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AGRI-FOOD AND COVID-19 IN EGYPT: Adaptation, Recovery and Transformation

Rapid qualitative assessment

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1. The agri-food sector and COVID-19

1.1 Complex food systems

Food systems can be conceptualized in many ways, as food affects social, economic, and environmental aspects of people's life in complex ways; at a minimum, food systems can be described as the entire range of actors and interlinked value-adding processes that take food from field to fork: agriculture production, food processing, distribution, retail, consumption, and waste disposal. While we are mostly used to conceive this range of processes as linear, the transition to circular food systems, which take at least partly food back to the field or use it as a feedstock for other industries, cannot be further delayed. The food system interacts with other key systems (e.g. energy system, trade system, health system, etc.) and is characterized by high connectedness, making it a complex system.



Figure 1 Food systems

Source: Rodin, Carsten in The Urbanist (2013). *Grow. Eat. Compost. Repeat.* Issue 523 May 2013. Retrieved from <http://www.spur.org/publications/urbanist-article/2013-05-13/grow-eat-compost-repeat>

From field to fork, the global food system accounts for 10% of the world GDP and employs 1 billion people, the global supply of food has nearly tripled since 1970 and food exports have grown sixfold over the past 30 years. A third of all food produced globally is wasted each year, which represents a huge loss of land, water and energy (The Economist, 2020; UNSG, 2020).

As the policy brief by the United Nations Secretary General emphasizes, “the global COVID-19 pandemic raises the alarm on the urgent need to rethink how we produce, market, consume our food and dispose of waste”. Rural women and youth whose livelihood depend, in the majority of the cases, on the agri-food sector, and all “workers engaged in collecting, processing, marketing, and distributing food, including wholesale and retail as well as informal food sellers are particularly vulnerable to COVID-19 exposure and to disruption to their livelihoods” (UNSG, 2020).

1.2 The agri-food sector in Egypt and COVID-19

Egypt's agri-food system, considering both agriculture and food processing as well as related input and trade systems, contributes by 24.5% to the country's GDP and by 23.2% to Egypt's labour value added. The large majority of the food processing activity is in Lower Egypt (78.3% of food processing gross output); while Upper Egypt plays an important role in primary agriculture, contributing 30.2% to agricultural gross output (IFPRI, 2018). Agriculture is a major source of wage- and self-employment for women, especially in rural areas.

The food and beverages industry is Egypt's second top industry by manufacturing value added, the first one by manufacturing employment, and the third one by manufacturing exports. Egypt's food and beverages intermediate trade balance is in deficit, which suggests that the country is located in the 'downstream' stages of supply chains (i.e. assembly of imported inputs into final goods) and imports more intermediates than it exports. Intermediate manufactured goods make up 47.3% (2016) of Egypt's food and beverages imports, noticeably a strong reliance on imported intermediate goods (reaching nearly 80% in some sub-sector such as the dairy), while intermediate manufactured goods make up only 20.8% (2016) of Egypt's food and beverages exports, showing that Egypt provision of inputs for food and beverages production to foreign economies is limited. ([UNIDO Industrial Analytics Platform](#)).

Agriculture and food production present, without doubt, one of Egypt's most attractive yet underserved investment opportunity. Egypt's soil and climactic conditions together with multiple growing seasons, the industry's proven track record of export performance, its geographical location with proximity both to Arab countries and Europe, and high participation in trade agreements all contribute to this potential. However, Egypt's agri-food sector is hampered by structural deficiencies. Unsustainable production methods put further stress on already strained natural resources (the sector consumes 86% of Egypt's water resource), and, together with poor support services, lead to high post-harvest losses. The food-processing sector in Egypt is highly fragmented, characterized by weak links between producers and processors, high informality among agricultural producers and suppliers, and dominated by SMEs, typically resulting in poor economies of scale, leading to the manufacturing of products of sub-optimal quality and packaging, that negatively affects the trade balance and prices of final products. Although Egypt is one of the world's leading producers of fruit and vegetables and the world's largest exporter of fresh citrus, Egypt is not on the list of top food processors for any of these. Egypt processes less than 10% and in some cases less than 5% of its fresh crops, well below the global average of 25-35%. For example, while Egypt is the 5th largest tomato producer in the world, only 3% is used in the Egyptian processing industry. Furthermore, less than 1% is exported and losses during the production and logistics phases reach 25-35%. This demonstrates that immense opportunities exist to improve the sector's growth and value addition, provided that dedicate support measures are taken.

Although global food markets appear robust with abundant stocks, collapse in demand and disruptions in supply, production and trade,¹ limited finance, unsustainable production and consumption patterns, infrastructure weaknesses together with increasing food access issues due to loss of critical income sources pose threats to the ability of Governments worldwide and especially in developing countries to ensure a safe and continuous supply of food, which is essential for the sustainability of livelihoods and businesses. Without focused attention and dedicated response measures, the combined effects of COVID-19 and the emerging global recession could disrupt the functioning of food systems. In the long term, demand and supply will pick

¹ In the World Economic Outlook published in June 2020, the International Monetary Fund (2020) projects a contraction of -9.4% in the trade of goods and services in the emerging market and developing economies in 2020. The World Trade Organization, which measures trade in terms of the average change in exports and imports of merchandise (excluding services), predicted a decline of between 13% and 32%.

up, however, changes to market dynamics, nature of supply and demand and nature of competition will occur (UNIDO, 2020c).

This report argues that while it is essential to mitigate the current negative impacts of COVID-19 in order to ensure continued production in the short-term, it is equally vital to start planning for the market restructuring that might only arrive in one-year time and put emphasis on the post-crisis growth in order to support the recovery and transformation of Egypt's food system in the medium and long terms making it more inclusive, sustainable and resilient (as elaborated in section 3 below) (UNIDO, 2020c; UNSG 2020). The report makes recommendations to be considered by policy makers, business support organizations and industry representative bodies, the private sector, as well as international organizations.

The analysis presented herein is based on a rapid qualitative assessment of the key bottlenecks in Egypt's food system (with a focus on food processing and SMEs) and the impact of COVID-19, which was conducted through online semi-structured interviews with key national stakeholders and draws upon more than a decade of UNIDO experience in supporting the Egyptian agri-food sector.

The key bottlenecks are presented in section 2, while recommended interventions will be discussed in section 3.

2. Key bottlenecks in Egypt's food system and the impact of COVID-19

COVID-19 magnifies pre-existing weaknesses in Egypt's agri-food sector, in addition to bringing about new challenges and opportunities. Although the pre-existing weaknesses are well known, a comprehensive understanding of the issues that Egypt's agri-food businesses, especially SMEs, face is paramount to devise response measures tuned to the characteristics and needs of the sector.

A rapid qualitative assessment of the key bottlenecks in Egypt's food system and the impact of COVID-19 was conducted through semi-structured interviews with key national stakeholders. The rapid qualitative assessment aimed at investigating the following areas which are critical for ensuring the market functioning:

- Supply: availability of and access to quality and safe raw material, intermediate goods (including packaging), and equipment
- Demand: sustained demand by consumers and industry
- Labour: availability of and access to qualified labour force
- Production: continued production and uninterrupted supply
- Finance: availability of and access to suitable financing mechanisms

In each area, several bottlenecks have been identified. Particular focus was given to food processing and SMEs.

Any more in-depth analysis in this regard must be underpinned by reliable data on the impact of COVID-19 on food markets as such data become available in the weeks and months to come (UNIDO, 2020a). Nonetheless, the following issues may need to be considered.

Supply of inputs

Food production rests on the availability of and access to quality and safe raw material, intermediate goods (including packaging), and equipment, whether local or imported. As mentioned above, Egypt's food manufacturing is characterized by a strong reliance on imported intermediate goods. In 2019, food imports accounted for 24% (16.8 billion USD) of all Egypt's imports in terms of value (71.3 billion USD) (Chamber of Food Industries. CFI, data).²

With regard to local inputs, the major constraint that Egypt food processors face is the inconsistency of the quality of inputs. This is due to poor cultivation practices, low quality and limited availability of inputs, lack of modern farm machinery, inadequate extension efforts, poor harvesting methods, lack of quality assurance and quality control, limited skills, and inadequate infrastructure facilities. Although some progress has been made in recent years, the reliance of Egypt's food production on imported inputs is noticeable. Even for locally produced inputs, the Egyptian food manufactures depend on imported food ingredients and raw materials (e.g. oils and fats that Egypt imports and then processes), as well as packaging (resins are imported). COVID-19 exposes such vulnerabilities. Abundant stocks helped them weather the COVID-19 crisis. However, the

² Egypt food imports' main sources are Indonesia, Argentina, Brazil, United States of America and China.

reliance on imported inputs such as packaging and ingredients might pose a real risk in the supply chain when their flow across borders is disrupted.

To mitigate risks of disruptions in the supply chains, the National Food Safety Authority (NFSA)³ and the Central Administration of Plant Quarantine (CAPQ)⁴ have reported that no effort is being spared to ensure the presence of inspectors at ports, airports and land borders. Already before COVID-19 outbreak, remarkable steps had been taken towards a more efficient and effective imported food control system as demonstrated by the development of a risk-based imported food control system by NFSA, whereby control activities on foods are determined based on their degree of risk, in line with international best practices including Codex, FAO and WHO guidelines, as well as the establishment of a 25% inspection threshold for consignments that arrive with pre-shipment certificates issued by inspection companies that are registered with NFSA.⁵ Another important development is the contracting of third parties to undertake inspection activities. Ensuring the effective roll-out of the above-mentioned measures is paramount. Moreover, some challenges remain, which require enhancing the inspection capacity (in terms of human resources and their capabilities), developing import databases, and strengthening the coordination among relevant agencies (e.g. NFSA, CAPQ, customs authorities).

While food manufacturers and industry associations acknowledge that to reduce the sector vulnerability to external shocks, diversifying suppliers and localizing the production of some of the inputs that are currently imported is critical, it is clear that data and information about Egypt's capabilities, competitiveness, and feasibility of local production vs. imports, key market conditions and trends are by a great deal lacking.



**Demand
for fresh &
processed**

In the same vein of what discussed above about the need for securing imports, ensuring that the traffic of exports of agricultural and processed food products runs smoothly is key to the functioning of the global food systems and the preservation of Egypt's market shares. Food exports account for 14% (1.8 billion USD) of all Egypt's exports in terms of value (FEC data for 2020) ranking third among Egypt's non-petroleum exports.⁶ According to data available for the first quarter of 2020, the export of agricultural fresh products has slightly decreased by about 8 - 10 % in the first quarter of 2020 compared to the same period in 2019 (AEC data for 2020). The export of processed food products has

³ The National Food Safety Authority of Egypt (NFSA) was established with law 1/2107 (followed by executive regulations issued in 2019) as the unified authority competent to supervise food safety (previously overseen by 17 different government agencies and units). NFSA is an independent authority under the Office of the Prime Minister. NFSA is mandated to protect consumers' health and consumers' interests by ensuring that food consumed, distributed, marketed or produced in Egypt meets the highest standards of food safety and hygiene. The agency is responsible for food safety regulation for domestic production, import and export through undertaking inspection, licensing and certification. <https://www.nfsa.gov.eg>
https://tii.unido.org/sites/default/files/publications/TII_FoodSafety_Egypt.pdf
https://apps.fas.usda.gov/newgainapi/api/report/downloadreportbyfilename?filename=Egypt%20Establishment%20of%20the%20National%20Food%20Safety%20Authority_Cairo_Egypt_9-2-2019.pdf

⁴ The Central Administration of Plant Quarantine (CAPQ), under the Ministry of Agriculture and Land Reclamation, is the only agricultural quarantine body in Egypt. CAPQ is responsible for the phytosanitary inspection of imported and exported consignments and can enforce legal restrictions on the movement of goods throughout the value chain in order to prevent or delay the introduction and spread of pests and plant diseases to Egypt <http://www.capq.gov.eg/>

⁵ <https://www.fas.usda.gov/data/egypt-egypts-national-food-safety-authority-issues-risk-analysis-food-regulations>

⁶ Egypt food exports' main destinations are Saudi Arabia, Libya, Jordan, United States of America and United Arab Emirates.

decreased by 5% in the first 5 months of 2020, however, it has recorded positive growth (2.2%) at the end of the first half of 2020 (FEC data for 2020).

With regard to the domestic market, while initially consumers might have reacted by panic-buying and stocking basic food commodities, this is mostly a short-term reaction. At the same time, the demand of consumers for some of the food processing sub-sectors has been negatively impacted by the closure of kiosks, schools, universities and offices, restrictions on movement and nighttime curfew (effective from end of March till end of June 2020). On the business-to-business side, with restaurants and hotels sharply reducing their demand for food, and the suspension of the Umrah pilgrimage by Saudi Arabia, both agricultural producers and food manufactures have seen a significant drop in demand for their products, adversely affecting their economic performance.

Although these contractions might seem less severe than those experienced in other industrial sectors, COVID-19 is highlighting the need for intensifying efforts to improve the ease of doing business by reducing the time and cost of trade, as well as for identifying new market shares both domestically and internationally. However, similarly to what discussed above, very little market intelligence is conducted to assess Egypt's competitiveness and understand changing customers' demand and emerging investment opportunities. The poor promotion of Egyptian agricultural and food exports has been highlighted by the interviewed stakeholders as another main obstacle hampering the growth of Egypt's exports.

Furthermore, key bottlenecks related to quality and safety considerations remain a main challenge for increasing Egypt's agricultural and food exports. Although the number of rejections of Egypt's exports have decreased, the main reason for the rejections continues to be pesticide damage and residues that disqualify Egyptian exports from meeting sanitary and phytosanitary requirements of trading partners, especially in the European Union. The efforts being made in recent years to improve the food safety of Egypt's exports, notably the compilation by NFSA of a "white-list" of food producers meeting food safety guidelines in line with Codex Alimentarius, are yielding the expected results with Gulf countries removing the restrictions previously imposed on Egypt's exports.



**Labour
force**

One of the chronic weaknesses from which the Egyptian agricultural producers and food manufactures suffer the most is the shortage of qualified labour force. This has direct negative impacts on the productivity and competitiveness of the entire food system.

COVID-19 poses an additional challenge to this perennial problem as shortages of labour caused by COVID-19 outbreaks disrupt production and processing of food, notably for labour-intensive industries (e.g. high-value crops such as fruit and vegetables, meat and fish). Large number of employees prevented from working means less output produced. This could even result in an increase in the companies' overhead costs, when employers cannot easily replace labour and resort to measures to compensate and motivate workers. In the midst of COVID-19, ensuring workers' health and safety, especially in labour-intensive industries, becomes even more urgent, not only to safeguard the workers' wellbeing but also the continuity of the business itself and the supply of food. This further burdens the companies' expenses, especially for SMEs which might perceive

the precautionary measures required for a safe workplace too demanding and costly thus compromising on the health and safety of their workers and products.

COVID-19 has raised the alarm on the inadequacy of the Egyptian educational system and vocational training to provide the private sector with qualified employees, such as production managers, supervisors, food scientists, technicians (including laboratory technicians), safety and quality assurance officers. Enhanced training and education of agri-food workers is paramount, chiefly on food safety and hygiene that are essential to mitigate the risk of different hazards, quality assurance, domestic marketing and sales, international marketing, managing international distribution channels, packaging, R&D (ILO, 2015; interviews). Access to qualified workforce is essential for increasing the efficiency of production and preparing businesses for the post-COVID-19 recovery.

Logistics & transportation

Egypt's agri-food sector is affected by logistics and transportation hurdles. Fragmented logistics and transport infrastructure and services are a main factor hindering the expansion of the agri-food sector, in terms of both investment and exports. Long and fragmented supply chain, inadequate cold storage and warehousing facilities, poor handling practices, fragmented transport services⁷, lack of modern logistics infrastructure such as logistics parks, integrated cold chain solutions, last mile connectivity, customized transportation, technology adoption (barcoding, radio frequency identification) are key impediments to the correct functioning of Egypt's food system (FICCI, 2010). The COVID-19 pandemic is an opportunity to identify the logistics and transportation bottlenecks and address them.

Movement restrictions and curfew constrain transport of food to markets. Blockages to transport routes are particularly obstructive for fresh food supply chains, especially for high value commodities (fruits and vegetables, milk, meat) because of their perishability, as they slow down agricultural services, access to inputs, delivery of goods, and marketing, and lead to accumulation of produce at farms. This may result in incomes decline for the producers, and lower incentives to produce the affected commodities, likely leading to lower yields and production in the near future. Blockages to transport routes may also result in increased levels of food loss and waste. Food loss and waste is already very high along Egypt's supply chains, reaching up to 25-35% in some cases (e.g. tomato). Food loss means waste of resources used in production such as land, water, energy.

For these reasons, all stakeholders interviewed praised the Government of Egypt decision, as a results of the efforts of the Chamber of Food Industries, to exempt the agri-food sector and its workers, raw material, packaging from the movement restrictions and nighttime curfew (effective from end of March to end of June 2020) in order to ensure continued food and related packaging production and uninterrupted supply. However, air traffic suspension and consequent limited air cargo capacity,⁸ shortages in transport operators (e.g. truck drivers) and empty containers/reefers with corresponding rise in freight fees, heightened inspections, and other transportation snarls⁹ have slowed down

⁷ With regard to inland transport, most of the trucks carting containers from/to ports are owned by individuals, while the percentage of trucks companies is minimal with small owned fleet of trucks.

⁸ High-value commodities, which reportedly represent 20% of Egypt's export volume, are shipped by air freight (AEC).

⁹ For example, Saudi Arabia has prevented Egyptian drivers and trucks to enter the country to limit the spread of COVID-19. Most of Egypt's fresh agricultural products exports to the Gulf countries are by road. Services related to cross-border shipments to Jordan

global food supply chains on which Egypt's agricultural and food production and exports depend.

Production

Manufacturing output growth has registered a sharp decline of 6.0% globally in the first quarter of 2020 due to economic lockdown measures motivated by the COVID-19 pandemic, and a less sharp decline of 1.8% in developing and emerging industrial economies except China. A massive decline of manufacturing output is expected in the forthcoming periods in industrialized economies and in most developing countries (UNIDO, 2020d). Even though the food sector was relatively less affected by COVID-19,¹⁰ Egypt's food manufactures have operated well below capacity. Notwithstanding the fact that the food sector was exempt from the movement restrictions and nighttime curfew, food manufacturers' production capacity has reportedly dropped by 30-40%, up to 70% in some cases, together with contractions in sales and revenues. As mentioned earlier, with the closure of kiosks, schools, universities and offices, restrictions on movement and nighttime curfew and restaurants and hotels sharply reducing their demand for food, and the suspension of the Umrah pilgrimage by Saudi Arabia, both agricultural producers and food manufactures have seen a significant drop in demand for their products, adversely affecting their economic performance

Once again, COVID-19 is uncovering key bottlenecks in Egypt's agri-food sector. Weak managerial capacities among Egypt's agri-food SMEs hamper their capacity to respond and adapt to crises due to deficiencies in strategic planning, operation optimization, risk management and emergency preparedness. Clear understanding of market context and value chains, opportunities and challenges for strategic growth and optimization of operations is lacking, processes are often not documented, policies and procedures for contingency planning are mostly missing, and operations and business transactions mainly rely on manual systems. Because of this, agri-food businesses, especially SMEs could easily find themselves outcompeted or in collapsing markets, unable to expand and grow. COVID-19 will intensify competition at home and abroad. In a tough competition, industry needs to be as competitive as it can be (UNIDO, 2020c).

Quality and safety of food production deserves focused attention. COVID-19 is a respiratory-borne not a food-borne disease, yet measures to ensure the safe and continuous supply of food are paramount for the sustainability of livelihoods and businesses. As mentioned above, quality and safety of food imports and exports are vital for the functioning of food systems and the preservation and growth of Egypt's market shares. The Government of Egypt has taken decisive steps in this regard in the past few years. However, some gaps still persist. As mentioned earlier with regard to streamlining imported food control activities, it is necessary to enhance the inspection capacity (in terms of human resources and their capabilities), develop import databases, and strengthen the coordination among relevant agencies (e.g. NFSA, CAPQ, customs authorities). Moreover, while NFSA "white-list" is mostly concerned with exports, less attention is given to the local market. SMEs are often reluctant to adopt changes necessary to meet NFSA safety requirements which they perceive as demanding and

were also suspended.

¹⁰ The estimated growth rate of the food industry output in quarter 1 of 2020 compared to the previous quarter is 0.4% in developing and emerging industrial economies excluding China (world average -2.4%) and compared to the same quarter in 2019 is 2.2% in developing and emerging industrial economies excluding China (world average 1,7 %) (UNIDO, 2020d).

costly, and when they do, they take the minimum action necessary to join NFSA “white-list”. Workers’ hygiene is still an issue and their awareness about needed practices food hygiene and safety is very limited. Full enforcement of NFSA “white-list” in the local market on the one hand and a stronger demand by consumers for safer food products on the other would irreversibly urge companies, especially SMEs, to invest in their compliance with NFSA safety requirements.

On the legislative front, it is worth noting that a unified food law is still missing. To complete the overview of bottlenecks affecting Egypt’s food production, it is also worth mentioning that the enforcement of the intellectual property rights law is not generally strong enough (European Union, 2019), which has, for example, the effect of discouraging contract manufacturing among food manufacturers.



Finance

Inhibited production capacity and limited market access affect the cash flow and liquidity of agri-food businesses due to extended cash conversion cycles. The Government of Egypt, like many other governments worldwide, has rapidly reacted to the COVID-19 economic crisis by enacting fiscal and financial measures to alleviate liquidity constraints of businesses and help facilitate continued production, such as deferral of tax payments and lending facilities (further details in section 3 below). Recipients of subsidized lending facilities include agricultural producers and food manufactures. However, food manufactures did not enjoy the deferral of tax payments like other industries, putting further stress on their cash flows. Moreover, temporary measures are not enough. To avoid temporary liquidity issues turn into solvency problems and to expand the agri-food SMEs’ and agricultural producers’ access to finance (UNSG, 2020), financing instruments tuned to the needs and characteristics of agri-food SMEs and agricultural producers are paramount.

Bottlenecks on both the demand and supply sides limit the agri-food SMEs’ and agricultural producers’ access to finance. On the demand side, agri-food SMEs and agricultural producers face significant difficulties in finding the necessary capital to launch and expand their operations due to the lack of collaterals and credit history (particularly for small-scale agricultural producers and early-stage SMEs), insufficient financial literacy, business management knowledge, and lack of adequate business plans and little or no formal accountancy systems. On the supply side, insufficient flexibility in lending and repayment conditions (particularly needed in agriculture), limited outreach, and above all the lack of specific expertise in agri-food among traditional financial institutions, together with the above-mentioned issues, result in the agri-food sector often been perceived as high risk. As a result, the financing needs of Egypt’s agri-food SMEs and agricultural producers are not well matched by the existing financing instruments which are not tuned to the sector’s specificities (e.g. seasonal production cycles, cash flow characteristics, storage and production characteristics, sensitivity to climate issues and other external risks) (Fi-compass, 2020).

The lack of financial support will obstruct the investment needed to improve the sector infrastructure and production capacity as discussed in the previous pages, and hinder its recovery and transformation capacity.

3. Response measures for the short, medium and long terms

3.1 Immediate responses by the Government of Egypt

Since November 2016, Egypt’s macroeconomic situation has improved markedly as a result of the bold but necessary economic reforms implemented by the Government of Egypt with the support of the International Monetary Fund (IMF). This is reflected in the higher growth rates (5.4% in the first half of the fiscal year 2019/2020)¹¹ and lower unemployment and inflation rates recorded before the start of the COVID-19 outbreak. This solid foundation enabled Egypt to deal with the crisis and its implications effectively. Even after reviewing its growth projections downward, the IMF (2020) forecasts a positive growth rate of 2% for Egypt in 2020 in stark contrast to the global average of - 4.9%.

Various fiscal and financial measures were promptly enacted by the Government of Egypt to limit the economic impact of COVID-19 pandemic. Moreover, international financial institutions and development banks have availed extra finance to Egypt in support of COVID-19 response.

Below are presented the Government of Egypt economic responses that are most relevant to the discussion herein.¹²

Table 1 Economic responses by the Government of Egypt

On the fiscal front
<ul style="list-style-type: none"> • Stimulus policies in the EGP 100 billion package (1.8% of GDP) to mitigate the economic impact of COVID-19 • Energy costs (natural gas and electricity) have been lowered for the entire industrial sector • Real estate tax relief has been provided for industrial and tourism sectors • Subsidy pay-out for exporters has been stepped up
On the monetary and macro-financial front
<ul style="list-style-type: none"> • The preferential interest rate has been reduced from 10% to 8% on loans to tourism, industry, agriculture and construction sectors • The Central Bank has approved an EGP 100 billion guarantee to cover lending at preferential rates to the manufacturing, agriculture and contracting loans (for companies of all sizes) • The Central Bank has approved the Ministry of Agriculture request to allow small scale growers and livestock breeder (dairy, poultry) access to the SMEs lending initiative to receive loans at 5% subsidized interest rate • MSMEDA has launched an initiative for small businesses, especially in the industrial and labour-intensive sectors, to provide up to 1 million EGP short-term loans of up to a year, to secure the necessary liquidity to finance working capital for operational expenses until the crisis is over • The Central Bank has given SMEs a six-month extension for credit repayments • A new debt relief initiative for individuals at risk of default has also been announced, which will waive marginal interest on debt under 1 million EGP if customers make a 50% payment

¹¹ Ministry of Planning and Economic Development <http://english.ahram.org.eg/NewsContent/3/12/371681/-.aspx>

¹² [IMF policy tracker](#); [OECD Policy Responses to Coronavirus \(COVID-19\)](#)

- Microlenders have been instructed to also consider delays on a case-by-case basis, of up to 50% of the value of monthly instalments for struggling clients
- The regulations issued last year requiring banks to obtain detailed information of borrowers have been relaxed, suspension of credit score blacklists for irregular clients and waiver of court cases for defaulted customers have also been announced
- The limit for electronic payments via mobile phones has been raised to EGP 30,000/day and EGP 100,000/month for individuals, and to EGP 40,000/day and EGP 200,000/per week for corporations

3.2 Recommended interventions for the recovery and transformation of Egypt's food system

Because of its strategic importance and the presence of the key bottlenecks described above, the agri-food sector deserves focused attention when planning interventions to respond to the economic crisis of COVID-19 in order to capture opportunities domestically and abroad.¹³ In addition to measures to mitigate the immediate shocks, relief and stimulus packages should include targeted measures to enable Egypt's food system undergo a certain degree of structural change and reorientation and Egypt's agri-food SMEs adapt their current business models to the changes of markets and nature of competition and venture on the road of recovery. While the actual scale of the economic downturn is unknown, early estimates and data suggest that the recovery challenge will be immense (UNIDO, 2020b; UNIDO, 2020c). To avoid that Egypt's agri-food enterprises, especially SMEs, find themselves outcompeted or in collapsing markets, planning for the longer-term market restructuring and business resumption is as essential as measures to mitigate short-term disruptions.

This section discusses recommended interventions to support the adaptation, recovery and transformation of Egypt's agri-food sector, with a particular focus on food processing and SMEs. The recommended interventions tackle the key bottlenecks in Egypt's food system as emerged from the consultations held with key institutions in the sector (section 2) and drawing upon more than a decade of UNIDO experience in Egypt.

As described below, the recommended interventions include different types of measures and instruments:

- Information and advice, e.g. on market opportunities, contingency measures, safety and quality
- Economic instruments, e.g. financial support measures to maintain liquidity and ease the financial burden of firms, especially SMEs
- Regulations / legislations, e.g. on food safety, import/export

They address one of the following areas that are critical for ensuring the market functioning:

- Supply: availability of and access to quality and safe raw material, intermediate goods (including packaging), and equipment
- Demand: sustained demand by consumers and industry
- Labour: availability of and access to qualified labour force
- Production: continued production and uninterrupted supply
- Finance: availability of and access to suitable financing mechanisms

Some of the recommended interventions, the majority, are meant to tackle pre-existing weaknesses endemic to the Egyptian agri-food sector, particularly affecting SMEs, which the current economic crisis is exacerbating; while others rather tackle COVID-induced threats. Some of the recommended interventions call for the extension/expansion of measures already adopted by the Government of Egypt to support enterprises weather the current storm; while others intend to complement them and leverage the recovery drive as an opportunity to foster some long overdue structural changes in Egypt's agri-food sector, improve its performance, productivity, competitiveness, resource use and waste disposal. Together the recommended interventions will make the Egyptian food system more inclusive, sustainable and resilient. To be successful, they require close collaboration between policy makers, support institutions representing/governing the sector, and the private sector building on the positive examples of collaboration already observed during the COVID-19 crisis.

¹³ The strategic importance of the agri-food sector has already urged many countries to adopt specific support measures targeting the sector, such as Argentina, Belgium, Canada, Croatia, Czech Republic, Estonia, Lithuania, Netherlands, Portugal, Singapore, Slovenia, Spain, Tunisia, Turkey (mainly financial and fiscal support measures).

The recommendations are directed to policy makers, business support organizations and industry representative bodies, the private sector, as well as international organizations, and serve to support them in the development of impactful interventions. The recommended interventions are indicative and not by any means exhaustive. Their implementation would require in-depth analysis and planning. The figure below summarizes the long list of recommended interventions addressing all the key bottlenecks affecting Egypt's food system. Each intervention is described in details in the following pages.

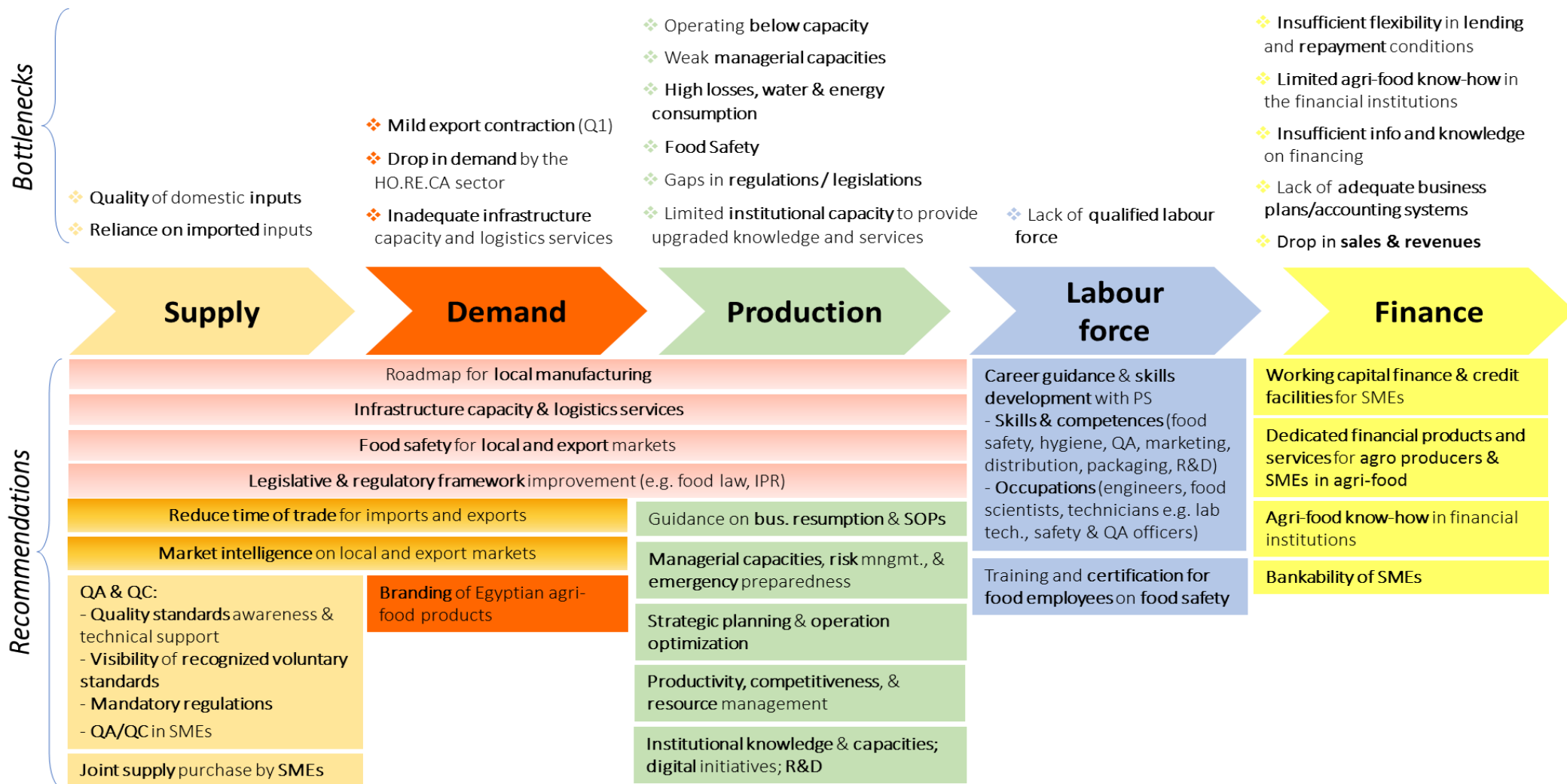


Figure 2 Long list of recommended interventions

The recommendations have been discussed and reviewed with the interviewed stakeholders and subject-matter experts.

Acknowledging the SMEs' contribution to Egypt's agri-food sector, out of the long list of recommended interventions, a short list of priority interventions targeting SMEs in the short (1 year – s-t) and medium term (3 years – m-t) was developed. The short list is presented in Figure 3 below. The priority interventions aim at increasing the resilience and competitiveness of SMEs and leveraging their ability to innovate and adapt to changing market dynamics, nature of supply and demand and nature of competition. The interventions address internal and external challenges that agri-food SMEs face as a result of either pre-existing weaknesses or COVID-19 induced threats.¹⁴

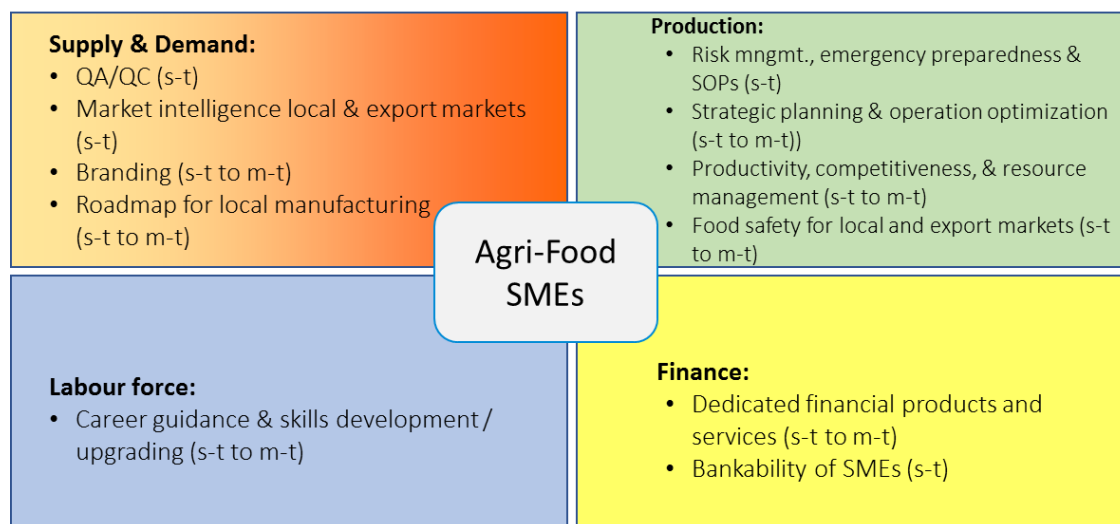


Figure 3 Short list of recommended interventions

The detailed description of each of the recommended interventions (both short and long list) is presented in the following pages.

¹⁴ The results of the shortlisting may vary if criteria different from the development of SMEs are chosen.

3.2.1 Supply

<i>Type of bottleneck</i>	<i>Recommended intervention</i>
Consistency of the quality of domestic inputs	<p>1. QA & QC: Raise the awareness of food producers, especially SMEs, on quality standards for food products (e.g. on hygiene practices, food safety management system, pesticide residues, and traceability, as well as specific standards for specific products) and provide technical support on their practical application (see also # 18 below) in order to encourage food producers to supply quality products to the local market, increase their competitiveness in international and regional markets, and increase the visibility and implementation of recognised voluntary standards. For the mandatory regulations, develop and disseminate widely among the sector guidelines for minimum requirements as well conformity assessment. Develop/enhance quality assurance systems and quality control mechanisms of inputs and products, especially in SMEs. Suggested stakeholders: Egyptian Organization for Standardization and Quality (EOS);¹⁵ NFSA; Chamber of Food Industries (CFI)</p>
Reliance on imported raw materials, intermediate goods and packaging	<p>2. Access to market data, information and analysis: Generate market intelligence on local and export markets (e.g. prices, production, stocks, import/export, world importers/exporters, local and global consumption, supply/demand balance) to help companies mitigate market uncertainty, build, diversify and reorient productive capabilities, and ensure investments are well targeted through the identification of new suppliers, emerging market needs and changes in consumer behavior. Disseminate market intelligence through dedicated online/offline tools (e.g. dedicated information sessions, expert group meetings, online observatories¹⁶). Suggested stakeholders: Ministry of Trade and Industry (MoTI) and affiliated institutions; CFI; exporters associations</p>
	<p>3. Roadmap for local manufacturing: Assess Egypt’s existing capabilities for the local manufacturing of high quality inputs, the techno-economic feasibility of local manufacturing as compared to imports, Egypt’s competitiveness, regulatory gaps and finance barriers, as well as key target markets and trends. Accordingly, devise a plan to develop capabilities for local</p>

¹⁵ EOS, under the Ministry of Trade and Industry, is the only competent authority entrusted with all matters related to standardization, quality control and metrology, with the aim of increasing the competitiveness of Egyptian products in the international and regional markets along with consumer's and environmental protection (ITC, 2017; <https://www.iso.org/member/1700.html>).

¹⁶ For example, the EU Commission has established sub-sectorial [market observatories](#) (for fruits and vegetables, crops, meat, milk, wine, sugar). The market observatories include an economic board and a dedicated website containing a large set of market data and information that is updated regularly. The economic board, composed of industry associations, is formally a Commission expert group intended to give advice on economic factors affecting market developments, to provide market information and to assess the current market situation. The data and information published include: monthly prices, yearly production volume, weather extreme events, stocks, yearly export / import volume and trade partners reported separately for fresh and processed products, yearly consumption, yearly supply/demand balance, world top exporters/importers by value, volume and average growth, world consumption; as well as agenda, reports and materials of the expert group meetings.

manufacturing, increase the sector's value addition, productivity and competitiveness in the short, medium and long terms, and promote related investment opportunities.

Suggested stakeholders: All concerned stakeholders under the leadership of MoTI

4. **Joint supply purchase by SMEs:** Supply chain bottlenecks mainly hit SMEs because the cost of the inputs will rise or because international suppliers will prioritize clients who can purchase larger batches. SMEs need to organize and attempt to unify their forces in securing access to supply for critical inputs. This could be organized through the FEI.

Suggested stakeholders: CFI; SMEs

5. **Improve ease of doing business by reducing time of trade:** Reduce time for clearance of imports at ports and airports by streamlining and improving quality and performance of control and inspection procedures for import through better utilizing risk assessment. This allows concentrating customs control, and to the extent possible other relevant border controls, on high-risk consignments and expediting the release of low-risk consignments. Remarkable efforts are already being made in this direction by the National Food Safety Authority (NFSA), which has recently developed a risk-based imported food control system. Further improvements require enhancing the inspection capacity (in terms of human resources and their capabilities), developing import databases, and strengthening the coordination among relevant agencies (e.g. NFSA, CAPQ, customs authorities).

Suggested stakeholders: NFSA; CAPQ; customs authorities

3.2.2 Demand

<i>Type of bottleneck</i>	<i>Recommended intervention</i>
Mild export contraction of both fresh and processed products (Q1)	<ol style="list-style-type: none"> 6. Improve safety of exports and reduce time of trade: In the same vein of the above-mentioned efforts to enhance the imported food control system, streamline and improve quality and performance of control and inspection procedures for exports through better utilizing risk assessment. Improve the safety of agricultural and food exports (especially with regards to pesticide damage and residues) to meet sanitary and phytosanitary requirements of trading partners and ease inspection measures and bans removals (European Union and Gulf countries). Remarkable efforts are already being made in this direction by NFSA through the compilation of the “white-list” (as requested by the Kingdom of Saudi Arabia), as well as by CAPQ and the Agricultural Export Council (AEC) especially following the Ministerial Decree 670/2017 regarding the inspection and monitoring of exports. Further improvements require strengthening the coordination among the key stakeholders in the sector for integrating resources (human, technology, processes); enhancing the inspection capacity (including through 3rd party contracting); digitalizing phytosanitary certificates (through developing electronic phytosanitary certificates, ePhyto).

Suggested stakeholders: NFSA; CAPQ; AEC

Drop in demand for food by the HO.RE.CA (hotels, restaurants, cafés) sector

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7. **Improve safety of local production:** (in addition to # 1 above with regard to quality of food products) Enforce hygiene practices along the supply chain including through increasing awareness among food handlers, manufactures and workers. Enforce NFSA “white-list” in the local market. Provide technical support and financial incentives to SMEs to apply corrective measures to comply with NFSA safety requirements as a means to enhance not only food safety but also their competitiveness. Implement effective traceability to provide key information on the food products (origin, processing method, ingredients) to minimize public health risks. Apply risk-based inspection and control system for the local market.

Suggested stakeholders: NFSA; CFI

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8. **Access to market data, information and analysis:** see # 2 above.

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9. **Branding of Egyptian agri-food products:** Develop and promote branding of Egyptian agri-food products to raise the country’s export profile in international markets, enhance perception of the Egyptian food systems, position Egypt’s agri-food products as safe and Egypt as a destination for investment.

Suggested stakeholders: MoTI; exporters associations

Inadequate infrastructure capacity and logistics services

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10. **Improve infrastructure capacity and logistics services:** Map out and assess public and private storage facilities, including available cooling infrastructure that could be used for emergency storage. Improve post-harvest food handling practices through access to low-cost handling facilities and packaging. Foster investment in cold storage facilities including low-cost ones. This issue is particularly severe in Upper Egypt, therefore priority should be given to this area. Enhance the wholesale market infrastructure and build capacities of wholesale market workers and traders to meet requirements of hygiene, food safety regulations and develop a traceability system. With regard to transportation, allow movement of seasonal workers and transport operators (e.g. truck drivers) across borders, provided that adequate health screening, testing, and safety protection measures are taken (FAO, 2020b). Enhance cooperation between the private sector, Government and customs authorities to streamline operations and ensure activity runs smoothly (Amcham, 2020). Promote organization among transport service providers. The reactivation of the fast lane done 3 years ago at Alexandria and Dekheila ports with the support of UNIDO¹⁷ has proven efficient in minimizing the entry time to the port and hence preserving the crops quality. An assessment is recommended to determine the need for fast lane at other ports.

Suggested stakeholders: Ministry of Supply and Internal Trade; NFSA; Ministry of Transportation; representative bodies

¹⁷ Green Trade Initiative (GTI) was implemented by UNIDO from 2014 to 2017 in collaboration with MoTI and funded by the Italian-Egyptian Debt Swap Programme. The main objective was to increase trade levels by enhancing the exports of quality agro Egyptian produce towards the EU, through Italy.

3.2.3 Labour force

<i>Type of bottleneck</i>	<i>Recommended intervention</i>
Lack of qualified labour force domestically	<p>11. Career guidance and skills development/upgrading: In partnership with the private sector, raise awareness of young students and graduates on career prospects in the agri-food sector as well as occupations, competences and skills in demand by the private sector. Develop, together with the private sector, training courses to equip the unemployed and underemployed with skills and competences in demand by the private sector (for production managers, supervisors and technicians) but not adequately supplied by the education system (e.g. skills and competences related to food safety and hygiene, quality assurance, domestic marketing and sales, international marketing, managing international distribution channels, packaging, R&D; and occupations such as engineers, food scientists, technicians including laboratory technicians, safety and quality assurance officers) to increase the efficiency of production and prepare for the market restructuring. The private sector must be included in the development of curricula, training of teachers/trainers and the delivery of training courses for the end-beneficiaries encompassing work-based learning (training sessions and internships hosted by the private sector). Suggested stakeholders: technical secondary schools; universities; training providers (public/private)</p> <hr/> <p>12. Training and certification for food employees on food safety: Develop mandatory basic training on food safety, and related certification system, to obtain the license for food employees, i.e. anyone working with food, including handling, processing, distribution. Various curricula should be developed for the different occupations (ongoing efforts by NFSA based on good practices from UAE) Suggested stakeholder: NFSA</p>

3.2.4 Production

<i>Type of bottleneck</i>	<i>Recommended intervention</i>
Factories operating below capacity	<p>13. Financial support: Extend financial measures already adopted for working capital finance (such as MSMEDA initiative) to enable SMEs cover operational costs as well as credit facilities at subsidized interest rates. See also # 28 to 32 below. Suggested stakeholders: MSMEDA; International Financial Institutions (IFIs) / national banks.</p> <hr/> <p>14. Roadmap for local manufacturing: See # 3 above.</p>

Drop in sales and revenues	<p>15. Strategic planning and operation optimization: Provide sector-specific technical support to SMEs to develop strategic growth plans (including collaborative planning, forecasting and replenishment¹⁸ to enhance supply chain planning and – see also # 4 above) and work on the optimization of production in terms of processes re-engineering, resource optimization, and documentation and digitalization of processes to allow companies to cut costs without having to compromise on quality.</p> <p>Suggested stakeholders: MoTI; MSMEDA</p>
Difficulty in sustaining labour and input costs	<p>16. Managerial capacities, risk management, and emergency preparedness: Provide sector-specific technical support for enhancing managerial capacities of SMEs (e.g. ISO 90001), risk management (including financial, production, information systems, supply chain, market, health pandemic and climate change related and other risks specific to the company), emergency preparedness and response through a systematic approach (e.g. ensuring adequate storage capacity). Provide technical support to SMEs on the practical application of quality standards specific to managing risks in food production (e.g. ISO 22000)¹⁹ and related certifications (see also # 1 above).</p> <p>Suggested stakeholders: MoTI (EOS); NFSA</p>
Weak managerial capacities and lack of SOPs	<p>17. Guidance on business resumption and SOPs: Provide guidance on business resumption and the development of standard operating procedures (SOPs), including on workers’ health and safety which is critical to ensure the safe and continuous supply of food. SOPs should cover the following: access control protocol (for workers and visitors) such as temperature screening, increased frequency and rigorousness of hand washing and sanitation, social distancing especially in high-risk areas where food is handled, equipment suitability, improved air filtration (e.g. high-efficiency particulate air), cleaning and maintenance, waste removal to avoid infestations. Awareness of employees about the required practices should be raised. Good steps in this regard are those already taken by NFSA with the development of guidelines to raise awareness of food handlers, manufacturers and workers on COVID-19 (risks and recommended practices) and by CFI with the development of recommended protocols for limiting the microbiological contamination in food facilities. Wide dissemination of the guidelines is recommended together with the development of complementary material dedicated to MSMEs.</p> <p>Suggested stakeholders: MoTI; NFSA; CFI</p>
	<p>18. Improve productivity, competitiveness, and resource management: Provide sector-specific technical support to SMEs on how to improve efficiency in the use of energy, materials, water in agriculture (e.g. water and energy saving irrigation, conservation agriculture, controlled environment farming, energy-efficient cold storage, biogas production, compost production) and food</p>

¹⁸ Business methodology for enhanced supply chain planning and information sharing to ensure fulfilling customers’ demand while reducing costs and optimizing inventory and logistics.

¹⁹ The ISO 22000 family addresses food safety management by providing guidelines and best practice for managing risks in all areas of food production. It defines the steps an organization must take to demonstrate its ability to control food safety hazards and ensure that food is safe for human consumption (ISO, 2017).

High level of losses and waste along the food value chain	<p>production (e.g. through a set of tools for sustainable production, such as Resource Efficient and Cleaner Production Assessment, Material Flow Cost Accounting and environmental and energy management systems), as well as to valorize un-/under-utilized agricultural and agro-industrial waste. Provide technical support to SMEs on suitable renewable energy applications in agriculture and food production (e.g. for water irrigation, industrial process heat). Promote the mainstreaming of solutions that can be easily standardized across the sector.</p> <p>Suggested stakeholders: MoTI</p>
High water and energy consumption, GHG emissions	<p>19. Improve infrastructure capacity and logistics services: See # 10 above. Suggested stakeholders: Ministry of Supply and Internal Trade; NFSA; Ministry of Transportation; representative bodies</p> <p>20. 4IR technologies to reduce losses and improve productivity and safety along food value chains: Explore and exploit potential of 4IR technologies to reduce losses and improve productivity and safety along food value chains.²⁰ Suggested stakeholders: MoTI</p>
Food safety	<p>21. Improve safety of local production: See # 7 above. Suggested stakeholders: NFSA; CFI</p>
Gaps in regulations and legislations	<p>22. Identify gaps in the legislative and regulatory framework related to food production, e.g. issuance of food law (which should include a traceability system to enhance tracking of food handling and supply) and enforcement of intellectual property rights law. Devise recommendations to fill the identified gaps. Suggested stakeholders: CFI; Exporters associations</p>
Limited institutional capacity to provide upgraded knowledge and services	<p>23. Strengthen institutional knowledge and capacities: Industry representative bodies and business support organizations have a crucial role in supporting business recovery; yet, limited resources and capacities hinder their potential to promote the sector's growth. It is paramount to strengthen the knowledge and capacities of industry representative bodies and business support organizations on market intelligence as well as on food safety to be able to provide upgraded knowledge and services to SMEs. Suggested stakeholders: MoTI; CFI; Exporters associations; MSMEDA</p> <p>24. Digital initiatives: Promote the shift from manual to automated processes to modernize trade and business processes and reduce costs (e.g. services related to marketing and export processes, traceability, electronic quotations, e-bills of lading, and electronic receivables/payables) (Amcham, 2020).</p>

²⁰ Examples include: robotics, big data, IoT, blockchain, data analytics for recording agricultural data from crops, soil and environment to optimize input applications (such as fertilizer, chemicals, irrigation), food supply chain transparency and traceability, 3D printing of food packaging, 'intelligent packaging' (able to transmit information about the food contained within), food sensing technologies to determine freshness and perishability of individual items as well as screening for pathogens, optimization of inbound and outbound logistics of factories, optimization of storage and warehouse automation.

Suggested stakeholders: NFSA; CFI; exporters associations; line Ministries

25. **R&D:** Enhance R&D service offering by technology centres, universities, research institutes, especially needed by SMEs that cannot usually afford their own R&D needed to expand and grow.

Suggested stakeholders: MoTI; CFI; universities; research institutes.

3.2.5 Finance

<i>Type of bottleneck</i>	<i>Recommended intervention</i>
Insufficient flexibility in lending and repayment conditions	<p>26. Dedicated financial products and services: Strengthen the capacities of financial institutions (banks, micro-financial institutions, leasing, factoring, insurance and micro-insurance) to screen and assess agri-food investments, embed sustainability considerations in financial decision-making, and develop financial products and services tailored to the needs and specificities of agricultural producers and SMEs in the agri-food sector. Examples include: value chain finance;²¹ credit facilities with improved conditions with regard to credit history and collaterals, or favourable payment schedules tuned to the cash conversion cycles of agri-food SMEs; credit facilities to enable SMEs to adopt energy and resource efficiency practices and invest in renewable energy applications (technology-based finance); credit facilities to enable SMEs to comply with NFSA requirements.</p> <p>Suggested stakeholders: IFIs / national banks; MSMEDA</p>
Limited subject-matter expertise in the financial institutions and perception of agri-food sector as high risk	<p>27. Subject-matter expertise in financial institutions: Develop/enhance subject-matter expertise in financial institutions to ensure products / services are tuned to the sector’s specificities (e.g. seasonal production cycles, cash flow characteristics, storage and production characteristics, sensitivity to climate issues and other external risks) (Fi-compass, 2020) and to develop innovative financing instruments as described above. This will also improve the risk perception by financial institutions.</p> <p>Suggested stakeholders: IFIs; UN TA programmes</p> <p>28. Matchmaking: Enhance financial institutions’ awareness and knowledge of the needs and characteristics of agri-food SMEs and agricultural producers as well as their capacities to reach out to potential clients in remote areas.</p>

²¹ “The term “value chain finance” refers to financial services, products and support services flowing to and/or through a value chain to address the needs and constraints of those involved in that chain, be it to obtain financing, or to secure sales, procure products, reduce risk and/or improve efficiency within the chain. It can improve quality and efficiency in financing agricultural chains by: identifying the financing needed to strengthen the chain; tailoring financial products to suit the needs of the participants in the chain; reducing financial transaction costs through the direct discounting of loan payments at the time of product sale; and using value chain linkages and knowledge of the chain to mitigate risks to the chain and its partners.” (IFAD, 2012).

	Suggested stakeholders: IFIs; UN TA programmes
Insufficient info and knowledge on financing and lack of adequate business plans / accounting systems.	29. Improve bankability of SMEs: Provide non-financial services to improve bankability of SMEs through sector-specific technical support to enhance agri-food SMEs' financial, managerial and technical skills. Suggested stakeholders: MSMEDA
	30. Matchmaking: Enhance agri-food SMEs' awareness and knowledge of available financial products and services and related conditions. Suggested stakeholders: MSMEDA

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