



A MULTI-PHASE ASSESSMENT OF THE EFFECTS OF COVID-19 ON FOOD SYSTEMS AND RURAL LIVELIHOODS IN KENYA

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This country report forms part of a series presenting results from three rounds of mixed-methods, comparative assessments conducted by the APRA Programme on the effects of COVID-19 on local food systems and rural economies covering over 800 households and 65 key informants in eight countries (Ethiopia, Ghana, Kenya, Malawi, Nigeria, Tanzania, Zambia and Zimbabwe), beginning in June-July 2020 and ending in May-June 2021.

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Key findings

- Incidence of COVID-19 symptoms in the households surveyed remained low, and most individuals were able to access health care.
- The majority of individuals reduced their movement within and outside of their village, even when the movement restrictions were lifted in July 2020.
- Paid work for children was minimal, even when schools were closed, and there were no reports of children sitting idle in February 2021 after schools resumed physical learning in January 2021.
- The burden of household chores, including caring for children, sharply reduced in February after schools opened in January 2021 since children were spending more time in school than at home.
- An increased share of respondents reported a decrease in participation in farming and business activities in February 2021, suggesting that the COVID-19 pandemic was continuing to negatively impact family-operated farms and businesses.
- Access to off-farm work continued to decline, while the availability of labour to hire increased, which reflects an increase in the supply of labour following the lifting or relaxation of COVID-19 containment policies.
- Limited availability of transportation services and high cost of transport continued to be a challenge for a majority of respondents by February 2021. In addition, the majority of respondents reported a decrease in the number of traders that went to their village to purchase produce. This implies that rural households continued to face constrained access to markets for agricultural produce.
- Most respondents reported a decrease in the availability of agricultural extension services, loans or credit, and concessionary loans or loan payment holidays, and an increase in the prices for inputs such as fertilisers, seeds and chemicals, and tillage services.
- The majority of respondents in February 2021 stated reduced availability of most food items in local markets, and a significantly higher percentage (76%) compared to October 2020 (49%) stated that the prices of grains had increased despite the November–February period being the harvesting season for maize.
- Food and nutrition insecurity generally remained a challenge for most households. The situation was worst in June–October and improved in October–February during the harvest period when most households possibly had their own stock of grains.
- A higher percentage of respondents in February 2021 than in June and October 2020 reported an increase in the cost of living. This is consistent with official statistics which reported much higher increase in the consumer prices between October 2020 and February 2021.
- Assistance to households, mainly from the government, sharply declined over time and by February 2021 less than 10% of households were receiving assistance from any source.
- On average, respondents perceived control over their own life increased in subsequent survey rounds, which suggests that relaxation of COVID-19 containment policies made individuals feel that they had more control over their own life.

1. Introduction

Kenya confirmed its first case of COVID-19 on 12 March 2020. Like many governments across the world, the Kenyan government implemented various measures aimed at slowing down local spread of the virus and cushioning the population against the negative economic effects of the pandemic and the associated policy restrictions. The specific policy responses have ranged from restrictions on movement of people (partial lock downs and curfews), social gatherings, and economic activities to curtail the spread of the virus, health specific guidelines and mandates to manage infections and mitigate spread, and social protection policies. The main policy responses in Kenya between March and November 2020, which were aimed to stymie the spread of the virus, are outlined in Box 1.

A team at the University of Oxford has developed an index for summarising the stringency (or strictness) of the policies using data on the containment and closure policies (i.e., closure of schools, colleges and workplaces, cancellation of public events, restrictions on gatherings, restrictions on public transport, stay-at-home requirements, movement restrictions, international travel restrictions, and public information campaigns) (University of Oxford, 2021). **(Figure 1)** shows that for Kenya, the containment and closure policies in 2020 were most stringent between March and June 2020, and the declining trend in the index

from July 2020 onwards reflects the relaxing of some of the restrictions from that month.

When governments the world over began to implement containment and closure policies to control local spread of the virus, international organisations and researchers postulated that the measures would negatively affect economic activities and livelihoods, with undesirable implications for poverty and food insecurity (Laborde, Martin and Vos, 2020; World Bank, 2020). Particularly vulnerable would be populations in developing countries such as Kenya, where many people depend on food systems for their livelihoods, and the majority of those are smallholder farmers who often have low economic power.

The objective of this rapid assessment was to investigate the impact of COVID-19 on the food system and the sub-set of the population largely dependent on agriculture in Kenya to inform actions that can assure protection of rural livelihoods and continued access to adequate and affordable food of acceptable quality to the population. This report presents results of that rapid assessment. Led by the Agricultural Policy Research in Africa (APRA) programme of the Future Agricultures Consortium (FAC) in eight countries, the three-wave phone-based assessment for Kenya was conducted by Tegemeo Institute in June 2020, October 2020 and February 2021 in five counties – Kiambu, Kilifi, Kwale, Muranga and Nakuru.

Box 1: Timeline for Kenya's COVID-19 policy responses

March 2020: Government imposes movement restrictions

- Returning citizens and permanent residents must self-quarantine
- All schools and higher learning institutions were closed
- Work-from-home advisory for non-essential government and business workers
- Ban on social gatherings (e.g. weddings, churches, political rallies)
- Bars closed and restaurants open only for take-away
- All flights were banned from 25 March 2020
- A nationwide curfew from 7pm-5am was imposed for a period of 21 days

April 2020: Government expands and tightens movement restrictions

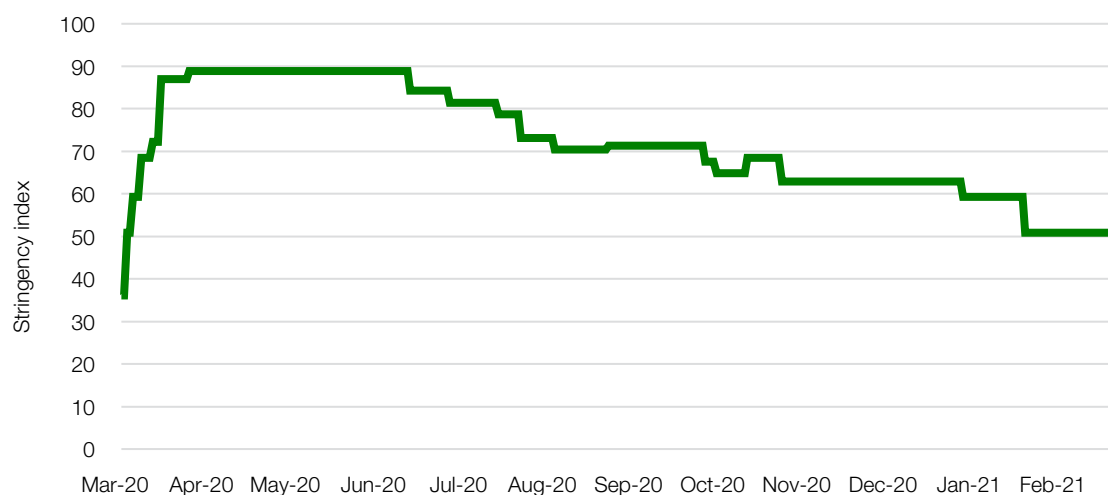
- Cessation of movement into and out of Nairobi Metropolitan Area, Mombasa, Kilifi, Kwale and Mandera; movement of cargo and foods exempted
- All restaurants and eateries were closed
- Social distancing measures on public transport imposed
- The nationwide curfew was extended for another 21 days

May 2020: Expanded and tightened movement restrictions continue

- Cargo drivers had to be tested 48-hours before travel
- Cessation of movement of people across Kenya's borders with Somalia and Tanzania
- Extension of cessation of movement into and out of Nairobi Metropolitan Area, Mombasa, Kilifi, Kwale and Mandera for another 21 days
- Cessation of movement into or out of Eastleigh (Nairobi) and Old Town (Mombasa)
- All markets, restaurants and eateries were closed in Eastleigh (Nairobi) and Old Town (Mombasa)

<p>June 2020: Expanded and tightened movement restrictions continue, but curfew hours reduced</p> <ul style="list-style-type: none"> ■ Extension of cessation of movement into or out of Eastleigh (Nairobi) and Old Town (Mombasa) ■ All markets, restaurants and eateries remain closed in Eastleigh (Nairobi) and Old Town (Mombasa) ■ Ban on social gatherings (e.g. weddings, churches, political rallies) extended for a further 30 days ■ The nationwide curfew was extended for 30 days; hours revised to 9pm–4am ■ International travel restrictions continued; protocol for local air travel was developed ■ Extension of cessation of movement into and out of Nairobi Metropolitan Area, Mombasa and Mandera for another 30 days
<p>July 2020: Some movement restrictions relaxed</p> <ul style="list-style-type: none"> ■ Bars remained closed ■ Restaurants and eateries were open only for take-away and had to close at 8pm ■ The nationwide curfew was extended for another 30 days ■ Religious services and weddings could be held within strict guidelines ■ Ban on other social gatherings continued ■ Local air travel resumed under specific guidelines ■ Transport of goods between borders continued under Ministry of Health and Ministry of Transport guidelines ■ Cessation of movement into and out of Nairobi Metropolitan Area, Mombasa and Mandera was lifted ■ A plan to open schools in September 2020 was suspended
<p>August 2020: Some restrictions remain relaxed</p> <ul style="list-style-type: none"> ■ The nationwide curfew was extended for another 30 days ■ Bars remained closed ■ Restaurants and eateries had to close at 7pm
<p>September 2020</p> <ul style="list-style-type: none"> ■ The nationwide curfew was extended for 60 days; hours revised to 11pm–4am ■ Bars could open and operate up to 10pm
<p>October 2020: Reduced hours of operations for bars, restaurants and eateries</p> <ul style="list-style-type: none"> ■ All bars, restaurants, and other establishments open to the public had to close by 9pm
<p>November 2020: Curfew hours increase, ban on political gatherings reintroduced, and plan to open schools announced</p> <ul style="list-style-type: none"> ■ The nationwide curfew hours were revised to 10pm–4am ■ A ban on political gatherings was introduced for 60 days ■ In-person classes in schools resumed in January 2021

Figure 1: Stringency index for COVID-19 containment policies in Kenya



Source: Own calculations from APRA COVID-19 Rapid Assessment Surveys

Section 2 of this report describes the data, sampling approach and survey strategy. Findings are discussed in sections 3–6, organised into four topics: experience of COVID-19 and responses; effect of the pandemic on farming and labour activities; effect of COVID-19 on food and nutrition security; and effect of the pandemic on poverty. Section 7 provides a conclusion.

2. Data

The rapid assessment was conducted through a household phone survey with a sample of 100 smallholder agricultural households in five counties in Kenya – Kiambu, Kilifi, Kwale, Muranga, and Nakuru. In each county, 20 households located in two villages were sampled for the rapid assessment. The sample was obtained from the Tegemeo Agricultural Policy Research and Analysis household survey conducted in 2014, which had a sample size of 7,000 households spread across 38 counties. The five study locations for this assessment were chosen as they carried out a range of small-scale agricultural practices and were close to Kenya’s major urban markets of Nairobi and Mombasa, which were also the initial hotspots for COVID-19 infections in the country.

The phone interviews were conducted from 24 through to 29 June 2020 in the first round (R1), 5 to 14

October 2020 in the second round (R2), and 15 to 22 February 2021 in the third round (R3). The survey was programmed in Qualtrics, through which enumerators collected and directly transmitted the data. Five enumerators were recruited, trained, and assigned to one county each for the phone interviews.

In addition to the household surveys, three sets of key informant interviews were also conducted, one in each wave of the survey. The key informants were officers at the ministries in charge of agriculture at the national and county governments levels who had knowledge about COVID-19 and its effects in local communities.

3. Awareness of COVID-19 and containment measures

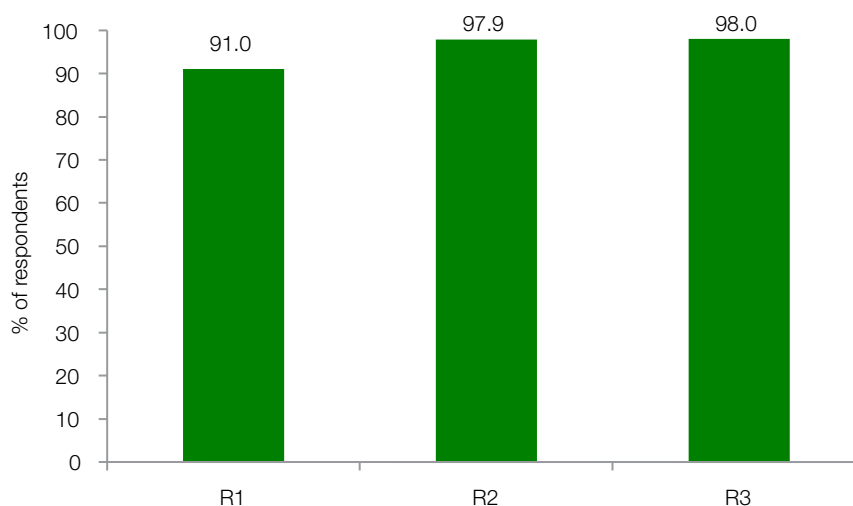
Across the three surveys, all of the respondents reported being aware of COVID-19 and were observing the established guidelines for COVID-19 prevention, except in R2 where 3.1% of the respondents reported that they were not observing the guidelines. Reported cases of COVID-19 symptoms in households were few; 3% of respondents in R1, 1% in R2 and 2% in R3 (**Table 1**). Incidences of Covid-19 symptoms in the survey villages were similarly quite low. However, there was an increase in the percentage of respondents that reported having heard about confirmed cases of COVID-19 infections in

Table 1: Presence of symptoms of COVID-19 (% respondents)

Survey period	Have you or anyone in your household had COVID-19 symptoms?	Has anyone else in the village that you know had COVID-19 symptoms?	Have you heard of any confirmed cases of COVID-19 in other villages in your county?
R1	3.0	0.0	9.0
R2	1.0	3.1	17.7
R3	2.0	4.9	37.3

Source: Own calculations from APRA COVID-19 Rapid Assessment Surveys

Figure 2: Access to healthcare (% respondents)



Source: Own calculations from APRA COVID-19 Rapid Assessment Surveys

their counties in R2 compared to R1, and in R3 relative to R2, which reflects the increase in confirmed cases of COVID-19 infections in Kenya, from the cumulative figure of 58 by the end of March 2020 to 105,972 by the end of February 2021 according to national official statistics.

Approximately 98% of the respondents reported being able to use health clinic in or outside their village in R2 and R3, compared to 91% in R1 (**Figure 2**).

The containment and closure policies against COVID-19 included restrictions in population movement through lockdowns and curfews. These measures were instituted with variations and different durations in different geographical locations. Over 75% of respondents reduced their movements both within and outside their own village, with the percentages higher in R1 compared to R2 and R3, when the containment and closure policies were less stringent (**Table 2**). Almost a similar percentage of respondents in R1 and R3 reported a decrease in the number of buyers or traders that went to their village to do business compared to similar times in previous years. This is surprising because movement restrictions were relaxed by R2 and R3, while they were fully in force in R1.

Schools closed in Kenya in March 2020 and were fully opened in January 2021. The observed higher percentage of respondents in R1 and R2 than in R3 reporting that children were doing schoolwork at home reflects that scenario (**Table 3**). Higher percentage of respondents in R1 and R2 than in R3 also reported that

both girls and boys were doing more housework and more farm work. However, the difference in percentages for boys and girls within the category of chores (i.e., housework and farm work) in both R1 and R2 relates to the common gender roles in the study communities. The low incidence of reported paid work for children in all the survey rounds suggests that child labour was minimal in the study areas, even with schools closed, which is commendable. The reported zero incidence of children sitting idle in R3 is consistent with the resumption of learning in schools in January 2021.

The COVID-19 pandemic and associated containment measures were expected to lead to reduced incomes and loss of livelihoods for individuals and households. Therefore, many governments, including in Kenya, introduced social protection measures, including conditional cash transfers, to moderate the economic effects of the pandemic on the population. Charitable organisations as well as families and friends were expected to offer support where they could, as often happens during shocks. Respondents were asked whether they were promised and whether they received any type of assistance from any source. Results showed that 39% and 22% of respondents, in R2 and R3, respectively, were promised assistance by the government (**Figure 3a**). In R2 12% of respondents also reported having received the promise of assistance from a local village organisation.

Regarding the assistance received, the government was the largest provider. Approximately 56% of the respondents reported receiving some assistance from

Table 2: Reduction of movements in study areas (% of respondents)

Survey period	As a result of COVID-19 have you reduced your movements within the village?	As a result of COVID-19 have you reduced your movements outside of your village?	Have family members/relatives/friends who live outside of the village been prevented from visiting due to COVID-19 restrictions?	How has the number of buyers or traders coming to the village to do business changed (compared to similar times in previous years)?		
				<	=	>
R1	86.0	96.0	77.0	89.0	6.0	5.0
R2	76.0	75.0	28.1	66.7	25.0	8.3
R3	75.5	80.4	28.4	88.2	4.9	6.9

Note: < Decreased; = No change; > Increased.

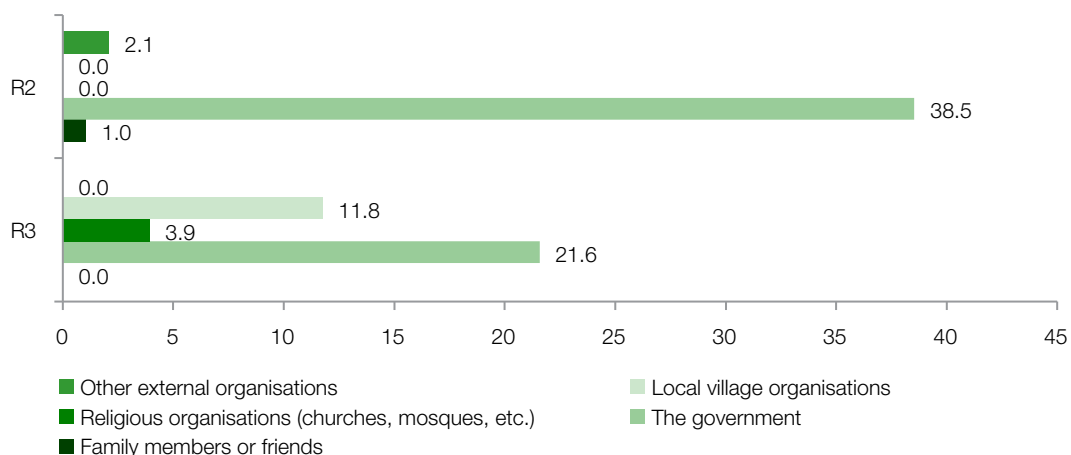
Source: Own calculations from APRA COVID-19 Rapid Assessment Surveys

Table 3: Children's activities at home when schools closed, by girls and boys (% of respondents)

	School work at home		More housework		More farm work		Paid work away from home		Nothing/sitting idle	
	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys
R1	59.0	65.0	67.0	62.0	55.0	62.0	3.0	4.0	11.0	7.0
R2	71.9	74.0	72.9	69.8	60.4	64.6	4.2	7.3	13.5	12.5
R3	16.7	15.7	15.7	2.0	1.0	15.7	1.0	1.0	0.0	0.0

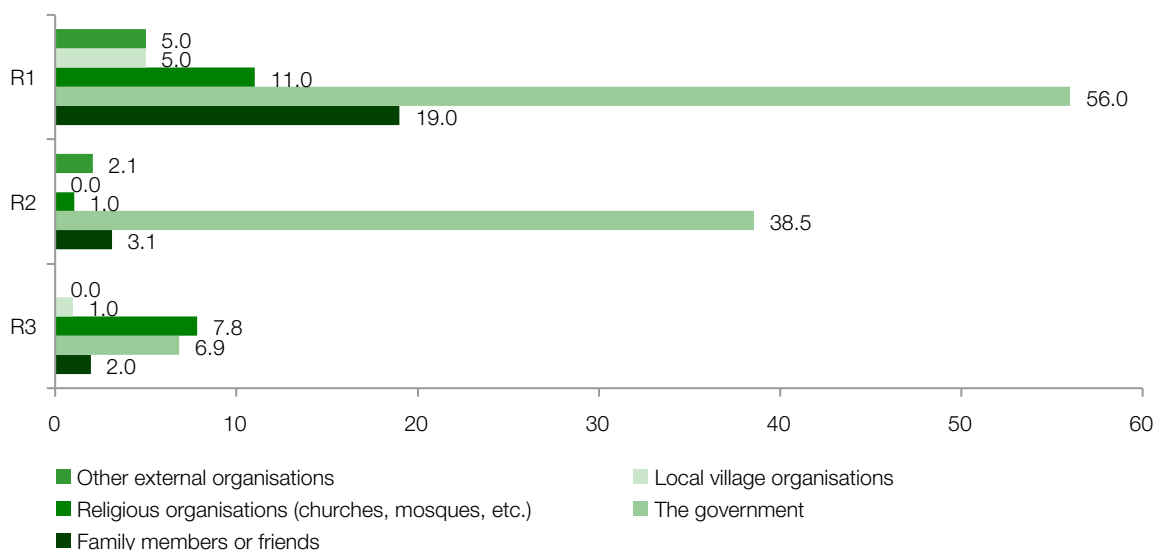
Source: Own calculations from APRA COVID-19 Rapid Assessment Surveys

Figure 3a: Reported promised assistance, by source (% of respondents)



Source: Own calculations from APRA COVID-19 Rapid Assessment Surveys

Figure 3b: Reported access to assistance, by source (% of respondents)



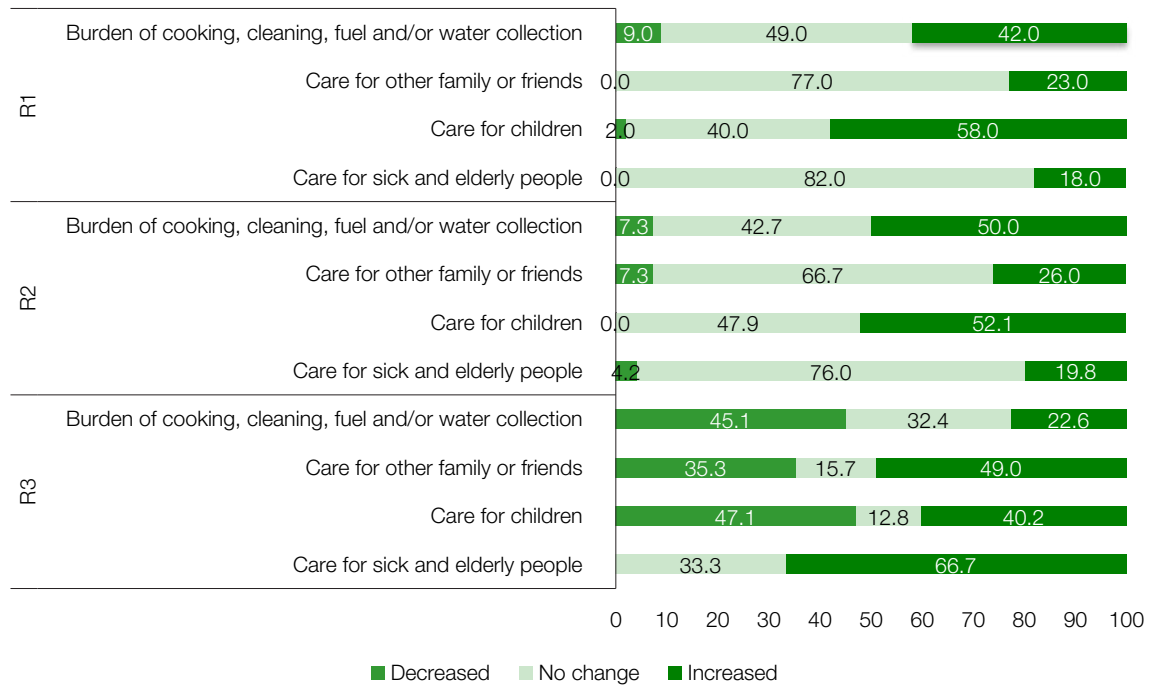
Source: Own calculations from APRA COVID-19 Rapid Assessment Surveys

the government by June (**Figure 3b**). The percentage of respondents that received assistance from the government between June and October declined to 39%, while the incidence of assistance between October and February was lowest at - at 7% and 8% from the government and religious organisations, respectively. It is crucial to note that limited financial resources constrained the scope of the government's social protection measures, since it also needed to fund direct health measures to combat the disease and had to rely on borrowings and donations from external sources.

The COVID-19 pandemic and associated containment policies were also expected to affect households and individuals in their daily responsibilities. Overall, a high

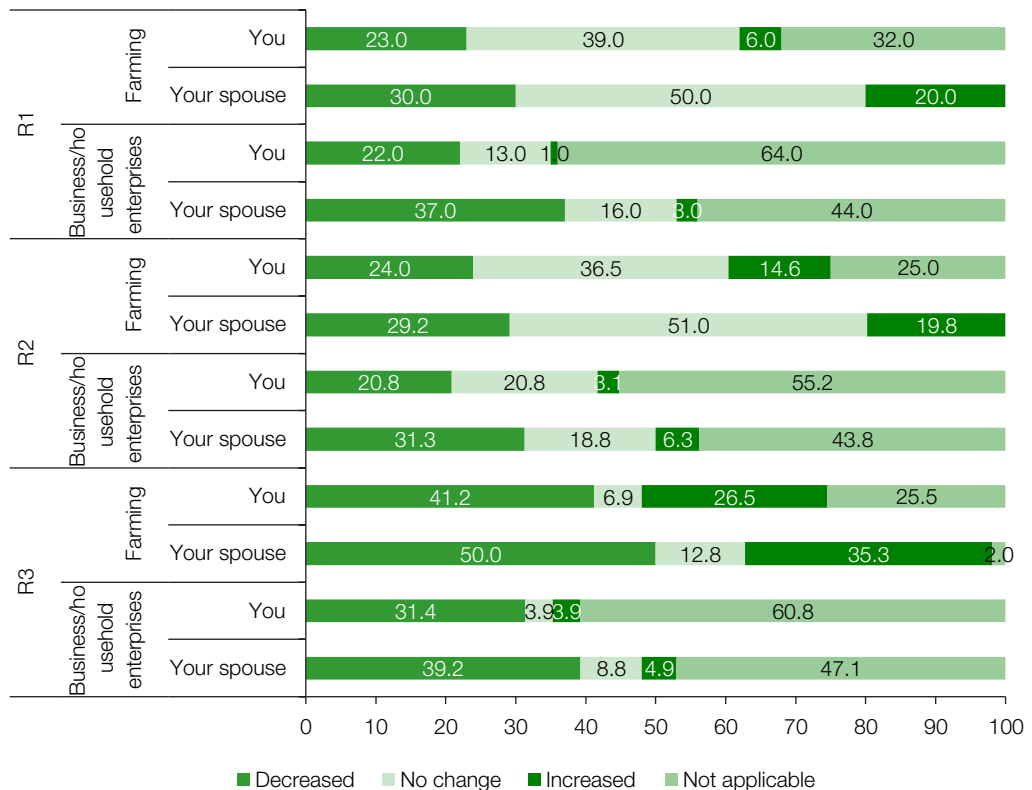
percentage of respondents reported an increase in the responsibility for caring for children and the burden of cooking, cleaning and fuel and/or water collection, in R1 and R2 (**Figure 4**). In R3, however, the increase in caring for children and an increased burden of cooking, cleaning and fuel and/or water collection was reported by a lower percentage of respondents, while a much higher percentage of respondents reported an increased responsibility in caring for the sick and the elderly and for other family or friends. The reduction in responsibilities of caring for children and cooking, cleaning and fuel and water collection in R3 is related to the fact that schools were open; the burden of caring and cooking for children reduced because some would be in boarding school while others would be provided lunch at school.

Figure 4: Reported changes in daily responsibilities in the household (% of respondents)



Source: Own calculations from APRA COVID-19 Rapid Assessment Surveys

Figure 5: Participation in farming and business – respondent and spouse



Source: Own calculations from APRA COVID-19 Rapid Assessment Surveys

4. Impact of COVID-19 on farming, labour and marketing

Respondents were asked about the impact of the COVID-19 pandemic on their participation in farming

activities and business/household enterprises, access to off-farm work, access to and the cost of hired labour, and marketing of agricultural commodities. In R1, households were asked about changes to these categories since the COVID-19 pandemic had begun,

while in R2 and R3 they were asked about changes since the previous survey.

4.1. Participation in farming and household business activity

The majority of the respondents reported no change in their own or spouse's participation in farming in R1 or R2 (Figure 5). In R3, however, the majority of respondents reported a decrease in participation in farming for themselves and their spouse since R2. The reported reduction in participation in farming between R2 and R3 may not be entirely because of COVID-19 since the latter months in that period are usually off-season months for farming activities in most of the study areas. Decreased participation in business was reported for over 20% of respondents and over 31% of spouses in R1 and R2. In R3, the decrease in participation in business activity was reported for 31% of respondents and 39% of spouses. This, combined with an increased percentage of respondents that reported a decrease in participation in farming activities in R3, suggests that the COVID-19 pandemic was continuing to negatively impact family-operated farms and businesses.

4.2. Access to off-farm work

Regarding off-farm work, a general declining trend in the percentage of both male and female respondents that reported that they were able to access off-farm work was observed, with the percentages lowest in

“With the COVID-19 outbreak, finding casual work for small-scale farmers was a challenge as demand for off-farm labour decreased drastically. This has made it difficult for those farmers to get the extra income they need to purchase much needed agricultural inputs.”

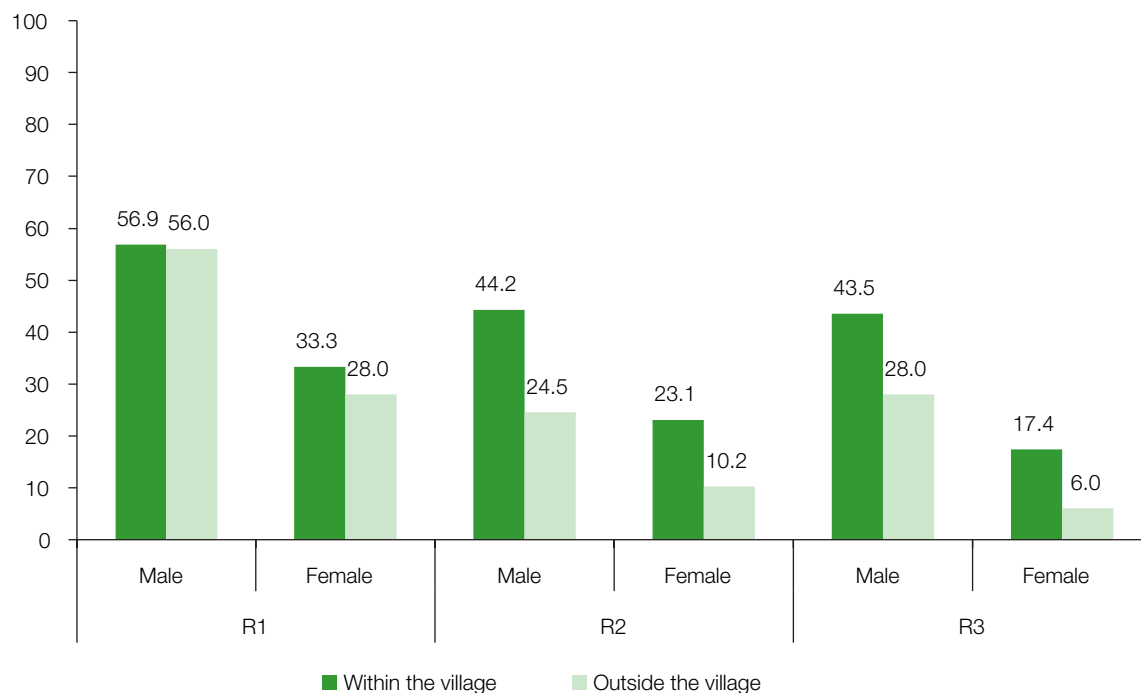
Agricultural officer, Kilifi County, June 2020

R3, except for males who could access off-farm work outside their villages (Figure 6).

4.3. Access to and cost of hired labour

The COVID-19 pandemic impacted on the rural labour market in three ways. First, uncertainty about who was infected or not made people hesitant to interact freely, and so supply and employment of outside labour on family farms and businesses was affected. Secondly, restrictions on movement of people across some counties and during curfew hours meant that people had fewer options to look for work and workers. Thirdly, the generally deteriorating economic situation due to the pandemic resulted into closure of businesses, reducing off-farm employment opportunities. Respondents were asked whether they were able to hire labour for their farming and/or business activities since the pandemic began (in R1), since June 2020 (in R2) and since October 2020 (in R3) (Figure 7). A consistent increase in the

Figure 6: Reported access to off-farm work (% of respondents)

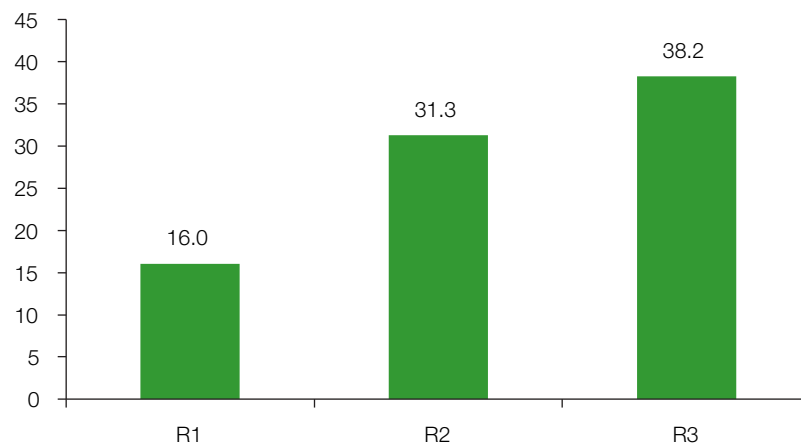


Source: Own calculations from APRA COVID-19 Rapid Assessment Surveys

“When COVID-19 struck in March 2020, many farms were not welcoming people they did not know, so demand for farm labour was generally low. Supply was also low because of government’s public health guidelines and restrictions. Since many of the restrictions were lifted from July 2020, people have generally become less cautious about COVID-19 and farms have become more willing to employ people. But demand for labour has generally remained low because many businesses and farms have not resumed full operations, while the general economic situation has made farmers have less purchasing power to hire labour. In Muranga County, most horticultural farms, especially those that produce for export markets, ceased or reduced operations, reducing their demand for labour.”

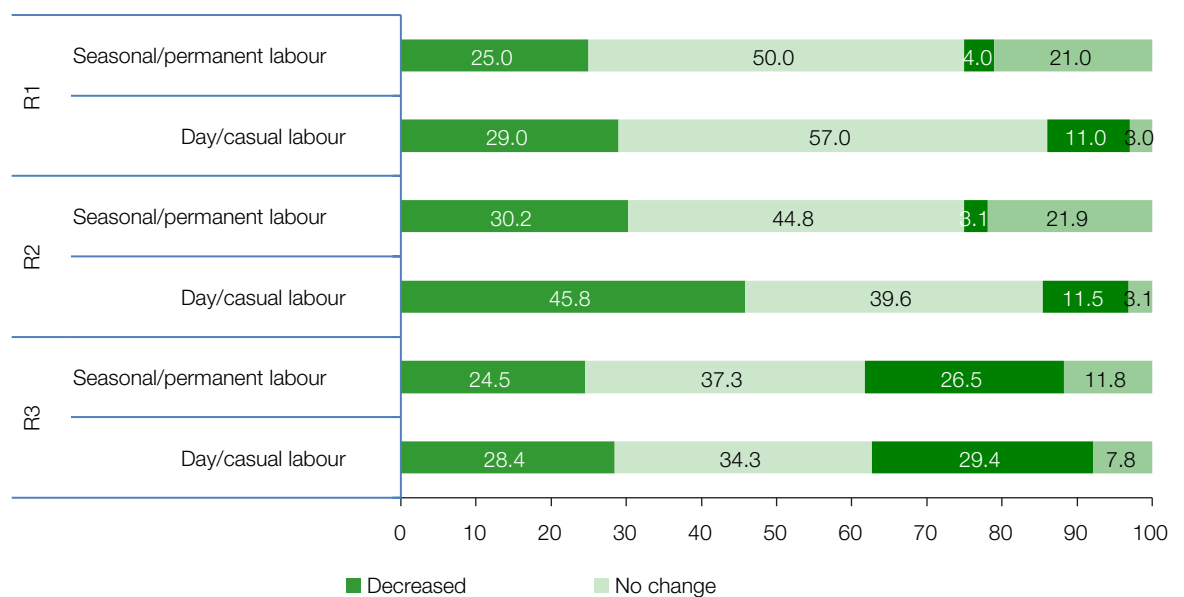
Agricultural officer, Muranga County, October 2020

Figure 7: Access to hired labour (% of respondents)



Source: Own calculations from APRA COVID-19 Rapid Assessment Surveys

Figure 8: Changes in cost of hired labour, by type (% of respondents)



Source: Own calculations from APRA COVID-19 Rapid Assessment Surveys

share of respondents that reported that they were able to hire labour was observed, from a low of 16% in R1 to 38% in R3. This reflects the progressive relaxation of the containment and closure policies, which opened up economic activities, and also the increased awareness about COVID-19 and guidelines on how to avoid infection on a personal level.

Respondents were also asked about changes in the cost of day/casual and seasonal/permanent labour, again between when COVID-19 struck and June 2020 (in R1), since June until October 2020 (in R2), and between October 2020 and February 2021 (in R3). The majority of the respondents reported no change in the cost of hired labour, but interestingly a high share (46%) of respondents reported a decrease in the cost of day/casual labour since June (in R2) (Figure 8). This may reflect an increase in the supply of labour following the lifting of the lockdown in July 2020.

“The lockdown measures that closed movement into and out of Nairobi and other towns contributed to a lot of vegetables being lost on farms because the produce could not reach the market in time. Some marketplaces were also closed in Kiambu County and this affected farmers and traders who depend on them to buy and sell their wares. This led many traders with small private cars to convert them into mobile stores parked along the roads in the county from where they sold their produce. The markets have since reopened and the number of cars parked at the roadside to sell to consumers have reduced significantly.”

Agricultural officer, Kiambu County, October 2020

4.4. Sale of farm produce

Most respondents sold farm produce at the farm gate, and in R1 the majority reported that COVID-19 constrained their access to markets to sell farm produce (Table 4). This pattern did not change in the subsequent survey rounds, as 44% of respondents reported reduced ability to sell their produce at farm gate between June and October 2020 (R2), and 58% reported the same for the period between October 2020 and February 2021 (R3). A similar pattern was observed for local markets, where the ability to access markets reduced for 44% of respondents surveyed in R2 and 54% of respondents in R3. A notable observation is that access to district/regional markets was much more constrained in R2 and R3, than in R1.

“When COVID-19 was reported in March 2020, many county governments took several measures to enforce COVID-19 health protocols, including closing down and/or relocating some open-air markets to more open spaces, most of which were often remote in terms of infrastructural development, e.g. in Nakuru. The relocation disrupted trading in food commodities, especially wholesale trading, because buyers were accustomed to designated spots for buying their wares. In addition to this, curfews greatly affected wholesale trading in agricultural produce because such trading takes place very early in the morning and curfew hours extended into part of the usual early morning trading hours.”

Official at the Ministry of Agriculture, Livestock, Fisheries and Cooperatives, February 2021

Table 4: Reported change in selling habits – by sales modalities (% of respondents)

How has your ability to sell your produce changed as an effect of COVID-19?																				
	At the farm gate (from your own farm)				In local markets				In district or regional markets				In national markets				Across the border			
	<	=	>	NA	<	=	>	NA	<	=	>	NA	<	=	>	NA	<	=	>	N/A
R1	47.0	18.0	5.0	30.0	31.0	11.0	4.0	54.0	12.0	5.0	2.0	81.0	3.0	3.0	1.0	93.0	-	2.0	-	98.0
R2	43.8	22.9	5.2	28.1	43.8	12.5	4.2	39.6	42.7	1.0	2.1	54.2	32.3	-	3.1	64.6	25.0	-	2.1	72.9
R3	58.8	5.9	27.5	7.8	53.9	6.9	12.8	26.5	37.3	5.9	2.9	53.9	25.5	-		74.5	17.7	1.0	-	81.4

Note: < Decreased; = No change; > Increased.

Source: Own calculations from APRA COVID-19 Rapid Assessment Surveys

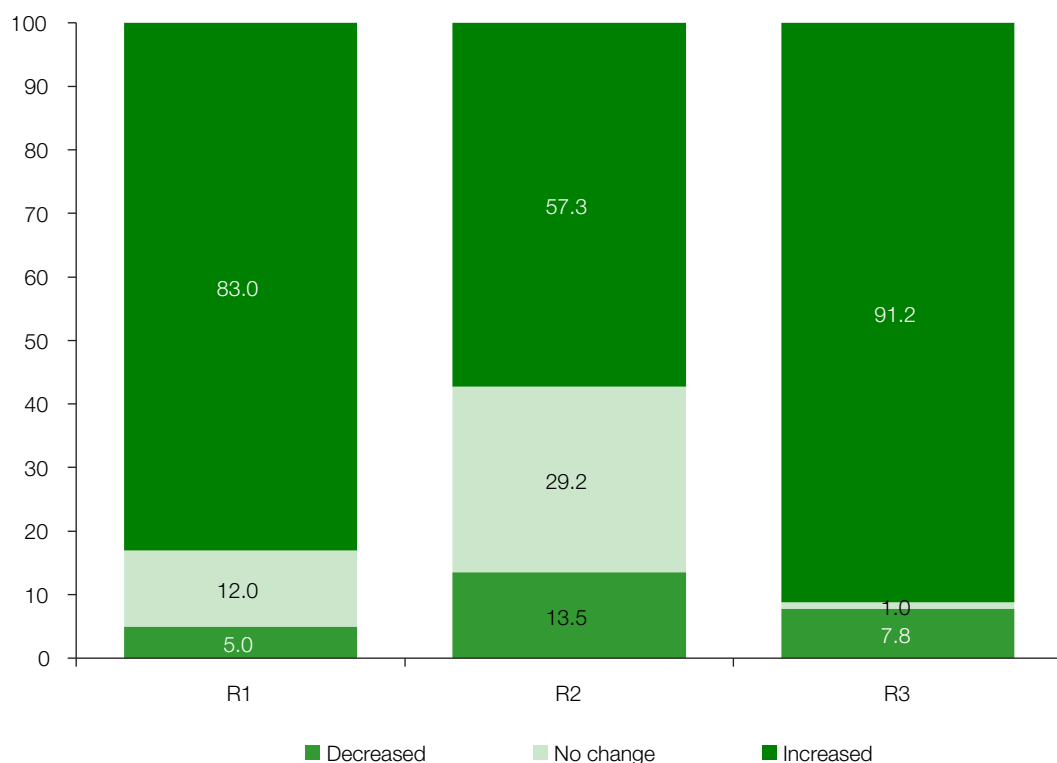
4.5. Transport

The availability and cost of transport services were among the most affected by the COVID-19 containment policies. The lockdown and curfew measures restricted movement of people and also slowed down movement of cargo due to the many police roadblocks that were set up to enforce the measures. Further, carrying capacities of public transport vehicles were reduced to enforce social distancing by passengers.

Respondents were asked about changes to the cost of transportation of people and goods and their ability to hire transport to take their produce to the point of sale. Regarding the cost of transport, 83% of respondents reported an increase in the cost of transportation in

R1, 57% in R2, and 91% in R3 (**Figure 9**). The increase in transportation cost between October and February (R3) was also partly because of a sharp rise in fuel prices during the period, by about 6% for diesel which is the most commonly used fuel in passenger and cargo transport vehicles. The majority of the respondents who needed to transport their produce to the point of sale reported being unable to hire transport services, especially in R2 and R3 (**Table 5**). In addition, the majority of the respondents reported a decrease in the number of traders that went to their village to purchase produce directly from them or their neighbours. The share of respondents reporting reduced number of traders into the village was highest in R1, which implies that because of the COVID-19 pandemic, the majority of farmers in the study areas generally had limited access to markets for their farm produce.

Figure 9: Changes in the cost of transportation of people and goods (% of respondents)



Source: Own calculations from APRA COVID-19 Rapid Assessment Surveys

Table 5: Reported changes in transportation (% of respondents)

	Are you still able to hire transport to take your produce to the point of sale?			What effect has COVID-19 had on buyers or brokers coming to the area to purchase produce directly from you and other farmers?			
	No	Yes	NA	<	=	>	NA
R1	19.0	22.0	59.0	88.0	3.0	9.0	0.0
R2	30.2	28.1	41.7	62.5	18.8	16.7	2.1
R3	50.0	26.5	23.5	63.7	2.0	33.3	1.0

Note: < Decreased; = No change; > Increased.

Source: Own calculations from APRA COVID-19 Rapid Assessment Surveys

4.6. Transactions

The Kenyan Government encouraged use of cashless transactions through a waiver of fees on mobile money transactions of up to KSh1,000 and a waiver of fees on the transfer of cash between bank accounts and mobile phone wallets. People were also being encouraged to avoid handling cash as a measure to prevent the spread of the virus. However, not everywhere in the country and in every transaction was a cashless mode of payment possible and convenient. Indeed, cash was the dominant mode of payment for transactions in all three survey rounds (**Figure 10**). While electronic transfer was also used by a high share of respondents, there was a consistent decline in its use. The reason for this decline especially in R3, could be due to the lifting of the waiver of fees on mobile money transactions, which happened on 31 December 2020.

4.7. Availability of agricultural services

Respondents were asked about changes in availability and prices of services and inputs for agricultural production. The services and inputs were agricultural land to rent, farm inputs, tillage services, agricultural extension services, loans or credit, and concessionary loans or loan payment holidays. Most respondents noted a decrease in the availability of agricultural extension services, loans or credit, and concessionary loans or loan payment holidays, with the share of respondents reporting the decrease largest in R3 (**Figure 11**).

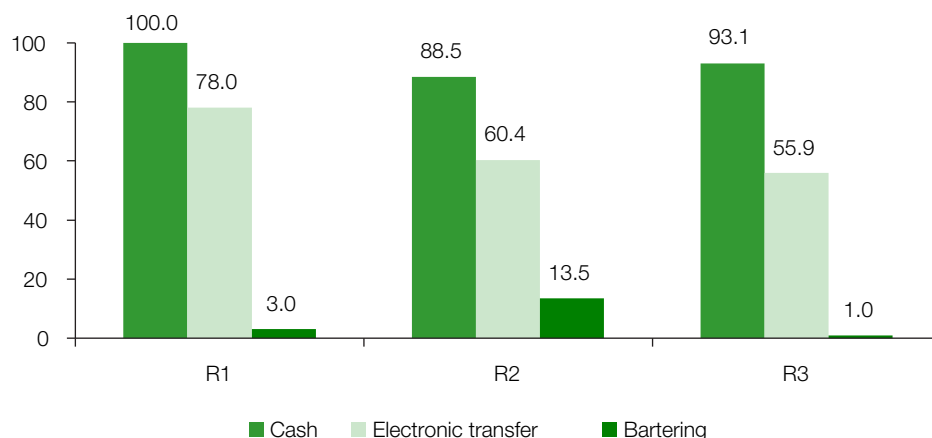
Unlike the cost of services and inputs in R1 and R2, the majority of the respondents in R1 and R2 noted that the cost for renting agricultural land had not changed, but by R3 most stated that the cost had increased (**Table 6**). For farm inputs such as fertilisers, seeds and

agricultural chemicals, most respondents in all survey rounds stated that prices had increased, with the share of respondents particularly high in R3. It is important to note that over 91% of respondents stated that the cost of transport increased in R3, and it is also during this period that farmers in the study areas plan for or make purchases of agricultural inputs for the long rain season. Therefore, it is not surprising that over 81% of the respondents observed that input prices had increased during that period. The cost of tillage services was reported to have remained unchanged by the majority of the respondents in R1 and R2. In R3, however, most stated that the cost had increased, which partly reflects the increase in the cost of diesel.

“COVID-19 has significantly affected normal activities in extension service provision. In Nakuru County, for example, the Nakuru Agricultural Show, which is usually held in June every year, was cancelled. The annual joint exhibition by the Nakuru County and the Rift Valley Institute of Science and Technology was reduced to only media broadcast and a few officers participating. Usually, farmers and other actors in the agricultural value chain from all over the country and beyond participate in both the Show and Exhibition. Delivery of extension services through farmer group meetings was also suspended, as most of the extension officers are considerably aged and have been advised to limit interactions in their work.”

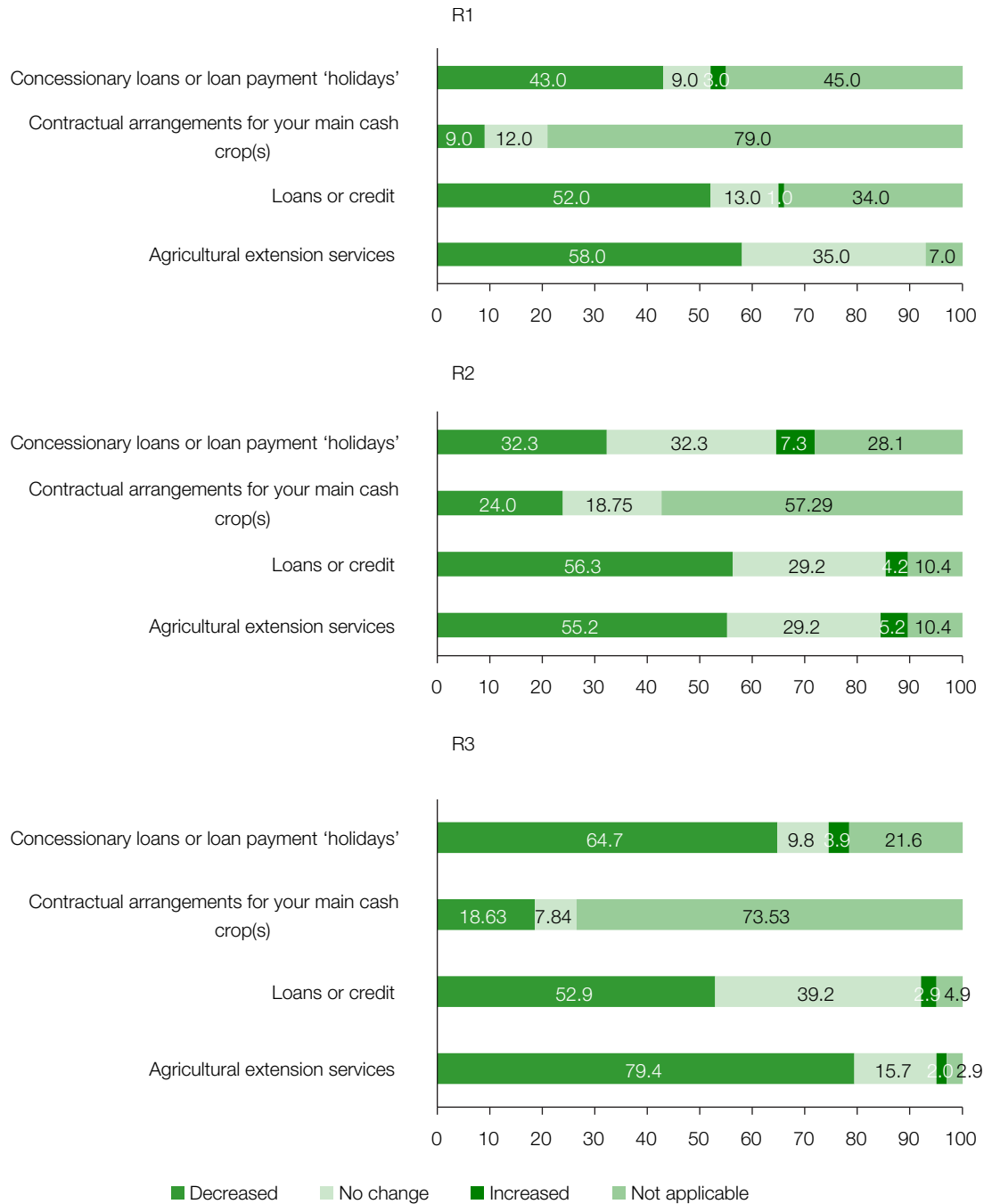
Agricultural officer, Nakuru County, October 2020

Figure 10: Reported form of payment for business transactions (% of respondents)



Source: Own calculations from APRA COVID-19 Rapid Assessment Surveys

Figure 11: Availability of services for agricultural production (% of respondents)



Source: Own calculations from APRA COVID-19 Rapid Assessment Surveys

Table 6: Prices of services and inputs for agricultural production and contractual agreements (% of respondents)

	Agricultural land rental price				Farm input prices				Price for tillage services				Contractual arrangements for your main cash crop(s) (received support)			
	<	=	>	NA	<	=	>	NA	<	=	>	NA	<	=	>	NA
R1	4.0	70.0	7.0	19.0	2.0	45.0	51.0	2.0	5.0	47.0	11.0	37.0	9.0	12.0	-	79.0
R2	6.3	53.1	32.3	8.3	6.3	45.8	47.9	-	4.2	38.5	27.1	30.2	24.0	18.8	-	57.3
R3	7.8	24.5	54.9	12.8	1.0	17.7	81.4	-	1.0	10.8	42.2	46.1	18.6	7.8	-	73.5

Note: < Decreased; = No change; > Increased.

Source: Own calculations from APRA COVID-19 Rapid Assessment Surveys

5. Food and nutrition security

One of the most important pathways through which the COVID-19 pandemic would affect households is through its impact on their food and nutrition security. This is especially true for agricultural households who disproportionately depend on their own production for their food supply and agricultural markets for income to supplement their food supply and meet other household needs. Respondents were asked about changes in the availability and prices of food items in local markets since COVID-19 started until June 2020 (in R1), between June and October 2020 (in R2), and between October 2020 and February 2021 (in R3). In R1, most respondents reported no change in the availability of most food items in local markets, except for vegetables where a decrease in availability was reported (**Table 7**). This pattern changed in R2, where the majority of households reported an increase in the availability of vegetables in local markets. On the

contrary, a decrease in the availability of pulses, nuts and seeds, and fruits were observed by most in R2. In R3, however, things took a largely dismal turn with most respondents reporting reduced availability of most food items, including grains and roots, tubers and plantains which constitute the major staples, in local markets.

In terms of prices of food items in local markets, the majority of respondents in R1 reported an increase for most food items except those of animal origin (milk and milk products, meat and poultry, eggs and processed foods). This remained unchanged in R2 but in R3 most respondents reported a decrease in the prices of meat and poultry and processed foods in local markets. It is important to note that in R3, a significantly higher percentage of respondents (76%) compared to R2 (49%) stated that the prices of grains had increased in local markets. This is concerning because the November–February period coincides with harvesting season for maize, which is the main staple grain in Kenya, and so ordinarily prices would not be expected to increase.

Table 7: Changes in availability and prices of food items (% of respondents)Note: < Decreased; =

	R1				R2				R3			
	%	%	%	%	%	%	%	%	%	%	%	%
	<	=	>	NA	<	=	>	NA	<	=	>	NA
	Availability											
Grains	38.0	61.0	-	1.0	24.0	49.0	27.1	-	49.0	38.2	12.8	-
White roots, tubers, plantains	45.0	54.0	1.0	-	47.9	25.0	26.0	1.0	44.1	30.4	25.5	-
Pulses, nuts, seeds	49.0	51.0	-	-	54.2	31.3	14.6	-	80.4	11.8	7.8	-
Milk, milk products	20.0	66.0	14.0	-	28.1	54.2	16.7	1.0	39.2	40.2	20.6	-
Meat and poultry	26.0	72.0	1.0	1.0	18.8	55.2	22.9	3.1	35.3	41.2	23.5	-
Fish and seafood	30.0	51.0	-	19.0	27.1	29.2	16.7	27.1	49.0	27.5	1.0	22.6
Eggs	26.0	71.0	3.0	-	24.0	52.1	19.8	4.2	47.1	34.3	18.6	-
Dark green leafy vegetables	50.0	44.0	6.0	-	25.0	30.2	43.8	1.0	56.9	20.6	22.6	-
Other vegetables	49.0	45.0	6.0	-	27.1	28.1	43.8	1.0	55.9	22.6	21.6	-
Other fruits	48.0	49.0	3.0	-	55.2	27.1	15.6	2.1	65.7	24.5	9.8	-
Processed foods	29.0	71.0	-	-	17.7	62.5	19.8	-	22.6	70.6	6.9	-
	Prices											
Grains	2.0	25.0	72.0	1.0	7.3	43.8	49.0	-	6.9	17.7	75.5	-
White roots, tubers, plantains	3.0	31.0	66.0	-	10.4	27.1	61.5	1.0	17.7	35.3	47.1	-
Pulses, nuts, seeds	2.0	27.0	71.0	-	5.2	32.3	62.5	-	1.0	19.6	79.4	-
Milk, milk products	16.0	51.0	33.0	-	5.2	58.3	36.5	-	3.9	57.8	38.2	-
Meat and poultry	5.0	50.0	44.0	1.0	4.2	61.5	30.2	4.2	51.0	49.0	-	-
Fish and seafood	2.0	37.0	42.0	19.0	2.1	30.2	40.6	27.1	1.0	44.1	32.4	22.6
Eggs	8.0	51.0	41.0	-	5.2	54.2	35.4	5.2	3.9	51.0	45.1	-
Dark green leafy vegetables	5.0	36.0	59.0	-	29.2	39.6	30.2	1.0	19.6	21.6	58.8	-
Other vegetables	4.0	34.0	62.0	-	27.1	36.5	35.4	1.0	20.6	19.6	59.8	-
Other fruits	1.0	41.0	58.0	-	9.4	26.0	62.5	2.1	5.9	26.5	67.7	-
Processed foods	2.0	61.0	35.0	2.0	3.1	72.9	22.9	1.0	68.6	-	31.4	-

No change; > Increased.

Source: Own calculations from APRA COVID-19 Rapid Assessment Surveys

Table 8: FIES (% of respondents)

	R1	R2	R3
Worried about not having enough food to eat because of a lack of money or other resources	94.0	83.3	71.6
Unable to eat healthy and nutritious food because of a lack of money or other resources	92.0	80.2	77.5
Ate only a few kinds of foods because of a lack of money or other resources	90.0	83.3	80.4
Had to skip a meal because there was not enough money or other resources to get food	54.0	69.8	58.8
Ate less than you thought you should because of a lack of money or other resources	66.0	78.1	73.5
Ran out of food because of a lack of money or other resources	52.0	56.3	45.1
Were hungry but did not eat because there was not enough money or other resources for food	47.0	55.2	50.0
Went without eating for a whole day because of a lack of money or other resources	16.0	39.6	29.4
FIES: min=0; max=8	5.11	5.46	4.86

Source: Own calculations from APRA COVID-19 Rapid Assessment Surveys

To understand the impact of COVID-19 on food security and the nutrition of households, the food insecurity experience scale (FIES)¹ was used, which consists of a set of eight questions that are categorised into three realms of food insecurity – anxiety and uncertainty about food access, insufficient quality of food, and insufficient quantity of food. (Table 8) lists the eight FIES questions and the percent of households that responded in the affirmative to the questions in each survey round. There are two important observations. First, in each survey round, at least six of the eight questions received affirmative responses from at least half of the respondents, which suggests that food and nutrition insecurity generally remained a challenge for most of the households during the survey periods. Secondly, the most severe incidences of food and nutrition insecurity on the FIES scale – going without eating for a whole day because of a lack of money or other resources, and being hungry but not eating because of not having enough money or other resources for food – were most prevalent in R2. Approximately 40% of respondents in R2 stated that at least one member of their household went without eating for a whole day because of a lack of money or other resources, while 55% stated that at least a member of their household was hungry but did not eat because there was not enough money or other resources for food. The June–October period are often lean months in terms of food production in most parts of Kenya.

Binary responses (1=yes, 0=no) were used to generate values for the eight indicators to measure the overall food and nutrition insecurity of households. The

“Conversations about food and nutrition security need to be enhanced to include two aspects in the food system: transportation and distribution, and agri-nutrition. For too long the conversation has been on increasing food production while transportation and distribution aspects of that food have been neglected. The aspect of food and diets has also not received adequate attention, and the conversation has been on increasing production of staples such as maize and potatoes. With COVID-19, we need to seriously think about how to address nutrition issues in the food system because consumption of nutritious foods is important to building body immunity.”

Government official, Nakuru County, June 2020.

indicator was on a scale of 0-8, with households scoring 0 being the most food secure (they did not experience any of the eight incidences of food insecurity) and those scoring 8 the most food insecure (they experienced all the eight incidences of food insecurity). Overall, food and nutrition insecurity was highest between June–October 2020 (R2) and lowest between October 2020 and February 2021 (R3). This finding may appear to contradict previous results that the majority of the respondents reported reduced availability of most food items in local markets in R3, and also that the prices of grains had increased. However, since November–

¹ The Food Insecurity Experience Scale of FAO - <http://www.fao.org/3/a-bl354e.pdf>

February is usually the harvesting season for maize, it may be that most households had their own stocks of grains and were not selling, hence the lower incidence of hunger in households and reduced supply of grains in local markets.

6. Poverty

Respondents were asked how their cost of living had changed in each round of the survey. Approximately 96% of respondents in R1 stated that their cost of living had increased. This percentage reduced to 66% in R2, where 20% stated a decrease and 15% stated no change in the cost of living. In R3, 98% of respondents observed that the cost of living had increased. These statistics are generally consistent with the official consumer price index (CPI) published by the Kenya National Bureau of Statistics, which indicated that the CPI increased by 1.2% between June and October 2020 and by 3.4% between October 2020 and February 2021 (KNBS, 2021). It is also important to note that schools opened in January 2021 and so households also needed to pay school fees and purchase other school items for their children, a factor which strained household budgets.

The nine-step ladder (Ravallion, 2012) was used to understand how the COVID-19 pandemic affected respondents' perception about the control they felt over their own lives. The nine-step ladder is scaled such that an individual on the first step believes that they

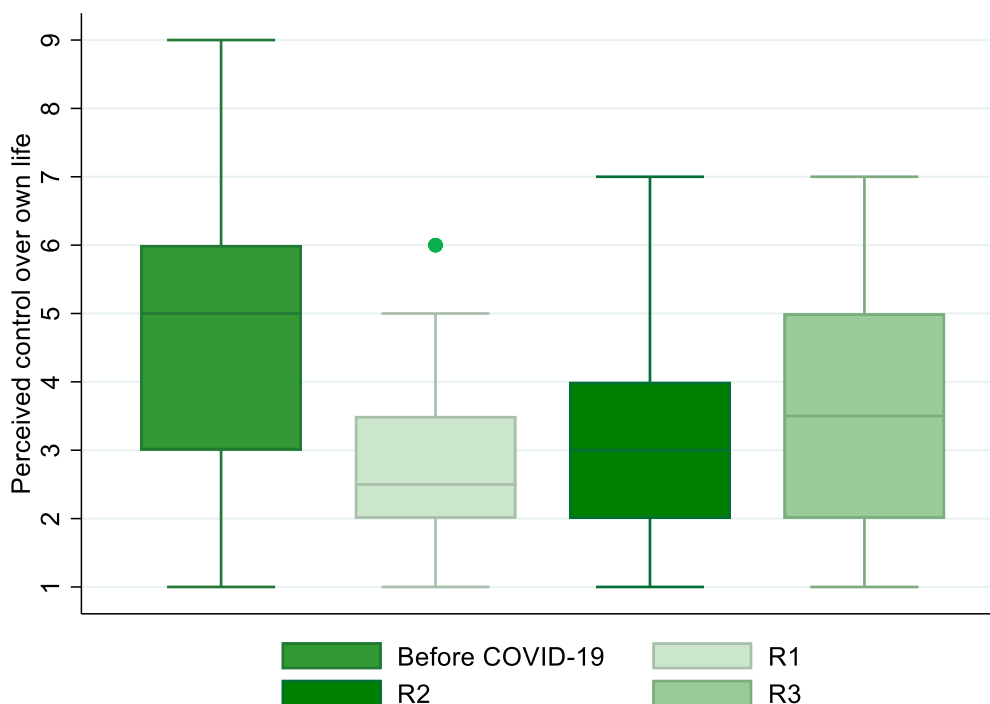
are completely unable to change their life, while an individual on step nine feels that they have full control over their life. The respondents were asked to place themselves on the nine-step ladder during each round of the survey. In R1, they were also asked where they believed they were on the ladder before the COVID-19 pandemic. (Figure 12) shows that, on average, the respondents felt that they had greater control over their own life before COVID-19, compared to after the pandemic had struck. Perceived control over their own life also increased, on average, in subsequent survey rounds, which suggests that the relaxation of COVID-19 containment policies was making individuals feel that they were gaining more control.

7. Conclusions

This report presents results from a three-wave rapid assessment of the impact of COVID-19 pandemic on food systems and the livelihoods of a sub-set of the population that is largely dependent on agriculture in Kenya.

The government's awareness campaigns and containment policies against COVID-19 appear to have contributed to the widespread awareness about COVID-19 among the study respondents. Thankfully, there were only a few incidences of COVID-19 symptoms in survey households and most individuals reported being able to access healthcare. The containment

Figure 12: Reported perceived control over own lives over time



Source: Own calculations from APRA COVID-19 Rapid Assessment Surveys

policies, however, limited households' engagement in social and economic activities, which impacted their livelihoods.

Closing of schools increased the burden of childcare and housework in households. However, children's engagement in paid work was minimal even when schools closed and no child was reported to be sitting idle when they opened, which is commendable.

The COVID-19 pandemic continued to reduce people's participation in farming and business activities. Access to off-farm work continued to decline while the availability of labour to hire increased following the lifting or relaxation of the containment and closure policies in July 2020, suggesting constrained employment opportunities.

Households' access to agricultural markets continued to be constrained, as limited availability of transportation services for hire, high cost of transport, and reduced number of traders into the villages to buy produce remained a challenge for the majority of the respondents. Further, the availability of agricultural extension services, loans or credit, and concessionary loans or loan payment holidays decreased, while prices for inputs such as fertilisers, seeds and chemicals and tillage services were observed to have increased by most respondents.

Most food items were reported to be available in local markets in R1, but by R3 the majority of the respondents reported a reduced availability of most food items in local markets, including grains and roots, tubers and plantains which constitute the major staples, and increased prices especially for grains. Food and nutrition insecurity was highest during the initial months of COVID-19 in the country and lowest between October 2020 and February 2021, partly because of the November–February harvesting period in the study areas.

Households generally continued to experience a high cost of living, consistent with the official statistics which reported increases in CPI between October 2020 and February 2021. While the government was the main source of assistance to households to help them to cope with the negative effects of the pandemic, that assistance sharply declined over time, leaving most of the households to manage the pandemic's effects on their own. On the positive side, however, perceived control over the respondent's own lives increased over time, which suggests that the relaxation of COVID-19 containment policies was making individuals feel that they were gaining more control.

With effective COVID-19 vaccines now available, Kenya should prioritise and fast track vaccination of its population and minimise containment and closure policies which have dominated the country's portfolio of policy responses since the pandemic struck and which have obviously had undesirable impacts on livelihoods. There is also a need for social protection support to farmers and families that have lost their income sources in the short to medium-term to help them recover and move on with their normal economic activities.

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