). Livestock producers stressed the need for access to feed and fodder for their animals (18 percent) and veterinary services, mainly prophylactic (18 percent).

Compared to the results of the third round, there was a reduction in the demand for cash for improved social or institutional programmes (from 24 percent to 23 percent).

Figure 7. Main needs identified (percentage of households)



Source: FAO. 2024. Data in Emergencies: Guatemala assessment results (June 2024). [Accessed on 18 October 2024]. <https://data-in-emergencies-hqfao.hub.arcgis.com/pages/monitoring-country-specific/>. Licence: CC BY-NC-SA 3.0.

Recommendations

Short-term recommendations (1–6 months)

- > Design and implement a cash transfer programme for households most affected by food insecurity with the objective of covering basic needs, focusing on female-headed households, households identified as indigenous and households with children under five. Alta Verapaz, Totonicapán and Huehuetenango departments were the most affected by food insecurity.

Medium- and long-term recommendations (6–24 months)

- > Promote the use of varieties resistant to drought, pest and/or disease, particularly in departments which were subject to water shortages and are food insecure, such as Huehuetenango, Totonicapán and Alta Verapaz.
- > Promote agricultural credit strategies as a measure to reduce gaps in access to inputs and means of production through agreements with actors in the cooperative and/or banking system.
- > Create and strengthen livestock assistance programmes at municipal level, and construct prophylactic management plans for different livestock species, particularly poultry, as a preventive measure against the risk of loss of family livestock assets.
- > Promote the implementation of mixed fodder banks (storage and silage).
- > Implement municipal and/or community biofactories for producing agricultural and livestock inputs in order to reduce production costs and dependence on the purchase of inputs.
- > Through institutional actors linked to rural extension, promote the implementation of diversified production systems under biointensive agriculture approaches and milpa systems interspersed with trees and fruit trees.



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FAO. 2024. *Guatemala: DIEM – Data in Emergencies Monitoring brief, round 4 – Results and recommendations, June 2024*. Rome.



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