



Ensuring the Resilience of Food Supply Chains in Israel During Emergencies

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This document details the insights gleaned thus far from research on the main challenges facing continued food supply to Israel during the current emergency situation. It sketches different scenarios that could develop in the war and indicates what is needed to ensure the ability to continue to produce food in Israel at the end of the war and thereafter.

Immediate intervention by the state is necessary to ensure stable food supply while preventing the collapse of local agricultural production in the long term. This requires the government to collect data and allocate system resources to form an up-to-date picture of the situation. It is also necessary to address (through incentives, regulatory benefits, and proactive procurement) challenges throughout the supply chain, such as the manpower shortage due to the mobilization of reserve soldiers, the evacuation of communities, the inability of Palestinian workers to enter the country, the fear of Israeli Arabs of venturing outside of Arab communities, and the departure of foreign workers from Israel. Additional challenges include the shortage of equipment due to competition with security forces, damage in combat areas, and potential slowdown at the ports; and the difficulty in transporting goods, due to the shortage of manpower and equipment, as well as the closure of roads and risks related to the war. It is necessary to prioritize support for various industries along the food supply chain, and to ensure food reserves and find transportation solutions for a worst case scenario: monitoring existing reserves and expanding them in accordance with health and nutritional needs; building an insurance model for ships coming to Israel if necessary; and ensuring the possibility of using alternative border crossings (mainly Eilat and by land). In addition, the needs of disadvantaged communities should command particular attention, and

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the public should be provided with information and instructions from the leadership, to strengthen households' resilience to a possible food shortage.

Current Situation and Main Challenges

This document was prepared in the first two weeks after the start of the war in Gaza, following interviews with senior professionals experienced in managing the main bodies related to the food supply chain – from government ministries and government companies to production companies and representative organizations. The purpose is to identify the main challenges to continued food supply to Israel during the current emergency situation, to prepare for scenarios that could develop in the war, and to understand what is necessary in order to ensure the ability to continue to produce food in Israel at the end of the war and thereafter.

The situation assessment that this document presents is based on discussions, interviews, and round table meetings, but not on quantitative data, which at that point in the war were not readily available to anyone inside or outside the governmental system. In order to understand the scope of the problems in the food industry that have been identified on the ground and to prepare an informed response to the challenges, a reliable, constantly-updating database should be built that will constitute a strong basis for taking decisions, prioritizing resources, and implementing policy. The need for clear and up-to-date data will only increase to the extent that the war continues and expands. In addition, within the food industry, it is also important to define priorities among various goals and various kinds of foods (from fresh and healthy food to processed foods that can be preserved over time).

The Situation and Principal Challenges

Lack of Manpower Throughout the Supply Chain

The most common challenge noted by the main players in the food system – from food producers and farmers to retailers and those who use the ports – is insufficient manpower. There are several principal reasons for the shortage: workers or their spouses who received emergency mobilization calls; workers who are unable to report for work when educational frameworks are closed; workers who were evacuated or are unable to leave their homes due to the security situation; Palestinian workers who are not permitted by the state (or by police and

soldiers in the area) to enter Israeli territory; Arab citizens of Israel who are afraid to go to work for fear of being harmed by Jews or by criminal organizations in the Arab society who may threaten them; and foreign workers who have returned to their countries of origin due to the war.

While there are foreign workers who were forced to leave their workplaces and are looking for alternatives, as well as volunteers and workers who are looking for temporary employment until the end of the war, their placement also involves challenges. First, there are jobs that require skills and other qualifications, such as electricians and truck drivers (where there is a particular shortage), or jobs that require complex knowledge of the factory and production line. Second, the training of new workers could take time, so factories need people who will remain in their jobs continuously for more than a few days. Third, many jobs in the industry are physically challenging and difficult to staff.

In agriculture too, it is necessary to distinguish between jobs that do not require special training and can rely on volunteers and one-time workers, like harvesting, and jobs that require skilled workers who need training and familiarity with the farm (such as operating specialized machines, electronic equipment, and farm maintenance).

Food Stocks

Food stock in Israel relies almost exclusively on the private sector. There are a small number of basic food products that the state pays the supermarket chains, importers, and producers in order to ensure they have a certain amount of stock, including oil, tea, legumes, baby food, sugar, and grains for food and fodder. It is estimated that the emergency reserves for which the government is responsible can last for three months. The food and raw ingredients reserves of producers and supermarket chains vary from sector to sector, and range from reserves of a few days to a few weeks, and even more in certain cases (for example, in the case of legumes, one and a half to three months, if imports were to stop completely). The main challenge at the moment in terms of a shortage of reserves is animal-based foods.

However, the government inventory does not meet the current food needs of Israel's population, which needs diverse and healthy food, even in emergencies. In addition, while ideally, emergency officials would like each household to have a food supply for several weeks, the government has refrained from instructing people to stock up, lest this create unnecessary panic and an uncontrolled spike

in demand (as occurred after the Home Front Command's announcement). As long as the ports are open, consumption is not overly affected by the issue of food stocks, aside from fresh products such as tomatoes and cucumbers as well as poultry. However, extreme scenarios in which all the ports are significantly damaged, to the point of ceasing their activity for a long time, or all ships are unwilling to come to Israeli ports, would change the picture.

Raw Materials and Equipment for Local Food Production

The ability of the food industry, including Israeli agriculture, to continue to produce food locally is challenged by the need to access specific raw materials and the availability of equipment. There are considerable differences between the kinds of producers. For example, even though at this time a shortage of fodder in Israel is not expected, poultry producers have reported difficulty obtaining food and medication. There are several broad problems: for example, the civilian economy has started competing with the army and the security establishment for some raw materials. Certain resources have been nationalized for the purpose of the war even more than in the past, as a result of an apparent decrease in the country's emergency inventory, especially trucks.

Other resources have been transferred for food production for the army, and there are raw materials that do not reach the local industry at the necessary pace due to inherent problems in the operation of the ports and the additional burden that has resulted from the war. The problem is especially difficult for production processes that depend on local raw materials such as vegetables, milk, eggs, and poultry. In addition, the arrival of some spare parts has been delayed, especially those that are normally brought to Israel by air and not by sea.

So too in the agricultural context, it is important to address the challenges regarding raw materials and equipment. For example, advanced mechanical equipment that relies on GPS technologies has stopped working in several farms in the north, as a result of the electronic disruption initiated by the defense forces. If the government is not capable of addressing the challenge, even replacing the equipment with older equipment that does not rely on GPS technologies is not easy to implement and requires government intervention and support.

Regarding raw material and equipment stocks: It is important to build up inventories that ensure the supply of the raw materials necessary for plant growth (for livestock there are certain reserves of grains for fodder), including fertilizers

and pesticides as well as components and spare parts for the mechanical and electronic equipment that is essential for operating the various kinds of farms.

Transport

As long as the ports stay open and ships can arrive, the transport of materials to Israel by sea will continue as usual, even if at slower rates (while coping with delays at the ports themselves, which need additional manpower for the various regulatory checks for imported goods). However, the movement of goods within Israel is becoming more challenging given the shortage of trucks and of drivers (who have been mobilized), roadblocks, and the risks inherent in driving during wartime. In addition, there appears to be a challenge with food distribution, especially to two populations that are disadvantaged in general and in particular at this time – the Arab community and those who have been evacuated from their homes due to the war. In Jewish and communities with mixed populations most of the distribution takes place through supermarket chains, which have independent procurement and distribution capabilities (which is also sometimes impaired by the nationalization of trucks and the conscription of drivers). But in Arab communities, and all the more so in the unrecognized Bedouin villages in the south, much of the distribution takes place via convenience stores, where the arrival of goods is delayed. In addition, the residents of Arab communities are sometimes afraid to go to buy food in Jewish communities, because of threats toward Arabs during wartime. Regarding the evacuated: the fact that tens of thousands of people are now being housed in hotels, which are not equipped to feed people as they would normally eat at home, complicates matters for the hotels and for the people's ability to obtain food independently, as they do not have access to kitchens or to raw materials (at the Dead Sea hotels, for example).

Food Production throughout the Supply Chain

In various sectors, production output has declined significantly, and quick action is needed to ensure a return to routine production, now and even more so after the end of the war. The greatest lapse is naturally felt in fruit and vegetable crops, where the evacuation of agricultural areas causes delays in sowing, planting, and harvesting. The army's use of agricultural areas as staging areas, along with the difficulty of continuing to run certain plant nurseries and conveying seedlings to farmers in preparation for planting vegetables in the spring threaten not only the supply of fruits and vegetables in the immediate term, but also in the coming seasons (for example, local tomatoes, where the shortage will continue to worsen if they are not planted now). What is not planted now will not exist in three months.

Furthermore, more than a few food factories are located in the western Negev area and are suffering a decline in output; dairy farms with cows that have not been milked could lose the ability to produce milk beyond just the immediate term. For poultry, the slaughterhouses are a bottleneck (mainly due to a shortage of manpower), and the restaurants, which are a significant part of the industry, have significantly changed their patterns of operation (most have closed).

Support for Essential Factories

Many food factories that must be defined as "essential" in order to permit workers to get to work are waiting to receive government approval. Factories that have already received this status are still facing difficulties bringing workers due to the risk inherent in going to work and the lack of peripheral support for workers, such as educational frameworks for children and an additional layer of security for the factory. Regarding agriculture: recognition as "essential" is also lacking for factories that support agriculture, which produce fertilizers, seedlings, tissue cultures, and in the longer term also irrigation companies. More broadly, workers at farms likewise need to be defined in advance as essential workers, so that they receive all of the protection and insurance necessary from the state, which is currently not the case.

Demand Volatility

The demand for food in Israel in wartime is not similar to the demand during routine times due to the army's food consumption, tens of thousands of residents moving to hotels and housing units, restaurants closing and greater reliance on home cooking (as during the COVID-19 pandemic), and popular concern about the possibility that they will be left without food at home (especially after warning announcements such as the one by the head of the Home Front Command). This joins the civilian mobilization to send food contributions to other civilians and to the army – the mobilization is heartwarming, but also sometimes involves significant food waste, as there is no governmental body that coordinates the needs and the supply. All of these change the kinds of goods, amounts, and patterns of distribution needed.

Balance between Imports and Local Production

Israel relies increasingly on imports to provide for the economy's food needs. During the current emergency, the prevailing view is that the gaps that emerged as a result of the war should be filled using imported food – for example, vegetables that cannot be grown in the evacuated agricultural fields in the western Negev, or eggs from chicken coops on the northern border, which have also been

forced to reduce their activity due to the threat from Hezbollah. But importing also involves risks: first, imports themselves can be delayed and encounter difficulties with increased fighting or in the case of boycotts in the medium and long term, if the war continues for a long time. Second, complete reliance on imports would critically harm local production, which would not survive the current war without the support of the state and the economy. The decision on how much to import must be based on data – the extent of the shortage of various goods that actually exists in the economy, the amount that can be produced locally, how much must be imported in the coming months, and guarantees that imports will not hurt local producers.

Risk Convergence

The local food market was in turmoil after the war started, which created difficulties for farmers, livestock farms, and food producers. But the war's challenges have converged with other challenges confronting the food market in Israel and worldwide in recent years – from the supply chain disruptions that started during the COVID-19 pandemic to the war between Russia and Ukraine, which makes it difficult to import grains and raw materials for agriculture, to the climate crisis, which has impaired the ability to produce and transport food from various areas of the world. All this has made it difficult to import certain food goods and raised their prices in the global market. The impact of climate risks could be felt directly in the immediate term, with increased flooding predicted in the coming weeks and months.

Difficulties in Situation Assessment

The Israeli market is an open and unplanned market, as is customary in Western countries, so the government does not have a full picture of the state of the food market in Israel and how it could change at any given moment. However, because Israel is an island economy that is under constant threat, it should develop a picture of the situation in light of various operational scenarios: how much food of each kind exists, how much was reduced immediately as a result of the emergency situation, how demand has changed, how much must be imported in order to fill the gaps, and how the prices of specific foods have changed over time (information on prices exists in commercial databases that the government can access). Without data it is difficult to prioritize the allocation of resources in the short term (how much food, manpower, and raw materials to allocate to the army versus the needs of the civilian economy per specific industry, factory, and farm) and in the long term (how to build up reserves and ensure the steady supply of

food, but at the same time maintain local agriculture and producers and ensure that they can continue their production after the crisis).

Policy Recommendations

1. Assessing the Situation and Prioritizing Resources and Policy Tools

The government should allocate resources to create a full picture of the situation in the food sector while developing technological tools for collecting and presenting the data as necessary with the assistance of bodies that represent the various players in the value chain. The data that is collected from government ministries, organizations that represent farmers and food producers, and companies should serve as a basis for government decision making, mapping needs, and prioritizing investment in the various parts of the economy: how many drivers must be allocated to essential factories versus to the army; which products, if any, should be price controlled; is it necessary to change the production quotas of eggs and milk; what quantity of fruits and vegetables is lacking in the coming month; and more. These considerations should be based on distinguishing between food in general and healthy food, the nutritional and health value of specific kinds of foods, the risk to their steady supply in varying time frames, and an assessment of how essential is the food.

In addition, supplementary policy tools should be considered that would ensure both consumer access to food and the continued activity of farmers, producers, and importers as necessary (for example, subsidizing certain food products and governmental procurement of food from farmers). Inter alia, requests for temporary policy changes raised by industry representatives can be considered: canceling or lowering regular fines (for example, for irrigation of agricultural areas that back up combat zones), adjusting quotas on local food production to emergency needs (for example, on milk and eggs), changes to kosher certification regulation, some of which slow the pace of production, and assistance for producers to cope with changes in production lines – even if they cannot immediately change packages and labels.

We recommend recruiting agriculture professionals that would help the National Emergency Management Authority (NEMA) generate an ongoing picture of the situation in each branch of agriculture, and take responsibility for solving problems in the immediate term (which resources are needed right now and the most convenient way to route them) and for longer time periods (what actions must be taken now to ensure the stability of the economy if the war is prolonged and afterward). It is insufficient for NEMA to ensure access to basic food stockpiles; it must ensure the steady supply of fresh and healthy food to Israel's population.

2. Ensuring Functional Continuity in the Production and Transportation of Food in Israel

The government must address the challenges to the food sector throughout the supply chain, including:

- The conveyance of food products and raw materials to Israel: The government should ensure that the ports continue to operate fully and that ships are not deterred from docking and unloading at Israel's ports. While currently most ships are arriving as planned, there have already been a few cancellations due to security concerns, and the government might have to set up an alternative insurance model for ships coming to Israel if insurance companies stop insuring these ships. A certain level of support for producers and importers may become necessary, if the unloading of ships is delayed and the cost of maritime transportation skyrockets, to ensure that goods arrive in Israel at reasonable costs, as is the case with regard to fuel. Support for food products needs to be implemented in accordance with nutritional priorities.
- The unloading of goods and their conveyance to suppliers and producers in Israel: It is necessary to examine how the state can help accelerate the unloading of general cargo and bulk cargo at the ports. Additional solutions must be found for releasing goods from the ports, including increasing the operation of trains and trucks, and then bolstering the port workers and customs inspectors, the Ministry of Agriculture, and the Ministry of Health (including on Shabbat) as necessary. Boosting the unloading of bulk carriers should be prioritized as much as necessary according to the food needs that the state defines (what is lacking, what is essential to citizens' health – grains for fodder? sugar?).
- Food production at factories and farms: Installing protected infrastructure at production sites and stationing additional security guards in sensitive areas (supermarkets, factories, warehouses), guaranteeing insurance for workers at factories and farms, locating and allocating manpower to food producers according to priorities identified by the state, proactively purchasing raw materials for emergency storehouses in order to ensure production capability over time, and purchasing surplus products from producers. Israel must ensure the planting of crops; if this does not occur now, there will be shortages later in the season and thereafter. The decision on expanding imports should be based on clear data regarding

projections of specific shortages in varying time frames, in order to prevent uncontrolled imports that would harm local producers.

- **Marketing and distribution:** Food producers must have the ability to deliver goods to consumers. It is imperative to ensure there enough trucks remain for producers, beyond what has been nationalized for the needs of the army, to quickly train truck drivers who can be employed during the war, to secure supermarkets, and to ensure that goods reach all parts of the country. NEMA should prioritize local agricultural production and address its needs similarly to how it handles the food industry (for example, by appointing an agriculture coordinator). In addition, the Ministry of Agriculture should work with the supermarket chains to ensure that all the existing agricultural produce is sold, even if it does not meet the chain's size and esthetic standards. The government should acquire the produce that isn't sold in the free market and give it directly to disadvantaged consumers or allocate it for use as raw material for processing in food factories. This will reduce food waste, ensure the livelihood of local farmers, and increase the public's access to fruits and vegetables.
- **Regional food storage:** Israel should consider establishing regional governmental food storage spaces to ensure local access.
- **Functional continuity plans for small and medium-sized businesses in the food industry** should be supported and implemented.
- **Addressing the needs of producers and farmers for the day after the war:** Increasing the quotas of foreign workers as necessary, incentivizing workers to continue to work in industry and in agriculture, preparing agricultural lands and agricultural equipment at alternative sites to the extent possible, and sowing and planting crops for the upcoming seasons. Already now it is important to clarify what reconstruction incentives there will be for farms and to provide them as necessary, especially in the Gaza envelope and the Upper Galilee.

3. Supporting Disadvantaged Communities and Conveying Information to the General Public

The twofold vulnerability of Arab communities should be addressed, as food reaches them less continuously and they face security threats – both on the level of transporting food to communities and supporting Arab workers who are afraid of traveling outside of the community (for example by means of organized shuttles and providing security for them at food production sites). In addition, clear public

statements are necessary by the leadership that would back Israel's Arab population and increase its sense of security to go out and purchase food and to work in mixed and Jewish communities.

Ministry officials and political leaders also have the ability to reassure the Israeli public regarding the continuity of the food industry in order to prevent unnecessary purchases, while providing the public with recommendations regarding the stocks that they should maintain at home and for how long. The supermarket chains have even greater potential influence: it is recommended that the supermarkets show consumers the current reserves of products for which there is increased demand, and prioritize the sale of products according to state recommendations.

The need to purchase wisely and to reduce food waste is critical, including with non-profit associations and social initiatives whose important work could lead to sub-optimal prioritization and to ongoing waste.

4. Preparation for Extreme Situations

As long as Israel's ports remain open and ships continue to arrive, the risk to Israel's food industry is relatively limited. However, Israel must prepare for extreme scenarios in which all the port corporations (at both Ashdod and Haifa) significantly reduce their ability to unload imported cargo. There is currently no alternative for bringing in goods in the amounts that the food sector needs, especially not grains for human consumption and for fodder, neither by air nor by land. Therefore, Israel should consider increasing reserves now, both in the volume and in the variety of goods and raw materials needed for producing food over time. It is insufficient for the reserves to be just the basic products that NEMA has required so far, as they do not provide for the variety of needs of the general population – neither health-wise nor in terms of demand. Thus, Israel should rely on an emergency menu with necessary food products that address the population's nutritional and health needs. The menu should also be used for prioritizing the entry of raw materials, and import and food production processes. Refrigerated rooms should be created to enable the storage of fresh reserves of vegetables, fruits, eggs, and milk, and the reserves of alternative animal products and frozen products should be increased, including milk powder, egg powder, and frozen chicken.

Other countries have built up shared reserves with neighboring countries, and similar mechanisms can be considered, notwithstanding the inherent challenges. One way or another, the reserves must be available, under the direct control and monitoring of the government, sufficient for enough time to renew the

conveyance of food to Israel and production in Israel. At the same time, Israel should ensure that if it becomes necessary to transport goods by land, there are suitable sources for imports, and that border crossings are prepared to take in greater quantities of goods (for example, by improving screening infrastructure at the border crossings with Egypt and Jordan). It is important to understand that there are risks to both imports and to local production, so they must offset one another.

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