

# Impact of Covid-19 on smallholder farmers and agricultural supply chains

December 2020



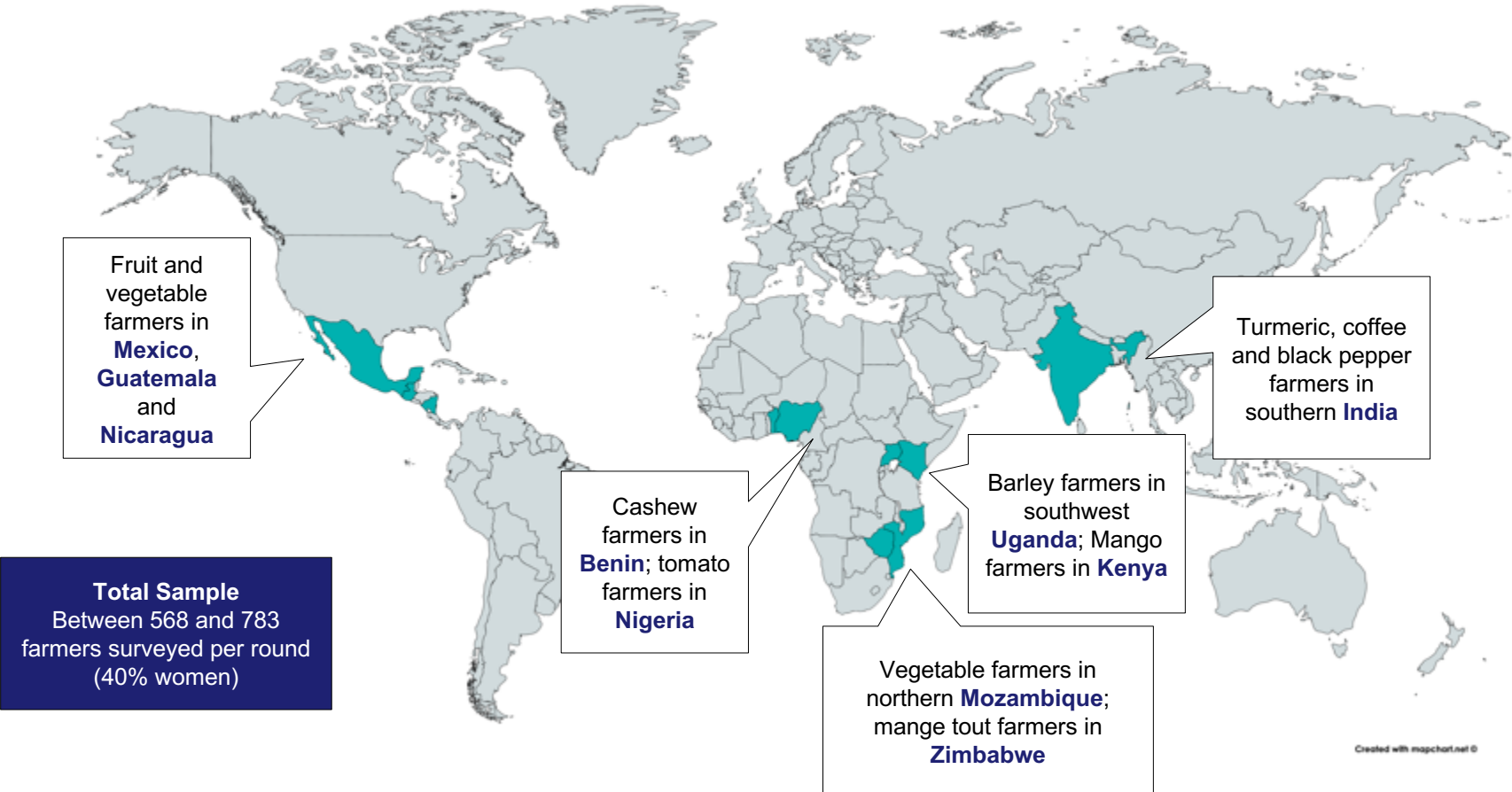
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## About the survey

- Key insights and implications
- How we are responding








# Between Jul. and Nov., TechnoServe's agriculture program teams<sup>1</sup> surveyed farming clients in 10 countries



<sup>1</sup> Excludes Coffee programs, which carried out a standardized coffee survey; includes agricultural programs within High Margin Agriculture portfolio.

# We asked women and men smallholder farmers questions on five key topics to understand the impact of Covid-19

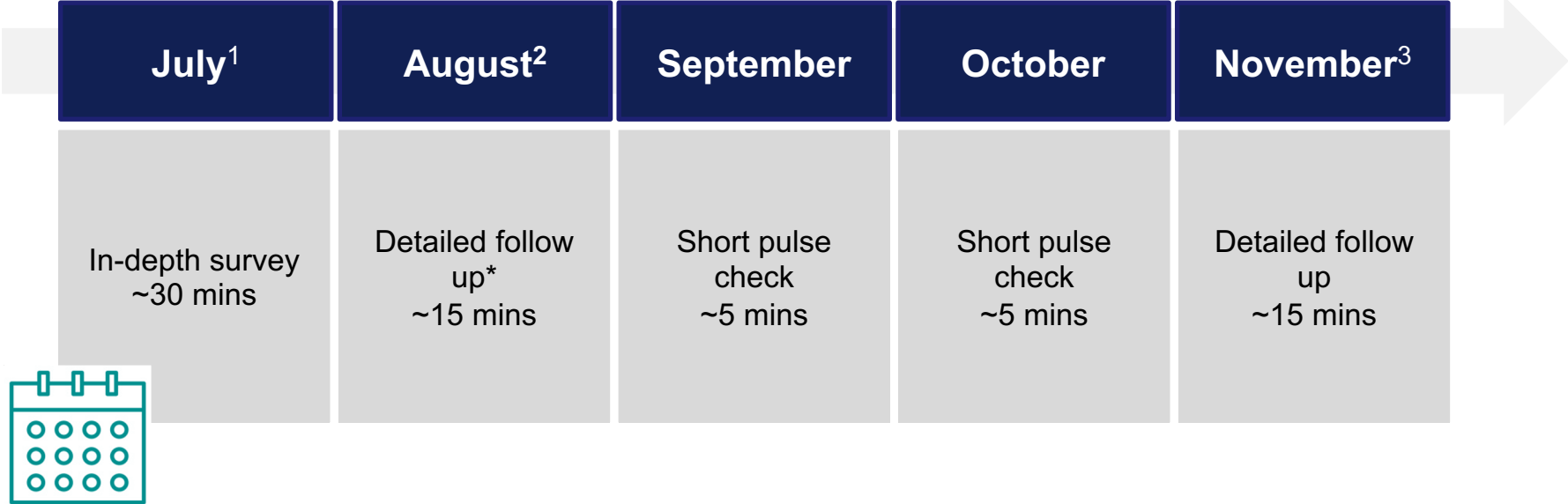
	 Covid-19	 Food Security <sup>1</sup>	 Overall Income	 Farming Business	 Technology
<b>Objective</b>	To assess if there are <b>health information gaps</b> , high levels of <b>misinformation</b> , or <b>lack of basic amenities</b>	To detect level of <b>food insecurity</b> amongst farmers, and understand the <b>underlying causes</b>	To understand impact to <b>overall household income</b> (including non-farming income sources), <b>underlying causes</b> , and <b>implications for household's wellbeing and resilience</b>	To understand impact on <b>farming business, nature of challenges</b> faced vis-à-vis market access, labor availability, input access, production, quality, access to finance, and <b>implications on the farming business</b>	To understand what <b>technologies</b> farmers use to access information and determine the <b>best channel</b> to deliver remote/blended advisory to farmers



**Gender:** 40% of respondents are women, and all data are analyzed on a gender-disaggregate basis (based on gender of respondent and gender of household head) to understand if there are different challenges and priorities for women and men.

<sup>1</sup> Food security questions were excluded from India program survey due to cultural sensitivities

# We conducted in-depth surveys in July, August, and November 2020



1 In depth survey includes all five topics on previous slide. Detailed follow up *excludes* Covid-19 and Technology themes. Short pulse check involves ~8 questions that aim to evaluate business health, business confidence and resilience.

2 2 programs of 11 that participated in July round did not participate in August.

3 1 program out of 11 did not participate in November.

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# Farmers have faced immediate income shocks as a result of Covid-19 disruptions, primarily due to lower crop prices

**Covid-19 resulted in immediate income shocks for 1 in 2 smallholder farmers surveyed.** In July, 54% of farmers reported immediate reductions to income as a result of the Covid-19 crisis. The immediate shocks to income have eased over time, from 54% in July to 24% in November.

**Half to two-thirds of farmers that have faced income shocks, have seen reductions in crop revenues, principally driven by lower crop prices.** In July, amongst farmers reporting income shocks, 62% said it was related to lower crop revenues, lower crop prices being the most significant challenge. 29% reported reductions in non-farm business income. 8% reported reductions to both types of income sources.

**Farmers appear to be faring better vis-à-vis the crop supported by TechnoServe's program.** Amongst farmers reporting access to market challenges, 53% reported challenges with the TechnoServe program-supported crop (often the principal source of income), whereas 71% reported challenges selling other crops. Our hypothesis is that investments in creating inclusive supply chains, accompanied by emergency interventions, have buffered farmers from some of the disruptions.

54%



Reported reduced income over the past month as a result of Covid-19 (amongst all farmers surveyed, Jul. 2020)

65%



Reported challenges selling their crops over the past month (amongst farmers reporting reduced income, Jul. 2020)

70%



Reported receiving lower crop prices than usual (amongst farmers selling crops and reporting market access challenges, Jul. 2020)



# Income drops have been compounded by higher food prices, creating food security challenges for households

**7 of 10 farmers reported higher food prices, which seem to be persisting despite easing of lockdowns.** In

July, 70% of farmers reported higher food prices at local markets, and this share remained high at 66% in November. 50-60% of households purchase half or more of the food consumed, suggesting majority are directly impacted by higher food prices.

**Squeezed by lower incomes and higher food prices, a large share of farmers are coping by changing eating habits.** Asked about how they are coping, in November 30% said they have reduced the size and frequency of meals, 46% said they have switched to less preferred foods, and 11% said they have gone to bed hungry over the past week as a result of food shortages.

**Apart from changing food habits, farmers are coping in other ways.** 1 in 3 farmers have used savings; 5% have sold assets. 43% can access emergency funding from family or friends if needed. Farmers have sources of resilience, but these are likely to deplete over time if the crisis and its impacts extend. Fewer female respondents said they had access to emergency funds and were less likely to have relied on savings as a coping mechanism.

**66%** 

Reported higher prices for food at local markets over the past week (amongst farmers visiting a local shop or market over the past week, Nov. 2020)

**46%** 

Reported switching to less preferred/less expensive foods (amongst farmers reporting reduced income, Nov. 2020)

**35%** 

Reported using savings as a coping method (amongst farmers reporting reduced income, Nov. 2020)



A similar dynamic has played out with inputs, driving under-investment in the farm with consequences for future production

**7 of 10 farmers also consistently reported higher prices for agricultural inputs.** While the share of farmers reporting input access challenges eased slightly from 50 to 37% between July and November, amongst those reporting challenges the principal challenge remained higher prices and stock shortages.

**A significant and rising share of farmers facing income shocks said it had impacted their ability to invest in their farms.** In November 55% of farmers that reported reduced incomes said it was constraining their ability to spend on their farms.

**More farmers reported quality and productivity issues in November, suggesting repercussions from disruptions to agricultural activities during lockdown and underinvestment in agriculture are showing up with a lag.** Farmers reporting lower than usual production increased from 15 to 34% between July and November. Farmer reporting greater than usual quality issues increased from 2 to 9% during the same time period.

55%



Reported income shocks have impacted their ability to invest in their farms (amongst farmers that reported reduced income, Nov. 2020)

34%



Reported harvesting a lower quantity than usual (amongst farmers selling crops and reporting market access challenges, Nov. 2020)

9%



Reported greater than usual quality issues with their crop (amongst farmers selling crops and reporting market access challenges, Nov. 2020)

” With the lockdown there's been an increase in price on everything, so I am reducing the size of the farm, using recycled seeds and animal dung.

*- A female farmer in Kaduna province, Nigeria*

” I used to sell two sacs of passion fruits each week at 300,000 shillings a bag. Now due to suspension of transport systems, closure of markets and closing of borders I can now only get 50,000 shillings a bag. Sometimes I fail to find a buyer and they spoil in the garden.”

*- A male farmer in Kabale district, Uganda*

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- New insights from November survey round

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# The November data confirmed key trends seen earlier in the year and revealed some new insights

**Restrictions on movement and commerce appear to have eased significantly in most geographies.** Share of farmers reporting food shops and markets were closed declined from 29% to 9%. Share of farmers saying they couldn't reach agri-input shops because of transport challenges eased from 39% to 8%.

**Despite easing of restrictions, prices of food and inputs do not appear to have normalized.** Share of farmers reporting higher food prices at local markets did not decline between July and November. In both survey rounds, amongst farmers that visited shops over the past week, ~70% reported higher prices. The same dynamic appears to be holding for input prices.

**Fewer farmers are reporting income shocks and farming business challenges, but these have not gone away.** Share of farmers reporting reduced incomes halved from 54% to 24%. Share of farmers reporting farming business challenges - access to markets, inputs, and labor challenges - reduced by 13 to 20 percentage points, yet a significant share of farmers (a third to half) said they are still facing such challenges.

**Farmers seem to be faring better vis-à-vis the crop supported by the TechnoServe program.** Amongst the farmers continuing to face market access challenges (45% in November vs. 65% in July), a greater share (18 percentage point difference) reported challenges with the crop not supported by the TechnoServe program. This provides some evidence that the long-term efforts to create strong and inclusive supply chains, plus the emergency measures, have supported greater resilience for smallholders within these supply chains.

**Coping mechanisms have evolved, with some gender-based differences emerging.** Amongst farmers who continue to face income shocks, more are looking for ways to earn additional income, and more are switching to less preferred foods. While the share of farmers reporting reduced frequency of size of meals for some household members stayed steady at 30%, the gender distribution changed in November (41% for women respondents vs. 24% for male respondents).

**Productivity issues are showing up more prominently, providing some evidence of underinvestment in the farm.** Amongst farmers reporting market access challenges, the share of farmers reporting lower production more than doubled from 15% to 34% in November suggesting the impacts of underinvestment are emerging.

# We noted some differences by program and geography in the November data

**Amongst farmers selling crops, access to market challenges are most severe in Benin, Kenya, Guatemala and Mexico.** At least 1 in 2 farmers faced access to market challenges in Benin (93%), Kenya (78%), Mexico (52%), Guatemala (50%). In all cases, except Mexico, the situation has worsened since July. While in all cases access to market challenges are more often reported for the non-TechnoServe supported crop, at least a third to half of farmers said the challenge was related to the program-supported crop. The principal challenge in all these cases is lower prices, followed by difficulty finding a buyer.

**Labor shortages are most severe in Benin, followed by Nicaragua and India.** 62% 23% and 20% of farmers in these three programs respectively reported labor access challenges, with the challenge intensifying in Benin. The nature of the challenge is most often described as a shortage of workers and higher wages.

**Productivity and quality challenges are showing up most prominently in Zimbabwe and Nicaragua.** In Zimbabwe 100% of farmers reported lower quantity and 43% reported greater quality issues (for other crops only) and in Nicaragua 71% reported lower quantity and 57% reported greater quality issues (for TechnoServe-supported and other crops).

**Input access challenge, in the form of higher input prices, are most severe in Benin, Kenya and Nigeria.** In Nigeria, while only a third of farmers said they rely on purchased inputs, 82% of these farmers said they faced challenges accessing inputs over the past month. In Benin and Kenya more than half of farmers said they rely on purchased inputs and amongst these over half faced input access challenges. In all cases the principal challenge is higher input prices.

**More farmers in India, Mexico, Nigeria and Zimbabwe are coping by dipping into savings.** In aggregate 1 in 3 farmers used saving, but this share is highest in India (82%), Zimbabwe (73%), Mexico (57%) and Nigeria (57%). All 4 geographies saw this number rise between July and November. In Benin, Kenya and Zimbabwe a rising share of farmers reported selling assets as a coping mechanism.

**Food insecurity is a growing concern in Benin, Kenya and Nicaragua.** Although in aggregate the share of farmers saying they went to bed hungry over the past week decreased from 16% to 11%, this number rose in these 3 geographies – in Benin from 21 to 24%, in Kenya from 10 to 15%, and in Nicaragua from 12 to 19%.

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**How we are responding**



# We are responding in 3 main ways, and will continue to scale and adapt our responses

**To preserve and protect smallholder producers and the inclusive supply chains they are part of, we are taking three priority actions:**

- 1 Intensifying support to key supply chain intermediaries** (e.g., food processors, aggregators, logistics and storage businesses, input distributors) to ensure they can offer smallholder farmers access to efficient output and input markets, now and in the future *(see examples ahead)*.
- 2 Finding ways of helping farmers address current scarcity to enable investment of capital and “bandwidth” at the farm level.** We are doing this in ways that are market driven. *(see example ahead)*.
- 3 Leveraging technology to deliver priority farmer support, training and advisory that addresses the current scarcity** *(see examples ahead)*.



*The situation is evolving and our responses may need to be refined/updated.  
Are there other types of actions you feel are a priority?  
Are there successful examples you have observed?*

# In Zimbabwe we are supporting investments in the supply chain to overcome Covid-19 disruptions at the packhouse



**Country:** Zimbabwe

**Crop:** Mange tout peas

**Partner:** Anglo American



## Covid-19 challenge:

Social distancing rules created supply chain bottlenecks at the packhouse

## Key response:

- Supply chain investments close to the farms to allow for uninterrupted production and sustained demand for smallholder production.



In India we are supporting the supply chain intermediary to establish a model to deliver agricultural inputs to farmers



**Country:** India

**Crop:** Multiple

**Partner:** Cargill,  
Walmart Foundation,  
Visa Foundation

The Visa logo, consisting of the word "VISA" in a bold, blue, italicized sans-serif font.



## Covid-19 challenge:

Lockdown conditions reduced farmer access to critical inputs during planting period

## Key response:

- Farmer Producer Organization (responsible for aggregation and marketing) rapidly pivoted business model to aggregate, order and deliver input orders.

# In Mexico, our partnership with Danone is supporting crisis bonuses and adapted advisory



**Country:** Mexico

**Crop:** Strawberry

**Partner:** Danone



## Covid-19 challenge:

Short term price volatility created potential barriers to longer term investment by producers.

## Key responses:

- Crisis bonus to top up revenues
- More intensive technical one-on-one advisory
- Advisory re-focused on investment decision-making in a climate of uncertainty.

In Mexico, support to farmers is focused on market access and adoption of key quality practices demanded by buyers



**Country:** Mexico

**Crop:** Fruits & veg.

**Partner:** Walmart  
Mexico Foundation



### **Covid-19 challenge:**

Sudden shifts in consumer patterns led to reduced demand and lower prices for some farmer segments

### **Key responses:**

- Connect more farmers directly to retail buyers
- Remote, tech-based assistance to help farmers meet quality specs

In Mozambique, we established a simple digital platform to support the priority market access challenge



**Country:** Mozambique

**Crop:** Vegetables

**Partner:** Total (ex-Anadarko)



### **Covid-19 challenge:**

Market closures led to sharp reductions in demand and price for producers

### **Key responses:**

- Connect supply and demand digitally through a WhatsApp based marketplace

## Looking ahead, we see three key priorities for continuous learning and adaptation

A

**Continue to monitor ground-level challenges.** Continue follow up with smallholder farmers to see if there are lagged effects or longer-term impacts of the crisis

B

**Rapidly replicate and scale successful adaptations internally.** Continue to share innovations and adaptations internally; evaluate what's working; rapidly replicate and scale successful innovations across our relevant geographies and practices

C

**Continue to build farmer capacity and resilience and strengthen supply chains to be more inclusive.** Continue to build smallholder farmers' ability to connect to end buyers through more efficient and transparent supply chain intermediaries.



*Do you see additional areas we should prioritize to support response efforts? Are there other ways in which we can contribute?*