



Secondary Impacts of Covid-19 on Food Systems Resilience in sub-Saharan Africa

AGRA REGIONAL FOOD TRADE AND RESILIENCE PROGRAMME

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Although the direct health impacts of Covid-19 have been severe, the secondary economic and social impacts of the virus are even more significant, leading to a global recession that is compounding food and nutritional insecurity, especially in sub-Saharan Africa (SSA). This paper highlights the principal Covid-19-induced disruptions to food systems in sub-Saharan Africa and identifies priority areas for monitoring and intervention.

Economic and Physical Access to Food

Other than predicted production shortfalls in the USA for wheat and soybeans (USDA 2021), with bumper harvests and high global stock-to-use ratios for the major food staples (rice, wheat, and maize) (World Bank 2020a), the global food supply remains secure for the foreseeable future (AFDB 2020; World Bank 2020b). According to the African Development Bank, as long as governments desist from imposing trade restrictions, strong production and stocks of major staples suggests that surplus stocks will be available for both regional and international trade (AFDB 2020).

Whilst the global outlook suggested an ample supply of staple foods, both the physical and economic access to food, especially for the world's poorest and most vulnerable, is a growing concern. In the case of sub-Saharan Africa, Covid-19 mitigation measures have instigated a number of secondary impacts that reduce economic and physical access to food, namely; 1) Weakening currencies and reduced foreign exchange; 2) Disrupted food supplies, and; 3) Reduced purchasing power of the poor.

1) Weakening currencies and reduced foreign exchange - Covid-19 mitigation measures (notably movement restrictions of workers/consumers) occasioned a dramatic slow-down in global economic activities. In turn, many countries in SSA witnessed a significant reduction in the demand for, and subsequently the price of non-agricultural commodities, especially oil, industrial metals and textiles (FEWSNET 2020b). Reduced exports led to a dramatic reduction in foreign exchange, in turn, leading to the depreciation of local currencies in many export dependent nations (Schmidhuber et al 2020). For example, in Nigeria, between March and May 2020, the Naira depreciated 20%, primarily due to the reduced earnings linked to oil exports. Sudan, South Sudan and Zimbabwe are in a similar situation to Nigeria (FEWSNET 2020b). Demand for some high-value agricultural commodities, such as cut flowers, fish and eggs also declined (FEWSNET 2020a). Reduced foreign exchange and devalued currencies are especially challenging for net food importing countries, as these countries have much less foreign exchange with which to purchase food imports and must spend even more local currencies to buy international imports in dollars (World Bank 2020b). According to the World Bank (2020c), due to a contraction of economies and currency devaluations, food imports into sub-Saharan Africa could decline by as much as 25%, leading to “food shortages, hunger, malnutrition, and high poverty levels”.

Currently, African countries import over US\$ 47 billion worth of food each year (AFDB 2020). According to the World Bank (2020c), the Covid-19 pandemic could cost the region between US\$ 37 billion and US\$ 79 billion in terms of lost output.

2) Disrupted food supplies – In April 2020, the African Development Bank predicted, as did many others, that global food prices were likely to remain stable but that price increases could be expected where localised trade is disrupted (AFDB 2020). Overall, this prediction has held true. Other than some of the more perishable high-value foods that suffered from acute logistical challenges (Reuters 2020), and some value-chains that struggled to match supply with rapidly changing demand (Bloomberg 2020), most global supply chains continued to function reasonably well, and prices remained relatively stable throughout 2020.

The effects of Covid-19 on food prices in SSA have been varied. Where Covid-19-induced supply and demand shocks were experienced, significant food price volatility occurred. The situation was exacerbated in SSA by the relatively unstructured and poorly coordinated nature of value-chains.

In most cases, reports suggest that Covid-19 mitigation measures led to price inflation (World Bank 2020b; Wellsprings UK and Sofala 2020). Indeed, the African Development Bank drew parallels to the Ebola 2014 outbreak in West Africa where, due to disruption in agricultural production, marketing and trade, the price of rice increased by up to 30% and cassava prices by up to 150% (AFDB 2020). Increases in food prices were documented across many countries in SSA, including; Benin, Burundi, Cameroon, CAR, Comoros, Cote d'Ivoire, DRC, Ethiopia, Ghana, Guinea, Kenya, Liberia, Mali, ROC, Rwanda, Senegal, Sierra Leone, Tanzania, Zambia, and Zimbabwe (World Bank 2020a). For example, since the commencement of lockdown, the price of a basic food basket in Zimbabwe increased by 40% (World Bank 2020a). By the end of 2020, prices had started to stabilise, and intra-regional trade picked up, as traders began to adapt to the new business realities imposed by Covid-19 (AGRA 2021). However, in the case of East Africa, due to currency depreciation and disruptions in regional trade and supply chains, food prices remained above the five-year average (FEWSNET 2020c).

In addition to weakening exchange rates, that have contributed to price inflation on imported commodities and food products, other supply and demand-side factors are further creating upward pressures on food prices. A reduction in food supplies, combined with the usual, and often higher than usual demand is among the factors reportedly responsible for price inflation (World Bank 2020b).

Globally, the instigation of protectionist measures (such export and import bans) by a growing number of governments restricted the flow of key staples from strategic areas of production to areas of consumption (World Bank 2020a). In recent months, there has been a sharp increase in the global prices of wheat, maize, and soybeans (USDA 2021; TBI 2021). These have been linked to wheat export restrictions imposed by Russia and Argentina who are major exporters, as well as to increased wheat imports by China (TBI 2021). Whilst governments across SSA have maintained cross-border trade, there is internal pressure to undertake national food security preservation measures. For example, Wellsprings UK and Sofala (2020) reported that the Ugandan Government was lobbied by civil society groups to introduce measures to address food insecurity via the regulation of cross-border trade. On the other hand, governments of Burkina Faso, Comoros, Cote d'Ivoire, DRC and Niger instigated price controls on essential food items (World Bank 2020a). Wellsprings UK and Sofala (2020) also report that the Rwandan Government fixed food prices to maintain economic access to food, especially for poorer segments of the population. Additionally, the unnecessary hoarding of food by consumers and key staples by some governments (WFP 2020) stimulated unnecessary price inflation. MarketPlace (2020) recently acknowledged that Egypt, Jordan, Taiwan, China, and India were importing and stockpiling staples.

Both formal and informal food supply chains, as well as the domestic and regional ones suffered significant as a result of the disruptions caused by Covid-19 mitigation measures. This was more so from movement restrictions and social distancing requirements (Mercy Corps 2020; WFP 2020; World Bank 2020a), leading to border closures, quarantines, and marketing restrictions (Wiggins et al 2020). Many consumers faced reduced physical access to food due to market closures or trade flow disruptions (Wiggins et al 2020). Movement restrictions prevented farmers from taking produce to

markets, either by public transport, or private means (IFAD 2020). Conversely, traders encountered problems traveling to rural areas in order to purchase food destined for urban markets. Indeed, the combination of movement restrictions, social distancing and attempts by governments to limit social gatherings led to the closure of many rural and urban food markets. During the first few weeks of the pandemic, many of the well-connected supermarkets in urban centres struggled to keep shelves stocked in the face of increased food demand linked to panic buying and hoarding by consumers, increased household stocking and Ramadan (Mercy Corps 2020). In most cases, imported foods, fortified foods, and perishable goods such as fruit, vegetables and meat were hard hit (GAIN 2020; CDC 2020). Where demand remained high, but supply was reduced, the price of imported foods and perishable goods increased (World Bank 2020b; FEWSNET 2020; GAIN 2020; CDC 2020). According to Mercy Corps (2020), Covid-19 induced movement restrictions led to reduced meat supplies and increased prices in many urban areas of Ethiopia. Meat producers expressed their concerns about securing access to feed and veterinary drugs for their livestock during lockdowns, as well as income losses linked to the potential deterioration in the weight and health of their livestock (Mercy Corps 2020). Similarly, in Rwanda, despite facing a high demand for fish feed, a national distributor of Zambian fish feed was unable to secure supplies due to delays experienced at the Zambian border crossing. Subsequently, Rwanda fish farmers resorted to feeding their fish poor quality and over-priced feed (GAIN 2020). In April and May, several livestock markets closed in West and East Africa, lowering income earned among affected pastoralists, traders, and meat processors (FEWSNET 2020b). Likewise, in the remote Rubkona County of Ethiopia, movement restrictions led to a reduction of more than 50% in the supply of onions, sugar and wheat flour between Ethiopia and Sudan, with a commensurate increase in prices (Mercy Corps 2020).

In some cases, increased prices were also reported for staple foods (GAIN 2020), with staple cereal prices 25% above the five-year-average in Sierra Leone, Senegal, southern Mauritania and the Central African Republic. This was disastrous for consumers who already spend more than 80% of their income on food (WFP 2020). Even in Ghana, the price of staple foods increased by about 8% after lockdown (CDC 2020). A survey conducted by Mercy Corps (2020) suggests that the highest price spikes occurred in locations subjected to Covid-19 restrictions for more than 30 days. Input shortages have also led to increased prices. In Kenya it was reported that the price for 90 kg of maize rose from 2300 KES to 3500 KES, whereas in Mozambique it was noted that the price of a day-old chick had risen from 38 MZN to 42 MZN (GAIN 2020). In other cases, reduced yields (WFP 2020; AGRA 2020), import bans, especially from China, (World Bank 2020b), and seasonal increases in demand (FEWSNET 2020b) also led to a reduction in food supply and increased prices.

Food transporters reported long administrative delays at border posts and road checkpoints. WFP (2020) recounts that waiting times at border crossing increased from between one to 10 days, while WFP (2020) and TMEA (2020a) reported increased police harassment in some countries, often accompanied by bribes and informal levies. This lengthened supply times, and in some cases, led to price increases for consumers (WFP 2020). According to GAIN (2020), countries dependent on food imports from neighbouring countries suffered most due to border closures and reduced trade flows. Urban consumers and workers are among the most impacted groups, along with those dependent on more complex and trade-dependent supply chains (Mercy Corps 2020).

Whilst most reported cases have identified increased food prices, there was also evidence of decreased food prices. Indeed, early in the pandemic, many financial analysts took the position that Covid-19 mitigation measures would significantly reduce incomes and lead to a general collapse in demand; especially for high-value fruits, vegetables, and meats (especially poultry and fish) (CDC 2020; World Bank 2020b). However, in some contexts, food prices have decreased. This has been especially evident in some end-markets, where demand collapsed but supply continues. For example, GAIN (2020) reported that some food companies in Mozambique and Rwanda had decreased food product prices to stimulate demand, while many livestock markets witnessed both reduced supply and demand for meat (especially from local restaurants), resulting in a reduction in price. Markets in both Nairobi and Hargeisa witnessed a 20% reduction in beef and goat prices (Mercy Corp 2020).

In some surplus production zones, livestock and perishable goods freely from the farm to the end consumer has been a struggle leading to an over-supply at the farmgate, and lower prices (FEWSNET

2020b; World Bank 2020a). In a survey conducted by IDH (2020), over 40% of SME companies reported that farmers complained of decreased farm-gate prices and that this was “possibly linked to over-supply and a glut in the market”. In some cases, governments have guaranteed minimum farm gate prices; for example, in the case of cashew nut and cocoa in Cote d’Ivoire (World Bank 2020a). Where Covid-19 lockdown measures were severe and prolonged, “microenterprises and informal workers — often disproportionately youth, women and displaced groups — are losing income, and those same microenterprises play a significant role in providing affordable food for their communities” (Mercy Corps 2020).

3) Reduced Purchasing Power of the Poor - The Covid-19 pandemic has significantly reduced the income of many households. This is especially acute for the near poor, poor, and vulnerable, such as refugees and internally displaced persons (IDPs) (World Bank 2020b), and those involved in the informal economy; especially those who have recently lost their jobs due to Covid-19 induced economic slowdown (World Bank 2020a; Mercy Corps 2020). According to Deloitte (2020), approximately 20 million formal and informal jobs were lost across the East African Community alone. Given the high percentage of income that the poor already spend on food, increased food prices, combined with a lack of savings and other safety net mechanisms, Covid-19 is expected to significantly increase food insecurity (Wiggins et al 2020; World Bank 2020a). Consequentially, reduced incomes were expected to lead to the consumption of less nutritious food; substituting cheaper staples for fruit, vegetables, meat and eggs (Wiggins et al 2020; World Bank 2020a).

Impacts of Covid-19 on Food Systems in SSA

Covid-19, and the associated mitigation measures implemented by national governments, continues to place significant pressure on food systems across SSA. This is especially true of the less developed and resilient components of food systems across SSA. It is important to understand both the nature and severity of these impacts. This section analyses available data on the impact of the Covid-19 pandemic on food systems in SSA.

Farm-level shocks

Access to Inputs and services - concerns were raised regarding the impact of Covid-19 on the timely and cost-effective access to quality inputs (especially, improved seeds, synthetic fertilisers and pesticides) and extension services (CDC 2020; WFP 2020; Schmidhuber et al 2020; GAFSP 2020; World Bank 2020b; AFDB 2020).

In the early stages of the Covid-19 pandemic, several commentators warned of a shortage of seeds, fertilisers, pesticides, and livestock vaccines, supplied via under-developed supply chains, that are often “more fragile”, unstructured and “susceptible to disruptions” (FAO 2020; GAFSP 2020; FAO-AU 2020). This was especially important for regions entering planting seasons in April, May and June; namely Eastern and Western Africa (IFAD 2020). However, concerns were also raised regarding access to farm inputs in Southern Africa, where the main planting season starts in September-October. Several commentators recalled the Ebola outbreak of 2014 where roadblocks dramatically reduced access to these inputs (AFDB 2020).

Initial evidence from the field paints a heterogeneous picture. Reduced availability and/or high prices of inputs such as pesticides were expected to reduce yields and crop production across SSA in 2020 (AFDB 2020). Commentators were especially concerned about the last mile market delivery of and access to inputs; especially across West and East Africa (Mercy Corps 2020). In a survey of 54 agri-SMEs across Ghana, Malawi, Mozambique, Tanzania, and Uganda, over 40% of respondents reported a reduced ability to source agricultural inputs for sale (IDH 2020). The World Bank (2020a) reported that both Ghana and Cameroon faced reduced supplies of both seeds and fertilisers. Large farm inspections by banks were hindered due to lockdown issues and created a heightened financing risk for the new crop sowing season (CDC 2020; Lazarus et al 2020). According to Mercy Corps (2020), one large input company reduced its order of hybrid maize seeds by 38%, and Calivoire (in Cote d'Ivoire) was reluctant to sell inputs to distributors and stored them instead in warehouses (World Bank 2020a). Some fertiliser manufacturers/blenders were only engaged in on-demand production (Mercy Corps 2020). In Kenya, 27% of farmers surveyed reported restricted access to farm inputs and 48% reported that input costs had risen (Olwande and Ayieko 2020). In the same survey, 55% and 56% reported reduced access to extension services and credit, respectively.

Others were concerned about farmers' physical access to markets to buy inputs (IFAD 2020; AFDB 2020). Furthermore, in the IDH study, over 60% of the companies reported challenges faced by farmers paying for seeds and inputs. This was due to cash constraints on the side of the farmer and significant decreases in the availability of credit facilities for farmers (IDH 2020). On a positive note, some companies developed innovative approaches for last mile delivery. For example, in Nigeria, larger farm input distributors invested in small transport vehicles, securing trade passes for third-party vendors, and used e-tools to reduce the need for physical interaction during input sales (Mercy Corps 2020).

Ultimately, it was expected that limited access to inputs would lead to reduced farm-level productivity and a significant drop in the volumes of crops available in the next harvest, resulting in food shortages in several countries (IDH 2020; CCSA 2020; WFP 2020; World Bank 2020b; AFDB 2020). The World

Bank (2020c) estimates that Covid-induced reductions in agricultural production will range from 2.6% to 7%.

Access to labour - On-farm, household and casual labour, are central to agricultural production in SSA, far much more than in developed countries. In times of restricted movement, curfews, and ill-health, food production is exposed to potentially significant disruptions. Early estimations predicted prolonged labour shortages, which would restrict plans for the cropping seasons across sub-Saharan Africa (GAFSP 2020; IFAD 2020). Smallholder farmers use more manual labour and where the disease takes a direct toll on their health or their movement, this can impede not only their ability to produce for others, but also undermines their own food security (FAO 2020). Much of the farm work is undertaken by women, who, faced with school closures, are also having to cope with additional child-care duties (FAO 2020). Interestingly, no-one discussed the likelihood of children helping out with farm work. Some were concerned about the knock-on effect of reduced food production caused by farmers being hindered by curfews from working on their land, or buying seeds and other production inputs or internal movement restrictions (Wiggins et al 2020; WFP 2020; FAO 2020). Others were concerned about the prospects of prolonged shortages of casual labour, which restrict the area that smallholder farmers can cultivate and the timeliness for land preparation, sowing and weeding (GAFSP 2020; IFAD 2020). In Kenya, evidence from household surveys reported that 46% of farmers were unable to hire farm labour. Of those able to hire farm labour, 46% needed to increase the wages for hired labour (Olwande and Ayieko 2020).

Other pre-Covid-19 challenges - Whilst the direct and indirect effects of Covid-19 are likely to be significant, other pre-Covid-19 challenges such as desert locust, drought, floods, political fragility, conflict and violence especially in South Sudan, Somalia, Sudan, Mali, DRC and north eastern Nigeria (Mercy Corps 2020), combined with underdeveloped food markets were expected to exacerbate both physical and economic access to food. This was of particular concern in Kenya and Ethiopia, as well as other countries in Eastern Africa (World Bank 2020b; Wellsprings UK and Sofala 2020; GAIN 2020; AGRA 2020; Wiggins et al 2020). For example, the Ethiopian Government estimated that over 350,000 metric tonnes of grain had been lost to a desert locust invasion, leaving over a million people food insecure (AGRA 2020). More than 1.61 million people were anticipated to face Crisis and Emergency (IPC 3 and 4) levels of food insecurity from February to September 2020 given the forecast of continued above-average rainfall during the April to June season and worsening desert locust situation. Somalia was expected to experience a 400-fold increase of desert locusts through to June, affecting 180,000 hectares of pasture and farmland, posing serious livelihood and food security risks (HEW 2020). In Southern Africa, climatic shocks reduced food production and increased staple food prices (AGRA 2020). However, there is also a positive flipside to the floods in Eastern Africa as abundant residual moisture provided a good opportunity for dry season cropping (AGRA 2020).

Farmers' incomes and solvency - in addition to the disruption of the last mile delivery of inputs, smallholder farmers were also expected to suffer loss of off-farm income (including remittances) and to no longer have the means, or incentives to purchase farm inputs; even in situations where output prices may rise (IFAD 2020). This was particularly worrying for farmers, agro-pastoralists and pastoralists struggling to gain access to output markets in the context of movement restrictions, road closures and checks; resulting in produce going to waste and a significant loss of income (AFDB 2020; WFP 2020). As discussed earlier, due to the closure of food outlets such as restaurants, cafes, street-food vendors, and many wet-markets, the demand for certain farm produce collapsed. Where no alternative market outlets could be found, farmers' incomes were expected to be significantly impacted (FAO 2020; CDC 2020; ASARECA 2020). Even where output markets remained open, many farmers, dependent on public transport, were expected to struggle to get produce to market (FAO-AU 2020). This often-obliged farmers to sell more of their produce to middlemen at low farmgate prices. For example, in Zimbabwe, due to travel and checkpoint restrictions and limited availability of public transport, farm produce increasingly began moving to cities through middlemen. This led to depressed prices at the farmgate (World Bank 2020a). Even if farmers were able get to market, the increased cost of public taxis, capacity and movement restrictions, led to higher food costs in the market (Mercy Corps 2020). According to IDH (2020) "farmers in the networks of over 50% of the

respondents face difficulties in securing off-take or experience changes in buying commitments from their buyers". In Kenya, 43% of farmers surveyed reported reduced agricultural sales at farm gate and local markets, and 63% reported a decrease in traders/middlemen coming to villages (Olwande and Ayieko 2020).

Famer Coping Strategies - Despite the efforts of most governments to maintain green-corridors for the efficient functioning of food supply chains, uncertainty around movement restrictions, higher transport costs, reduced incomes and reduced access to and purchase of farm inputs, stimulated the implementation of a range of farmer coping strategies, such as; use of cash savings, borrowing money, selling assets, reducing the area of crops sown, and reduced input purchases (FAO-AU 2020; AFDB 2020; UN 2020; ASARECA 2020). For example, in Kenya, farmers face growing indebtedness. According to Olwande and Ayieko (2020), whilst 66% of households surveyed used savings as a coping mechanism, 42% of farmers had to resort to either borrowing money or selling assets. In Sierra Leone and Zambia, 60% and 50%, respectively, of households surveyed used savings to pay for food and other essential goods and services (IPA 2020). In addition to reduced farm incomes, smallholder farmers have also faced a reduction in non-farm incomes. According to AGRA (2020), 14% to 34% of small holder farmer incomes originate off-farm.

Food Transportation and Aggregation shocks

Disruption of food movement logistics was amongst the first visible secondary impact of COVID-19 on food systems (FOLU 2020; AFDB 2020; FAO 2020; Wellsprings UK and Sofala 2020; World Bank 2020a). Key logistical disruptions include access to transport (especially flights for international exports), increased roadblocks, quarantines, and border closures (World Bank 2020b; AFDB 2020; Reuters 2020). Delayed and cancelled flights, increased freight costs and a huge fall in demand (especially for cut flowers) initially brought major vegetable and flower exports in Eastern Africa to a virtual standstill. However, whilst freight charges remained high, by June 2020, Kenya's vegetable export had recovered up to 89% of the volumes exported before the pandemic hit CGTN (2020) and cut flower exports reached 95% of 2019 volumes (TMEA 2020c).

Given the direct impact on food security and political stability, most governments have made the movement of food and agricultural inputs a priority by exempting them from the mobility restrictions. However, given the apparent support from governments for the unfettered movement of food, most food systems actors across a range of countries report that movement restrictions, road closures, and police-enforced checkpoints have seriously constrained the transportation of both agricultural inputs and outputs between rural and urban areas (FAO-AU 2020; World Bank 2020a). In a Covid-19 world, size matters. According to Mercy Corps (2020), while large-scale formal abattoirs in Zimbabwe are able to access travel permits to move livestock to processing facilities and onward for distribution to supermarket chains, the smaller licensed butcheries rely on unregistered and informal transporters who are unable to access movement permits, thus cutting off their supply and compromising their ability to operate their businesses. In a similar vein to farmers, most small and medium traders rely on non-cargo means, such as public transport or private vehicles, and do not feel comfortable leaving their products in the hands of drivers without their direct oversight (Mercy Corps 2020). Traders indicated needing to pay hefty bribes to transport goods on main roads and resorting to smuggling less bulky items across the border via other routes (Mercy Corps 2020). In some cases, obtaining the required permits is proving difficult because offices are closed or have restricted hours/personnel to process requests. These restrictions reverberate through the agri-food system affecting food supplies in urban areas, the ability of agri-food businesses to secure raw materials, to supply value-added products to domestic markets and to transport food from larger urban centres to smaller towns (FAO-AU 2020). They may also lead to interruptions in the availability of labour for harvest, post-harvest handling, transportation and storage activities, leading to high post-harvest losses, especially for perishables (FAO-AU 2020).

Struggling SMEs and Informal Actors

Faced with a falling demand for certain produce, transport restrictions and increased costs, or enforced suspension of businesses by governments, it was expected that many agri-food supply-chain businesses would struggle to maintain profitability and could potentially go out of business (Wiggins et al 2020). Indeed, because of cash flow and operational challenges, many agri-business SMEs became, and remain, vulnerable to the primary and secondary impacts of Covid-19. In June 2020, AGRA (2020b) drew attention to the farmers groups, stressing that they were the “most financially vulnerable actors in the value chain”. AGRA (2020b) stressed that, if farmer organisations failed, many other food system actors among them, input suppliers, off-takers and finance providers would also struggle due to their dependency on them.

In order for those businesses to continue operating, increased logistical challenges, and associated increased costs (FAO-AU 2020; Mercy Corps 2020), combined with reduced levels of domestic food production, will further increase food prices (Wellsprings UK and Sofala 2020; GAIN 2020). According to the World Bank (2020a), “in ECA, the most affected value chain on transportation, storage, and sales is the fish value chain, followed by the milk and dairy, livestock, grains, and pulses value chains”. A survey of 54 food companies undertaken by IDH (2020) found that “all companies faced operational challenges arising from lockdown and social distancing measures. This often translated into delays and longer lead times for the movement of goods and increased cost of logistics.

Given that governments focused almost exclusively on maintaining the formal movement of food from areas of production to areas of consumption (including both domestic and regional trade), concerns have been expressed regarding the functionality of informal trade. A survey of 71 cross-border women traders, working across the border between Uganda and Kenya, revealed a reduction in profits of between 76.2% and 93.8%, respectively, since the beginning of the COVID-19 pandemic (TMEA 2020b). Women traders reported 5 major constraints to informal trade: 1) Restriction of movement (78%); 2) Business closure (78%); 3) Diminishing clients (64%); 3) Failure to pay back loans (64%), and; 4) Border closure (60%) TMEA (2020b).

Food Processing and Marketing shocks

Given the supply chain logistic concerns elaborated above, it is not surprising that food processors are often struggling to secure raw materials. Based on a survey conducted by Technoserve in April 2020 involving 104 food sector SMEs, GAIN (2020) report that approximately 50% of firms witnessed disruptions in accessing raw materials. This figure was even higher in another industry survey conducted by IDH (2020), where 55% of food processors reported not having enough raw materials to meet current demand. Similar difficulties were faced in securing equipment and packaging materials. Given that less than 30% of the companies surveyed had adequate stocks of raw material to meet demand, this is of concern. Indeed, approximately 40% of respondents are dependent on imported ingredients (GAIN 2020). Procurement of raw materials is not the only logistical constraint faced by food processors. According to GAIN (2020), over 75% of companies surveyed reported disruption to product marketing and distribution. In a few cases (11-15% of companies surveyed), marketing and distribution had been completely halted.

In addition to disruptions to both input and output channels, most food processing companies have been affected in one way or another due to the primary and secondary effects of Covid-19 on factory labour. Given the limited automatised of food processing in SSA, factories are especially vulnerable to how movement and health restrictions impact on the capacity of workers to undertake their roles (GAIN 2020; World Bank 2020b). As a result, many food processors were operating with a depleted and socially distanced workforce and often found it difficult to move processed foods to end markets (GAIN 2020). For example, slaughter houses in Nairobi reported a 50% reduction in production “due to decreased supply and social distancing restrictions in their facilities” (Mercy Corps 2020). Meat processors in Zimbabwe noted a 70% reduction in the volumes of cattle being processed. According to Impact Capital Africa (2020), nearly half of the jobs at risk in Zambia in 2020 were in the agriculture and agro-processing sectors.

Lastly, the difficulties faced by many food companies are exacerbated by a lack of market information and the relatively unstructured nature of food systems in SSA. The information gap and more opportunistic and unstructured relationships between producers, traders, food processors, wholesalers and retailers reduce the capacity of all actors involved in domestic supply chains to make the right decisions at the right time. Retailers may have their fingers on the pulse of fluctuating demand, but in many cases fail to transmit this information efficiently and effectively back down their disjointed supply chains (GAIN 2020).

Food Consumption shocks

Globally, the World Food Program estimates that an additional 130 million people will experience acute malnutrition as a result of the Covid-19 pandemic (Wiggins et al 2020). FEWSNET (2020b) estimate a comparable number of 90 to 100 million people, across the 29 countries that they monitor. Indeed, Sumner and Ortiz-Juarez (2020) in early 2020, foresaw a worst-case scenario of as many as 580 million people pushed into poverty around the world (Wiggins et al 2020). More recent estimates from the World Bank (2021) expect the global “COVID-19-induced new poor in 2020 to rise to between 119 and 124 million.”

Ultimately, it will be the poorest and most vulnerable populations, in both rural and urban settings, that are likely to suffer the secondary effects of Covid-19 the most (World Bank 2020a; FAO 2020). These vulnerable populations can be characterised as the poor and marginalised; those who have little or no income or savings, and can draw on few, if any, robust coping mechanisms. Women and children are the most exposed to food security and nutritional shocks within these groups. The AFDB (2020), suggest that these groups will have “greater difficulty accessing enough food for survival and adequate nutrition, but many also depend upon the food system’s stability for their livelihoods.” As outlined earlier, the effects of Covid-19 are varied. In some cases, specific geographies or value chains may suffer disproportionately. For example, South Sudan witnessed reduced availability of key food items due to its reliance on cross-border trade with Uganda and Sudan, as well as an under-developed infrastructure, (Mercy Corps 2020). Conversely, West Africa, an area reliant on rice imports (CDC 2020), witnessed a significant reduction in imports due to the imposition of rice export bans in India, Vietnam and Cambodia.

Coping Strategies and Remittances - On the ground, the secondary impacts of the Covid-19 pandemic have, and continue to be, both complex and significant for the most vulnerable segments of the African population. Many poor urban workers, either earning a living in the informal sector or as casual unskilled workers in the formal sector, have either lost their jobs through lockdowns, movement restrictions or quarantines after facing near-impossible operating environments in the informal sector. Across 10 African countries surveyed by the International Committee of the Red Cross, 94% of households reported an increase in food prices, 82% reported income/revenue loss, and only 7% said they had enough savings to cope with a prolonged crisis (ICRC 2020).

The poor, and especially the most vulnerable, have no savings and limited options. Many poor in the cities rely on overseas remittances from relatives. In SSA countries, such as Lesotho, Gambia, Cabo Verde, Comoros, Zimbabwe, Liberia and Guinea-Bissau, remittances comprise more than 10% of GDP (World Bank 2020d; Ratha et al 2020). In some countries, such as South Sudan, remittances are estimated to be as high as 34% of GDP (Mercy Corps 2020). In 2020, remittances were predicted to fall by up to 23%, but this figure was subsequently revised downwards to 9%, followed by a further increase of 6% in 2021 (World Bank 2020d). Nigeria was expected to lose up to US\$2bn in remittances in 2020 (Ratha et al 2020).

The rural poor have also suffered from reduced remittances, including from relatives in Africa’s cities, and reduced livelihood options (Griffith-Jones and Willem te Velde 2020; Wiggins et al 2020; FEWSNET 2020b). In many cases, the situation has been exacerbated by the return of school age children, and as older sons and daughters migrate back from the cities as their incomes dry up (IFAD 2020).

Driven by the restricted physical access to food and reduced purchasing power, the initial coping strategy for many poor families is an adjustment to their diets (Mercy Corps 2020). For many, this has meant substituting fresh fruit and vegetables, meat, dairy and eggs, for starchy staples and cheap pulses (FAO-AU 2020; Mercy Corps 2020; WFP 2020). These have often taken the form of less healthy processed foods, which have a longer shelf-life and can be prepared at home (AFDB 2020; FOLU 2020; AGRA 2020b). There is a strong demand for staples such as rice, maize and bread, and weak demand for dairy products, fish, sugar and oils (AGRA 2020b). Indeed, across SSA, reports suggest that, due to a combination of increased food costs and reduced purchasing power, many vulnerable families have reduced the amount of food consumed. Some families are eating just one meal, or less, per day. Olwande and Ayieko (2020) and Wells (2020) in Kenya, suggest that 77% and 72%, respectively, of households surveyed stated that they didn't have enough food to feed their families. In Rwanda, 50% of households reported reducing food consumption (IPA 2020). According to Brookings (2021), more than 45% of households surveyed in SSA by the World Bank reported "being worried about running out of food in the last 30 days. In Nigeria, 3 in 4 households reported skipping a meal in the previous 30 days due to a lack of money."

Priority Areas for Monitoring and Intervention

- 1) Generating a better understanding of food systems resilience across SSA. Attention should focus on the resilience of both smallholder farmers and SMEs operating along strategic value chains. Have they been able to adjust to the new Covid-19 realities or are they exhausting their coping mechanisms?
- 2) Where clear evidence exists that food systems are failing and that cost-effective interventions can be made without market distortion, financial and technical assistance could be rallied for support to farm input supply and extension, storage, aggregation, transportation, processing, and marketing. Improving the integration, quality and competitiveness of food systems should be a core aim in any intervention.
- 3) Given the focus of national governments across SSA on meeting domestic food security needs through domestic and regional production, both the sustainable intensification of agricultural production and post-farmgate investments (such as agro-processing and logistics) should be supported.
- 4) Investments should be made in strategic market-enabling infrastructure (storage, roads, energy etc.), transport logistics, food processing and packaging to facilitate both domestic and regional trade between surplus and deficit regions of food production.
- 5) Continued efforts should be focused on increasing food system resilience in the face of the economic, climatic, environmental and pest/infestation shocks. In turn, this will strengthen the income resilience of smallholder farmers and SMEs along the food and agricultural value chain.

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Alliance for a Green Revolution in Africa (AGRA)

West End Towers, 4th Floor
Muthangari Drive, off Waiyaki Way, Nairobi, Kenya
PO Box 66773, Westlands 00800, Nairobi, Kenya

WWW.AGRA.ORG